

ABSTRACT

Bachelor's thesis: 51 p., 10 fig., 9 tabl., 2 appendixes, 9 sources.

The topic of the research: "Operational risk modelling with methods of data mining".

The object of research is operational risks in financial systems.

Subject of research is mathematical models and methods of exposition and evaluation of operational risks.

The goal of research:

- 1) development of mathematical models of operational risk in the form of random distribution and exploitation for evaluation of potential losses;
- 2) development of software, that realizes an evaluation of potential losses algorithm by the procedure AMA (advanced measurement approaches).

The theoretical and methodological basis of research are works of domestic and foreign scholars in the field of economic theory, mathematical modeling, risk management, operational risk assessment.

During the bachelor's thesis the software for calculation of size of surplus had been created. It is calculated for different types of activities and uses data of losses during last three years. Also the software can calculate the descriptive characteristics for decision making hereafter for operational risk minimization. The performance of software using the generated data is presented.

The methodology is implemented on the basis of well-known algorithms, using own development.

The software is implemented using programming language Python. The recommendations for further researches were presented.

RISK MANAGEMENT, RISK ASSESSMENT, OPERATIONAL RISK, SURPLUS, ADVANCED MEASUREMENT APPROACHES.