

## Old-age Pension Systems in the Nordic Countries



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# Foreword

The Nordic Social-Statistical Committee (NOSOSCO) is a permanent committee under the Nordic Council of Ministers. It was set up to coordinate social statistics of the Nordic countries and to make comparative analyses and descriptions of the scope and content of social protection systems.

The Committee is composed of three representatives for each country with chairmanship rotating at three-yearly intervals. Sweden chairs the Committee over the period 2008-2010.

NOSOSCO describes developments in the field of social protection annually in the report *Social Protection in the Nordic Countries*. The report will continue to be available for downloading from the NOSOSCO website, while special reports such as the present one will also be published in printed format.

The topic of Old-Age Pension Systems in the Nordic Countries was decided upon at the plenary meeting of NOSOSCO in 2007, and the report has been prepared by Gudrun Ehnsson of the Swedish Social Insurance Agency, in cooperation with a reference group of representatives of the Nordic countries.

Nordic Social-Statistical Committee 2008

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## *Chapter 1*

# Introduction

Leaving the labour market and becoming a pensioner means making many re-adjustments, particularly from the financial point of view. The old-age pension will, on average, be the principal means of support for the individual for up to 20 years. The statutory pension systems in the Nordic countries all include basic security. This basic security entails a right to a certain pension which is payable regardless of previous earnings or contributions that have been paid in. It guarantees all pensioners a minimum standard of living.

Financial security for most people does not just mean basic protection, it also includes a guarantee of being able to maintain a particular standard of living. A pension system that provides income security, that is to say a pension that is related to the individual's previous earned income, is therefore significant to prosperity in old age. This part of the pension protection is organised in different ways in the Nordic countries. It can form part of the statutory system, collectively agreed pension systems or be an individual choice through private insurance or saving in some other way.

Individuals' decisions on work and savings during their lifetime are governed to some extent by how the public and compulsory pension systems are structured – the design of the systems is thus of significance to the national economy from this point of view. A pension system also has income-redistributing effects. The basic security entails a transfer between income groups. The work-based old-age pension redistributes income across the individual's lifetime. A redistribution takes place between groups at risk in an insured population. In a public old-age pension scheme this entails a transfer from those who live for a shorter time than average to those who live longer than average – typically a transfer from men to women. A pension system may also entail re-distribution between generations.

A redistribution of income over one's lifetime can, in principle, be brought about in two different ways. One way is to save for one's own pension, as in a premium reserve system. The alternative is a pay-as-you-go system, a generational contract, where the generation in gainful employment pays for the pensions of the elderly. Regardless how the pension system is designed, the pensions paid out during a year are financed from the income that arises in the economy over the same period.

The costs of pensions are thus always borne in one way or another by the working population. In a pay-as-you-go system, where pensions are paid for continuously through contributions or taxes, changes in the population structure or employment rate may be of great significance to the financial stability of the system. The demographic trend in Europe and in many other countries is towards an ageing population. The proportion of elderly people in relation to the number of people of working age is rising. Many countries have therefore initiated more or less radical changes to their pension systems to relieve the dependency burden for the generation in gainful employment. The changes in rules relate for example to extending the period of earnings taken into account when benefits are calculated and adjusting the level of benefits with respect to increased life expectancy. The increasing average life expectancy has not been reflected in later retirement. As incomes have arisen in real terms, part of the increased prosperity has been taken as more leisure time. However, over the past ten years the age at which people on average leave employment, the age of exit, has risen in the Nordic countries.

This report compares the Nordic pension systems. The report is divided into the following sections: *Nordic pensions in an economic perspective*: The emergence of the pension systems, the principles on which their financing is based and the significance of retirement age in an economic perspective are discussed in this section. *An ageing population*: A description of the demographic trend in the Nordic countries according to the countries' population projections and what this means for the future dependency burden. In a recent Nordic survey, people aged 50-64 were asked when they wanted to retire and thought they would be able to do so. Some results from the survey are presented in this section. *Average retirement age and age of exit from the labour force*: Retirement age and age of exit are not entirely synonymous terms. An account is given in this section of how these measures have developed over the past 5-10 years. *Description of the Nordic old-age pension systems*: As well as a summary description of the pension systems of the Nordic countries, calculations of the level of pension for some typical cases today and in twenty years are presented. Annex 3 contains each country's description of its old-age pension system. *The pension system and women and men*: Some aspects of ways in which the design of the pension system can affect the standard of living of women and men as pensioners are considered. *The pension systems and future costs*: An account is given of how old-age pension costs change up to 2050 according to the European Commission's calculations and according to national calculations.



## *Chapter 2*

# Nordic pensions in an economic perspective<sup>1</sup>

Pension systems in a broad sense exist in all kinds of societies, regardless of level of economic development, and have always existed. The cliff where people were expected to throw themselves off when they were unable to contribute to their maintenance due to the infirmity of old age is simply a myth. The precipice is mentioned in the imaginative Icelandic Gautrek's Saga, and is said to have been located somewhere in Götaland.

Taking care of people who are old and unable to work can be considered instead to be part of the very definition of a society. This obviously does not mean that the treatment of the old was always notable for affection. Nor were the arrangements that occurred probably pension systems in the sense in which the term is used today: a pension as something a person has a right to enjoy at a certain age even if they remain healthy and able to work. The idea was not developed in the Nordic countries, and for most nations, until well into the 20th century. As prosperity has risen, it has become natural to use part of the potential for material growth for the "product" of leisure, in the form of shorter weekly hours of work, longer holidays and a growing number of years of freedom in the autumn of a person's life.

In bygone times the arrangement was not to be regarded as a system either, in the sense that the terms and conditions were governed by law or through other formal rules. Taking care of elderly and infirm people was primarily a matter for the family. The community within the family was thus the securest guarantee in earlier times of financial security in old age, sickness or in the event of loss of provider. But very early on there were statutes in the Nordic countries that stipulated how the elderly were to be provided for in different situations in rural areas. Some form of jointly organised poor relief was steadily developed for those who could not be looked after by their families.

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<sup>1</sup> The author of this chapter is Hans Olsson of the Swedish Social Insurance Agency.

Gradually – but to varying degrees in the Nordic countries – guilds of craftsmen etc. began to organise mutual assistance. The members paid contributions to funds that provided financial support in the event of illness and accidents. These funds can be regarded as the forerunners of the collectively agreed insurance schemes that are now important elements in the pension systems of the Nordic countries.

### *The first steps: basic security for the elderly*

The pension law introduced by Otto von Bismarck in Germany in 1889 is usually regarded as the world's first statutory pension system. The German pensions, interestingly enough, were related to the size of the contributions paid by individuals, and were thus a primitive model of the defined-contribution insurance-based systems that have guided the reforms of the statutory pension system of a large number of countries in recent decades.

Two years later (in 1891) Denmark became the first country on the Nordic mainland to legislate that large groups should receive financial assistance in old age. Unlike the German system, however, the Danish system was based on needs testing, without consideration of earned income earlier in life. An old-age allowance could be granted to those “worthily in need” who had reached the age of 69. Iceland, under Danish sovereignty but with some autonomy since 1874 and with legislative powers for the Alting, its parliament, had already introduced a law on old-age allowances the previous year, in 1890, although this was mostly a modernisation of the old Poor Relief Act.<sup>2</sup>

The Danish scheme came to serve as a model for the early pension systems elsewhere in the Nordic region to a greater extent than the Bismarckian system. In 1909 a law on municipal support funds for old people was passed in Iceland, which was a more important step towards an old-age pension system than the 1890 poor relief reform. However, very small amounts of benefit were paid. The same can be said of the first general public insurance scheme in Sweden, which was set up in 1913. This scheme was mandatory and was partly financed by contributions. A needs-tested portion was financed from public funds. The retirement age was 67, but it was possible to receive disability pension earlier for those who were unable to provide for themselves through work.

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<sup>2</sup> The position of the Faeroe Islands at this time was less autonomous than that of Iceland, but the situation was turbulent, with strong moves for independence. However, Danish law was still applicable.

Norway and Finland were latecomers with statutory public pensions. In Norway a tax-financed system was introduced in 1936 with a basic benefit that was needs-tested, essentially based on the earlier Danish pattern. In Finland it took until 1939 for the first pension law to be enacted. The Finnish basic pension was also needs-tested, and the qualification requirements were so tough that the majority of old people were not entitled to receive a pension. This situation lasted until 1956, when a heavily revised basic pension act was introduced.

### *Earnings-related old-age pensions*

It can generally be said that well into the 1960s the Nordic pension systems offered such small amounts of pension that most people who were able to work did so. This at least applied to the masses, while civil servants and privately employed white-collar staff could often anticipate a pension that was to some degree related to their salary income prior to retirement. Earnings-related pensions for the majority of the people – statutory or collectively agreed – came relatively late, and it took a number of years before they became of major significance to the size of pensions. Sweden's employment pension system (ATP) was set up in 1960, and in the early 1960s the decentralised but statutory Finnish pension system was introduced. In 1967 Norway acquired its national insurance scheme based on the Swedish model. In Iceland an occupational pension system was established in 1969 by agreement between the social partners, a system which in 1974 was made mandatory by law for all wage and salary earners. In Denmark earnings-related pensions were likewise introduced through agreements in the labour market, a process that was not completed until around 1990. The Faeroe Islands introduced similar collectively agreed labour-market pensions even later. The Danish and Faeroese labour-market pensions cover wage earners at workplaces where there are collective agreements.

The latter principle of affiliation also applies to the earnings-related collectively agreed pensions which generally supplement the basic pension in Norway and Sweden. Collectively agreed pensions of this supplementary kind are less widespread in Finland partly because there is no ceiling for pension-qualifying earnings in the statutory system for earnings-related pension.

### *Is there a Nordic pension model?*

In international contexts there is often said to be a specific “Nordic model” for pensions and also for social insurance schemes in general. As is already apparent from the description above, this is a simplistic picture. There are obviously common features, including statutory minimum basic protection and the possibility of receiving a pension that reflects the individual’s historic wage or salary income. But these features distinguish many countries at an equivalent standard of living, and there are large differences of detail between the Nordic countries, for instance with regard to:

- the level of basic protection and how it is offset against other income the pensioner has,
- the earning rules for earnings-related pension, whether it is regulated by law or governed by labour-market agreements and whether it is compulsory or not,
- the way in which the pensions are financed, principally whether the systems are funded or based on a pay-as-you-go model,
- tax subsidies for private saving, for example in pension insurance schemes,
- retirement age and what arrangements make it possible to leave employment before this age.

Many of the differences that exist will become apparent from the country-by-country reviews in a later chapter. Comparisons between countries are complicated by the fact that several countries have recently implemented, or are in the process of implementing, quite radical reforms of their systems. In these cases it will take several years before the changes in the systems have had their full impact, and pensions still to a large extent reflect older rules and will continue to do so for a long time to come.

Regarding the first two items, certain differences will only be briefly outlined here. Reference is otherwise made to Chapter 5 below.

With regard to basic protection, Iceland has the highest level, followed by Denmark and the Faeroe Islands in relation to the country’s average level of pay. Comparisons of levels of pensions are complicated firstly by the fact that currency conversions can be done in various ways and secondly by the fact that taxation rules differ. All the countries, after the pension reforms in Norway and Sweden have been implemented, apply deduction of the basic protection from other statutory basic pension according to formulas of somewhat differing kinds. Such deductions have always occurred in the other countries. In Denmark, the Faeroe Islands and Iceland the deduction

is made not just from other basic pension but also from other kinds of income, a reminder of the strong element of needs testing that has been characteristic of these countries ever since the infancy of the pension systems. In Finland only other pension has reduced the basic protection since 1985.

The statutory *earnings-related* pension is mostly uniformly designed in Norway and Sweden – both before and after the reforms currently being implemented – as the rules are identical for all types of people in gainful employment irrespective of industry or sector or whether they are wage-earners or self-employed. Differences in the latter respects arise, however, as a consequence of the collectively agreed supplementary pensions that occur on a relatively large scale. Denmark, the Faeroe Islands and Iceland, as already mentioned, have built up their earnings-related pensions through various agreements between the social partners, leading to a certain heterogeneity. In Denmark there is, in addition, a statutory lifelong pension scheme, ATP (employment pension), which is based on time in work, but this is of lesser significance in terms of amount. Self-employed people are not covered by the collective schemes, with the effect that tax-subsidised private pension insurance schemes are of great significance. The Finnish earnings-related pension differs from the Norwegian-Swedish type as well as the Danish-Faeroese-Icelandic type, both before and after the reform carried out in 2005. Everyone in gainful employment is covered by the legislation, but there are separate laws for civil servants, private-sector employees, the self-employed etc. The contributions paid by employees and employers are also managed in a way that is to some extent decentralised.

### ***Financing of pensions: funded or pay-as-you-go system***

The way in which pensions are financed may be of significance to the national economy and merits more detailed and fundamental discussion in the present context. There are two main financing models: pay-as-you-go systems and funded systems. In a pay-as-you-go system pensions are paid for by contributions or taxes received in parallel from those who are in gainful employment. Although the pay-as-you-go system often has one or more funds, they are usually only designed to serve as a buffer to bridge periods when the inflow of contributions is temporarily less than pension payments. In national tax-financed systems the balance of the government budget can fulfil the function of the buffer fund. Funded pension systems are distinguished by contributions (often called premiums) being

accumulated in a fund from which payments are not made until those who have paid in the contributions have started to draw their pension. During the intervening period the pension assets that are regularly paid in are usually invested in shares, bonds or property.

An attractive feature of pay-as-you-go systems is that full pensions can start to be paid out as soon as the system has been set up. With funded systems it takes several decades from the time when the system starts until pensions can be paid out at the envisaged level. For those who only have a few years of employment left when the system is started, it is impossible for the pension to reach any appreciable size. Each age cohort of premium payers could be said to pay for its own pensions.

The fact that each generation pays for its own future pensions is usually highlighted as an important benefit of funded systems. This is particularly true of countries such as those in Nordic region, with an expected more or less powerful “ageing boom”. The number of old people per person in gainful employment will rise sharply (see also Chapter 3). The dilemma of pay-as-you-go systems is that the sum of money that a constant rate of contribution or tax on earned income brings in must be shared between a growing number of pensioners. The incomes of pensioners will consequently decrease in relation to those of people in gainful employment. If such a trend is to be avoided, it is necessary to raise the percentage rate for payments by those in gainful employment. On the other hand, the growth in income of people in gainful employment decreases accordingly. It must be pointed out that this also applies if the income of the pension system is taken through an employer's contribution. A rise in employer's contribution sooner or later will be passed on to the wage and salary earners. The requirements of businesses for return on investment must be met in the longer term – and in the globalised capital markets of today these are determined internationally. If employer's contributions are raised, the required return in principle can only be achieved by the actual growth in wages and salaries becoming slower. This might be done by the companies charging higher prices, which pushes up inflation and in so doing lowers the real rate of growth in pay. Whether inflation in this case undermines pension income depends on whether pensions are linked to the price index or not. If pensions are index-linked, the real incomes of pensioners are not affected.

With a pay-as-you-go system it is made clear that there is little scope for consumption in the future, generated by those who are then in gainful employment, and this scope for consumption is in some way to be shared

between the active and non-active parts of the population. A generational conflict may be on the way.

Unfortunately it is not self-evident that a funded pension system does away with the restriction on the future scope for consumption, and the risk of conflict. Neither it is possible to consume more than is produced with a funded system. In principle it is the same cake that has to be shared. The cake may possibly be affected by the existence of the funds. The assets that are added while the fund is being built up are used for real investments of various kinds, and these investments should, in the longer term, raise the production capacity of the economy per person in gainful employment. This assumes, however, that the investments that would otherwise have been made using other savings are nevertheless undertaken, despite the pension fund also investing. This is a dubious assumption. The demand for real investments in the business sector is not determined by access to domestically generated savings but by future sales opportunities identified by businesses. In an economy cut off from the world around, the increased supply of savings might perhaps lead to lower interest rates, which would make it cost-effective to run more investment projects. But that is not the situation in the Nordic countries. The capital markets are globalised, and interest rates and other yield requirements are barely affected by the domestic supply of savings. The existence of a funded pension system might possibly create stronger confidence in the future, which in turn would make business more interested in investing. This would, however, in essence be a more ideological and emotional argument, an illusion that could easily burst.

Funded systems, however, deal with the distribution between the active population and pensions in a different way than pay-as-you-go systems. Whether pensioners receive high or low incomes depends in part on financial market forces. The outcome might perhaps be regarded as fairer than if central government intervened with reduced/raised pensions or raised/reduced contributions by wage and salary earners. And if the resultant pensions are regarded as unfairly or high, this is a consequence of trends in the financial markets and “nothing can be done about it”. The latter statement is not, however, entirely true. During the high-interest period in the 1980s Danish pension funds invested in 30-year bonds issued by the Danish government at double-figure interest rates. The government then introduced a “real interest-rates law”, under which all yields in excess of 3.5% in real terms were confiscated. One of the aims behind this was to avoid future generational conflicts. Future people in gainful employment would have had to pay for the pensioners’ large pensions, in this case

through taxes to finance the interest expenditure of central government. Sweden soon followed the Danish example, in modified form, with an extra wealth tax of no less than 7% on amounts of capital. It may also run in the opposite direction, so that long periods of poor returns occur for the pension funds. In the United States voices were raised in the late 1960s in favour of index-linking pension funds to economic growth, as there had been no return on capital in real terms for many years.

In the Nordic countries private pensions and collectively agreed pensions in the private sector are likely, without exception, to be funded. The reasons for this are, without doubt, principally of a legal nature. A private insurer can hardly be permitted to make a commitment to payments of life-long pensions without having capital backing. Premium payers may stop making payments, agreements may be amended and the insurer may collapse. The Danish, Faeroese and Icelandic (compulsory) collectively agreed earnings-related pension systems are consequently funded. Pay-as-you-go systems in principle can only be established in the public sector, which can guarantee its pension obligations through its constitutional right of taxation. The collectively agreed pensions or statutory occupational pensions enjoyed by civil servants are usually not fully funded, and practice varies among the municipalities.

Funded systems are equated in the English-speaking world to “defined contribution” and pay-as-you-go systems to “defined benefit”. A common perception, at least in Sweden and Norway, is that this is an over-simplification. The reformed basic pension systems of Sweden and Norway are still pay-as-you-go systems (in the sense that contributions paid in continuously pay for pensions), but have been designed to resemble a funded premium reserve system. The contributions paid are booked to individual accounts, and the amount accrued on the day of retirement is shared out over the remaining life expectancy using what are known as life expectancy divisors. This system has become known in English as “notional defined contribution”.<sup>3</sup> Sweden has additionally introduced an actually funded premium reserve system with regard to a minor part of the pension contribution. Finland has implemented a reform for its earnings-related pension that resembles the Swedish and Norwegian reforms, but which is a less exact copy of a funded premium reserve system, for instance in the sense that pensions are not affected by remaining life expectancy, regardless

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<sup>3</sup> It can also be pointed out that funded systems may be defined-benefit, i.e. the pensions are determined by final salary. This applies for instance to certain contractual pension systems that have long existed in the white-collar areas in several countries.



of when they are drawn between the ages of 63 and 68. The Finnish earnings-related pension is partly funded, but not in individually held accounts.

### *Retirement age and age of exit from the labour market*

A retirement age is defined somewhere in the rules governing the national old-age pension systems in all the Nordic countries – at present it is 65 in Denmark, Finland and Sweden and 67 in Norway, the Faeroe Islands and Iceland. In practice there are, however, large individual differences with regard to the age at which those in gainful employment actually leave the labour market. Although a large proportion work up to the established retirement age and some continue beyond it, many stop working earlier. In the four largest countries (see Chapter 4 and the sources mentioned there for further details) the average age of exit from the labour market<sup>4</sup> is 63 or lower, i.e. well below retirement age. The age of exit in Iceland is around 67, which should mean that roughly the same number finish after as before retirement age.<sup>5</sup> A good indicator of age of exit is the proportion of the population in the labour force at the age of 60-64: Iceland approximately 80%, Sweden and Norway around 60%, Denmark and Finland less than 40%.

The actual age of exit is of great economic significance, as it affects both the dependency burden for the elderly of those in gainful employment and the total production of the national economy (GDP) and thus the actual maintenance base.

One of the reasons why the Icelanders work so long may be that Icelandic public pensions historically have not been particularly generous, and that not everyone have made arrangements for themselves in time by taking out private pension insurance. Tradition and culture also play a role. Retirement age in Denmark was lowered from 65 to 60 in 1937, following a common pattern in continental Europe. In 1946 the country raised the retirement age to 65 again for men, but retained the lower age for women. The Basic Pension Act of 1964 introduced a retirement age of 67 for everyone. The historical ambivalence concerning retirement age in

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4 Age of exit can be calculated in various ways and using various data. Data from "Labour Market Surveys", which is gathered according to common internationally established principles, has been used here. See also Chapter 4.

5 No figures are available for the Faeroe Islands.

Denmark has continued. In 2004 retirement age was lowered to 65, but there are now parliamentary resolutions for a gradual increase to 67 (possibly even higher) starting in 2024. In Norway the official retirement age was 70 when the first statutory needs-tested basic benefit was introduced in 1936, and it was converted to a basic pension in 1956. In 1973 retirement age was lowered to 67. Retirement age in Sweden was 67 from the time of the introduction of the first basic pension in 1913 up to 1976, when it was lowered to the present-day 65. In Finland the normal retirement age was already set at 65 when the first pension law came into effect in 1939.

The official retirement age as stipulated in legislation to some extent has a “signal value” to the public regarding what the authorities consider to be a suitable age at which to leave employment, in consideration of the state of health of the population, the national economy and public finances. But the signal has a limited range. The arrangements that make earlier exit possible, whether for health reasons or not, are probably more significant for public attitudes. The schemes concerned may be formally within the old-age pension system, but also in sickness and labour-market insurance, or be based on collective agreements between the social partners. What is important is to show what effect they can have in practice when the actual “retirement” of individuals takes place.

A very sharp economic upturn took place throughout the world in the 1960s and large parts of the 1970s, and Norway was no exception. Although the oil crisis of 1973-1974 tempered growth, it did not do so in Norway, whose economy benefited greatly from the sharp rise in oil prices. The Norwegian expansion to some extent mitigated the effects of the downturn in the neighbouring Nordic countries, in part through the export industries of these nations. The socio-political conclusions during this period were almost exclusively expansive, and the expansion lasted almost throughout the 1980s. The usual political perception was that the increase in prosperity to some extent ought to be taken as shorter working hours, which also included opportunities to leave the labour market before the official retirement age.

The options for early retirement before normal retirement age already contained in the pension systems were consistently expanded from applying only to severe incapacity and severe illness to include less serious health problems, labour-market reasons and “social” reasons. The levels of allowances were also improved in many cases.

In Denmark the introduction of anticipatory pension in 1979 was justified on the grounds that the gainfully employed part of the population

would have a better age composition, and that the elderly could withdraw earlier and make way for younger people. Voluntary early retirement pay (efterløn) makes it possible to stop working at the age of 60, under certain conditions related to earnings, with beneficial compensation up to retirement age. The terms for payment of allowance have declined somewhat, but the scheme remains popular. In Finland people who have reached the age of 57 have been granted additional days in the unemployment insurance scheme, followed by what is known as unemployment pension, as a way of leaving the labour market early. In addition there is a general option of drawing ordinary old-age pension at the age of 62. However, unemployment pension has been abolished in recent times for those born in or after 1950; these will only receive cash benefits from the unemployment insurance scheme. In Norway the high formal retirement age is moderated by there being a scheme, alongside the possibility of early retirement on the grounds of ill-health, with collectively agreed early retirement pension (AFP) at the age of 62-66. This provides benefit which, through a supplement, exceeds what the statutory insurance scheme would have paid at the age of 67. It thus reduces the incentive to work after the age of 62, and it has therefore been proposed that this part of the old-age pension system should be revised so it becomes an increment to the pension when flexible retirement age is introduced in 2011. The increment increases the later the pension is drawn. In the Swedish system a downward adjustment of pension is made if it is taken early (which can be at the age of 61 at the earliest) in relation to pension at age 65, in consideration of the longer remaining life expectancy.

A reversal has thus taken place in the pension policy of the Nordic countries over the last 20 years or so compared with the situation in the 1960s, 1970s and 1980s.<sup>6</sup> The focus now is on raising retirement ages, both the formal and actual ages when exit from the labour force takes place in practice. These endeavours are described more clearly than above in the country-by-country reviews in Chapter 5. The same attitude has emerged among politicians in most other countries in Europe and is manifested in work for instance in the OECD and the European Union. Greater awareness of the economic significance of age of exit has also emerged, as the time of the commencement of the “explosion of ageing” has drawn

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<sup>6</sup> It is characteristic of the reversal that there was a proposal in Sweden in the late 1980s for a “work pension” which would give those who had worked for 40 years the option to draw old-age pension without downward adjustment of the amount in comparison with what the pension would be at the age of 65. This reform never saw the light of day.

closer (see Chapter 3 below). In addition, the average life expectancy of the population has increased substantially more than had previously been imagined to be possible, which accentuates the problem of the expected increase in dependency burden for the elderly.

The steady rise in average life expectancy has also been used as an argument as to why a higher retirement age is reasonable. Rising life expectancy is not in itself evidence of human ageing commencing later. There are differing views on this point in research. There are advocates of the hypothesis that increasing life expectancy consists in a prolonged period of morbidity and “frailty” in the later part of life, a trend that has become possible due to the progress made by medicine in life-preserving treatment. The average 65-year-old would thus be more or less equally affected by ill-health and incapacitated today as, say, 30 years ago.

The most common assessment, however, is that at least to some extent it is healthy years that are added to life, and that the health and work capacity of the older labour force at given ages have been improved in the long term. On the other hand, work capacity must be considered alongside the changes that have taken place in the labour market with regard to work tasks, professional roles and required skills. The world of work has changed substantially in these respects, perhaps at an ever quickening pace, and perhaps in directions that have disadvantaged older people in relation to younger people. The natural slowness of fully healthy elderly people may be a greater problem now than previously, and a source of frustration both for elderly people themselves and for employers and colleagues at work. In the world of work of the past retirement posts were available for older workers – these might involve cleaning, caretaker jobs and so on, usually associated with lower pay. These kinds of jobs are now done by specialised, trained labour, and often by specialist contract firms with their own, tough efficiency requirements. The modern solution for the responsible employer has been to assist in arranging alternative provision, which may be early retirement, financed by public funds, but sometimes also at the company’s own expense. For the employee, this means a lowered level of income in roughly the same way as in previous times, but – for good or ill – without employment. Expressed concisely, fewer and fewer people are working, at ever higher productivity, and these have to in some way provide for the others.

Old age is not a sickness. It is not possible to obtain a medically motivated early pension on the grounds that normal ageing is an obstacle to work. But ageing, in spite of this, is often an obstacle to work. Ageing has many aspects, which weigh equally heavily with regard to ability to cope

with various work tasks. Physical mobility and muscular strength decline very markedly between the ages of 40 and 60. Mental ability declines in some respects: the older person thinks more slowly, forgets and finds it more difficult than younger people to adapt to new technology and so on. One problem is that ageing progresses individually at such a differing pace. Out of a group of 40-year-olds with similar capacity, some individuals will barely have changed at all twenty years later. Others will have deteriorated very sharply, without necessarily being considered to be ill. What can be an advantage with an older labour force for certain work tasks, on the other hand, is the fund of experience that may have been built up over a long working life.

From the point of view of the national economy it is theoretically cost-effective for a person to stay in work for as long as he or she produces something that is worth more than the costs in terms of materials, premises used – that is to say, as long as the value added is positive – and if the pay corresponding to the result of production exceeds the employee's valuation of leisure. At a workplace in real life a complicating factor is that pay cannot be set very low so that it corresponds to what is perhaps very low productivity. While flexibility of pay and variation in pay in society have in general increased, it is, if anything, less accepted now than previously for pay to be lowered as an employee becomes older. It may be rational to accept the cost an employer may face in retaining older staff at pay that exceeds the production value of the person concerned from the point of view of goodwill. High pay for older labour may also, however, be a simple, but perhaps less rational, expression of relationships of power in businesses. The people who have influence on the process of pay-setting, both on the employer's side and on the trade-union side, are often older than the average workforce. These individuals may – consciously or unconsciously – tend to favour others of the same generation. A workplace may thus serve to some extent as a pension system in miniature: younger people are paid relatively lower and older people relatively higher than their production results – a kind of social contract. But there is obviously a limit to how far such redistribution is cost-effective or is perceived as reasonable. The limit is partly determined by the attitude of the younger people to the arrangement. If their acceptance were to drop, so too would the age at which older people are forced to stop. If the nature of the work changes in such a way that the productivity of older people decreases in relation to that of young people, the same thing happens.

Beyond the limit at which employers do not wish to retain older workers whose productivity is low at the prevailing level of pay, there may be

justification for society to subsidise people whose productivity is lower yet whose productivity exceeds their valuation of increased leisure. A rigidity in pay ratios between workers of different ages, which means that pay ratios fail to reflect the differences in productivity, is an example of what is known in macroeconomics as market imperfection. An imperfection means that the resources of society are not used in an optimum way from the point of view of the national economy. In practice it is, however, difficult to decide in a satisfactory way who the subsidy should be targeted at in that case. In addition, it must be financed in some way, for example by taxes, and this financing in itself creates new imperfections in the shape of tax wedges.

The reformed Swedish and Norwegian old-age pension systems, like individually funded systems, have rules that mean that retiring early or late has to be financially neutral. The size of the pension is related to the remaining life expectancy at the time of retirement. Someone who retires early pays for this himself or herself in the form of a lower annual amount of pension, while someone who retires late receives a financial yield in the shape of higher pension. According to the principle of lifetime earnings, someone who prolongs their working life can earn a larger amount to be distributed over the expected number of remaining years of life. Additional years of work also mean years with earnings that, to a quite significant degree, can exceed the future pension.

But in these systems too there is an overarching reason to prevent drawing of pension at a very low age. There is a tax wedge that distorts the individual's choice between work and leisure. Those who use their time for work pay taxes and contributions for collective purposes, while leisure is tax-free. There is a risk of free choices for individuals leading to use of time that is not in accordance with their own real preferences. Assume that a large proportion of the consumption needs of households are met through collective consumption, financed by high taxes. It is in the private interest to keep working hours down – earnings after tax are so low – yet share in the collective consumption. The final result, however, is lower consumption than the individuals actually want, given their earning capacity, as the available amounts of tax are so low. It is thus not entirely true to say that individuals themselves pay for early drawing of earnings-related old-age pension, due to the taxes etc. paid on earned income.

## *Chapter 3*

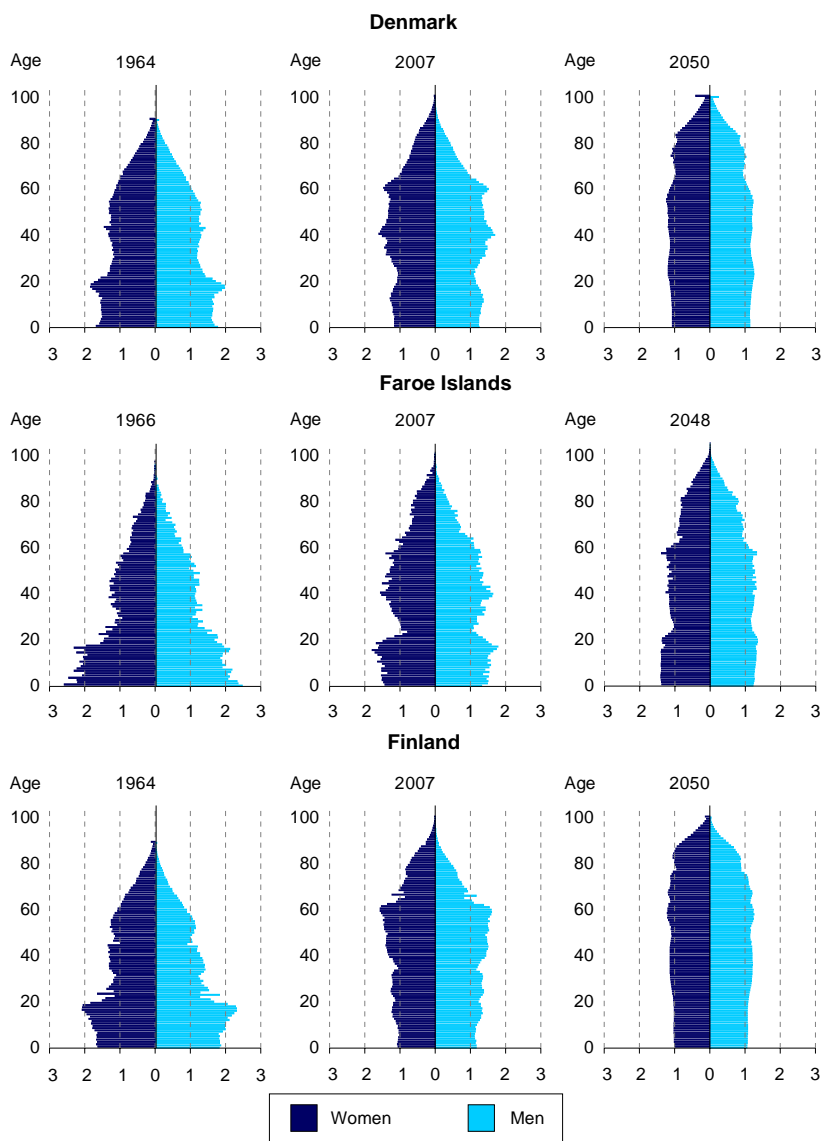
# An ageing population

The demographic trend in the Nordic countries, as in the rest of Europe, is towards an ageing population. Average life expectancy is increasing, and the elderly are living ever longer. In the Nordic countries, average life expectancy differs by a maximum of 3.6 years for men and 2.6 years for women. The lowest average life expectancy is in Denmark, at around 78.2 for men and women combined. People in Iceland, Norway and Sweden statistically live to be two to three years older, while Finland occupies an intermediate position. The population projections presented below are a result of the countries' own projections. No common projections, with coordination of methods, underlying principles and assumptions have thus been made.

It is assumed that mortality rates will continue to fall in the future, but to differing degrees according to the countries' own population projections. In the Finnish projections, which show the greatest change, average life expectancy is assumed to increase by a total of 8.4 years or just over 2 months per year between now and 2050.

Diagram 3.1 shows a picture of how the population structure in the Nordic countries is expected to change between now and 2050. The population pattern an equal number of years earlier, in 1964, is also shown for comparison. A common feature is that the population pyramids acquire an increasingly evenly thick shape – no clear broad base of children and adolescents and narrowing of the pyramid is delayed ever further up the age structure. The population pyramids for Iceland are based on five-year age groups, while those for the other countries are based on one-year cohorts. The assumptions on average life expectancy, birth rate and migration underlying the projections are presented in Annex 1.

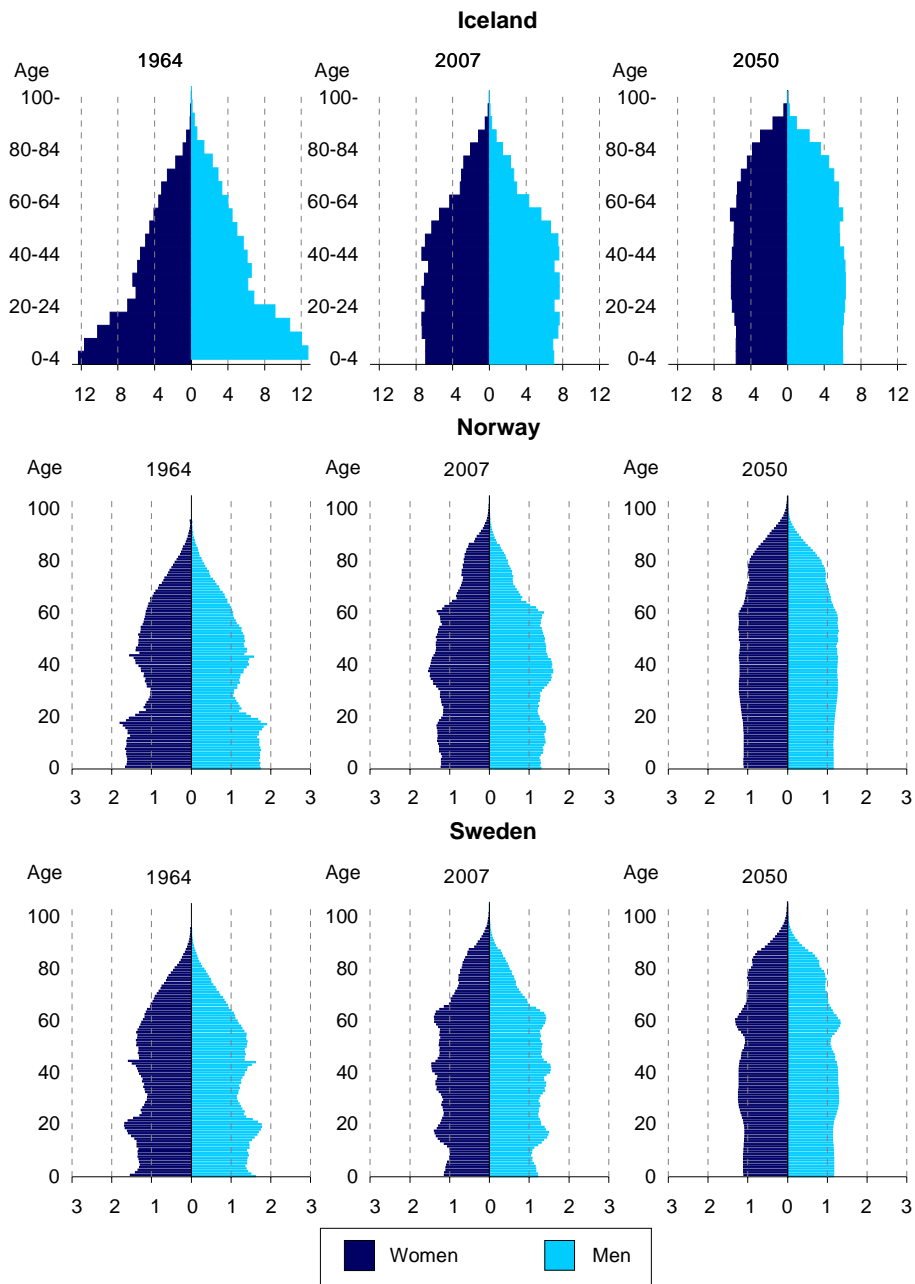
**Diagram 3.1 The population in 1964, 2007 and 2050 according to the projections of each country. Age breakdown as a percentage of all women and men<sup>7</sup>**



<sup>7</sup> The population for Iceland is broken down into five-year cohorts, while it is broken down into one-year cohorts for the other countries. The diagram shows the percentage age breakdown for each gender.



Diagram 3.1 Continued



## OLD-AGE PENSION SYSTEMS IN THE NORDIC COUNTRIES

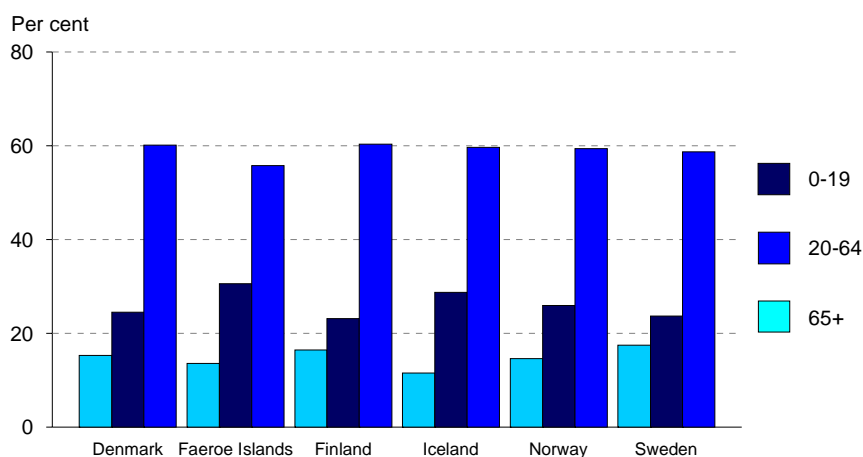
Table 3.1 shows how average remaining life expectancy for 65-year-olds is expected to change between now and 2050.

**Table 3.1 Average remaining life expectancy from the age of 65 in the population projections**

	Denmark	Faeroe Islands	Finland	Iceland	Norway	Sweden
2010	18.8	17.2	19.6	19.7	19.3	19.3
2030	22.0	20.1	22.5	21.4	21.2	21.0
2050	23.1	22.3	24.9	22.8	23.2	22.0

Sweden is the country that today has the highest proportion of elderly people in the population, while Iceland has the lowest proportion, and the same applies when the number of elderly people is compared with the number of people of working age. In Sweden there are 0.30 persons aged 65 or over per person in the 20-64 age group. The equivalent proportion in Iceland is 0.19. The dependency burden in the other Nordic countries is similar, in terms of demographic measures, with an elderly ratio of 0.25.

**Diagram 3.2 Composition of the population in 2007. Per cent**



The trend in the number of elderly people is principally determined by the size of the cohorts now approaching retirement age. At the same time, a reduced mortality rate means more elderly people to support. The number

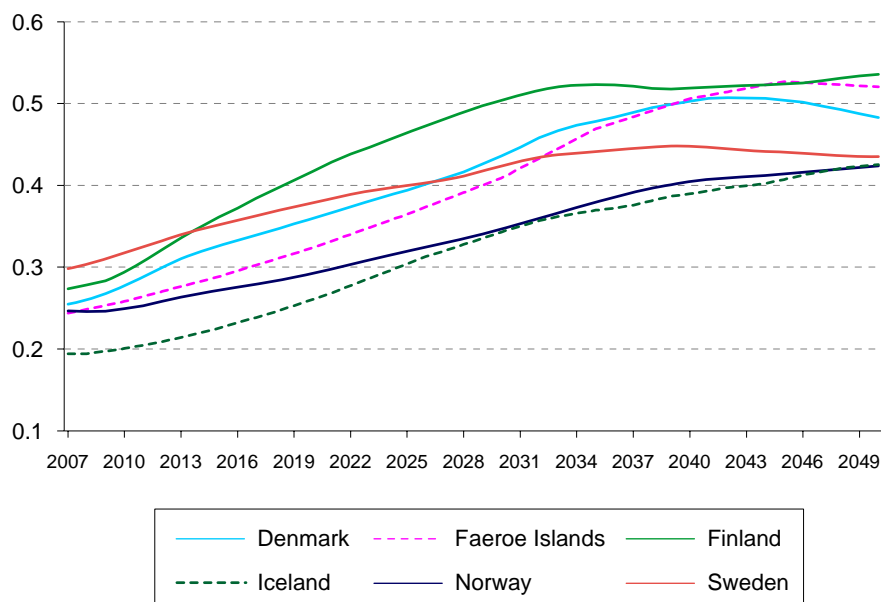
of people of working age is affected in the short term by net immigration and is only affected by assumptions on birth rates in the longer term.

According to the latest population projections the elderly ratio in Finland and Denmark is expected to double or almost double between now and 2050. In the case of the Faeroe Islands an even stronger trend is anticipated, with a more than two-fold increase in elderly ratio in 2050. A similar strong trend is anticipated for Iceland, but the proportion of elderly people is lower. The elderly ratio for Iceland is at the same level as for Norway and Sweden at the end of the projection period. This is evident from Table 3.2 and Diagram 3.3, which show how the number of people aged 65 or over is expected to develop in relation to the number of people aged 20-64. The greatest changes occur up to the 2030s, after which the graphs level off.

**Table 3.2 Number of persons aged 65 and over in relation to the number aged 20-64.**

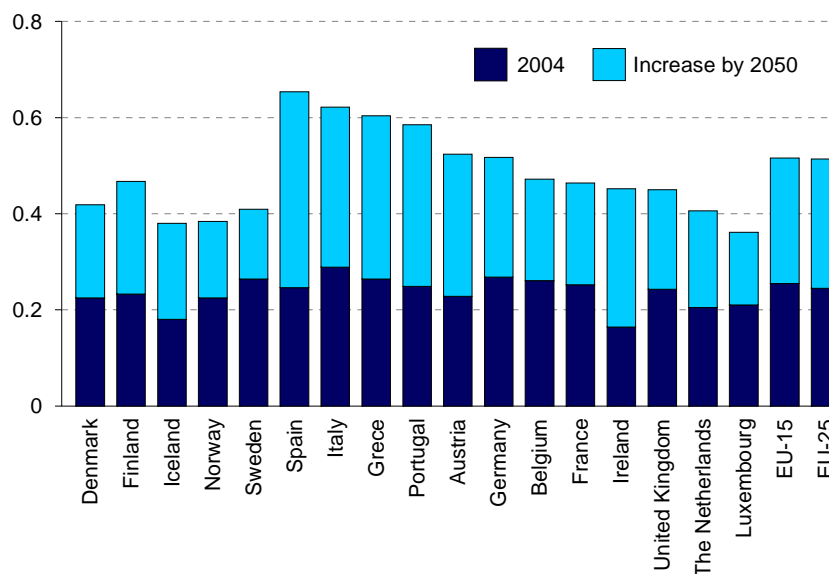
	Denmark	Faeroe Islands	Finland	Iceland	Norway	Sweden
2007	0.25	0.24	0.27	0.19	0.25	0.30
2030	0.44	0.41	0.50	0.34	0.35	0.42
2050	0.48	0.52	0.54	0.43	0.42	0.44

**Diagram 3.3 Number of persons aged 65 and over in relation to the number aged 20-64. Projection up to 2050**



The trend in the Nordic countries is by no means unique in Europe. Present-day elderly ratios are at a level roughly equivalent to the average for countries in the EU. However, the proportion of elderly people is expected to increase considerably more sharply in many other countries up to 2050, for instance in Spain, Italy and Greece. The proportion of elderly people in the Nordic countries is expected then to be lower than the average for the EU. Diagram 3.4 shows elderly ratios for countries in the EU plus Iceland and Norway and how these are expected to rise by 2050 according to European Commission projections and, in the case of Iceland and Norway, according to national projections. The elderly ratio in this case relates to the number persons aged 65 or over per person aged 15-64. The first five bars in the diagram show the trend for the Nordic countries, the last two bars show the average for the countries in the EU and in between the countries are arranged by size of elderly ratio in 2050.

**Diagram 3.4 Number of persons aged 65 and over in relation to the number aged 15-64. In 2004 and 2050**



Source: European Commission 2006<sup>8</sup>, supplemented by data for Iceland and Norway

<sup>8</sup> European Commission (2006) “The Impact of ageing on public expenditure: projections for the EU25 Member States on pensions, health care, long-term care, education, and unemployment transfers (2004-2050)” DG ECFIN

The diagrams above show how the demographic dependency burden regarding the elderly is expected to develop up to 2050. They only take account of changes in the composition of the population, and do not say anything about the trend in the labour market. A more suitable measure than the purely demographic one in the context may be the number of old-age pensioners in proportion to the number of people in employment. Such dependency ratios for 2007 are presented in Table 3.3 with demographic dependency ratios for comparison. The dependency burden related to the number employed weighs more heavily than the purely demographic measure. The difference is smallest in Norway, where old-age pension cannot be drawn until the age of 67.

People in gainful employment do not just have to support elderly but also children and people who for various reasons are unable to work. A total dependency ratio of this kind is also shown in the table. The whole population compared with the number in employment shows that each employed person has to support just over one person in addition to himself or herself.

**Table 3.3 Dependency ratios in 2007 defined in three different ways**

	Denmark	Finland	Iceland	Norway	Sweden
Number of persons aged 65 and over per person aged 20-64 (elderly ratio)	0.25	0.27	0.19	0.25	0.30
Number of old-age pensioners per person employed <sup>1</sup> at least 20 hours/week	0.34	0.42	0.24	0.30	0.41
The total population in relation to number employed at least 20 hours/week	2.3	2.3	2.2	2.2	2.1

1 Aged 15-74

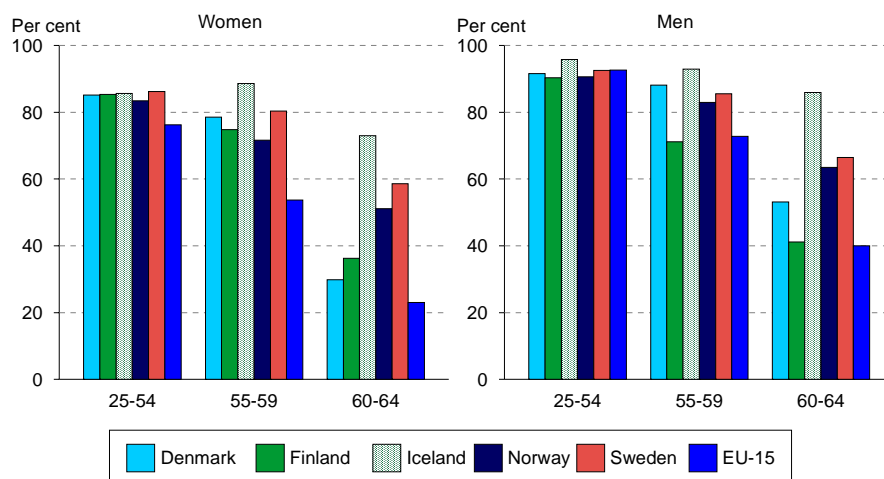
Labour-market participation<sup>9</sup> in the Nordic countries is high among both men and women. In the 25-54 age group around 90% of men are in the labour force, which is equivalent to the average for countries in the EU-15<sup>10</sup>.

9 The labour force includes both employed and unemployed persons

10 Member states before 01.05.2004

The equivalent proportion for women is 85%. A decrease is noticeable among 55-59-year-olds, which is reinforced in the 60-64 age group. In Iceland, however, 86% of men and 73% of women aged 60-64 are still in the labour force. Labour-market participation for women in the Nordic countries is higher in each age group than the average for women in the EU-15.

**Diagram 3.5 Labour-market participation for women and men of different ages in 2006**



Source: OECD Labour Force Statistics

There are several factors that affect the trend in the number employed in the future. The population projection provides the framework. In addition there are estimates of the extent of gainful employment at different ages, with regard to both activity rate and average working time.

A longer period of training for various occupations means that young people enter the labour market later. A calculation based on Swedish statistics<sup>11</sup> shows that the age of entry into the labour force, with a working time of at least 20 hours per week, is around 22. The calculation is based on people who at the age of 40 are in the labour force. The age of entry, defined in this way, rose from just under 20 in the late 1980s to around 22 in 1994 and has been at this level since.

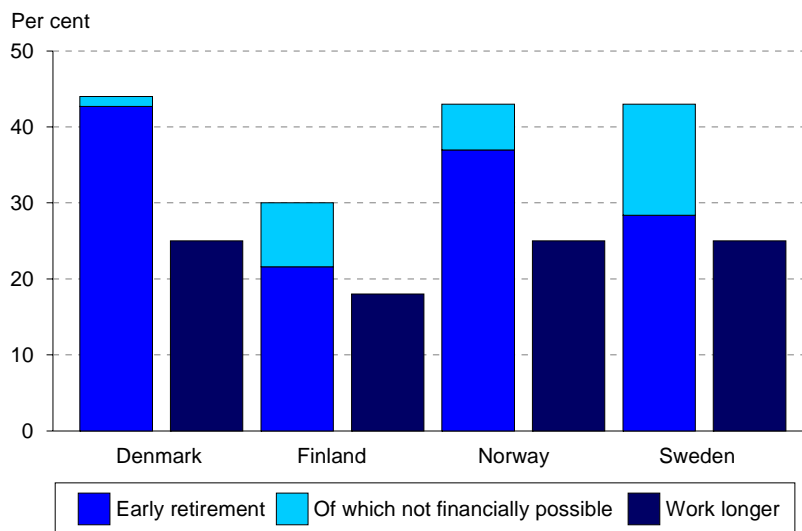
11 Swedish Social Insurance Agency Hur länge arbetar vi i Sverige? (How long do we work in Sweden?) Analyserar 2007:6

A higher level of education and training contributes to a growth in productivity, which in itself can more than offset a later start in the labour market. A question that arises, however, is whether with later entry into employment there will be a correspondingly later exit from employment compared with today. A continued increase in average life expectancy is assumed in the population projections, which it is hoped will mean more healthy years after what today is considered a normal retirement age. It can be imagined that part of this time will be used to prolong working life. Studies of how long people want to work often indicate, however, that many people would prefer to retire early if it is financially possible to do so. In a recently conducted survey<sup>12</sup> in the four largest Nordic countries men and women aged 50-64 were asked when they wish to retire. 43% replied that they wish to retire before the official retirement age, while 25% wish to work for as long as they can. The Finnish responses were distributed slightly differently, with only 30% wanting to retire early and 18% wanting to work longer. One explanation may be that the Finnish retirement age is stated as being in the range of 63 – 68, which means a lower normal retirement age in comparison with the age limits in the other countries of 65 and 67. The desire to retire early is greater among the younger respondents (50-54) and there is a greater wish to work longer among the older respondents (60-64). The principal reason for wanting to retire early is a wish to have more freedom and time for leisure interests. Not everyone believes that they will be able to afford to stop working early, however. Swedes and Finns in particular are unsure about whether this will be financially possible.

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12 Våra bästa år – dröm eller verklighet (Our best years – dream or reality). A Nordic survey conducted by Synovate Sweden for Nordea

**Diagram 3.6 Percentage of people aged 50-64 who wish to retire early or work longer**



Source: Nordic survey, Synovate Sweden for Nordea

The term normal retirement age in this context primarily means the age when payment of old-age pension generally begins. However, old-age pension in many cases can be preceded by other pension, such as disability pension. The average retirement age in the population is therefore lower than the official retirement age.

Nor is the average retirement age the same as the age when people on average leave employment. There are other paths out of the labour market than through old age or disability pension. The average age of exit from the labour force may therefore be lower than the average retirement age.

In Chapter 4 an account is given of how average age of retirement and age of leaving the labour force has developed over the latest ten-year period in the Nordic countries.



## *Chapter 4*

# Average retirement age and age of exit from the labour market

Retirement age is an ambiguous term. The official retirement age, the age when old-age pension can be drawn, often differs from the average retirement age, that is to say the age at which people on average leave employment with some kind of pension. There are 'exit paths' from employment other than old-age pension. A possibility of early retirement can be provided through pension agreements between the social partners, for example, and many people leave employment early for health or labour-market reasons. Nor is it always the case that pension is drawn at the time of the individual leaving the world of work for good. In many cases it is possible both to draw pension and to work. It may also happen that a person first leaves employment and then draws pension later on. The average age of exit from the labour force may therefore be different from the average retirement age.

The official retirement age in the Nordic countries is 65 in Denmark, Finland and Sweden and 67 in the Faeroe Islands, Iceland and Norway. It is possible to draw old-age pension at an earlier age. In Finland both basic pension and earnings-related pension can be drawn from the age of 62. The Swedish guaranteed pension cannot be drawn early, but earnings-related pension can be taken from the age of 61. Icelandic earnings-related pension can usually be drawn from the age of 65.

In Denmark and Norway old-age pension cannot be drawn before normal retirement age. As part of the Norwegian pension reform it is, however, proposed that a flexible retirement age from the age of 62 should be introduced from 2011. There is provision for early retirement in Norway from the age of 62 through a special scheme based on agreements between the social partners, collectively agreed early retirement pension (AFP). Around 80% of employees at age 62 are covered by AFP. The Danish voluntary early retirement pay (*efterløn*), which entitles anyone who is a member of an unemployment insurance fund and has paid contributions to the insurance scheme for 30 years to withdraw from employment at the age

of 60, has the same scope. In Finland a common route out of employment has been unemployment pension, which can be granted to unemployed people from the age of 60. However, unemployment pension was abolished for those born in or after 1950 at the time of the 2005 pension reform. Disability pension<sup>13</sup>, which is granted to anyone who has reduced work capacity, has been a common route out of the labour market in all the countries.

### *Average retirement age<sup>14</sup>*

The average retirement age presented here relates to the drawing of old-age pension, granted disability pension and other pensions of the kinds mentioned above. There is, however, one limitation: those who have been granted disability pension before the age of 50 are not included in the calculation, and 50 is thus a lower age limit. Retirement age is calculated by a method reminiscent of the calculation of life expectancy from a particular age. Account is taken of full and partial pensions in the calculation. If a person is granted half disability pension, this is regarded as “semi-retirement”. If a disability pensioner is rehabilitated and no longer receives pension, this is taken into account in the calculation as a negative retirement.

Diagram 4.1 shows how average retirement age has developed over the past five to ten years up to 2007 at the latest. Retirement age in Iceland is around 66 over the period 1996-2005, which is at least 2-3 years higher than the average age for Norwegians and Swedes. Average retirement age has been lowest in Finland, around 61, but has risen somewhat in recent years. In Denmark retirement age in the national retirement scheme was lowered at the end of June 2004, which may explain the later downturn in average age. In 2007 average retirement age rose relatively sharply in Norway, which is assumed to be largely attributable to the good times in the labour market. The Swedish measure does not show the same trend for 2007, an increase occurred instead in 2005 and 2006, principally due to fewer granted disability pensions. Flexible retirement age in Sweden is utilised more now than previously. The number of people who draw old-

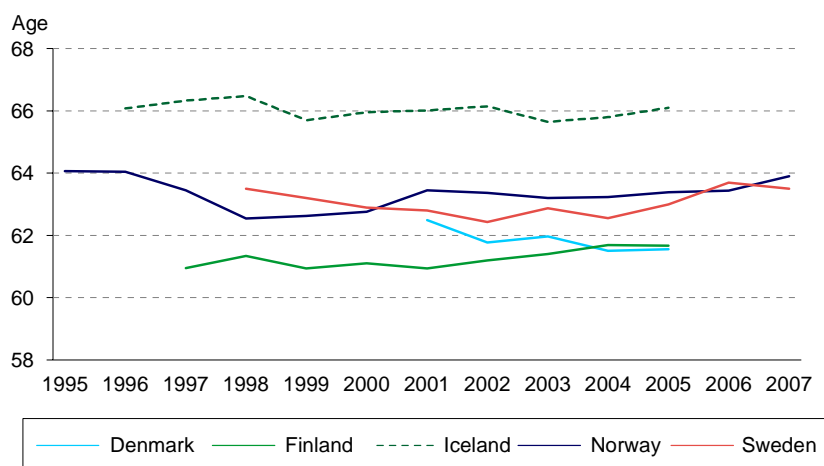
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13 Called anticipatory pension in Denmark and sickness allowance in Sweden

14 The figures are taken from the report Expected effective retirement age in the Nordic countries, Statistical Report 2/2008, Finnish Centre for Pensions. For a more detailed description of terms and methods of calculation, see the report.

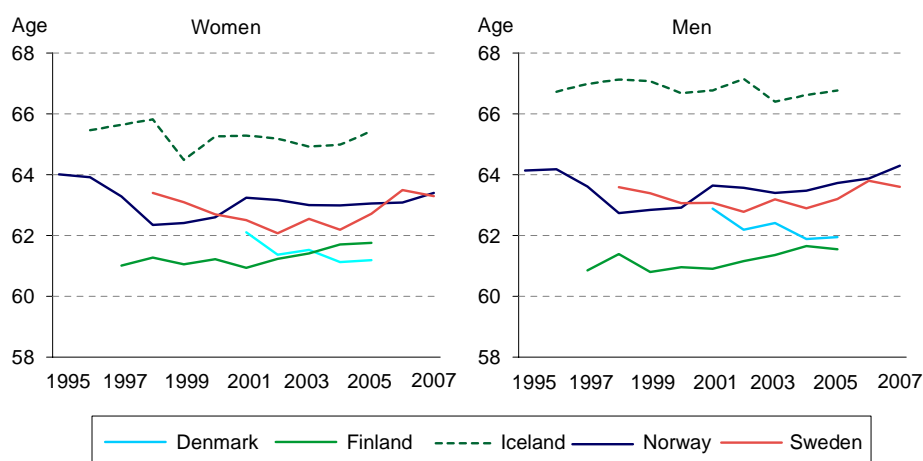
age pension before the age of 65 has risen quite sharply since 2003, but the number taking their pension after the age of 65 has also risen.

**Diagram 4.1 Average retirement age for people who had not retired at the age of 49**



Retirement age for women and men does not differ greatly. The greatest differences are in Iceland, where women on average retire eighteen months earlier than men. In Finland, retirement age for women is instead slightly higher than for men, although the differences between the genders are marginal. In the other Nordic countries the average retirement age for women is generally around six months lower than for men.

**Diagram 4.2 Average retirement age for people who had not retired at the age of 49, women and men**



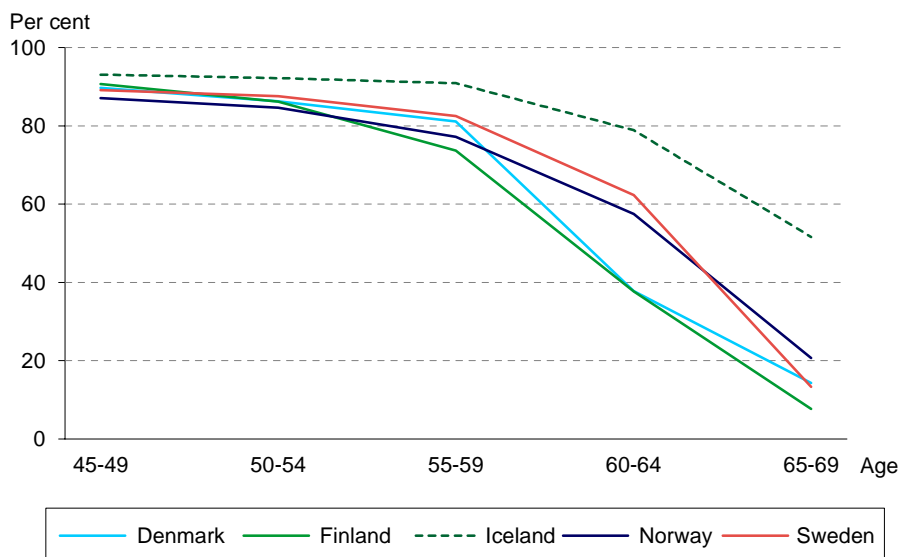
### *Average age of exit from the labour market<sup>15</sup>*

Average age of exit, the age at which people on average leave employment, can be calculated on the basis of data on labour-market participation. This does not just take account of retirement through the national insurance schemes and certain other collectively agreed insurance schemes. This measure also includes those who leave the labour market with private pension insurance or other support.

As shown earlier, labour-market participation is high among both men and women up to the age of 50. The picture then changes, with many leaving employment. The change is taking place more rapidly in some of the countries than in others. Labour-market participation in the 60-64 age group ranges from 79% in Iceland to around 60% in Norway and Sweden and down to just below 40% in Denmark and Finland.

<sup>15</sup> This section is partly based on the report *Genomsnittlig pensionsålder i de nordiska länderna* (Average retirement age in the Nordic countries), Analyserar 2006:11, Swedish Social Insurance Agency

**Diagram 4.3 Labour-market participation as a percentage of the population of different ages in 2006**



The average age of exit from employment can be calculated with the presentation in Diagram 4.3<sup>16</sup>. The calculation is based on persons who are in the labour force at the age of 47. The differences in labour-market participation between the countries at that age are relatively small – around 90% are in the labour force, and in Iceland as many 95%. For a given year, the age at which people on average would leave the labour force if the patterns of gainful employment at different ages in the given year remain constant is calculated using labour-market participation at successively higher ages.

As Diagram 4.3 indicates, Iceland has the highest age of exit, followed by Sweden and Norway, then Denmark and finally Finland. Women generally leave employment earlier than men. However, the difference is insignificant in Finland.

<sup>16</sup> The method of calculation, which is described in the Swedish Social Insurance Agency publication *Analyserar 2006:11*, is similar but not entirely identical to the method used to calculate expected retirement age.

**Table 4.1 Average age of exit in 2006**

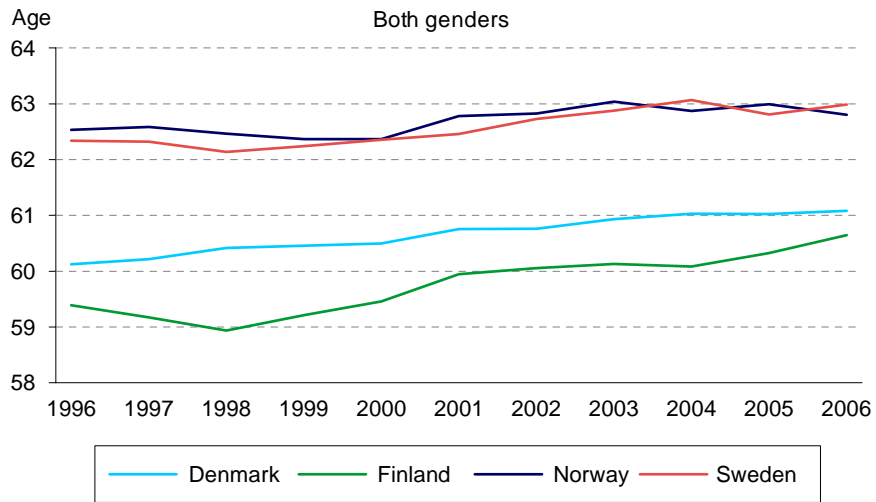
	Denmark	Finland	Iceland	Norway	Sweden
Women	60.3	60.5	66.0	62.2	62.7
Men	61.8	60.8	68.1	63.2	63.3
Women and Men	61.1	60.6	67.1	62.8	63.0

The differences between ages of exit are financially significant. If the total time in work is 40 years, an increase in age of exit for example of 4 years would result in an increase in labour supply of 10% and roughly the same increase in GDP. In addition to this there are savings in expenditure on various social benefit systems.

In drawing comparisons there is reason to identify a source of error of a more institutional kind. A person who is on sick leave from work is counted as part of the labour force, while a person who is fully retired on disability pension (or similar) is not. The crucial factor is whether the person still has his or her job or not. Depending on which systems exist in the countries and how they are applied, labour-force participation may differ, although health and work capacity are identical. This source of error is probably of little significance. In an alternative calculation for Sweden, persons who have been on sick leave for more than 6 months were assumed to have left the labour force. The age of exit then became 0.1 years lower.

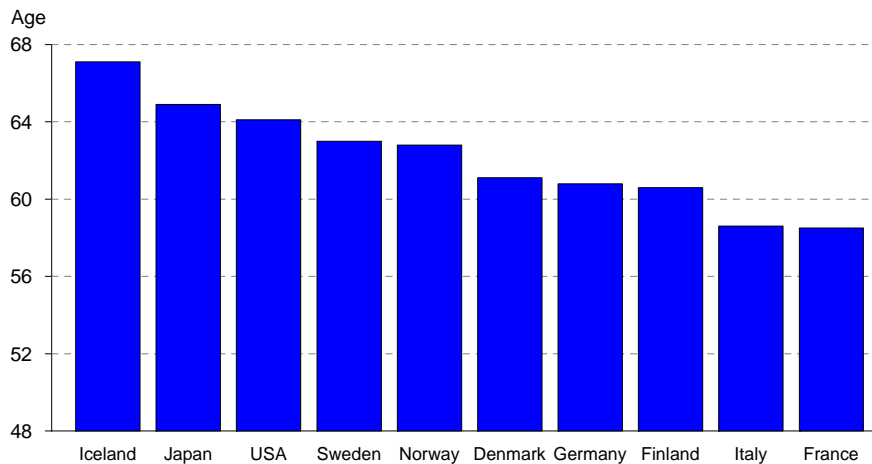
A problem in the valuation of age of exit is that part of the labour-market participation in the very highest age groups probably relates to temporary jobs and jobs with a low number of hours per week or month. The calculations may therefore be misleadingly high with regard to drawing conclusions about the age at which actual exit from employment occurs. Age of exit increased in all the four largest Nordic countries over the period 1996-2006, most in Finland. See Diagram 4.4. This signifies a break in trend: up to the mid-1990s the trend had tended to be downward. Age of exit in Iceland was high throughout the period. However the necessary basis for including Iceland in the diagram is lacking.

**Diagram 4.4 Average age of exit from the labour force for persons who were in the labour force at the age of 47, 1996-2006**



Many countries in Europe have a significantly lower age of exit than the Nordic countries. The age of exit in Japan and the United States is, however, higher than in the Nordic countries, with the exception of Iceland. Diagram 4.5 shows the average age of exit in some countries in 2006. The age of exit is higher for men than for women in all the countries. Gender differences are relatively small for the Nordic countries.

**Diagram 4.5 Average age of exit in various countries in 2006**



## *Chapter 5*

# Description of the Nordic old-age pension systems

A pension system can be regarded as an insurance contract between the individual and the collective covered by the system. The insured population may comprise everyone of a particular age group who lives or works in the country (as in the statutory systems) or everyone who works in a particular area of agreement (as in pension systems governed by collective agreements).

The old-age pension system and complementary schemes for early retirement have to provide financial security for elderly people leaving employment. The time of retirement may be a personal choice or be due to failing health or difficulties in obtaining continued employment in the labour market. Old-age pension on average constitutes the principal means of support for 15-20 years. The pension systems in the Nordic countries cover both basic security and income security – the latter in the context of the statutory systems, the negotiated systems or pension schemes in both sectors that complement one another. Major pension reforms have recently been implemented in Finland and Sweden, and a reformed system will come into effect in Norway in 2011. The reformed rules are being introduced gradually. Pensions will thus be affected by older rules for several years to come.

The basic protection guarantees a minimum level of pension for those who have not been in gainful employment or have only worked to a minor extent. The rules regarding how the guaranteed pension level, or parts of it, is reduced by other pension and other income varies between the Nordic countries. In the four largest countries there is means-tested housing allowance, which is generally of great significance to pensioners with low incomes. This housing allowance evens out differences in income between pensioners in different income brackets. There are also other kinds of means-tested supplements in the national systems.

The public pension system in the Faeroe Islands only covers basic protection. The same principally applies to the Danish system, where the greater part of pension is made up of basic pension. In Iceland collectively



agreed earnings-related pensions have been mandatory for all wage and salary earners since 1974.

The minimum pension level of a single pensioner in 2007 is shown in Table 5.1. The amount of pension is indicated both in the national currency and converted to what are known as purchasing power parities (PPP). For a certain amount in PPP the same basket of goods and services can be purchased in all the countries. Expressing amounts of pension in PPP makes it possible to compare the standard of living of pensioners between countries.

The guaranteed level of pension is also indicated as a percentage of average pay<sup>17</sup> for a full-time worker. This provides a measure of the pensioner's standard of living in relation to a person in gainful employment in the country and a relative comparison between countries. The last line of the table shows how high pension income becomes in relation to average pay when housing allowance is included. The pensioner is assumed to have average housing costs and no income other than pension.

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17 Average amounts of pay and conversion factors for PPP are presented in Annex 2.

**OLD-AGE PENSION SYSTEMS IN THE NORDIC COUNTRIES**

**Table 5.1 Guaranteed level of pension for a single pensioner in 2007 – overview**

	Denmark	Faeroe Islands	Finland	Iceland	Norway	Sweden
<i>Basic pension/guarantee pension</i>						
Retirement age	65	67	65	67	67	65
Monthly amount, national currency	10 874 DKK	9 354 DKK	524.85 EUR	130 775 ISK	9 789 NOK	7 153 SEK
Monthly amount, PPP	1 042	897	441	1 081	867	664
Taxed?	Yes	Partly	If only income: no	Yes	If only income: no	Yes
Indexation	Pay. Reduced by up to 0.3 percentage points in case of growth over 2%	.	Prices	Prices	Pay. From 2011: Pay and life expectancy, but not lower indexation than earnings-related pension	Prices
Pension as percentage of average pay, before tax	36	39	18	45	29 <sup>1)</sup>	25
Pension as percentage of average pay, after tax	44	60	26	55	41	28
<i>Housing allowance</i>						
Maximum proportion of cost of housing covered, %	Basic rule 75	-	75	-	Approx. 80	93
Pension incl. housing allowance <sup>2)</sup> as percentage of average pay, after tax	56	-	38	-	52	46

1 The level will be raised over the next few years and is expected to be equivalent to 32% of average pay in 2010

2 Relates to pensioner with an average monthly rent and no income or assets other than guaranteed pension. Monthly rent applied: DKK 3 500, Finland EUR 328, Norway NOK 5 200, Sweden SEK 4 000

Basic pension/guaranteed pension measured in relation to average level of pay after tax is highest in the Faeroe Islands and Iceland – the maximum pension is equivalent to 60 and 55% respectively of average pay in the country. In Denmark and Norway the maximum amount of basic pension is 40-45% of average income, and the corresponding level in Finland and Sweden is 26-28%. When housing allowance is included, the pensioner's income level rises to around 55% of average income in Denmark and

Norway and up to 38 and 46% in Finland and Sweden. In Finland and Norway a pensioner with basic pension as sole income does not pay any tax.

The housing allowance is means-tested and the maximum amount of basic pension is reduced for those who have other pensions. In Finland and Sweden the basic pension/guaranteed pension is reduced by statutory work-based pension. In Norway this applies to the special supplement to the basic pension. In the reformed system which comes into effect in 2011 the guaranteed pension is offset by the earnings-related pension. In Denmark and the Faeroe Islands the basic pension is reduced by collectively agreed pensions, income from work and other taxable income except social security pension. The information in Table 5.1 relates to newly granted pension. How the pensioner's standard of living changes with rising age in relation to those in gainful employment at the same time depends on the method of indexation, whether the amount of pension is raised in line with changes in pay levels or prices. In Finland, Iceland and Sweden, where the basic pension is price-indexed, the pensioner's standard of living in relative terms will decrease in good times when increases take place in real pay. A more detailed description of each country's pension system is provided in Annex 3.

Most women and men earn pension based on gainful employment. The Finnish and Swedish earnings-related pension systems have recently been reformed, and a reformed system comes into force in Norway in 2011. Pension in the reformed systems in all three countries is based on lifetime earnings. In the earlier systems, which are now being phased out, the level of pension was based on a limited number of best or last years of income with requirements for a particular number of years of work for full pension. Also several of the collectively agreed supplementary pension schemes – referred to hereafter as supplementary pensions – have changed in the direction of defined-contribution systems. However, it will take several years before the new earnings rules have their full impact on pension income.

In the Finnish statutory earnings-related pension system there is no ceiling, no upper limit, on what income pension is based on. The scope of supplementary pensions in Finland is therefore very small. In Norway and Sweden the supplementary pensions are responsible for pension protection for incomes above the ceiling of the statutory system and are also complementary for incomes up to the ceiling. Around 90% of people in gainful employment are covered by a supplementary pension insurance scheme. Supplementary pension has been mandatory in Norway since 2006.

The Danish ATP (employment pension) system has a different design than other work-based pensions. Here it is the number of hours worked that

determines the size of the pension contribution and therefore also the size of pension. The amount is relatively low, the maximum amount for a new pensioner in 2007 being 35% of the basic pension. The ATP pension (employment pension) is thus not related to earlier income. Instead it is the supplementary pensions that are responsible for income security. Many of these pension schemes were established around 1990 and are thus not yet in full function. The majority of wage and salary earnings are insured for supplementary pension. In Iceland, employment pensions have been mandatory by law for all wage and salary earners since 1974 and there has been fully harmonised legislation since 1997.

Table 5.2 presents an overview of the statutory systems for earnings-based pensions. The supplementary, collectively agreed systems are thus not included, with the exception of Iceland. The table shows, very broadly, how pension is earned, how pension entitlements are index-linked and whether pensions will be adapted in future to increasing average life expectancy.

**OLD-AGE PENSION SYSTEMS IN THE NORDIC COUNTRIES**

**Table 5.2 Work-based pension in the systems regulated by law – overview**

	Denmark	Finland	Iceland	Norway	Sweden
Pension benefit	ATP (employment pension)	Earnings-related pension	Employment pension	Earnings-related pension from 2011	Earnings-related pension, premium pension
Retirement age	Minimum age 65 <sup>1)</sup>	Age 63-68. Pension is reduced at minimum age 62 <sup>2)</sup> and increased beyond age 68.	Age 65-67 <sup>3)</sup> . The later pension is taken the higher it is	Minimum age 67 <sup>4)</sup> . From 2011: age 62-75. The later pension is taken the higher it is	Minimum age 61. The later pension is taken the higher it is
Pension is based on	Working time, per month and number of years	Lifetime earnings, applicable from 2005. Higher earning at higher ages.	Lifetime earnings	Lifetime earnings, applicable to those born in or after 1954 <sup>5)</sup>	Lifetime earnings, applicable to those born in or after 1938 <sup>5)</sup>
(Before reform)	-	(last 10 years of employment)	In older funds for public-sector employees: Final salary, number of years of earnings	(20 best years of earnings out of 40, applicable to those born in or before 1962)	(15 best years of earnings out of 30, applicable to those born in or before 1953)
<i>Indexation</i>					
- before retirement	Agreed between the social partners	Prices and 80% of real growth in pay	Pay	Pay	Earnings-related pension Pay
- after retirement:	Agreed between the social partners	Prices and 20% of real growth in pay	Prices In older funds for public-sector employees: pay	Pay minus 0.75 percentage points (before reform: Pay)	Pay minus 1.6 percentage points Premium pension return on fund
Pension adjusted to life expectancy for first time	Gradual increase in retirement age 2024 – 2027 to age 67	2010	–	2011 Life expectancy divisor with preliminary interest rate of 0.75% in reformed system.	2001, reformed pension only. Life expectancy divisor with preliminary interest rate 1.6% for income pension, 3.9% for premium pension <sup>6)</sup>

1 Possible to retire from age 60 with voluntary early retirement pay from unemployment insurance fund

2 Possible for an unemployed person born before 1950 to receive an unemployment pension from the age of 60

3 The pension funds can allow for early/deferred taking of pension of five years

4 Possible to retire from age 62 with collectively agreed pension (AFP)

5 The reformed system is being phased in so that certain age classes receive pension calculated according to both old and new rules

6 Relates to unit-linked insurance

Examples are shown in Table 5.3 below of how adaptation to life expectancy can be expected to affect pensions in the future. It emerges, for example, that a Norwegian person in gainful employment who retires at the age of 65 in 2050 on average will be a pensioner for nearly four years longer than one who retires in 2010. The table could be summarised as indicating that one extra year as a pensioner in Norway or Sweden means that the annual pension decreases by around 4-5 percentage points. The reason why the decrease is relatively greater for the Norwegian pension than for the Swedish one is the choice of preliminary interest rate in the life expectancy divisor.<sup>18</sup> The reduction in Finland is smaller, between 3 and 4 percentage points.

**Table 5.3 Percentage decrease in annual pension due to increased life expectancy. Pension at age 65. Comparison year 2010**

	Finland		Norway		Sweden	
	increased life expectancy	reduced annual pension	increased life expectancy	reduced annual pension	increased life expectancy	reduced annual pension
2030	2.9 years	11%	1.9 years	10%	1.7 years	7%
2050	5.3 years	18%	3.9 years	17%	2.7 years	11%

In Finland, Sweden and in the reformed Norwegian system it is possible to continue in gainful employment while receiving pension without the pension being reduced by earned income. In Sweden people in work accrue pension beyond the upper age limit, regardless of whether they are receiving pension at the same time or not. In Finland there is an age limit of 68 and in Norway the age limit after the reform in 2011 will be 75.

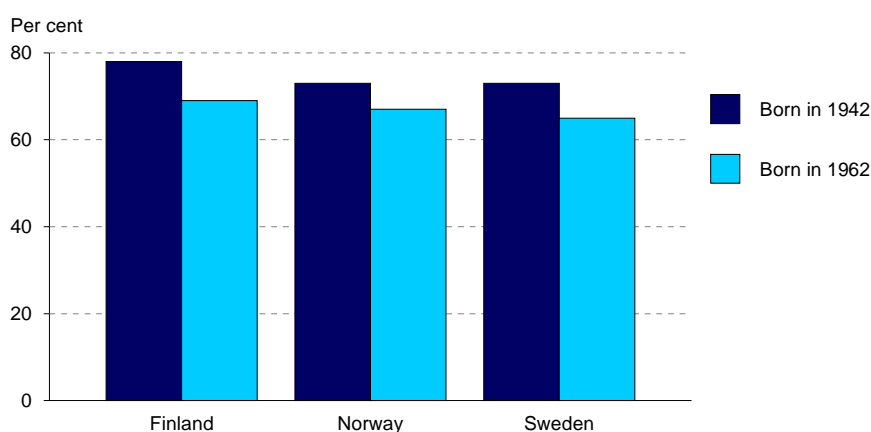
Pension has been calculated for two average earners in Finland, Norway and Sweden as an example of how large the pension can become in relation to previous earnings. Pension income in this case also includes supplementary pension. Persons born in 1942 and 1962 have both worked for 42 years with an average income and retire at the age of 67. The older person thus retires in 2009 and the younger one in 2029. The pension system is undergoing reform in all three countries. The new rules with lifetime accrual and life expectancy adjustment are being phased in. In

<sup>18</sup> The Norwegian and Swedish pensions are also affected by the reduced mortality rate among people of working age due to lower inheritance gains. However, this effect has not been included in the table.

Finland and Norway a person born in 1942 is not affected at all by these new rules. The phasing-in of the Swedish system in principle means that 40% of the pension follows the reformed rules. For the person born in 1962, who is thus 20 years younger than the person in the previous example, the new rules on accrual have had an impact of around 60% in Finland, 90% in Norway and 100% in Sweden.

Diagram 5.1 shows how large the newly granted pension is estimated to be at the age of 67 for the two individuals born in 1942 and 1962. The diagram shows the pension after tax as a percentage of average pay for a person working full-time. The assumptions on future growth in pay in the calculation are described in more detail in Annex 2.

**Diagram 5.1 Pension (incl. supplementary pension) as a percentage of average income for persons in gainful employment at the age of 67 in 2009 and 2029. Pensioner born in 1942 and 1962. Amount after tax**

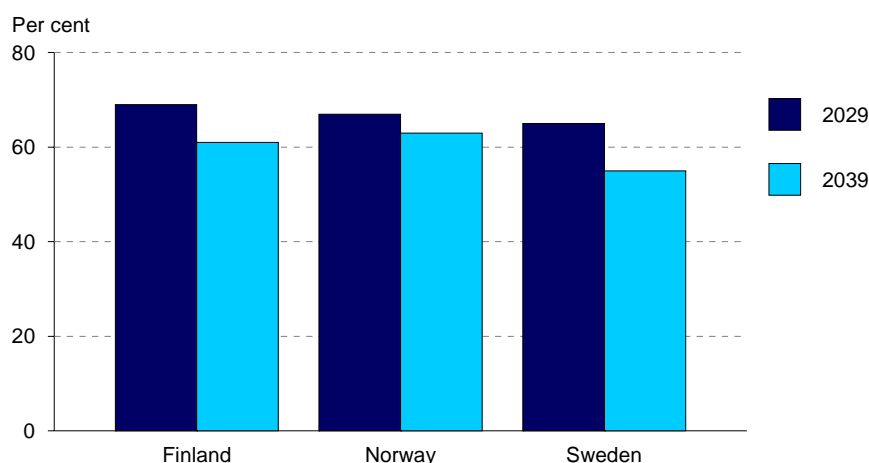


The Finnish middle income earner who retires in 2009 receives higher compensation after tax than the new pensioners in Norway and Sweden. The tax rules in Finland and Norway are more favourable for pensioners than for wage and salary earners. In Sweden tax on income from work is somewhat lower than for pensions and other social insurance benefits. The Norwegian and Swedish pensioners receive equally high pensions after tax in relative terms. The pensioner born in 1962 receives a relatively lower pension. The pension for the younger person is affected both to a greater degree by the new rules on earnings and by the life expectancy adjustment. According to population projections, average life expectancy will increase. If

retirement age, in this case 67, remains unchanged, the pension will therefore be lower in 2029.

Diagram 5.2 shows how the pension develops over time for the individual born in 1962. The diagram shows the pension when it is first granted and ten years later.

**Diagram 5.2 Pension (including supplementary pension) as a percentage of average income for people in gainful employment on retirement in 2029 and ten years later. Pensioner born in 1962. Amount after tax**



The statutory earnings-related pension is linked in some way to pay trends in all three countries. In Finland pension is raised in line with inflation and 20% of real growth in pay: pensions thus grow more slowly than pay. In Norway and Sweden statutory pension<sup>19</sup> is raised annually in line with growth in pay less a certain rate of growth (this rate of growth is credited in the divisor). This growth rate is 0.75% for the Norwegian pension and 1.6% for the Swedish one. The Swedish earnings-related pension thus decreases more in relation to pay than the Norwegian earnings-related pension. The Swedish premium pension has been calculated as a unit-linked insurance with credited interest of 3.9% per year in the life expectancy divisor. With the return on the fund and growth in pay assumed in the calculation, this means that the premium pension grows more slowly than pay. The Swedish supplementary pension also grows less strongly than pay. It consists of two

<sup>19</sup> This does not apply to the Swedish premium pension



parts, an inflation-proofed part and a funded part which in the example has been calculated in the same way as the premium pension. The Swedish pensioner receives around 75% of his or her pension from the statutory system, while the proportion for the Norwegian pension is around 80%. The remainder is made up of the supplementary pension.

In Annex 2 there are also examples showing how large the pension becomes if it is taken two years earlier, at the age of 65.

The pension systems of each country are described in Annex 3.

## *Chapter 6*

# The pension system and women and men

The way in which a pension system is designed may have different effects for women and men<sup>20</sup>. One reason is the different attachment of women and men to the labour market and the significance of this for work-based pension. Another is the higher average life expectancy of women, which means that the pension may be principal source of maintenance for more years for women than for men.

Women in the Nordic countries are economically active to almost the same extent as men, but there are differences in the patterns of employment of men and women. It is generally women who take greatest responsibility for the family. This means that they more often work part-time or are not in gainful employment at all during some period when their children are small. They also, on average, receive lower pay than men.

In a pension system where there is a strong link between paid contributions and the level of benefit no direct redistribution takes place between persons with high and low income. Account is taken of earnings throughout working life in the Finnish, Norwegian and Swedish reformed pensions. High lifetime earnings result in a higher pension, and the system consequently encourages gainful employment. Unlike the Finnish system, there is a ceiling in the Norwegian and Swedish pension systems for the pension-qualifying level of earnings.

Extra pension entitlement is given in the Finnish, Norwegian and Swedish systems for the care of young children. This kind of subsidy to parents of young children can be regarded as both vital and necessary in the system, as each pension system depends on the economically active generation to function. Pension entitlement for years of childhood contributes to smoothing

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20 The effects of different pension systems for women and men are analysed in the report Retirement Income Security for Men and Women, 2004 by A-C Ståhlberg, Stockholm University, M Cohen Birman and A Sundén, National Social Insurance Board (RFV) and A Kruse, Lund University

out differences in earnings that are due to women, to a greater extent than men, deciding against gainful employment while their children are young.

Before the reform of the Nordic pension systems, that is to say before the change-over to a system based on the principle of lifetime earnings, the number of years of gainful employment required for full pension was limited. A redistribution takes place in a system of this type from persons with a long working life to those who have been in the labour market for a shorter time, which on average favours women. At the same time the incentive for gainful employment is weakened, particularly among women. Provision is made for example for the care of children or other unpaid activity without this impacting on future pension. Compared with the reformed systems, this means a more random redistribution between people with different patterns of employment – the system can be said to subsidise all kinds of other activities for a limited period. The elements of redistribution become clear and are targeted at specific situations in a pension system based on a strict principle of lifetime earnings.

In the public pension systems the same level of earned pension entitlements provides an equally high pension for women and men. This also applies in systems with a direct link between contributions and benefits. The longer average life expectancy of women thus does not mean that they receive a lower annual pension. With the same annual pension for men and women, the lifetime pension of women becomes greater than that of men, which signifies a redistribution in favour of women.

The way in which it is chosen to index pensions can have differing significance for groups with differing average life expectancy. Pay indexation is particularly vital, with average positive growth in real pay, for those who will live for a long time as pensioners. With price indexation, their pensions at the end of their lives would have declined in standard in comparison with people in gainful employment at the same time.

A type of indexation has been introduced in the Norwegian and Swedish systems which in the Swedish system is known as adjustment indexation. Adjustment indexation means that the pension is adjusted upwards by the general growth in pay less a given percentage. An interest rate of an equivalent level is credited in the divisor, which is used to calculate the pension. The credited interest means that the newly granted pension becomes higher than it would otherwise have been. The pension thus becomes higher at the start but decreases with time in relation to the pay of people in gainful employment. For a pensioner with an average life expectancy, the total lifetime pension would have been just as high without credited interest in the divisor and with pure pay indexation. The difference

is purely in the payment profile: the alternative would have produced a lower initial pension which increased each year in line with pay. The difference in payment profile means that a pensioner with a shorter life expectancy is favoured by a system with credited interest and adjustment indexation. This means that a greater proportion of the lifetime pension is paid during the first part of a life as pensioner of average length. Someone who lives longer than average, on the other hand, can be said to be disadvantaged by adjustment indexation. The pension paid during the “extra” years of life is lower with adjustment indexation than it would have been with pure pay indexation.

The basic protection in the basic pension system is naturally of greatest significance to people who have had low earned incomes. The level of basic pension is high in Iceland, Denmark and the Faeroe Islands. It is wholly or partially reduced by both the person’s own income and the spouse’s income. The basic pension / guaranteed minimum pension in the Finnish, Swedish and the reformed Norwegian system is scaled down against the person’s own earnings-based pension in the public system. Means-tested benefits have the advantage of reaching those who are in greatest need of extra financial support. On the other hand, means testing often has high marginal effects for low earners, which adversely impacts on the incentive for gainful employment. When benefits are tested against the household income, this can become particularly noticeable for the person with the lowest income in the household, which in most cases is the woman. Her gainful employment results in a low financial dividend for the pension.

How the issue of survivor protection is dealt with is of greatest significance to women. As women on average live longer and additionally on average are the younger person in a cohabiting relationship, in most cases it is the woman who will live in a single-person household at the end of life. Survivors’ pensions are not, however, included in the descriptions of the countries’ pension systems presented here.

## *Chapter 7*

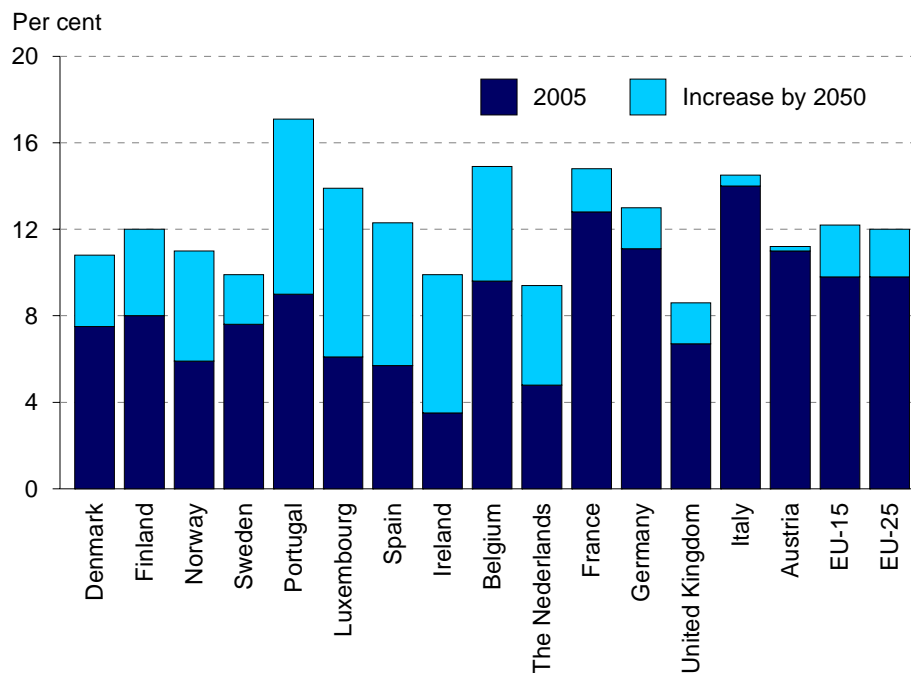
# The pension systems and future costs

The trend in the Nordic countries is towards a sharp increase in the proportion of elderly people in the population. For every elderly person there are at present three to four persons of working age. It is estimated that in 2050 there will be two. The trend is always towards fewer people having to support more in the rest. This was illustrated in Diagram 3.4 with the European Commission's population projections up to 2050 for countries in the EU. In the same report calculations were made on how far pension costs for the elderly may increase up to 2050. Four factors influencing cost are identified in the report. The principal reason for the projection increases in costs is the demographic trend. The effect is mitigated by an assumed increase in activity rate in all EU countries. Another factor that impacts on costs is the number of pensioners in relation to the population aged 65 or over. In Denmark and Finland it is assumed that this proportion will decrease, a result of the rise in retirement age and/or reduced opportunities for early retirement. In Sweden, on the other hand, the proportion is expected to increase somewhat due to pension payments to persons who are resident outside the country. A fourth factor of significance to the dependency burden is the size of average pension in relation to average pay per person in gainful employment. It is assumed that this benefit ratio will decrease for the Nordic countries and most other countries, which thus slightly lessens the rise in costs.

The result of the European Commission's projects is shown in Diagram 7.1. The diagram has been supplemented by data for Norway according to national projections. The first four bars in the diagram show the trend for the Nordic countries, the last two bars show the average for the countries in the EU and in between the countries are arranged by size of change in costs expressed as a percentage of GDP. The diagram should be interpreted with caution with regard to levels and trend. Differences may, for example, occur in the type of pensions and allowances included for each country. Despite these and other objections, it can be noted that the diagram confirms the

previous picture: the Nordic countries are not among those that can expect the most dramatic development.

**Diagram 7.1 Costs of pensions for the elderly as a percentage of GDP. In 2005 and 2050**



Source: European Commission 2006<sup>21</sup>, supplemented by data for Norway

Finland, Norway and Sweden have made their own calculations of the trend in costs up to 2050, as shown in Diagram 7.2. The calculations only cover the public, statutory systems. Supplementary pensions are thus not included.

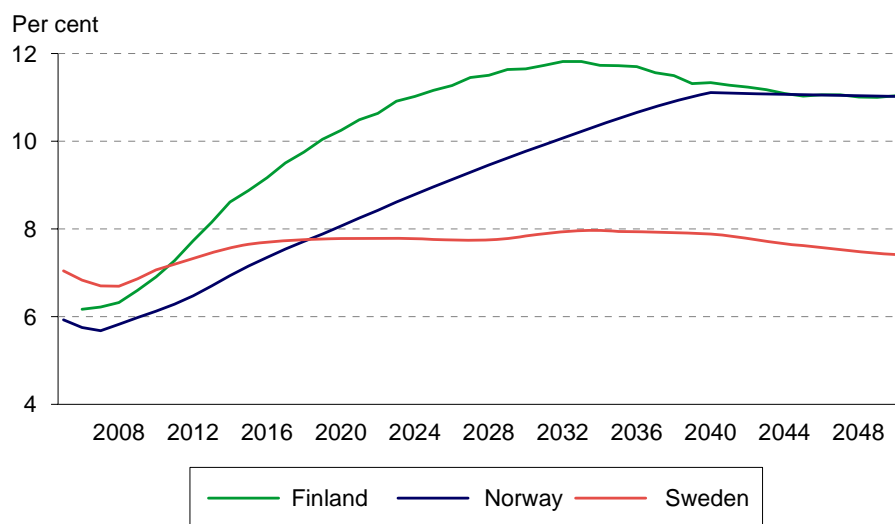
In Denmark the costs of the national basic pension are expected to be relatively lower in future as the supplementary pensions gradually increase in size. More pensioners will be entitled to a supplementary pension and the average amount paid out will increase. Higher payment of supplementary pension means that the amount of basic pension decreases. The average

21 European Commission (2006) “The Impact of ageing on public expenditure: projections for the EU25 Member States on pensions, health care, long-term care, education, and unemployment transfers (2004-2050)” DG ECFIN

amount of basic pension for new pensioners in 2008 is around 13% lower than the average amount for the group of pensioners as a whole, due in part to the supplementary pensions. If this trend continues, the average amount of basic pension will fall appreciably in a short time.

In Diagram 7.2 the pension payments are calculated to increase considerably more sharply in Finland and Norway than in Sweden. This is due both to differing demographic trends and the estimated development of average pensions in relation to average pay for those in gainful employment at the same time.

**Diagram 7.2 Estimated expenditure on old-age pension from the statutory systems as a percentage of GDP<sup>22</sup>. 2005-2050**



Source: The countries' own projections

The number of pensioners is expected to increase most in Norway, a rise of 135% by the end of the period compared with around 80% in Finland and 55% in Sweden. It has been assumed in the calculations that the pattern of retirement is largely unchanged over the period. It has thus been assumed that life expectancy adjustment of pensions will not affect average retirement age. On the other hand, life expectancy adjustment affects the

<sup>22</sup> Basis of calculation: Real wage growth 1.8%, real rate of return 3.25%, inflation 2%. GDP rises in line with total wage bill. Mainland GDP has been used for Norway. Basic pension and work-based pension from the statutory systems are included, while supplementary pension is not.

average amount of pension. However, the average pension in Norway will increase by around 10% over the next few years. The increase can be principally attributed to longer accrual periods. Norway's present-day earnings-based pension system was introduced in 1967. This means that by 2005 a pensioner could have a maximum of 38 years of accrual. The increased female activity rate will also signify more years of accrual and therefore higher pensions in the future. After 2030 the pension starts to decrease, principally due to life expectancy adjustment, and is estimated to be around two per cent higher in 2050 than in 2005. Average pension decreases in the Swedish calculations in relative terms over the whole period, largely due to life expectancy adjustment. In Finland the phasing-in of the pension system is estimated to mean that average pension will increase up to 2020 and then level off and start to decline, principally due to the life expectancy adjustment.

Almost all the countries in the EU have implemented, or plan to implement, reforms in the area of pensions in response to future increases in costs. The changes in rules relate for example to indexation of pension entitlements, extending the period of accrual taken into account when benefits are calculated and adjusting the level of benefits with respect to increased life expectancy. Raising pension contributions is another alternative.

The Swedish old-age pension reform has signified a shift from a defined-benefit system to a defined-contribution system with a fixed contribution. A rise in contribution is thus not an alternative to addressing financial imbalances in the system. In such situations the annual upward adjustment of pension entitlements and pensions in the pay-as-you-go system is instead reduced by the activation of balancing.<sup>23</sup> It is the same type of adjustment that takes place in funded defined-contribution systems in the event of financial strains, for example in the public premium pension system. The balancing ensures that the system's expenditure in the long term does not exceed its income. Each year an accounting report is compiled on the assets and liabilities of the income pension system and how these are changing. This annual reporting makes it possible to monitor the trend in the economic and demographic factors that impact on the financial position of the system and the size of pension.

The Norwegian reformed pension system has many features in common with the Swedish system, but not with regard to financing: the pensions are

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23 The way in which balancing works is described in Annex 3



financed continuously and are part of the government budget. Finnish pensions are principally financed by pension contributions and partly by tax revenue. In Denmark and the Faeroe Islands most public pension expenditure is financed from taxes.

Life expectancy adjustment of pension, which several countries have introduced, is based on the principle that the present value of aggregate lifecycle pension should be unchanged. If pension is to be paid for more years, the annual amount therefore becomes lower. Life expectancy adjustment can be viewed as the choice an individual makes between lower benefit and later retirement. However, it is not possible for everyone to freely choose their own time of retirement, for example for health-related reasons.

In Finland newly awarded pensions will be affected by life expectancy adjustment for those born in 1948 or later. In the Swedish reformed system, earnings-based pensions are calculated using a divisor which is related to the calculated number of years spent as a pensioner. The reformed system is being successively introduced, which means that the life expectancy adjustment will be fully implemented for people born in or after 1954. Pensions are also calculated using a divisor in the Norwegian reformed system. Life expectancy adjustment will also, however, be introduced for pensions calculated according to older rules. The new rules are applied for the first time for the 1944 cohort.

With an unchanged retirement age in the future, the increased life expectancy will be added in its entirety to the time spent as pensioner and the life expectancy adjustment will mean that pension decreases. This reduction in pension can be offset by deferring retirements and working longer. To achieve this around two-thirds of the time needs to be added to the person's working life. Despite the higher retirement age, the time spent as pensioner will, on average, be longer than it is today.

An equivalent measure in Denmark affects the retirement age for receipt of basic pension. The current retirement age of 65 will be successively raised over the period 2024-2027 to 67. From 2030, when the 1963 cohort reaches retirement age for receipt of basic pension, retirement age will be raised further in relation to the rise in life expectancy. Basic pension cannot be taken early. The possibility of early retirement from the age of 60 is provided for instead in the voluntary early retirement pay (*efterløn*). This age limit will be raised at the same rate, so that voluntary early retirement pay can be paid for a maximum of five years.

The period of earnings has been extended in the public earnings-related systems to increase the incentives to continue in gainful employment. It is

common to the Nordic countries that pension is based on earnings throughout economically active life, taking account of the accrued pension entitlements of each year. Years of earnings after the age of 62 weigh particularly heavily in the calculation of the Finnish pension. Those who carry on working after retirement will continue to earn pension entitlements that raise the amount of pension. However, it is not just the design of the public pension system that affects the individual's choice, whether it is worthwhile carrying on in gainful employment or not. As pension systems regulated by collective agreements are of significance to the economic standard enjoyed by pensioners, the design of these regulated systems also plays a great role.

To summarise, a stable pension system requires benefits to be designed in such a way that there is flexibility in relation to the demographic and economic trend. Life expectancy adjustment contributes to making the system demographically compliant, and pay indexation of pension entitlements and benefits contributes to flexibility in relation to the economy – these elements can be found in the Nordic reformed systems.

The balance between the extent and length of working life and the number of years spent as pensioner is of significance to future pensions. This applies both individually to the level of compensation in the earnings-based systems and on a system level with regard to the dependency ratio. At the same time, studies show that many people wish to retire early, but the proportion falls with rising age, to some extent perhaps because economic conditions then become more clearly apparent. However, with increasing life expectancy it is not unreasonable for part of this time to be added to the working life: later retirement, but still a longer period of retirement than previous generations. The increase in life expectancy means that, to at least some extent, it is healthy years that are added to life and that the capacity of older people for work has improved. On the other hand, work capacity is related to the changes that have occurred in employment with regard to tasks and required skills, a change that perhaps has disadvantaged older people with respect to younger people. Ageing has many aspects, which weigh unequally heavily with regard to ability to cope with various work tasks, normal ageing can be obstacle to work. One solution for the employer has been to assist towards early retirement for the employee. If more older people are to stay in work longer, there is a need for a demand for older labour in the labour market. The increase in the age of exit from the labour market observed in recent years may suggest that a change of attitudes is under way, among both employers and employees.

A high activity rate is essential to finance pensions and other welfare. Pension expenditure in Finland and Norway will increase sharply according to the calculations shown here. In a pay-as-you-go system, where the expenditure is paid continuously in contributions or taxes, the contribution/tax must be raised, or pensions must be lowered, to cope with the financing. In the former case a larger portion of the joint scope for consumption will be claimed for pensions. As described in Chapter 2, it is also the case with a funded system that more cannot be consumed than is produced. However, it is not equally evident how the scope for consumption is distributed. Whether pensioners receive high or low incomes depends in part on the results of financial market forces.

The increasing number of elderly people in the population does not just mean higher pension expenditure but also that the costs of medical and social care will rise. The increasing number of genuinely old people will make great demands on resources, financial and personnel – a further challenge to be faced by the society of tomorrow.

## *Annex 1*

# Assumptions on average life expectancy, birth rate and net migration in the population projections

	Average life expectancy		Birth rate	Net immigration	Population
	Women	Men			
<i>Denmark</i>					
2007	80.4	75.9	1.80	8 900	5 447 084
2050	86.0	83.0	1.85	1 900	5 819 000
<i>Faeroe Islands</i>					
2007	81.3	76.5	2.57	-75	48 480
2048	88.2 <sup>1)</sup>	85.0 <sup>1)</sup>	2.57	.	52 000
<i>Finland</i>					
2007	82.9	75.8	1.83	13 600	5 300 484
2050	89.7	85.8	1.84	10 000	5 748 000
<i>Iceland</i>					
2007	82.9	79.4	2.07	3 097	307 672
2050	87.2	84.8	1.85	1 028	431 246
<i>Norway</i>					
2007	82.7	78.2	1.90	39 700	4 681 134
2050	88.9	84.7	1.85	20 000	6 553 000
<i>Sweden</i>					
2007	83.0	78.9	1.85	54 000	9 182 927
2050	86.3	83.8	1.87	15 000	10 384 000

1 The figure relates to total average life expectancy for a person aged 60

## *Annex 2*

# Calculations

The following conversion factors have been applied for PPP:

Denmark	Faeroe Islands	Finland	Iceland	Norway	Sweden
10.43	10.43	1.19	121.03	11.29	10.77

Average pay used in Table 5.1 can be seen in the table below.

### *Pension calculations for typical cases*

Calculations of typical cases are presented for the pension systems in Finland, Norway and Sweden.

Calculations are made for two persons of different birth cohorts but with identical occupational careers. They were born in 1942 and 1962 and started to work at the age of 25. The individual's pay follows the general trend in pay throughout their career. In 2007 the person has pay equivalent to the average pay stated in the table below. The person has thus had average pay throughout his or her life.

The Norwegian and Swedish calculations relate to both statutory pension and supplementary pension. Supplementary pensions are governed by different agreements. The table shows which pension agreements have been used in the calculations. The systems of rules are described in the sections on the individual countries.

## OLD-AGE PENSION SYSTEMS IN THE NORDIC COUNTRIES

	Average pay in 2007, annual amount in national currency.	Supplementary pension, agreements used in the calculations
Denmark	DKK 359 912	
Faeroe Islands <sup>*)</sup>	DKK 287 623	
Finland	EUR 34 837	-
Iceland <sup>*)</sup>	ISK 3 475 693	
Norway	NOK 399 500	Public occupational pension <sup>24</sup>
Sweden <sup>*)</sup>	SEK 336 818	White-collar staff in private employment, ITP <sup>25</sup>

<sup>\*)</sup> Equivalent to AW (average wage), which is used in OECD calculations

*Basis of calculation for the future:* Real annual wage growth 1.8%. Real rate of interest/return 3.25% per year. Inflation 2%. Average life expectancy changes according to the national population projections.

The pension is presented as a percentage of average wage at the same time. The statement for the year in which the individual retires thus shows the replacement ratio, that is to say how high the pension is in relation to the pay the individual would have received in gainful employment. The statement ten years after the year of retirement shows how the pension has developed in relation to the pay of people in gainful employment.

A comparison of the replacement ratios for the individuals born in 1942 and 1962 shows the impact of the life expectancy adjustment but also the effect of new accrual rules.

Comparison of the replacement ratios at retirement ages of 65 and 67 shows the significance of a few years of extra gainful employment. The pension is positively affected by extra earned pension entitlement and by the life expectancy adjustment (earned pension entitlement is to be shared between fewer years of retirement, which results in higher annual pension). In the reformed system new pension entitlements can be earned after normal retirement age.

In the Finnish and Norwegian examples the pension of the person born in 1942 is not affected by the reformed rules. The phasing-in of the Swedish system in principle means that 40% of the pension follows the reformed rules. For the person born in 1962 the new rules on accrual have had an impact of around 60% in Finland, 90% in Norway and of 100% in Sweden.

24 Offentlig tjänstepension tillämpas, eftersom reglerna för privata tjänstepensioner varierar mellan branscher

25 ITP-avtalet tillämpas, eftersom det har den största omfattningen

## Results

### Finland

#### Person born in 1942

	Retirement age 65		Retirement age 67	
	2007	2017	2009	2019
Pension, annual amount in EUR, 2007 prices	22 660	23 470	26 370	27 320
Of which supplementary pension, %	–	–	–	–
<i>Pension as percentage of pay:</i>				
- before tax	65	56	73	68
- after tax	71	63	78	73

#### Person born in 1962

	Retirement age 65		Retirement age 67	
	2027	2037	2029	2039
Pension, annual amount in EUR, 2007 prices	28 050	29 060	32 810	33 990
Of which supplementary pension, %	–	–	–	–
<i>Pension as percentage of pay:</i>				
- before tax	56	49	64	55
- after tax	63	55	69	61

**OLD-AGE PENSION SYSTEMS IN THE NORDIC COUNTRIES**

**Norway**

**Person born in 1942**

	Retirement age 65 *		Retirement age 67	
	2007	2017	2009	2019
Pension, annual amount in NOK, 2007 prices	263 700	296 700	273 200	302 900
Of which supplementary pension, %	100	20	20	20
<i>Pension as percentage of pay:</i>				
- before tax	66	62	66	61
- after tax	73	69	73	68

\* As retirement age in the present-day system is 67, the example is based on the drawing of collectively agreed early retirement pension (avtalesfestet pensjon - AFP) in the public sector. All public sector employees are covered by AFP and pension is principally calculated as public occupational pension.

**Person born in 1962**

	Retirement age 65		Retirement age 67	
	2027	2037	2029	2039
Pension, annual amount in NOK, 2007 prices	311 900	345 800	356 800	395 500
Of which supplementary pension, % *	22	22	19	19
<i>Pension as percentage of pay:</i>				
- before tax	55	51	60	56
- after tax	62	58	67	63

\* Future rules are under study. The example is based on the present-day rules, but with life expectancy adjustment of pension and a neutral system for flexible pension.



**Sweden**

**Person born in 1942**

	Retirement age 65		Retirement age 67	
	2007	2017	2009	2019
Pension, annual amount in SEK, 2007 prices	219 700	221 800	265 200	267 600
Of which supplementary pension, %	22	22	22	21
<i>Pension as percentage of pay:</i>				
- before tax	65	55	76	64
- after tax	65	54	73	62

**Person born in 1962**

	Retirement age 65		Retirement age 67	
	2027	2037	2029	2039
Pension, annual amount in SEK, 2007 prices	287 300	286 900	337 700	337 100
Of which supplementary pension, %	27	26	27	26
<i>Pension as percentage of pay:</i>				
- before tax	59	50	67	56
- after tax	58	49	65	55

## *Annex 3*

# The Danish old-age pension system

The Danish pension system is based on three pillars, each with its own principal purpose.

The first pillar primarily consists of the public **folkepension (basic pension)**. The basic pension ensures a reasonable basic standard of living for everyone. The basic pension makes up the greater part of the pension income of people in retirement today, cf. the table below.

The savings-based pension scheme **ATP (employment pension)** is also often considered to belong to the 1st pillar. ATP ensures a supplement to the basic pension for almost the whole population. ATP is statutory, and the pension is independent of previous work earnings. The contribution depends on the extent of employment.

The second pillar primarily consists of the privately organised **labour-market pension schemes** (supplementary pension), which ensure the majority of wage and salary earners a supplement to the basic pension and a reasonable replacement ratio on retirement. The schemes are typically savings-based. These schemes will in future account for a substantially larger proportion of pensioners' pension income. Larger labour-market pensions, viewed in isolation, will mean less expenditure on basic public pension due to the income testing of the latter.

The third pillar comprises various possible individual pension schemes, which make it possible to take account of individual wishes. The task is accomplished by a wide diversity of arrangements offered by the insurance companies and others under relatively advantageous tax rules.

In addition there are some schemes which – like ATP – cannot be clearly attributed to a single pillar:

- The Special Pension Savings Arrangement (*Særlige Pensionsopsparing – SP*), is a statutory, savings-based pension scheme from 1999. The contribution to SP is 1% of earnings, but has been suspended during the period 2004 – 2008 (inclusive).

- The Supplementary Labour Market Pension for Disability Pensioners (*Supplerende Arbejdsmarkedspension for Førtidspensionister* – SAP) is a voluntary, statutory and savings-based pension scheme for disability pensioners established in 2003. The contribution to SAP is DKK 5 040 in 2008, equivalent to around 2.8% of early pension for a single person. The level of contribution is adjusted in line with the wage trend in the labour market. The Government pays 2/3 of the contribution.

**Average gross pension payments in 2003**

	Average gross pension at 2003 prices	In per cent
ATP & SP	4.900	3,7
Instalment pension and annuity	38.800	29,6
<i>Savings-based pension, total</i>	43.600	33,3
Basic pension	87.400	66,7
Pension, total	131.000	100,0

Source: Fremtidens velfærd – vores valg (Welfare of the Future – Our Choice). Danish Welfare Commission 2006. According to the Danish Welfare Commission's calculations the proportion of total pension payments accounted for by basic pension will fall to around 52% in 2078. The savings-based pensions will rise at the same time to around 48%, of which annuities account for 26 percentage points. It has not been possible in 2003 to divide savings-based pensions beyond ATP and SP into payments from instalment pension and annuity.

The Danish pension system is thus characterised by being based to a considerable extent on savings-based schemes, where the demographic risk is fully borne by the members themselves. This contributes to making the pension system robust in relation to demographic development. The most recent changes concerning retirement age, cf. below, have reinforced this robustness.

*Most recent changes*

In the welfare reform adopted in 2006, the age of retirement was raised and made dependent on the trend in life expectancy, cf. below. In the Job Scheme adopted in the spring of 2008 greater financial incentives were introduced to defer exit from the labour market and for recipients of basic pension to work. For recipients of basic pension the employment requirement for deferred pension was reduced and a special lower-limit allowance for work-related earnings when income testing basic pension was

introduced. A Work Commission which has been appointed will shortly be submitting its recommendations in a number of areas relevant to exit from the labour market. This exit from the labour market is – and has been – the object of great attention in recent years, because unemployment is exceptionally low.

### *1. Basic pension (folkepension)*

*Folkepension* is a basic pension intended to ensure a reasonable income for all Danes in retirement. Pension is paid from the age of 65. There is no provision for early basic pension. On the other hand, basic pension can be delayed, cf. below on deferred pension.

The level of pension depends on the number of years with residence in Denmark between the ages of 15 and 65. Full (maximum) basic pension is attained after 40 years of residence in Denmark in this period. In the case of shorter periods of residence the pension is reduced pro rata.

The basic pension consists of three elements, which are fully taxable (2008 rates):

- Basic amount (DKK 61 152)
- Pension supplement (DKK 61 540 for single people or DKK 28 752 for others)
- The supplementary pension benefit (DKK 7 800)

There are a number of special allowances, which can be given to meet specific expenditure: health allowance and heating allowance, which are income tested, and special personal allowances which can be awarded following a specific, individual assessment. In addition there are particularly favourable rules for recipients of basic pension under other legislation, e.g. favourable housing allowance.

Basic pension is income tested broadly in accordance with the following principles: 1) First the supplementary pension benefit (and at the same time the special allowances) targeted at the pensioners who are financially worst off is scaled down. 2) Then the pension supplement is scaled down. 3) Finally the basic amount is scaled down. The basic principle is thus that the elements are scaled down one at a time.

The basic amount is only income-tested for the pensioner's own earnings from personal work. The pension supplement and the supplementary pension benefit (and the special allowances) are earnings-adjusted on the basis of the total earnings of the pensioner and any spouse or cohabiting partner beyond social security pension.

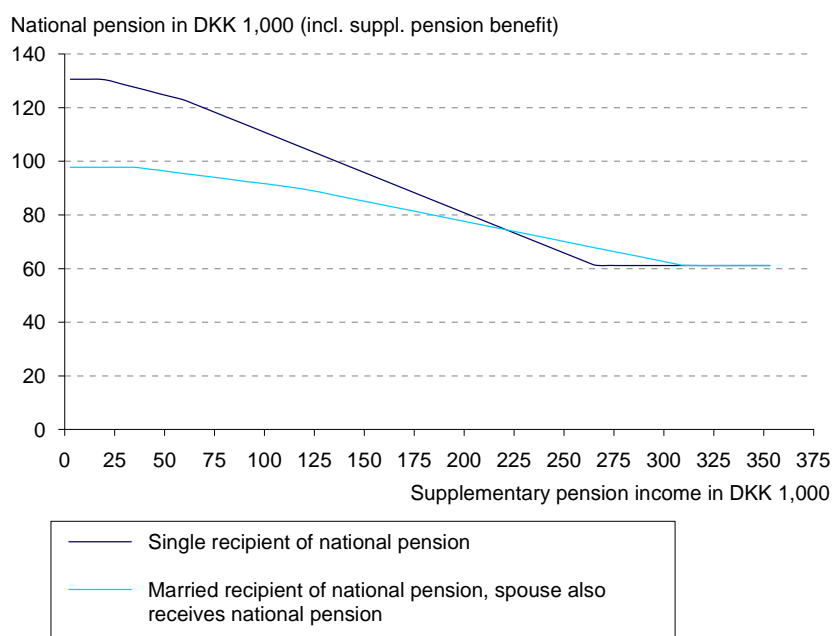
**Elements of social security pension for single recipient of basic pension, 2008**

Pension element	Scaled down from	Scaled down to	Scale-down percentage	Maximum amount	Basis of scaling down
	DKK	DKK	%	DKK	
Supplementary benefits	16 600	57 300	19,2	7 800	Taxable earnings above social security pension
Pension supplement	57 300	262 500	30	61 540	As above Earned income from personal work
Basic amount	259 700	463 500	30	61 152	

Note: The supplementary benefits is not paid if liquid assets exceed DKK 59 900. Supplementary benefits is adjusted to earnings technically by multiplying the full benefit by a personal supplement percentage which is reduced from 100% to 0% in the stated interval according to special rules. The scale-down rate of 19.2% is thus a calculated percentage.

The figure shows how basic pension, including the supplementary pension benefit, is scaled down as supplementary income rises, for example from a labour-market pension.

**Diagram 1 Basic pension with supplementary income**



### *Price and pay indexation*

The basic pension, including the supplementary benefit, is adjusted upwards annually to the rise in annual pay for wage and salary earners. However, the indexation is reduced by up to 0.3 percentage points if the rise in pay exceeds 2.0%, which is then transferred to a pool used for improvements for recipients of transfer income and weak groups.

### *Deferred basic pension*

Rules on deferred pension have been introduced since 2004. According to these rules elderly people who have reached the age at which basic pension becomes payable (i.e. including persons who have started taking basic pension) can choose to defer basic pension and actively participate in the labour market in return for having the basic pension (basic amount and pensions supplement) increased by a percentage – the deferral percentage – of the basic pension paid.

The deferral percentage is calculated as:

$$\frac{\text{Number of months the pension has been deferred}}{\text{Remaining life expectancy when pension payment is resumed}}$$

It is a condition that the person who has deferred basic pension has earnings from personal work for at least 1 000 hours each calendar year (reduced on 1 July 2008 from 1 500 hours to 1 000 hours as part of the Job Scheme, cf. above).

### *The welfare reform*

The welfare reform meant that the pension age for basic pension was raised by two years to 67. Basic pension age will be raised in steps over the period 2024-2027, cf. table below. Provisions were introduced into the legislation at the same time that basic pension age was index-linked to the trend in remaining life expectancy for a 60-year-old.

Year	Basic pension age
2008-2023	65
2024	65.5
2025	66
2026	66.5
2027 -2029	67
2030	67 + POSSIBLE INDEXATION

The Danish Parliament takes decisions on adjustment of the pension age at intervals of 5 years and will do so for the first time in 2015 on the basis of mortality experience in the previous two years. Basic pension age will be adjusted if the average life expectancy (60 + remaining life expectancy) for 60-year-olds according to this mortality experience exceeds the life expectancy in 2004-2005 of 81.4 years. Basic pension age is adjusted with a period of notice of 15 years, i.e. the first adjustment can take place in 2030.

Basic pension age is fixed in the year of decision as follows:

- The estimated life expectancy of 60-year-olds on the basis of the mortality experience in the two previous years, plus  
+ an assumed future increase in life expectancy of 0.6 years in the period up to 10 years after the year of decision, minus  
- an assumed basic pension period of 14.5 years.
- The basic pension age calculated in this way is rounded to the nearest half year.

The indexation mechanism is to be viewed in conjunction with the indexation of voluntary early retirement age, which follows the same principles. The voluntary early retirement scheme gives persons who are members of an unemployment insurance fund and have paid contributions to the voluntary early retirement scheme for 30 years the option of retiring at the age of 60 with voluntary early retirement pay which is equivalent to 91% of the unemployment benefit rate. When the indexation mechanism for voluntary early retirement and basic pension was introduced it was made a condition that the expected period of early retirement and basic pension would total 19.5 years and that the period of voluntary early retirement was fixed at a maximum of five years.

Payments from tax-advantaged pension schemes (employment pensions etc.) according to current rules can be made at the age of 60. In the welfare reform this age limit was raised and indexed in a corresponding way to voluntary early retirement age, i.e. the age limit is raised by half a year at a time to the age of 62 from 2019 and up to 2022 with effect for persons born on or after 1 January 1959. The change in age limit has an effect on pension agreements entered into after 1 May 2007.

## ***2. Labour Market Pension Scheme (ATP) (employment pension)***

ATP is a statutory, savings-based pension scheme established in 1964. All wage and salary earners in Denmark who are aged between 16 and 64 and are employed for more than 9 hours weekly pay contributions to ATP. The circle of contributors to ATP has been expanded since the early 1990s to also include a number of recipients of transfer incomes. Self-employed people can additionally make voluntary contributions.

The contribution to ATP does not depend on the individual's income but on hours worked. The annual contribution varies, but in 2008 is typically DKK 2 927 on an annual basis for a wage or salary earner full-



time employment, equivalent to something of the order of 1% of average earnings. Individuals themselves pay 1/3 of the contribution. The employer pays the remaining 2/3 of the contribution for wage and salary earners, while the State pays the remaining 2/3 of the contribution for recipients of transfer income.

The ATP scheme ensures its members a life-long, regular old-age pension from the age of basic pension. The maximum regular old-age pension for a 65-year-old is DKK 20 700 annually in 2007, which is equivalent to around 35% of the basic amount of basic pension.

### *3. Labour-market pension (supplementary pension)*

Labour-market pensions cover by far the majority of the Danish labour market. Around 90% of all wage earners in full-time employment are covered by a labour-market pension. Apart from public servants' pensions, labour-marked pension schemes are largely based on savings.

#### *Labour-market pension agreed by collective bargaining or at company level (supplementary pension)*

The collectively agreed schemes are agreed between employee and employer organisations, while the schemes at company level are agreed between a company and its staff.

The labour-market pensions are designed as collective insurance schemes, with membership typically being mandatory for the individual covered by an area of agreement or by a company pension agreement. The labour-market pensions are predominantly defined-contribution, i.e. the size of the pension depends on the contributions made.

Many of these schemes were established around 1990, when only 30% of wage and salary earners were covered by a scheme. These schemes are thus still not mature. The contribution to these new schemes will typically be 12% after the rises agreed in the collective bargaining negotiations in 2007. The employer contributes 2/3 of the amount and the individual the last 1/3. The contribution rate for the older schemes will typically be higher.

The composition of benefit in the labour-market pensions may vary considerably. There is typically a life-long old-age pension, which can be combined with instalment pension and/or capital pension. In addition there is an invalidity pension and a surviving dependants' pension. The size of the benefits will also depend on the membership of the individual scheme, for example their mortality, invalidity risk etc.

### *Public servant's pension*

Public servant's pensions are defined-benefit. The size of the pensions depends on the number of years of employment as a public servant and pension-qualifying pay – typically final salary. Defined-benefit pensions in the form of public servant's pension schemes are of steadily less significance both in central government and in the municipal/regional sector, where the form of employment is being changed and the employees to a greater extent are covered by contribution-financed and defined-contribution pension schemes.

### *4. Individual pension saving*

Individual pension schemes can be set up in banks and insurance and pension institutions. In 2000 around 1 million people paid into individual pension schemes.

### *5. Tax*

Pension payments are taxable (in payments of a capital pension a charge is paid of 40% of the lump-sum payment). In return, payments into pension schemes can be deducted from taxable income. The saved pension capital is taxed at a rate on return on capital of 15% on the interest on bonds and the return on shares.

## The Faeroese old-age pension system

As part of the Danish Realm, the Faeroe Islands have been influenced by the Danish scheme. The foundations of the present-day pension scheme in the Faeroe Islands date back to 1933. The Faeroese pension was transferred in 1995 from a reimbursement scheme to an actual block grant from Denmark.

The Faeroe Islands thus have administrative responsibility for the pension scheme, while it continues to be financed through the block grant. In 1999 actual Faeroese legislation on pensions was enacted in which rights and adjustments in this area are laid down.

The pension system in the Faeroe Islands is built around three pillars. It is primarily based on the public tax-financed basic pension, and the solidary labour market allowance, which is financed by the partners of the labour market. These two systems make up the largest of three pillars that make up the combined old-age pension system.

A second pillar is the various labour-market pension schemes. Public servants by law are assured of the right to employer-financed retirement pay. In addition, all public sector employees and most privately employed wage and salary earners now have collective labour-market pension schemes. Many of the schemes have only existed for a few years, and they will consequently not be of significance to the financing of the pension area until some time in the future. The schemes differ very widely in relation to how much is paid in – from 6% to 18% of earned income.

The third pillar consists of the individual schemes. Some persons have various types of private pension savings, which are encouraged by favourable tax rules.

However, some of the Faeroese population do not have any pension saving. Combined pension savings in 2005 were equivalent to 46% of GDP.<sup>26</sup>

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<sup>26</sup> Information from working group in the Ministry of Finance on future pension schemes

### *General conditions for national and early retirement pension*

The right to Faeroese social security pension is principally conditional on Danish citizenship, permanent residence in the Faeroe Islands and permanent residence for at least three years in the Danish Realm between the ages of 15 and 67. Equated to permanent residence in the Danish Realm is employment on Faeroese, Greenlandic or Danish ships, periods spent abroad as a representative of a Faeroese, Greenlandic or Danish public authority in connection with a position of public interest, a position in a department of a Faeroese, Greenlandic or Danish business or its subsidiary and in connection with education and training.

### *Calculation*

The right to full Faeroese pension is additionally conditional on at least 40 years of permanent residence in the Danish Realm between the ages of 15 and 67. In the event of shorter period of residence, pension is calculated at 1/40 of full pension for each year of residence in the Danish Realm. If someone has been resident in the Danish Realm for 10 whole years, for example, pension is paid at 10/40 of full Faeroese pension. Pension is not paid if it amounts to less than 1/40 of the basic amount.

### *Income base*

Pension benefits are related to earnings on an income base which comprises general taxable income with the exception of social security pension and solidary labour market allowance under the Law on Solidary labour market allowance, plus net income which is taxed according to the rules in the Capital Gains Tax Act and social assistance in those cases where this has been equivalent in level to the lost income. The earnings basis is the same regardless which pension benefit is earnings-related.

### *Basic pension*

Basic pension is paid to everyone over the age of 67, following application. Basic pension consists of a basic amount and a supplement, as well as children's allowance, if there are children below the age of 18.

### *Basic amount*

The size of the annual basic amount is DKK 50 028 for single persons and DKK 39 756 for married pensioners, and it is paid regardless of the

pensioner's income. The basic amount is not subject to the same rate adjustment as the other pension amounts, which have been adjusted annually since 2002.

### *Supplement*

The size of the supplement depends on the combined earnings of the pensioner and the pensioner's spouse, if applicable. The supplement is DKK 35 712 for single persons and DKK 27 648 for married persons.

The supplement is reduced by 60% of earnings if it exceeds the deduction-free amount of earnings. This amount is DKK 56 400 per year for single persons and DKK 112 800 per year together for married persons. The income base for married pensioners is half the married couple's combined earnings base regardless of whether one spouse is a pensioner or both spouses are pensioners. The supplement ceases to apply at income of DKK 115 920 for single persons and DKK 204 960 for married couples. The deduction-free amount of income is adjusted in the same way as the supplement.

### *Tax position*

The basic amount is not taxable, but the supplement is subject to tax.

### *Other supplements*

Persons who were in receipt of assistance or care allowance before the age of 67 retain this on changing over to basic pension.

Personal allowances can be paid for reasonable individual expenses, housing expenses, medical treatment etc. following specific financial assessment of the needs of pensioners whose circumstances are particularly difficult.

All pensioners are entitled to subsidies for medication expenses in excess of the minimum prescription charge, which is DKK 200, 400 or 600 per quarter depending on the individual's income.

Single pensioners who, in addition to the pension, have an annual income of less than DKK 60 000, and married couples who, in addition to the pension, in total have an annual income of less than DKK 80 000 receive a special supplement of DKK 6 924 per year. A supplement is paid to married couples.

All the amounts mentioned are rates as of 1 January 2008. The *other supplements* mentioned are not taxable.

Basic pension is financed by tax, and is administered by the central social administration.

### *The Solidary labour market allowance*

In addition to the basic pension mentioned there is a public statutory solidary labour market allowance (employment pension). This is financed by the partners of the labour market, with all persons below the age of 67 paying a percentage of their pay and all employers paying a corresponding percentage of paid wages and salaries. This percentage is 1.75% at 1 January 2008. The payments are made to a solidary labour market fund, which is governed by a board.

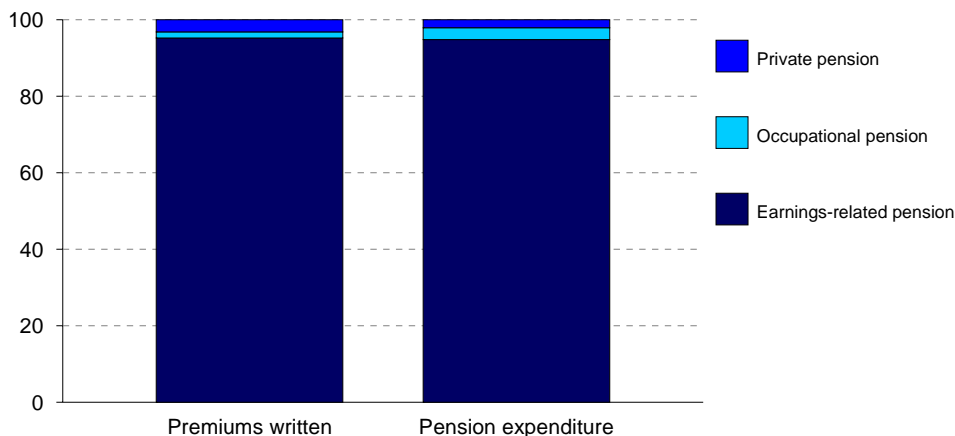
The board establishes the amount of solidary labour market allowance for the following calendar year no later than 1 October of the current year.

All persons who have reached the age of 67 are permanently resident in the Faeroe Islands and are registered in the Faeroese population register are entitled to this solidary labour market allowance. Solidary labour market allowance is DKK 2 230 at 1 January 2008. The amount is taxable.

## The Finnish old-age pension system

Finnish pension protection principally consists of statutory earnings-related pension which is based on gainful employment and covers both employees and the self-employed, and of basic pension which is based on residence and offers minimum protection. Pension protection arranged by the employer or based on labour-market agreements (occupational pension) and personal pension insurance are not as common in Finland as in many other European countries. This is due in part to the statutory earnings-related pension system not having an upper limit for the pension or for pension-qualifying earnings. The total pension protection consists to 95% of the statutory pension protection (Diagram 1). The share of basic pension in total pension expenditure in 2006 was 15%.

**Diagram 1 Earnings-related pension, occupational pension and private pension (2006)**



Source: Finnish Insurance Supervisory Authority

The Finnish system has recently been reformed. The pension reform came into effect on 1 January 2005. Pensions have been calculated in a new way since 2005. Earned pensions up to the end of 2004 are counted separately under the laws that applied prior to the pension reform.

The most significant changes in the extensive pension reform were that income throughout the career started to be taken into account in pension-

qualifying pay, a flexible retirement age between 63 and 68 was introduced, the age limit for anticipatory pensions was raised, unemployment pension and individual anticipatory pension were abolished and the impact of increasing life expectancy started to be taken into account on pension calculation. In addition, the calculation rules in various earnings-related pension laws were further harmonised.

The reform has strengthened the link between contribution and benefit. It is a response to the increasing need for labour and increasing pension expenditure. The principal aim of the pension reform is to encourage employees to stay in the labour market longer.

The earnings-related pension system consists of the pension systems for the private and public sectors. Three-quarters of the labour force works in the private sector and just under a third in the public sector. One in seven persons is active in the private sector as a self-employed person.

The person's pension protection is arranged in accordance with several pension laws. The earnings-related pension laws for the private sector covers employees of private employers, the self-employed and farmers as well as those covered by the law on seamen's pensions. A new law on pensions for employees, ArPL, came into force on 1 January 2007. ArPL brings together the earnings-related pension laws that apply to wage and salary earners in the private sector<sup>27</sup>.

The public sector includes persons who are employed by central government, some of the employees in the education sector and the institutions supported by central government, employees in towns, municipalities and joint municipalities and persons who are employed by the church, the parishes and the parish associations. The public sector also comprises officials of the Social Insurance Institution of Finland and the Bank of Finland, as well as persons employed by the Orthodox Church prior to 1 January 1994.

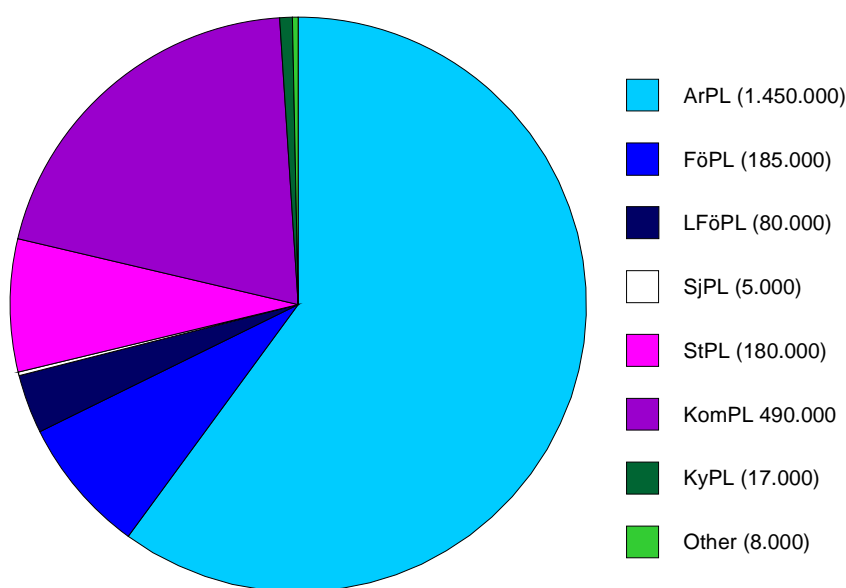
Despite there being several different pension laws, ArPL is the most important pension law, to which all the other pension laws are adapted.

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27 ArPL = Law on pensions for employees (APL), Law on pensions for employees in short-term work relationships (KAPL), Law on pensions for artists and particular groups of employees (KoPL). In addition, there are the Law on pensions for the self-employed (FöPL), the Law on pensions for farmers (LFöPL) and the law on seamen's pensions (SjPL) in the private sector. There are separate laws in the public sector: The Law on state pensions (StPL), the Law on municipal pensions (KomPL) and the Pensions law for the Evangelical-Lutheran Church (KyPL) as well as the pensions statute of the Bank of Finland (FB), the pensions statute of the Social Insurance Institution of Finland (FPA) and the pensions statute of the Åland Government.



**Diagram 2** Population insured for earnings-related pension benefits, 31 December 2007



One person can be covered by several different pension acts

## 1. Old-age pension in Finland

### *Earnings-related pension*

Earnings-related pension accrues from the start of the month following the person's 18<sup>th</sup> birthday. Before 2005, pension did not start to accrue until the person's 23<sup>rd</sup> birthday. With effect from 2005 pension is calculated on the basis of earnings throughout the period of economic activity. Work alongside pension is pension-qualifying. Pension also accrues on the basis of earnings on which certain social benefits are based.

Earnings-related pensions were revised from 2005 so that those who are aged 63–68 can retire when they choose to do so. Anyone wishing to do so can delay retirement until after their 68<sup>th</sup> birthday, in which case the pension is raised by 0.4% for each month of deferral.

The pension is based on earnings after deduction of pension contribution for employees. Anyone who is aged 18–52 accrues pension at 1.5% of annual income. For those who are aged 53–62 the accrual rate is 1.9 and 4.5 for those who have reached the age of 63. Anyone who has earned income alongside their pension accrues pension on the basis of this at 1.5% per year regardless of age but not beyond the end of the month in which the age of 68 is reached.

Persons who have reached the age of 62 can draw their earnings-related pension early. An anticipatory reduction is then made in the pension accrued up to the time of retirement. The reduction amounts to 0.6% per month. If pension is drawn one year early, the pension is reduced by 7.2%. The reduction is permanent. In addition, it is possible to take a part-time pension at the age of 58–67.

The pension on the basis of social benefits grows by 1.5% per year regardless of age. Pension grows, depending on benefit, at 65–117% based on the income that forms the basis of benefit. In the absence of income a fixed amount in euros is used. For periods of maternity allowance, special maternity allowance, paternal allowance and parental allowance, pension grows at 117% of the income according to which the benefit has been calculated. In the absence of earned income, pension grows on the basis of the amount of EUR 588.54 per month (2008). Pension is earned for the care of a person's own child under the age of 3 and for studies leading to examinations at a standard monthly wage for calculation purposes of EUR 588.52 (2008).

For periods of unemployment benefit, 75% of the income on which the benefit is based is pension-qualifying. The income used as a basis for periods of education benefit, adult education allowance, rehabilitation allowance, compensation for loss of income under the Traffic Safety Act or the Accident Insurance Act, sickness benefit and special care allowance are pension-qualifying to 65%.

The amount of pensions has been adapted to the change in life expectancy using the life expectancy coefficient. The life expectancy coefficient applies to those born in 1948 or later and affects new old-age pensioners for the first time in 2010. If average life expectancy increases, the life expectancy coefficient has the effect of reducing earned monthly pension. The reduction in pension caused by the coefficient can be offset by working longer.

Two different indexes are used in the earnings-related pension system. The wage coefficient applies to everyone in gainful employment. The wage coefficient is affected to 80% by the change in level of earnings and to 20%

by the change in price level. Pension-qualifying income and amounts of benefit in the laws governing earnings-related pension are adjusted with this. All current pensions are adjusted according to the earnings-related pension index regardless of the age of the pensioner. The index is affected to 20% by the change in level of earnings and to 80% by the change in price level. Earnings-related pensions represent taxable income.

*Basic protection*

The basic pension system ensures a minimum payment for those who do not have, or have a low, earnings-related pension. Old-age pension can be paid from the age of 65. It can be taken early from the age of 62, but the pension is then permanently reduced. The reduction for early old-age pension is 0.4% for each month that remains until the pensioner reaches the age of 65. Earnings-related pension which a person accrues after the age of 63 does not reduce the amount of basic pension. Forty years of residence in Finland from the age of 16 is required for the right to full pension<sup>28</sup>. Basic pension decreases as earnings-related pension rises. When basic pension exceeds EUR 49.29 per month (2008) the full amount of basic pension decreases by half the difference between the earnings-related pension and EUR 49.29.

Basic pension is raised annually by the basic pension index, which is based on the cost-of-living index. Pensions represent taxable income, but if a person only receives basic pension this is tax-free.

**Table 1 Full basic pension and gross earnings-related pensions that provide entitlement to full amount and those that rule out entitlement to basic pension, EUR/month, 2008.**

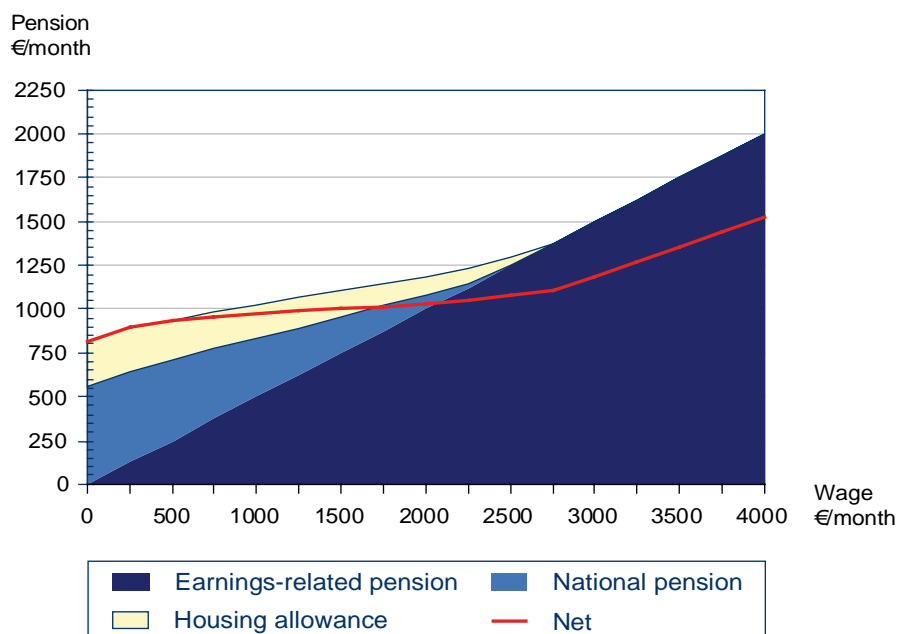
	Full basic pension	Earnings-related pension permitting full basic pension	Earnings-related pension ruling out basic pension
<i>Family status and municipal group</i>			
Single	558.46	49.29	1 154.30
Married	495.35	49.29	1 028.13

Pensioners who have reached the age of 65 can also apply for housing allowance. Housing allowance is means-tested and tested against all types of

<sup>28</sup> Residence in another EU/EEA country also provides entitlement to basic pension.

income and assets. This allowance is of great significance to the standard of living of the individual pensioner.

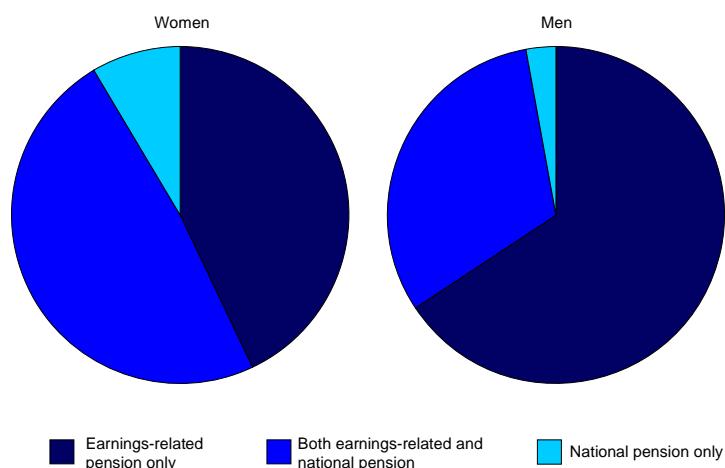
**Diagram 3 Earnings-related pension reduces basic pension**



*Number of old-age pensioners in 2007*

The number of old-age pensioners in December 2007 was just under a million. The majority of them, 52%, were only receiving basic pension. Nearly half, 42%, were also in receipt of national (guaranteed) pension and just over 60 000 were only receiving basic pension. 90 000 old-age pensioners were additionally receiving housing allowance, three-quarters of whom were women.

**Diagram 4 All old-age pensioners according to pension structure on 31 December 2007**



### *Financing*

The costs of earnings-related pensions in the private sector are principally covered by insurance contributions paid by employers and employees. The pensions of the self-employed and farmers are also financed from public revenues. Central government pays the portion of the pensions of the self-employed which insurance contributions are insufficient to cover. A third of seamen's pensions is paid for from public revenues.

The employer's social insurance contribution varies depending on which pensions law is applied and how large the business is. The employee's pension contribution is not affected by such factors. On the other hand, the contribution has been affected by the employee's age since 2005.

Old-age pension contribution is part of the total earnings-related pension insurance contribution in Finland (see Annex 1). The average earnings-related pension insurance contribution according to ArPL is 21.8% of wage (in 2008). The pension contribution is 16.8% for employers and 4.1% for employees. The pension contribution for employees over the age of 53 is 5.2%. The pension contribution for employees is the same in the public sector, but the whole contribution is around 28.2% of the sum of wages covered by StaPL.

Financing is partly funded and partly pay-as-you-go. A quarter of contributions in the private sector are funded to cover future pension liabilities.

The basic protection is financed by the employer's basic pension contributions and general tax revenue.

*Annex 1.*

**Components of the average ArPL contribution in 2008 (percentage of wage)**

Funded old-age pension component	2.9
Funded invalidity pension component	1.8
Funded unemployment pension component	0.0
Pooled components	16.6
Other expenses <sup>1)</sup>	1.0
Estimated bonuses	-0.5
<b>Total</b>	<b>21.8</b>

<sup>1</sup> This portion of others includes premium loss share, share of overheads and share of the costs of the Finnish Centre for Pensions.

## The Icelandic old-age pension system

The Icelandic pension system is a three-pillar system.

The first pillar is the basic pension which is paid for by the National Social Insurance Board (basic pension) and is financed by tax revenue. Entitlements are based solely on period of residence in the country.

The second pillar is employment pension for all wage and salary earners and others in gainful employment which is paid from pension funds. The pension funds are typically savings-based schemes. Because of fund formation in the pension funds they play an important role in the credit market.

The third pillar is extra individual private pension saving. It has not been of great significance in Iceland, but is favoured by amended tax rules from 1997 and new agreements in the labour market.

The Icelandic old-age pension system has changed substantially in the past 25 years. Notable is the increasing significance of savings-based schemes, as shown in the table below.

**Table 1 Percentage distribution of old-age pension expenditure in 1991, 1999 and 2006**

	1991	1999	2006
Basic pension	68.0	56.1	43.0
Employment pension, total	32.0	43.9	53.8
Funds with defined-benefit employment pensions	16.1	20.9	26.5
Funds with defined-contribution employment pensions	15.9	23.0	27.3
Private pension	.	.	3.2
Old-age pension, total	100	100	100

### *1. Basic pension*

The basic pension is generally paid at the age of 67, but seamen can retire at the age of 60 if they have been at sea for at least 25 years. To be entitled to old-age pension from the basic pension, the pensioner has to have been resident in Iceland for at least three years between the ages of 16 and 67. Permanent residence for 40 years provides entitlement to full pension, and pension decreases in percentage terms in the case of a shorter period of residence.

The amount of basic pension for old-age pensioners in Iceland has long been regulated with respect both to the earned income of the pensioner and his or her household and employment pension from pension funds. A reform of this scheme in two stages began in 2007, with statutory changes on 1 January 2007 and 1 January 2008. The purpose of the reform has been to raise the amount of pension somewhat, and to reduce the impact (raising the free income ratio and making the reduction smaller) of both the pensioner's earnings and those of the household. As a result, the basic protection has been strengthened and old-age pensioners have been given an opportunity for greater participation in the labour market. The statutory amendments brought the right to defer drawing of pension to the age of 72. Deferral provides entitlement to raise all parts of the basic pension by 0.5% for each month or a maximum of 30%.

Basic pension in 2007 consists of three parts which are taxed according to the same rules as other income. These parts are basic amount, income insurance and extra supplement for single people living alone. The table below shows the size of basic pension and means-testing in 2007.



**Table 2 Size of basic pension and means testing in 2007**

	Maxim- um amount, ISK	Income at which the reduction starts, ISK	Pension reduced to zero at income, ISK	Reduction percent- age	Income that reduces
Basic amount <sup>1</sup>	297 972	2 056 404	3 049 644	30.00	Taxable income excluding pensions and allowances, since 2007 also excluding earned income for pensioners aged 70 and over. Capital income included to 50%
Income insurance basic rule	993 360	.	3 105 041	39.95	As for basic amount but employment pension and private pension also reduce the amount. For spouses account is taken of 65% of the pensioner's own and 35% of the spouse's earned income and 80% of the pensioner's own and 20% of the spouse's employment pension <sup>2)</sup>
Income insurance, special rule	446 736	.	670 070	66.67	As for the basic rule but only the pensioner's income reduces. If 2/3 of the pensioner's income is lower than ISK 446 731 the difference is to be compensated for by income strengthening.
Extra supplement to those living alone	277 968	.	2 359 660	11.78	Same rules as for income strengthening

1 If the whole basic amount is reduced to zero, nor are income strengthening and extra supplement paid

2 The reduction in the basic amount is deducted from the reduction in income insurance.

The amount of basic pension is set every year in the government Finance/Budget Act. Account has to be taken of the trend in pay in deciding how the annual amount is to be raised. However, the increase has to be at least equivalent to the increase in the consumer price index.

## *2. Employment pension*

### *Trend in employment pension*

The Icelandic employment pension funds pay both old-age and invalidity pension and survivors' pension. They are insurance funds where the members have entitlements in the form of earned pension credits but not individually owned accounts. The pensions are determined by contributions paid in and financed by fund assets. If the fund assets are insufficient the pension is decreased. A different situation applies to the older statutory pension funds for public sector employees and bank employees (a law on the first employment pension funds for public sector employees was enacted in 1921). In these funds pensions are determined by a particular percentage of pay during one or more years at the end of the person's career (where the percentage depends on how long a member has been paying contributions to the fund). The pensions are thus defined-benefit and follow the trend in pay in the occupation concerned. The size of pensions in this case does not depend on the level of fund assets: the defined-benefit pensions are guaranteed by payments from the employer, central government or municipality.

In 1969 employment pension schemes were introduced for all wage and salary earners in the private sector through agreements between the social partners. Compulsory membership of pension funds for all wage and salary earners was introduced by law in 1974 and for everyone in the labour market (including freelance workers and the self-employed) by law in 1980. It was decided in agreements between the social partners in 1990 that contributions are to be paid on all pay (previously only on full pay excluding overtime payment etc.). The agreement between the social partners was renewed in 1995 and can be regarded as a basis for the general harmonised legislation on pension funds in 1997.

A complete law on pension funds was enacted for the first time with the law on compulsory insurance for employment pension on the activities of pension funds in 1997. The law defines minimum contributions for members and employers, minimum pension entitlements to pension, conditions for the activities of the funds, what types of investments they are

allowed to make and requirements for their funding to be responsible for future payments. The law also covers other statutory pension funds (such as pension funds for public sector employees), even though these still have their own laws.

### *Contributions and entitlements*

Compulsory insurance for employment pension is defined according to the law on compulsory membership of an employment pension fund and for payment of contributions to it. The law only defines the minimum contribution, not the amount of the contribution. The total minimum contribution as a rule is 12% of the income of the insured (as from 2006, previously 10%). The contribution is shared between the wage earner and employer such that the former is responsible for 4% and the latter for 8%. The contributions of wage earners are not liable to tax, but the pension is taxed as earned income. The pension fund to which the contribution is to be paid and the amount of the contribution (above the minimum level) and the division between wage earner and employer are determined by the agreements that set minimum pay in the sector concerned.

The pension funds minimum level of insurance for employment pension is defined according to the law as 56% of monthly pay if contributions have been paid for 40 years. Pension is paid monthly to the end of the person's life and can be drawn at the latest from the age of 70. The level of pension is in accordance with the agreement between the social partners from 1995, which stipulates that a contribution to a pension fund of 10% is to provide entitlement to a monthly pension which is equivalent to at least 1.4% of average monthly pay from the age of 67. According to more detailed provisions in an ordinance, the pension fund is to commence payment of old-age pension when a member has reached the age of 65-67. The pension fund can also allow for early or deferred drawing of pension by five years. The monthly pension is to be index-lined to the consumer price index. The pension funds ordinance contains more detailed provisions on pension amounts, how they are calculated and terms of payment.

The total of the assets of the pension funds and the current value of future members' contributions are to correspond to the current value of expected pension payments for contributions already paid in and for future contributions. If an actuarial investigation shows that the difference between assets and liabilities is more than 10%, it is necessary to make changes to the fund arrangement. The same applies if the difference is more than 5% for five years in succession.

*Structure and financing of the employment pension funds*

The employment pension funds can be divided into the following categories: 1) for public sector employees, 2) for individual trade unions, combinations of trade unions or nationwide trade union federations and 3) for employees in individual businesses (rarely). The number of funds has declined in recent years as a result of the merging of funds and small corporate funds having ceased to exist. The number halved between 1991 and 2007, down from 76 to 37 (of which six are no longer taking members' contributions). Of these 37 (31), 22 (18) are insurance funds with full financing responsibility (defined-contribution pensions), while for 13 (12) funds the financing of the pensions is guaranteed by the employer (defined-benefit pensions) (cf. above). 2 (2) funds have both types of pension insurance. These are two funds for public sector employees which, as a consequence of the 1997 legislation, introduced insurance funds for new members while older members could choose to remain in the older funds. In 2007 the three largest funds account for more than half the funds' assets and the ten largest for over 80% of them.

The Icelandic funded pension system is notable for contributions being accumulated in a fund from which payments are not made until those who have paid in the contributions have started to draw their pension. During the intervening period the pension assets regularly paid in are invested in the capital market. With funded systems it takes several decades from the time when the system starts until pensions can be paid out at the envisaged level. For those who only have a few years of employment left when the system is started, it is impossible for the pension to reach any appreciable size. As has become apparent, the Icelandic employment pension funds have developed over a long period, and it is clear that there has been a difference between public sector employees and wage earners in the private market with regard to entitlements to employment pension. But this difference is decreasing every year, and it is now nearly 30 years since all wage earners started paying contributions to pension funds. In 1991 a third of the female old-age pensioners only received basic pension, and the same applied to almost a fifth of the males. Sixteen years later, in 2006, this applies to one in ten women and one in twenty men.

**Table 3 Recipients of old-age pension by gender and types of pension in 1991, 1999 and 2006**

	1991	1999	2006
	Per cent	Per cent	Per cent
<i>Women</i>	100	100	100
Basic pension only	31.1	12.2	9.1
Basic and employment pension	68.8	87.5	81.7
Employment pension only	0.1	0.2	9.2
<i>Men</i>	100	100	100
Basic pension only	18.7	8.6	5.3
Basic and employment pension	79.8	89.6	79.1
Employment pension only	1.6	1.8	15.6

In a funded system each age cohort of premium payers could be said to pay for its own pensions. The fact that each generation pays for its own future pensions is a major advantage of funded systems. This is particularly true of countries with an expected more or less powerful “ageing boom”.

The assets of the pension funds in Iceland grew from 77% to 120% of GDP between 1999 and 2007. This is a more than two-fold increase (118%) in real terms according to the consumer price index. This is of enormous significance to the present-day credit market and in particular for future pensions and their impact on the economy.

**Table 4 Assets of the employment pension funds as a percentage of GDP**

	Assets as a percentage of GDP
1999	77.1
2000	77.7
2001	78.0
2002	77.0
2003	90.0
2004	97.4
2005	108.6
2006	116.2
2007	119.8

### *3. Private pension savings*

The law on pension funds from 1997 gave wage earners and others in the labour market who wish to make extra private pension savings beyond the compulsory savings the right to sign contracts with banks, life assurance companies and pension funds (which have the right by law to receive this type of savings) on the payment of monthly contributions for extra private pension savings on individual accounts.

Under the law, the account holder cannot start drawing on the savings and interest until he reaches the age of 60, with an equally large annual payment for at least 7 years or for the time that remains until the age of 67. This means for example that the amount can be taken as an annual payment for three years from the ages of 65 to 67 or as a lump-sum payment at the age of 67.

Tax rules allow for payment of tax of 8% of total pay to be deferred if it goes on payment of compulsory contributions to employment pension (minimum contribution 4%) and contributions to private pension. Extra private pension savings have developed in such a way that by agreement between a wage earner and an employer the employer pays 2% if the wage earner chooses (it is not mandatory) to pay 2% or more in contributions. This has led to a large proportion of economically active population having started to make savings of this type.

# Old-age pensions in Norway

## 1. Introduction

The National Insurance Scheme (*Folketrygden*) is the general public pension system, and covers everyone who lives and works in Norway. The pensions under the National Insurance Scheme comprise old-age, disability and survivors' pension.

All employees in Norway additionally have supplementary pension schemes through the company they work in, which are financed by contributions from the individual employee and employer (referred to as occupational pension schemes – *tjenestepensjonsordninger* in Norway). Public sector employees have long had this, while in the private sector it was previously up to the individual company to choose whether to have a supplementary pension scheme. However, since 2006 this has also been mandatory in Norway for the private sector, where businesses, under detailed rules, have to place at least 2% of the employees' pay in a contribution-based supplementary pension scheme (known as OTP – *obligatorisk tjenestepensjon* (mandatory occupational pension)). Alternatively the individual business must have a benefit-based supplementary pension scheme of at least equivalent level. The individual can also save for a pension through individual schemes, but the scale of this is relatively small.

In 2006 old-age pension from the National Insurance Scheme accounted for 67% of income for all old-age pensioners, while supplementary pension schemes (occupational pension) accounted for 18%, and other income such as capital income and earned income accounted for 15%. It is old-age pensioners with the highest incomes in particular who have significant other income, while old-age pensioners with low incomes receive by far the greater part of their income from the National Insurance Scheme.

The National Insurance Scheme old-age pension at present is paid from the age of 67. From 2011 it is planned as part of a major pension reform that a neutrally designed (actuarial) flexible old-age pension will be provided for in the National Insurance Scheme from the age of 62.

Persons who on medical grounds cannot stay in work until the age of 67 are entitled to receive disability pension. Disability pension is common in older age groups, and 43% of new old-age pensioners in the National Insurance Scheme in 2007 had previously received disability pension. Disability pension today provides roughly the same benefit as the National Insurance Scheme old-age pension. Work is in progress on changes to the

National Insurance Scheme disability pension benefits, and to old-age pension for people that have previously been disabled, partly due to provision being made from 2011 for flexible old-age pension from the age of 62. The public supplementary pension schemes also provide disability cover, while this is optional in the private sector.

In addition there are collectively agreed early retirement schemes (*avtalefestet pensjon – AFP*). These schemes at present provide pensions for the 62-66 age group, based on agreements between the employer organisations and the employee organisations. These schemes cover around 80% of all employees at the age of 62. AFP provides pension cover roughly in line with the National Insurance Scheme's disability pension and old-age pension. Most of the scheme is financed by the employers, but the State also contributes to its funding.

As a consequence of the aim to introduce a flexible national insurance scheme from the age of 62 from 2011, it is proposed that the design of the AFP schemes should be changed for the 1948 cohort and later cohorts. AFP will be converted for this group to a neutral supplement to the national insurance scheme. Changes to the AFP scheme, including transitional arrangements, were an important topic in the pay settlement in the private sector in Norway in 2008.

## *2. The National Insurance Scheme old-age pension*

According to the plan the National Insurance Scheme is to be gradually reformed from 2011. The reform is endorsed in two Norwegian Parliament (*Storting*) resolutions from 2005 and 2007. Work is now in progress on a bill which is to be presented during the course of 2008, and which will describe in greater detail the rules in the new system and the transitional arrangements.

An important reason for the reform was that expenditure on old-age pension would increase very sharply with the present-day system, and that there was a need for changes to make the National Insurance Scheme more sustainable. The ageing of the population will result in an increasing dependency burden, as in other countries. At the same time, it is estimated that average pension from the National Insurance Scheme will increase over the next few years in comparison with the level of pay in society. Furthermore, the present-day pension system overall provides relatively weak incentives to stay in work, particularly for older people over the age of 62. The system also has some unfair aspects in that people with the same lifetime income in the present-day system may receive very differing



pensions, and persons with widely differing lifetime incomes can receive the same pension.

The reform in Norway is inspired by the Swedish pension reform, in part by changing over to a lifetime-based pension earning and by introducing a flexible pension which is neutral in design. It is also proposed in Norway that a calculated pension holding should be accrued which on retirement is divided by a divisor that reflects the number of years spent as a pensioner.

The Norwegian reform nevertheless differs from the reform in Sweden on a number of points. The National Insurance Scheme will continue to be regularly funded in Norway and part of the government budget. No autonomous system with separate payments is proposed, as in Sweden, and therefore no mechanism for balancing expenditure and income in the system either. Nor is introduction of a premium pension as part of the public system proposed in Norway. On the other hand, since 2006 Norway has had a system with mandatory supplementary pension in the private sector which is funded. The reform proposal also entails some other differences in comparison with the Swedish reform, for example with regard to the level of pension earning and indexation of income pension during payment and of guaranteed pension.

Under the Government proposals everyone born in or after 1963 will be fully covered by the reformed system. Everyone born in 1953 or earlier will be fully covered by the present-day earning rules. People born between 1954 and 1962 will have their pensions calculated according to the relative proportion from the present-day and new earning systems. Persons born in 1954 receive 1/10 from the new system and 9/10 from the present-day system. The proportions are then increased for each later cohort, so that the 1962 cohort receives 9/10 from the new system and 1/10 from the present-day system.

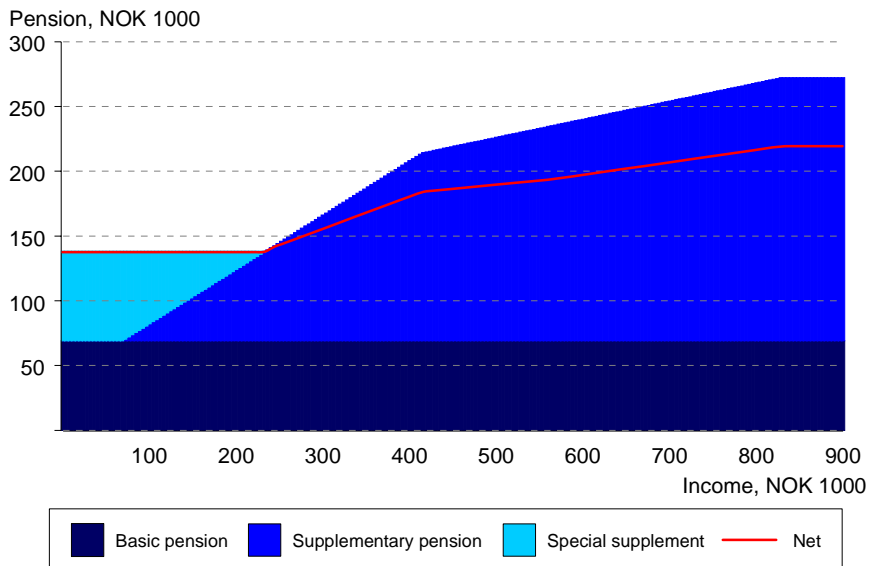
It is proposed that flexible pension from the age of 62 is introduced from 2011 for new old-age pensioners in both the present-day and new systems. It is also proposed that life expectancy adjustment of pension be introduced from 2010. Introduction of changed indexation of pensions during payment is proposed for all old-age pensioners from 2011.

Persons who have no or low pension earning will have their earnings-based pension supplemented by a guaranteed pension. It is proposed that the guaranteed pension should be equivalent to the minimum pension in the present-day National Insurance Scheme, but it will be slightly differently designed in that it is gradually reduced against earnings-related pension by 80%.

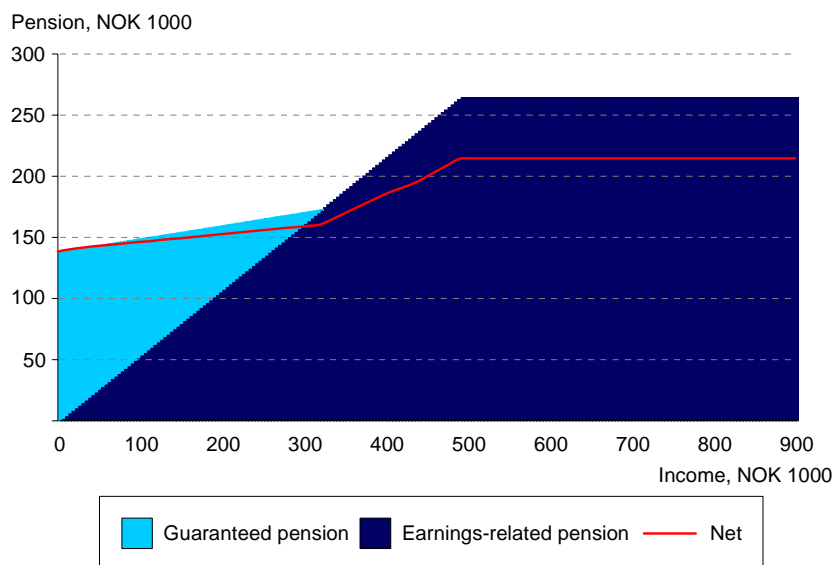
Figures 1 and 2 below illustrate pension according to the present-day earning model and the new accrual model. The present-day accrual model consists of a basic pension which is independent of previous income, and a supplementary pension which depends on previous earnings. Persons who have accrued no or little supplementary pension will be paid a special supplement. The special supplement in the present-day system is reduced by 100% against the supplementary pension and together with the basic amount constitutes the minimum pension. The earnings-related pension will replace the present-day basic and supplementary pension in the new system.

In the present-day system both pension entitlements and pensions under payment are adjusted by the basic amount, which is assumed to change in line with the trend in pay levels in society. Nor is there any life expectancy adjustment or flexible pension before the age of 67 in the present-day system.

**Diagram 1 Pension according to old accrual model. Steady income for 40 years. Marital status single. Average basic amount in 2008: NOK 69 108**



**Diagram 2 Pension according to new accrual model. Steady income for 40 years. Marital status single. Average basic amount in 2008: NOK 69 108**



Pension in Norway is taxed according to tax rules that are more favourable than for wage and salary earners. The special tax rules mean, for instance, that recipients of minimum pension do not pay any tax<sup>29</sup>, and that pensioners at higher income levels also pay lower tax than wage and salary earners with the same income. Net pension after tax is also illustrated in Figures 1 and 2. The figure shows that pension is the same before and after tax for recipients of minimum pension. At higher levels of pension tax increases, so that the difference between gross and net pension gradually increases. Work is in hand on adjustments to the tax rules, partly as a consequence of it being possible from 2011 for old-age pension to be taken from the age of 62.

Income testing of old-age pension at the ages of 67–69 was introduced in conjunction with the reduction of retirement age in 1973 from 70 to 67. Pensioners who are in this age bracket and have income more than twice the National Insurance Scheme base amount have their pension reduced by 40% of the surplus income. Income testing for 67-year-olds was abolished

<sup>29</sup> Recipients of minimum pension may nevertheless be taxed if they have income other than pension or have assets.

in the government budget for 2008. When neutral drawing of old-age pension from the National Insurance Scheme is introduced from 2011, income testing will be abolished for all old-age pensioners.

### *Detailed description of earnings-related pension*

In the present-day National Insurance Scheme it is possible to earn pension points from the ages of 17 to 69, but full entitlement is obtained after 40 years. As part of the pension reform it is planned that the upper age limit will be raised to 75 from 2011, while entitlement is given in the new system for economic activity beyond 40 years. Consideration is also being given to reducing the lower age limit for pension accrual of 17, but no decision has yet been reached on this.

Pension-qualifying income consists of wage and salary income plus some other benefits such as daily cash benefit, sickness benefit and rehabilitation benefit etc. Care accrual can also be obtained for the time a person is at home looking after young children, as well as pension accrual for national service. Pension accrual in these cases is calculated in relation to an estimated income.

It is proposed that all income up to 7.1 G should qualify for pension. The base amount (*grunnbeløpet* – G) is adjusted every 1 May, and the average G in 2008 is NOK 69 108. A ceiling of 7.1 G is thus equivalent to around NOK 491 000 in 2008. Average pay per full-time equivalent in Norway in 2007 was around NOK 399 500, or 6.1 G. The ceiling of 7.1 G is therefore about 115% of an average annual income. The ceiling will be adjusted in line with average trend in pay in society.

It is proposed that pension entitlement should be 18.1% of the pension base. Annual earning of pension benefit is therefore around 13% higher than in Sweden if comparison is only made with the 16% paid into the earnings-related pension. The amount is somewhat lower than in Sweden if account is also taken of premium pension. There are separate schemes for survivor's pension and inherited pension after the death of a spouse.

In Norway it is proposed that the individual should build up a pension holding in the same way as in Sweden. This will be index-lined to the average trend in pay per full-time equivalent in society. Previously earned pension entitlements consequently retain their value relative to average income in society. The pension holding also increases through inheritance gains, that is to say pension entitlements for those who die before retirement age are distributed to survivors in the same age cohort.

Pension can be taken from the age of 62 as whole or partial pension. Those who continue in work also continue to earn pension, and there is not to be any deduction of pension in relation to work-related income.

Earnings-related pension is calculated by dividing the pension holding at the time of retirement by a divisor. The divisor is calculated separately for each age cohort and different retirement ages and has to reflect remaining life expectancy at the time when the pension is taken. It is proposed that divisors be calculated from the ages of 62 to 75. An upper age limit of 75 is proposed in order to avoid very large differences in annual pension paid out. This limit is harmonised with the new upper age limit for the earning of pension benefit.

In calculating divisors account is taken of pensions under payment being adjusted in line with growth in pay less a fixed factor of 0.75%. The pension at the time of retirement thus becomes higher than it would have been with adjustment of pension in line with pay.

The factor of 0.75% is lower than the factor used in the Swedish system of 1.6%. The indexation of pensions under payment for a given trend in pay is consequently better in Norway than in Sweden, and there is less likelihood of a negative trend in purchasing power for pensioners. On the other hand, the starting level of pension, all other things being equal, is lower in Norway than in Sweden.

Special transitional rules apply to persons born 1954–1962, cf. discussion above. In the present-day supplementary pension there is a ceiling of 40 years for full earning of benefit, and the pension is calculated from the income for the best 20 years. If the effect of divisors and changes in indexation are disregarded, it is calculated that the level of pension in the new system on average will be somewhat higher than in the present-day system.

Pensioners who have earned entitlement under the present-day system will also have access to flexible pension from 2011, and will be subject to life expectancy adjustment. This will be done technically by calculating a ratio which is standardised at 1 for a person who was born in 1943 and reaches the age of 67 in 2010. The flexible old-age pension in the present-day system will also be a neutral scheme. However, many people will not be able to increase pension accrual by working longer due to the maximum accrual period being 40 years, and there is therefore discussion of setting an upper limit for life expectancy adjustments in the first few years after 2010.

*Detailed description of the guaranteed pension*

The guaranteed pension in the new system is a minimum provision for those who do not have an earnings-related pension, or with a low earned-income pension. The minimum pension in the present-day system can be taken from the age of 67. A period of residence in Norway of 40 years is required to be able to draw full minimum pension, and the minimum pension is reduced proportionally in the case of shorter periods of residence.

It is proposed that guaranteed pension can be taken from the age of 62 in the new system, but that it will be adjusted in relation to the time of retirement in the same way as earnings-related pension. If pension is drawn before the age of 67 there is nevertheless a requirement that accrued pension together with guaranteed pension must be so high that it surpasses the level of guaranteed pension at the age of 67.

Flexible drawing of guaranteed pension will also contribute to a flexible system for those with low accrued pension. The purpose of the requirement for a level of accrued earnings-related pension is that no one should have to live on a very low pension in their retirement.

The minimum pension in Norway was 1.7933G (NOK 117 470) for single persons and 1.6433G (NOK 107 644) for married persons in 2007. The minimum pension for single people was equivalent to around 30% of average pay per full-time equivalent. In the 2008 collective agreement on National Insurance Scheme the minimum pension for single persons was raised to 1.94G. At the same time, the Norwegian Parliament (*Storting*) made a commitment to raise the minimum pension for single persons to 2G in 2010. In terms of average base amount for 2008 this is equivalent to NOK 138 216.

The guaranteed pension will replace the present-day minimum pension in the new pension system, and it is proposed that this is reduced by 80% against accrued earnings-related pension. The significance of the guaranteed pension in a typical example is illustrated in Figure 2 above.

In the present-day system minimum pension is to be adjusted in line with growth in pay in society, and minimum pension will therefore constitute a roughly stable proportion of average level of pay over time. It is proposed in the new pension system that the minimum level should be indexed to growth in pay, but adjusted for rise in life expectancy. The minimum level for a given retirement age will therefore fall somewhat over time in relation to trend in pay. However, the guaranteed pension is to be adjusted for time of drawing, so that persons with low accrued entitlement can maintain the level of pension by deferring drawing when life expectancy increases.

Pensioners and other persons with a low income and high expenditure can also apply for housing allowance and social assistance under specific rules. There is also a separate support scheme which, subject to specific rules, ensures benefit equivalent to minimum pension for persons with a short period of residence in Norway.

### *3. Supplementary pension schemes*

Public sector employees today have a supplementary pension designed as a gross benefit, and the individual is guaranteed 66% of final salary after 30 years' service. This benefit is coordinated with the National Insurance Scheme old-age pension from the age of 67, and this coordination means that public sector employees receive a combined pension which is somewhat higher than 66% of final salary. Gross benefit in this context means that the supplementary pension automatically compensates for any changes in the National Insurance Scheme. There is a ceiling on entitlement equivalent to 12G, or around twice an average annual salary. Work is in progress to adapt supplementary pension in the public sector to the reformed old-age pension in the National Insurance Scheme.

In the public sector the municipal supplementary pension schemes are funded, while the supplementary pension scheme in the state sector is based on continuous financing.

Benefit-based net schemes have traditionally dominated in the private sector. These may have a differing level of benefit, and together with the National Insurance Scheme may provide a benefit for example of 66% of final salary. It is up to the individual company to set the level of benefit in the scheme, but companies wishing to be covered by the tax rules for this type of supplementary pension schemes have to offer the scheme to all employees. Nor may the company award a higher overall replacement ratio for highly paid staff than low-paid employees under the scheme. Accrual in the net schemes is adapted to the rules in the National Insurance Scheme, but there is no automatic compensation for changes in the National Insurance Scheme.

Contribution-based supplementary pension schemes have become more common in Norway in recent years. As has been mentioned, all companies in Norway must have a supplementary pension scheme from 2006. Payments to the scheme must be equivalent to at least 2% of pay from 1 to 12 G, or the company must, if appropriate, set up a benefit scheme that provides at least equivalent benefits.

Most new supplementary pension schemes established in Norway in recent years are contribution-based, and there has also been some transition from benefit-based to contribution-based supplementary pension schemes. Both the benefit-based and contribution-based supplementary pension schemes in the private sector are funded.

There will be a need to adapt the supplementary pension schemes to a reformed old-age pension in the National Insurance Scheme with flexible retirement age from 62, but it has not yet been clarified how this adaptation will be implemented.

#### *4. Collectively agreed early retirement scheme*

The retirement age for the National Insurance Scheme, as mentioned, at present is 67, but around 80% of wage and salary earners approaching retirement age are covered by collectively agreed early retirement schemes (AFP).

These schemes provide benefits at the age of 62–66 roughly equivalent to the old-age pension in the National Insurance Scheme, but a separate AFP supplement is paid which makes the benefits somewhat higher than in the National Insurance Scheme. These schemes are criticised for offering weak incentives for work, in that those who are covered by AFP schemes do not receive a higher annual pension, either from AFP or from the National Insurance Scheme, by staying in work after the age of 62. Collectively agreed early retirement pension is reduced for pensioners with a work-related income above NOK 15 000.

As part of the adaptation to a reformed National Insurance Scheme with flexible pension from the age of 62 in 2011, it is proposed that collectively agreed early retirement pension be made a supplement to the National Insurance Scheme old-age pension for persons born in or after 1948. This supplement is estimated to be equivalent to a pension accrual of around 4.2% which is additional to the pension accrual of 18.1% in the National Insurance Scheme old-age pension.

The supplement will be designed to be neutral and can be combined with work-related income without deduction in the pension, but on individual points will deviate from the rules on entitlement in the National Insurance Scheme, and there are some special transitional rules.

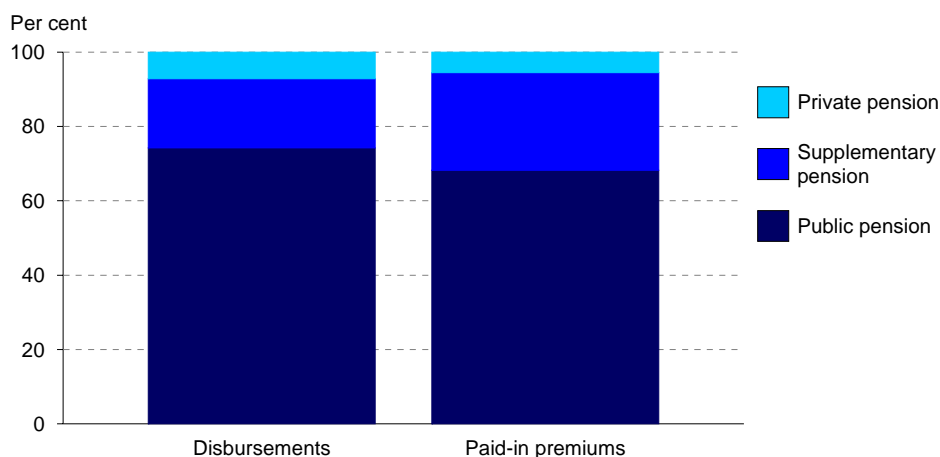
Contractually agreed early retirement pension is mainly financed by the employers, but the State also contributes to its financing.



## The Swedish old-age pension system

The public pension system covers everyone who lives or works in Sweden. Most people who work also have some form of pension insurance through collective bargaining between the social partners (supplementary pension). Those who wish to can also take out private pension insurance. A picture of the present-day ratio between public pension, supplementary pension and private pension shows that the greater part of pension payments comes from the public system, 74% compared with 19% from the collectively agreed pension systems. The picture may be modified in the future. The public system is not quite as dominant in relation to contributions and premiums paid in today – 68% relates to the public pension and 26% to supplementary pension.

**Diagram 1 Earnings-based public pension, supplementary pension and private pension**



Source Orange report 2007

The public pension system has recently been reformed. The reform has entered into force gradually, and all parts of it have been applicable since 2003. The most important reason for revising the pension system was that the costs of pensions were rising while growth was low. The trend towards an ageing population meant an increased dependency burden for those in gainful employment. In addition, more and more people were receiving an

ever higher pension, and with low growth the increased dependency burden was becoming even more difficult to support. The reform signified a change from a defined-benefit system, where pension in principle was determined as a particular percentage of pay, to a defined-contribution system, where the size of pension is based on contributions paid in. The link between contribution and benefit has thus been strengthened. Collectively agreed pensions have also changed in the direction of defined-contribution systems.

### *1. The statutory pension system*

Everyone in gainful employment and born in 1938 or later earns pension entitlement for inkomstpension and premium pension (*premiepension*). The inkomstpension system is a pay-as-you-go system, where contributions pay for pension benefits paid out in the same year. The contributions to premium pension are deposited in individual pension accounts and invested in funds according to the individual's choice. There are around 800 funds to choose from and a fund for those who do not make a choice. The reformed system applies in full to those who were born in 1954 or later. Part of the pension of elderly people is calculated according to older rules, this part being known as ATP (*tilläggs-pension*). The pension entitlements of someone who has not earned sufficient pension through work are topped up by a guaranteed pension (*garantipension*).

Pension is taxed in the same way as other social insurance benefits. A special deduction in taxation has been introduced for earned income. This deduction applies with effect from the 2007 year of earnings and is being expanded in 2008. Lower tax is thus paid on wage and salary income than on equivalent income from pension.

#### *Income index*

An income index is used in the inkomstpension system to adjust pension entitlements etc. The change in income index shows the trend in average earnings. The income on which the index is based is pension-qualifying income with no upper limit. Changes in the income index among other things dictate the trend in the income base amount.

#### *Inkomstpension and premium pension*

There is no lower or upper age limit for accruing inkomstpension and premium pension rights. Pension-qualifying income is earnings from gainful employment and social insurance benefits such as sickness and activity

compensation, sickness cash benefit and unemployment benefit. Pension entitlements can also be obtained for time (up to a maximum of four years) spent at home looking after young children, for studies and for national service. In these cases pension entitlement is calculated on a notional income, what is known as a pension-qualifying amount. Persons receiving sickness or activity compensation are also credited a pension-qualifying amount in relation to the assumed income on which the compensation paid is based. The pension base, the sum of pension-qualifying income and amount, is set at a maximum of 7.5 income base amounts, which in 2008 is equivalent to SEK 360 000. The upper income limit is thus raised in line with the trend in average income.

The pension entitlement is 18.5% of the pension base, 16 percentage points of which goes to inkomstpension and 2.5 percentage points to premium pension. Persons who are married have the option of transferring their premium pension entitlements to their partner. A contribution equivalent to 8% of the transferred amount is charged on transfer

In the premium pension system the individual's pension entitlements are invested in funds, and the pension account grows with the return on the funds the individual has chosen. In the inkomstpension system the accumulated pension rights are similarly noted as an account (pension balance) to which interest is applied. The "interest" equates to the annual change in the income index. Pension entitlements accrued early on consequently retain their value in relation to the trend in average earnings. The pension balance also grows with inheritance gains – the pension entitlements of those who have died before retiring are distributed to those still alive in the same age cohort – and is reduced by deductions for administrative expenses. The premium pension account changes in an equivalent way.

Pension can be drawn from the age of 61 as full or partial benefit. Those who carry on working as pensioners accrue new pension entitlement. Inkomstpension is calculated by dividing the pension balance by an annuity divisor at the time of retirement. The annuity divisor is specific to each age cohort and reflects remaining average life expectancy at the age when the pension is drawn and future indexation (interest) of 1.6%. The divisor is based on observed life expectancy statistics. The interest of 1.6% means that the divisor becomes lower than what the average life expectancy is and the initial pension becomes higher than it would otherwise have been. Pension is re-calculated annually with the change in income index less 1.6 percentage points, the interest that has already been credited in the divisor. The indexation method is known as adjustment indexation.

The premium pension can be drawn either as traditional insurance or as fund insurance. It is also calculated using an annuity divisor, which in this case is based on projection future life expectancies. An interest rate of 3.9% for fund insurance and 2.2% for traditional insurance has been credited in the divisor since April 2007. The premium pension can be taken with survivor's protection, which means that it is paid for as long as one of the spouses is alive. The annual pension then becomes lower.

*ATP (employment pension)*

Special transitional rules apply to persons born between 1938 and 1953. They receive a certain part of their pension as ATP and the remaining part as inkomstpension and premium pension. Pensioners born in 1938 receive 80% of the ATP, those born in 1939 receive 75% and so on. The ATP is equivalent to the former ATP plus the former basic pension (*folkpension*). ATP is based on income for the best 15 years of earnings before the age of 65, and 30 years are required for entitlement to full pension. The ceiling for maximum pension-qualifying income taken into account is the same as for inkomstpension, 7.5 income base amounts<sup>30</sup>. Accrued pension points are subject to price indexation. As pension points for ATP cannot be accrued after the age of 64, later gainful employment instead provides full pension entitlement for inkomstpension and premium pension.

ATP pension drawn before the age of 65 is reduced by 0.5% per month before the month in which the age of 65 is reached. Similarly, pension is raised by 0.7% per month by which the drawing of pension is deferred. The adjustment in amount is life-long. The ATP pension is subject to adjustment indexation in the same way as inkomstpension from the year in which the age of 65 is reached.

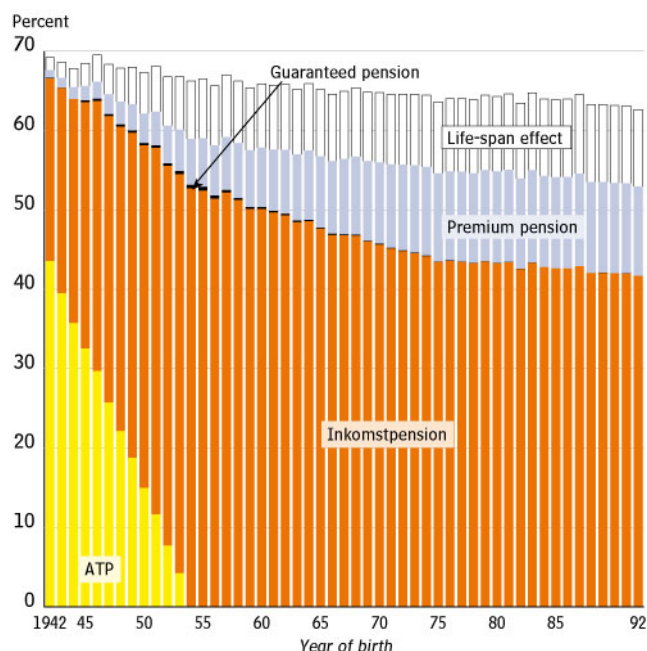
Diagram 2 shows how large the pension is calculated to be at the age of 65 as a percentage of the earnings of people in gainful employment at the same time. A real rate of growth in income of 1.8% per year and a real rate of interest of 3.25% per year have been assumed in the calculations. The phasing-out of the old ATP system and the effect of life expectancy adjustment of pension can be seen in the diagram. The unfilled bar shows how much higher the pension would have been if the annuity divisor had not increased due to increased life expectancy in the population or

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30 Before 2002 the ceiling was subject to price indexation.

alternatively if retirement age had been adapted to higher average life expectancy.

**Diagram 2 Average pension at age 65 as a percentage of average income**



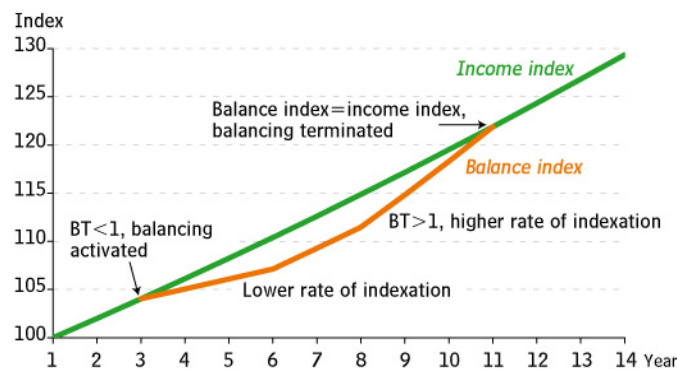
Source Orange report 2007

*Other indexation than income index – balancing*

The pay-as-you-go system has a fixed contribution rate of 16% and indexation that follows the trend in average earnings. This, combined with the fact that the annuity divisor is linked to current life expectancy, means that the system is considerably more stable than the old system. However, financial stability may be threatened if certain demographic and economic trends occur. Income indexation must be departed from in such situations. This is done by activating what is known as balancing. The system’s assets in relation to its liabilities provide a measure of the financial position of the system, a ratio known as the balance ratio. If the balance ratio is less than 1.0 balancing is activated and indexation takes place with a balance index instead of an income index. When the balance ratio exceeds 1.0 again and the balance index reaches the level of the income index, that is to say when

pensions regain the value they would have had if they had only been indexed with the income index, balancing is stopped.

**Diagram 3 Principle of balancing**



Source Orange report 2007

*Basic protection*

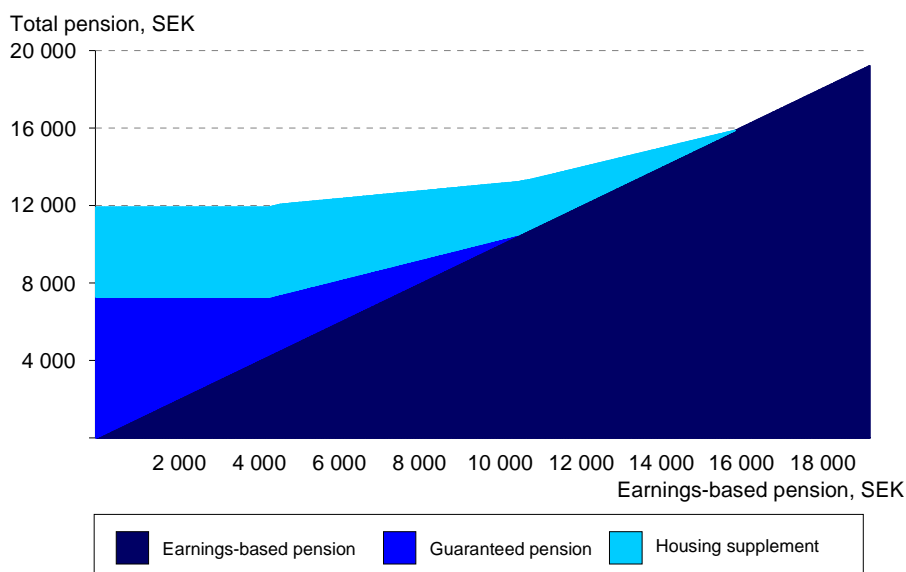
The guaranteed pension is basic protection for those who do not have any earnings-based pension or a top-up for those with a low pension. Guaranteed pension can be paid from the age of 65. Forty years of residence in Sweden<sup>31</sup> from the age of 25 is required for entitlement to full pension. Maximum guaranteed pension<sup>32</sup> per month in 2008 for a single pensioner is SEK 7 278 and for a married pensioner SEK 6 492. Guaranteed pension is reduced by the earnings-related pension in two steps: for low incomes a reduction is made by 100%, while for higher incomes the reduction is only 48%. The income limit (where the reduction percentage changes) is equivalent to a monthly pension of SEK 4 305 for a single pensioner and SEK 3 895 for a married pensioner.

Pensioners who have reached the age of 65 can apply for housing supplement. The housing supplement is means-tested and is tested against all types of income and against assets. This supplement is of great significance to the standard of living of the individual pensioner.

31 Residence in another EU/EEA country also provides entitlement to guaranteed pension.

32 The description relates to guaranteed pension for those born in 1938 or later. The maximum amount for older pensions is somewhat higher. The guaranteed pension for older pensioners is also calculated differently with the aim of providing the individual with the same basic protection as someone with the previous basic pension (folkpension) combined with the special tax rules that applied before 2003.

**Diagram 4 Earnings-related pension reduces guarantee pension. Monthly amount for a single pensioner in 2008**



*Number of old-age pensioners in 2007*

The number of old-age pensioners in December 2007 was just over 1.7 million. The majority of them, 92%, had earnings-related pension. Guaranteed pension was paid to nearly half the pensioners, around 800 000 persons, of whom 140 000 received guaranteed pension only. A total of 280 000 persons additionally received housing supplement. More women than men received guaranteed pension and housing supplement.

**Diagram 5** Proportion of old-age pensioner receiving earnings-based pension only, guarantee pension only and receiving both types of pension in 2007



### *Financing*

Earnings-based pension is financed by contributions paid by the insured person himself or herself, the employer and the state. The principle is that for each credited pension entitlement there is an equally large contribution. The combined contribution is thus 18.5% of pension-qualifying income and pension-qualifying amount<sup>33</sup>.

The basic protection is financed by general tax revenue.

33 The insured pays general pension contribution of 7% of income up to a contribution ceiling of 8.07 income base amounts (SEK 387 360 in 2008). The contribution is not included in the pension base. The employer's old-age pension contribution is 10.21% of total pay. Contributions on portions of pay above 8.07 income base amounts do not equate to any pension entitlement, nor do they accrue to the pension system. The State pays a corresponding contribution, 10.21%, on transfers. The aggregate contribution is thus 17.21% of the contribution base or 18.5% of the pension base. The difference between the contribution base and the pension base is the general pension contribution of 7%. Pension base thus represents 93% of the contribution base. The State pays the whole contribution of 18.5% for the pension-qualifying amount of notional incomes.



## 2. *Supplementary pensions*

As a complement to the statutory pension, around 90% of persons in gainful employment are covered by a pension insurance scheme agreed between the social partners. The four largest pension agreements are agreements for manual, white-collar workers, municipal and county council employees and central government employees. These pension systems have been successively strengthened by complementary defined-contribution pensions having been introduced and the contribution rate to these having been raised.

The supplementary pension systems have a significantly higher income limit than the statutory system and are therefore of particularly great significance for persons with high incomes. The collectively agreed pensions are complementary for portions of wage and salary up to the income ceiling for the public system, previously being equivalent to around 10% of wages and salaries in the last few years of employment. Unlike the statutory system, pension accrues to a maximum age of 65.

However, the collectively agreed pension insurance schemes have also changed in the direction of defined-contribution systems. Pension for portions of pay below the ceiling is now defined-contribution in the four large pension insurance schemes. The pension under the new agreements for manual and white-collar workers in private employment is entirely defined-contribution, both below and above the ceiling of 7.5 income-related base amounts. The contribution is 4.5% of pay below the ceiling and 30% above it<sup>34</sup>. The rule changes are linked to long transitional rules. The new rules will not have their full impact on pensions until those who are young today retire.

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34 Applicable to accrual of pension from 2012 for manual workers, for white-collar employees (ITP) from 2007 and primarily for those born after 1978. ITP for older cohorts is used for typical cases in Chapter 5; compensation for pay up to the ceiling represents 10% of final salary, complemented in 1977 by a funded defined-contribution system with a premium of 2% of pay. The defined-benefit portion in principle is inflation-protected.

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