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## **FINANCIAL SECURITY MANAGEMENT IN ECONOMIC SECURITY SYSTEMS AT DIFFERENT LEVELS OF MANAGEMENT SYSTEMS: METHODOLOGICAL PROBLEMS**

**Abstract.** The main methodological problems of the organization and implementation of the process of financial security management within the functioning of economic systems of different levels are identified. To meet the methodological needs of financial security management under financial security itself, it is proposed to understand the state of protection of financial interests in various sectors and functional areas of financial activities of the economic system and its main participants from external and internal threats, which ensures the effectiveness of economic relations, related to the implementation of financial guidelines for the development of economic, socio-economic, economic systems. It is established that the classical approach to the structure of the financial security subsystem in the system of economic security at any level of management positions it as a set of factors, the state of which determines the financial capacity of the entity or system to counteract economic risks and threats and their negative financial impact on the system respectively. The elements of financial security at the micro and macro levels are systematized according to such parameters as the financial security system, security entities, information principles, personnel component, management mechanism, resources, tools, instruments. A 16-component model of financial security management is proposed, which provides for the possibility of building a management system on four fundamental parameters: organizational culture, progressive and sustainable development, continuous optimization of the management process and ensuring its systemic nature. The proposed formulas for calculating the level of financial security of the state and the level of financial security of the entity based on the author's approach to segmenting their system for diagnostic purposes allow to obtain a rapid assessment of the financial security of the economic system, of course. Conceptual bases of the system approach to management of financial security of economic system taking into account object of management, subjects of management, the management mechanism, system of maintenance of process of management, principles of management and an estimation of level of safety are presented.

**Keywords:** financial security, financial security management, risk, threat, economic security, economic system.

**JEL Classification** G21, F29, L41

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## МЕНЕДЖМЕНТ ФІНАНСОВОЇ БЕЗПЕКИ В СИСТЕМАХ ЕКОНОМІЧНОЇ БЕЗПЕКИ НА РІЗНИХ РІВНЯХ УПРАВЛІНСЬКИХ СИСТЕМ: МЕТОДОЛОГІЧНІ ПРОБЛЕМИ

**Анотація.** Виявлено основні методологічні проблеми організації та реалізації процесу управління фінансовою безпекою в межах функціонування економічних систем різного рівня. Для забезпечення методологічних потреб менеджменту фінансової безпеки під самою фінансовою безпекою запропоновано розуміти стан захищеності процесів задоволення фінансових інтересів у різних секторах і функціональних напрямках фінансової діяльності економічної системи і її основних учасників від зовнішніх і внутрішніх загроз, що водночас забезпечує ефективність функціонування системи економічних відносин, пов'язаних із реалізацією фінансових орієнтирів розвитку економічної, соціально-економічної, господарської систем. Установлено, що класичний підхід до будови підсистеми фінансової безпеки в системі економічної безпеки на будь-якому рівні управління позиціонує її як сукупність факторів, стан яких визначає фінансову спроможність суб'єкта або системи протидіяти економічним ризикам і загрозам та їхньому негативному фінансовому впливу на стан усієї цієї системи відповідно. Систематизовано елементи забезпечення фінансової безпеки на мікро- і макрорівні за такими параметрами, як система фінансової безпеки, суб'єкти забезпечення, інформаційні засади, кадровий компонент, механізм управління, ресурси, засоби, інструменти. Запропоновано 16-компонентну модель управління фінансовою безпекою, що передбачає можливість побудови управлінської системи на чотирьох фундаментальних параметрах: організаційній культурі, поступальному і сталому розвитку, постійній оптимізації управлінського процесу та забезпеченні його системності. Запропоновані формули розрахунку рівня фінансової безпеки держави та рівня фінансової безпеки суб'єкта господарювання на основі авторського підходу до сегментації їхньої системи для потреб діагностики дають змогу отримати експрес-оцінку рівня фінансової безпеки економічної системи, звісно, за умови наявності всіх потрібних для розрахунку даних. Представлено концептуальні засади системного підходу до управління фінансовою безпекою економічної системи з урахуванням об'єкта управління, суб'єктів управління, механізму управління, системи забезпечення процесу управління, принципів управління та оцінювання рівня безпеки.

**Ключові слова:** фінансова безпека, управління фінансовою безпекою, ризик, загроза, економічна безпека, економічна система.

Формул: 3; рис.: 3; табл.: 3; бібл.: 10.

**Introduction.** Financial security management is now becoming an urgent management task at various levels of economic systems. Thus, at the macro level, the state of financial security and a high level of protection of the financial system and its participants from various dangers and threats of financial origin guarantee the state of financial independence, which allows to talk about financial security management as an important task of public administration. Ukraine's national economy is currently under the destructive influence of numerous external and internal risks and threats, some of which are unpredictable and have consequences that are difficult to foresight. Uncontrolled and unregulated development of the digital economy, financial dependence of the national economy on international organizations and donors of financial resources — these are just a few negative factors that characterize the trends of the domestic financial market and its participants. The loss of financial autonomy, which in the near future may become a very real threat to Ukraine, given the visible trends of financial policy, highlights the need to study the problem of financial security at the macro level. Financial stability and increasing the financial potential of the national economy, necessary for Ukraine's self-determination and gaining prestige in the international economic arena in the context of integration into the European Union, remain unattainable in the absence of a high level of financial security, which is an indicator of its financial image in a global business-space. In view of this, the topic of financial security management of the national economy of Ukraine is such that it is on time.

On the other hand, we observe a situation when in a state of financial instability are numerous enterprises, institutions, organizations, some of which belong to the category of critical infrastructure. In this area, the relationship between financial security management at the micro and macro levels is evident, and the relationship between the state of financial security of economic entities and the security of development and functioning of the financial system, and hence the level of financial security in general is obvious. The study of the level of financial literacy of the population and financial inclusion shows the third problem vector — the management of individual, personal financial security of man, citizen, and so on. The effectiveness of each level of management is determined by the effectiveness of the tools selected for financial security management and the completeness of methodological support and information support of the management process. And it is in this context that specialists have the most questions, both at the theoretical and applied levels. They are related to the lack of modern concepts of financial security management, and the lack of methodological tools for assessing the level of financial security achieved at a particular level of the economic system, and the existing shortcomings of financial security management mechanisms.

**Research analysis and problem statement.** These problems in the theoretical and methodological plane have become catalysts for numerous studies by leading scientists and the publication of their results in authoritative scientific journals. So, Zachosova N., Herasymenko O., Shevchenko A. study risks and possibilities of the effect of financial inclusion on managing the financial security at the macrolevel [1], in the source [2] conducted a system research and methodological framework for managing the economic security of financial intermediaries in Ukraine, Vladychyn U., Skomorovych I., Lobozyńska S. pay attention to the issue of assessment of financial and economic security of Ukraine in conditions of foreign banking development [3], Józef A. H., Bukhtiarova A., Chorna S., Iastremska O., Bolgar T. make an attempts of forecasting the level of financial security of the country (on the example of Ukraine) [4], Khalatur S., Pavlova G., Zhylenko K. determine the role of some indicators of financial security in Ukraine in the context of transnationalization and national interests [5], Blakytka G., Ganushchak T. justify the role of enterprise financial security as a component of the economic security of the state [6], Kurylo M., Klochko A., Zhuravlov D., Javadov H. study economic and legal aspects of banking security under European integration in tensification in Ukraine [7], Derevyanko B., Nikolenko L., Syrmamiik I., Mykytenko Y., Gasparevich I. deal with issues of assessment of financial and economic security of the region (based on the relevant statistics of the Donetsk region) [8], Ponomarenko T., Prokopenko O., Kuzmenko H., Kaminska T., Luchyk M. conduct research on the topic: «Banking security of Ukraine: current state and ways to improve» [9], Semjonova N. demonstrates foreign experience of security-oriented management in her publication on the topic: «Financial security in the Baltic States: comparison with selected EU countries». At the same time, there is no comprehensive study of modern problems of financial security management in economic security systems at different levels of economic systems in the current domestic literature. Therefore, the study proposed to the scientific community is relevant and such that it is on time.

**Study results.** At the beginning of 2021, the methodology of managing the financial component of economic security at different levels of economic systems had significant shortcomings, most of which are associated with resource provision of this process — information, personnel, financial, as well as the emergence of atypical threats to the national economy, economic entities and financial system and the dependence of economic policy vectors on the interests of international financial organizations and funds, and at the level of individual enterprises — on the interests and desires of the dominant categories of stakeholders.

The classical approach to the structure of the financial security subsystem in the economic security system at any level of management positions it as a set of factors, the state of which determines the financial capacity of the entity or system to counteract economic risks and threats and their negative financial impact on the system. At the national level, it is a set of levels of banking, budget, debt, currency, monetary security and security of the non-banking financial sector. At the same time, there are scientific works that prove the need to draw attention to the problem of public finance, customs security, investment security, etc. in the national economic system. The special role

of financial security in the system of national economy and the structure of economic security of the state is due to the influence of a number of reasons, such as the impact of economic processes and phenomena on finance, which is especially evident in crises and economic contradictions; interdependence of economy and finance, as any economic initiative taken both at the state level and at the level of business structures and non-state actors in economic relations requires funding.

At the level of an individual business entity financial security is the state of investment, credit, sometimes currency, deposit, tax security, security of own, attracted and borrowed financial resources and the state of efficiency of their use.

To meet the methodological needs of financial security management, the financial security system is proposed to be understood as the state of protection of financial interests in various sectors and functional areas of financial activities of the economic system and its main participants from external and internal threats, related to the implementation of financial guidelines for the development of economic, socio-economic, business system.

The components of the financial security system of the national economy are proposed to include as subsystems of the first level — financial market security, monetary security and security of public finances. The subsystems of the second level are distinguished: within the security of the financial market — banking security and security of the non-banking financial sector; within the limits of credit and monetary security — currency security, investment security, monetary security; within the framework of public finance security — budget security and debt security. The third level subsystems are proposed to be considered: security of banking institutions, security of the banking system, security of the insurance market, security of the market of non-banking credit institutions, security of the private pension market, security of leasing market, stock market security, emission security, fiscal security, customs security, tax security, internal debt security, external debt security. At the micro level, the architecture of financial security is simpler: these are two levels, one of which generalizes the security of own, attracted and borrowed financial resources, and the second level financial security is diversified by functional areas of its provision — tax security, credit security, investment security, currency security, settlement security (including digital financial security), etc.

In the *Table 1* the elements of financial security at the micro and macro levels are summarized and systematized.

Table 1

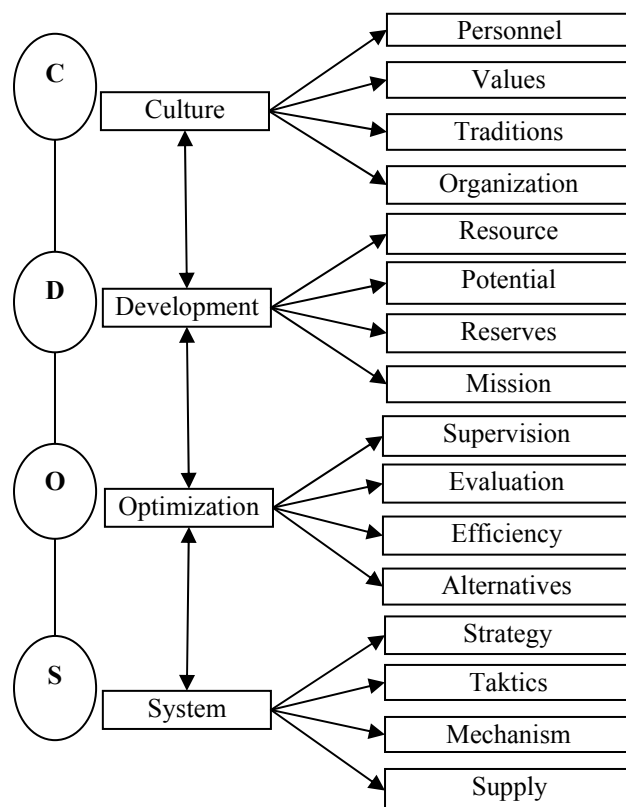
### Elements of financial security

Element	Micro level	Macro level
Financial security system	Security of own, borrowed and attracted financial resources (tax security, credit security, investment security, currency security, settlement security (including digital financial security))	Subsystems of banking, budget, debt, monetary, currency security, security of the non-banking financial sector
Suppliers	Company executives, top management of business entities	Public authorities, national financial market regulators
Information principles	Security strategy, corporate strategy, Economic security policy, orders of managers, instructions	Security strategy, state security program (if available), regulations, orders of financial market regulators
Personnel component	Responsible for financial security management	Civil servants entrusted with security functions
Control mechanism	A set of management decisions, interconnected and aimed at achieving a high level of financial security of the entity, the realization of economic and financial interests of its stakeholders in the presence of economic and financial threats to the functional state of the financial security system	A set of management decisions, interconnected and aimed at achieving a high level of financial security of the state, the implementation of its economic and financial interests, the interests of citizens and economic entities in the presence of economic and financial threats to the functional state of the financial security system
Resources, tools, instruments	Regulation, evaluation, analysis, diagnosis, monitoring, control, supervision	

*Source:* compiled by the authors.

There are numerous semantic problems in the system of formation of modern theoretical and methodological principles of financial security management at the micro and macro levels. The management of financial security of the economic system is positioned from five substantive positions. First, financial security management can be seen as a way to achieve a state of protection against threats, when identifying sources of threats and a set of management decisions to prevent them and minimize the negative consequences. Second, financial security management is defined as a mechanism to ensure the realization of financial interests, within which actions are developed to protect available financial resources in the process of using them to meet the interests of stakeholders. Third, financial security management is a separate area of management, which implements the classic management functions, adapted to the needs of the goal of security-oriented management. Fourth, effective financial security management is a prerequisite for financial freedom, because in the process a set of management decisions is formed that should guarantee the financial freedom of the object of management. Fifth, financial security management at a particular level of the economic system can be considered a separate project, when, depending on the circumstances and the need to respond to threats, the development and implementation of a project to ensure the financial security of the state, enterprise or individual.

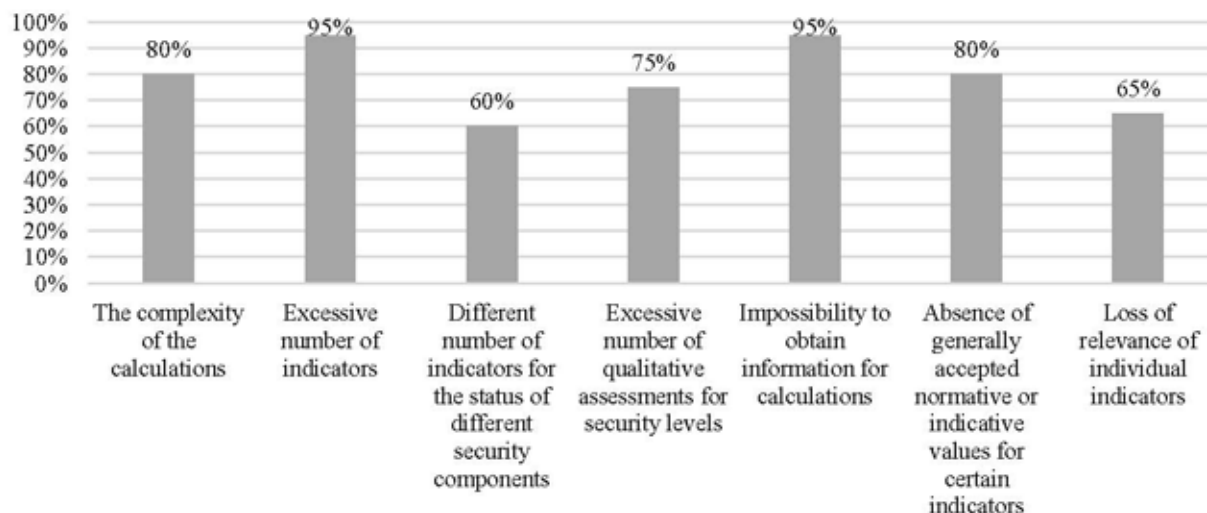
The following approach to financial security management is proposed, which can be applied both at the level of individual business entities of different types of economic activity and at the level of state management of financial security of the national economy (*Fig. 1*).



**Fig. 1. 16-component model of financial security management (CDOS)**  
 Source: compiled by the authors.

At the beginning of 2021, an expert survey was conducted to identify problematic aspects of modern mechanisms for diagnosing the level of financial security at the state level and at the level of individual economic structures of various types of economic activity. The respondents were 50 people who are representatives of public authorities, heads of enterprises in various sectors of the economy, financial managers, financial analysts, employees of higher education institutions and practitioners in the field of organization and control of financial relations.

The results of the questionnaire of experts are summarized in *Fig. 2*.



**Fig. 2. Diagram of the results of the expert survey on problematic aspects of the use of existing methods of assessing the level of financial security of different economic systems**

Source: compiled by the authors.

As the main disadvantages of modern approaches to diagnosing the financial security of various economic systems, experts recognize the inability to obtain the information needed for calculations from publicly available sources, the excessive number of indicators to be calculated and the presence of those that have lost their relevance at the moment time.

Possibilities of modernization of methods and practices of assessing the level of financial security will be demonstrated by the example of the author’s approach to rapid diagnosis of the level of financial security of the state.

Table 2 shows the results of expert assessment of the weights of indicators of the level of functional components of the financial security system of Ukraine, proposed in this study. Prospects for further research are to determine a set of indicators for diagnosing the state of each of these three subsystems and calculating their share in the resulting indicators using the Fishburne formula.

Table 2

**The results of expert assessment of the importance of indicators of financial security of the state**

Experts	Financial security of the macroeconomic economic system		
	Financial market security	Monetary security	Security of public finances
First	0,3333	0,1667	0,5
Second	0,5	0,1667	0,3333
Third	0,5	0,1667	0,3333
Fourth	0,5	0,3333	0,1667
Fifth	0,1667	0,3333	0,5
Average	0,4	0,23334	0,36666

Source: compiled by the authors.

In each group we have the following possible weight options for the proposed indicators:

$$a_i = \frac{2 \cdot (n - i + 1)}{n \cdot (n + 1)}, \tag{1}$$

$$a_1 = \frac{2 \cdot 3}{3 \cdot 4} = \frac{1}{2} = 0,5,$$

$$a_2 = \frac{2 \cdot 3}{3 \cdot 4} = \frac{1}{3} = 0,3333,$$

$$a_3 = \frac{2 \cdot 3}{3 \cdot 4} = \frac{1}{6} = 0,1667.$$

Thus, the formula for calculating the level of financial security of the state based on the author’s approach to the segmentation of its system for diagnostic purposes into three functional components — financial market security, monetary security and security of public finances — has the form:

$$I_{\text{Ifsof the state}} = 0,4 I_{\text{fms}} + 0,23 I_{\text{ms}} + 0,37 I_{\text{spf}}. \tag{2}$$

Within each group, additional indicators will be identified to assess the state of financial market security, monetary security and security of public finances.

To assess the level of financial security of the entity we have the following data (Table 3).

Table 3

**The results of the expert assessment of the weight of financial security indicators of the entity**

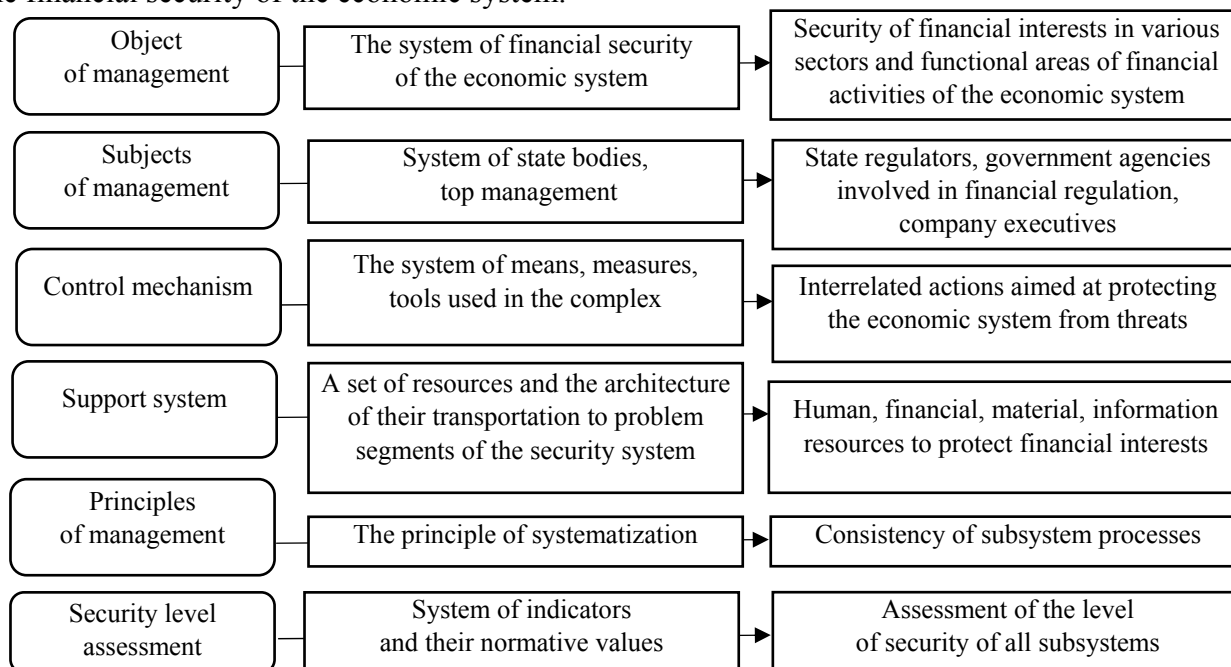
Experts	Financial security of the business entity		
	Security of own financial resources	Security of attracted finances	Security of borrowed funds
First	0,3333	0,5	0,1667
Second	0,5	0,3333	0,1667
Third	0,5	0,1667	0,3333
Fourth	0,3333	0,5	0,1667
Fifth	0,5	0,1667	0,3333
Average	0,43332	0,33334	0,23334

Source: compiled by the authors.

Thus, the formula for calculating the level of financial security of the entity based on the author’s approach to segmentation of its system for diagnostic purposes into three functional components — security of own financial resources, security of attracted finances and security of borrowed funds — has the form:

$$I_{\text{Ifs of business entity}} = 0,43 I_{\text{sofr}} + 0,33 I_{\text{saf}} + 0,23 I_{\text{sbf}}. \tag{3}$$

In Fig. 3 we systematized the conceptual foundations of a systematic approach to managing the financial security of the economic system.



**Fig. 3. Conceptual bases of the system approach to management of financial security of economic system**

Source: compiled by the authors.

Ukraine continues to reform approaches to state regulation of the financial sector. Approaches to assessing the state of financial security are constantly changing. New challenges and threats to the normal operation of business entities are emerging. Under such conditions, the process of financial security management should be continuous, rational and effective, which can be ensured only by eliminating the shortcomings of its organization at the theoretical and applied levels.

**Conclusions.** The study of methodological problems of financial security management in economic security systems at different levels of management systems allowed us to make such important conclusions.

1. The biggest methodological problems of financial security management of economic systems of different levels at the moment are the lack of conceptual foundations of financial security management, the complexity and low level of information transparency of methods for assessing the financial security of economic systems, including the inability to obtain information needed for calculations, from publicly available sources, an excessive number of indicators, the values of which need to be calculated and the presence among them of those that have lost their relevance at the current time. Also at the application level there is a lack of effective models for the formation of an effective mechanism for managing financial security at both micro and macro levels.

2. According to the results of the study, the elements of financial security at the micro and macro levels are summarized and systematized by such parameters as financial security system, security entities, information principles, personnel component, management mechanism, resources, tools, instruments; a 16-component model of financial security management (CDOS) is proposed, which provides for the possibility of building a management system on four fundamental parameters: organizational culture, progressive and sustainable development, continuous optimization of the management process and ensuring its systemic nature. The proposed formulas for calculating the level of financial security of the state and the level of financial security of the entity based on the author's approach to segmenting their system for diagnostic purposes allow to obtain a rapid assessment of the financial security of the economic system, of course. The conceptual principles of a systematic approach to the management of financial security of the economic system are also presented, taking into account the object of management, management entities, management mechanism, management process management system, management principles and security assessment.

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