On the Pricing of Longevity-Linked Securities*

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Abstract

For annuity providers, longevity risk, i.e. the risk that future mortality trends differ from those anticipated, constitutes an important risk factor. In order to manage this risk, new financial products, so-called *longevity derivatives*, may be needed, even though first attempts to issue a longevity bond in 2004 were not successful. While different methods of how to price such securities have been proposed in recent literature, no consensus has been reached. This paper reviews, compares and comments on these different approaches. In particular, we use data from the UK to derive prices for the proposed first longevity bond and an alternative security design based on the different methods.

*_An earlier version of this paper entitled "Pricing Longevity Bonds Using Implied Survival Probabilities" was presented at the 2006 meeting of the *American Risk and Insurance Association (ARIA)* and the 2006 meeting of the *Asia-Pacific Risk and Insurance Association (APRIA)*. Moreover, some of the ideas have previously been presented in Bauer (2007).

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