ABSTRACT

The thesis is presented in 46 pages. It contains 2 appendixes and bibliography of 11 references. Ten figures are given in the thesis.

The aim of this thesis is to develop mathematical and software tools to automate the process of making investment decisions The diploma work analyzes existing solutions of the task such as: statistical methods (linear regression, autoregressive) and neural networks for forecasting the price fluctuations on financial instruments and the theory of Markowitz and Tobin optimal portfolios. These methods are compared in terms of efficiency for the financial market of Ukraine. To solve the problem were chosen methods of regression analysis and the theory of Markowitz optimal portfolio.

Was developed an automated system that implements this method. Were provided tests for implemented program.

Key words: investments, default, profitability, risk, portfolio in Markowitz sense.