Generalized Linear Models for Traffic Annuity Claims, with Application to Claims Reserving

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Abstract

Currently the standard/common reserving techniques used by the general insurance actuaries are based on the assumptions that future claims are going to behave with the same pattern/trend as they did in the past, no allowance is made for any individual claim information, any change in speed with which the claims are settled or for any factors that may change the pattern. The main objective of this thesis is to provide the reserving actuary with an alternative method than can be applied in cases when the common reserving methods fail to deliver a suitable result, but also to investigate the outcome of using an alternative model that allows for individual claims information. In this paper we will try to predict the loss reserve for personal injury claims that compensates for the loss of income a claimant will have as a consequence of traffic injury. Also known as traffic annuity claims, these types of claims are rather difficult to estimate; given that the victims personal circumstances will have a significant effect on how the compensation will turn out to be. We will apply a Generalized Linear Model to individual data, and test if this type of individual claims method can work as a support for the actuaries to improve the reserve estimation and at the same facilitate the understanding of which factors that are important for predicting the loss reserve for traffic annuity claims

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