

Parris-Bell, Marilyn

From: Hunt, Andrew
Sent: 23 April 2014 10:34
To: Parris-Bell, Marilyn
Cc: Blake, David
Subject: Abstract for Submission to Longevity 10

Marilyn

Please find below my abstract for submission at the Longevity 10 conference in Santiago in September. I hope this is suitable but if there is anything further you need, please say.

Kind regards

Andrew Hunt
PhD Student
Cass Business School, City University London

Forward Mortality Rates: Applications to securities pricing and the hedging of longevity risk

Andrew Hunt and David Blake

The emergence of a new class of longevity-linked securities requires us to be able to price them consistently, based on market information, and allows us to use them to hedge longevity risk. We propose a new “forward mortality rate” framework which is derived from more familiar age/period/cohort mortality models. This framework can be easily calibrated from a combination of historic data and market prices to give market consistent values for life insurance reserves or longevity-linked securities prices. We then use this framework to calculate one-year Values at Risk for longevity-linked securities and assess their effectiveness at hedging the longevity risk in a portfolio of life annuities.