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SUMMARY

Mikko Sankala, Kaarlo Reipas and Kasimir Kaliva

Impact of Investment Risks on Earnings-related Pension Financing under the Employees Pension Act

In this report, we discuss the impact of investment risks on the financing of pensions under the Employees Pension Act, using stochastic investment return scenarios.

The starting point for our calculations is the updated stochastic investment return model of the Finnish Centre for Pensions, which has been designed to model future investment markets. We have updated the model based on material up to and including the financial crisis and the following low-interest period. In addition to inflation, the model produces semi-annual returns on money market investments, bonds, equities, hedge funds and real estate investments.

We have calibrated the investment return model so that long-term investment returns reflect, on average, the basic assumptions used by the Finnish Centre for Pensions. However, we have determined the starting levels based on the current situation. One of the main results of our model are the investment returns for the next few decades. They will be lower than in the past due to the current low interest rates.

We have studied the impact of investment risks on the financing of pensions under the Employees Pensions Act by combining the investment return scenarios of the investment return model with the long-term projections model of the Finnish Centre for Pensions. That way, we can look at how the investment returns affect, for example, the earnings-related pension expenditure, pension contributions, pension assets and the solvency capital.

Since we have not taken into account the potential impact of investment returns on other economic developments than inflation, the impact of investment returns on the development of pension expenditure is moderate in our projections.

The annual fluctuation of investment returns are reflected in the uncertainty of the pension contribution under the Employees Pensions Act. If the investment returns are poor for a long period, the contribution approaches the level of the pay-as-you-go contribution, which is determined based on the pension expenditure. On the other hand, a long period of terrific investment returns allows the contribution to fall to a very low level. The median of the pension contribution rate corresponds fairly well with the previously published deterministic projection. However, the confidence intervals of the results are wide. The annual variation in investment returns may be higher in the future than they were in the past since recent changes in the pension system make it possible to invest more in equities.

High investment returns increase while low returns reduce the amount of pension funds under the Employees Pensions Act. It is highly probable that the amount of funds relative to the wages will decline in the following decades due to, for instance, the weak outlook on investment returns. In the second half of the century, the funds are likely to increase.

Problems relating to a sufficient solvency capital are fairly common in the projections. In slightly less than half of the scenarios there is a shortfall in the solvency capital at some point in the future.

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Finnish Centre for Pensions
ELÄKETURVAKESKUS

Finnish Centre for Pensions
FI-00065 Eläketurvakeskus Finland
Phone +358 29 411 20
Fax +358 9 148 1172

Eläketurvakeskus
00065 ELÄKETURVAKESKUS
Puhelin 029 411 20
Faksi 09 148 1172

Pensionsskyddscentralen
00065 PENSIONSSKYDDSCENTRALEN
Telefon 029 411 20
Fax 09 148 1172

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