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SUMMARY

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How birth rate scenarios affect pension financing

The birth rate fell significantly in the last decade. In 2018, the total fertility rate was 25 per cent lower than at the beginning of the decade. Based on preliminary data, the total fertility rate continued to decline steeply also in 2019.

As birth rates decline, the share of old people in the population grows. This poses challenges for the financing of earnings-related pensions since each working generation finances the main part of the pensions paid out to retirees each year.

This report presents pension projections that are based on demographic projections (Nisén et al. 2020) of how the birth rate will develop in the future. The scenarios presented in the report aim to consider to what extent the already observed decline in birth rates is permanent or temporary by nature. The report presents two scenarios, of which Nisén et al. find scenario A to be more in accordance with the current situation.

In scenario A, it is assumed that part of the already observed decline in birth rates is due to women having children at an increasingly higher age. This trend is assumed to slow down. When having children is no longer postponed, the period total fertility rate will begin to rise, although it is likely to remain significantly below the level at the beginning of the decade. In this scenario, there is a 95 per cent probability that the average total fertility rate will be between 1.42 and 1.67 in 2019–2040.

In Scenario B, the decline in birth rate is not assumed to be due to the trend of deferring having children. In this scenario, the birth rate varies around the 2018 level and remains lower than in scenario A. There is a 95 per cent probability that the average total fertility rate will be between 1.31 and 1.54 in 2019–2040.

For each scenario A and B we represent a median as well as the percentiles that equal confidence intervals of 80 and 95 per cent. The pension projections extend to the year 2085.

The scenarios are compared to a baseline scenario based on Statistics Finland's population projection for 2019. In the baseline scenario the total fertility rate is 1.35. The baseline projection does not consider factors underlying the development of the total fertility rate.

The dependency ratio clearly exceeds the current level in the baseline projection and in all alternative projections. However, a higher total fertility rate results in a younger age structure compared to the baseline projection. It follows that the dependency ratio in the median alternatives of both scenarios are lower than in the baseline projection.

The share of employed persons of the population decreases from its current level in the baseline projection and in all alternative projections. The statutory pension expenditure relative to GDP is lower in all percentiles in scenario A than in the baseline projection. If it is assumed that the periodic birth rate is partially restored, it is highly probable that the baseline projection overestimates the long-term growth of the pension expenditure rate. In the median alternative of scenario A, the pension expenditure rate at the end of the projection period is 1.8 percentage points lower relative to GDP than in the baseline projection.

In the median alternative of scenario B, the development of statutory pension expenditure relative to GDP is closer to the baseline projection than in scenario A. In the long term, the pension expenditure of the median alternative is about 0.7 percentage points lower relative to GDP than in the baseline projection.

The pension contribution under the Employees Pensions Act faces upward pressure from its current level particularly after the middle of the century. Nevertheless, the upward pressure is lower in all presented percentiles of the scenario A compared to in the baseline projection. Compared to the baseline projection, the contribution under the Employees Pensions Act is over three percentage points lower at the end of the projection period in the median alternative of scenario A and more than one percentage points lower in the median alternative of scenario B.

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