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Pension Indicators 2021

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Foreword

The aim of pension policy is to ensure sufficient earnings-related pensions, the financial sustainability of the earnings-related pension scheme and longer working lives. Earnings-related pension indicators provide a perspective on the current status of earnings-related pensions as well as on their realised and predicted development. The collection of indicators is intended for decision-makers and other parties interested in the future development of earnings-related pensions. The pension indicators have been grouped according to three central goals: length of working life, pension level and pension financing.

The core indicators include central issues in terms of the development of earnings-related pensions and the monitoring of the reforms. The supplementary indicators offer, as their name reveals, additional insight. There is more information relating to indicators on the website of the Finnish Centre for Pensions and its various publications.

The Finnish Centre for Pensions first introduced indicators for the monitoring and evaluation of pension provision in 2013. The indicators have been slightly updated in 2021.

The indicators of this review have been compiled by Jaakko Kiander, Joonas Hautamäki, Santeri Helin, Henna Iire, Jari Kannisto, Katariina Käkönen, Jukka Lampi, Tuija Nopola, Tiina Palotie-Heino, Juha Rantala, Suvi Ritola and Janne Salonen of the Finnish Centre for Pensions, as well as Kimmo Koivurinne of The Finnish Pension Alliance TELA.

Helsinki, October 2021

Jaakko Kiander
Director, Finnish Centre for Pensions

CONTENTS

1.1 Expected effective retirement age

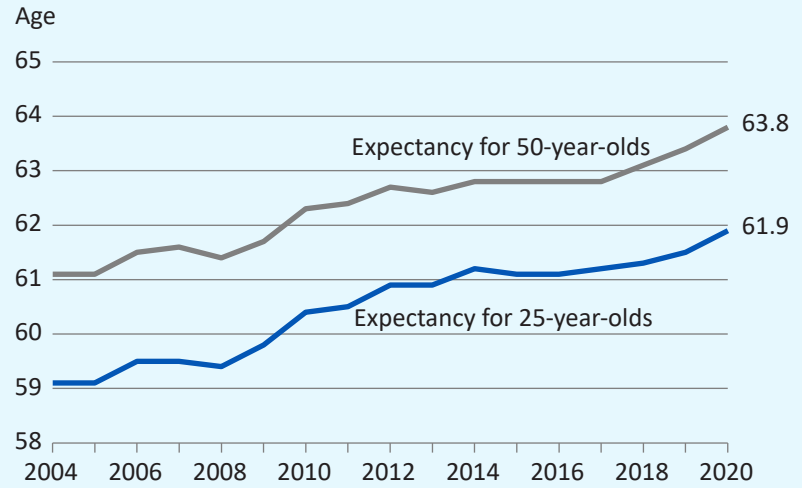
The expected effective retirement age depicts the average retirement age for insured persons of a certain age when presuming that the retirement risk and mortality per age group remains at the level of the review period. Part-time pension retirees or partial old-age pension retirees are not included when calculating the expectancy.

The expected effective retirement age can be calculated for persons at any age. The expectancy for a 25-year-old has been selected as the basic indicator.

The expectancy for a 25-year-old has risen by 2.8 years from the level prior to the previous pension reforms (2004). In 2020, the expected effective retirement age for a 25-year-old was 61.9 years. It rose by 0.4 years compared to 2019. In 2020, the expected effective retirement age for a 50-year-old was 63.8 years; that is, 1.9 years higher than that of a 25-year-old. Thus, the expected effective retirement age for a 50-year-old also rose by 0.4 years in 2020. One of the key underlying reasons for the rapid rise in expected effective retirement age is the rising old-age retirement age.

The expected effective retirement age for men and women was on the same level until 2015. After that, the expected effective retirement age for men rose in a few years and exceeded that of women by 0.7 years. In the last few years, the gap has not grown. Instead, men's and women's expected effective retirement age has increased at the same pace. The gap between 50-year-old men and women is narrow.

Figure 1.1a
Expected effective retirement age in 2004–2020, all retirees on earnings-related pension



Those born in late 1956 and early 1957 reached their retirement age in 2020. Because of the rising retirement ages, the retirement age of these age groups was 63 years and 6 months and 63 years and 9 months respectively. Due to the change, the number of new retirees on an old-age pension has been lower than before since only a part of the age groups reaches their retirement age each year. Before 2018, the entire age group reached the retirement age in the same year.

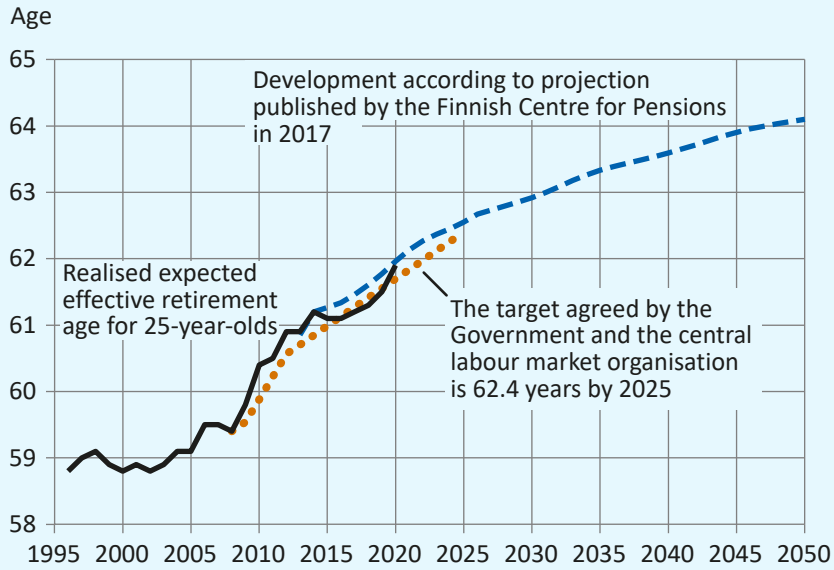
More information: Effective retirement age in the Finnish earnings-related pension scheme

In 2009 the government and central labour market organisations set as a goal that the expected effective retirement age of a 25-year-old should rise to at least 62.4 years by 2025. To implement this goal, government proposals to change the earnings-related pension acts were confirmed in January 2016. New earnings-related pension acts came into force on 1 January 2017. The Finnish Centre for Pensions' impact assessment of the 2017 pension reform projected that, as the age limits for old-age pension are progressively raised, the targeted levels for the expected retirement age should be reached by around 2025.

(Projections on the effects of the 2017 earnings-related pension reform – Assessments based on the Government bill. Finnish Centre for Pensions, Reports 08/2015).

The expected effective retirement age at the beginning of the 2000s was around 59 years. In connection with the 2005 pension reform, the unemployment pension was phased out which, after a transition period, clearly raised the expected effective retirement age. When the effective retirement age ceased to rise in 2015, a change in retirement age was seen as the best alternative to achieve the set goal. The retirement age was amended in connection with the 2017 pension reform. Now reaching the goal seems feasible. The expected effective retirement age should rise by 0.5 years from 2020 to 2025. This requires that the effective retirement age rises by an ample one month per year.

Figure 1.1b
Expected effective retirement age in 1996–2050: realisation, goal and projection



1.2 Duration of active working life and duration of employment

The duration of active working life depicts the average number of years a 15-year-old is expected to take part in the workforce during the remaining years of life, if the workforce shares of the year in question would prove to be permanent.

The duration of employment depicts the average years that a 15-year-old person can be expected to be in employment or self-employment during the remaining years of life, if the rates of employment during the year in question would prove to be permanent. Its annual values are cyclical in the same way as the employment rate.

The calculations are based on data from workforce research of Statistics Finland. The variables used are workforce share and employment rate.

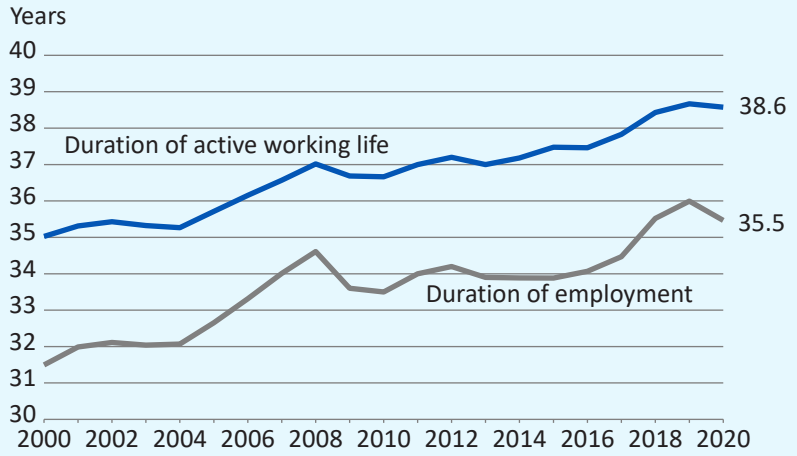
More detailed definitions are presented at the website of Statistics Finland.

The calculations have been made at the Finnish Centre for Pensions.

The expected time in employment increased by 3.6 years in the review period. Up to 2016, the expected time in employment was around 34 years. At its highest, the expected time in employment was 36 years in 2019.

The difference, about three years between the duration of active working life and the duration of employment, is due to unemployment.

Figure 1.2
Duration of active working life and duration of employment for a 15-year-old in 2000–2020



1.3 Employment rate

The employment rate is the percentage share of employed persons in the population of the same age. The review is based on the annual average values of the labour force survey by Statistics Finland. Normally, the employment rate is calculated as a percentage share of same-age population among the employed between 15 and 64 years of age. This being the case, 65–69-year-olds do not impact the employment rate of the population as a whole.

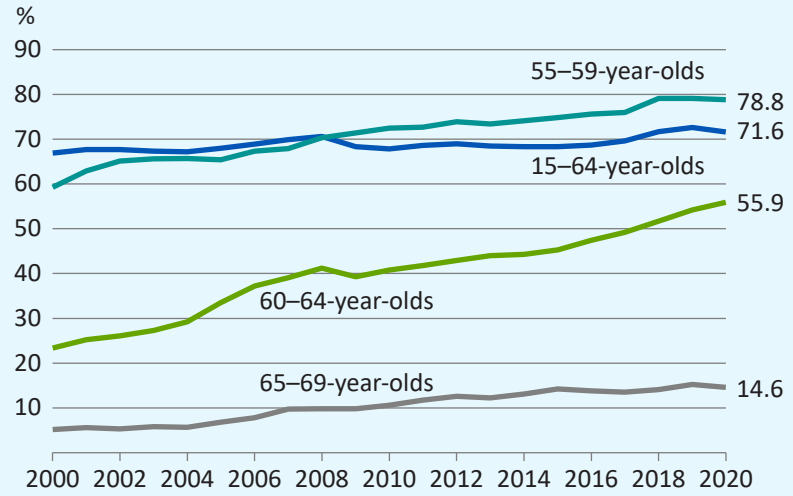
As employed is considered a person who, during the survey week, was in gainful employment and received a monetary salary for at least an hour of work or fringe benefits, or profit, or someone who has been temporarily off work. More detailed definitions are available from Statistics Finland.

The employment rate rose in the 2000s, right up until the financial crisis of 2008. Since then the trend for the employment rate has been particularly favourable in the age groups 55+. In the age group 55–59, the employment rate since 2008 has been higher than in the whole working age population. The employment rate of this age group has risen steadily, but in the last two years, the development seems to have stagnated. In 2020, the employment rate dropped by three decimal percentage points from the record-high level in 2019.

Employment has also improved significantly among the 60–64-year-olds. Apart from the brief slump caused by the financial crisis, the employment rate in this age group has risen rapidly. A new record has been set each year, also during the corona pandemic. In 2020, the employment rate of the 60–64-year-olds was 55.9 per cent - an increase of 1.7 per cent from 2019.

The employment rate for the 65–69-year-olds has also improved, particularly since the 2005 pension reform. The likely main reason for this is that the age when the insurance obligation ends has risen from 65 to 68 years. Before the 2017 reform the employment rate of this age group was around five per cent. In 2020, it was three times as high (14.6%) as at the turn of the century.

Figure 1.3
Employment rate by age group in 2000–2020



Source: Official Statistics of Finland (OSF): Labour force survey. ISSN=1798-7857. Helsinki: Statistics Finland

It took ten years for employment in the total population to rise to the pre-financial-crisis level. In 2019, the record-high level of the 2000s (72.6%) was reached. In the year of the corona pandemic (2020), the employment rate decreased by one percentage point compared to in 2019. The quick economic recovery from the slump caused by Covid-19 is likely to send the employment rate on an upward trend again this year.

1.4 Length of working life of new retirees

Length of working life means the duration of time, in months or years, of coverage by the earnings-related pension scheme. In such cases, working life only includes employment or self-employment insured for earnings-related pensions. In this review, a person is considered to have been at work during a specific month, according to register information, if they have been employed or self-employed and insured for earnings-related pensions during said month.

A person's working life begins no earlier than from the beginning of the month following their 17th birthday: this is the age at which pension begins to accrue. Until the end of 2016, pension began to accrue at age 18. Since the review ends with retirement, working life does not comprise work carried out alongside receiving a pension, if the pension in question is not part-time pension or partial old-age pension. The information is based on the statistical registers of the Finnish Centre for Pensions.

In 2020, the working life length of new retirees on an earnings-related pension seems to have taken an upward turn. Despite that, the average working life of new retirees on an earnings-related pension was six months shorter than five years ago. The median working life, on the other hand, was nearly at the same level as, or slightly longer, than five years ago. In reality, working lives have hardly shortened. Instead, due to the rising retirement age, the share of new retirees on an old-age pension of all new retirees is exceptionally small. It makes it more difficult to make temporal comparisons for all new retirees. That is why it is good to review the working lives of new retirees on an old-age pension in particular.

The working length of new retirees on an old-age pension has risen clearly in the last few years. In 2020, the average working life of new retirees on an old-age pension was 35.8 years and the median working life 39.5 years. In other words, half of all new retirees on an old-age pension worked for at least 39.5 years before retiring. Both the average and the median values increased compared to 2020.

Table 1.4
The length of working lives of retirees in 2020, years

	Average value	Median
All new retirees in 2020		
Both genders	32.1	37.1
Males	32.7	37.7
Females	31.7	36.4
New retirees on an old-age pension in 2020		
Both genders	35.8	39.5
Males	36.2	39.8
Females	35.3	39.1

The working life of male new retirees on an old-age pension was, on average, 0.9 years longer than that of female new retirees. The gender gap was of similar size also among all new retirees.

The median length of working life is around five years higher than that measured with the average value. For new retirees on an old-age pension, the gap is slightly under four years.

The development in the last few years indicates that, on average, people retire on a disability pension after an increasingly shorter working life. The shortening working life can be explained, among other things, by the rising share of young people among new retirees on a disability pension.

1.5 Retirees and working

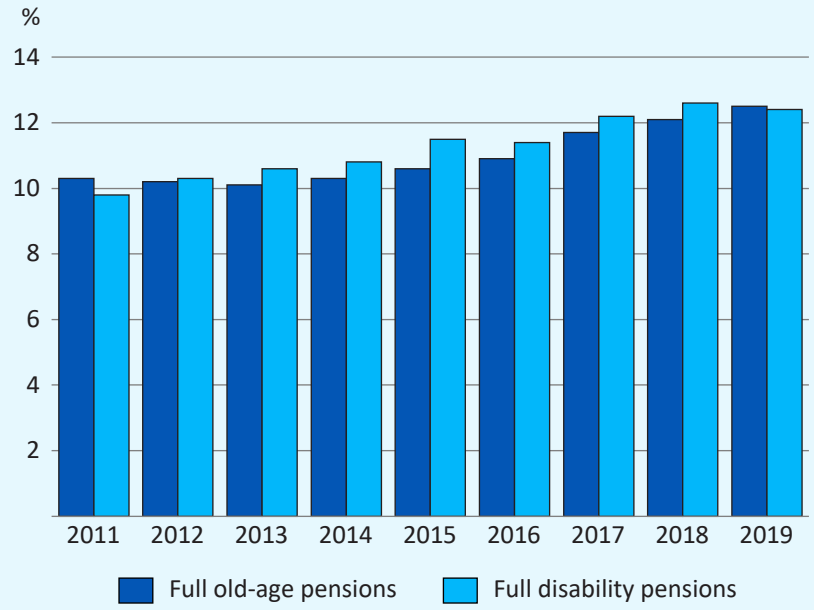
The percentage of pension recipients working while drawing a pension compared to pension recipients of the same age describes the frequency of working in retirement. Since the data is based on the statistical registers of the Finnish Centre for Pensions, the review has to be limited to those covered by the insurance obligation, that is, the 18–67-year-old pension recipients who received an old-age pension or a full disability pension at the end of the statistical year.

The old-age pensions do not include the partial old-age pension. The partial disability pension has also been excluded from the review. The disability pension may be awarded as a full pension or a partial pension. Since the partial pension is half of the amount of the full pension, its prerequisite is continued working (with a reduced work input) within the limits of the person's ability to work. In recent years, partial pensions have been paid to more than 23,000 persons, one third of whom are men. Nearly 80 per cent of all partial pension recipients work.

Of the under 68-year-old recipients of a full old-age pension, a total of 12.5 per cent worked at year-end 2019, up by two percentage points in the 2010s. Working has become more common mainly in the latter half of the decade in the wake of a favourable economic development.

The number of recipients of a full disability pension has dropped by 40 per cent during the period under review. They numbered 180,000 in 2011 and 110,000 by the end of 2019. While the number of full disability pension recipients has decreased, working in retirement has increased slightly. At the end of 2019, a total of 12.4 per cent of all recipients of a full disability pension worked.

Figure 1.5
Share of employed 18–67-year-old pension recipients at year-end 2011–2019, %



1.6 Expected effective retirement age, median and average value

The effective retirement age can be described by the indicators expectancy, median and average value.

The expected effective retirement age (expectancy) depicts the average retirement age for insured persons of a certain age when presuming that starting pensions and mortality per age cohort remain at the level of the year under review. The expected effective retirement age can be calculated for persons at any age. The expectancy for a 25-year-old has been selected as the basic indicator.

The median is the age that 50 per cent of retirees are younger than and 50 per cent are older than.

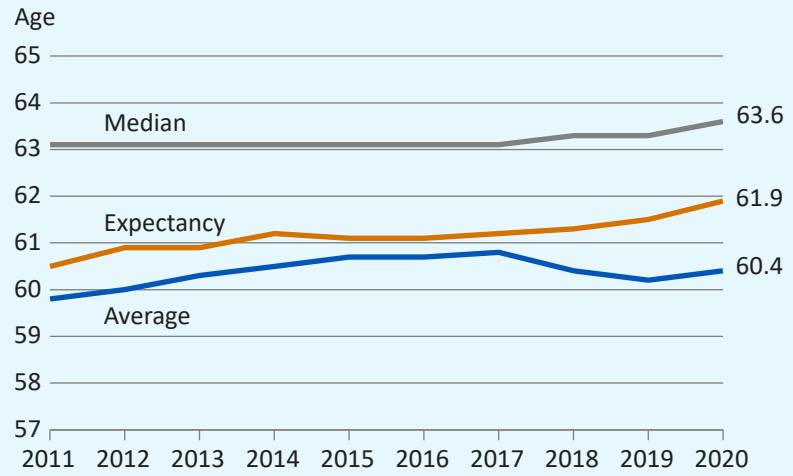
The average age is the arithmetic mean of the ages of those who retired.

People who have taken out a part-time pension or a partial old-age pension are not included in the figures of retirees.

All indicators show that the effective retirement age has risen in the 2000s, through to 2017. In 2018 and 2019, the number of new retirees on an old-age pension dropped temporarily compared to the previous years due to the rising retirement age. Those born in late 1956 and early 1957 reached their retirement age in 2020. The retirement age of those born in 1957 was 63 years and 9 months, which means that the majority of the cohort reached its retirement age in 2021.

The average and median values indicate the effective retirement age for a given year; they cannot be used for inferences about changes occurring over time. For example, the drop in the average value in the last couple of years is due to the exceptionally low number of new retirees on an old-age pension. In reality, this will defer actual retirement. Both the expected effective retirement age and the median effective retirement age have risen clearly since the 2017 pension reform.

Figure 1.6
The expected effective retirement age, median and average value in the earnings-related pension scheme in 2011–2020



The population age structure has had a major effect on the effective retirement age in the 2000s. The boomers have now retired on an old-age pension, so their impact on these indicators has faded. In the future, increasingly smaller age groups are approaching retirement age. The expected effective retirement age is not affected by the demographic age structure, only by changes in behaviour of those approaching retirement age. As the retirement age rises, the number of new retirees on an old-age pension decreases, which reduces the average effective retirement age, at least in the beginning.

1.7 Share of insured that have retired on an earnings-related pension

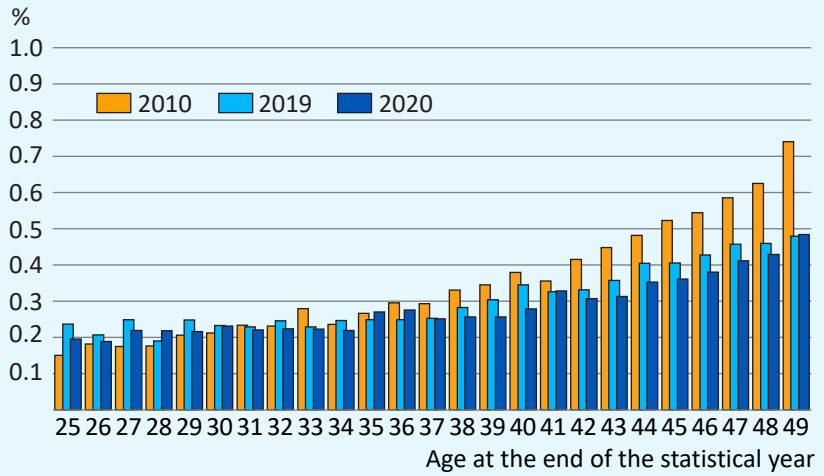
The share of insured that have retired on an earnings-related pension depicts the percentage share of new retirees among persons of the same age who are insured but not retired. The ratio can be interpreted as the risk of retirement at a certain age. This retirement risk is also used to calculate the expected retirement age.

In the 2010s, the share of new retirees on an earnings-related pension has clearly decreased in the age groups under 63. Among the young, however, the shares have not decreased; on the contrary, the share of young new retirees on a disability pension has increased somewhat.

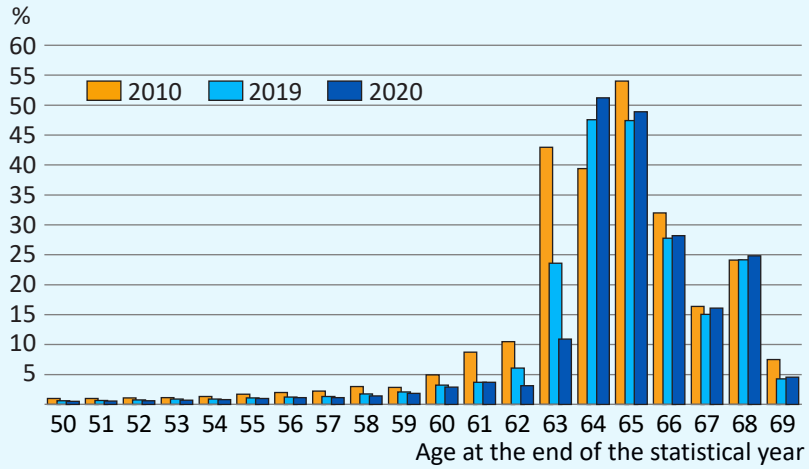
The share of middle-aged new retirees on a disability pension has decreased as a result of the population's improved health and more developed health services. As for the older workforce, the abolishment of the unemployment pension is particularly obvious among the 60- and 61-year-olds. As of 2018, the retirement age has risen by three months per age cohort, which is reflected in a reduced number of new retirees aged 63. In 2020, those born in early 1957 reached their retirement age of 63 years and 9 months.

Figure 1.7
Share of insured that have retired on an earnings-related pension in 2010, 2019 and 2020

a) 25–49-year-olds



b) 50–69-year-olds



Please note the different scaling in figures a and b.

1.8 Age-standardized incidence of disability pensions

The incidence of disability pensions depicts the percentage share of the non-retired population that has begun receiving disability pension during the year in question. The figures have been age-standardized, using those insured for earnings-related pension in the last year as standard population. By standardizing them, the impact that age structure differences in the population have on the incidence is removed.

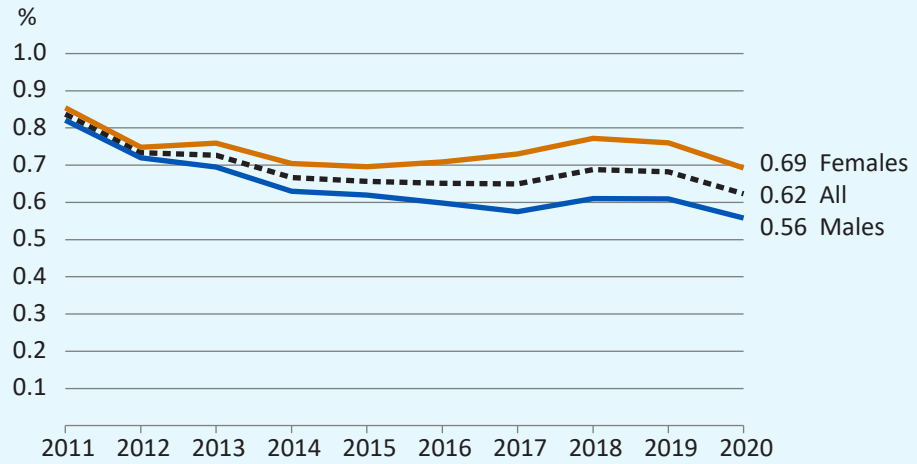
The incidence of disability pensions fell in the 2010s up to 2017, more so among men than women. After the 2017 pension reform was implemented, the incidence took a temporary upward turn, which ended in a clear downward turn in 2020. In 2020 the incidence of disability pensions was 0.62 per cent.

In the early 2000s, the incidence was higher for men than women. In 2010, the incidence was the same for both genders, but since then, women's incidence rates have been higher than men's. In recent years, the gap has no longer increased and seems to have stabilised at 0.15 per cent.

In the mid-2010s, the annual number of new retirees on a disability pension stabilised at clearly less than 19,000 persons. After the 2017 pension reform, the number took a quick upturn, which seems to have taken a downward turn in 2020, the year of the corona pandemic, when 19,100 persons retired on a disability pension. This was a drop of six per cent (or 1,200 persons) compared to 2019.

The most common reasons for retirement on a disability pension are musculoskeletal disorders and mental and behavioural disorders. In 2019, for the first time, mental and behavioural disorders was the most common reason for retirement on a disability pension: 33 per cent of all new retirees on a disability pension retired due to mental and behavioural disorders while 31 per cent retired due to musculoskeletal disorders. The trend continued in 2020.

Figure 1.8
Age-standardized incidence of disability pensions for 25–62-year-olds in the earnings-related pension scheme in 2011–2020 by gender, %



The figures include full disability pensions and individual early retirement pensions.

Standard population = non-retired population of persons insured for an earnings-related pension in 2020

1.9 Duration of active working life in the Nordic countries and the EU

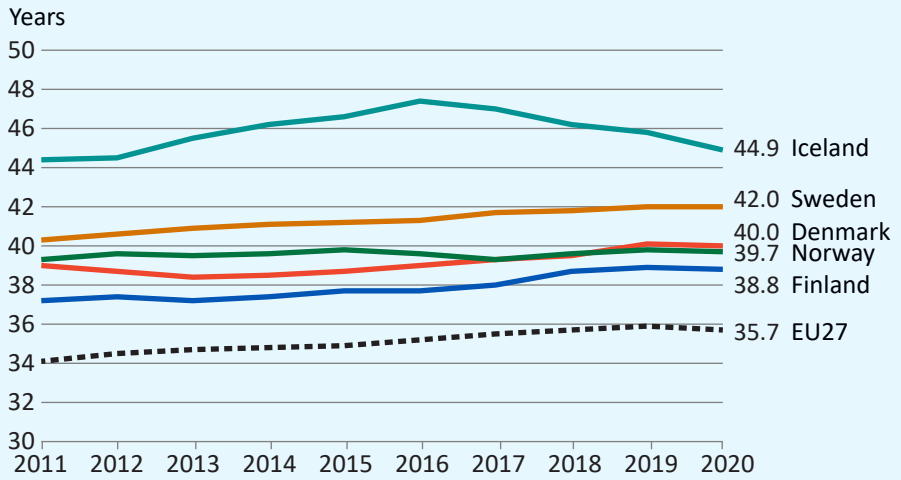
The duration of active working life depicts the average number of years a 15-year-old is expected to take part in the workforce during the remaining years of life. The figures come from Eurostat.

The expected duration of active working life has increased in the whole EU area by around two years during the period under review.

In the Nordic countries, Sweden and Finland have seen the expectancy rise at the same rate as in the EU. In Norway, the expectancy has remained at the same level (39.5 years) throughout the review period. The expected duration of active working life is highest in Iceland, about 45 years.

In Finland, the active working life duration is shorter than in the other Nordic countries. In 2020 the difference to Sweden was 3.2 years.

Figure 1.9
Duration of active working life of a 15-year-old in the Nordic countries and the EU in 2011–2020



1.10 Employment rate of 55–67-year-olds

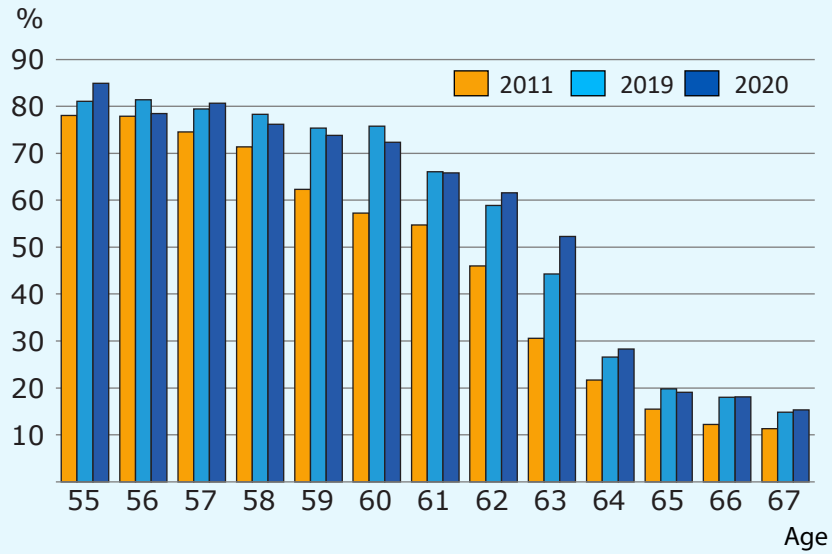
The employment rate is the percentage share of employed persons in the population of the same age. The review is based on the annual average values of the labour force survey by Statistics Finland.

As employed is considered a person who, during the survey week, was in gainful employment and received a monetary salary for at least an hour of work or fringe benefits, or profit, or someone who has been temporarily off work. More detailed definitions are available from Statistics Finland.

In recent years, the employment rate has risen in the older workforce. In the past ten years the employment rate has increased clearly in all 55+ age groups. This positive trend continued in 2020 in particular in the age group 62–64 years.

The largest change in the 2010s occurred in the age group 59–63-year-olds. The increase in retirement age is probably one of the central reasons for the rising employment rate in these age groups.

Figure 1.10
The employment rate of 55–67-year-olds in 2011, 2019 and 2020



Source: Official Statistics of Finland (OSF): Labour force survey. ISSN=1798-7857. Helsinki: Statistics Finland

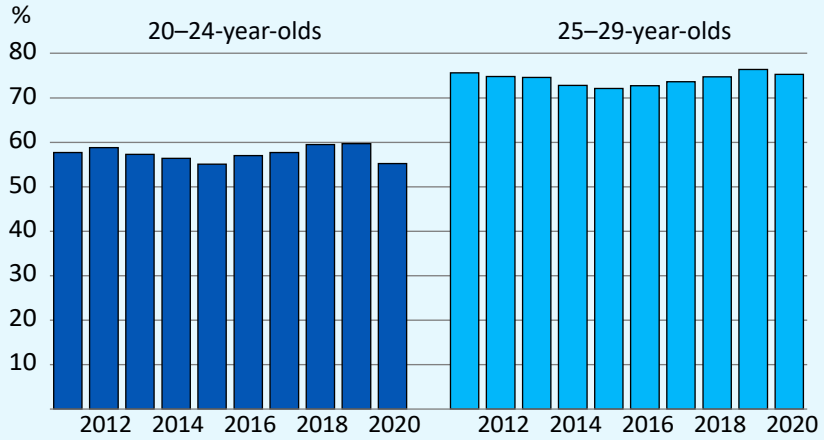
1.11 Employment rate of 20–29-year-olds

The employment rate is the percentage share of employed persons in the population of the same age. The review is based on the annual average values of the labour force survey by Statistics Finland.

As employed is considered a person who, during the survey week, was in gainful employment and received a monetary salary for at least an hour of work or fringe benefits, or profit, or someone who has been temporarily off work. More detailed definitions are available from Statistics Finland.

In the early 2010s, the euro crisis pressed down the employment rate. It was at its lowest in 2015, after which the employment rate among the young took an upward turn again. The employment rate peaked at the end of the 2010s. The upward trend ended with the corona crises. In 2020, the employment rate among the 20–24-year-olds was 55.2 per cent, and 75.3 per cent among the 25–29-year-olds.

Figure 1.11
The employment rate of 20–24- and 25–29-year-olds in 2011–2020



Source: Official Statistics of Finland (OSF): Labour force survey. ISSN=1798-7857. Helsinki: Statistics Finland

1.12 The average employment rate of 60–64-year-olds in the Nordic countries and the EU

The employment rate is the percentage share of employed persons in the population of the same age. The review is based on data collected by Eurostat from the workforce research of different countries. The definitions of the statistic are the same as in the workforce research of Statistics Finland. More details available at Eurostat.

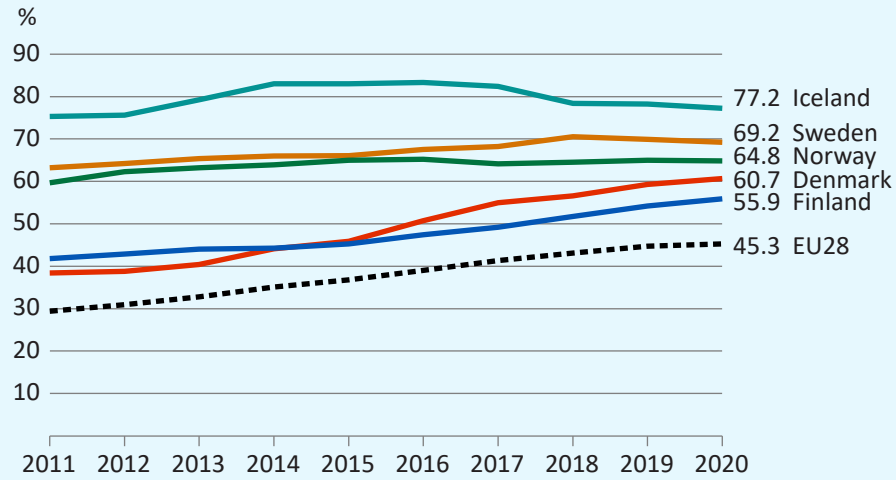
As employed is considered a person who, during the survey week, was in gainful employment and received a monetary salary for at least an hour of work or fringe benefits, or profit, or someone who has been temporarily off work.

Although the employment rate of 60–64-year-olds in the EU has risen clearly in the 2010s, it is still below that in the Nordic countries. Finland has the lowest employment rate of the Nordic countries but it is 10 percentage points above the average EU rate.

Iceland has the clearly highest rate in the Nordics. Sweden comes in second. Its employment rate among the 60–64-year-olds has remained at around 70 per cent in recent years. Norway, Denmark and Finland each stand at five percentage points apart.

In Finland and Denmark, the employment rate among the 60–64-year-olds has risen briskly in the 2010s, narrowing the gap to the other Nordic countries in recent years in particular. For example, the gap between Finland and Sweden has narrowed by eight percentage points during the review period. Atthe same time, the employment rate of the elderly workforce has risen by more than 20 percentage points. The swiftest development in the Nordics has made Denmark surpass Finland and approach Norway, where the development has slowed down.

Figure 1.12
Employment rate of 60–64-year-olds in the Nordic countries and the average rate in EU countries in 2011–2020



Source: Eurostat, Employment, Labour Force Survey

At least part of the gaps between the Nordic countries can be explained by part-time work, which is clearly more common in Sweden and Norway than in Finland. In Finland, the employment rate particularly of older men is lower than in the other Nordic countries.

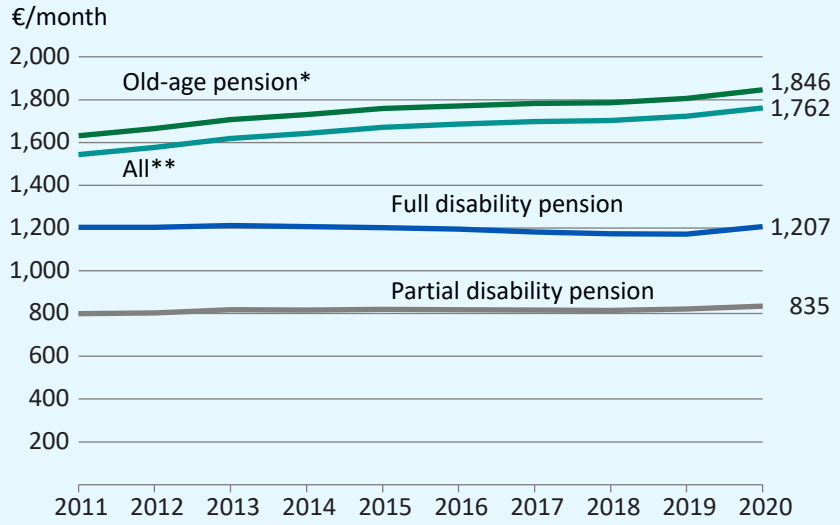
2.1 Average total pension in one's own right

The average total pension in one's own right depicts the average total pension of persons resident in Finland and receiving old-age or disability pension from the earnings-related and/or national pension scheme. The pension contains the individual's own earnings-related and national pension as well as surviving spouse's pension. The total pension also comprises special provisions pensions[1] as well as front veterans' supplements, child increases and guarantee pensions paid by Kela.

The average total pension of old-age pension recipients has seen a real growth of 13 per cent during the period under review.

The average total pension of those receiving a full disability pension has remained nearly at the same level throughout most of the period under review. The total average pension of those receiving a partial disability pension has also remained fairly stable during the period under review. According to the definition, the partial disability pension is half the size of a full pension. Relatively speaking, partial disability pensions are better than full pensions. In 2020 the total average pension of those receiving partial disability pension was 70 per cent of the total pension of those receiving a full disability pension.

Figure 2.1
The average total pension in one's own right by pension benefit in 2011–2020, in 2020 currency



*Old-age pension doesn't include partial old-age pensions.

**Contains unemployment pensions up until 2014.

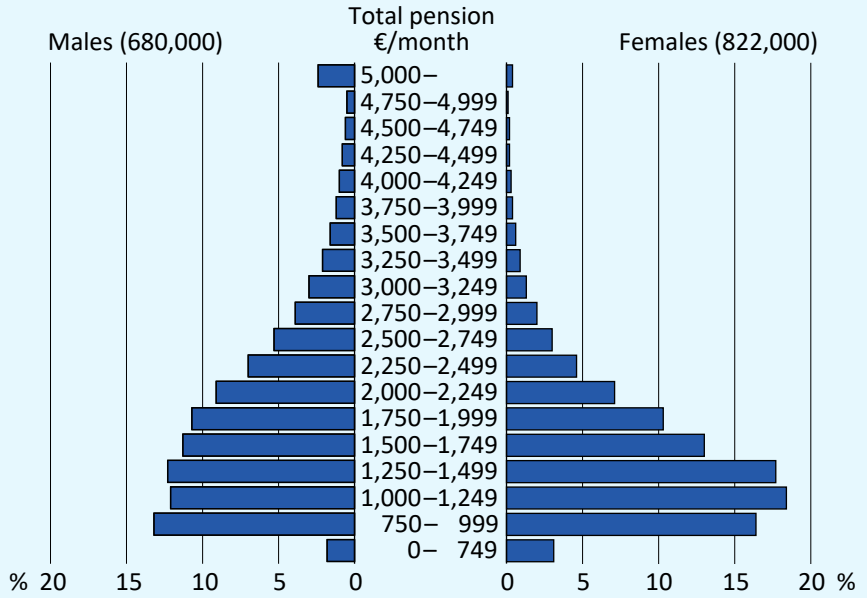
1 The Motor Liability Insurance Act, the Occupational Accidents, Injuries and Diseases Act, the Act on Compensation for Military Accidents and Service-Related Illnesses, the Act on Compensation for Accidents and Service-Related Illnesses in Crisis Management Duties, and the Military Injuries Act.

2.2 Distribution of total old-age pension among pensioners with a pension in one's own right

T**he average total pension** in one's own right depicts the average total pension of persons resident in Finland and receiving old-age or disability pension from the earnings-related and/or national pension scheme. The pension contains the individual's own earnings-related and national pension as well as surviving spouse's pension. The total pension also comprises special provisions pensions[1] as well as front veterans' supplements, child increases and guarantee pensions paid by Kela.

Pension recipients received an average monthly total pension of 1,762 euros in 2020. The size distribution of the total pension received in one's own right is more regular among men than women. Of the pension recipients, nearly half received a monthly pension of less than 1,500 euros. From a gender perspective, 56 per cent of the women and 40 per cent of the men received a monthly pension of less than 1,500 euros. Around 15 per cent of all pension recipients residing in Finland received a total monthly pension of more than 2,500 euros. As a rule, large pensions are paid to men.

Figure 2.2
Distribution of total pension received in one's own right of persons residing in Finland at 31 Dec. 2020



The graph does not include pension recipients who get partial old-age pension or disability pension.

1 The Motor Liability Insurance Act, the Occupational Accidents, Injuries and Diseases Act, the Act on Compensation for Military Accidents and Service-Related Illnesses, the Act on Compensation for Accidents and Service-Related Illnesses in Crisis Management Duties, and the Military Injuries Act

2.3 Average total pension in one's own right in relation to average earnings

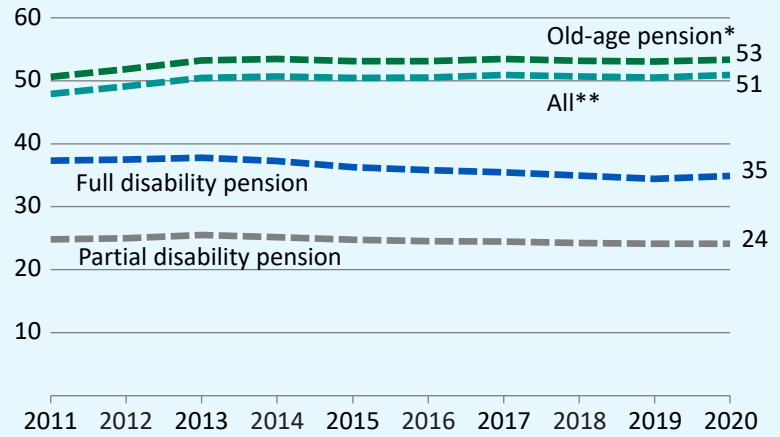
The average total pension in one's own right depicts the average total pension of persons resident in Finland and receiving old-age or disability pension from the earnings-related and/or national pension scheme. The pension comprises the individual's own earnings-related and national pension as well as surviving spouse's pension. The total pension also comprises special provisions pensions[1] as well as front veterans' supplements, child increases and guarantee pensions paid by Kela.

The average earnings are based on the average wages and self-employment income of different professions, as reported in the income distribution statistic of Statistics Finland. More detailed definitions are available from Statistics Finland.

The income ratio of all pension recipients and the working population has remained around 50 per cent throughout the entire period under review. The income ratio has remained virtually the same due to the development in old-age pensions. The average old-age pension relative to the average earnings of those working has also remained around 50 per cent, and even exceeded it as of 2012. In recent years, the moderate changes in average earnings have also impacted the development of this ratio.

The status of recipients of a full disability pension in relation to people still in the labour market has slightly weakened during the period under review. For recipients of disability pension, the income ratio to the working population has decreased by a couple of percentage points to 35 per cent. The income ratio of recipients of partial disability pension to the working population has remained at around 25 per cent throughout the period under review.

Figure 2.3
The average total pension in one's own right in 2010–2019, in percentage of the annual average earnings of the year in question, by pension benefit



*Old-age pension doesn't include partial old-age pensions.
**Contains unemployment pensions up until 2014.

1 The Motor Liability Insurance Act, The Occupational Accidents, Injuries and Diseases Act, The Act on Compensation for Military Accidents and Service-Related Illnesses, The Act on Compensation for Accidents and Service-Related Illnesses in Crisis Management Duties, Military Injuries Act.

2.4 Average total pension in relation to average earnings, 2015–2085

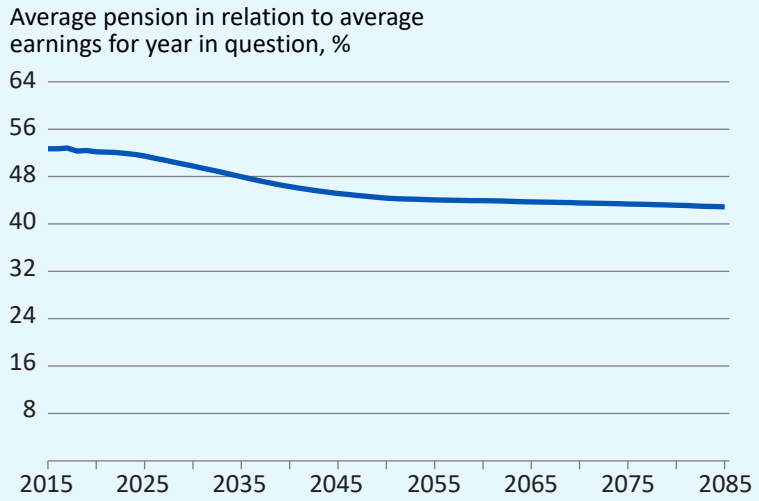
The assessment of the development of the average total pension is based on the long-term projection (LTP) compiled in October 2019. (The LTP is a long-term pension projection based on the 2019 population projection of Statistics Finland, 17 October 2019, memo of the Finnish Centre for Pensions).

The average total pension in one's own right depicts the average total pension of persons resident in Finland and receiving old-age or disability pension from the earnings-related and/or national pension scheme. The pension contains the individual's own earnings-related and national pension as well as surviving spouse's pension. The total pension also comprises special provisions pensions[1] as well as front-veterans' supplements, child increases and guarantee pensions paid by Kela.

The average pension purchasing power will more than double in the period 2017–2085, which means that, at the 2017 price level, a pension of 1,600 euros will rise to 3,600 euros per month. The rise in pension purchasing power is mainly attributable to rising earnings levels.

The average pension was slightly more than half of the average earnings of the insured in 2017. From 2020 onwards pensions will rise more slowly than average earnings. This is mainly due to the life expectancy coefficient. In addition, the discontinuation of the final salary principle in 2005 and higher accrual rates in the public sector compared to the private sector in the 1990s contributed to reduce the average pension to average earnings ratio. Over the next few years the narrowing of the ratio will be slowed by the continued maturing of the earnings-related pension system. The working lives of the oldest pensioners partly date back to the time before the earnings-related pension acts came into force. In the projection, all pensions paid by Kela are assumed to follow the growth in earnings and the growth in prices on a fifty-fifty basis. This is why Kela pensions grow at a slightly slower rate than do earnings. By 2085 the ratio of the average pension to average earnings will settle at the level of 43 per cent.

Figure 2.4
The average total pension in one's own right and its ratio to average earnings of the year in question in 2015–2085



1 The Motor Liability Insurance Act, The Occupational Accidents, Injuries and Diseases Act, The Act on Compensation for Military Accidents and Service-Related Illnesses, The Act on Compensation for Accidents and Service-Related Illnesses in Crisis Management Duties, Military Injuries Act.

2.5 Pension replacement rate

The pension replacement rate depicts the earnings-related pension percentage share of the earnings level preceding retirement of a person who has retired on an earnings-related pension. The earnings-related pension includes all pensions in one's own right paid as earnings-related pensions. The earnings level has been determined two and three years before the pension contingency year, based on earnings received.

Included in the review are persons who retired on an earnings-related pension in 2020 and had earnings from work during the years 2017 and 2018. Excluded from the review are thus those new retirees who did not have earnings during the two calendar years under review. Part-time pension recipients have also been excluded from the review during that time. The limitations screen out approximately half of all new retirees. Many left outside the review retired as a result of disability or unemployment.

The earnings have been indexed to the statistical year by the cost-of-living index.

The pension replacement rate for people retiring in 2020 was 59 per cent on average. The replacement rate varies greatly. If earnings from the last working years differ significantly from average career earnings, the replacement rate may be very high or very low. The replacement rate median was 57 per cent. It describes the average pension replacement rate fairly well. Every second replacement rate was between 47 and 66 per cent. The replacement rate was slightly higher for men than for women.

Table 2.5
Pension replacement rates of those retiring on an earnings-related pension from work in 2020

	Average replacement rate	Lowest decile, i.e. 10%	Lower quartile, i.e. 25%	Median value, i.e. 50%	Upper quartile, i.e. 75%	Highest decile, i.e. 90%
All new retirees						
Both genders	59	31	47	57	66	79
Males	62	36	50	59	68	83
Females	56	29	44	56	65	76

The basic figures for the replacement rates presented here are, by nature, rather stable; changes occur slowly. Although the average replacement rate rose in 2020 by one percentage point compared to 2019, a slowly declining trend can be observed over the long run, with an annual decrease of around one percentage point. In 2012, the average replacement rate of those retiring from work was 66 per cent. The median and quartile rates have also decreased, but at an even slower rate.

2.6 Average total pension in one's own right and share of pension income per decile

The average total pension in one's own right per decile depicts the total pension of pension recipients in different deciles.

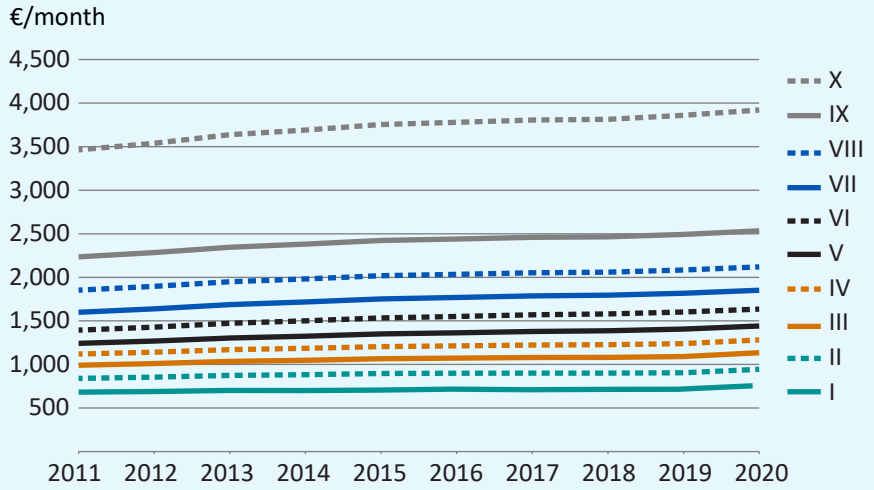
The deciles have been arrived at by arranging pension recipients in ascending order based on total pension, and by dividing pension recipients into ten groups of equal size.

Recipients of pension in one's own right are those Finnish residents receiving old-age, disability, unemployment or special farmers' pensions from the earnings-related and/or national pension scheme. Unemployment pensions have not been paid out since 2014.

The total pension comprises the individual's own earnings-related and national pension as well as surviving spouse's pension. The total pension also comprises special provisions pensions[1] as well as guarantee pensions, front-veterans' supplements, child increases paid by Kela.

The pension level has risen in all pension income categories during the period under review. However, the pension level has risen more in the higher than in the lower deciles, resulting in greater differences between pensions when it comes to actual euro amounts. In the uppermost decile, the average pension has risen by approximately 460 euros and by approximately 75 euros in the lowest decile.

Figure 2.6
The average total pension of pension deciles of recipients of pension in one's own right in 2011–2020, in 2020 currency



1 The Motor Liability Insurance Act, the Occupational Accidents, Injuries and Diseases Act, the Act on Compensation for Military Accidents and Service-Related Illnesses, the Act on Compensation for Accidents and Service-Related Illnesses in Crisis Management Duties, and the Military Injuries Act.

2.7 Calculation of the development of pension replacement rates

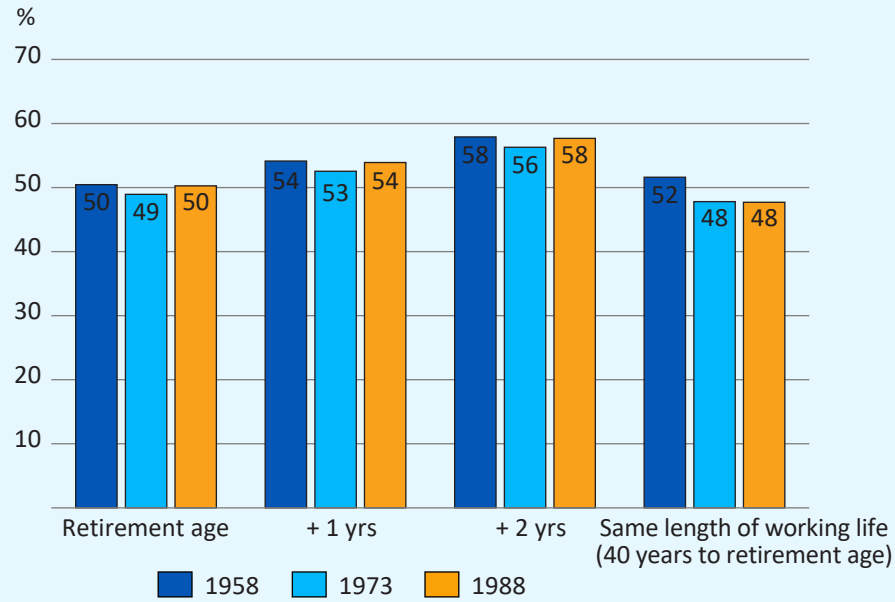
The pension replacement rate means the amount of the starting pension in relation to the last earned wage calculated with the help of pension models. With the help of these models, we can see how the pension calculation rules affect the level of the starting pension.

The replacement rate has been calculated based on the assumption that the working life has begun at the age of 25 and continued without interruption until retirement. The replacement rate has also been calculated for all for working life exceeding 40 years, in which case the age at which the working life has begun varies but the length of the working life is the same. In the calculation. earnings are assumed to have developed according to an undulating earnings profile, where the earnings are 75 per cent of average earnings at the start of the working life and 105 per cent at the end. In the projection, the assumed life expectancy coefficient, retirement ages and general earnings and price development correspond to those in the projections of the Finnish Centre for Pensions.

Figure 2.7 shows the replacement rates for example persons born in 1958, 1973 and 1988. The replacement rate is presented for these cohorts at their retirement age as well as at one or two years of working past their retirement age. The working lives vary slightly depending on the retirement age of each birth cohort. For those born in 1958, the retirement age is 64 years; for those born in 1973 it is 66 years and for those born in 1988 it is 67 years and 5 months (the retirement ages of those born in 1973 and 1988 are current estimates). For each age cohort, there is also a calculation for a working life spanning 40 years.

For all cohorts, the replacement rates at retirement age are at the same level (49–50 per cent). This means that the working life is the longer the younger the cohort is. When reviewing working lives of equal length, the replacement rates decrease when moving from the oldest cohort to the younger cohorts. According to the population projection, the expected life expectancy will grow, which means that the life expectancy coefficient will reduce pension levels and the replacement rate. Continued working improves the replacement rates for each cohort.

Figure 2.7
Pension replacement rates for example persons born in 1958, 1973 and 1988



2.8 Pension replacement rate distribution

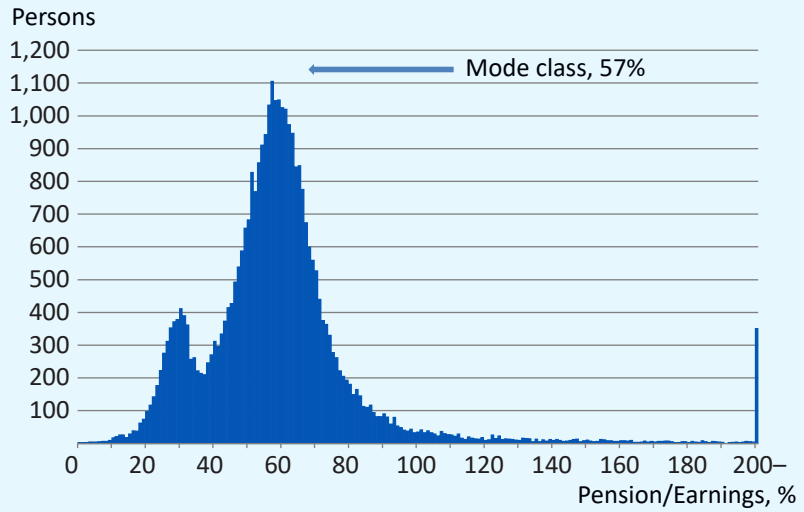
The pension replacement rate depicts the earnings-related pension percentage share of the earnings level preceding retirement of a person who has retired on an earnings-related pension. The earnings-related pension includes all pensions in one's own right paid as earnings-related pensions. The earnings level has been determined two and three years before the pension contingency year, based on earnings received.

Included in the review are persons who retired on an earnings-related pension in 2020 and had earnings from work during the years 2017 and 2018. Excluded from the review are thus those new retirees who did not have earnings during the two calendar years under review. Part-time pension recipients have also been excluded from the review during that time. The limitations screen out approximately half of all new retirees. Many left outside the review retired as a result of disability or unemployment. The definition is the same as in section 2.5.

The earnings have been indexed to the statistical year by the cost-of-living index.

The ratio of pension to preceding earnings varies greatly for new retirees. In some situations, the replacement rate can rise very high percentage-wise. In such cases it is usually not a question of large pensions, but of small and irregular earnings during the final years of working life. The replacement rate distribution of earnings-related pension clearly has two peaks. The smaller peak comes at the 30 per cent mark and the higher peak at the 60 per cent mark. The concentration at the 30 per cent mark can be explained by the partial disability pensions. The partial disability pension amounts to half of the full disability pension. In recent years there have been only minor changes in the shape of the distribution, but the mode has decreased by a few percentage points.

Figure 2.8
The ratio of pension to preceding earnings of those retiring on an earnings-related pension in 2020



2.9 Income of pensioner households

A household consists of persons living and dining together. The member of the household that earns the most determines the socio-economic status of the household. The categories are professionally active, pensioners and others. Income means the household's disposable money income per consumption unit. This is referred to as equivalent income. Starting from the statistical year 2011, Statistics Finland has calculated the equivalent income based on money income, following the practices of Eurostat. Previous years have been updated to correspond to this concept. According to the previous definition, equivalent income also included imputed income items such as housing income. Pensioners, more often than the rest of the population, live in homes that they own and have fully paid for, which weakens the position of pensioners in the new calculation method. More detailed definitions are available from Statistics Finland.

In 2019, the average income of those living in pensioner households was 22,300 euros per year or roughly 1,900 euros per month. Those who fared best were professionally active households, where the real annual income was 32,700 euros. In a weaker position, with an annual average income of 14,000 euros, were persons living in other domestic households: in practice, students and the long-term unemployed.

Compared to 2010, real growth in the income of pensioner households has been 8 per cent. In relation to those who are professionally active, the income of pensioner households has ranged between 66–71 per cent. Economic fluctuations are reflected in the ratio. During economic upturns, the position of pensioner households compared to the professionally active tends to weaken; during downturns, it tends to improve. Compared to the population as a whole, the income of pensioner households has varied between 79 and 85 per cent. In 2019, the ratio was 82 per cent.

Figure 2.9a
Household's disposable money income per consumption unit in 2010–2019, average in 2019 currency

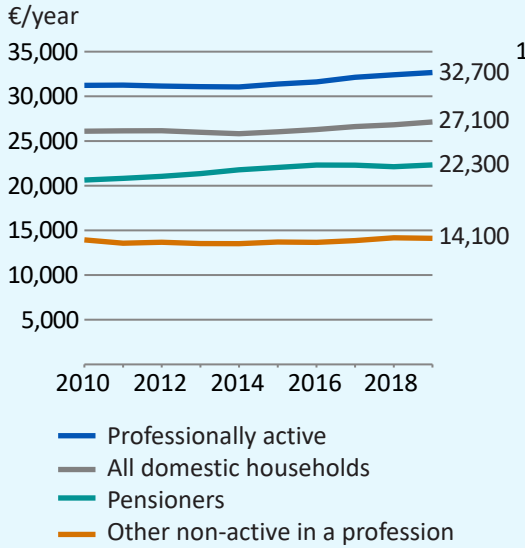
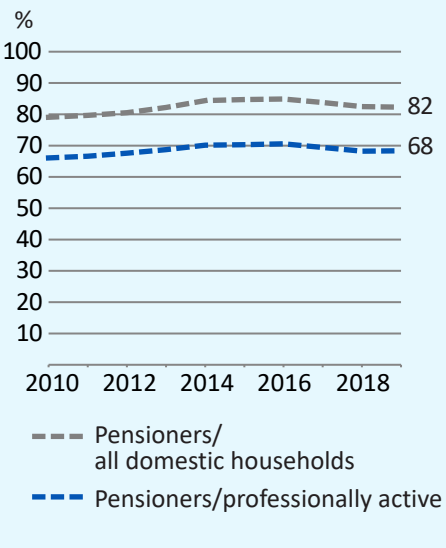


Figure 2.9b
Income of pensioner households in relation to wage earners and all domestic households in 2010–2019



2.10 Low income of pensioners

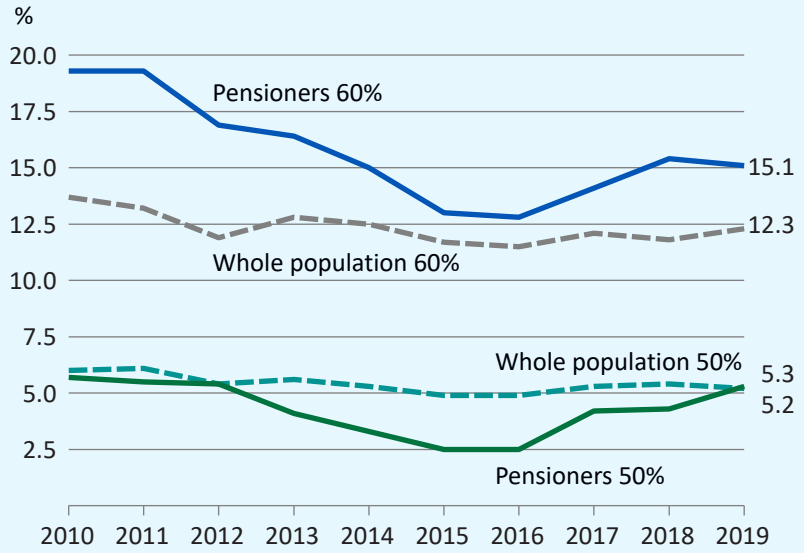
The low income rate depicts the share of the population falling below the low income limit. The low income limit is based on the household's median disposable money income (equivalent income) per consumption unit. The EU countries follow a uniform definition according to which a person is considered to be a low income earner if the income is smaller than 60 per cent of the median income, but a 50 per cent limit is also used.

Starting from the statistical year 2011, Statistics Finland has calculated the equivalent income based on money income, following the practices of Eurostat. Previous years have been updated to correspond to this concept. According to the previous definition, equivalent income also included imputed income items such as housing income. It is more common for pensioners to own and have fully paid for their homes, which is why the omission of housing income from the income particularly raises the low income rate of pensioners. More detailed definitions are available from Statistics Finland.

In 2019 the pensioner low income rate was 15.1 per cent when calculated based on the 60 per cent limit, which is 2.8 percentage points higher than for the population as a whole. Compared to 2010, the pensioner low income rate has dropped by 4.2 percentage points and by 1.4 percentage points for the population as a whole.

The occasional shift in the pensioner low income rate is also greater than for the population as a whole. The fluctuation is affected by changes to the poverty limit, since the income distribution of pensioners is concentrated more around the 60 per cent poverty limit than other population groups. Changes to the low income limit thus affect the number of low income pensioners the most, and thereby the pensioner low income rate. Using the lower limit of 50 per cent, the pensioner low income rate is slightly higher than for the population as a whole.

Figure 2.10
The low income rate of pensioners and the entire population at the low income limit of 60 and 50 per cent in 2010–2019



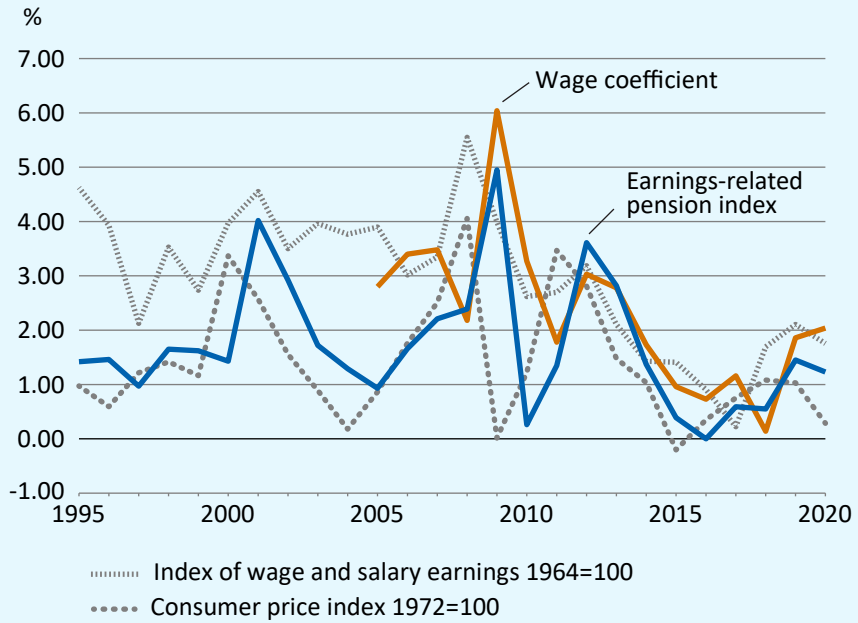
2.11 Earnings-related pension indexes

The earnings-related pension indexes ensure that the starting level of the retiring person's pension is reasonable and that the purchasing power of the pension in payment remains intact. The earnings-related pension index and the wage coefficient secure earnings-related pensions.

The weightings of the index adjustments are based on changes in the consumer price index and the index of wage and salary earnings calculated by Statistics Finland.

The consumer price index describes development in the prices of products and services purchased by households in Finland. The annual change to it is generally used as a measure of inflation. The index of wage and salary earnings describes the average development of all employees' earnings from regular working hours. In the wage coefficient (Employees Pensions Act, Chapter 96), the changes in wage-earners' income level weigh 80 per cent and the changes in price level weigh 20 per cent. In the earnings-related pension index (Employees Pensions Act, Chapter 98), on the other hand, the changes in price level weigh 80 per cent and the changes in wage-earners' income level weighs 20 per cent. In 2015, a decision-based cut was made to the earnings-related pension index.

Figure 2.11
Annual changes in consumer price index (1972=100), index of wage and salary earnings (1964=100), wage coefficient and earnings-related pension index in 1995–2020, %



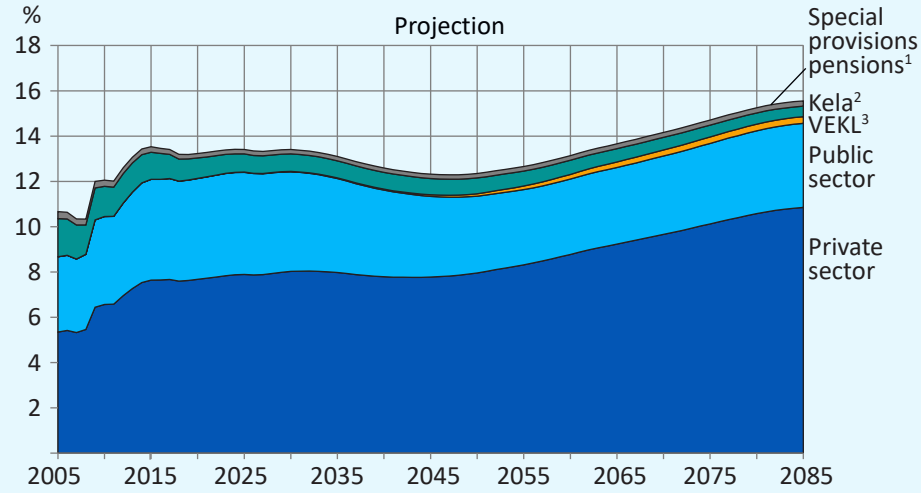
3.1 Statutory pension expenditure in relation to the gross domestic product

The assessment of the development of the statutory pension expenditure relative to GDP is based on the long-term projection (LTP) compiled in October 2019. (The LTP is a long-term pension projection based on the 2019 population projection of Statistics Finland, 17 October 2019, memo of the Finnish Centre for Pensions).

Before the onset of recession in autumn 2008, statutory pension expenditure stood at about 10 per cent of GDP. Pension expenditure has increased since 2009 and the pension expenditure to GDP ratio has risen sharply. In 2018 statutory pension expenditure stood at 13.2 per cent of GDP. The relative expenditure is projected to remain stable until 2030, after which it will decrease to 12.3 per cent by 2045. The decrease is caused by the fact that the growth of average pensions is slower than that of labour productivity.

In the latter half of the century the trend towards retiring later will slow and the growing share of pensioners in the population will turn the pension expenditure to GDP ratio onto an upward path. The growing share of pensioners is due to both low fertility and increasing life expectancy. By 2085, the pension expenditure to GDP ratio will increase to 15.6 per cent.

Figure 3.1
Statutory pension expenditure in relation to GDP in 2005–2085, %



[1] The Motor Liability Insurance Act, The Occupational Accidents, Injuries and Diseases Act, the Act on Compensation for Military Accidents and Service-Related Illnesses, the Act on Compensation for Accidents and Service-Related Illnesses in Crisis Management Duties, and the Military Injuries Act.

[2] Comprises national pensions and guarantee pensions.

[3] The act on pension state funds replacing pensions during periods of care for child younger than 3 years or during studies.

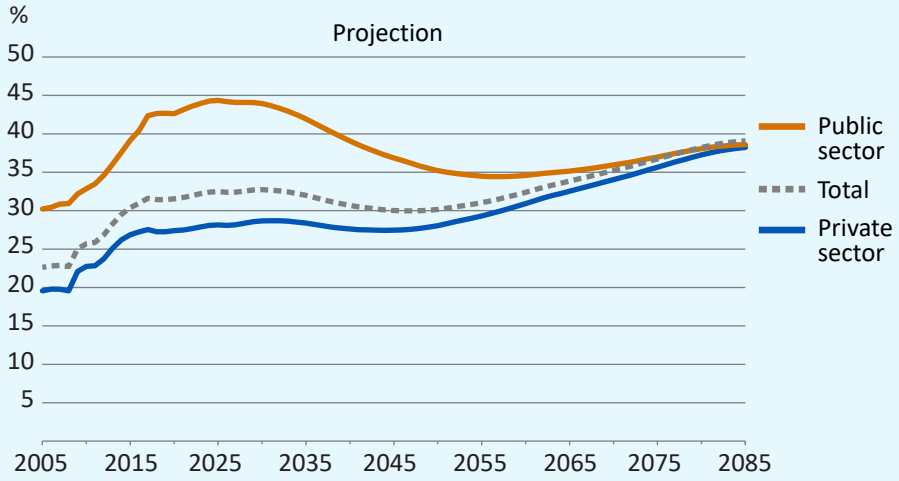
3.2 Earnings-related pension expenditure in relation to the sum of earnings

The assessment of the development of the statutory pension expenditure relative to GDP is based on the long-term projection (LTP) compiled in October 2019. (The LTP is a long-term pension projection based on the 2019 population projection of Statistics Finland, 17 October 2019, memo of the Finnish Centre for Pensions).

Pension expenditure in relation to income from work is on different trajectories in the public and private sectors. In the private sector, the expenditure ratio in 2018 was 27.3 per cent. The ratio will fluctuate within the range of 27 and 29 per cent through to 2054, turning to growth in the latter half of the century. In 2018 public sector earnings-related pension expenditure stood at 42.6 per cent of the public sector payroll, and expenditure will continue to rise until 2025. At this point the expenditure ratio will reach 44.4 percent. The expenditure ratio will then begin to fall. In 2025–2085 the ratios for the public and private sectors will begin to converge. In 2085 the ratio in the private sector will be 38 per cent and in the public sector 39 per cent.

The high public sector expenditure ratio that has persisted for several decades has its background, firstly, in the fact that pension benefits in the public sector used to be more generous than in the private sector, and secondly, in privatizations that have resulted in employees transferring to the private sector. In the long term, the public and private sector expenditure ratios will move ever closer to each other with the increasing convergence of benefit rules.

Figure 3.2
Earnings-related pension expenditure in relation to the sum of earnings in 2005–2085, %



The total amount of earnings-related pension expenditure includes the pension expenditure accrued from periods of study and caring for a child at home (VEKL). This is not, however, included in sector-specific expenditure.

3.3 Expenditure and contribution rates under the Employees Pensions Act

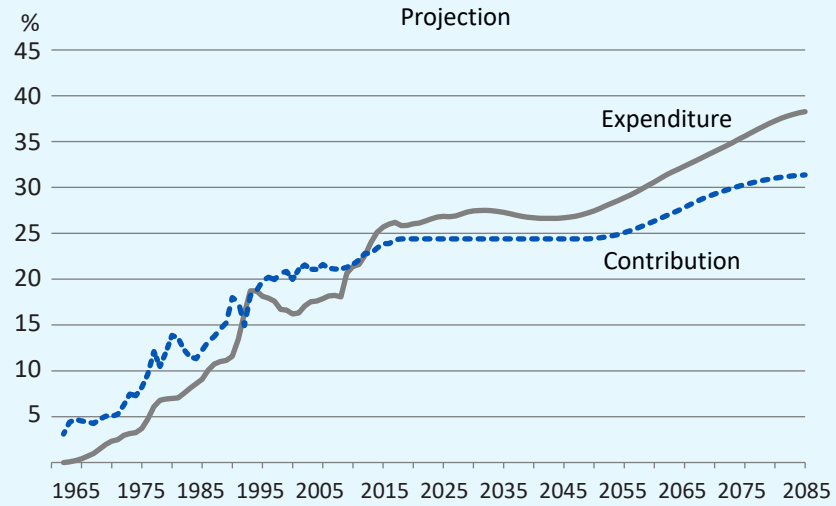
The assessment of the development of the statutory pension expenditure relative to GDP is based on the long-term projection (LTP) compiled in October 2019. (The LTP is a long-term pension projection based on the 2019 population projection of Statistics Finland, 17 October 2019, memo of the Finnish Centre for Pensions).

Since the introduction of the Employee's Pensions Act (TEL), private sector pension expenditure growth has almost continuously outpaced payroll growth. This is because of population ageing and the phasing in of new benefits. The ratio of expenditure to the sum of earnings will remain close to its current level through to the middle of the century. Although the dependency ratio will weaken in the next few decades, the implemented pension reforms will slow down the expenditure growth at the same time. As the share of pensioners in the population continues to grow in the latter half of the century, pension expenditure in relation to the sum of earnings will start to rise.

The peak in the expenditure ratio in the 1990s was caused by the reduction of the wage sum during the recession. Correspondingly, the expenditure ratio increased rapidly after 2009 as a result of sluggish economic growth and a sharp rise in pension expenditure.

Part of private sector employees' earnings-related pensions are prefunded. This explains why pension contributions exceeded pension expenditure up until 2012. Since 2013 the yield on pension assets has made it possible to keep the contribution rate lower than expenditure. The long-term projection for the contribution rate is not based on spending pension assets; rather, the pension assets at the end of the calculation period in relation to the payroll are higher than they were at the beginning of the projection period.

Figure 3.3
Expenditure and contribution rates under the Employees Pensions Act in 1962–2085



3.4 Accrued pension rights and the funding ratio

Capital value of pensions accrued up to a certain point means the amount of money that would be sufficient to fund pensions accrued up to that certain point in time.

The estimates of the accrued pension rights are based on the long term projections of the Finnish Centre for Pensions from the year 2019 (Statutory pensions in Finland: long-term projections 2019. Finnish Centre for Pensions, Reports 07/2019).

The amount of earnings-related pension funds refers to the current value of earnings-related pension institutions' investment assets at the end of each year. This is significantly affected by annual fluctuation in investment returns.

The value of accrued pensions has been calculated using a 2.5 per cent real discount rate up to 2028 and a 3.5 per cent real discount rate from 2029 onwards. The value of earnings-related pensions accrued by the end of 2017 totalled 712.2 billion euros, which is 3.2 times the value of 2017 GDP.

The funding ratio is obtained by dividing the amount of earnings-related pension assets by the capital value of accrued pensions. This key figure shows to what extent pensions can be financed from pension funds already accrued and from the future yield of these funds. At year-end 2017 the funding ratio for the whole earnings-related pension scheme was 28.4 per cent.

Table 3.4
Pension assets, accrued pension rights and funding ratio in 2017, with a real discount interest rate of -1.98 per cent in 2018, 2.5 per cent from 2019 to 2028, and 3.5 per cent as of 2029 Amounts at current prices.

	TyEL	JuEL state	JuEL municipal sector	All
Pension funds, € billion	126.2	19.6	52.3	202.3
Accrued pension rights, € billion	412.6	94.5	137.0	712.2
Funding ratio, %	30.6	20.7	38.1	28.4

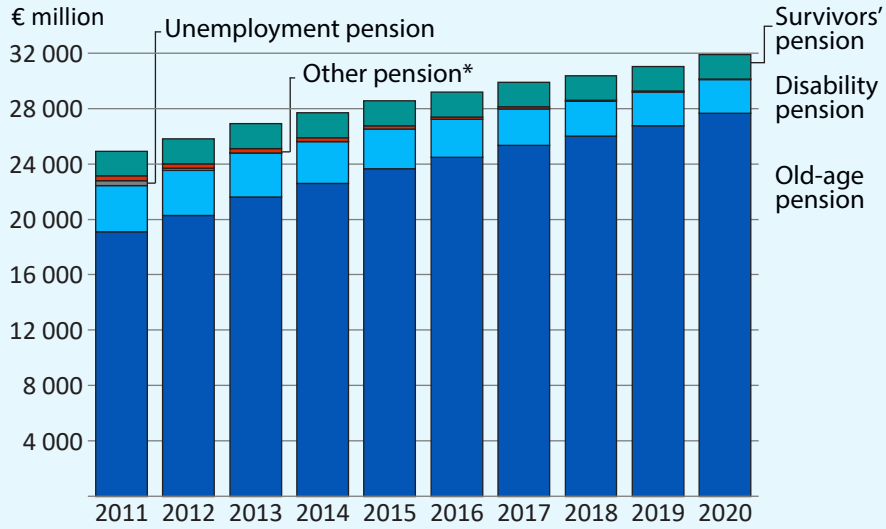
3.5 Earnings-related and national pension expenditure

Earnings-related and national pension expenditure consists of old-age, disability, unemployment, part-time and survivors' pensions and special pensions for farmers paid by the earnings-related pension providers and Kela. Unemployment pensions have not been paid out since 2014.

In 2020, earnings-related and national pensions totalled 32 billion euros, of which earnings-related pensions accounted for 30 billion euros and national pensions for 2 billion euros. Old-age pensions accounted for 86 per cent of the pension expenditure, disability pensions for 8 per cent and survivors' pensions for 5 per cent.

In addition to national pensions, Kela paid guarantee pensions to a sum of 262 million euros and front veterans' supplements and child increases to a total sum of 17 million euros in 2020.

Figure 3.5
The earnings-related and national pension expenditure by pension benefit in 2011–2020, in 2020 currency



*Special pension for farmers and part-time pension.

3.6 Earnings-related pension contribution rates

Table 3.6 shows the **average pension contribution rates** for 2011–2020. The rates under the relevant pension acts include both employer and employee contributions. The contribution components have been calculated on the wage earners' earnings based on the rules of the different pension acts.

The employee contribution is the same for all employees, but dependent on age. In 2020 the base contribution rate was 7.15 per cent of the monthly wage, while employees aged 53–62 paid an increased rate of 8.65 per cent of their monthly wage. Before 2017 the increased contribution rate was applied to employees aged over 53, with the exception of those insured under MEL. Until the end of 2015, half of their pension contribution was covered by the employer.

Self-employed persons' and farmers' pension contributions depend not only on age but also on income from work. Grant recipients have been insured under the Farmer's Pensions Act (MYEL) since 2009. Grant recipients' average contribution rate is almost half a percentage point lower than farmers'.

The Public Sector Pensions Act (JuEL) was introduced at the beginning of 2017 by merging the Local Government Pensions Act (KuEL), the State Employees' Pensions Act (VaEL) and the Evangelical-Lutheran Church Pensions Act (KiEL). The pension contributions of public sector employers are regulated under the Keva Act (Keva's member corporations), the Act on the Financing of State Pension (State) and the Act on the Financing of Pensions of the Evangelical-Lutheran Church (Evangelical-Lutheran Church).

Table 3.6
Average earnings-related pension contribution rates in 2011–2020 according to pension act*

Year	TyEL[1]	MEL	JuEL state	JuEL municipal sector[2]	JuEL church[3]	Employer contribution[4]	Employee contribution[4]	YEL	MYEL
						Basic	Increased		
2011	22.1	22.2	24.9	28.7	31.8	4.7	6.0	20.2	11.3
2012	22.8	22.4	25.0	29.1	33.3	5.2	6.5	21.1	11.8
2013	22.8	22.6	24.9	29.6	33.7	5.2	6.5	20.9	12.9
2014	23.6	22.8	26.5	29.8	34.1	5.6	7.1	21.8	13.4
2015	24.0	22.8	26.4	29.8	34.3	5.7	7.2	22.6	13.7
2016	24.0	22.8	24.1	29.4	30.5	5.7	7.2	22.6	13.6
2017	24.4	22.0	23.6	28.5	30.7	6.2	7.7	23.1	13.9
2018	24.4	20.0	23.8	28.3	29.0	6.4	7.9	23.1	13.8
2019	24.4	20.0	24.4	28.3	29.0	6.8	8.3	23.2	13.9
2020[5]	24.4/ 21.8	19.0	24.4	28.4	29.0	7.2	8.7	23.1	13.9

[1]TyEL contribution rates take into account employer-specific customer bonuses and temporary reductions to the contribution.

[2]The contribution of Keva's member corporations include the components based on wage and pension expenditure.

[3]Contribution rates of the Evangelical Lutheran Church Pension Act do not contain a pension fund contribution which was 1.2% of the church tax during the years 2013–2015, 4.0% of the church tax in 2016–2019.

[4]The confirmed contribution rates of employees are included in the table. They are the same for all insured employees, except for those insured under MEL before 2016 (when the pension insurance contribution was shared evenly between the employer and the employee).

[5]Due to the corona pandemic in 2020, the employer's share of the TYEL contribution was reduced by 2.6 percentage points as of 1 May 2020. The reduction did not apply to the employee's share of the contribution. The deduction was allocated to the pooled component of the contribution.

*Pension acts, see p. 34.

3.7 Earnings-related pension assets

The pension assets under TyEL and MEL in Table 3.7 include the technical capital and the technical provision used in solvency calculations.

Pension assets under YEL and MYEL include the technical provision under these pension acts and the investment assets of public sector pension providers

The amount of pension assets has increased apart from a few exceptional years. The decline in investment assets in 2008, 2011 and 2018 temporarily reduced the amount of pension assets. When the stock prices rose, pension assets continued to grow.

The total pension assets amounted to 224.6 billion euros at year-end 2020, which was 95 per cent relative to Finland's GDP. The pension assets grew during the review period by around 3 per cent.

Table 3.7
Pension assets, € bn

	TyEL	MEL	JuEL state	JuEL municipal sector	JuEL church	Other public sector	YEL	MYEL	Total
2010	92.3	0.8	13.9	29.4	1.0	1.3	0.1	0.0	138.8
2015	114.0	1.0	17.9	44.9	1.3	1.4	0.1	0.1	180.8
2019	136.3	1.2	20.6	56.5	1.7	1.4	0.1	0.1	218.0
2020	140.1	1.3	21.0	58.9	1.8	1.4	0.1	0.1	224.6

TyEL Employees Pensions Act

MEL Seafarer's Pensions Act

JuEL Public Sector Pensions Act

YEL Self-employed Persons' Pensions Act

MYEL Farmers' Pensions Act

Other public sector pensions regulation: Pension regulation for the Bank of Finland, Pension regulation for the regional government of Åland and regulations concerning the pension benefits of the employees of Kela.

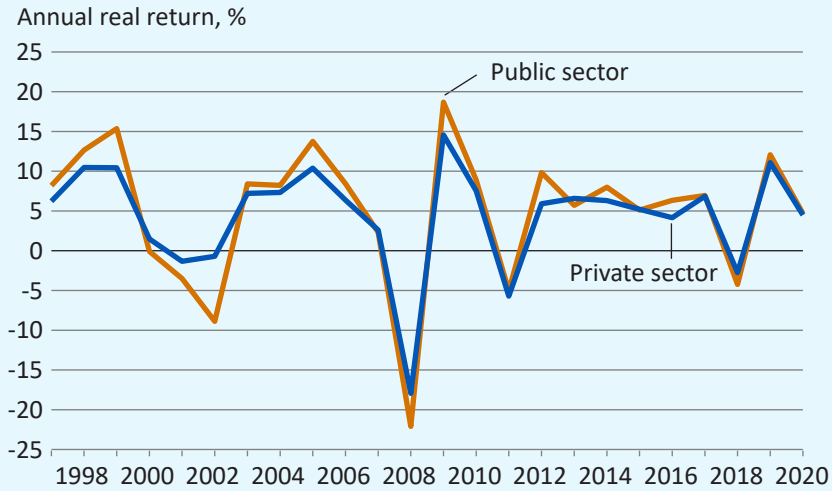
3.8 Investment returns

When calculating profit from earnings-related pension investments, the calculation method used is that determined by the Financial Supervisory Authority. Investment returns include the so-called cash income, in other words dividends, interest rates and rent as well as increases and decreases in value of realised and unrealised investments. The return rate is achieved by proportioning these to the capital employed. Real return is arrived at when the impact of consumer pricing on the purchasing power of capital employed is taken into account alongside nominal return.

The return varies from year to year, first and foremost due to changes in value. Despite the corona pandemic, 2020 was a favourable investment year. Private-sector investments yielded a real return of 4.5 per cent and public sector investments 4.7 per cent. The investment operations of earnings-related pension providers in the private sector differ somewhat from those of public sector pension providers. A key difference in the average investment allocation of the sectors is the private sector's lower exposure to investments in fixed-income securities and shares. At year-end 2020, investments in fixed-income securities and shares in the public sector exceeded those in the private sector by, on average, six and five percentage points, respectively. In the private sector, on the other hand, the exposure to real estate investments and other alternative investments is higher than in the public sector.

In a review period spanning the last fifteen years (2006–2020), the exposure to investments in shares in the public sector has exceeded that in the private sector by, on average, eight percentage points. The gap has narrowed since the beginning of the review period when public sector investments in shares exceeded those in the private sector by fifteen percentage points, on average. Short-term fluctuation in the value and long-term return expectations of investments in shares are higher than of other assets. This means that the proportion of investments in shares in investment portfolios explains the long-term fluctuation in return between the private and public sectors.

Figure 3.8
The average real annual return of earnings-related pension investments in per cent of capital employed in 1997–2020



Private sector: Average profit of pension provider investments used for the year 1997
Public sector: Average profit of Keva investments used for the years 1997–1999

Private-sector actors are obligated to meet statutory demands for solvency.

Due to annual shifts in investment returns, they are also depicted in terms of average value over several years. Sufficiently comprehensive, comparable return series that cover the entire field begin in 1997. In the private sector, the real average return of twenty-four years was 4.2 per cent per year. In the public sector it was 4.6 per cent.

Source: The Finnish Pension Alliance TELA

3.9 Internal rate of return on earnings-related pension contributions by generation

The internal rate of return is the interest rate that, when used for discounting, gives equal current values for the pension contributions and benefits for each birth-year cohort. The internal rate of return can thus be interpreted as the return on earnings-related contributions by cohort.

The calculation of the internal rate of return is based on a combination of historical data and a projection. The historical data covers the years 1962–2013 and is based on statistics of the Finnish Centre for Pensions from different periods. In some details, where the realised development is concerned, estimates have had to be used, but these estimates have little significance on the overall picture. As of 2014, the internal rate of return is based on the long-term projections of the Finnish Centre for Pensions from the year 2019 (Statutory pensions in Finland: long-term projections 2019. Finnish Centre for Pensions, Reports 07/2019).

Table 3.2.5 presents the internal real rate of return on the earnings-related contributions of insured wage-earners in accordance with the Employees Pensions Act and the acts preceding it for cohorts born between 1940 and 2000. In practice, all statutory earnings-related pensions of private-sector wage-earners are included in the calculation. Only the Seafarer's Pensions Act is excluded.

The operational costs of the pension system are covered with a portion of costs included in the pension contribution. The pension system's operating costs are included in the realised and projected pension contribution and are thus a factor that reduces the internal return.

Pension contributions are tax-deductible, and pension payments received by the pensioner are taxable income. However, taxation is not considered in the calculation of the internal return. This would require that all earnings and pension income are included in the calculation and that there is data on the size distribution of earnings and pension income for the sake of progressive taxation.

Table 3.9
Internal real rate of return on the earnings-related pension contribution of private sector wage earners by year of birth, %

	Year of birth												
	1940	-45	-50	-55	-60	-65	-70	-75	-80	-85	-90	-95	-00
Internal rate of return, %	6.5	4.8	3.9	3.2	2.6	2.3	2.1	2.0	2.0	2.1	2.1	2.1	2.0

The real internal rate of return declines from 6.5 per cent for those born in 1940 to 2.1 per cent for those born in 1970. For subsequent generations the internal rate of return is steady at this level through to those born in 2000. Due to data limitations, the calculation does not include generations born before 1940. The internal rate of return for these generations are estimated to be even higher than those for later generations. The most important reason for the declining internal rate of return lies in the phasing in of new pension benefits and rising TEL/TyEL contribution rates in response to population aging.

Private sector wage-earners' earnings-related pension contributions by birth cohort and gender have been examined in more detail in Private sector wage-earners' earnings-related pensions by birth cohort and gender. Finnish Centre for Pensions, Reports 09/2015.

Earnings-related pension indicators provide a perspective on the current status of earnings-related pension provision as well as on realised and predicted development. The Pension indicators have been grouped according to three central goals: length of working life, pension level and pension financing. The core indicators include central issues in terms of the development of the earnings-related pension provision and the monitoring of the reforms. The complementary indicators offer, as their name reveals, additional insight.

Finnish Centre for Pensions, Reports

The Finnish Centre for Pensions, an expert on earnings-related pensions, is a statutory body that develops pension provision and produces joint services for all parties to the scheme. In the Reports series, we publish reviews, surveys and projections that serve the assessment and development of pensions.

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