

Special Issue on Longevity Risk and Insurance

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The aging of populations has become a global and irreversible process, with an advancement level dependent on the socio-economic development phase of a given society. Today, thanks to the progress in medical and diagnostic technologies and infrastructure, improvement of the population's health status as a result of a healthy lifestyle, as well as changes in the educational structure of the population, including an increase in social awareness, many people can live longer and longer. However, it should be emphasized that a longer life expectancy means a longer retirement period, an increase in the financing needs of retired people and a greater demand for health care services provided to the elderly. Consequently, the ageing populations and increasing longevity have drawn attention to the management of longevity risk in pension and social insurance systems as well as life and health insurance sector.

This special issue includes the selected theoretical and applied research related to the longevity risk and insurance solutions. The invited authors represent the international approach in their research and for the purpose of this issue they take the challenge to address the essential problems

combining longevity risk and insurance as a method for its financing. In the paper authored by J.A. Turner, G. Hughes, A. Chłoń-Domińczak and D.M. Rajnes the longevity insurance benefit programmes as a way of extending pension coverage provided through social security systems in low- and middle-income countries are examined. The actuarial analysis of impact of longevity risk on the valuation of life insurance contracts with accidental options is presented in the study by M. Homa. In the paper prepared by E.D. Cruz and J.T. Query, a multivariate regression model is determined that allows computation of the actuarial liability of social benefits using a group of potential predictors. In the next study, D.H. Lee, J.H. An and J.H. Sung apply a genetic algorithm and show that self-annuitization can be recommended as an optimal choice for retirees if they consider properties as one of the investment options.

We do hope that this special issue will be a contribution to the global discussion on the insurance solutions that can be implemented by governments, insurers and other financial institutions in order to manage the longevity risk more and more efficiently.