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COMPREHENSIVE ANALYSIS AND FORECASTING OF THE FINANCIAL CONDITION OF UKRAINE'S AGRICULTURAL SECTOR

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КОМПЛЕКСНИЙ АНАЛІЗ ТА ПРОГНОЗУВАННЯ ФІНАНСОВОГО СТАНУ АГРАРНОЇ ГАЛУЗІ УКРАЇНИ

The article reveals the essence of the financial condition of a business entity, highlights its main parameters and the need for analysis; determines the purpose of conducting financial analysis at the enterprise, methodology, information support and expected results.

The main stages of analyzing the dynamics of the financial condition of the agricultural sector of Ukraine are determined, in particular: formation of information resources based on financial reporting of leading agricultural companies; calculation of parameters of the financial condition of specific business entities in the agricultural market (profitability, financial stability, liquidity, business activity, etc.); determination of aggregate parameters of the financial condition based on the results of the analysis of individual agricultural companies; establishment of maximum, normative and optimal values for individual parameters of the financial condition, which are included in the rating coefficient; calculation of the difference between the maximum (normative, optimal) and actual values of the

calculated relative indicators for each analyzed period; calculation of the indicator of the dynamics of the financial condition of the domestic agricultural sector for the analyzed period; formation of conclusions and proposals regarding the financial condition of the agricultural sector of Ukraine based on the dynamics of the calculated rating coefficient; planning and forecasting the financial stability of the agricultural sector and developing conclusions and proposals based on the results obtained.

Based on financial reporting, the article analyzes the financial condition over a long period of time of four domestic companies that are the largest producers of agricultural products and operate in various areas of the agricultural market and regions of Ukraine. Based on the results of the analysis, the financial stability of the agricultural market of Ukraine is assessed using the aggregate key indicators of the financial condition of the studied agricultural companies.

In order to forecast the dynamics of the financial condition of the agricultural market of Ukraine, a rating indicator has been developed in the work and a corresponding analysis has been conducted. The results of such analysis and forecasting will allow forming and implementing an effective state financial policy in the agricultural sector and creating prerequisites for the effective functioning of agricultural enterprises, increasing their competitiveness in the international market and increasing the level of protection in the event of crisis phenomena in the national economy.

У статті розкрито сутність фінансового стану суб'єкта господарювання, висвітлено його головні параметри та необхідність аналізу; визначено мету проведення фінансового аналізу на підприємстві, методологію, інформаційне забезпечення і очікувані результати.

Визначено головні етапи проведення аналізу динаміки фінансового стану аграрної галузі України, зокрема: формування інформаційних ресурсів на основі фінансової звітності провідних аграрних компаній; розрахунок параметрів фінансового стану конкретних суб'єктів господарювання на аграрному ринку (рентабельності, фінансової стійкості, ліквідності, ділової активності тощо); визначення сукупних параметрів фінансового стану на основі результатів аналізу окремих аграрних компаній; встановлення максимальних, нормативних та оптимальних значень для окремих параметрів фінансового стану, що закладені у рейтинговий коефіцієнт; обчислення різниці між максимальними (нормативними, оптимальним) та фактичними значеннями розрахованих відносних показників за кожний аналізований період; розрахунок показника динаміки фінансового стану вітчизняної аграрної галузі за аналізований період; формування висновків і пропозицій щодо фінансового стану аграрної галузі України на основі динаміки обчисленого рейтингового коефіцієнта; планування та прогнозування фінансової стабільності аграрної галузі та розроблення висновків і пропозицій на основі отриманих результатів.

На основі фінансової звітності у статті проведений аналіз фінансового стану у динаміці за тривалий відрізок часу чотирьох вітчизняних компаній, які є найбільшими виробниками аграрної продукції і функціонують у різних сферах аграрного ринку та регіонах України. За результатами проведеного аналізу оцінено фінансову стабільність аграрного ринку України за допомогою сукупних ключових показників фінансового стану досліджуваних аграрних компаній.

З метою прогнозування динаміки фінансового стану аграрного ринку України у роботі розроблено рейтинговий показник та проведений відповідний аналіз. Результати такого аналізу і прогнозування дадуть змогу формувати та проводити ефективну державну фінансову політику в аграрній сфері й створити передумови для результативного функціонування сільськогосподарських підприємств, підвищення їх конкурентоспроможності на міжнародному ринку та наращення рівня захищеності у разі виникнення кризових явищ у національній економіці.

Key words: Financial Analysis, Financial Condition, Profitability, Financial Stability, Liquidity, Solvency, Business Activity, Bankruptcy, Agricultural Companies, Agricultural Sector.

Ключові слова: фінансовий аналіз, фінансовий стан, рентабельність, фінансова стійкість, ліквідність, платоспроможність, ділова активність, банкрутство, аграрні компанії, аграрна галузь.

PROBLEM STATEMENT AND ITS RELATION TO SIGNIFICANT SCIENTIFIC OR PRACTICAL TASKS

The agricultural sector, and particularly agricultural enterprises, occupies a prominent position in the Ukrainian

economy, as it is within this domain that domestic entrepreneurs possess significant untapped potential. It is noteworthy that agriculture is among the few sectors in Ukraine that maintains strong competitive positions in the global market and holds considerable potential for the

production and export of goods with high added value.

However, in order to consolidate and further strengthen these positions, it is essential to ensure the availability of financial resources on the domestic market that are both affordable and carry acceptable levels of risk. Currently, Ukrainian farming enterprises primarily rely on internal capital, short-term bank loans, and accounts payable. Such financial constraints limit their ability to invest in the modernization and renewal of their material and technical infrastructure, thereby hindering improvements in the quality of agricultural output — a key driver of enhanced competitiveness.

In light of the above, the search for reserves and mechanisms to improve the financial condition of agricultural enterprises represents a highly relevant and urgent area of research. This is particularly important for enabling access to new markets and creating the necessary prerequisites for sustainable economic growth.

The most significant and comprehensive indicator of the performance of agricultural enterprises is their financial condition, the analysis of which plays a crucial role within the management system and in the process of making various operational and strategic decisions. Information regarding the financial standing of agricultural companies is of substantial interest to investors, creditors, suppliers of material and technical resources, government authorities, and production managers. Therefore, the primary objective lies in identifying reserves and opportunities for strengthening their financial position.

The financial condition of agricultural companies must be analysed comprehensively, systematically, and thoroughly, employing modern methods, tools, and analytical approaches. Such an analysis enables a critical evaluation of financial performance, liquidity, solvency, financial stability, and the likelihood of bankruptcy. It also facilitates the identification of weaknesses in financial operations, more effective use and rational allocation of financial resources, as well as the uncovering of hidden reserves for enhancing overall financial sustainability.

ANALYSIS OF RECENT RESEARCH AND PUBLICATIONS

A significant contribution to the development of the theory and practice of financial analysis of business entities has been made by prominent Ukrainian scholars, including O. Ya. Bazilinska [1], U. B. Makarenko [2], H. M. Shamota, D. O. Malysh [7], I. O. Shkolnyk, I. M. Boyarko, O. V. Deineka [8], N. P. Shmorgun, I. V. Holovko [9] among others.

IDENTIFICATION OF PREVIOUSLY UNRESOLVED ASPECTS OF THE GENERAL PROBLEM ADDRESSED IN THIS ARTICLE

While acknowledging the valuable contributions of both domestic and international scholars, it is important to emphasize the relevance of ongoing research efforts aimed at addressing the challenges of strengthening the financial condition of agricultural companies, developing a unified methodology for its analysis, and constructing a comprehensive indicator for assessing the financial stability of Ukraine's agricultural sector.

FORMULATION OF THE ARTICLE'S OBJECTIVES (STATEMENT OF THE TASK)

The purpose of this article is to deepen theoretical understanding and to develop principles and practical recommendations for the application of methods for analyzing and forecasting the financial condition of Ukraine's agricultural sector.

The methodological foundation of this study is based on fundamental principles of economic science related to the methodology of financial analysis of business entities. The article employs methods of comparative and systemic analysis, induction and deduction, as well as logical, graphical, tabular, index, rating, and ratio analysis techniques.

To construct the rating indicator for forecasting the financial condition of agricultural companies, key balance sheet figures from Form 1 (averaged annually) and financial performance reports were utilized. Based on these indicators, a table was created summarizing all values across four agricultural companies under study. Financial ratios incorporated into the rating indicator were calculated as averages for these four companies, which hold a significant share of Ukraine's agricultural market.

The development of the financial condition dynamics indicator for the agricultural sector was conducted by comparing normative values with actual data for each parameter. Forecasting of individual components of the rating indicator was carried out using the method of average annual growth rates. The evaluation indicator of the financial condition dynamics of business entities can vary within the range of 0 to 265. The upper limit characterizes a situation where the parameters of the rating coefficient approach normative (maximum, optimal) values.

Since values were rounded to two decimal places, the smallest difference in the numerator equals 0.01, which squared equals 0.0001. Consequently, each fraction will equal $(1 \div 0.0001) = 10,000$. There are seven such fractions under the root, summing to 70,000. The square root of this number equals approximately 264.57.

PRESENTATION OF THE MAIN RESEARCH MATERIAL

The primary characteristic of the operation of business entities is their financial condition, a comprehensive term encompassing all components of an enterprise's financial and economic system. It is determined by production and economic factors and is characterized by techniques, models, methods, and parameters that reflect the state, structure by sources of formation, and directions of allocation and investment of financial resources. Therefore, continuous analysis of the financial condition gains particular importance as a key factor in ensuring the stable functioning of the enterprise.

The ability of an entrepreneurial entity to attract financial resources in the required volume to fund its economic activities is characterized by its financial condition. This condition is defined by a rational structure of financial resources in terms of allocation (asset structure by production and circulation sectors, including fixed and current assets) and the optimal balance between sources of own and borrowed financing (liability structure).

A stable financial condition is a crucial factor for the balanced socio-economic development of the enterprise, whereas crisis conditions, without the implementation of remedial measures, may lead to bankruptcy. Financial analysis enables the identification of strengths and weaknesses in the enterprise's financial condition and provides answers to key questions posed by financial managers regarding the use of specific instruments aimed at strengthening the financial position and overcoming crises.

The financial condition of an economic entity is a key indicator of the stability of its operations, as it reflects its competitiveness, reliability in business relationships, and determines the degree of protection of the interests of owners, creditors, and potential investors. It also defines the enterprise's financial capacity. It is important to note that conducting systematic analysis of the financial condition is necessary not only for the enterprise itself but also for its potential counterparties — such as banking institutions, insurance companies, employees, and government authorities. These stakeholders typically assess the reliability of the enterprise's operations, evaluate its future prospects, and analyze the overall state of the industry.

The informational basis for conducting economic analysis comprises statistical and financial reporting compliant with international standards, accounting data, primary documents, the enterprise's financial plans, and other relevant materials. The object of financial analysis is the financial condition of a specific economic entity, while the subjects of analysis are financial managers and analysts who have a vested interest in the outcomes of the financial condition assessment.

The financial condition of an enterprise is determined by a set of analyzed parameters and indicators, which may characterize it as normal, impaired, or critical.

The primary objective of conducting financial analysis within an enterprise is to comprehensively assess the dynamics of its financial condition and to identify specific parameters such as profitability, financial stability, liquidity and solvency, business activity, among others. The results of this analysis should reveal hidden reserves for improving these parameters, evaluate creditor protection regarding the fulfillment of obligations, and assess the enterprise's capacity to withstand future losses.

Additionally, it is necessary to formulate reliable forecasts of the future dynamics of financial stability, conduct comparative analyses based on industry averages, types of activities, and competitors. Thus, a thoroughly conducted analysis will help detect potential deterioration in the financial condition and outline the necessary set of measures to avoid adverse consequences.

Factor analysis enables the identification of negative impact factors through specialized methods and helps determine opportunities for their mitigation.

The synthesis of existing methodological approaches to financial management in domestic scholarship has revealed that managing the finances of agricultural business entities can be conducted based on process-oriented, systemic, comprehensive, program-targeted, and criterial approaches.

The systemic approach enables the identification of the structure of the financial mechanism, the role of each element within the overall system, the interconnections between elements, and the reciprocal influence between the system and its components. The process-oriented approach facilitates the development of actions for implementing financial management functions.

The program-targeted approach reflects the formation of mechanisms aligned with enterprise development programs aimed at achieving operational, tactical, and strategic goals while considering the influence of internal and external factors. The comprehensive approach integrates various methods into a unified financial management system.

Finally, the criterial approach ensures the development of individual evaluative criteria for the effectiveness of the financial mechanism's functioning within specific subdivisions and the enterprise as a whole, aimed at implementing the incentive function of this mechanism.

The evaluation of the quality of financial resource management in agricultural corporations should be conducted based on the criteria of stability, solvency, and business activity. These criteria are examined through indicators of capital structure, liquidity, and turnover, which enables a quantitative assessment of the impact of financial resource management quality on profitability levels and the development dynamics of agricultural companies.

Currently, the entrepreneurial potential of agricultural enterprises in Ukraine remains insufficiently realized, which is attributed to the inconsistency or ineffectiveness of components within the institutional environment, the lack of justification for certain transformations, and an ineffective system of institutional conditions for conducting legal activities. The primary focus should be placed on the regulatory and legal component of the institutional environment. This would enable clear regulation of the operations of agricultural companies.

Based on the financial statements of LLC Firm "Astarta-Kyiv," LLC "Chernihiv Industrial Dairy Company," LLC "Kernel Trade," and PJSC "MHP," we will conduct an assessment of the operational efficiency of agricultural entities. To determine the average indicators of the Ukrainian agricultural market, we analyze the dynamics of the financial condition of these companies, as they are among the largest producers of agricultural products operating in different sectors of the agricultural market and regions of Ukraine.

For the financial condition analysis, we will construct a table containing indicators from the balance sheet (statement of financial position) and the statement of financial results (comprehensive income) of these entities to simplify the calculation of subsequent indicators. The table will include selected indicators from the specified financial statements, which will be used for further calculations and forecasting of the financial condition.

Notably, the balance sheet indicators are averaged over the year (the sum of the values at the beginning and end of the period divided by two). Each indicator in the table is aggregated across all four companies (Table 1).

The activities of agricultural business entities typically involve making alternative financial management decisions

and forecasting their consequences. However, an analysis of the financial condition of agricultural companies does not provide a complete answer regarding its changes over the long term. This necessitates that financial analysts master forecasting methodologies for application in financial analysis.

On the other hand, in order to provide targeted support to Ukraine's agricultural sector, the government must also engage in forecasting the financial condition of the industry to anticipate potential changes and make appropriate managerial decisions at the national level. The importance of forecasting financial performance cannot be overstated, as there is no better preparation for adverse events and crises than being well-informed and having a clearly defined action plan in place to address possible scenarios.

Contemporary academic literature lacks a unified approach and clear methodological guidelines for regulating the process of forecasting the financial condition of agricultural enterprises and the agricultural market. This necessitates an individualised approach to each company and the development of specific generalised indicators. Such comprehensive rating indicators, designed to forecast the financial condition of an agricultural company or the market as a whole, should encompass its key parameters — profitability, financial stability, liquidity, solvency, business activity, and others.

The forecasting and analysis of the dynamics of financial stability within Ukraine's agricultural market should serve to inform the government and relevant ministries about significant changes that have occurred, are taking place, or are anticipated in this sector. This will enable the development and implementation of an effective public financial policy in the agricultural sphere and create the necessary conditions for the efficient operation of agricultural enterprises, enhancement of their competitiveness in the international market, and strengthening of their resilience in the face of potential crises in the national economy.

The initial stage in forecasting government programmes aimed at stimulating the development of the domestic agricultural sector is the assessment and planning of its financial stability. To this end, it is essential to develop a rating coefficient for evaluating the financial condition of agricultural companies in dynamics, in order to anticipate trends and changes in the development of Ukraine's agricultural market over the long term.

To construct a rating coefficient for analysing the dynamics of the financial condition of Ukraine's agricultural sector, we have used the financial indicators of four leading Ukrainian agricultural companies (LLC "Astarta-Kyiv", LLC "Chernihiv Industrial Dairy Company", LLC "Kernel-Trade", and PJSC "MHP"), as presented in Table 1.

The rating coefficient encompasses the following parameters of the financial condition of agricultural business entities:

- Profitability of sales (the ratio of gross profit to net revenue from sales);
- Financial independence (the ratio of equity capital to total sources of financing);
- Share of accounts payable in the company's liabilities;
- Liquidity (the ratio of current assets to current liabilities);

Table 1. Balance Sheet Indicators (Averaged Annually) and Financial Performance Data of LLC Firm "Astarta-Kyiv," LLC "Chernihiv Industrial Dairy Company," LLC "Kernel Trade," and PJSC "MHP" for the Period 2008-2024, mln UAH

Financial Indicators	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
I. Average Annual Balance Sheet Indicators																	
Assets	10476,2	15528,7	22026,1	31106,2	40329,6	48263,4	61652,2	85919,5	107474,8	127726,9	150900,3	170007,1	190624,0	227984,2	292813,6	334423,5	356144,6
Fixed assets	6324,2	8818,1	11583,8	15761,9	21156,1	26475,7	36211,0	50646,3	60749,3	70320,9	81780,3	97183,6	113384,1	124790,5	146230,5	162453,3	177892,7
Current assets	4152,0	6710,5	10236,8	14715,5	19173,5	22211,0	25441,2	35273,2	46725,5	57406,1	69120,0	72823,5	77240,0	103193,7	146583,1	171970,2	178251,9
Inventories	2101,6	3206,1	3867,5	5051,1	8861,8	11883,7	14052,7	19317,6	24645,3	31656,6	38702,8	38032,8	35289,6	48578,0	128547,7	124137,7	49744,3
Shareholders' equity	4541,9	7077,8	10647,7	16136,4	21589,7	25017,2	28996,5	37116,7	48963,3	49236,7	44279,9	66658,8	89300,1	108638,9	132781,8	145639,2	172531,5
Long-term liabilities	3145,9	4252,0	6317,4	8623,6	10512,0	12756,5	17690,2	26658,1	33113,2	57300,7	81839,8	72888,2	74565,1	87240,5	86251,2	75399,1	79053,1
Current liabilities	2788,4	4198,8	5061,0	6346,2	8227,9	10489,8	14965,5	22144,7	25398,3	21189,5	24780,6	30460,2	26758,9	32104,7	73780,7	109242,7	100417,5
Short-term borrowings	1338,4	2042,1	2415,1	3316,1	4432,8	5278,4	7239,4	13085,8	15404,3	10449,9	12588,2	13619,1	5826,1	2990,1	26544,8	43950,1	31758,6
Accounts payable	1450,0	2156,8	2645,9	3030,1	3795,1	5211,4	7726,1	9058,9	9994,0	10739,5	12192,4	16841,1	20932,8	29114,6	47235,9	65292,6	68658,9
Liabilities	5934,3	8450,9	11378,3	14969,8	18739,9	23246,2	32655,7	48802,8	58511,5	78490,3	106620,4	103348,4	101324,0	119345,3	160031,8	184641,7	179470,5
Working capital	1363,6	2511,7	5175,9	8369,3	10945,6	11721,3	10475,7	13128,5	21327,2	36216,5	44339,4	42363,4	50481,1	71089,0	72802,4	62727,5	77834,5
II. Indicators from the Statement of Financial Performance																	
Revenue from Product Sales	8668,9	14087,8	18194,0	28460,6	32747,7	39225,7	45420,4	76217,8	90065,6	108154,9	121685,7	178580,3	172293,4	240703,5	279336,4	266411,1	301168,8
Profit from Product Sales	2376,4	4574,6	5881,5	8208,4	8454,4	7605,3	12399,1	21873,2	25830,8	27865,4	24653,6	23338,6	28162,5	55399,8	29963,2	56287,8	79295,6

Source: Official Financial Statements of Agricultural Companies [3—6].

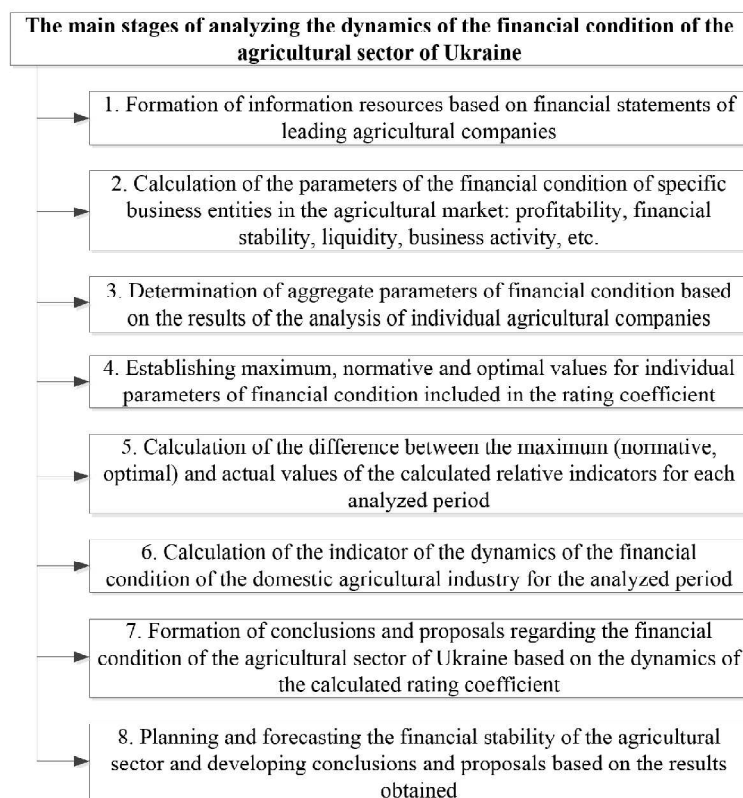


Fig. 1. Algorithm for Analysing the Dynamics of the Financial Condition of Ukraine's Agricultural Sector

Source: Built by the authors.

— Financial stability (the ratio of equity and long-term liabilities to non-current assets);

— Provision of inventories with normative financial resources (the ratio of working capital, accounts payable, and short-term loans to the value of inventories and expenses);

— Turnover of current assets (the ratio of net revenue from sales to the average value of current assets).

These financial ratios have been calculated as averages across the four analysed agricultural companies, which together occupy a significant share of the national agricultural market.

The construction of the indicator reflecting the dynamics of the financial condition of the agricultural sector was carried out using a comparative method, whereby actual indicators are compared with normative (benchmark) values for each parameter.

In cases where actual values reach the normative (maximum or optimal) levels, these indicators are automatically assigned the status of normative benchmarks. Subsequent actual values of the financial ratios are then compared relative to these established normative indicators.

The assessment of the dynamics of the financial condition of the agricultural sector was carried out using Microsoft Excel, which enables the automatic calculation of the proposed indicators. The algorithm for analysing the dynamics of the financial condition of Ukraine's agricultural sector in accordance with specific stages is illustrated in Fig. 1.

At the first stage of assessing the financial condition, information is collected on the selected leading agricultural

companies over a defined period in order to calculate the key parameters of the rating indicator.

During the second stage, the calculated parameters are entered into the Microsoft Excel environment, where the coefficients characterizing the financial condition of the agricultural companies are automatically computed. For all companies combined, average values of the financial coefficients are determined for all periods, and normative and optimal levels of these indicators are established, taking into account the specific features of conducting business activities in the agricultural sector. The program automatically calculates the maximum levels.

At the third stage, we determine the coefficients that characterize the difference between the achieved values and the normative values for the parameters encompassed by the financial condition dynamics indicator of the national agricultural sector.

$$K_i = \sum_{i=1}^n \frac{1}{(N_i - F_i)^2} \quad (1),$$

where K_i is the coefficient representing the ratio between the normative and actual data of the i -th parameter of the financial condition dynamics indicator for the Ukrainian agricultural sector. The maximum possible value of the indicator is 1000, which is due to rounding to three decimal places, while the minimum value approaches zero. The optimal level for each financial coefficient considered in the calculations is defined as its maximum or normative (optimal) value across all analyzed periods; N_i is the normative (optimal, maximum) value of the i -th

parameter of the financial condition; F_i is the actual value of the i -th parameter of the financial condition for the analyzed period [2, p. 143].

Further calculations involve determining the indicator for analyzing the dynamics of the financial condition of the agricultural sector for each analyzed period using the following formula:

$$PDFSAG_i = \sqrt{\sum_{i=1}^n K_i} \quad (2),$$

where $PDFSAG_i$ denotes the indicator of the dynamics of the financial condition of the agricultural sector in the i -th period.

The extended formula for calculating the rating coefficient in our case is as follows:

$$PDFSAG_i = \sqrt{\frac{1}{(M_{rp}-F_{rp})^2} + \frac{1}{(N_{avt}-F_{avt})^2} + \frac{1}{(O_{kz}-F_{kz})^2} + \frac{1}{(N_{zl}-F_{zl})^2} + \frac{1}{(F_{fs}-F_{fs})^2} + \frac{1}{(M_z-F_z)^2} + \frac{1}{(M_{ob}-F_{ob})^2}} \quad (3),$$

M_{rp} — maximum value of profitability of sold products based on profit from sales; N_{avt} — normative value of the financial autonomy ratio; O_{kz} — optimal value of the share of accounts payable in liabilities; N_{zl} — normative level of overall liquidity;

N_{fs} — normative value of the financial stability indicator; M_z — maximum value of inventory and expenses coverage by planned sources; M_{ob} — maximum value of current assets turnover for the analyzed period; F_{rp} — actual value of profitability of sold products based on profit from sales; F_{avt} — actual level of the financial autonomy ratio; F_{kz} — actual value of the share of accounts payable in liabilities in the current period; F_{zl} — actual level of overall liquidity; F_{fs} — actual level of the financial stability indicator in the current period; F_z — actual value of the coefficient of inventory and expenses coverage by planned sources; F_{ob} — actual value of current assets turnover in the analyzed period [2, p. 144].

An increase in the constructed indicator for analyzing the dynamics of the financial condition of the agricultural sector should be characterized as a positive shift. It is important to note that the developed rating indicator will range between 0 and 265.

An assessment of the dynamics of the financial condition of Ukraine's agricultural sector is presented in Table 2, using the data from Table 1. These data were calculated based on aggregated indicators of sales profitability (by gross profit), equity concentration, the share of accounts payable in liabilities, overall liquidity, financial stability, coverage of inventories and expenses by normative financial resources, and turnover of current assets.

Based on the calculation of average annual growth rates, we forecast the parameters incorporated into the indicator of financial stability dynamics of Ukraine's agricultural sector for the period 2025—2027. The calculations for each component are presented in Table 3. It is important to note that a major challenge of such forecasting lies in obtaining up-to-date reporting data from business entities, which are published with significant delays, thus undermining the timeliness of such forecasts.

Table 2. Calculation of the Financial Condition Dynamics Indicator of Ukraine's Agricultural Sector Based on Aggregate Indicators of the Analyzed Agricultural Companies

Indicators	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Fest 2025	Fest 2026	Fest 2027
Profitability of sold products based on operating profit, %	27,41	32,47	32,33	28,84	25,82	19,39	27,30	28,70	28,68	25,76	20,26	13,07	16,35	23,02	10,73	21,13	26,33	26,26	26,20	26,13
Autonomy ratio (equity ratio)	0,43	0,46	0,48	0,52	0,54	0,52	0,47	0,43	0,46	0,39	0,29	0,39	0,47	0,48	0,45	0,44	0,48	0,49	0,49	0,49
Ratio of accounts payable to liabilities	0,24	0,26	0,23	0,20	0,20	0,22	0,24	0,19	0,17	0,14	0,11	0,16	0,21	0,24	0,30	0,35	0,38	0,39	0,40	0,42
Current liquidity ratio	1,49	1,60	2,02	2,32	2,33	2,12	1,70	1,59	1,84	2,71	2,79	2,39	2,89	3,21	1,99	1,57	1,78	1,79	1,81	1,83
Financial stability ratio	1,22	1,28	1,46	1,57	1,52	1,43	1,29	1,26	1,35	1,52	1,54	1,44	1,45	1,57	1,50	1,36	1,41	1,43	1,44	1,45
Coverage ratio of inventories by main sources of financing	1,98	2,09	2,65	2,91	2,16	1,87	1,81	1,83	1,90	1,81	1,79	1,91	2,19	2,12	1,14	1,39	3,58	3,72	3,86	4,01
Turnover of current assets	2,09	2,10	1,78	1,93	1,71	1,77	1,79	2,16	1,93	1,88	1,76	2,45	2,23	2,33	1,91	1,55	1,69	1,67	1,65	1,62
Recommended profitability of sold products based on operating profit, %	32,47	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00	60,00
Normative value of autonomy ratio	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60
Normative value of accounts payable ratio in liabilities	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80
Normative value of current liquidity ratio	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20	2,20
Normative value of financial stability ratio	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60	1,60
Normative value of coverage ratio of inventories by main sources of financing	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90
Normative value of current assets turnover	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00
Rating indicator	13,36	12,90	13,55	40,42	21,44	18,77	9,99	9,45	16,30	15,55	18,26	9,80	11,13	34,15	17,26	8,43	11,21	11,59	12,06	12,61

Table 3. Calculation of Average Annual Growth Rates for the Components of the Rating Indicator of Financial Stability Dynamics in Ukraine's Agricultural Sector

The growth rate values for the components of the rating indicator of financial condition dynamics	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Average annual growth rate
Profitability of goods sold based on operating profit	1,18	1,00	0,89	0,90	0,75	1,41	1,05	1,00	0,90	0,79	0,65	1,25	1,41	0,47	1,97	1,25	0,9975
Equity ratio	1,05	1,06	1,07	1,03	0,97	0,91	0,92	1,05	0,85	0,76	1,34	1,19	1,02	0,95	0,96	1,11	1,0070
Share of accounts payable in total liabilities	1,04	0,91	0,87	1,00	1,11	1,06	0,78	0,92	0,80	0,84	1,43	1,27	1,18	1,21	1,20	1,08	1,0284
Current ratio	1,07	1,27	1,15	1,00	0,91	0,80	0,94	1,15	1,47	1,03	0,86	1,21	1,11	0,62	0,79	1,13	1,0110
Financial stability ratio	1,06	1,14	1,07	0,97	0,94	0,90	0,98	1,07	1,12	1,02	0,93	1,01	1,09	0,95	0,91	1,04	1,0095
Inventory coverage ratio by primary sources of financing	1,06	1,26	1,10	0,74	0,86	0,97	1,01	1,04	0,96	0,98	1,07	1,14	0,97	0,54	1,21	2,59	1,0379
Current assets turnover	1,01	0,85	1,09	0,88	1,03	1,01	1,21	0,89	0,98	0,93	1,39	0,91	1,05	0,82	0,81	1,09	0,9869

The calculations presented in Table 2 indicate the strongest financial position of the agricultural market in 2011 (rating coefficient value of 40.4) and the lowest values in 2014, 2015, and 2023 (10, 9.4, and 8.4, respectively).

Therefore, the financial position of the domestic agricultural market can be considered most stable during the period corresponding to the maximum value of the rating coefficient. In our case, this is the year 2011, when the indicator of financial condition dynamics reached 40.4 (28.84% — profitability of goods sold by profit from sales, 0.52 — coefficient of autonomy of financing sources, 0.2 — share of accounts payable in the liabilities of agricultural companies, 2.32 — total liquidity ratio, 1.57 — financial stability indicator, 2.91 — inventory and expenditure coverage ratio by own working capital, 1.93 — current assets turnover) (Table 3).

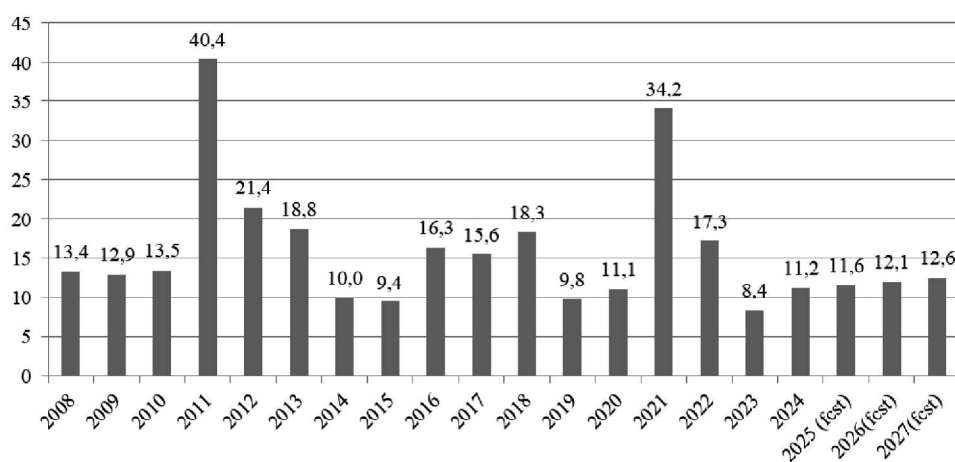
It is worth noting that, starting from 2012, the indicator of the dynamics of the financial condition of Ukraine's agricultural sector gradually declined until 2015, indicating a general deterioration in the financial standing of enterprises in this industry. It then generally increased, reaching a substantial level of 34.2 in 2021, before dropping sharply in 2023 to 8.4. Forecasts constructed on

the basis of average annual growth rates for 2025—2027 also offer little optimism, as they indicate only a slight increase in the proposed rating coefficient (Fig. 2).

The indicator for assessing the dynamics of the financial condition of business entities can vary within the following range: 0 to 265. The upper limit characterizes a situation in which the parameters of the rating coefficient approach their normative (maximum, optimal) values. Since the values were rounded to two decimal places, the difference in the numerator amounts to 0.01, which, when squared, equals 0.0001. Accordingly, the entire fraction will equal $(1 \div 0.0001) = 10,000$, and there are seven such fractions under the root sign, which in total amount to 70,000. The square root of this number equals 264.57.

It should be noted that the constructed indicator of the dynamics of the financial condition of the agricultural sector is appropriate for use in conducting a comprehensive financial analysis of an individual company or the agricultural industry as a whole. It may be supplemented with other parameters that constitute the financial condition of a business entity, provided that their optimal (maximum, normative) values are determined in advance.

The use of the proposed rating coefficient will be

**Fig. 2. Dynamics of the indicator for the analysis of the financial condition of Ukraine's agricultural sector over the period 2008—2027**

beneficial for individual agricultural companies, as it enables them to provide potential creditors or investors with up-to-date forecast information regarding the dynamics of specific indicators and the overall financial condition.

CONCLUSIONS

Thus, the application of the financial condition dynamics indicator for the agricultural sector will assist the government in formulating financial policies aimed at stimulating the development of enterprises within this sector and improving the investment climate. It will also enable the incorporation of concrete quantitative targets in the process of developing strategies for the advancement of Ukraine's agricultural sector and allow timely identification of measures to protect domestic agricultural producers from adverse events.

The most stable financial condition of the domestic agricultural market should be considered as that period corresponding to the maximum value of the rating coefficient. In our case, this was the year 2011, when the financial condition dynamics indicator amounted to 40.4 (28.84% — profitability of sold products based on operating profit, 0.52 — equity ratio of financing sources, 0.2 — share of accounts payable in the liabilities of agricultural companies, 2.32 — current liquidity ratio, 1.57 — financial stability indicator, 2.91 — coverage of inventories and costs by own working capital, 1.93 — turnover of current assets).

The constructed indicator of the financial condition dynamics of the agricultural sector is advisable to use for conducting a comprehensive financial analysis of an individual company or the agricultural sector as a whole. It can be supplemented with other parameters that constitute the financial condition of an economic entity, provided that their optimal (maximum, normative) values are determined beforehand.

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