

Securitization, Structuring and Pricing of Longevity Risk

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Abstract

Pricing and risk management for longevity risk has increasingly become a major challenge for life insurers and pension funds around the world. Risk transfer to financial markets, with their major capacity for efficient risk pooling, is an area of significant development for a successful longevity product market. The structuring and pricing of longevity risk using modern securitization methods, common in financial markets, has yet to be successfully implemented for longevity risk management. There are many issues that remain unresolved in order to ensure the successful development of a longevity risk market. This paper considers the securitization of longevity risk focussing on the structuring and pricing of a longevity bond using techniques developed in the financial markets, particularly for mortgages and credit risk. A model based on Australian mortality data and calibrated to insurance risk linked market data is used to assess the structure and market consistent pricing of a longevity bond. Age dependence in the securitized risks is shown to be a critical factor in structuring and pricing longevity linked securitizations.