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METHODOLOGY OF APPLICATION OF STATISTICAL MODELING FOR RISK ASSESSMENT

Abstract:

Risk assessment is one of the major challenges that must be addressed by each insurance company. To assess risk we need to know the value of losses as well as the probability of losses, since the risk cost is the basic component in evaluating the insurance indemnity. Statistical methods should be used for objective evaluation of insurance processes, but because of complexity in real life processes of insurance, statistical modelling techniques would be preferable. It is particularly important to develop and practically apply these methods in Latvia as in recent years (starting from 1992) the insurance market in Latvia has experienced steady growth. To improve the competitiveness of the insurance companies, especially small companies, it is simply impossible to do without methods allowing us to estimate the parameters of the insurance process. Taking this into consideration it becomes important to study information systems related to the processes of insurance and to use modern information technologies for processing the available empirical information and the dynamic scenario forecasting performance of the insurance process taking into account different assumptions about the factors that could affect the insurance process. The article deals with the various statistical models that assess the risks and losses of the insurance company allowing us to simplify the calculation of insurance premiums, insurance reserves and assess the financial stability of the insurance company with a sufficiently wide range of parameters of the real process of insurance. At the present time transition from local information systems to corporate information systems based on network technologies is being accomplished in the Baltic countries. Therefore, in the future it is important to include such statistical models into the integrated European information system of processing insurance information.

Keywords:

Risk Assessment, Statistical Methods