

PRICING INTEREST RATE GUARANTEES IN NORWEGIAN DEFINED BENEFIT PENSION

ABSTRACT

In Norwegian defined benefit pensions, assets corresponding to the premium reserve and premium fund are guaranteed a minimum return of a fixed rate r . This r is the same interest rate used for discounting when calculating the premium reserve. The guarantee is issued by the insurance company to each client. In this paper we aim at pricing an interest rate guarantee which is given by a put option with a stochastic strike depending on events in the membership data. We want to consider a risk indifference pricing problem with respect to this put option with an underlying given by the client assets, buffer funds and the company equity. The underlying is modelled by a two dimensional exponential Levy process. Finally we compare the obtained results with those in a classic Black and Scholes framework.