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## **FINANCIAL AND ECONOMIC SECURITY OF AGRICULTURAL ENTERPRISES IN THE UKRAINE**

Key words: agriculture, financial security, agricultural enterprises, financial ratios

**ABSTRACT.** The paper aims to assess the factors affecting the financial security of agrarian enterprises to create the proper conditions for the stable functioning of agricultural enterprises. The research period covers the years 2013-2016. Agrarian business management is currently affected by times of instability and uncertainty leading to an increase in economic and financial risks. The situation in agriculture requires addressing – forming a mechanism for the financial security of agricultural enterprises and developing a methodology for its evaluation. In the study, essence and structure of organizational support of financial security management as a critical component of economic security of agrarian enterprises was revealed. The main preconditions for providing financial security of agricultural enterprises through a prism of their financial status based on the achieved results of recent years are considered. The analysis of the leading indicators of financial security of agricultural development is carried out. Threats of an enterprise's financial security are identified. Identifying financial security threats contribute to the timely application of adequate tools to minimize the effects of risks or maximize the factors that positively impact the financial performance of agrarian enterprises.

### **INTRODUCTION**

In the context of current challenges, measures to strengthen the national security of the state, food security and financial security of agricultural development are being taken. Agriculture, as a sector of the domestic economy, requires protection on regional and international levels. This branch has an uneven developmental pattern that is explained by the peculiarities of natural climatic zoning. For example, in Western Ukraine, the successful development of potato production is possible but it is not possible in the mountainous regions of the Crimea, again highly profitable horticulture in the Kherson region is unprofitable in the industrial districts of Donbas. In addition, Svitlana Titova notes that financial security is responsible for the ability to withstand the threats that lead to a change in the structure of capital and the elimination of industry [Titova 2010].

One of the main arguments for the development of agriculture and strengthening its financial security is the existence of structural changes in different branches of the

Ukrainian economy, which occurred as a result of military-political events and made it impossible to develop heavy industry sectors, including the implementation of state regional programmes.

It should be noted that a feature of agriculture is a high level of risk in relation to other branches caused by characteristic features of production. Increasing the financial security level of agricultural enterprises is an important task taking into account such a feature.

## THEORETICAL BACKGROUND

Aleksey Sosnin and Pavlo Prygunov argue that the economic welfare and power of an enterprise are based on three factors – development, security and profit [Sosnin, Prygunov 2002]. Foreign scientists note that security is a top priority for all economic entities regardless of ownership, type of activity or level of development [H. Platt, M. Platt 2006, Raczkowski, Schneider 2013].

The unstable financial situation of agrarian enterprises causes their insolvency; the deterioration of its financial indicators lead to unplanned losses and a lack of a required level of profitability.

The need to solve financial security problems is explained by rapid changes in the Ukrainian economy, thus there is a need to take a worthy place in the international community, and a need to adequately respond to threats at different levels. Almost all over the world, as well as the Ukraine, there are negative consequences of the financial crisis. A significant decline in the demand for industrial products, primarily metallurgy, machinery, chemical and light industry is explained by the above mentioned situation. The world economy has not reached such stability yet, so security enhancement is considered one of the main prerequisites for the further development of the country. Taking into account a high level of Ukrainian economic instability, many scientists and practitioners are researching the financial security of economic entities.

Financial security of economic entities is quite a difficult economic category, and today there are various definitions of this category suggested by scientists. Financial security is the protection of financial interests of economic entities at all levels of financial relations; the provision of households, enterprises, organizations and institutions, regions, sectors and sectors of the economy and the economy in general by financial resources that are sufficient to meet their needs and fulfill financial obligations [Zagorodniy, Voznyuk 2007].

Ivan Alexandrov, Ekaterina Orlova and Aleksey Polovyan [2002] offered to evaluate the financial security of an enterprise on the basis of financial activities undertaken. Natalia Grinyuk [2008], as one of the representatives of the resource-functional approach, noted that financial and economic security is based on a level of business entity resource use. A number of scientists such as Andriy Fomenko [2010], Tetiana Kuzenko, Natalia Sablina and Olena Litovchenko [2010] determine the financial security of enterprises as a state of the most efficient use of enterprise resources. Such a state can be determined by financial indicators of liquidity, solvency, ROA, ROE, ROS and indicators of turnover [Menggang 2013].

RESEARCH MATERIALS AND METHODOLOGY

Quantitative methods of assessing the level of financial security of agrarian enterprises are based on the analysis of their economic activity. Some recommendations for calculating the level of economic security were developed and represented in order No. 1277 [MEDTU 2017]. These techniques can conventionally be divided into methods of assessing the financial condition and methods of assessing the market value and capitalization of agrarian enterprises. There are methods of assessing the financial situation of enterprises that differ from each other depending on the methodological approach and the indicators taken into account upon verification. Some methods include financial indicators that fully characterize the financial situation of enterprises. Such indicators, for example, can be grouped into three groups: property status; profitability and financial independence as well as sustainability [Wasilewska 2010].

The financial condition is a result of a system of internal and external factors of the functioning and development of the agrarian enterprise [Davydenko 2003]. It reflects the complex system of various interacting financial relations. Changing one element leads to changes in another element and the financial situation on the whole. Systematic analysis of the financial situation of an agrarian enterprise – solvency, liquidity and financial stability – is also necessary because the profitability of any enterprise and the size of profits are dependent on its solvency [Davydenko 2006, Brigham, Ehrhardt 2013].

Diagnostics include the development of measures for the effective management of assets and own and borrowed capital of an enterprise. The results of such diagnostics is

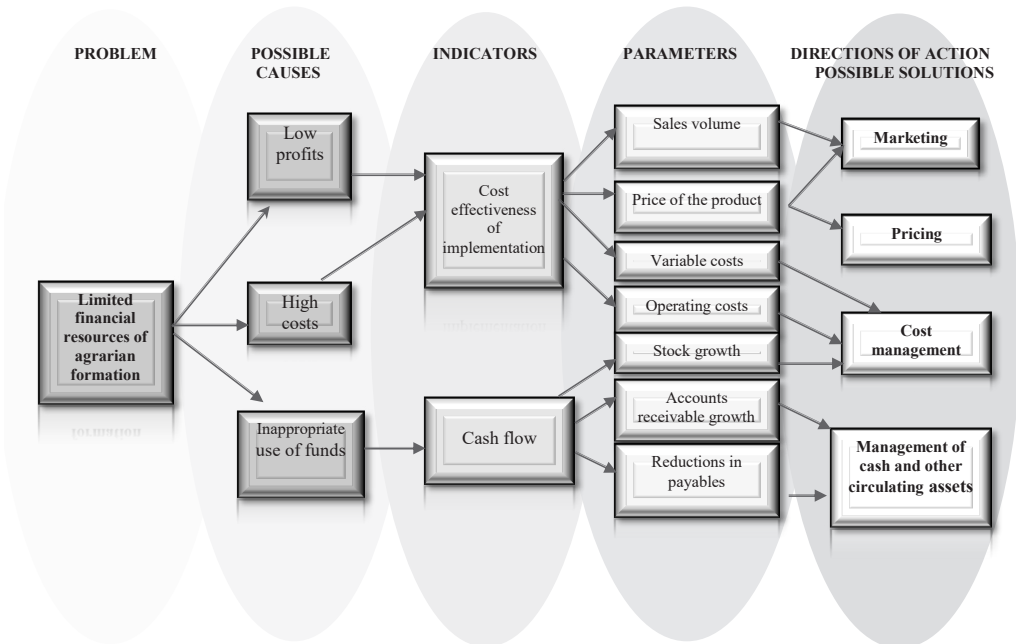


Figure 1. The results of agrarian formation diagnostics  
Source: [Davydenko 2003]

described in Figure 1. Well-founded management aimed at improving the financial situation can be built based on the correct diagnosis of an enterprise's financial condition. However, today, it is not possible to just take into account the financial results of enterprise activity. Many approaches are based on financial indicators which have been developed universally in practice. Benefits of such approaches are confirmed by wide application in international practice in management decisions.

The specific choice of such indicators and ratios may vary depending on the specifics of the branch, kinds of business activity, target guidance analysis and other factors.

Financial managers use financial ratios and indicators to control the activity of an enterprise, to ensure the efficient use of limited resources in agriculture as well as to prevent bankruptcy.

As a result of conducting research, among a large number of different methods used to determine the financial condition of agrarian enterprises, the following groups of financial indicators that most reveal all aspects of financial and economic activity can be presented:

- assessment of the property status of agrarian formation and the dynamics of its change;
- analysis of the financial results of agrarian formation activity;
- liquidity analysis;
- analysis of business activity;
- solvency analysis (financial stability);
- profitability analysis.

## RESEARCH RESULTS

Financial security of agriculture is the creation of conditions for financial self-sufficiency, reliability, independence, financial stability, competitiveness that ensures a high level of food security as well as an impact on national security. Financial security of agricultural development is formed by new agrarian and financial policy that satisfies general and specific principles of the implementation of state policy in the field of strengthening the country's economic development: the first group of principals include the priority of human and civil rights and freedoms, the priority of ensuring national interests; legality, unity, etc.; the second group – overcoming financial contradictions and balancing individual and national interests, ensuring the efficient allocation of financial resources and capital as well as government control over its use, ensuring macro and micro finance stability [Prokopyshak, Yarmolsky 2014].

The main way of creating enterprise financial security is the justified use of assessment methods aimed at making managerial decisions at all levels of financial management, planning and the implementation of financial and economic activity of an enterprise based on such an assessment. An important stage of financial security enterprise assessment is the choice of a set of indicators, based on which it is possible to diagnose the level of enterprise financial security as a prerequisite for the creation of financial security of agricultural development in general.

The assessment of financial security of agricultural development should be conducted in accordance with methodological recommendations for calculating the level of economic security of the country [Raczkowski, Schneider 2013]. These recommendations state that

financial security, as part of a country's economic security, is a situation of a country's financial system, which creates the necessary financial conditions for stable socio-economic development of the country, ensuring resilience to financial shocks and imbalances and creating preconditions for the preservation of integrity and unity of the national financial system. The next step of the research is determining the financial security of agriculture in the Ukraine. It is a two stage process.

The first stage is to determinate the financial indicators of agricultural enterprises that demonstrate financial security and agricultural indicators that reflect the sectoral peculiarities of the functioning of economic entities. The second stage is to analyze agricultural statistics and indicators. The result are represented in Tables 1 and 2. Analysis of the financial security of agriculture shows a negative tendency of development of agrarian enterprises. In particular, it should be noted that the coefficient of financial stability decreased to 0.28 (almost 2 times lower than the average during the last four years). This means that agricultural enterprises are dependent on external short financial sources and do not have good prospects for development. This situation is confirmed by the analysis of the liability structure of agricultural enterprises. So, in 2016, only 5% of liabilities are long-term. This means that agro businesses do not have "long-term money" that can be sources for long-term investments.

Table 1. Financial security indicators of agricultural enterprises, 2013-2016

Indicator	Year					Average indicator	Deviation (+/-)	
	2013	2014	2015	2016	2017		to 2013	to 2017
Equity to debt ratio	1.00	0.72	0.67	0.32	0.92	0.73	138.16	126.40
Current liabilities to total liabilities	0.72	0.72	0.83	0.95	0.88	0.82	88.29	106.70
Long-term liabilities to total liabilities	0.28	0.28	0.17	0.05	0.12	0.18	153.60	69.32
Financial stability (equity and long liabilities to total assets)	0.64	0.58	0.50	0.28	0.54	0.51	125.98	106.30
Net working capital to equity	0.52	0.63	0.63	0.58	0.51	0.57	91.04	89.04

Source: own calculation based on [UKRSTAT 2017, NBU 2017]

The high level of agricultural enterprises crediting is proved by the equity to debt ratio. In 2016, this indicator dropped to a dangerously low level of 0.32. This situation is mainly related to the crisis in the Ukrainian economy over the last ten years. The first peak of the crisis came at the end of 2008 and the second peak – in 2014. During this period, the Ukrainian currency was devaluated and there was a high level of inflation. Agrarian enterprises were forced to adapt to an aggressive environment and this also adversely affected their activities. Despite the fact that the nominal value of loans increased by more than 30% (from 2013 to 2016), the situation was quite difficult.

Table 2. Agricultural financial statistics and indicators, 2013-2016

Indicator	Year				Average indicator	Deviation (+/-)	
	2013	2014	2015	2016		to 2013	to 2016
Agricultural production expressed as gross value added (basic prices) [%]	9.9	11.7	14.2	13.7	12.4	80.0	110.7
Profitability level of all types of activity [%]	8.3	9.3	30.4	24.9	18.2	45.5	136.6
Profitability level of operating activities [%]	11.7	21.4	43.0	32.7	27.2	43.0	120.2
Enterprises which get net profit [percentage to total number]	80.3	84.7	88.9	88.3	85.6	93.9	103.2
Loans [bln UAH]	692.0	779.0	788.0	822.0	770.3	89.8	106.7
NPL (non-performing loans) [bln UAH]	128.6	239.5	271.1	281.9	230.3	55.8	122.4
Average Lending Rate in the Ukraine [%]	15.2	16.7	21.4	16.2	17.4	87.5	93.2
The share of NPL in total loans [%]	18.6	30.7	34.4	34.3	29.5	63.1	116.3
Agricultural loans [bln UAH]	41.0	55.0	48.0	55.0	49.8	82.4	110.6
NPAL (non-performing agricultural loans) [bln UAH]	2.4	6.0	5.9	6.1	5.1	47.1	119.6
Agricultural lending rate [%]	18.0	22.0	22.0	17.0	19.8	91.1	86.1
The share of NPAL in total agricultural loans [%]	5.9	10.9	12.3	11.1	10.1	58.7	110.4
Agricultural production expressed as gross value added (basic prices) [%]	9.9	11.7	14.2	13.7	12.4	80.0	110.7

Source: own calculation based on [UKRSTAT 2017, NBU 2017]

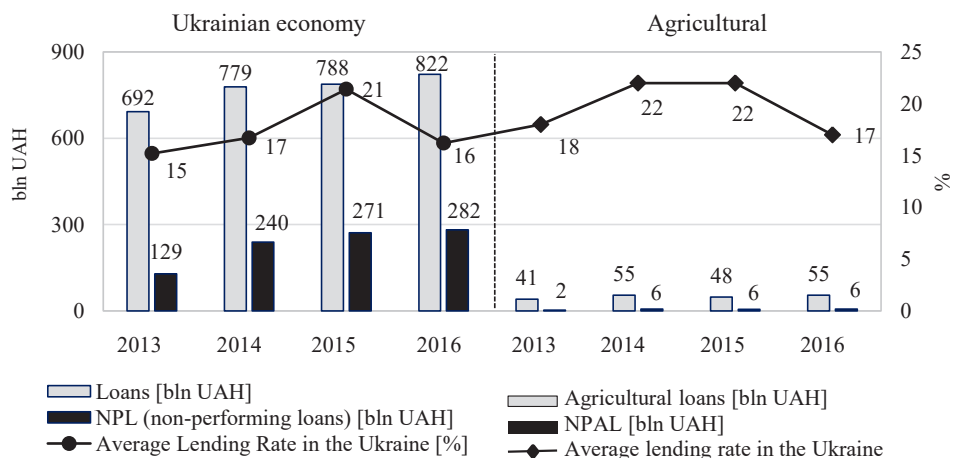


Figure 2. Bank Lending to the Ukrainian Economy and Agriculture

Source: own calculations based on [UKRSTAT 2017, NBU 2017]

At the same time, prices for agricultural products have increased to almost double. As results from the analysis, it is possible to confirm that the real value of received loans decreased by 25%. Since 2017, the situation has improved slightly, which can be proven by the value of financial security indicators of agricultural enterprises.

Analyzing Figure 2, it can be noted that a characteristic phenomenon of the economic crisis is a high level of NPL. Thus, in 2016, the level of non-performing loans was 34.3%. However, in agriculture, this indicator was only 11%. A comparison of overdue loans at macroeconomic and sectoral levels indicates a relatively high debt reliability of agricultural production. It gives rise to a decrease in interest rates for agricultural enterprises taking into account a relatively low level of risk of agriculture in comparison with other sectors of the Ukrainian economy.

Instead, today, the situation is reversed. As can be inferred from Table 2, the average interest rate is somewhat lower than for agricultural enterprises. So, in 2016, the average lending rate in the Ukraine was 16.2% and the interest rate for agriculture was 17.0%.

A similar trend is also observed by the analysis of industry specific indicators. At first glance, the situation is quite positive (Table 3). The value of agricultural production has more than doubled. Taking into account the high level of inflation during the period 2013-2016 (that was 202%!), it becomes clear that agriculture has had many negative effects of the economic crisis.

Additional confirmation of a negative tendency in this area is a slight increase in agricultural exports. Moreover, it should be understood that increasing the raw material component of exports is the easiest way for “developing agriculture”, but, in the long term perspective, it is one of the worst ways.

Table 3. Macroeconomic Indicators for Agriculture

Indicator	Year				Average indicator	Deviation (+/-)	
	2013	2014	2015	2016		to 2013	to 2016
Gross output of agricultural production [bln UAH]	128.70	160.50	236.00	277.20	200.60	64.16	138.19
Gross output of agricultural production per person	5.60	5.80	5.60	5.90	5.73	97.82	103.06
Gross output of agricultural production per 100 ha of agricultural land	681.30	708.30	674.20	712.10	693.98	98.17	102.61
Export of agricultural products per 100 ha of agricultural land [thous. USD]	48.80	47.60	31.70	35.30	40.85	119.46	86.41
Accounts receivable per 100 ha of agricultural land [thous. UAH]	474.80	739.00	731.20	723.00	667.00	71.18	108.40
Accounts payable per 100 ha of agricultural land [thous. UAH]	244.30	351.80	415.00	407.00	354.53	68.91	114.80

Source: own calculated based on [UKRSTAT 2017]

Table 4. Economic indicators in agribusinesses depending on size

Indicator	Tendency to increase from group I to V by
Revenue from the sale of agricultural products [mln UAH]	162 times
Profitability [%]	4.7 times
Revenues per employee [thous. UAH]	7 times
Annual payroll fund per employee [thous. UAH]	14%
Rent payment per 1 ha	30%

Source: [Borodina 2018]

The Institute of Economics and Forecasting conducted research and established that there are unequal changes of economic and social indicators in medium and large agricultural enterprises. It should be added that the activity indicators of agrarian enterprises, including financial results, depend significantly on the size of enterprises (I group includes enterprises with 290 ha agricultural land and less, and V – more than 6,600 ha).

Nowadays, it can be stated that agrarian enterprises require significant state support to create economic, legal and institutional preconditions of agricultural financial security.

## CONCLUSIONS

Taking into account the inflation and devaluation of the Ukrainian national currency, indicators such as the high level of profitability ratios, an increase in credit volumes and an increase in agricultural production have completely different values – profitability becomes unprofitability, the real value of loans is much lower than its nominal value, and the sales revenue is not enough for simple reproduction. Only the effective implementation of a system of measures by the government can change the situation related to financial security in agriculture, in particular:

1. The cessation of inflation processes at a level of 3-5% per annum and the stability of the exchange rate must be a necessary prerequisite for the development of agriculture. No one branch can function or develop in such an unstable economic situation (as previously noted, inflation during the period from 2013 to 2016 was 202%).
2. The development of small and medium-sized agricultural enterprises by directing at least 60% of state support funds to SMEs. The previous state policy supported the development of agroholdings. Big business not only has to provide food security of the country, Ukrainian agroholdings should also implement social policies for rural development. Instead, big companies focused on growing intensive low-yield crops (mainly grain and oilseeds), that significantly worsened land resources and did not take care of social issues.
3. The creation of a credit system for small and medium-sized agricultural enterprises with relatively low interest rates. Nowadays, agroholdings have free access to the credit resources of Ukrainian and foreign banks. However, small enterprises are forced to function under other circumstances. In 2019, the interest rate remains at a prohibitively



high level – over 17% per annum. Preferential loans granted to enterprises within the state support cannot solve the problems. State financial support for agriculture is also inefficient – territorial and sectoral distribution of state financial support is based on lobbying. In 2017, more than 50% of financial resources were received by the largest poultry farms of the Kyiv region!

4. Creating an investment climate. Loss of territory, hostility and the difficult financial situation have significantly reduced foreign capital and direct investment, particularly in agriculture, by more than a third (in 2013 – USD 776.9 million, in 2016 – USD 500.1 million). The share of direct investment in agriculture is only 1.3% of the total. Taking into account the problematic economic situation in the Ukraine, creating the above-mentioned conditions could have a positive impact on the financial security of agricultural enterprises and agriculture in general.

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## BEZPIECZEŃSTWO FINANSOWE I EKONOMICZNE PRZEDSIĘBIORSTW ROLNICZYCH NA UKRAINIE

Słowa kluczowe: rolnictwo, bezpieczeństwo finansowe, przedsiębiorstwa rolnicze, wskaźniki finansowe

### ABSTRAKT

Celem artykułu jest ocena czynników wpływających na bezpieczeństwo finansowe przedsiębiorstw rolniczych, w celu stworzenia odpowiednich warunków dla ich stabilnego funkcjonowania. Badania dotyczyły lat 2013-2016. Obecne warunki zarządzania przedsiębiorstwami rolniczymi charakteryzują się niestabilnością i niepewnością. Prowadzi to do wzrostu ryzyka ekonomicznego i finansowego. Sytuacja w rolnictwie wykazuje w tym zakresie duże problemy, dlatego stworzenie mechanizmu bezpieczeństwa finansowego przedsiębiorstw rolniczych i opracowania metodologii oceny w tym zakresie jest ważne. Omówiono istotę i strukturę wsparcia organizacyjnego zarządzania bezpieczeństwem finansowym, jako kluczowego elementu bezpieczeństwa ekonomicznego przedsiębiorstw rolniczych. Pod uwagę brano główne warunki zapewnienia bezpieczeństwa finansowego przedsiębiorstwom rolniczym, w oparciu o osiągnięte wyniki z ostatnich lat. Dokonano oceny głównych wskaźników bezpieczeństwa finansowego, ważnych dla rozwoju jednostek rolniczych. Zidentyfikowano zagrożenia dla bezpieczeństwa finansowego przedsiębiorstw rolniczych. Przeprowadzone badania przyczyniają się do prawidłowego stosowania odpowiednich narzędzi, w celu minimalizacji skutków zagrożeń prowadzonej działalności lub maksymalizacji czynników pozytywnie wpływających na wyniki finansowe przedsiębiorstw rolniczych.

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