

ABSTRACT

Thesis: 79 p., 19 fig., 6 tab., 2 app., 16 sources.

MODELING, FORECASTING, EXCHANGE RATE, AUTOREGRESSION, CURRENCY EXCHANGE, GROUP METHOD OF DATA HANDLING.

The paper examines the problem of analyzing, modeling and forecasting the exchange rate on the Ukrainian Interbank Currency Exchange. The paper gives an overview of the main and most effective models and methods - auto regression (AR) and its modifications, group method of data handling. The method of OLC for calculating the coefficients of AP models is considered, and the principle of determining the order of AP models using the values of autocorrelation and partly autocorrelation functions. The necessary experiments were carried out and their results compared.

The object of study: Experimental and statistical data on financial and economic processes, which are described by time series and require effective analytical processing in order to identify practically useful knowledge and interrelations between them, necessary for decision making at the Ukrainian Interbank Currency Exchange.

Subject of research: Methods of regression analysis.

Purpose: Modeling and forecasting the dynamics of the exchange rate at the Ukrainian Interbank Currency Exchange.

Methods and apparatus: Mathematical statistics, methods of regression analysis, laptop that runs on Windows 10 operating system.

Results: AR, ARMA, GMDH models were designed for forecasting the USD / UAH currency pair rate on the Ukrainian Interbank Currency Exchange, a 4-month forecast was fulfilled. The results of various methods were compared.

Uses: Forecast of the exchange rate on the currency exchange.