Investigation of Dependency between Short Rate and Transition Rate on Pension Buy-outs

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Abstract

Solvency II regulations are in force for Pension Bulk Annuity Market since January 2016. These regulations encourage insurers to apply stochastic models for valuation of the contracts and to consider the dependency between finance and insurance markets for the examination of the capital adequacy requirements. In this study, we first employ affine structure for modeling the dependency between short rate and transition rate. For this aim, we utilize the methodology of dependent forward rates. After that, we show how to valuate a pension buy-out deal. We also examine the Solvency II capital requirement for a riskless portfolio.

Keywords Pension Buy-out, Solvency II, Dependency, Stochastic Models, Forward Rates.