

This presented thesis deals with applications of Tweedie compound Poisson model in non-life insurance pricing and claims reserving. Tweedie models are exponential dispersion models with power mean-variance relationships and compound Poisson distribution is a particular Tweedie model. The interest in Tweedie compound Poisson model is motivated by its applications to generalized linear models (GLMs) and generalized estimation equations (GEE). The purpose of this thesis is to construct pricing and claims reserving models in which the response variables follow Tweedie compound Poisson model. Theoretical approaches are applied on the real datasets.