

The application of tools for assessing the financial security of enterprises

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Abstract

A key task in ensuring the viability of enterprises is the constant monitoring of their financial condition. Due to significant dynamics of the business environment and the lack of sufficient research on minimising the negative consequences thereof, there is an urgent need to study this issue. We assumed that the selection of several main indicators of enterprise activity is sufficient for the initial assessment of the level of financial security. Given these facts, the purpose of this study is to develop a method for the express assessment of financial security of an enterprise by forming a 3D matrix, which will facilitate the rapid identification of possible threats and the application of necessary measures. The developed matrix is formed on the basis of reasonably selected indicators, in particular financial stability, profitability, and liquidity. The calculations were carried out for Ukrainian enterprises grouped by the type of their economic activity. As a result, they were classified by the level of their financial security, with groups of most companies being at an acceptable level. This method may be a tool at the initial stage of estimation of possible threats to financial security. The results of the study are important for the evaluation of the financial security of enterprises in the short term and the ability to take timely measures to counteract possible threats.

Key words

financial security, liquidity, profitability, financial stability, assessment of financial security of enterprises.

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Introduction

In today's world, globalisation is accompanied by rapid changes in the conditions of

functioning of enterprises. This relates mostly to threats to their financial interests, as well as

a significant level of financial risk. As a result, the development of principles for the effective monitoring and evaluation of enterprise security is becoming especially relevant. It is necessary to define and substantiate key indicators of financial security and clarify the allowable limits which would help to establish the appropriate level of the financial condition and security of a company. Due to constant changes in the external environment of business entities and the lack of sufficient research on minimising their negative consequences, there is a need to study this problem.

The financial security of firms is a key sphere of national security because, due to the efficiency of enterprises, the necessary resources are formed to counter threats from the external and internal environments of the socio-economic system (Delas et al., 2015; Dixon, 1998; Ivanisevic et al., 2020). The urgency of the work is due to the fact that the concept of financial security is universal, reflecting consistency in the balance of interests of the enterprise and other parties from the surrounding environment with which the firm forms relationships (Pietnoczka, 2018; Elton and Gruber, 1972; Hung et al., 2009). Financial security is also a main component of economic security (Berzhanir, 2014; Blank, 2001; Kwilinski et al., 2020; Shpak et al., 2021).

The point of strengthening the financial security of a firm is to achieve the highest efficiency and stability in its operations, which is possible as a result of the timely detection of threats to enable a company to successfully overcome them. Accordingly, it is necessary to constantly monitor the situation to anticipate them. At the same time, the issues of formation of methodological frameworks to assess financial security, despite their importance to businesses today, are still insufficiently addressed. Given the deliberations presented, the purpose of our study is to develop a method for the express assessment of the financial security of enterprises by forming a 3D matrix which will facilitate the rapid identification of possible threats and the ap-

plication of necessary measures. This method allows one to monitor and analyse the effectiveness of management decisions, forecast financial results and determine reserves for improving financial management.

The rest of our paper is structured as follows. The next section presents the literature review which is followed by a description of the methodology used in our study. We then present the results of our research and discussion. Finally, we present the conclusions resulting from our work.

1. Literature review

The main purpose of ensuring the financial security of a firm is to support its stability and ensure the efficiency of its operations and the potential for future development. Most studies argue that the volatile level of efficiency of the financial security management system is the cause of crises, focusing on combating the negative effects of external and internal factors rather than the prevention and timely neutralisation of potential risks and threats (Oleksiuk, 2018). Meanwhile, its evaluation involves determining the level of solvency of the firm, the optimal structure and efficiency of its capital, as well as the evaluation of indicators that reflect various aspects of its financial and economic activities.

Amosov (2011) and Butler (2002) interpret the essence of a firm's financial security either as financial stability, protection from threats, or indeed both. In some research (e.g. Cornett and Saunders, 2003; Halkiv et al., 2020) the financial security of the firm is considered to be protection against possible financial losses and the prevention of bankruptcy, the most effective utilisation of corporate resources, etc. In particular, Pasternak-Malicka et al. (2021) stated that among the main causes of corporate bankruptcy are financial factors, including insufficient income from sales, changes in the economic environment and inefficient management. Furthermore, Jurczak et al. (2021) empha-

sis the importance of preventing problems with competitiveness management and company development through factor analysis. However, the application of this method is complex and subject to requirements for the amount of input data. In turn, Nasser (2021) claims that an important element of company development is compliance with the principles of sustainability. Thus, the author confirms the importance of ensuring the sustainability of the firm, including financial sustainability. One may even state that problems associated with the assessment of financial security, which need to be addressed as a matter of priority, are inherent in most enterprises (Kwilinski et al., 2020). It is also worth emphasising that, according to Florek-Paszowska et al., (2021), every company strives to create a unique model during its life cycle that will help increase its adaptability and resilience and counter potential threats in an era of digital transformation and turbulent times. However, bankruptcy risk and the quality of reported profits, along with other aspects of financial performance, vary throughout the company's life cycle (Durana et al., 2021), and are still underresearched.

It is important to consider a number of approaches to the definition of "financial security", as a choice of indicators by means of which to assess its level depends on it. The concept of "financial security" is relatively new (Shadrin and Leonov, 2018), as it was introduced into scientific practice only in the most recent decade. Therefore, it is being considered comprehensively and in detail by many researchers who analyse different aspects. In particular, Wu (2006) substantiates the provision of financial security on the basis of a stylised model, which is based on a pure jump Lévy process. In turn, Suwanrada (2009) investigated financial security from the point of view of the availability of funding sources. Howell et al. (2013) studied the dependence of financial security on economic development. Also, Lyons et al. (2018) investigated the topic based on the assessment of the impact of de-

mographic factors. Furthermore, Thompson (2017) added that the issue of time is of particular importance for the financial security of a firm. In a dynamic environment, it is crucial to make quick and correct decisions (Sedliačiková et al., 2021). This in turn complicates its management.

In general, one can state that financial security is a state of the enterprise that: i) allows one to provide financial balance, stability, solvency and liquidity in the long run; ii) ensures sufficient financial independence; iii) meets the financial needs for sustainable expanded reproduction; iv) means a company is able to withstand existing and potential dangers that can cause financial damage to a company, affect the structure of equity and lead to the liquidation of the company as a result; v) provides sufficient flexibility in making financial decisions, protecting the financial interests of business enterprise activity with an emphasis on assessing its financial condition.

Another important area of research associated with company financial security is the analysis of enterprise performance based on the type of economic activity. It can identify the most important types of threats to the loss of financial security and, consequently, improve the reliability and quality of management decisions related to financial security. Among the performance indicators of enterprises, profitability indicators are considered to be the key. Their management is strategically oriented and takes place in conditions of uncertainty, as profits and expenses change randomly over time (Streltsova et al., 2019, 556). Profitability has a significant impact on the level of financial security. Dankiewicz et al., (2020) show that managers often pay minimal attention to managing different types of risks. The authors provide recommendations for the development of input tools for risk management, primarily methods for its prevention. However, most enterprises do not have sufficient methods by which to ensure the effectiveness of management decisions, especially in the field

of financial security. In this context, Shpak et al., (2019) offer a business case for managers to help improve the efficiency of decision-making and the use of resources to increase competitiveness. The essence therein is to model the sensitivity of competitiveness to the relevant complex factors. This can help ensure a high level of financial security.

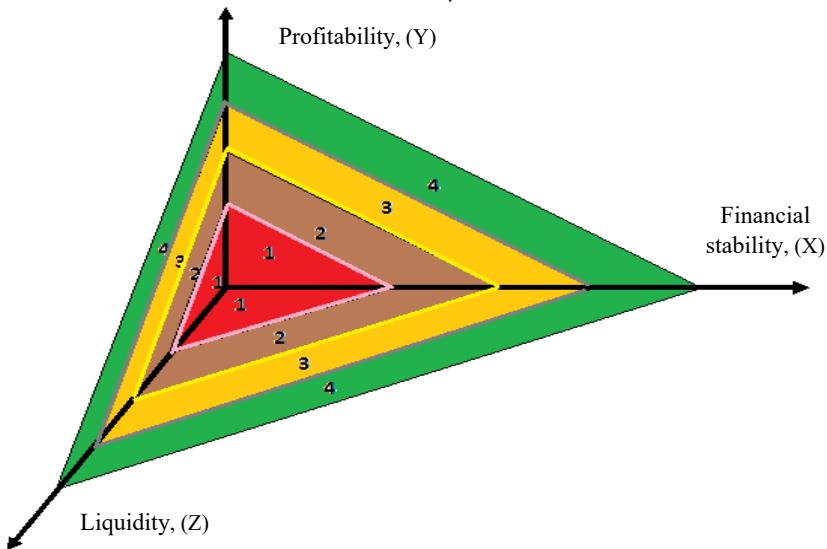
The choice of financial stability indicators is based on the results of research by Betaneli et al. (2021) on the need to analyse the financial stability of enterprises in the digital economy. The practical value of this study lies in the ability to identify strengths and weaknesses, threats and risks for the enterprise. Therefore, we believe that, for the financial security of a firm, it is important to ensure its stability. In turn, the choice of liquidity indicators is based on the results of a study by Lesáková et al. (2020), where the importance of said indicators was analysed based on the example of machine-building enterprises (a sample of 398 enterprises). Low liquidity significantly affects a company's activity, and liquidity analysis is a prerequisite for choos-

ing measures to improve financial security. The use of liquidity indicators can contribute to the formation of a system of criteria for making sound management decisions. After all, the effective management of the financial security of a firm can strengthen its competitive advantages and ensure the rational use of time and resources.

2. Methodology

To assess the financial security of a firm, a method of express assessment is proposed, which can help to facilitate the rapid identification of possible threats and measures to counter them. The method is based on the development of a 3D matrix for assessing the financial condition of the company by means of indicators such as financial stability, profitability, and liquidity (Figure 1). Besides those mentioned above, another reason for choosing these indicators is that they characterise the efficiency of resources of an enterprise, and thus its sustainable development. In practice, these indicators are closely linked.

Figure 1. 3D matrix for the express assessment of the financial condition of an enterprise



Source: own elaboration based on Blank (2001) and Amosov (2011)

The coordinate axes of the 3D matrix for the express assessment of the financial condition of a firm reflect indicators such as financial stability (X-axis), which characterises different states from a state of crisis to financial stability; the profitability of the firm (Y-axis), which reflects the results of the firms from inefficiency to a high level; and liquidity (Z-axis), which characterises the ability of the firms to cover their liabilities.

The analysis of these indicators helps to comprehensively assess the financial security of a firm. After all, any company must have sufficient financial resources to pay cur-

rent bills on time. An enterprise that is unable to meet this condition either recovers financially or goes bankrupt. The proposed 3D matrix provides for the grouping of the firms based on the results of the express assessment of their financial condition. Group 1 includes companies in a deep financial crisis. The second group includes financially unstable firms. Businesses with a satisfactory level of profitability (although some indicators are below the recommended values) are included in the third group. Accordingly, Group 4 includes firms with good prospects for further development (Table 1).

Table 1. Grouping of the firms according to the results of the express assessment of their financial condition

Groups of enterprises	Indicators	Necessary measures
Group 1 The company is in a deep financial crisis	(X) – Financial crisis (Y) – No profitability (Z) – No liquidity	It is necessary to look for other sources of debt coverage and change the direction of enterprise management
Group 2 The company is financially unstable	(X) – Unstable financial condition (Y) – Low profitability (Z) – Low liquidity	Leading the company out of the crisis requires significant changes in its financial and economic activities
Group 3 The company has a satisfactory level of profitability, although some indicators are below the recommended values	(X) – Normal financial stability (Y) – High profitability (Z) – Acceptable liquidity	Improving some performance indicators
Group 4 The company has good prospects for further development	(X) – Absolute financial stability (Y) – High profitability (Z) – High liquidity	Maintaining the activities of the enterprise at the appropriate level

Source: own elaboration based on a 3D matrix for assessing the financial condition of enterprises

To determine which group a company should be placed in, the calculation of the abovementioned indicators is performed (Podolchak et al., 2014):

1. Financial stability (X-axis). This is one of the main characteristics of enterprises' financial condition, which to some extent includes indicators of liquidity and solvency

(Dolgikh and Slepuhina, 2019). To characterise the activity and financial conditions of enterprises, absolute indicators are used in most cases, in particular the indicator of financial stability (Dikareva and Kankhva, 2017). Criteria for determining the financial condition of enterprises in terms of stability are presented in Table 2.

Table 2. Criteria for the analysis of the financial stability of enterprises

Financial stability	Criteria			
	Absolute financial stability	Normal financial stability	Unstable financial condition	Financial crisis
	$I_f \leq S_o$	$I_f \geq S_o$	$I_f \geq S_{lt}$	$I_f \geq S_{tv}$
	$\Delta S_o \geq 0$	$\Delta S_o \leq 0$	$\Delta S_o \leq 0$	$\Delta S_o \leq 0$
	$\Delta S_{lt} \geq 0$	$\Delta S_{lt} \geq 0$	$\Delta S_{lt} \leq 0$	$\Delta S_{lt} \leq 0$

Source: own elaboration based on Dolgikh and Slepuhina, 2019

Two groups of calculations are allocated for the analysis of absolute indicators of financial stability. The first group includes indicators that reflect the different level of coverage of certain types of sources of inventory formation (I_f): own sources of stock formation (S_o); own and long-term sources of stock formation (S_{lt}); and the total value of the key sources of stock formation (S_{tv}).

The second group includes indicators that reflect the provision of the stocks with the sources of their formation: excess or lack of working capital (ΔS_o); excess or lack of own and long-term sources of stock formation (ΔS_{lt}); and excess or lack of the total value of the key sources of stock formation (S_{tv}) (Bashnianyn and Lintur, 2015) (Table 1).

2. Profitability (Y-axis). In modern conditions, one of the main goals of enterprises, regardless of its type of activity and form of ownership, is to obtain maximum profit,

which is impossible without effective management. In order to analyse the efficiency of the enterprise, suitable indicators of profitability and profitibility which are key to determining the efficiency of activities are used (Reid, 1993; Illés et al., 2015; Karkovska, 2009).

To assess the level of profitability (P), the conditions of its division into types are proposed:

1. No profitability: $P \geq 0$;
2. Low profitability: $P > 0$; $P \leq 1$;
3. High profitability $P \geq 1$; $P \uparrow$.

3. Liquidity (Z-axis). To assess the degree of liquidity of a company, different relative liquidity ratios, which differ in terms of the set of liquid assets that characterise the ability to cover short-term liabilities, are used (Lesáková et al., 2020). Evaluation criteria are presented in Table 3.

Table 3. Criteria for assessing the degree of liquidity of enterprises

	Criteria				
	Absolute	Acceptable	Low	Null	
Total liquidity	$A1 \geq L1$	$A1 \leq L1$	$A1 \leq L1$	$A1 \geq L1$	$A1 \leq L1$
	$A2 \geq L2$	$A2 \geq L2$	$A2 \geq L2$	$A2 \geq L2$	$A2 \geq L2$
	$A3 \geq L3$	$A3 \leq L3$	$A3 \geq L3$	$A3 \geq L3$	$A3 \leq L3$
	$A4 \leq L4$	$A4 \leq L4$	$A4 \geq L4$	$A4 \geq L4$	$A4 \geq L4$

Source: own elaboration based on Blank (2001)

Liquidity analysis is the comparison of assets, grouped by the level of liquidity, with liabilities, grouped by maturity.

Groups of liabilities:

- L1 – the most urgent liabilities;
- L2 – short-term liabilities;
- L3 – long-term liabilities;
- L4 – fixed liabilities;

Asset groups and their liquidity:

- A1 – the most liquid assets;
- A2 – quick-to-sell assets;
- A3 – slow-to-sell assets;
- A4 – hard-to-sell assets.

Critical values of indicators characterise the minimum allowable level of security, which means the transition of the enterprise to the area of activity, accompanied by the inefficient use of corporate resources and the emergence of negative impacts of various types. Negative influences may be either subjective (external and internal) or objective (force majeure and similar circumstances). Normal values of indicators determine the potential of the enterprise, the degree of which is sufficient to ensure its ability to expand production and the stability of operations both in the current period and in the future (Shpak et al., 2020).

The proposed method of express assessment of financial security allows one to identify threats to the enterprise (a lack of investment and financial resources; difficulties in obtaining loans; a lack of reserves; a lack of economically sound programmes and projects; a lack of access to market information; a limited market; low level of management; accounting, etc.).

3. Research results and Discussion

3.1. The efficiency of Ukrainian enterprises

The effectiveness of management of any component of economic security is determined by financial indicators to the greatest extent (Herath and Herath, 2014; Ponomarenko et al., 2019). The subject of our study is financial security, which is a component of economic security as well as a result thereof. Thus, financial stability characterises not only the financial security, but also the economic security of an enterprise to a large extent (Prokopenko et al., 2019; Harmantzis and Malek, 2004).

The proposed method of express assessment of financial security was applied to Ukrainian enterprises, grouped by the type of economic activity, on the basis of statistical information from the State Statistics Service of Ukraine (Table 4).

Table 4. Financial stability of Ukrainian firms (grouped by type of economic activity) in 2019, million USD

Types of economic activity	Own sources of stock formation	Own and long-term sources of stock formation	Total value of the key sources of stock formation	Excess or shortage of working capital (So)	Excess or lack of own and long-term sources of stock formation (Δ St)	Excess or lack of the total value of the key sources of stock formation (Δ Stv)
Agriculture, forestry and fishery	5850.9	18,911.7	20,585.1	-1413.7	11,647.1	13,320.5
Industry	-28,983.8	12,674.4	20,969.9	-43,904.5	-2246.3	6049.2
Construction	-4856.7	16.1	482.8	-7336.9	-2464.1	-1997.5
Wholesale and retail trade; repair of motor vehicles and motorcycles	-8951.3	29,014.6	34,453.5	-24,376.8	13,589.2	19,028.0

Types of economic activity	Own sources of stock formation	Own and long-term sources of stock formation	Total value of the key sources of stock formation	Excess or shortage of working capital (ΔSo)	Excess or lack of own and long-term sources of stock formation (ΔStv)	Excess or lack of the total value of the key sources of stock formation (ΔStv)
Transport, warehousing, postal and courier activities	-6128.7	-1594.8	-1336.4	-7771.4	-3237.6	-2979.2
Temporary accommodation and catering	-975.5	-690.5	-632.7	-1074.8	-789.8	-732.0
Information and tele-communications	-1881.8	-634.1	-392.9	-2050.4	-802.6	-561.5
Financial and insurance activities	227.5	5661.1	5965.8	123.8	5557.4	5862.1
Real estate transactions	-13,583.0	-7638.9	-6767.9	-14,231.3	-8287.2	-7416.2
Professional, scientific and technical activities	-3601.3	2469.8	3918.3	-6765.7	-694.6	753.8
Activities in the field of administrative and support services	-2078.6	-3.3	205.8	-2310.1	-234.8	-25.6
Education	-2.1	16.2	16.4	-5.5	12.8	13.0
Health care and social assistance	-215.5	-129.6	-120.6	-258.8	-172.9	-163.9
Arts, sports, entertainment and recreation	-649.4	-433.6	-390.9	-668.9	-453.2	-410.5
Provision of other types of services	-54.6	21.4	29.8	-75.4	0.6	9.0
Total	-65,884.1	57,660.5	76,985.8	-112,120.5	11,424.0	30,749.4

Source: own elaboration based on State Statistics Service of Ukraine data

Based on the indicators calculated in Table 4, the activity of the firms is characterised by a lack of working capital. Therefore, in this case it is considered that the total value of the key sources of stock formation is not sufficient. Accordingly, the balance of payments can be ensured only through deferred payments.

In 2019, the indicator (ΔSo) is negative (Table 4), which is a positive situation, as absolute financial stability involves the use of only one's own sources of funding. However, it is with the use of borrowed capital (ΔStv) that it becomes possible to take advantage of opportunities to increase production and increase the profitability of enterprises accordingly.

In 2019, there was an unstable financial situation, in which it is considered that equity and long-term liabilities are not enough to form stocks. The unprofitability or the minimum level of profitability of some groups of enterprises in 2019 (Table 5) indicates the low level of their financial security and an inability to effectively counter most external and internal threats. Therefore, the problem of financial security is acute. According to the proposed scale, the assessment of profitability is somewhat volatile for the analysed period. However, most analysed firms are highly profitable.

Table 5. Profitability of Ukrainian firms (grouped by type of economic activity) in 2019

Types of economic activity	Costs of production of goods/services, \$ million	Financial result (balance), \$ million	Profitability (P), %
Agriculture, forestry and fishery	13,890	2459	18
Industry	67,131	2004	3
Construction	6458	-179	-3
Wholesale and retail trade; repair of motor vehicles and motorcycles	12,984	924	7
Transport, warehousing, postal and courier activities	12,317	-600	-5
Temporary accommodation and catering	683	63	9
Information and tele-communications	3518	430	12
Financial and insurance activities	430	430	100
Real estate transactions	2147	600	28
Professional, scientific and technical activities	3410	1156	34
Activities in the field of administrative and support services	1864	-129	-7
Education	95	3	4
Health care and social assistance	532	5	1
Arts, sports, entertainment and recreation	320	-82	-26
Provision of other types of services	120	-1	-1
Total	125,900	6027	5

Source: own elaboration based on State Statistics Service of Ukraine data

Liquidity ratios (Table 6) reflect the financial security of enterprises in the long term.

Table 6. Analysis of liquidity indicators of Ukrainian firms (grouped by type of economic activity) in 2019

Types of economic activity	Cash (A1), \$ million	A-L comparison	Current liabilities (L1), \$ million	Receivables (A2), \$ million	A-L comparison	Short-term loans (L2), \$ million	Stocks (A3), \$ million	A-L comparison	Long-term liabilities (L3), \$ million	Non-current assets (A4), \$ million	A-L comparison	Equity (L4), \$ million
Agriculture, forestry and fishery	717.6	>	369.9	13,060.9	>	1673.3	7264.6	>	39.3	9732.6	<	15,583.5
Industry	3141.9	<	64,487.9	41,658.2	>	8295.5	14,920.7	<	19,766.5	48,606.2	>	19,622.4
Construction	435.5	<	3178.1	4872.8	>	466.6	2480.3	>	1238.9	4138.7	>	-717.9
Wholesale and retail trade; repair of motor vehicles and motorcycles	4010.3	<	34,094.7	37,965.9	>	5438.8	15,425.5	>	6673.7	9888.2	>	936.8

Types of economic activity	Cash (A1), \$ million	A-L comparison	Current liabilities (L1), \$ million	Receivables (A2), \$ million	A-L comparison	Short-term loans (L2), \$ million	Stocks (A3), \$ million	A-L comparison	Long-term liabilities (L3), \$ million	Non-current assets (A4), \$ million	A-L comparison	Equity (L-4), \$ million
Transport, warehousing, postal and courier activities	1218.2	<	6926.7	4533.9	>	258.4	1642.8	<	4669.2	28,006.1	>	21,877.5
Temporary accommodation and catering	90.4	<	356.4	285.0	>	57.8	99.3	<	467.4	878.6	>	-96.9
Information and tele-communications	593.3	<	1719.8	1247.8	>	241.1	168.5	<	1294.5	2900.6	>	1018.7
Financial and insurance activities	829.6	<	1225.5	5433.6	>	304.7	103.7	<	2096.7	4212.9	<	4440.4
Real estate transactions	500.5	<	3739.0	5944.1	>	871.0	648.3	<	2962.8	12,717.4	>	-865.7
Professional, scientific and technical activities	1273.0	<	9398.1	6071.1	>	1448.5	3164.4	>	1238.2	21,045.8	>	17,444.5
Activities in the field of administrative and support services	158.4	<	1079.6	2075.3	>	209.2	231.4	>	206.3	9971.6	>	7893.0
Education	14.6	>	13.7	18.3	>	0.2	3.4	>	1.1	75.9	>	73.8
Health care and social assistance	34.9	<	143.8	85.9	>	9.0	43.3	<	110.4	382.0	>	166.5
Arts, sports, entertainment and recreation	25.0	<	334.8	215.7	>	42.7	19.5	<	276.9	983.6	>	334.2
Provision of other types of services	14.4	<	41.6	76.1	>	8.4	20.8	>	3.1	148.3	>	93.6
Total	13,057.7	<	127,109.3	123,544.6	>	19,325.3	46,236.4	>	41,044.8	153,688.7	>	87,804.6

Source: own elaboration based on State Statistics Service of Ukraine data

Absolute liquidity is observed for only one type of activity, namely agriculture, forestry and fishery. However, given the high inflation, it is impractical to fulfil the first condition, i.e. to keep a significant share of highly liquid assets. For other activities, liquidity is low in most cases (Table 6).

3.2. Grouping of enterprises according to the results of the express assessment method

The calculations of all the necessary components of the matrix make it possible to group enterprises according to the results of the proposed method (Table 1). This division aims to find effective measures to counter potential threats (Table 7).

Table 7. Division of Ukrainian firms (by the type of economic activity) into groups according to the proposed 3D matrix of financial security assessment in 2019

Types of economic activity	Group type *
Agriculture, forestry and fishery	Group 4
Industry	Group 3-2
Construction	Group 2-1
Wholesale and retail trade; repair of motor vehicles and motorcycles	Group 3-2
Transport, warehousing, postal and courier activities	Group 1
Temporary accommodation and catering	Group 2-1
Information and tele-communications	Group 2-1
Financial and insurance activities	Group 4-3
Real estate transactions	Group 2-1
Professional, scientific and technical activities	Group 3-2
Activities in the field of administrative and support services	Group 2-1
Education	Group 3-2
Health care and social assistance	Group 2-1
Arts, sports, entertainment and recreation	Group 1
Provision of other types of services	Group 3-2

* Legend: group types based on Table 1:

Group 4	Group 2
Group 4-3	Group 2-1
Group 3	Group 1
Group 3-2	

Source: own elaboration based on State Statistics Service of Ukraine data

It should be noted that not every type of economic activity undertaken by the firms is within one group, as in many cases they are located on the border of two groups. Therefore, according to Table 7, groups 4 and 4-3 include only types of economic activity such as agriculture, forestry and fishery; and financial and insurance activities. Such a position cannot be considered optimal, as it is considered that purely one's own financial resources are used for the activity. Attracting borrowed funding sources would increase the return on equity for this type of activity (due to the leverage effect). The fulfilment of all liquidity conditions of the balance sheet also cannot be considered positive, as the retention of highly liquid assets, in particular cash that is not capital-creating, is impractical. However, this

type of activity has a high chance of further development.

Most types of economic activity are classified as 3-2, 2-1 groups. In particular, Group 3-2 indicates an acceptable level of financial stability, liquidity and profitability. The debt used in this group is long-term, so it does not threaten financial security. It can be assumed that enterprises belonging to this group are stable.

Firms from Group 2-1 are financially unstable, and have low levels of profitability so as to maintain solvency at an acceptable level. These activities usually have overdue debts and short-term liabilities. The use of large amounts of short-term liabilities can bring about a loss of independence. Significant changes in the financial and economic activities of a company should be

made to bring the company out of a crisis. Attracting investment is associated with increased risk. Also, companies undertaking two types of economic activity (transport, warehousing, postal and courier activities; arts, sports, entertainment, recreation) are in the first group, i.e. they are in a deep financial crisis. They have large amounts of accounts payable, meaning that such companies are unable to pay their obligations. The financial stability of the firms is almost completely lacking. The degree of the crisis faced by these enterprises is so deep that the likelihood of improving the situation, even in the case of a significant change in financial and economic activities, is low.

The results of specifying the essence of the key indicators for the analysis of financial security make it possible to form a set of priority tasks to ensure that it is achieved: ensuring financial stability, in particular through reduction of negative impact of external and internal threats; the protection and coordination of financial interests of the enterprise; and ensuring the efficient use of financial resources etc.

Of course, achieving this goal is possible only by means of the solution of a set of tasks. However, in addition to the calculation of indicators, it is necessary to take factors that cannot be measured into account, which is why managers are forced to act despite having limited information.

Conclusions

An analysis of methodological approaches to assessing the level of financial security of enterprises shows that they have certain shortcomings, namely the difficulty of choosing the optimal combination of indicators, the use of resource-intensive valuation methods, and insufficient attention being paid by managers to financial security analysis. Our study confirmed that several key indicators of performance are sufficient for the preventive assessment of financial security of

enterprises. We identified key indicators that allow for the initial assessment of the financial security of enterprises. A method for the express assessment of the financial security of enterprises based on the formation of a 3D matrix was developed and applied, providing said enterprises with an opportunity to respond to changes. The scientific value of the proposed express method lies in the ability to quickly assess the level of financial security; such a method serves as a guide for managers on the further choice of measures to ensure the financial security of enterprises. This constitutes our contribution to the theory.

Our paper has several implications. The proposed method can be used not only to determine the financial security of enterprises according to the type of economic activity, but also to determine the level of security of enterprises by individual industries, and individually for any enterprise. For managers, it is an auxiliary tool for a swift assessment of the level of financial security and interpretation of the results. However, in addition to the calculation of the mentioned indicators, it is necessary to take factors that cannot be measured into account, which is why managers are forced to act despite having limited information.

Despite the large number of studies that address various aspects of assessing the financial security of enterprises, certain theoretical and practical issues related to this problem remain controversial and require further study. The priority of assessing the financial security of enterprises forms the preconditions for intensifying research in this area, in particular in the direction of developing appropriate conceptual foundations for assessing financial security. The debatable issues of the study are the correct choice of the necessary combination of indicators that relate to the financial results of enterprises in accordance with the direction of their activities.

However, the problem of creating a highly efficient methodology for assessing the finan-

cial security of enterprises remains unsolved. It requires further research; in particular, it is necessary to determine the components of financial security of enterprises, select indicators to determine their status, provide indicators of weights and develop a methodology for determining the integral index of financial security of enterprises, taking external factors into account. This may make it possible for enterprises to make sound management decisions and reduce possible risks.

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