

ABSTRACT

Bachelor's thesis: 90 p., 39 fig., 16 tabl., 3 appendixes, 14 sources.

The topic of the research: "Construction of models of financial time series using fractal methods".

The object of research is fractal time series in the areas of financial and investment activities.

The subject of the study is non-stationary time series with correlations slowly changing with the time and match the characteristics of fractal time series.

The aim of the study:

1) research tools Fractal Market Analysis - R / S-analysis and V-statistics, as well as new predictive models SFARIMA;

2) develop software that implements algorithms of fractal analysis.

Theoretical and methodological basis of the study are works of domestic and foreign scholars in the field of economic theory, mathematical modeling, predictive models and fractal theory market.

During the thesis created software to determine the memory time series, study series for the non-periodic cycles and forecasting of time series values using fractal models and presented results at the program generated and real data.

The methodology is implemented on the basis of already known algorithms and using own development.

The software is implemented using the programming language SAS. The recommendations for further research are given.

FRACTAL ANALYSIS, TIME SERIES, R / S - ANALYSIS, V-STATS, SFARIMA..