PORTFOLIO INSURANCE STRATEGIES FOR TARGET ANNUITISATION FUNDS

Mengyi Xu[1], Michael Sherris and Adam Wenqiang Shao

School of Risk and Actuarial Studies and Australian Research Council Centre of Excellence in Population Ageing Research (CEPAR), UNSW Australia, Sydney, Australia.

Abstract

Defined contribution (DC) pension funds do not guarantee an income for retirees. Current investment practice mostly aims to maximise wealth at retirement with risk management being less of a concern. Increasingly the investment objective of providing a sustainable income flow to fund post-retirement consumption is under consideration. We investigate pre-retirement investment strategies that are driven by inflation- and longevity-linked post-retirement consumption. The investment products using these strategies are referred to as target annuitisation funds. They aim to address the lack of integration between accumulation and retirement phases of an individual's retirement strategy. Inflation risk and mortality improvements are critical for these strategies, as shown by our empirical analysis of the amount of wealth required at retirement to meet a minimum level of inflation and longevity protected retirement income across several major countries. We assess portfolio insurance strategies to limit the downside risk of meeting a targeted annuitisation level in retirement. In particular, we consider two portfolio insurance strategies: option-based portfolio insurance (OBPI) and constant proportion portfolio insurance (CPPI). The results contribute to the investment and risk management of DC pension funds by proposing and assessing pre-retirement investment strategies that specifically target post-retirement income streams. Importantly these investment strategies focus on the downside risk protection feature of the portfolio insurance strategies. The asset allocation results highlight benefits and disadvantages of using OBPI and CPPI strategies.

Keywords: defined contribution, pension risk management, target annuitisation fund, portfolio insurance strategies, inflation risk, longevity risk

[1] [Speaker] Email: m.xu@unsw.edu.au; Postal address: ARC Centre of Excellence in Population Ageing Research (CEPAR), NICTA Building, Level 3 East, 223 ANZAC PDE, Kensington 2033, Australia; Phone: +61-2-9385 7008.