

## ABSTRACT

Master's dissertation: 170 p., 20 fig., 28 tabl., 4 appendixes, 24 sources.

Topic: Estimation of risks of trading in securities using maximum likelihood methods.

The object of study – the process of estimation of risks of trading in securities. Subject of research – different maximum likelihood methods, risks in trading in securities and ways to deal with them.

Purpose – eliminate nuisance parameter in estimation of risks in trading in securities using maximum likelihood methods.

Methods of research – analysis of scientific researches, experiment (computer modeling), comparison, formalization, generalization and systematization, statistical methods.

Actuality – results can be applied to formation of reserve capital in trading in securities.

It is suggested to eliminate nuisance parameter (expected value of normal distribution) using maximum likelihood methods in risk estimation through parametric VaR-method. Computer program is developed. It calculates probability of risk, value at risk and time of system guaranteed functionality.

Using of maximum likelihood methods shows that up to 25% of reserved capital formed by traditional method may become free. In addition, due to using of different weight functions prior information that was got from fundamental and technical analysis can be included into results.

STOCK MARKET, RISK, MAXIMUM LIKELIHOOD METHOD, LIKELIHOOD FUNCTION, NUISANCE PARAMETER, WEIGHT FUNCTION.