Belarusian State University

Faculty of Mechanics and Mathematics

Department of nonlinear analysis and analysis of the economy

Annotation to the diploma work
«Capital Asset Pricing Model
and its generalization»

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Diploma work contains:
– 53 pages
– 8 illustrations (images)
– 10 used sources,
– 2 tables.

Keywords: OPTIMAL PORTFOLIO OF SECURITIES, RISK-FREE ASSET, ARBITRAGE PORTFOLIO OF SECURITIES, PROFITABILITY, EXPECTED RETURN, RISK, BETA ASSET COEFFICIENT.

Econometric modeling and analysis of the securities market on the basis of equilibrium models of the stock market: capital asset pricing model CAPM and its generalization (model APT) in the theory of arbitration estimation were explored in the diploma work.

The aim of the diploma work is studying and practical implementation of capital asset pricing model CAPM and its generalization (model APT).

Methods of optimal portfolio investment, the statistical validation of the models and software RStudio (for practical applications) were used to achieve the goals.

Diploma work includes the following results:
– A description of the models and their modifications;
– Interpretation of the models;
– Link establishment between models;
– Testing of the models and their practical implementation.

The diploma work is both methodical and applied nature. Its results can be used in studies of equilibrium models as well as applied in practice.

All the results of the the diploma work were obtained strictly in accordance with the rules of mathematics.