

学术论文

# 关于2000-2003新生命表出台对寿险业的影响分析

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**摘要** 随着2000-2003新生命表的出台, 寿险业对生命表的关注程度日益加强, 本文第一部分介绍了研究背景, 第二部分对死亡效力(mortality force)进行模拟, 并进行了可靠性检验. 第三部分结合中国人寿保险业1990-1993生命表、2000-2003生命表, 给出了时间推移下同年龄死亡效力之间的关系. 基于此, 引入了布朗运动的随机变量, 将死亡效力随机化, 并进行模拟, 优化了可靠性检验结果. 第四部分预测了生命表改善对年金保险(annuity)净费率的影响, 分析了延期承保的费率影响趋势, 指出了长寿风险. 最后给出了相关评价及未来预测思路.

**关键词** [最小二乘法, 死亡效力, 布朗运动.](#)

分类号

## Analysis of 2000-2003 New Life Table's Effect on Life Insurance

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**Abstract** With the new life table of 2000-2003 publication, life insurance pays more attention to the mortality rate. For example, considering the mortality rate development trends and its effect on life insurance in the future. So we should study more about it. To this paper, in the first section, specific background is introduced. As to mortality force, its function are estimated by least square method and credibility test is given in the second section. At the same time, in the third section, it shows the relationship between and, which reflects the mortality force change with time lapse under the life table of 1990-1993, 2000-2003. Moreover, generally, the concept of random variable about Brownian motion to the mortality force formula. Also, the parameter estimated and test given as that of section two. Fourthly, it forecast the effect of decreasing mortality trends on net prem

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ium of annuity, providing the concrete example to analyze the longevity risk. Lastly, relative remark and recommendation are given.

**Key words** [Least square method, mortality force, Brownian motion.](#)

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