Personal retirement accounts with risk sharing

A.L. Bovenberg, T.E. Nijman and C. van Ewijk

Employers are withdrawing as risk sponsors of occupational defined-benefit schemes. The alternative of individual defined-contribution schemes in which workers bear investment risk often lack longevity insurance. In order to reconcile taking investment risk, sharing longevity risk and providing life-long retirement income, this paper proposes Personal Retirement accounts with Risk sharing (PRR). A PRR unbundles the three main functions of variable annuities: investment, longevity insurance and dissaving. This unbundling eliminates three drawbacks of variable annuities: intransparency, complex valuation and inflexibility in adapting investment and pay-out profiles. Valuation is especially complex if shocks are smoothed over time to avoid volatile income streams during retirement. To avoid controversies about valuation (and the related choice of the assumed interest rate) in mutual insurers, variable annuities tend to be inflexible, thereby yielding inefficient intertemporal consumption smoothing.

PRRs combine the strengths of collective defined-benefit schemes and individual defined-contribution schemes. Whereas investment and dissaving decisions are individualized, insurance and risk sharing functions are organized collectively. In particular, similar as in defined-benefit schemes, asset-liability risk management is aimed at providing stable life-long income, idiosyncratic longevity risk is pooled within solidarity pools and trustees provide a choice architecture for (dis)saving and investment decisions. Just as defined-contribution schemes, PRRs feature transparency, clear property rights on financial assets and tailor-made, adaptable investment and pay-out profiles. In particular, pay-outs and associated hedge portfolios can be adapted without giving rise to intergenerational conflicts. PRR are an especially attractive innovation for the pay-out phase of defined-contribution schemes. PRRs can be provided through both external insurers and mutual insurers.

We show how PPRs can extend financial markets through an additional risk-sharing function. In particular, financial risks can be shared across non-overlapping generations and risks that are not traded on financial markets can be exchanged between participants. Extending financial markets in this way yields better risk-return trade-offs but can also give rise to conflicts about subjective pricing.