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# SUMMARY

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## How mortality affects the pension system

The increase in life expectancy has slowed down in many EU Member States and some other high-income OECD countries in the last few decades, particularly in the 2010s. The mortality rate for older women has declined more sharply than for older men. As a result, the gender gap in life expectancy has narrowed, on average, over the past decades in these countries. In the last years, the influenza and Covid-19 (in 2020) have raised the mortality rates of older people in particular.

Although the retirement age and the life expectancy coefficient depend on the development of the mortality rate and, as a result, reduce the effect of rising longevity on pension expenditure, they do not fully neutralise that effect. Assessing how the mortality rate will develop is part of assessing the financial sustainability of the pension system. In this report we present the effects of alternative mortality rates on pension financing, the retirement age and pension benefits.

Our report includes scenarios of the Finnish population based on different assumed reduced mortality rates. The scenarios are based on the assumptions used in the population projections of Sweden, Norway and Great Britain, as well as the assessment of the Finnish mortality rates presented in Eurostat's population projection and the alternatives with high and low mortality rates presented in Tikanmäki et al's report (2019). In one scenario, the mortality rate is assumed to remain at the same level as in 2019. The scenarios are compared to the baseline projection which is based on the mortality projections of Statistics Finland's 2019 population projection that ranges to the year 2070, after which the decline of the

mortality rate has been halved. The baseline projection has been published in Reipas (2019). The observed trend of a declining mortality rate in the years 1987–1991 and 2014–2018 has been extended by age and gender.

The projections demonstrate that the growth in pension expenditure and pension contributions in the baseline projection is not only due to low birth rates but also to the assumption that life expectancy increases. The decline of the mortality rate is assumed to be higher than in the baseline projections of the countries of comparison, apart from Norway.

If mortality were to remain at the 2019 level, the ratio between statutory pension expenditure and GDP would be around half a percentage point (4%) lower than in the baseline projection at mid-century and 1.6 percentage points (10%) lower at the end of the projection period (2085). Relative to the wage sum, the TyEL contribution would be around 1.4 percentage points (6%) lower than in the baseline projection at mid-century and around 3.2 percentage points (10%) lower at the end of the projection period. The retirement age for those born in 1962 and later would remain at 65 years while, in the baseline projection, it rises to 66 years and 8 months for those born in 1980 and 68 years and 2 months for those born in 2000. Due to the reduced life expectancy, the ratio between the average pension and the average wage would be around 4.6 percentage points higher than in the baseline projection at the end of the projection period.

The differences compared to the baseline projection are smaller in those scenarios in which the mortality rate is assumed to decline. The difference depends on the selected rate at which mortality declines.

Using the mortality outlooks of Eurostat and Sweden, the ratio between statutory pension expenditure and GDP will remain around 0.2 percentage points lower than in the baseline projection at the end of the projection period. Using the mortality outlooks of Great Britain, it will be around 0.5 percentage points lower. If mortality declines faster than assumed in the baseline projection, the expenditure percentage will rise above that in the baseline projection. For example, in the alternative of a rapid decline in Finland, it will rise 1.3 percentage points higher than in the baseline projection at the end of the projection period.

The level of the TyEL contribution rate can also be assessed so that it is set at a sustainable, standard level which, together with the accumulated assets, would be adequate to cover all future TyEL expenditure. The standard TyEL contribution rate grows less than in the baseline projection if the mortality rate declines at a slower rate than in the baseline projection. In Eurostat's mortality development scenario, the standard TyEL contribution rate is around 0.2 percentage points lower than in the baseline projection. In the mortality development scenario of Great Britain, it is 0.4 percentage points lower.

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