Life insurance policy termination and survivorship *

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Abstract

There has been some work, e.g. Carriere (1998), Valdez (2000), and Valdez (2001), leading to the development of statistical models in understanding the mortality pattern of terminated policies. However, there is a scant literature on the empirical evidence of the true nature of the relationship between survivorship and persistency in life insurance. In a life insurance contract, when policies terminate due to voluntary non-payment of premiums, there is a possible hidden cost resulting from mortality antiselection. This refers to the tendency of policyholders who are generally healthy to select against the insurance company by voluntarily terminating their policies. In this article, we explore the empirical results of the survival pattern of terminated policies, using a follow-up study of the mortality of those policies that terminated from a portfolio of life insurance contracts. The data has been obtained from a major insurer who tracked the mortality of their policies withdrawn, for purposes of understanding the mortality antiselection, by obtaining their dates of death from the Social Security Administration office. We modeled the time until a policy lapses and its subsequent mortality pattern. We find some evidence of mortality selection and we subsequently examined the financial cost of policy termination.

Keywords: Survivorship and persistency, duration models, Gompertz models, and mortality selection.

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