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Implicit lifecycle investing in a collective pension fund

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Abstract

This paper deals with the question if it is possible to combine the insights and recommendations of life-cycle investing with the proven gains of defined benefit pension funds. A downside of such collective pension plans is namely that it imposes a uniform funding policy, leaving little scope for personal characteristics. Therefore, a new pension agreement was proposed by the Dutch government, containing the requirement that in all pension contracts investment risks will be taken conform (implicit) life-cycles.

The main focus of this thesis is to find out how these life-cycles can be incorporated in a defined benefits pension plan. One way is to distribute investment risks and returns according to age. At the moment the allocation of investment returns only depends on the financial capital of the participants. A number of other ways of allocating investment returns are analyzed and the results are compared using the certainty equivalent of the participants.

It turns out that changing the way that investment returns are distributed results in substantial welfare improvements. Incorporating a function of age or human capital in the allocation of investment returns leads to a welfare increase of over 7%. Another argument to change the allocation of investment returns, besides the average improvement in welfare, is that risk is transferred from the older participants to the younger participants.

Concluding, I would recommend pension funds to incorporate implicit life-cycles by allocating investment returns according to either age or human capital, since this will lead to a better consideration of the individual characteristics of the participants of the pension fund and to substantial welfare improvements.