

Annotation to the dissertation by Vadim Evgenievich Zyamalov on the topic
“Macroeconomic factors of the dynamics of the stock market”, submitted for the
degree of candidate of economic sciences in the specialty 5.2.2. “Mathematical,
Statistical and Instrumental Methods in Economics”

Stock indices are indicators that reflect the reaction of investors to the current state of the economy, as well as their expectations regarding future development trends. Thus, as noted in the literature, stock indices can be considered as one of the leading indicators of the economic situation. Because of this, the problem of modeling their dynamics is especially important to build more accurate economic models.

The theoretical basis is based on microeconomic approaches to the formation of the value of companies' securities, based on the level of technology development. The use of such approaches provides a structured relationship between the indicators included in the model. This structure makes it possible to apply methods for assessing the impact of fundamental innovations on the variables included in the model.

The purpose of this dissertation research is to substantiate the presence and features of the influence of macroeconomic indicators on the stock market of the Russian Federation, as well as to conduct an empirical study of this influence and to identify the dependence of the nature of the discovered relationships on changing economic conditions. In order to achieve this goal, the following tasks are solved:

- Studied is the available theoretical and empirical literature on economic links between financial markets and macroeconomic indicators.
- Formulated are hypotheses based on the analysis of the studied literature and a theoretical model for a small oil export-oriented economy is constructed establishing the nature of the relationship between domestic stock indices and the main macroeconomic indicators of the Russian Federation and foreign markets.
- The empirical testing of the hypotheses is put forward by estimating the impulse response functions of stock indices to fundamental innovations of the considered macroeconomic indicators using various econometric approaches.

- The dependence of the relationship between macroeconomic indicators and the stock market of the Russian Federation on changing economic conditions is studied using the methodology of multi-regime vector autoregression models.
- Compared are the results of empirical study with the formulated theoretical hypotheses establishing their validity.
- The feasibility of using the considered econometric methods in order to predict the level of domestic stock indices is determined.

The object of the research is the stock market of the Russian Federation. The subject of the research is the relationship between the main macroeconomic indicators and stock indices of Russian Federation.

The study is based on data from the Federal State Statistics Service (Rosstat), the Central Bank of the Russian Federation (CBRF), the FINAM holding, and the Federal Bank in St. Louis (USA).

The novelty of the results obtained by the author is as follows:

1. The mechanisms of the influence of macroeconomic indicators and economic conditions on stock markets and the value of shares are identified consisting in the effect of changes in macroeconomic factors on inflation rates and, thereby, on the interest rate. Hypotheses about the nature of the relationship between Russian composite stock indices and various indicators of the Russian economy are formulated. The essence of these hypotheses is (a) a negative relationship with the value of the interest rate, inflation rate, the exchange rate of the domestic currency, and (b) a positive relationship with the rate of industrial production, the price of oil and foreign stock markets. The fundamental possibility of using vector and multi-mode autoregressive models for a representative assessment of the impact of macroeconomic indicators on stock indices is shown. Practical testing of these classes of models makes it possible to confirm the author's hypotheses about the nature of the relationship between Russian and foreign stock indices with macroeconomic indicators.

2. Developed and tested is a model of a small open economy specializing in oil exports, describing the relationship between stock prices and macroeconomic indicators in the short term. Based on this model, the boundary values of the elasticities

of economic indicators have been identified that affect the nature of the relationship between the value of shares and macroeconomic indicators.

3. The magnitude of the impulse response of domestic composite stock indices to shocks of macroeconomic indicators of the Russian economy is estimated, which shows that the statistical hypotheses put forward in the work are consistent with empirical data. The results obtained confirm the presence of (a) a close connection between the domestic stock market and world capital markets, as well as the significant influence of oil prices, as the main export commodity of the Russian economy, on the nature of the relationship between Russian stock indices and macroeconomic indicators; (b) signs of a negative relationship between Russian stock indices and the interest rate, exchange rate and inflation rate; (c) signs of a positive relationship with the rate of industrial production and foreign stock indices.

4. Based on the use of vector smooth transition autoregressive (VSTAR) and smooth transition vector error correction models (STVECM), making it possible to reveal the dependence of the relationship between the variables under consideration on economic conditions, the features of the influence of the cost of Brent oil on macroeconomic factors and Russian stock indices are shown. In particular, the results obtained indicate the strengthening of the relationship of several key indicators—foreign stock indices, interest rates, oil prices—with Russian stock indices when the conditions of foreign economic activity change.

5. Compared in the research is the predictive ability of various autoregressive models: AR, VAR and VSTAR. The results obtained show that in the time interval considered in the study, the use of more complex VSTAR models for forecasting, considering the change in economic regimes, which is useful from the point of view of identifying previously unconsidered relationships between the studied indicators, has low feasibility in the current level of the development of domestic stock market.

In the conducted dissertation research, important theoretical and practical results were obtained. The elements of scientific novelty described above can serve as a contribution to the literature on the domestic stock market. The theoretical significance lies in the development of a theoretical model describing the mechanisms

of influence on the value of shares of companies in a small economy focused on oil exports.

The results of an empirical study are of practical importance for further research on the domestic stock market. These results are also of practical value in developing measures of political influence on the economy, building more accurate models of the stock market and scenario forecasts for the development of the Russian economy.

The results of the research and the main scientific and practical provisions of the dissertation are published in four works of the author. Of these, 4 works were published in leading peer-reviewed journals recommended by the Higher Attestation Commission of the Ministry of Education and Science of the Russian Federation.

The work includes an introduction, three chapters, a conclusion, a bibliography, and an appendix. The content of the thesis is presented on 140 pages, including 33 figures, 47 tables, 1 appendix and a list of references from 76 sources.

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