

Mortality improvement: an actuarial perspective

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We study the relation between the two basic random events associated with human mortality; birth and death. Recorded dates of birth and death provide strong evidence of a positive association between longevity and cohort. That means, people born in more recent cohorts tend to live longer. Forecasting models such as that of Lee & Carter (1992, JASA) have attempted, with limited success, to give a parametric description of this association. We investigate a copula model for a bivariate survival function, with non-parametric marginals. The estimation and fit of extreme value copulas is presented and compared to current parametric model.