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Луцький національний технічний університет<https://orcid.org/0000-0002-4629-4011>o_nuzhna@ukr.net**ANALYSIS OF FINANCIAL INDEPENDENCE OF UKRAINIAN ENTERPRISES**

The article is devoted to practical aspects of analysing the financial independence of Ukrainian enterprises as an important component of managing their financial stability. The purpose of the study is to determine the level of their financial independence by calculating the coefficient of autonomy and to conduct a comparative analysis of the results obtained in the context of certain types of activities based on the study of the structure of sources of financial resources of enterprises in Ukraine as a whole and with a distribution by size. The information base of the study consisted of educational and methodological literature on financial analysis, monographic and dissertation research, as well as data from the state statistics service of Ukraine for 2013-2021. The objects of research are enterprises of Ukraine, enterprises of agriculture, forestry and fisheries, as well as industrial enterprises in general and with their distribution by size large, medium, small and microenterprises. The analysis showed a discrepancy between the autonomy coefficient and the recommended range of values during the entire study period for Ukrainian enterprises in general and industrial enterprises. Moreover, for industrial enterprises, a negative value of the autonomy coefficient for a group of medium and small enterprises was recorded, which indicates not only the lack of equity, but also its negative value and the complete dependence of these enterprises on external sources of financing. A much better situation is observed with financial independence for enterprises of agriculture, forestry and fisheries of Ukraine, for which the value of the coefficient of autonomy either exceeds the lower limit of the recommended range of values, or is close to reaching it. The positive dynamics of the autonomy coefficient in recent years has been established for all objects of research the enterprises of different types of activities and different sizes. The forecast is made regarding the negative impact of the war and the emergence of a whole range of risks in all spheres of activity on the level of financial independence of Ukrainian enterprises and, accordingly, the level of their financial stability.

Keywords: *large enterprises, economic risk, coefficient of autonomy, small enterprises, industry, medium-sized enterprises, agriculture, financial independence.*

АНАЛІЗ ФІНАНСОВОЇ НЕЗАЛЕЖНОСТІ ПІДПРИЄМСТВ УКРАЇНИ

Стаття присвячена практичним аспектам аналізу фінансової незалежності підприємств України як важливої складової управління їх фінансовою стійкістю. Мета дослідження – на основі вивчення структури джерел фінансових ресурсів підприємств України загалом і з розподілом за розмірами визначити рівень їх фінансової незалежності шляхом розрахунку коефіцієнта автономії та провести порівняльний аналіз отриманих результатів в розрізі певних видів діяльності. Інформаційну базу дослідження становили навчально-методична література з фінансового аналізу, монографічні та дисертаційні дослідження, а також дані Державної служби статистики України за 2013-2021 роки. Об'єктами дослідження є підприємства України, підприємства сільського господарства, лісового господарства та рибного господарства, а також підприємства промисловості загалом та з розподілом їх за розмірами – великі, середні, малі та з них мікропідприємства. Аналіз показав невідповідність коефіцієнта автономії рекомендованому проміжку значень протягом всього періоду дослідження для підприємств України загалом і промислових підприємств. Причому для промислових підприємств зафіксоване від'ємне значення коефіцієнта автономії по групі середніх і малих підприємств, що свідчить не лише про відсутність власного капіталу, а й про його від'ємне значення і повну залежність цих підприємств від зовнішніх джерел фінансування. Значно краща ситуація спостерігається з фінансовою незалежністю для підприємств сільського господарства, лісового господарства та рибного господарства України, для яких значення коефіцієнта автономії або перевищує нижню межу рекомендованого проміжку значень, або є близьким до її досягнення. Встановлено позитивну динаміку коефіцієнта автономії протягом останніх років для всіх об'єктів дослідження – підприємств різних видів діяльності та різних розмірів. Здійснено

прогноз щодо негативного впливу війни та виникнення цілого спектру ризиків у всіх сферах діяльності на рівень фінансової незалежності підприємств України та, відповідно, рівень їх фінансової стійкості.

Ключові слова: великі підприємства, економічний ризик, коефіцієнт автономії, малі підприємства, промисловість, середні підприємства, сільське господарств, фінансова незалежність.

Statement of the problem in general form and its connection with important scientific and practical tasks. An important characteristic of an enterprise's activity is its ability to carry out its activities in a balanced and efficient way for a long time, that is, in other words, the stability of the enterprise. One of the components of sustainability is financial stability, which, in particular, implies a rational capital structure of the enterprise, that is, the ratio of own and attracted sources of financing. The predominance of own resources over attracted ones positively characterizes the enterprise and indicates its financial independence from external sources of financing, as well as effective capital management of the enterprise. Information about the level of financial independence of an enterprise is important not only for internal, but also for external users suppliers, creditors, competitors, etc.

Analysis of recent studies that have started solving the problem. Research of theoretical and methodological problems of financial stability analysis in general and, in particular, its aspect, such as the analysis of the structure of sources of financial resources, are described in publications on financial analysis (Luchko et al., 2016; Mnykh and Barabash, 2014; Tiutiunnyk et al., 2020; Shkolnik et al., 2016). In the analysis of financial stability, the authors consider the following aspects the purpose, objectives and information base of the analysis, evaluation methods, stages of analysis, a set of absolute and relative indicators, types and stock of financial stability. The authors of monographic and dissertation studies pay considerable attention to the problems of ensuring financial stability. In particular, scientists study the formation of a system of financial diagnostics of industrial business entities (Chernyshov, 2019), study and improve accounting and analytical support for assessing the financial stability of enterprises (Nahorna et al., 2020).

Taking into account the significant achievements of scientists in studying this topic, we consider it appropriate to study the state of financial independence of Ukrainian enterprises in dynamics.

Purpose of the article. The purpose of the study is to determine the level of financial independence based on the study of the structure of sources of financial resources of Ukrainian enterprises in general and by size by calculating the coefficient of autonomy and to conduct a comparative analysis of the obtained results in terms of certain types of activities.

Presentation of the main research material with justification of the obtained scientific results. The study of the structure of sources of financing provides important information both for internal users, which include management at different levels and owners, and for external users, among which, in particular, it is worth mentioning competitors and creditors. The presence of a sufficient amount of equity capital ensures the company's financial stability, liquidity and solvency. It is the key to its effective functioning not only in the current period, but also in the future.

The calculation of the autonomy coefficient is based on formula (1), in which the numerator is the amount of equity, and the denominator is the total balance sheet:

$$C_{\text{aut}} = \frac{EC}{TB}, \quad (1)$$

where EC – equity capital, thousand UAH;

TB – total balance, thousands UAH.

The economic content of this indicator is that it shows the amount of own funds in sources of financing or the amount of equity that falls on each hryvnia of the company's property.

In fact, the autonomy coefficient characterizes the degree of financial independence of an enterprise from external sources of financing.

The study of educational and methodological literature on financial analysis has shown that its authors determine the standard (recommended) range of values of the autonomy coefficient ≥ 0.5 . That is, the situation when own sources of funding are not less than attracted is considered normal.

The calculation of the autonomy coefficient for Ukrainian enterprises was carried out by us for the period 2013-2021 on the basis of data from the state statistics service of Ukraine, namely, we used data from the section "statistical information" and the subsection "enterprise activities".

As the objects of research, we took enterprises of Ukraine, enterprises of agriculture, forestry and fisheries (section A according to the KVED-2010 (Standard Industrial Classification code), as well as industrial enterprises (sections B, C, D, E according to the KVED -2010 as a whole of these types of activities, and with their distribution by size – large, medium, small and microenterprises.

The values of the autonomy coefficient for Ukrainian enterprises as a whole and with a size distribution in 2013-2021 in the context of certain types of activities are shown in Table 1.

Table 1. Dynamics of the coefficient of autonomy for enterprises of Ukraine in general and with a distribution by size in 2013-2021, by type of activity

Kind of activity	Value of the autonomy coefficient									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average value
Total										
all businesses	0,34	0,25	0,28	0,24	0,25	0,25	0,27	0,26	0,29	0,27
large enterprises	0,40	0,33	0,44	0,45	0,41	0,42	0,39	0,40	0,41	0,41
medium-sized enterprises	0,32	0,19	0,16	0,15	0,16	0,15	0,19	0,19	0,23	0,19
small enterprises	0,30	0,20	0,18	0,07	0,10	0,13	0,19	0,17	0,21	0,17
of which microenterprises	0,30	0,24	0,23	0,07	0,09	0,12	0,18	0,15	0,17	0,17
Agriculture, forestry and fisheries (A)										
all businesses	0,50	0,42	0,40	0,24	0,48	0,49	0,51	0,54	0,59	0,46
large enterprises	0,50	0,43	0,47	0,41	0,43	0,59	0,56	0,54	0,59	0,50
medium-sized enterprises	0,49	0,41	0,41	0,40	0,50	0,54	0,54	0,57	0,60	0,49
small enterprises	0,53	0,42	0,36	0,14	0,47	0,41	0,46	0,51	0,59	0,43
of which microenterprises	0,49	0,41	0,32	0,07	0,38	0,24	0,39	0,43	0,47	0,36
Industry (B+C+D+E)										
all businesses	0,39	0,29	0,20	0,19	0,17	0,19	0,25	0,21	0,25	0,24
large enterprises	0,45	0,36	0,27	0,26	0,27	0,32	0,33	0,30	0,35	0,32
medium-sized enterprises	0,28	0,14	0,12	0,09	0,04	-0,01	0,14	0,09	0,08	0,11
small enterprises	0,19	0,13	0,01	0,04	0,001	-0,02	0,12	0,09	0,15	0,08
of which microenterprises	0,19	0,12	0,08	0,05	-0,01	-0,07	0,02	0,03	0,08	0,05

Note. Author's calculations.

Analysis of the data in Table 1 shows that in general, Ukrainian enterprises during the study period have values of the autonomy coefficient below the minimum recommended value (0.5), which indicates that they are not sufficiently provided with their own funds to finance their activities and the structure of sources of their financing is dominated by borrowed funds. More precisely, in each hryvnia of sources of financing, own funds amount to an average of 27 kopecks and range from 24 kopecks in 2016, up to 34 kopecks in 2013. It should be noted that for the group of large enterprises, the indicators in comparison with the general ones have higher values of the autonomy coefficient, which range from 0.33 (in 2014) to 0.45 (in 2016), and the average value is 0.41. slightly lower indicators are observed for the group of medium-sized enterprises: from 0.15 in 2016 and 2018 to 0.32 in 2013, the average value is 0.19. and the lowest indicators can be stated for the group of small enterprises: from 0.07 in 2016 to 0.30 in

2013, the average value is 0.17. Graphically, the interpretation of the autonomy coefficient for Ukrainian enterprises as a whole and with a size distribution in 2013-2021 is shown in Fig. 1.

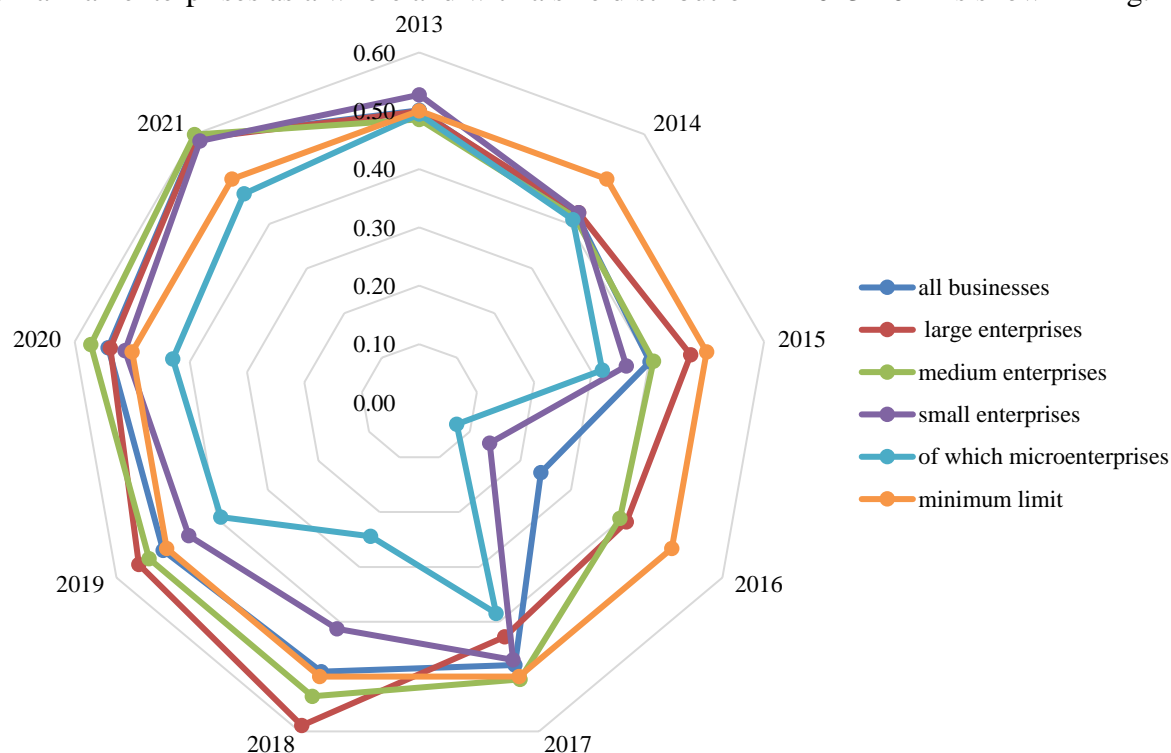


Fig. 1. Graphical interpretation of the autonomy coefficient for Ukrainian enterprises as a whole and with a size distribution in 2013-2021 *

Note. Built by the author on the basis of his own calculations.

For industrial enterprises as a whole, during the study period, the structure of sources of financing is also dominated by attracted funds and in each hryvnia of sources of financing, equity capital is on average 24 kopecks and ranges from 17 kopecks in 2017, up to 39 kopecks in 2013. It should be noted that for a group of large enterprises, compared to general ones, there are higher values of the autonomy coefficient, which range from 0.26 (in 2016) to 0.45 (in 2013) with an average value of 0.32. Significantly lower indicators are observed for the group of medium-sized enterprises: from 0.04 in 2017 to 0.28 in 2013, the average value is 0.11. and the lowest indicators can be found for the group of small enterprises: from 0.001 in 2017 to 0.19 in 2013, the average value is 0.08.

In addition, in 2018, for the group of medium and small industrial enterprises, we note a negative value of the autonomy coefficient. This means that the equity capital of these enterprises has a negative value due to the predominance of the amount of uncovered loss over its positive components. Thus, in each hryvnia of financing sources in 2018, the funds raised amount to UAH 1.01 for medium-sized enterprises and UAH 1.02 for small enterprises, while the lack of equity capital is 1 kopeck, respectively and 2 kopecks for these groups of businesses. For industrial microenterprises, this situation is observed not only in 2018, when each hryvnia of financing sources accounts for UAH 1.07 of funds raised, but also in 2017, when the corresponding figure is UAH 1.01.

In comparison with the enterprises of Ukraine as a whole, as well as with industrial enterprises, significantly better indicators are observed for agricultural, forestry and fisheries enterprises. In 2013 and 2019-2021, the value of the autonomy coefficient for enterprises of this type of activity exceeds the lower threshold (0.5), which indicates their sufficient security with their own funds and financial independence from external sources of financing. Thus, in

each hryvnia of sources of financing for enterprises of this type of activity, own funds amount to an average of 46 kopecks and range from 24 kopecks in 2016, up to 59 kopecks in 2021.

For a group of large enterprises of this type of activity, the studied indicator, with the exception of 2017, exceeds the indicators for the entire group as a whole. So, in each hryvnia of sources of financing for large enterprises of agriculture, forestry and fisheries, their own funds amount to an average of 50 kopecks and range from 41 kopecks in 2016, up to 59 kopecks in 2018 and 2021. We note that the indicator corresponds to the specified interval for this group of enterprises of this type of activity in 2013 and 2018-2021 and its positive dynamics to increase in 2018-2021.

The value of the autonomy coefficient for the group of medium-sized enterprises in agriculture, forestry and fisheries during the study period averages 0.49, which is slightly less than the minimum threshold of the recommended range of values. The indicator ranges from 0.40 in 2016 to 0.60 in 2021. We note that the indicator corresponds to the specified period for this group of enterprises of this type of activity in 2017-2021 and the positive dynamics of increase during this period.

The average value of the autonomy coefficient for a group of small enterprises in agriculture, forestry and fisheries during the study period is 0.43, which is 0.07 less than the minimum threshold of the recommended range of values. In each hryvnia of sources of financing for enterprises of this type of activity, own funds range from 14 kopecks. in 2016, up to 59 kopecks in 2021. We note that the indicator corresponds to the specified period for this group of enterprises of this type of activity in 2017-2021 and the positive dynamics of increase during this period.

Microenterprises of agriculture, forestry and fisheries have lower values of the autonomy coefficient compared to even small enterprises of this type of activity and do not reach the minimum recommended value during the study period, although the dynamics over the past four years have been positive.

Based on the results of the conducted research, management decisions related to the management of financial condition can be made, in particular, the financial stability of enterprises in the context of activities, taking into account the distribution of enterprises by size into large, medium or small, including microenterprises.

Conclusions, discussions and recommendations. Thus, we have calculated the coefficient of autonomy and studied in dynamics for 2013-2021 its value for enterprises of Ukraine, enterprises of agriculture, forestry and fisheries (section A under the NACE-2010), as well as industrial enterprises (sections B, C, D, E under the NACE-2010) as a whole of these types of activities, and with their distribution by size – into large, medium, small and microenterprises.

The results obtained indicate that the studied indicator does not correspond to the recommended range of values during the entire study period for Ukrainian enterprises in general and industrial enterprises. Moreover, for industrial enterprises, a negative value of the autonomy coefficient for a group of medium and small enterprises was recorded, which indicates not only the lack of equity, but also its negative value and the complete dependence of these enterprises on external sources of financing. A much better situation is observed with financial independence for enterprises of agriculture, forestry and fisheries of Ukraine, for which the value of the coefficient of autonomy either exceeds the lower limit of the recommended range of values, or is close to reaching it. We can also state the positive dynamics of the studied indicator in recent years for all objects of research – enterprises of different types of activities and different sizes. However, positive dynamics in the future can hardly be expected due to the war and the growth of a whole range of risks in all areas of activity, which already has and will have a significant impact on the formation of indicators of financial stability of enterprises in the future.

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