On Simulation-Based Approaches to Risk Measurement in Mortality with Specific Reference to Binomial Lee-Carter Modelling

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Abstract

This paper develops the binomial version of the Lee-Carter model and provides a comparative study of simulation strategies for assessing risk in mortality rate predictions and associated estimates of life expectancy and annuity values in both period and cohort frameworks.

Keywords: Binomial modelling; Over-dispersion; Joint-modelling; Mortality projections; Mortality statistics; Simulated risk