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Modern paradigm of agrarian units' financial security assessment

Abstract. It is established that the basic elements related to the development of methodological approaches to defining the financial threat to agrarian units are the degree of transactors' protection from the impact of negative factors, the ability to timely remove threats, minimization of destabilizing effects on the financial state of the agrarian units, the guarantee of effective use of financial resources for further sustainable financial performance. It is proved that to assess the level of financial security of agrarian units, one

should use traditional indicators for assessing the financial state, including liquidity, the level of financial stability, business activity and profitability. The methodological approach is based on the minimized cumulative damage criterion. Evaluation tools of financial security of enterprises are offered in a flowchart that shows optimum use of material and information resources and an adequate level of financial security of agrarian units under existing economic relations, organizational communications, internal and external influences. The application of the offered methodological tools enables to timely identify and effectively respond to deficiencies in financial activities, to create conditions necessary for the financial stability of the agrarian unit, to identify the factors that affect the stability of the financial system in a globalized economy, to achieve diversification, including the domestic capital market, through restructuring of the agrarian unit and exchange of specific management resources between strategic management zones. The author presents agrarian unit as an object of modeling with its quantitative and qualitative characteristics which make it possible to control costs per unit of output, to use the latest technologies to minimize utilization of financial resources. Such an approach makes it possible to achieve sustainability of financial security, to provide a new understanding of market behavior as of a strategic element which determines possibilities of competitive agrarian units, new organizational structures and provides technological capabilities due to the conservation and efficient use of available production potential of agrarian units.

Keywords: Agrarian Unit; Financial Security; Approach; Rate; Coefficient; Standard; Economic and Organizational Model

JEL Classification: Q13; B41; C13

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Сучасна парадигма оцінки фінансової безпеки аграрних формувань

Анотація. Встановлено, що найефективнішими при розробці методологічних підходів до визначення загрози фінансової безпеки аграрних формувань як економічної категорії є такі основні елементи: ступінь захищеності суб'єктів господарювання від дії негативних факторів, здатність своєчасно усунути загрози, мінімізація дестабілізуючого впливу на фінансовий стан аграрних формувань, забезпечення ефективного використання фінансових ресурсів для подальшого стабільного фінансового функціонування. Обґрунтовано, що для оцінки рівня фінансової безпеки аграрних формувань доцільно використовувати традиційні показники оцінки фінансового стану, зокрема ліквідності, фінансової стійкості, ділової активності та рентабельності. Розроблений методологічний підхід ґрунтується на основі використання критерію «мінімум сукупного збитку, який завдається безпеці». Запропоновано інструментарій оцінки фінансової безпеки підприємств, що в умовах наявних організаційних зв'язків, внутрішніх і зовнішніх факторів впливу забезпечує оптимальне використання матеріальних та інформаційних ресурсів та достатній рівень фінансової безпеки аграрних формувань. Застосування запропонованого методичного інструментарію дає змогу вчасно виявляти й усунути недоліки у фінансовій діяльності; створює умови для забезпечення стійкості фінансового стану агроформування; дає можливість виявляти фактори, що впливають на стійкість фінансової системи; здійснювати диверсифікацію, зокрема через внутрішній ринок капіталів, реструктуризацію аграрного формування, передачу специфічних ресурсів управління в межах стратегічних зон господарювання.

Ключові слова: аграрне формування; фінансова безпека; стійкість; методичний підхід; фактор; показник; коефіцієнт; інструментарій.

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Современная парадигма оценки финансовой безопасности аграрных формирований

Аннотация. Установлено, что наиболее эффективными при разработке методологических подходов к определению угрозы финансовой безопасности аграрных формирований как экономической категории являются такие основные элементы: степень защищенности субъектов хозяйствования от воздействия негативных факторов, способность своевременно устранять угрозы, минимизация дестабилизирующего влияния на финансовое состояние аграрных формирований, обеспечение эффективного использования финансовых ресурсов для дальнейшего стабильного финансового функционирования. Обосновано, что для оценки уровня финансовой безопасности аграрных формирований целесообразно использовать традиционные показатели оценки финансового состояния, в частности ликвидность, финансовую устойчивость, деловую активность и рентабельность. Разработанный методологический подход основывается на использовании критерия «минимум совокупного ущерба, который наносится безопасности». Предложен инструментальный оценки финансовой безопасности предприятий, который в условиях имеющихся организационных связей, внутренних и внешних факторов воздействия обеспечивает оптимальное использование материальных и информационных ресурсов, а также достаточный уровень финансовой безопасности аграрных формирований. Применение предложенного методического инструментария позволяет своевременно выявлять и устранять недостатки в финансовой деятельности, создает необходимые условия для обеспечения устойчивости финансового состояния аграрного формирования, позволяет выявлять факторы, влияющие на устойчивость финансовой системы, осуществлять диверсификацию, в том числе через внутренний рынок капиталов, реструктуризацию агроформирования, передачи специфических ресурсов управления в пределах стратегических зон хозяйствования.

Ключевые слова: аграрное формирование; финансовая безопасность; устойчивость; методические подходы; фактор; показатель; коэффициент; инструментальный.

1. Introduction. Financial security, together with the most significant and urgent problems of the theory and practice of management, has become one of the most important entities under modern conditions of economic development. This problem becomes acute especially in periods of economic crisis.

In modern conditions of national and global economies development, we observe an increase in the risk and uncertainty of various economic activities, including agriculture. In this regard, improvement of the agrarian units' financial security, which is one of the most important areas of the country's food supply security, appears to be one of the key problems of the present developmental stage.

Agrarian units are the fundamental parts of the domestic economy. They are aimed at the production of food, raw materials for the industry, creating conditions for the growth of the export potential of Ukraine. In order to ensure a stable financial and economic activity, to increase production efficiency and to maintain existing competitive advantage, agrarian units should observe a proper level of financial security.

However, at the present stage of agrarian production, taking into consideration sustainable growth of interdependence and openness of the economy, competition between agrarian units, the role of information in local farmers' business, it is necessary to study factors and threats to the financial condition, to be aware of complexity of management processes and to create a reliable system of protection against destructive impacts of risks related to financial and economic activity. It is also important to take flexible financial management actions and to make decisions which will help to get real financial results.

Under such conditions, the existence and further development of the agrarian unit is impossible without maintaining a suitable level of financial security. Therefore, a thorough study of methodological aspects of attempts to define financial security threats to agrarian units are in urgent need today.

2. Brief Literature Review. The problems of financial security under unstable financial condition of agrarian units, the lack of the required level of profitability, negative effects of the financial crisis, a reduced demand for products found their reflection in the works of prominent scientists, such as C. Borio (2005) [7], Garry J. Schinasi (2004) [10], A. Houben (2004) [3], O. Baranovskiy, K. Horiacheva [5], A. Hryvkiivska, N. Hryniuk [6], O. Kyrychenko, G. Portnova [1] and others.

At the same time, the economy of the country has not yet reached the state of stability in which enhancing the financial security is not considered to be one of the main prerequisites for sustainable development of economy of agrarian units that require further study of financial security as a means of permanent protection from possible financial costs and the most efficient use of all resources.

The implementation of these requirements as to financial security of agrarian units requires justification of thorough systemic interaction of the independence state, efficiency and competitiveness of businesses, which are reflected through the performance of financial balance, liquidity of assets and so on.

The systematic approach to complex research of such problems in the area of financial security gives the informational and methodological basis which helps to solve a number of methodological problems.

3. Purpose. To justify methodological approaches to threats of financial security of agrarian units, which allow to timely identify and effectively respond to deficiencies in fi-

ancial activities and find the reserves to improve the financial situation of agrarian units.

4. Results. Financial security of agrarian units provides protection of entities from negative factors, as well as the ability to timely remove threats, minimize the destabilizing effect on the financial position of the entities and ensure an effective use of financial resources regarding their future sustainable financial, economic and social functioning.

The agrarian unit is a very dynamic system, which is why its financial security is not static, and requires constant monitoring and effective management. Economic objectives of any agrarian unit are influenced by the factors of survival in a competitive environment, the provision of income and conditions for economic growth. In the context of financial issues, these three objectives determine the level of financial security of agrarian units, their financial problems, quality criteria and financial management organization (Figure 1).

In the scientific literature, there are many parameters and coefficients for determining the level of financial security of agrarian units. The determination of the level of agrarian units' financial security correlates with its assessment.

That is, the assessment of financial security involves, above all, the determination of financial position of entities. A financial situation is the result of the internal and external factors impact on functioning and development of agrarian units. It reflects a complex system of various financial relationships interacting. Changing one of them leads to other changes and finally to the transformation of the financial condition in general.

The financial condition of the agrarian unit is evaluated on the basis of indicators that reflect its financial and economic activities, existence, location, use and resource relocation [1].

Quantitative methods of agrarian units' financial security evaluation are based on the analysis of business entities. Moreover, these techniques can also be divided into methods of the financial condition evaluating and the market value and capitalization evaluation methods.

Based on the diagnosis of the financial condition of the agrarian unit, a reasonable control can be made aimed at its improvement. However, as the economic practice clearly shows, one cannot be limited to the final statement of financial performance.

In economic theory and practice, there are several different methodological recommendations with a wide range of indicators that allow evaluating the financial condition of the agrarian unit. However, these techniques differ only by the number of indicators used for the analysis and methods of their classification.

Both domestic and foreign experts determine the common system of financial coefficients, the value of which is confirmed

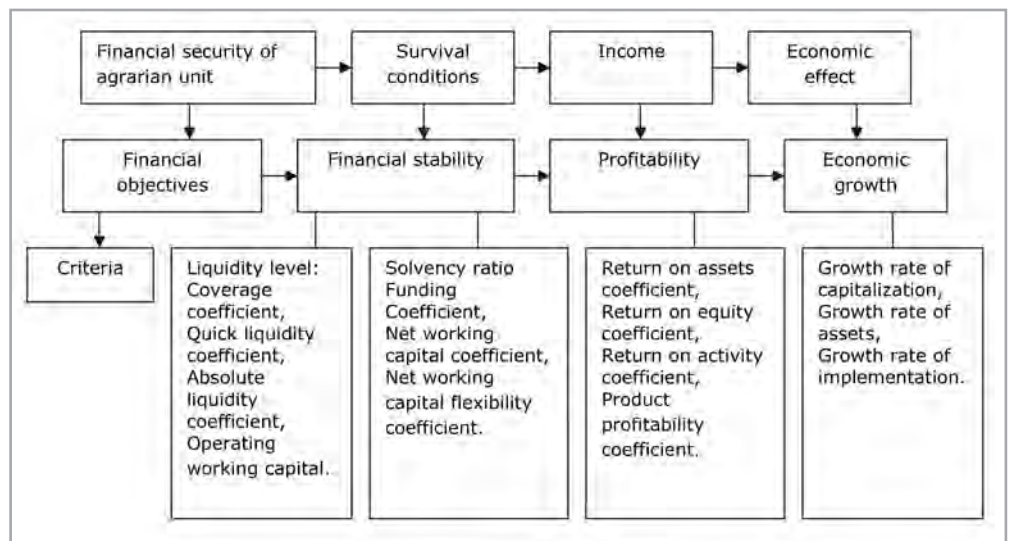


Fig. 1: Financial goals of agrarian unit
Source: Developed by the Author

by the international practice of their widespread usage in analytical work and decision-making as well as accessibility for different users [2].

The particular choice of local indicators and coefficients can vary depending on the specific industry, the nature of the agrarian unit, target analysis guidelines and other factors [3].

We believe that the guidelines for the audit reporting preparation when checking stock companies and enterprises – bond issuers most complexly reveal all aspects of financial and economic activity comparing with many other methods for agrarian units' financial condition determination.

According to this methodology, we offer to evaluate the financial condition of an agrarian unit in order to determine the level of its financial security through the following group of indicators:

- the property of an agrarian unit and dynamics of its change;
- the financial performance of an agrarian unit;
- liquidity;
- business activity;
- financial stability;
- profitability.

In addition to the abovementioned methods, there are other approaches to assess the level of financial security of an agrarian unit, particularly a resource and functional approach, which will include evaluation of the financial security rounding on the assessment of the level of financial resources on the basis of the ratio of the owned and borrowed funds [4]. However, we believe that this approach is too narrow and characterizes only one financial ratio, such as autonomy or ability to pay.

Another approach is based on the assessment of the functions, such as providing high cost-effectiveness of an agrarian unit by defining its financial stability and independence [5]. However, this approach, in our opinion, is too broad, since the concept of financial security is reduced to the concept of the general agricultural development and evaluation of the resources usage by an agrarian unit.

Another approach is based on the criterion of «minimum cumulative damage that threatens security» [6]. This criterion is too difficult to calculate due to the lack of the necessary accounting mechanisms and statistical data, so one needs to do additional calculations. Under these conditions, the coefficient can be calculated only by an expert.

In this research analysis, we have developed an economic and organizational model to show the financial security of an agrarian unit in block schemes. This approach helps to use existing material and information resources to control financial stability in terms of agrarian unit's financial activity (Figure 2).

Developed economic-organizational model application creates necessary conditions for the stability of an agrarian unit's financial state and provides an opportunity to identify factors that affect the stability of the economic system, to achieve diversification, including domestic capital market, through the agrarian unit restructuring and specific management resources exchange between strategic management zones.

The main purpose of the developed model application is to timely identify and effectively respond to deficiencies in financial activities and find the reserves to improve the financial condition and solvency taking into account the findings of other researches [7; 8].

A review of agrarian unit as of the object of mathematical modeling makes it possible to take advantage of the production planning due to its economic and technological programming on the basis of mathematical models of management [9], which allows developing optimal application of resources and production based on market estimates and market conditions (Figure 3).

The feature of the functioning of agrarian units as of the object of modeling is that their main elements are arranged in the way which allows to implement managerial decisions to achieve the ultimate goal during the operation. This approach makes it possible to control the cost per unit of output, to use the latest technologies; to minimize use of financial resources; to consider factors and conditions of the prospective development of the agrarian unit economy, which aims to minimize the risk.

The formal expression of goals is an objective function (an optimality criterion). Its application allows to create an information and control framework for quantitative targets of the system that determines a way by which the goal can be achieved. The structure (an agrarian unit) designed in such a

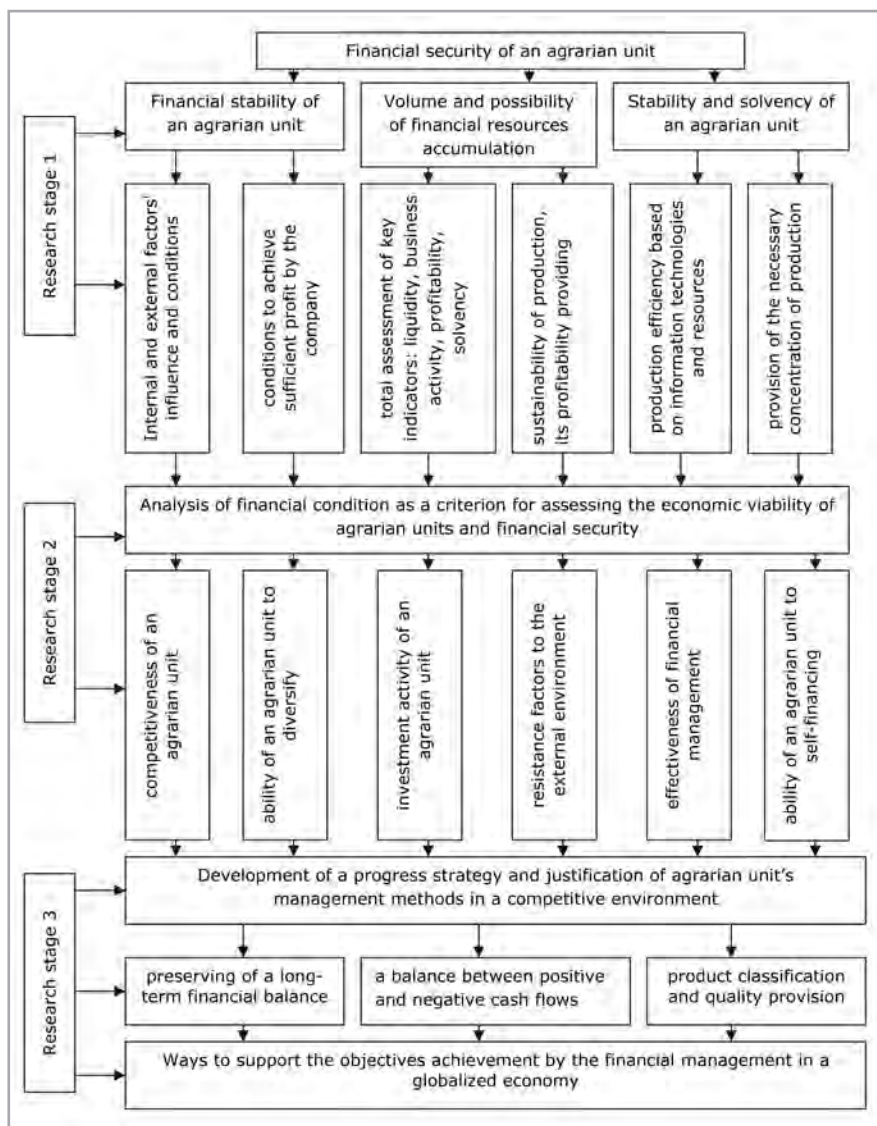


Fig. 2: Economic and organizational model to ensure the financial security of agrarian units
Source: Developed by the Author

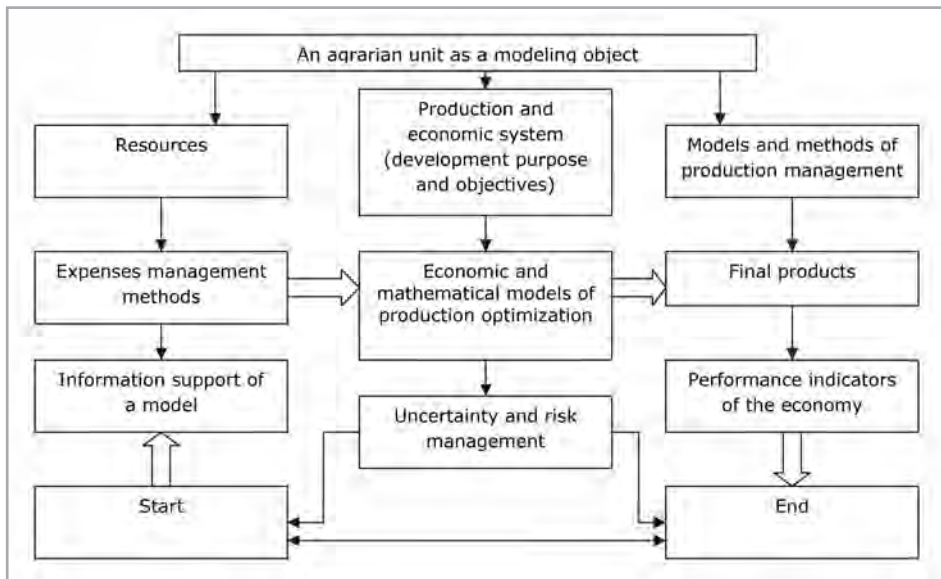


Fig. 3: Agrarian unit as an object of mathematical modeling
Source: Developed by the Author

- of Donetsk National Technical University), 1, 12-17 (in Russ.).
5. Horiacheva, K. S. (2003). Enterprise financial security. Meaning and role in the system of economic security. *Economist (Economist)*, 8, 65-67 (in Ukr.).
6. Hryniuk, N. A. (2008). Methodical approaches to the grounding of evaluation indicators of the enterprise financial security level. *Problemy Nauky (Problems of Science)*, 6, 35-40 (in Ukr.).
7. Borio, C., & Tsatsaronis, K. (2005). Accounting, prudential regulation and financial stability: elements of a synthesis. *BIS Working Papers*, 180, 1-38.
8. Borio C., Furfine C., & Lowe, P. (2000). Procyclicality of the financial system and financial stability. *Marrying the Micro- and Macro-Prudential Dimensions of Financial Stability*, 21, 1-58.
9. Bakayev, L. A. (2005). *Mathematical methods and models of economic systems research*. Kyiv: Logos (in Russ.).
10. Schinasi, G. (2004). Defining Financial Stability. *IMF Working Paper Series*. WP/04/187, 1-16.

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way may be a reference to the basic elements in the process of management.

5. Conclusions. An assessment of financial security involves, above all, the determination of financial position of the entity. A financial situation is the result of the impact of internal and external factors on corporate governance and development of an agrarian unit. It reflects a complex system of interacting of various financial relationships. A change in one of them leads to changes in the others, which finally transforms the financial condition in general. Evaluation of financial security, including analysis of financial condition and capitalization of agrarian units as a process of growth of its market value, allows the determination of the tangible and intangible assets, current and expected income etc.

The concept of formation and functioning of the financial security of agrarian units based on economic and organizational models presented allows developing scenarios of agrarian units' performance.

References

1. Portnova, G. O., & Antonenko V. M. (2012). Financial security of enterprises: modern opinions as to the meaning and estimation. (*Collection of scientific works of National University of the State Tax Service of Ukraine*), 1, 345-355 (in Ukr.).
2. Liubyshyn, N. P., Leshcheva, V. B., & Diakova, V. G. (1999). *Analysis of financial and economic activity of an enterprise*. Moscow: YUNITI-DANA (in Russ.).
3. Houben, A., Kakes, J., & Schinasi, G. (2004). Toward a framework for safeguarding financial stability. *IMF Working Paper Series*. WP/04/101, 1-48.
4. Aleksandrov, I. A. (2001). Evaluation of financial security of an industrial enterprise. *Sbornik nauchnykh trudov DonTU (Collection of Scientific Works*

References (in language original)

1. Портнова Г. О., Антоненко В. М. Финансовая безопасность предприятий: современные взгляды относительно сущности и оценки / Г. О. Портнова, В. М. Антоненко // Сборник научных работ Национального университета государственной налоговой службы Украины. – 2012. – № 1. – С. 345 – 355.
2. Любушин Н. П. и др. Анализ финансово-экономической деятельности предприятия / Любушин Н. П., Лещева В. Б., Дьякова В. Г. – М.: Юнити-Дана, 1999. – 471 с.
3. Houben Aerd. Toward a framework for safeguarding financial stability / Aerd Houben, Jan Kakes, Garry Schinasi // IMF Working Paper Series. – 2004. – WP/04/101. – P. 1–48.
4. Александров И. А. Оценка финансовой безопасности промышленного предприятия / И. А. Александров, О. А. Орлова, А. В. Половян // Сборник науч. трудов ДонНТУ. – 2001. – С.12 – 17.
5. Горячева К. С. Финансовая безопасность предприятия. Сущность та місце в системі економічної безпеки / К. С. Горячева // Економіст. – 2003. – № 8. – с. 65–67.
6. Гринюк Н. А. Методичні підходи до обґрунтування індикаторів оцінки рівня фінансової безпеки підприємництва / Н. А. Гринюк // Проблеми науки. – 2008. – № 6. – С. 35–40.
7. Borio Claudio. Accounting, prudential regulation and financial stability: elements of a synthesis / Claudio Borio, Kostas Tsatsaronis // BIS Working papers. – 2005. – № 180. – P. 1–38.
8. Borio Claudio. Procyclicality of the financial system and financial stability / Borio Claudio, Craig Furfine, Philip Lowe // Marrying the micro- and macro-prudential dimensions of financial stability. – 2000. – September 21. – P. 1–58.
9. Бакаев Л. А. Математические методы и модели исследования экономических систем : монография / Л. А. Бакаев. – К. : Логос, 2005. – 252 с.
10. Schinasi Garry J. Defining Financial Stability / Garry Schinasi // IMF Working Paper Series. – 2004. – WP/04/187. – P. 1–16.

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