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How do earnings-related pensions develop? Calculations until 2050

This report focuses on the long-term development of earnings-related pensions in Finland. The aim is to answer the following three questions: How does the real value of pensions develop, what happens to their replacement rates and how do pensions develop in relation to earnings? These questions are analyzed by using three different data and calculations. Firstly, the long-term planning model of the Finnish Centre for Pensions is used to produce calculations which are consistent with the estimate of pension expenditure and financing. Secondly, information on real careers and employment incomes of the insured population are used to estimate future pension levels. Thirdly, calculations are presented of the pension levels based on the example cases agreed on in connection with the European Union work on pension policy.

Economic growth increases the real value of pensions

Future economic growth is decisive for the real value of pensions. The calculations based on the long-term planning model of pension expenditure and contributions assume that the annual real growth rate of wages is 1.75 per cent. Since the level of earnings-related pensions are linked to the earnings level, wage improvements lead to improvements in pensions. The calculations imply that the real value of earnings-related pensions increases by 50 per cent in the next twenty years. By 2050, this real value doubles. If earnings accrue less value than assumed in the basic scenario, the real growth of pensions will likewise be slower, and vice versa.

The calculations based on individual career data produce similar results. A person born in 1980 can expect to receive a pension which is, on average, 60 per cent higher than the pension of a person born in 1945.

The replacement rate increases in the next 10–15 years and starts to decrease thereafter

Calculations using individual-level data are based on careers that span 32–36 years. The gross replacement rates are more than 46 per cent for those who take the pension at the age of 63 and are more than 55 per cent for those who take the pension at the age of 65. The net replacement

rates are from 7 to 9 percentage points higher than the gross rates. For the calculations based on example careers, the replacement rates increase from the cohort born in 1940 to the cohort born in 1945. After that, the life expectancy coefficient (a technique which was adapted in the 2005 pension reform to adjust pension expenditure to a longer life expectancy) starts to lower the replacement rates. Example calculations show that lengthening work careers has a considerable impact on the replacement rate. For example, the replacement level can increase 14 percentage points if a person does not take his or her pension at the age of 63 but continues to work five more years.

The relative pension level increases in the next 10–15 years and starts to decrease thereafter

The third window through which we can examine the adequacy of pensions is to relate pensions to average earnings. In this case we talk about the relative pension level.

The average old-age pension for 2003 was about 48 per cent of the average earnings level. If calculated on a net basis, the percentage is 55. These figures refer to the stock of old-age pensions. New old-age pensions are higher in relation to average earnings, close to 60 per cent.

Calculations based on the long-term planning model indicate that the relative earnings-related pension increases over the next 10 to 15 years. This is due to the maturation of the pension scheme. As a result, the relative pension level will start to decrease in the 2020s, and in the 2040s it will be roughly at the same level as it is now. The relative pension level of new old-age pensions (inflow) will remain at the current level in the next ten years or so, after which it will start to decrease. Calculations based on individual earnings careers also display similar developments over time. The relative pension levels of younger cohorts decrease from the level of those cohorts which are retiring now, or do so in a few years.

The results depend on the assumptions we make on population and economic forecasts. Some sensitivity analyses were carried out so as to better understand the significance of these assumptions. The population development can deviate from the baseline scenario for fertility, migration and mortality. The first two of these factors have an impact on contributions, but not on pension levels. In contrast, the development of mortality has a relatively minor effect on contributions but a major effect on relative pension levels, because the life expectancy coefficient adjusts the old-age and survivors' pensions to the changes in life expectancy. In the short term, changes in employment rates do not have an impact on the relative pension levels, but their impact on the contributions is significant. In the long term, employment rates are important for the relative pension levels, not so much for the contributions. The increase of the growth rate of the earnings level from the baseline assumption lowers contributions to some extent, and improves the real value of pensions greatly. Nevertheless, the relative pension level remains lower if earnings develop faster. Investment yields have a significant impact on contributions, but only a minor impact on the pension levels.

Pension policy implications of the results

This report attempts to calculate the size of pensions that Finns can expect in the future. The sensitivity analyses also help to describe the impact of other developments than those used in the basic scenario.

The ageing population in Finland has raised two kinds of concerns for decision-makers and for the Finnish population in general. The first concern has been whether there will be enough money and enough contributors to finance pensions. In 2004, the Finnish Centre for Pensions contributed to this debate by publishing a report on the long-term developments in pension expenditure and contributions. The results showed that while the expenditure grows considerably, the contributions grow more modestly.

Another public concern has been the adequacy of pension levels. This report contributes to that discussion. However, the results of these calculations cannot be described as dramatic. Perhaps the more accurate expression is that the emerging picture is reassuring.

In the long term the real value of pensions increases depending on the development in earnings. The replacement rates improve for a further decade or so, after which a modest decline is likely. The relative pension levels display a similar pattern.

The long-term decline in the replacement rates and relative pension levels can be attributed mainly to the life expectancy coefficient, which is expected to lower the new old-age pensions. The effect of this coefficient can be compensated for by using a part, roughly one-half, of the increased life expectancy to work. The other half thus increases the number of years in retirement.

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