

**Abstract:** The aim of this thesis is to determine the premium of motor third party liability insurance. Thesis explores both direct approach to premium calculation and calculation using separately calculated claims frequency and claims severity. Emphasis is put on the use of generalized linear models whose theory is also present. Described approaches to calculation are applied on real world data, compared with each other and then final model for premium calculation is selected. Premium is determined with the inclusion of IBNR reserves and expenses.

**Keywords:** generalized linear model, claims frequency, claims severity, net premium, gross premium, motor third party liability insurance, bonus-malus.