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Analytical and Information Support for the Operation of Exchange Market Participants: Logistics Approach

Abstract. Introduction. *The article analyzes the formation tendencies of analytical and information support for the operation of the exchange market participants on the basis of the logistic approach in the conditions of permanent crisis in the economy.*

Purpose. *It is formulated and substantiated the principles that form the basis of information support of exchange activities, the predominance of economic content over the legal form, continuity, comparability of data, continuity, multiple use of data.*

Results. *The problems related to the insufficient provision of the commercial banks, investment companies and non-banking organizations representing the interests of investors and issuers with the quality information necessary for making economically sound management decisions by the group of stakeholders are highlighted. First, establishing the existence of the problems in the formation and development of exchange-traded financial markets, in particular: the need to form the strong national exchange-traded financial markets that will attract financial capital. Secondly, there are difficulties with clarification of participation in exchange financial markets and determining the relationships that have developed between the participants at the present stage of the development of exchange markets based on a logistical approach which consists of minimizing risks and protecting the rights of investors. Thirdly, weak theoretical research of the methodological and methodological foundations of information support for the participants activities in exchange financial markets.*

Conclusions. *It is proven the necessity of a system forming of accounting for the participants in exchange financial markets which is aimed at providing the group of stakeholders for decision-making with the information in the context of a logistic approach. A scientific approach to assessing the quality of information disclosed by participants in exchange financial markets is substantiated and the main components are structured within which information of a financial and financial nature is disclosed in the participants' reports in exchange financial markets. Prospects for further research are the development and implementation of a mechanism for managing the activities of exchange market participants in the context of a logistic approach.*

Keywords: *exchange activity; participants of exchange financial markets; investors; analytical and information support; logistic approach.*

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Аналітико-інформаційне забезпечення діяльності учасників біржового ринку: логістичний підхід

Проаналізовано тенденції формування аналітико-інформаційного забезпечення діяльності учасників біржового ринку на основі логістичного підходу в умовах перманентної кризи в економіці. Сформульовано та обґрунтовано принципи, які складають основу інформаційного забезпечення біржової діяльності: переважання економічного змісту над юридичною формою, безперервність, порівнянність даних, спадкоємність, багаторазовість використання даних. Виокремлено проблеми, пов'язаних з недостатньою забезпеченістю комерційних банків, інвестиційних компаній та небанківських організацій, що представляють інтереси інвесторів та емітентів, якісною інформацією, необхідною для прийняття економічно обґрунтованих управлінських рішень зацікавленими користувачами. По-перше, встановлення існування проблем формування та розвитку біржових фінансових ринків, зокрема: необхідність формування сильних національних біржових фінансових ринків, що дозволять залучити фінансовий капітал. По-друге, існують проблеми з уточненням складу учасників біржових фінансових ринків та визначенням взаємозв'язків, що склалися між учасниками на сучасному етапі розвитку біржових фінансових ринків на основі логістичного підходу, що полягає в мінімізації ризиків та захисту прав інвесторів. По-третє, недостатньо ґрунтовні теоретичні дослідження методологічних і методичних основ інформаційного забезпечення діяльності учасників біржових фінансових ринків. Доведено необхідність формування системи обліку учасників біржових фінансових ринків, яка націлена на забезпечення зацікавлених користувачів для прийняття рішень інформацією в контексті логістичного підходу. Обґрунтовано науковий підхід до оцінки якості інформації, яка розкривається учасниками біржових фінансових ринків та структуровано основні компоненти, в рамках яких інформація фінансового та не фінансового характеру розкривається в звітах учасників біржових фінансових ринків. Перспективами подальших досліджень є розробка та впровадження механізму управління діяльності учасників біржового ринку в контексті логістичного підходу.

Ключові слова: біржова діяльність; учасники біржових фінансових ринків; інвестори; аналітико-інформаційне забезпечення; логістичний підхід.

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Formulation of the problem. Modern crisis phenomena in the global financial markets require an understanding of the processes that determine the further development of the Ukrainian economy, an understanding of the place of the financial system in the process of reproduction, as well as the need and possibility of government intervention. At the present stage of its development, society is at a stage when the financing of scientific and technological innovations is carried out mainly by the private sector and only to a small extent by the state, the potential for expanded financing is directly dependent on the development of financial institutions and technologies. The formation of institutions which connect with financial technologies with the functioning of the non-financial sector is an essential element in the global and national socio-economic development. Therefore, high-quality analytical and information support for the activities of such institutions becomes a significant component that determines the effectiveness of further development both at the micro and macroeconomic levels.

The main task of the modern stock exchanges is to service the movement of financial capital: on the one hand, concentrating its supply and on the other hand, providing access to it by the state and various economic (corporate) structures. Unfortunately, these stock exchanges do not yet have these important qualities. However, the stock market in Ukraine is still in its infancy. Certificate privatization, low income of the vast majority of the population did not contribute to the creation of a full-fledged stock market in general, or the development of stock trading or stock exchanges in particular. And although stock exchanges actively participated in the processes of the monetary stage of

privatization they failed to organize a stable and liquid stock market [1].

In 2019, the conditions for the development of the global financial market were complicated by a sharp deterioration in its situation and exacerbation of crisis processes. In the context of a global pandemic, one of the main tasks of the exchange activities should be to create the effective anti-crisis management system. As a result, it is likely that the number of countries where independent and full-fledged exchange-traded financial markets may remain and continue to operate will be gradually reduced. In the next decade, a few national financial markets will either buy the form of global financial centers or enter the sphere of influence of existing ones [8].

The transformation of the methods of its regulation in the domestic economy, the development of market relations should set targets of implementation of the relevant new economic environment: the distribution of resources, the formation of equilibrium market prices in providing a financial and credit mechanism. One of the elective tools for implementing these tasks of a market economy is the exchange mechanism which is an essential part of the infrastructure of the market economy. The market economy has retained the exchange mechanism as a fundamental tool of economic relations which, in combination with the means of the state and public regulation can ensure economic recovery. In general, with the help of exchange mechanisms, it is already possible to get a real idea of the needs of the domestic market. Such organizations arose as a result of a general breakdown in economic ties, a shortage of goods and the lack of necessary information about their availability. Despite the fact that

such structures are very different from the system of classical exchanges operating in developed countries, they still bring the certain benefits today. Firstly, stock exchanges provide the necessary information about the availability of a variety of goods, help the producers and consumers find each other; secondly, the transactions on the stock exchanges are concluded in the conditions of high-profile trading which contributes to an increase in tax revenues to the budget and narrows the possibilities of the illegal market.

The Government of Ukraine has adopted a Strategy for the Development of the Financial Sector until 2025. The aim of the adopted strategy is to form a competitive global financial center in Ukraine on the basis of domestic stock exchange of the financial markets. Such tasks are planned to be implemented through the introduction of mechanisms to ensure the participation of numerous retail investors in the stock market and protection of their investments, expanding the range of derivative financial instruments and creating opportunities for securitization of a wide range of assets, raising awareness [2].

The relevance of the research is also due to the fact that in domestic economics there is a significant lack of work on aspects of fictitious capital movements in the stock financial markets not directly related to the movement of the real capital which has increased due to the use of modern information and communication technologies. The problems of informing the participants of the stock financial markets in terms of the needs of the group of stakeholders with the use of the organization logistical principles of this process remain insufficiently studied. The main reason for the unsatisfactory analytical and information support of groups of interested users in relation to exchange activities is the backwardness in the development of domestic financial markets. As a result, there is a massive outflow of capital from Ukraine which in recent years has reached catastrophic proportions, which ultimately leads to loss of productive potential, tax base and control over monetary aggregates which burdens Ukrainian society as a whole, complicating public policy. Therefore, the scientific substantiation of approaches to the formation of effective analytical and information support of the exchange market of Ukraine on the principles of logistical approach to providing the necessary information to stakeholders is an integral part of the economic system and the main market participants: commercial banks, investment companies, non-banking organizations representing the interests of a set of investors and issuers.

Analysis of recent research and publications. The theoretical research and development of the

methodological foundations of analytical and information support of exchange activities in Ukraine is still at an early stage, which is manifested in insufficient coverage of these issues in the special scientific literature, both domestic and foreign ones. This is especially acute now, in the context of the financial crisis that has engulfed the economies of the countries. It is also important that in the circles of the scientific community there is still no unambiguous approach to the vision of the main directions of analytical and information support of the exchange activities and the formalization of such a vision. Exchange activity is considered as activity in exchange financial markets. Exchange financial markets are organized as the markets for capital, currency, derivatives and money. According to the analytical and information support of the participants of exchange financial markets is the provision of commercial banks, investment companies and non-banking organizations representing the interests of investors and the group of stakeholders, quality information needed to make economically sound management decisions by interested users [3].

Consideration of the issue of analytical and information support of the participants of exchange financial markets implies the need to study the general theoretical and conceptual foundations of the exchanges as well as the participants of exchange financial markets in the context of global competition in capital markets and growing risks. These issues are studied in the works of some Ukrainian and foreign scientists, among which should be noted A. Berlach, M. Gudz, R. Korobka, Z. Matsuk, N. Orlenko, M. Solodky, O. Sokhatska, V. Dalko, L. Klein, J. Rogers, M. Wang and others.

Formulation of research goals. The purpose of this article is to assess the state of analytical and information support of the exchange market participants on the basis of a logistical approach in the conditions of permanent crisis in the economy.

Outline of the main research material. An essential aspect of analytical and information support of exchange activities is the harmonization of the national accounting and reporting standards for the international standards through the national accounting reform and reporting standards. At the same time, the relationship between analytical and information support and exchange management is insufficiently considered to ensure their stable development in the current conditions of global transformational changes and the strategic European integration course of Ukraine. The importance and influence of exchange activities under these conditions is expressed in its specific functions at two levels: microeconomic and macroeconomic (Fig. 1-2).

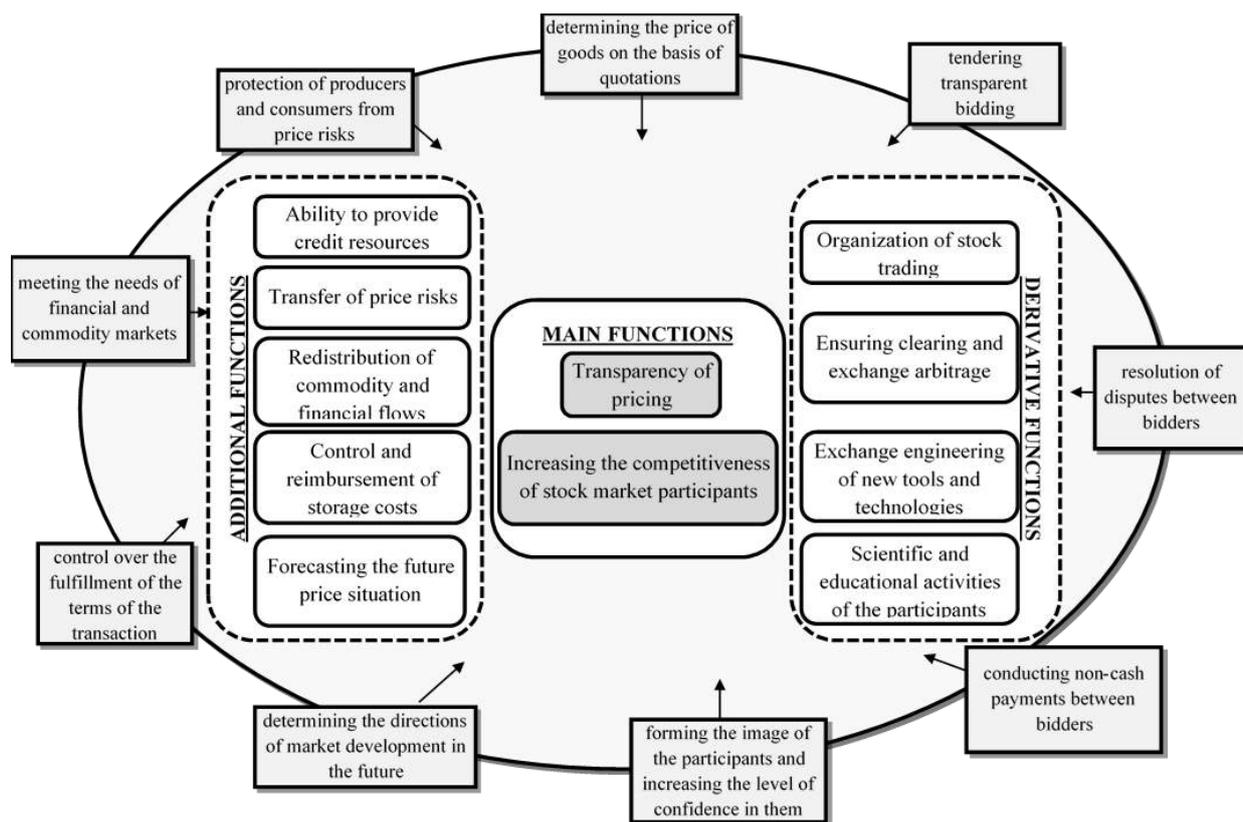


Figure 1 – Functions of exchange activities at the micro level

Source: developed by the author

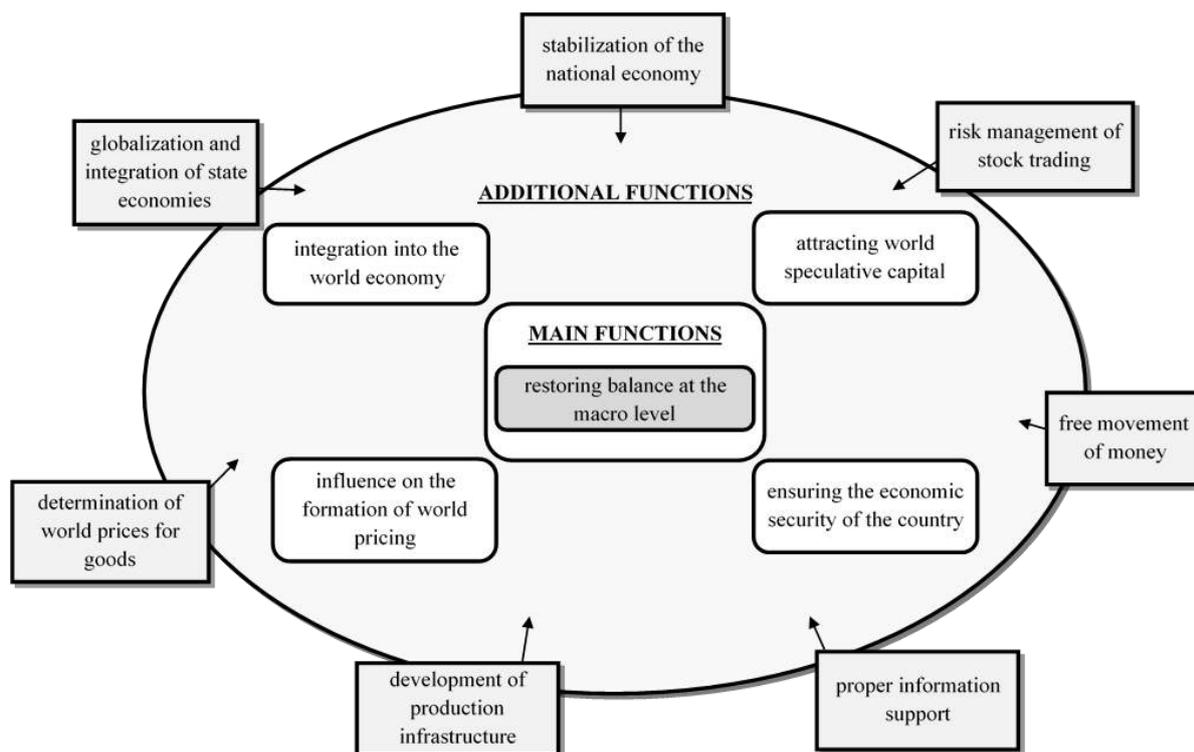


Figure 2 – Functions of exchange activities at the macro level

Source: developed by the author

Based on the purpose of the article, it is necessary to analyze in more detail the several groups of problems related to the process of analytical and information support of the exchange activities at the macro and micro levels. The first group of the problems is related to the formation and development of exchange-traded financial markets in the world economy as well as the peculiarities of Ukrainian exchange-traded financial markets. It is pointed out that despite the obvious role of the stock financial markets in the country's economy, in-depth study of the nature and role of stock financial markets worries only a very limited number of specialists. However, when problems arise in a single exchange financial market, whether stock, futures, currency or money, in the process of trading, clearing or depository activities, serious chaos begins in the financial environment which usually leads to negative consequences both for the exchanges themselves and for the participants in the stock financial markets (commercial banks, investment companies and other non-banking organizations, representing a wide range of investors and issuers). As practice has shown/ the COVID-19 pandemic caused by the SARS-CoV-2 coronavirus has become the factor that forced the whole world to reconsider not only development forecasts and its short-term economic and social policies but also take a different approach to forming their own. priorities for the long term. The consequence of this state of affairs is cyclical collapses in terms of settlements, a liquidity crisis in the country's economy, negative dynamics of stock indices and exchange rates. Thus, one should conclude a high degree of social significance of exchange financial markets [5, 6].

The modern economy brings the exchange financial markets in importance for one of the leading places in the country's economy, since one of the main factors of economic growth is financial capital through portfolio investment (raising resources for the development through the instruments of the exchange financial markets). As a result, Ukraine has chosen the path of transition to a market economy, it needs the strong national exchange financial markets (at the first stage – a strong financial center on a regional scale in the Union of Independent States, providing, first of all, the closest financial support for economic ties with the partner countries, occupying the largest specific weight in its foreign trade balance).

The world market economy has entered a phase of globalization for a long time which is characterized by the liberalization of capital, labor, information and other factors of production. Ukraine must use these advantages as a factor in the growth of the national economy. Financial capital will come to Ukraine only when strong national stock markets are formed in the country [9].

The second group of the problems is related to clarifying the list of participants in exchange financial markets and determining the existing relationships

between participants at the present stage of the development of exchange financial markets. According to the Law of Ukraine "On Securities and the Stock Market", stock exchange is a legal entity that ensures the regular functioning of the organized market for securities, currencies, derivative financial instruments and money. Stock exchange provide the necessary conditions for the normal circulation of assets in the stock, currency, derivatives and money markets, contribute to the formation of market prices for the relevant assets, disseminate the information about the market prices of assets, and maintain the level of professionalism among the participants in exchange financial markets. Modern stock exchanges are vertically integrated business holdings that provide their participants in exchange financial markets with a full range of competitive trading, clearing, settlement, depository and information services [7].

The main tasks of the stock exchanges at the present stage of the development are to provide the infrastructure of the organized markets, the formation of equilibrium exchange market price of assets, ensuring publicity and openness of exchange trading, providing arbitration, ensuring safety guarantees of the agreements concluded on the exchange, developing ethical standards, code of conduct. Participants in the exchange financial markets are legal entities represented by commercial banks, investment companies and other non-banking organizations that represent the interests of investors and issuers in exchange financial markets. Formally, the participants in stock exchange financial markets are represented by brokers, dealers, asset management companies, as well as securities issuers. The organization of the participants of exchange financial markets is based on the most important social principle – minimizing risks and protecting the rights of investors [4].

The list of the participants determines the specifics of the process of analytical and information support of the exchange activities based on the interests of interested users. Risk assessment of the activities in stock exchange financial markets is carried out by the group of stakeholders on the basis of the information obtained from the registers of accounting and reporting. In each case, the information is formalized by a system of financial and non-financial indicators. Depending on how accurately these indicators are reflected in accounting and reporting, the risks of activity on the stock exchange financial markets are adequately assessed by interested group of stakeholders.

The third group of the problems concerns the theoretical research of methodological and methodical bases of information support of the participants activity of the exchange financial markets. The article formulates the basic principles of the construction of information support of exchange activities such as the predominance of economic content over the legal form, continuity, comparability of data, continuity, multiple use of data. Along with the principles, the need to comply with such

necessary information requirements as clarity, usefulness, materiality, reliability and reliability is noted.

The main requirements for accounting to ensure the effective operation of the financial market is provided by the participants of the stock market. The system of the participants registration should be aimed at providing the interested users with information that allows to assess the current state of the participant in accordance with the objectives and plans. Hence a number of requirements that must satisfy the accounting system of the participants in stock financial markets: efficiency, flexibility, sufficiency, objectivity and economic feasibility.

The consequence of the insufficient degree of elaboration of analytical and information support in the field of exchange financial markets is the low quality characteristics of the relevant information reporting of the participants. Participants in exchange financial markets do not always fully meet such requirements as clarity, relevance, reliability (reliability), comparability and neutrality of information. The most important specific feature of the participants activities in stock financial markets is the need for clear and transparent reflection of property rights to securities and other assets. At the present stage of the development of exchange financial markets, the function of accumulating relevant information is performed by special institutions, usually which is the part of exchange holdings – depositories (custodians). Issues of reporting methodology and its practical specification (methodologies) in relation to this most important aspect of the activity in the financial markets are paramount importance since they directly affect the basis of the functioning of the system – the property rights of investors to their financial assets. The modern methodological and methodological support of depository activities lags far behind and does not fully meet the needs of the participants in exchange financial markets which leads to a significant increase in risks in the financial sector of the country's economy. This statement is equally applicable to the stability and reliability of such institutions in terms of requirements for their own funds, approaches to professional risk insurance, quality requirements for depository activities, exclusion of depositories from participating in corporate conflicts, especially in favor of their shareholders, etc.

The fourth group of the problems explored in the work relates to the development of proposals for improving the analytical and information support of the participants of stock financial markets. This group of problems touches on such important aspects as improving the accounting and reporting of exchange market participants, the interpretation of accounting and reporting data as an information base for economic analysis of exchange market participants by interested users, methodological basis for analyzing exchange market participants.

Improving the accounting and reporting of the participants in stock financial markets is a necessary condition for improving the efficiency of their activities. The paper identifies two main areas of improving the accounting and reporting of participants in stock financial markets on the principles of the logistics approach:

improving the conceptual basis for the recognition and valuation of assets and liabilities, income, expenses, profits, capital of the participants in exchange financial markets;

improvement of the conceptual framework for the preparation of the participants reports in exchange financial markets (structure, content and forms of presentation).

Improving the accounting and reporting of the participants in stock financial markets is dictated by the need of interested users in quality information about the participants activities to make economically sound decisions in the management process. Considering that stock financial markets as a sector of the economy are developing quite dynamically compared to other industries, the need for better analytical and information support is growing at a similar pace. The dynamic development and constant complication of the processes taking place in the stock exchange financial markets of Ukraine necessitate the development of the methodology for analyzing activities in order to make analysis before making economically sound management decisions by the participants in such markets. The researches of theoretical and methodological bases of the analysis of the participants activity of the exchange financial markets within the limits of the logistic approach allow to allocate the following basic directions of the analysis as priorities in the medium term: construction and use of a system of indicators that characterize the participants activities and the types of risks that are accepted with the identification of the relationship between indicators; study of the changing factors in these indicators and the magnitude of the risks taken; comparison of the obtained indicators with the average indicators for a group of homogeneous participants and the average for the industry.

The process of building and using a system of indicators that characterizes the participants activities should summarize the latest theoretical research and the best practices in organizing economic analysis of their activities, focusing on current needs of the management process. The formed system of indicators should provide complexity of the participants activity of the exchange financial markets.

It is developed and proposed a methodology for rating the participants activities in stock financial markets in the context of the logistics approach based on the results obtained during the study. This technique allows for a comprehensive analysis of the reporting of the participants in stock financial markets by using the algorithm for determining the internal rating of each individual participant based on the results of the

aggregate assessment of financial and non-financial performance. Performance indicators are differentiated by the degree of their significance. Each indicator is evaluated and based on the base score, adjusted for the significance factor of the indicator. The internal rating of each participant is calculated by the following formula:

$$R = \sum P_i * P_e, \quad (1)$$

where R – internal rating of the participant;

P – rating based on the results of the total score evaluation of indicators;

Pe – the result of expert evaluation.

Thus, the logistical approach in the system of building effective analytical and information support of the stock market participants is based on the calculation of the internal rating of the stock market participants which allows to form the adequate management decisions on the results of their activities in uncertainty and crisis in the economy.

Conclusions. The results of the trends analysis in the formation of analytical and information support of the stock market participants on the basis of a logistical approach indicate the existence of certain problems associated with insufficient provision of commercial banks, investment companies and non-banking organizations, representing investors and issuers. economically sound management decisions by interested

users. The first group of the problems includes the problems of formation and development of exchange-traded financial markets which are inherent in Ukrainian realities, in particular: the need to form strong national exchange-traded financial markets that will attract the financial capital. The second group of the problems is related to clarifying the composition of the participants in stock financial markets and determining the relationships between participants at the current stage of the development of stock financial markets based on a logistical approach to minimize risks and protect the investors' rights. The third group of the problems is a theoretical study of methodological and methodological foundations of information support for the participants activities in stock financial markets. The paper proposes a methodology for rating the participants activity in exchange financial markets in the context of a logistic approach which allows for a comprehensive analysis of the statements of the participants in exchange financial markets by using the algorithm for determining the internal rating of each specific participant based on the results of an aggregate assessment of financial and non-financial performance indicators. Prospects for further research are the development and implementation of a mechanism for managing the activities of exchange market participants in the context of a logistic approach.

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