Integral Assessment of the Financial Security Level of Agrarian Corporations of Ukraine

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ABSTRACT

Issue of providing and assessing the financial security of Ukrainian agricultural corporations is becoming more relevant in the current economic environment. Improving the financial security of the country as a whole and its components is necessary. Improvement of the methodology for assessing the financial security of Ukrainian enterprises in the conditions of difficult economic situation in the country is also required.

The development of methodological approaches to improving the assessment of financial security of Ukrainian agricultural corporations is the purpose of this article.

In the process of research used scientific methods:

modeling was used to determine the impact of economic and financial potential of agricultural enterprises on the level of their financial security; the economic and statistical method were used to evaluate the dynamics of financial security; analysis and synthesis were used to find out the reasons behind the change in the level of financial security; tabular and graphical methods were used to represent the results of the study; abstract-logical method was used in the implementation of theoretical and methodological generalizations.

The results of the study are an analysis of the level of financial security of agricultural corporations of Ukraine using an integral indicator. It takes into account the impact of economic and financial factors. Proposals for the formation of the system of financial security of agricultural enterprises were formulated according to the results of the study.

Keywords: Financial security; Agrarian corporations; Integral index; Financial indicators.

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Evaluación Integral del Nivel de Seguridad Financiera de las Empresas Agrarias de Ucrania

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RESUMEN

La cuestión de la provisión y evaluación de la seguridad financiera de las empresas agrícolas ucranianas es cada vez más relevante en el entorno económico actual. Es necesario mejorar la seguridad financiera del país en su conjunto y de sus componentes. También es necesario mejorar la metodología para evaluar la seguridad financiera de las empresas ucranianas en las condiciones de la difícil situación económica del país.

El desarrollo de enfoques metodológicos para mejorar la evaluación de la seguridad financiera de las empresas agrícolas ucranianas es el objetivo de este artículo.

En el proceso de investigación se utilizaron métodos científicos:

La modelización se utilizó para determinar el impacto del potencial económico y financiero de las empresas agrícolas en el nivel de su seguridad financiera; el método económico y estadístico se utilizó para evaluar la dinámica de la seguridad financiera; el análisis y la síntesis se utilizaron para averiguar las razones detrás del cambio en el nivel de seguridad financiera; los métodos tabulares y gráficos se utilizaron para representar los resultados del estudio; el método abstracto-lógico se utilizó en la aplicación de las generalizaciones teóricas y metodológicas.

Los resultados del estudio son un análisis del nivel de seguridad financiera de las empresas agrícolas de Ucrania mediante un indicador integral. Tiene en cuenta el impacto de los factores económicos y financieros. Las propuestas para la formación del sistema de seguridad financiera de las empresas agrícolas se formularon de acuerdo con los resultados del estudio.

Palabras claves: Seguridad financiera; Corporaciones agrarias; Índice integral; Indicadores financieros.

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1. Introduction

The current economic conditions are characterized by significant fluctuations of factors of internal and external environment of enterprises. Also, the level of threats to the financial interests of the enterprise by individual entities is increasing. The level of financial risks has increased. Consequently, urgent problem today is to ensure the financial security company (Blank, 2004; Kartuzov. 2012; Kirichenko and Kudrya, 2009).

Stability is the most significant features of functioning of the economic interests system. It is ensured by stable financial condition, profits increase and future development of the activity. Timely diagnosis of external and internal dangers with the aim to level negative influence is provided by the use of financial security assessment.

The development of methodological approaches to improving the assessment of financial security of Ukrainian agricultural corporations is the purpose of this article.

The methodological and practical aspects of assessing the level of financial security of agricultural corporations using an integrated indicator that takes into account the impact of economic and financial factors have been further developed.

2. Literature review

In the economic literature, there is no single approach to defining the essence of the concept of "financial security" and the main components that have a direct impact on it are not identified.

Thus, Blank I.O. under the financial security of an enterprise understands "... quantitatively and qualitatively determined level of its financial condition, which provides stable protection of its priority balanced financial interests against identified real and potential threats of external and internal character, the parameters of which are determined on the basis of its financial philosophy and create the necessary prerequisites for financial support for its steady growth in the current and future period» (Blank, 2004).

At the same time Orlyk O.M. interprets this category as "financial sustainability and / or protection against threats; the main objective of financial security is to guarantee the financial stability and maximum efficiency of the enterprise in the current period and high potential for future development; the main condition is the ability to withstand the existing and emerging dangers and threats that can cause financial damage to the enterprise » (Orlyk, 2015).

Yermoshenko M.M. and Goryacheva K.S. define financial security of an enterprise as a financial condition characterized by (Yermoshenko and Goryacheva, 2010): first, the balance and quality of the set of financial instruments, technologies and services used by the enterprise; resources, fourth, the ability to ensure the effective and sustainable development of this financial system.

In turn, Shelest V.V. also states that "the financial security of the enterprise is a financial condition characterized by a balance, resistance to internal and external influences, allows to ensure the effective activity of the enterprise due to the optimum involvement of the property transferred by the installers to management in the long term. period» (Shelest, 2009).

The issue of a comprehensive assessment of the financial security of agricultural corporations remains unresolved. Although there is a considerable amount of research in this area (shah and shaikh 2011).

3. Data and methodology

The theoretical and methodological basis of this study is a set of general scientific and special methods of research, in particular: the dialectical method made it possible to consider the financial security of enterprises in the dynamics of its development and in relation to other factors; economic and statistical method - allowed to normalize individual financial security indicators; the method of economic and mathematical modeling was used to calculate the integral index of financial security of

agricultural corporations; theoretical and methodological generalizations were made using the abstract-logical method.

4. Results

Financial security is a state of the enterprise that allows you to ensure profitability, financial stability, solvency and liquidity in the long term. It satisfies the needs of the enterprise in financial resources for sustainable extended reproduction of the enterprise and provides sufficient financial independence of the enterprise. Also, financial security can counter existing and emerging threats and threats that could cause financial loss to the enterprise, or undesirable to change the capital structure or forcibly liquidate the enterprise. It provides sufficient flexibility in making financial decisions and safeguarding the financial interests of corporate business owners (Davidenko, 2003; Babenko et al., 2018; Azarenkova et al., 2014).

The studies have allowed us to take some steps towards the development of a system of indicators for assessing financial security, but further clarification is needed. In principle, such a system should include different groups of quantitative indicators characterizing one or another direction in ensuring the financial security of the enterprise. The financial condition of the enterprise is estimated on the basis of indicators reflecting the financial and economic activity of the enterprise, availability, location, use and movement of resources of the enterprise. The financial security of the enterprise is a productive result of equal components: indicators of financial condition, financial stability and the level of its capitalization.

Methodological recommendations for the preparation of the audit report for the audit of joint stock companies and bond issuers (other than commercial banks) were used to assess the financial condition of enterprises. Minutes of the meeting of the Audit Chamber of Ukraine, №99 dated 23.02.2001 (Methodological recommendations, 2001).

Financial indicators and ratios of the enterprise act as an important tool for analyzing the movement of financial resources (Davidenko, 2008; Solomina, 2018; Mulyk, 2013). The financial ratios and ratios used are used internally to analyze the current and strategic goals of financial management. They are also used by external analysts to independently and objectively evaluate the position of a corporate enterprise in the market, its competitiveness, etc. Financial ratios are instruments of financial management techniques. They can be seen as an important part of financial management itself in terms of realizing the possibility of using mathematical methods and models (Davidenko, 2008; Vdovenko and Chernenko, 2017). In addition, financial ratios act as effective indicators of the state of the enterprise. With their help potential and current shareholders, investors, tax authorities and competitors (almost everyone who encounters the work of the company) can make conclusions about its competitiveness and predict the possible prospect of functioning and development.

The aforementioned methodology for assessing the financial condition of an enterprise involves research in six areas: assessment of property status, liquidity assessment, assessment of financial stability, assessment of business activity (turnover), profitability assessment, assessment of the position of enterprises in the securities market.

We believe that among the listed groups of indicators, it is advisable to analyze the indicators of liquidity, financial stability and business activity to determine the level of financial security. These factors can give a complete picture of the overall level of the financial condition of a business entity. The role of each of them should be clearly identified.

Financial liquidity means the willingness and ability of an entity to meet its obligations in full and within the terms of the loan agreement. However, while short-term debt is differentiated only by the subject of the retention, liquid assets differ in their ability to convert quickly to maturity. Absolutely liquid assets are cash in national and foreign currencies, their equivalents and current financial investments. Their presence has a positive effect on the level of solvency of the enterprise and forms the value of the absolute liquidity ratio. It should be noted that excessive holding of absolutely liquid

assets can adversely affect the level of material and technical support of the enterprise's economic processes.

The effectiveness of agricultural business entities depends largely on the nature of the use of available financial resources. This forms an important aspect of financial security for entities - financial sustainability. The financial sustainability of an enterprise implies that resources invested in entrepreneurship must be recouped from the cash flow from management. Profit obtained to ensure self-financing and independence of the enterprise from external attracted sources of asset formation (Lakhtionova, 2001; Nepochatenko, 2013; Pristemsky, 2014; Epifanova, 2009).

Financial soundness indicators reflect the ratio of varieties of financial resources of an enterprise to each other and to their total value, degree of mobility of use, etc. We propose to use solvency ratios, autonomy, financing, equity maneuverability and own working capital ratio to assess the financial security of agrarian entities

How can you make the least effort to move to product, labor or capital markets with the most effective results?. This question confronts leaders in a tight and not always fair market competition. The answer to this question cannot be found without the involvement of existing production and commercial opportunities in the context of their analysis. The above mentioned components of the problem appear in the definition of "business activity".

There are broad and narrow approaches to defining the concept of "business activity". In a broad sense, this term means the marketing and commercial promotion of the enterprise, provided that the maximum possible resource potential is attracted with the direction of the entire spectrum of efforts. In the narrow sense, the business activity of an enterprise means the quality of management decisions made, characterized by highly skilled management, the completeness of the return on their efforts and the effective use of available production and commercial opportunities.

With the help of the integrated assessment of financial security, it is possible to present in a generalized way the activity of the enterprise on the market and to determine the rating of its functioning efficiency (Vovk 2020; Shorikov and Babenko, 2014; Nartova and Kirichenko, 2012).

This allows market actors to determine the most effective ways of investing capital and thus to promote the return on resources used in the conditions of their limited.

Comprehensive assessment of the financial condition of an enterprise can be performed using the following methods: creation of rank using a number of indicators, cluster analysis, matrix method, scoring method, comparative rating method, method of rating financial analysis, etc.

The method of rating of financial security of enterprises was used for our research. It provides the following sequence of actions:

- defining a system of indicators for assessing the financial security of the studied enterprises;
- calculation of certain indicators for the studied period of time for each enterprise;
- normalization of indicators;
- calculation of the integral estimation of financial condition of each enterprise.

Unambiguous interpretation, evaluation and comparison of indicators characterizing complex systems, it is necessary to conduct a comprehensive analysis to determine the state of financial security. The indicators should be normalized because a significant number of different quality and varied indicators of the financial condition of the enterprise were used.

It is necessary to make the transition from absolute values to normalized ones, which characterize the degree of approximation to the optimal value. It is also necessary to ensure the information unidirectionality of the normalized indicators by separating the indicators of stimulants (the higher the value of the input, the higher the quality of the integral) and the stimulators (the higher the value of the input, the lower the quality of the integral). It should be noted that the optimal value is approaching zero in the analysis of normalized indicators.

The main task of normalization is to bring the indicators to one basis (dimensionless values), provided that the ratio between them is maintained. Normalization of indicators is performed by the formula:

Stimulating indicator

$$n_{ij} = \sum_{i=1}^n \frac{X_{\max i} - X_{ij}}{X_{\max i} - X_{\min i}}$$

Not a stimulating indicator

$$n_{ij} = \sum_{i=1}^n \frac{X_{ij} - X_{\min i}}{X_{\max i} - X_{\min i}}$$

where n_{ij} is the normalized value of the i -th indicator of the j -th enterprise;;

x_{ij} – the value of the i -th indicator of the j -th enterprise;

$x_{\max i}$ – the maximum value of the i -th indicator;;

$x_{\min i}$ – is the minimum value of the i -th indicator.

The following indicators were used for this study:

k1 - coverage coefficients;

k2- quick liquidity ratio;

k3 - absolute liquidity ratio;

k4 - solvency ratio (autonomy);

k5 - coefficient of financing;

k6 - the ratio of equity to equity;

k7 - coefficient of maneuverability of own capital;

k8- asset turnover ratio;

k9 - payables turnover ratio;

k10 - receivables turnover ratio;

k11 - turnover ratio of inventories and costs;

k12 - turnover ratio of fixed assets;

k13 - the ratio of return on equity.

Table 1. Results of financial security ratios of agricultural corporations during 2008-2018

	k1	k2	k3	k4	k5	k6	k7	k8	k9	k10	k11	k1	k13
Kernel - Trade	0,65	0,56	0,77	0,54	0,55	0,28	0,40	0,41	0,31	0,76	0,70	0,32	0,50
Agrotone	0,19	0,24	0,30	0,16	0,45	0,19	0,29	0,35	0,70	0,77	0,92	0,47	0,74
Rise-Agro	0,94	0,80	1,00	0,91	0,67	0,72	0,61	0,54	0,90	0,96	0,50	0,73	0,34
Myronivsky bread product	0,69	0,65	0,59	0,46	0,79	0,61	0,44	0,42	0,43	0,59	0,46	0,79	0,54
Astarta - Kiev	0,73	0,94	0,93	0,31	0,72	0,30	0,42	0,94	0,68	0,76	0,62	0,82	0,84
Industrial dairy company	0,75	0,81	0,92	0,40	0,81	0,40	0,46	0,48	0,46	0,27	0,79	0,64	0,50
Vanguard	0,77	0,60	0,81	0,50	0,61	0,69	0,66	0,83	0,61	0,78	0,68	0,83	0,70
Ukrproduct	0,72	0,89	0,86	0,35	0,72	0,45	0,62	0,78	0,82	0,62	0,72	0,97	0,80

The analysis of the normalized indicators shows that Agroton company in the group of indicators of liquidity and financial stability has the most optimal values as they approach 0. However, it should be noted that the indicators of the business activity, in particular, the turnover ratio of the receivables and the receivables and costs are reversed. The Industrial Dairy Company and Kernel Trade, although there are indicators that are quite high, but a significant number of indicators of financial stability are below average.

Figure. 1 Integral assessment of financial security of Ukrainian agricultural corporations

On the basis of calculated normalized indicators of enterprises, we determine the arithmetic mean of the sum by all indicators characterizing the financial security of enterprises by the formula:

$$I_j = \frac{\sum_{i=1}^n n_{ij}}{n},$$

where I_j – is the integral assessment of a particular j -th enterprise on all indicators of financial security of enterprises;

n - is the number of indicators used to calculate.

The Integral Assessment of Financial Security of Agrarian Corporations of Ukraine shows that in 2008 it was the highest in Kernel Trade, but during the analyzed period the situation changed significantly and in 2018 the company Agroton, by the integrated assessment, has the highest level of financial security

5. Discussion

It should be noted that the financial security of the company is almost one of the most important factors that ensure the effective operation of each individual enterprise. The financial security of an enterprise can be characterized by many factors. Therefore, for effective development, an enterprise

must develop a system of financial instruments, as it enhances its functionality and ability to withstand both external and internal threats.

The most important component of an enterprise's financial security is its financial condition. First of all, the assessment of the financial security of the enterprise involves the identification of its financial condition. The main areas of analysis of the financial condition of the enterprise include: assessment of the property condition, liquidity of assets, solvency, financial stability, business activity and profitability of the enterprise.

6. Conclusion

The importance of financial security for agrarian business entities as a component of a country's financial security and maintaining its sustainable level is linked to the need to address food, national and environmental security and is therefore a strategic direction of the country's economic policy.

The article provides an integrated assessment of the financial security of Ukrainian agricultural corporations, taking into account the financial potential as well as production efficiency. This approach can be quite feasible in the context of both an inflationary and a stable economy

The proposed calculation method takes into account a number of indicators that characterize the internal environment of agricultural enterprises, providing a systematic approach to the study of financial security, which allows identifying both strengths and weaknesses, and developing a strategy for their development.

Thus, we have developed a model of assessing the level of financial security of agricultural corporations, which, unlike the existing ones, allows you to determine the integral indicator, and, taking into account the security of each individual indicator and functional component, makes it possible to obtain an operational, tactical and strategic assessment to make adequate in accordance with the current situation of measures in the field of ensuring and managing the financial security of a particular enterprise.

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