

Bonus-malus systems are tariff systems which determine premium depending on claim history of insured risks in previous periods. The thesis deals with computation of part of risk which falls on policy holders and on insurance company. There is used the Bayesian approach in the first part. A portfolio is assumed in which the risk parameter of each policy holder is a random variable. There is established a model with two kinds of policy holders too, every kind has a given distribution of the risk parameter again. There are mentioned some bonus-malus systems used in the world in third-party liability insurance in the second part. It is shown how to modify the systems which do not satisfy the Markovian condition to a model which satisfies this condition. It is useful for next calculations. A portfolio is assumed again in which the risk parameter of each policy holder is a random variable and it is computed part of risk which falls on policy holders and on insurance company. The calculations are supplemented by concrete numerical illustrations.