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# Bootstrapping Parametric Models of Mortality

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## Notes

Rempala GA and Szatcschneider K. Bootstrapping parametric models of mortality. *Scand. Actuarial J.* 2004; 2004: 53–78.

We realize that in many actuarial applications the data available for the construction of mortality rates is very different that used in Eq. (2.1). However, for the most part of the discussion presented in this paper the actual way of arriving at the values of the components of  $q^{(n)}$  is irrelevant, as long as we can assume their asymptotic independence and normality (see Theorem 4.1). We have chosen to consider model given by Eq. (2.1) due to its simplicity as well as relevance to the general survival analysis

Adjusting  $n$  to be relatively small sample size

The resampling method bootstrap. However, it may be more practical results on  $n \rightarrow \infty$ . See, e.g.,

The results of Shao and Tu (1995)

In order to use the same method



in the table, however, in our example we simply applied linear interpolation to obtain the values of the pseudo-empirical distribution at the integer ages and then to calculate the

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