

Abstract:

The seminar is a summary of my research activity. In the first part, I will discuss the use of quantile regression and parametric quantile regression for ratemaking based on a two-part model. After the introduction of a premium principle based on a quantile, I will show how quantile regression can be a useful statistical tool to get a loaded premium for each risk class. Furthermore, parametric quantile regression will be introduced as an alternative to quantile regression in order to get an improvement in terms of parsimony and time-consuming. The second part will deal with the relationship between lapse rate and a market spread between a benchmark rate and the policy crediting rate to describe a policyholder's behaviour. To model this relationship, I will consider a double sigmoid function. Theoretical features and practical application of the model will be discussed. In the last part, future developments of my research will be described.