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A new approach for satisfactory pensions with no guarantees. (English) Zbl 1452.91263

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Summary: The increase in longevity, the ultra-low interest rates and the guarantees associated to pension benefits have put significant strain on the pension industry. Consequently, insurers need to be in a financially sound position while offering satisfactory benefits to participants. In this paper, we propose a pension design that goes beyond the idea of annuity pools and unit-linked insurance products. The purpose is to replace traditional guarantees with low volatility, mainly achieved by collective smoothing algorithms and an adequate asset management. With the aim of offering security to the insured, we discuss the optimisation of some key variables of the proposed pension product to target both a satisfactory level of the initial pension and stable pension payments over time. By combining such well-known products as unit-linked and annuities, we show that it is possible to design a pension product with both high-expected return and low risk for the policyholder. However, differently than in the classical unit-linked framework, we do not allow the individuals to choose the underlying funds. Instead, the funds are under the surveillance of an insurance company's professional risk management, which induces better informed decisions.

MSC:

91G05 Actuarial mathematics
91G30 Interest rates, asset pricing, etc. (stochastic models)

Cited in **2** Reviews

Keywords:

pensions; guarantees; unit-linked contracts; ultra-low interest rates; collective mechanism; volatility smoothing

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