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The impact of uncertainty in risk preferences and risk capacities on lifecycle investment

"Full personalisation is not needed for a close to optimal investment policy"

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Under new Dutch pension law, pension funds and insurance companies are required to elicit the risk preferences and risk capacities of individual participants and to adjust (collective) investment strategies accordingly. A considerable amount of recent research has studied how the risk preferences and risk capacities of participants can be measured. We go a step further and study the impact of suboptimal lifecycle investments due to changing risk preferences and unanticipated shocks in income. Furthermore, we investigate and quantify how sensitive a participant's pension outlook is to decisions made earlier in life, which were based on a possibly wrong assessment of risk preferences or future pension contributions.

Principal Findings

- Leverage constraints bound the welfare losses due to underestimation of risk aversion.
- A drop in pension accrual can cause large welfare losses, especially when the risk aversion level is underestimated.
- Inadequate beliefs about future income seem to have a lower impact than inadequate beliefs about risk preferences.
- Overestimation of future income can counterbalance the overestimation of risk aversion.

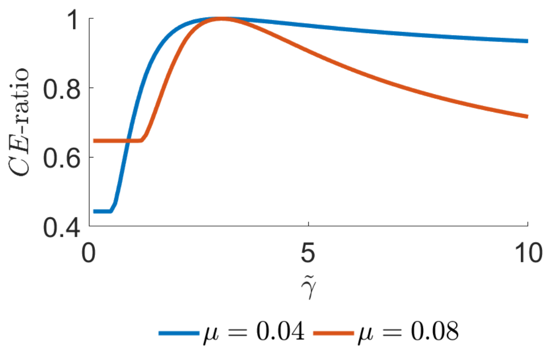

Figure: The two curves in the figure show the welfare effect of suboptimal lifecycle investment due to misestimation of the risk aversion level. On the horizontal axis, a high value of $\tilde{\gamma}$ corresponds to a relatively high aversion to risk-taking. Welfare is measured by the certainty equivalent (CE) ratio. When $\tilde{\gamma} = \gamma = 3$, there is no welfare loss. If the expected return on the risky asset is higher (red curve), the leverage constraint is binding more often and a too conservative strategy implies that one misses out on more.

Key Takeaways for the Industry

- Strategies that work well under slightly different preferences, personal situations and market environments provide sufficient robustness for near-optimal individual results.
- Leverage constraints or a built-in disability insurance may contribute much more to welfare than the illusion of a perfect match between the individually optimal investment and investments implemented.

Want to know more? Read the paper
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