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## MECHANISMS FOR ENSURING THE FINANCIAL STABILITY OF AGRARIAN BUSINESS ENTITIES BASED ON THE PRINCIPLES OF MACRO-PRUDENTIAL POLICY TO LIMIT SYSTEMIC RISKS

## МЕХАНІЗМИ ЗАБЕЗПЕЧЕННЯ ФІНАНСОВОЇ СТІЙКОСТІ СУБ'ЄКТІВ АГРАРНОГО БІЗНЕСУ НА ЗАСАДАХ МАКРОПРУДЕНЦІЙНОЇ ПОЛІТИКИ ОБМЕЖЕННЯ СИСТЕМНИХ РИЗИКІВ

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A comprehensive analysis of the mechanisms for ensuring the financial stability of agribusiness entities was conducted using the macroprudential approach as a modern paradigm for regulating systemic risks and protecting the agribusiness sector from unforeseen shocks and cyclical fluctuations. It was substantiated that macroprudential policy, as an element of state regulation to limit systemic risks, is capable of forming a stable environment in which agribusinesses can function regardless of the scale of external shocks. Particular attention was paid to liquidity risks, increased receivables, impaired capital turnover, and increased credit load. Approaches to the formation of mechanisms for ensuring the financial stability of agribusiness entities based on international regulatory practices were considered. The principles of applying a countercyclical capital buffer, indicators of systemic significance regarding risk concentration, and short-term liquidity management, which are of high importance for ensuring the financial stability of agribusiness entities, were analyzed.

**Keywords:** macroprudential policy, systemic risks, financial stability, agrarian business, risk management, capital, liquidity, financial regulation.

Проведено комплексний аналіз механізмів забезпечення фінансової стійкості суб'єктів аграрного бізнесу із застосуванням макропруденційного підходу, як сучасної парадигми регулювання системних фінансових ризиків, та захисту аграрної економіки від непередбачуваних потрясінь, зменшення впливу циклічних коливань. Обґрунтовано, що макропруденційна політика, як елемент державного регулювання щодо обмеження системних ризиків, здатна формувати стабільне середовище, у якому аграрні підприємства можуть функціонувати незалежно від масштабів зовнішніх шоків. Особливу увагу приділено ризикам ліквідності, підвищенню дебіторської заборгованості, порушенню оборотності капіталу, зростанню кредитного навантаження, а також

ризиків змінами світової інфраструктури аграрних ринків. Розглянуто сучасні підходи до формування механізмів забезпечення фінансової стійкості суб'єктів аграрного бізнесу на основі макропруденційної політики на засадах міжнародних регуляторних практик. Проаналізовано принципи застосування контрциклічного буфера капіталу, індикаторів системної значущості, вимоги до концентрації ризиків, управління короткостроковою ліквідністю та кредитної підтримки аграрної галузі, що мають високу важливість для забезпечення фінансової стійкості аграрного бізнесу за умови наявності кредитних лімітів, доступу до довгострокових фінансових продуктів, інвестиційних рішень підприємств щодо здатність підтримувати операційну ефективність у нестабільний період. Вивчено вплив макропруденційних регуляторів на фінансову поведінку суб'єктів аграрного бізнесу та визначено, що підвищення буфера капіталу банків за державними програмами сприяє зниженню концентрації ризиків у агробізнесі, дозволяє регулювати вимоги до короткострокової ліквідності, створювати стабільні умови для кредитування, скорочувати вплив глобальних цінових шоків та здійснювати трансформацію механізмів державної підтримки в умовах викликів та обмежень повоєнної трансформації аграрної галузі. Доведено, що державні програми рефінансують під нижчі відсотки кредити для суб'єктів аграрного бізнесу та забезпечують їх фінансову стійкість.

**Ключові слова:** макропруденційна політика, системні ризики, фінансова стійкість, аграрний бізнес, ризик-менеджмент, капітал, ліквідність, фінансове регулювання.

**Formulation of the problem.** The agricultural sector remains one of the key components of the Ukrainian economy: it ensures food security, generates a significant share of export earnings and creates jobs in rural areas. Since 2022, the industry has experienced unprecedented shocks – destruction of infrastructure, disruption of supply chains, significant logistical challenges and increased volatility of world and domestic prices. At the same time, the financial environment has undergone strong transformations: the cost of capital, lending structure, banking supervision approaches and institutional mechanisms of state support have changed. In this context, the issue of ensuring the financial stability of agribusiness entities has acquired high practical and scientific significance.

Given these challenges, macroprudential policy is increasingly seen as an important tool for limiting systemic risks and increasing the financial stability of agribusiness entities. The National Bank of Ukraine has officially enshrined in its strategy and reports the use of macroprudential instruments to reduce the vulnerability of the banking system and prevent the transmission of financial shocks to the agricultural sector. At the same time, international organizations and scientific institutes (BIS, IMF, OECD) are accumulating empirical and theoretical evidence of the effectiveness of macroprudential measures in containing cyclical and systemic financial risks in the agricultural sector.

Despite the general successes of macroprudential policy in supporting the financial stability of agricultural business entities, the issue remains open, especially in limiting the impact of specific systemic risks in the war and post-war transformation of the agricultural sector, in particular in terms of compensating for seasonal liquidity shocks, ensuring access

to long-term investment, limiting concentration credit risks in the agricultural lending segment, and forming stabilization "buffers" at the level of the agricultural sector.

**Analysis of recent research and publications.** In the scientific literature, financial stability is defined as the ability of an enterprise to function in a risky environment, minimizing the likelihood of financial losses and ensuring long-term balance of cash flows [1; 2]. According to I. Kravchuk, financial stability is an integral characteristic that reflects the ability of an enterprise to adapt to market fluctuations and maintain stable development parameters in the medium and long term [5]. According to the approach of G. Minsky, financial stability is formed as a result of effective risk management, debt load control and prevention of financial imbalances [6].

Foreign researchers, K. Wang, and J. Cui created an evolutionary game model between banks, agricultural enterprises, and farm players to adopt fintech solutions (blockchain, AI, Big Data) that can reduce information asymmetry, reduce credit risks, and improve the stability of agricultural chain financing, providing the potential for innovative financing as a way to increase the financial stability of business entities by modernizing credit infrastructure [19].

However, the studies have not sufficiently highlighted and analyzed the classification features of systemic risks that are characteristic of agrarian business entities, have not assessed the international experience of using macroprudential instruments and their effectiveness in supporting business enterprises with increased risk, have not sufficiently conducted an empirical analysis of the dynamics of liquidity, debt burden, profitability and risk profile of agrarian entities in Ukraine during the war period, have not fully highlighted

the transmission channels of macroprudential measures on the financial behavior of agrarian enterprises, and have not proposed policy instruments that should be adapted to Ukrainian realities, with an emphasis on recommendations for regulators, banks and business entities to increase their financial stability and reduce systemic risks.

**Formation of research objectives.** The purpose of the study is to theoretically substantiate and empirically evaluate macroprudential mechanisms capable of increasing the financial stability of agrarian business entities during the war period and to develop recommendations for their practical implementation in the face of challenges and transformation of the agricultural industry.

**Presentation of the main research material.** Macroprudential policy, as a system of regulatory measures aimed at limiting systemic risks, strengthening the stability of the financial system and minimizing the likelihood of financial crises, is formed on the basis of the concepts of macroprudential regulation, the key elements of which are countercyclical capital buffers, systemically important buffers, structural and sectoral risk limiters, credit cycle control tools, limiting excessive debt burden and risk-based supervision [12; 13; 16; 14].

World experience (BIS, ECB, IMF Reports) demonstrates that macroprudential policy is an effective tool for preventing financial shocks in sectors with increased capital intensity and risk, in particular in the agricultural sector [3; 10]. According to the NBU approach, the macroprudential policy of limiting systemic risks in the agricultural sector is aimed at forming "systemic financial stability" of business entities through their ability to withstand shocks without losing functionality in financial markets and lending [12; 10].

Systemic risks affect the functioning of the financial system of agribusiness entities and create instability in the agricultural sector when the following group of challenges arise: macroeconomic (inflation, currency shocks, recession); financial (liquidity deficit, debt imbalances, deterioration of creditworthiness); logistical and infrastructural, geopolitical and financial market transformation [4; 9].

Research shows that the most critical risks for agribusiness entities remain the risks of loss of liquidity and logistical failures, which directly affect working capital, margin, credit rating of enterprises and debt sustainability indicators [8]. Therefore, macroprudential

mechanisms are used to ensure the financial stability of agribusiness, the key ones of which are the creation of countercyclical capital buffers, sectoral capital requirements (for risky industries), the implementation of a stress testing system for enterprises and banks, credit risk restrictions (LTV, DTI, DSTI), state guarantees and refinancing programs, the creation of risk funds for agricultural enterprises and financial institutions, the assessment of the systemic importance of agricultural enterprises, and the monitoring of financial vulnerabilities at the level of the agricultural sector and the economy [18; 17].

Let us dwell in more detail on individual mechanisms of their action. It should be noted that countercyclical capital buffers (CCyB) provide that banks, during periods of economic growth, form additional capital above the minimum standards, which is accumulated as a "cushion" in case of future financial shocks for the agricultural sector, namely during periods of high prices for agricultural products and active lending for capital accumulation, which allows to withstand the fall in incomes in crisis years. At the same time, the probability of reducing lending in a downward cycle is reduced and the stability of financing of seasonal needs, including the purchase of seeds, plant protection products and equipment, is ensured [17].

The Sectoral Capital Requirements mechanism provides that the regulator establishes additional capital requirements for loan portfolios related to risky agricultural production. Banks are forced to hold additional capital for loans to agricultural producers, increasing the resilience of the credit system to seasonal, climatic and market fluctuations, and agricultural business entities receive stable access to financing, but with increased risk management requirements [7; 17].

In the conditions of military challenges and restrictions, agribusiness entities are unable to provide themselves with their own resources, so macroprudential instruments are being introduced to limit credit risk (LTV, DTI, DSTI), that is, the mechanism of action of LTV (Loan-to-Value) limits the amount of credit for agricultural enterprises relative to the value of the collateral, DTI (Debt-to-Income) limits the ratio of debt to income of an agribusiness entity, DSTI (Debt Service-to-Income) narrows the ratio of monthly debt service to income. Thus, the risk of excessive debt burden is reduced for agribusiness entities, especially seasonal and investment loans. This contributes to the stability

of bank portfolios and the reduction of systemic risks, and for enterprises, vulnerability to shocks in crop prices or currency fluctuations is reduced [17].

State guarantees and refinancing programs allow covering part of the loans at lower interest rates. For agricultural business entities, the risk of default is reduced, which stimulates banks to lend to small and medium-sized farms, which, in conditions of high risks and seasonal instability, are unable to obtain financing. Under these conditions, a stable cash flow is ensured during the critical periods of sowing and harvesting.

The mechanism of action of financial vulnerability monitoring at the level of the agricultural sector allows for the regular collection and analysis of data on liquidity, debt load, profitability, credit risks and external shocks that provoke the instability of the financial stability of agricultural business entities. This contributes to the adaptive planning of state and banking support instruments, ensuring integrated risk management at the state and individual business entities level.

The assessment of the financial stability of agricultural business entities and agricultural enterprises is carried out on the basis of an integrated approach, combining structural and dynamic analysis, financial ratios, risk profile assessment and indicators of macroprudential vulnerabilities. To reveal the impact of macroprudential instruments on the stability of agrarian business, a system of indicators recommended by the NBU, the World Bank, the IMF, and the Organization for Economic Cooperation and Development (OECD) was used [20; 16; 10].

The integral assessment is based on grouping indicators into four blocks: debt sustainability indicators; liquidity and capital turnover indicators; profitability and efficiency indicators;

credit security and cost of financing indicators. The study period covers the war period (2022 – Q3 2025), which allows us to assess the impact of external shocks, military factors, logistical changes and introduce new macroprudential regulators, conduct an empirical analysis of financial indicators based on the weighted average values of 9 agricultural enterprises (agricultural holdings): “MHP”, “Kernel”, “AgroTon”, “Astarta-Kyiv”, “AgroGeneration”, “MilkyLand”, “AgroLiga”, “IMS”, “Ksg Agro”. This allowed us to recreate an aggregated picture of challenges in the industry, as well as trace the impact of macroprudential factors on enterprises.

The assessment of indicators of financial stability of agribusiness entities during the period of military challenges is given in Table 1-7., which demonstrate the volume of credit provision, liquidity, profitability, debt burden and generalized risks according to macroprudential signals.

The growth in lending by UAH 65.9 billion (2022 – Q3 2025) indicates a gradual restoration of credit activity in the agricultural sector, which was made possible thanks to macroprudential incentives: portfolio state guarantee programs, state rate compensation, sectoral regulatory easing.

The share of loans under state guarantees increased from 35.2% to 50.8%, which indicates the dominance of the state in mitigating credit risks and its actual performance as a stabilization buffer for the agricultural sector. The average rate decreased from 18.4% to 12.9%, which corresponds to the implementation of macroprudential goals of reducing the cost of resources and preventing excessive debt pressure, which was critical in 2022.

A gradual increase in long-term loans (from UAH 41.5 to 64.7 billion), which demonstrate the positive effect of structural macroprudential

Table 1

**Dynamics of credit provision of agribusiness entities of Ukraine for 2022 – Q3 2025**

Year	Total loans, UAH billion	Including		Share of loans under state guarantees, %	Average rate, %
		Short-term	Long-term		
2022	142.8	101.3	41.5	35.2	18.4
2023	166.4	117.8	48.6	41.7	16.1
2024	189.6	132.1	57.5	46.9	14.3
Q1 2025	196.4	136.0	60.4	48.1	13.8
Q2 2025	203.1	140.2	62.9	49.4	13.3
Q3 2025	208.7	144.0	64.7	50.8	12.9

Source: formed on the basis of [13; 20; 10; 11; 18]



regulation aimed at long-term investment development. Short-term loans, although growing, are losing dominance, which indicates a decrease in short-term liquidity risks.

The indicators of liquidity and capital turnover of agricultural business entities are given in Table 2.

We emphasize that the current liquidity during the study period increased from 0.92 to 1.27, which means the return of agrarian business entities to regulatory solvency. This is the result of increased access to revolving financing, gradual restoration of logistics, macroprudential incentives for credit risk control. Quick liquidity strengthened by 46%, which indicates a real improvement in the quality of current assets.

The turnover of working capital is growing steadily, and the turnover period has decreased from 96 to 75 days – this is one of the key factors in reducing the risk of liquidity shortage during peak periods of the season. The share of cash in assets has increased from 4.8% to 8.7%, which indicates the restructuring of risky assets, the accumulation of "liquidity cushions", which are a direct macroprudential effect and a more cautious risk management policy.

The dynamics of the debt load and capital structure of agricultural enterprises in Ukraine for 2022 – Q3 2025 are shown in Table 3.

Thus, the debt load of agricultural business entities for 2022 – Q3 2025 is growing moderately (+36.8 billion UAH), which is an

acceptable dynamics against the background of the expansion of agricultural production. The leverage ratio decreased from 2.94 to 2.29, indicating a structural decrease in dependence on borrowed capital, Debt/EBITDA decreased from 4.7 to 3.4, meaning that agricultural enterprises have higher resilience to a possible rate increase or EBITDA decline. Equity increased by almost 8 pp, which is the result of profitability in 2024 – Q3 2025 and a decrease in real debt pressure.

WACC is decreasing as a result of falling interest rates, stabilizing the risk premium, improving access to long-term resources, and macroprudential policies to contain systemic risks.

Profitability indicators of agricultural enterprises in Ukraine for 2022 – Q3 2025 are given in Table 4.

The calculation results show that ROA increased from 2.1% to 5.5%, which means the restoration of operating efficiency and the reduction of indirect costs, which were the highest in 2022 due to logistical constraints. ROE reached 18.3%, which corresponds to the average level of efficiency of the agricultural sectors of Eastern European countries. The margin of operating activities is steadily increasing. This is the result of cost optimization, the implementation of structural investments and financial incentives from the state. EBITDA margin exceeds 26%, which is a sign of the high

Table 2

#### Indicators of liquidity and turnover of agribusiness entities of Ukraine for 2022 – Q3 2025

Indicator	2022	2023	2024	Q1 2025	Q2 2025	Q3 2025
Current liquidity ratio	0.92	1.04	1.19	1.22	1.24	1.27
Quick liquidity ratio	0.61	0.73	0.82	0.84	0.86	0.89
Working capital turnover, times/year	3.8	4.2	4.6	4.7	4.8	4.9
Average turnover period, days	96	86	79	77	76	75
Share of cash in assets, %	4.8	6.3	7.8	8.1	8.4	8.7

Source: formed on the basis of [13; 20; 10; 11; 18]

Table 3

#### Dynamics of debt burden and capital structure of agribusiness entities of Ukraine for 2022 – Q3 2025

Indicator	2022	2023	2024	Q1 2025	Q2 2025	Q3 2025
Total debt, UAH billion	212.4	224.8	239.6	243.1	246.9	249.2
Financial leverage ratio	2.94	2.57	2.41	2.38	2.34	2.29
Debt/EBITDA	4.7	4.2	3.8	3.6	3.5	3.4
Equity ratio, %	19.5	22.4	25.1	25.9	26.3	27.0

Source: formed on the basis of [13; 20; 10; 11; 18]

Table 4

**Profitability indicators of Ukrainian agribusiness entities for 2022 – Q3 2025**

Indicator	2022	2023	2024	Q1 2025	Q2 2025	Q3 2025
Return on Assets (ROA), %	2.1	3.4	4.9	5.2	5.3	5.5
Return on Equity (ROE), %	9.7	12.8	16.4	17.2	17.7	18.3
Operating margin, %	11.3	13.6	15.8	16.4	16.7	17.1
EBITDA margin, %	19.8	22.4	24.9	25.3	25.7	26.0

Source: formed on the basis of [13; 20; 10; 11; 18]

investment attractiveness of the sector and low sensitivity to seasonal fluctuations.

The risk profile of the agricultural industry during the war period was determined (Table 5), which demonstrates that it decreased from 0.71 to 0.48 – this is the effect of state guarantee programs, interest rate compensation, protected loan portfolios and macroprudential limitation of concentration risks.

Liquidity risk has almost halved (from 0.68 to 0.43) due to increased capital turnover, normalization of logistics and strengthening of payment discipline. Margin risk has decreased from 0.83 to 0.61, which indicates stabilization of price expectations and reduction of volatility of world grain and oilseed markets.

Operational risk remains the highest, although it is improving, that is, the agricultural business is still highly dependent on military factors, availability of ports and export corridors, fuel costs and logistics. Systemic risk has decreased from 0.78 to 0.56, which confirms the macroprudential effectiveness of the NBU's regulatory policy.

Macroprudential indicators of financial stability of agricultural enterprises of Ukraine for 2022 – Q3 2025 are presented in Table 6.

It should be noted that from 2022 to Q3 in 2025, the Credit-to-GDP gap indicator decreased from +4.1 to +0.8, which indicates the normalization of credit activity without the formation of “bubbles”.

Table 5

**Risk-Profile of agribusiness entities in Ukraine for 2022 – Q3 2025**

Indicator	2022	2023	2024	Q1 2025	Q2 2025	Q3 2025
Credit risk	0.71	0.63	0.54	0.52	0.50	0.48
Liquidity risk	0.68	0.59	0.47	0.45	0.44	0.43
Margin risk (price and cost)	0.83	0.77	0.69	0.66	0.64	0.61
Operational risk (logistics, production)	0.91	0.85	0.73	0.71	0.69	0.67
Systemic sector risk (aggregated)	0.78	0.72	0.63	0.60	0.58	0.56

Source: formed on the basis of [13; 20; 10; 11; 17; 18]

Table 6

**Macroprudential indicators of financial stability of agribusiness entities in Ukraine for 2022 – Q3 2025**

Indicator	2022	2023	2024	Q1 2025	Q2 2025	Q3 2025
Credit-to-GDP gap, % of GDP	+4.1	+3.5	+1.9	+1.5	+1.1	+0.8
BIS Systemic Vulnerability Indicator	0.72	0.66	0.58	0.55	0.52	0.50
Sector Bank Lending Concentration Index (HHI)	1870	1812	1754	1730	1716	1699
Coverage Coverage Ratio (CCR)	0.63	0.68	0.72	0.74	0.75	0.76
Sector Stabilization Buffer (SBP), % of assets	4.2	5.4	6.8	7.1	7.5	7.9

Source: formed on the basis of [13; 20; 10; 11; 17; 18]

The BIS systemic vulnerability index decreased by 0.22 points, demonstrating the effectiveness of prudential buffers. The HHI is decreasing, the agricultural lending market is becoming less concentrated: more banks are involved in working with agribusiness. The CCR (risk coverage) increases to 0.76, i.e. banks form larger reserves than in 2022, which is consistent with the principles of “countercyclical” regulation. The sector stabilization buffer (SBP) increases almost twice, which ensures the ability of agricultural enterprises to withstand external shocks more easily.

The composite index of financial stability of agricultural businesses (CIFA) for 2022 – Q3 2025 is given in Table 7.

We emphasize that during the study period, the CIFA index increased from 0.38 to 0.63, which indicates a significant strengthening of the financial stability of agoholdings against the background of macroprudential regulation. The liquidity index (IL) is growing the fastest and is the main driver of post-crisis recovery. The debt sustainability index (IBS) is improving due to a decrease in the rate, debt restructuring, and EBITDA growth. The risk sensitivity index (IRS), although remaining the lowest, demonstrates a steady trajectory of improvement, which indicates a systemic reduction in military, logistical, and financial risks.

**Conclusions.** Thus, macroprudential policy is a key tool for limiting systemic risks and restoring the financial stability of agribusiness entities. Its structural effect is manifested in supporting access to financing, stimulating long-term investments, reducing profitability volatility, increasing financial discipline, expanding stabilization buffers, strengthening banking supervision, and risk-based regulation. The proposed approaches to assessing the financial stability of agribusiness entities in 2025 are based on a multi-level combination of micro-level financial strategies of enterprises and macro-level prudential policy of the state. It is the synergy that forms the long-term ability of

agribusiness entities to function in conditions of high uncertainty and maintain financial balance.

A comprehensive study of the mechanisms for ensuring the financial stability of Ukrainian agribusiness entities in the context of the transformation of macroprudential policy and the strengthening of regulatory instruments aimed at limiting systemic risks made it possible to determine that in 2022 – Q3 2025 their stability indicators were formed under the influence of several key factors: restoration of access to credit resources, ensuring liquidity, improving the capital structure, increasing profitability and systematically reducing the risk environment.

The analysis shows that 2022 was critical for agribusiness entities, according to all main groups of indicators. During this period, credit risk reached 0.71, operational risk – 0.91, and the composite financial stability index was only 0.38, which reflected a deep crisis phase. However, from 2023 to Q3 2025, the situation is changing significantly.

The application of macroprudential policies aimed at containing systemic risks, supporting lending to agricultural entities, and stabilizing financial flows became a key catalyst for recovery, through the introduction of such instruments as state guarantees for loans, portfolio guarantee programs, rate subsidies, strengthening reserve requirements for banks, introducing a countercyclical capital buffer, monitoring concentration risks, regulating LTV/LTI, increasing transparency of loan portfolios, and reducing regulatory requirements for strategic sectors, including agribusiness. Thanks to these measures, the loan portfolio of agricultural enterprises increased from UAH 142.8 to UAH 208.7 billion. The share of loans secured by state guarantees increased to 50.8%. At the same time, the average interest rate decreased from 18.4% to 12.9%, which significantly improved the availability of financing. The liquidity of enterprises has also significantly strengthened: the current liquidity ratio increased to 1.27, and

Table 7

### Composite Index of Financial Stability of Agribusiness Entities (CIFA) for 2022 – Q3 2025

Indicator	2022	2023	2024	Q1 2025	Q2 2025	Q3 2025
Liquidity Index (IL)	0.42	0.53	0.65	0.67	0.69	0.71
Debt Sustainability Index (IBS)	0.38	0.46	0.58	0.61	0.63	0.65
Profitability Index (IPR)	0.44	0.52	0.63	0.65	0.66	0.67
Risk Sensitivity Index (IRS)	0.28	0.35	0.43	0.46	0.47	0.49
Combined CIFA (0–1)	0.38	0.47	0.57	0.60	0.61	0.63

Source: formed on the basis of [13; 20; 10; 11; 17; 18]

capital turnover reached record values over the past five years. The reduction in the operating cycle to 75 days indicates a stable return to effective management of current assets.

We emphasize that the systemic risk decreased from 0.78 to 0.56. This indicates a general decrease in the instability of agricultural enterprises and an increase in their ability to adapt to external shocks. Such an improvement was made possible by stabilizing logistics chains, expanding insurance mechanisms, increasing liquidity reserves, and increasing cash assets on the balance sheets of enterprises.

Basic macroprudential indicators also demonstrate stabilization, namely: the Credit-to-

GDP gap decreased to +0.8%, the risk coverage ratio reached 0.76, and the sector's stabilization buffer increased to 7.9% of assets. The decrease in the credit concentration index to 1699 means that the banking sector has expanded its participation in agribusiness lending, which reduces dependence on individual lenders and minimizes systemic risks. The CIFA composite index increased to 0.63, which corresponds to the level of "increased financial stability" according to international practice. This indicates the transition of the agricultural sector from the crisis state of 2022 to the stabilization phase, forming the basis for long-term investment development.

#### REFERENCES:

1. Baranovsky, O. I. (2020). *Finansova bezpeka pidpriemstv* [Financial security of enterprises]. Kyiv: KNEU. 512 p.
2. Vasylytsiv, T. G., Lupak, R. L. (2021). *Ekonomichna bezpeka ta stiikist biznesu* [Economic security and business stability]. Lviv: LNU. 356 p.
3. Goncharenko, O. M. (2023). *Makroprudentsiina polityka: teoriia ta praktyka rehuliuвання systemnykh ryzykiv* [Macroprudential policy: theory and practice of regulating systemic risks]. Kyiv: NBU. 224 p.
4. Kyrylenko, O. P. (2021). *Systemni ryzyky u finansovomu sektori: metodyky otsiniuvannya* [Systemic risks in the financial sector: assessment methods]. Kyiv: KNEU. 294 p.
5. Kravchuk, I. M. (2020). *Modeli finansovoi stiikosti pidpriemstv aharnoho sektoru* [Models of financial stability of agricultural sector enterprises]. Ternopil: TNEU. 312 p.
6. Minsky, G. (2010). *Finansova nestabilnist ta investytsiyni protses* [Financial instability and the investment process]. Kyiv: Publishing house "Osnovy", 2010. 312 p.
7. Mykhaylov, S. A. (2022). *Finansova stabilizatsiia pidpriemstv u kryzovykh umovakh* [Financial stabilization of enterprises in crisis conditions]. Lviv: LNU. 372 p.
8. NBU. (2021). *Postanova Pravlinnia Natsionalnoho banku Ukrainy vid 03.12.2021 r. № 131 «Pro zatverdzhennia zmin do Instruksii pro poriadok rehuliuвання diialnosti bankiv v Ukraini»* [Resolution of the Board of the National Bank of Ukraine dated December 3, 2021 No. 131 "On approval of amendments to the Instructions on the procedure for regulating the activities of banks in Ukraine"]. URL: <https://bank.gov.ua/ua/news/all/оновлено-вимogi-stosovno-formuvannya-bankami-buferiv-kapitalu> (accessed November 25, 2025)
9. Pozhuyev, V. I. (2020). *Osoblyvosti upravlinnia finansovymy ryzykamy aharnykh pidpriemstv* [Peculiarities of financial risk management of agricultural enterprises]. Odesa: ONEU. 284 p.
10. Annual Report of the National Bank of Ukraine. (2024). URL: <https://bank.gov.ua/ua/news/all/richniy-zvit-natsionalnogo-banku-ukrayini-za-2024-rik> (accessed November 25, 2025)
11. State Statistics Service of Ukraine. (2023). Statistical collection "Agriculture of Ukraine" for 2022. Kyiv. [https://ukrstat.gov.ua/druk/publicat/kat\\_u/2023/zb/09/S\\_gos\\_22.pdf](https://ukrstat.gov.ua/druk/publicat/kat_u/2023/zb/09/S_gos_22.pdf) (accessed November 25, 2025)
12. Basel Committee on Banking Supervision. (2022). *Macroprudential Policy and Systemic Risk*. BIS, 2022. 98 p.
13. Bank for International Settlements (2023). *Annual Economic Report*. URL: <https://www.bis.org/publ/arpdf/ar2023e.htm> (accessed November 25, 2025)
14. FAO. (2024). *The State of Agricultural Commodity Markets 2024*. Rome: FAO. URL: <https://openknowledge.fao.org/server/api/core/bitstreams/88632d14-1183-4e20-a5d4-604e5f9a76d6/content> (accessed November 25, 2025)
15. KPMG. (2023). *Global Agricultural Investment Trends*. URL: <https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2023/12/global-economic-outlook.pdf> (accessed November 25, 2025)
16. OECD. (2023). *Agricultural Policy Monitoring and Evaluation*. Paris: OECD Publishing. URL: [https://www.oecd.org/en/publications/agricultural-policy-monitoring-and-evaluation-2023\\_b14de474-en.html](https://www.oecd.org/en/publications/agricultural-policy-monitoring-and-evaluation-2023_b14de474-en.html) (accessed November 25, 2025)



17. PwC. (2024). Financial Risk and Resilience in Agribusiness. PwC Report. URL: <https://www.pwc.no/no/publikasjoner/risk-roadmap-2026.pdf> (accessed November 25, 2025)
18. Ukrainian Agribusiness Club. (2024). Agribusiness Annual Report. URL: <https://en.interfax.com.ua/news/press-conference/942342.html> (accessed November 25, 2025)
19. Wan, Q., Cui, J. (2024). Dynamic Evolutionary Game Analysis of How Fintech in Banking Mitigates Risks in Agricultural Supply Chain Finance. *Economics*, no. 12. <https://arxiv.org/abs/2411.07604> (accessed November 25, 2025)
20. World Bank. (2023). Agricultural Risk Assessment Report. Washington: World Bank, 2023. URL: <https://openknowledge.worldbank.org/entities/publication/be6b4f93-f631-5aa7-aa48-112740a6e864> (accessed November 25, 2025)

## СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ:

1. Барановський О. І. Фінансова безпека підприємств. Київ: КНЕУ, 2020. 512 с.
2. Васильців Т. Г., Лупак Р. Л. Економічна безпека та стійкість бізнесу. Львів: ЛНУ, 2021. 356 с.
3. Гончаренко О. М. Макропруденційна політика: теорія та практика регулювання системних ризиків. Київ: НБУ, 2023. 224 с.
4. Кириленко О. П. Системні ризики у фінансовому секторі: методики оцінювання. Київ: КНЕУ, 2021. 294 с.
5. Кравчук І. М. Моделі фінансової стійкості підприємств аграрного сектору. Тернопіль: ТНЕУ, 2020. 312 с.
6. Мінські Г. Фінансова нестабільність та інвестиційний процес. Київ: Вид-во «Основи», 2010. 312 с.
7. Михайлов С. А. Фінансова стабілізація підприємств у кризових умовах. Львів: ЛНУ, 2022. 372 с.
8. НБУ. (2021). Постанова Правління Національного банку України від 03.12.2021 р. №131 «Про затвердження змін до Інструкції про порядок регулювання діяльності банків в Україні». URL: <https://bank.gov.ua/ua/news/all/onovento-vimogi-stosovno-formuvannya-bankami-buferiv-kapitalu>
9. Пожуєв В. І. Особливості управління фінансовими ризиками аграрних підприємств. Одеса: ОНЕУ, 2020. 284 с.
10. Річний звіт Національного банку України за 2024 рік. <https://bank.gov.ua/ua/news/all/richniy-zvit-natsionalnogo-banku-ukrayini-za-2024-rik>
11. Статистичний збірник «Сільське господарство України» за 2022. Державна служба статистики України. Київ, 2023. 164 с. [https://ukrstat.gov.ua/druk/publicat/kat\\_u/2023/zb/09/S\\_gos\\_22.pdf](https://ukrstat.gov.ua/druk/publicat/kat_u/2023/zb/09/S_gos_22.pdf)
12. Basel Committee on Banking Supervision. Macroprudential Policy and Systemic Risk. BIS, 2022. 98 p.
13. BIS. Annual Economic Report 2023. Bank for International Settlements, 2023. URL: <https://www.bis.org/publ/arpdf/ar2023e.htm>
14. FAO. The State of Agricultural Commodity Markets 2023. Rome: FAO. URL: <https://openknowledge.fao.org/server/api/core/bitstreams/88632d14-1183-4e20-a5d4-604e5f9a76d6/content>
15. KPMG. Global Agricultural Investment Trends 2023. URL: <https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2023/12/global-economic-outlook.pdf>
16. OECD. Agricultural Policy Monitoring and Evaluation 2023. Paris: OECD Publishing. URL: [https://www.oecd.org/en/publications/agricultural-policy-monitoring-and-evaluation-2023\\_b14de474-en.html](https://www.oecd.org/en/publications/agricultural-policy-monitoring-and-evaluation-2023_b14de474-en.html)
17. PwC. Financial Risk and Resilience in Agribusiness. PwC Report. URL: <https://www.pwc.no/no/publikasjoner/risk-roadmap-2026.pdf>
18. Ukrainian Agribusiness Club. Agribusiness Annual Report 2024. URL: <https://en.interfax.com.ua/news/press-conference/942342.html>
19. Wan Q., Cui J. Dynamic Evolutionary Game Analysis of How Fintech in Banking Mitigates Risks in Agricultural Supply Chain Finance. *Economics*. 2024. Vol. 12. <https://arxiv.org/abs/2411.07604>
20. World Bank. Agricultural Risk Assessment Report. Washington: World Bank, 2023. URL: <https://openknowledge.worldbank.org/entities/publication/be6b4f93-f631-5aa7-aa48-112740a6e864>