

Maryna Berest*, Natalia Sablina

Simon Kuznets Kharkiv National University of Economics
61166, 9A Nauka Ave., Kharkiv, Ukraine

Diagnosis of Capital Structure as a Tool for Administering the Financial Activities of Enterprises

Abstract. The development of market transformations in Ukraine has led to the noticeable changes in the sphere of formation and using enterprise capital. Formation of the optimal capital structure, which allows to combine an increase in financial results with the existing risk level, is the main factor of maintaining effective functioning. In this connection, processes of financial activity administration require rethinking and improving the approaches to diagnosis of financing sources both in the theoretical and practical aspects. The aim of the study is to improve the methodological approaches to the diagnosis of enterprise capital structure as an instrument of justifying and making managerial decisions in financial management system on the basis of theoretical approaches and specifying the definition of the term “enterprise financial activity administration”. Methods of scientific cognition were used in the work, in particular: of system approach, analysis, synthesis, scientific abstraction, generalizing. Methods of financial coefficient analysis and Shuhart’s control charts creation were used to carry out capital structure diagnosis on the example of JSC “Zhytlobud-1” (Kharkiv). The author’s vision of the essence of enterprise financial activity administration as a process of developing and implementing managerial decisions was formed, including formation and use of its capital with the aim of financial strength, profitability and creating conditions for fulfillment of obligations, based on information, diagnostic and analytical support for the realization of managerial procedures. It was concluded that diagnosis of capital structure served as the key element in the system of instruments for the administration of enterprise financial activity. The use of Shuhart’s control charts for diagnosing the capital structure was proposed, and relevant calculations were carried out on the example of JSC “Zhytlobud-1”, the level of manageability of its capital components was assessed, and key management objects in the structure of the company’s financing sources were identified. The results of the research can be useful for scientists, students of economic specialties of higher educational establishments, managers and employees of financial divisions of enterprises and financial institutions

Keywords: financial management, sources of financing, management decisions, analysis of financial ratios, Shuhart’s control charts

Article’s History: Received: 03/28/2022; Revised: 05/10/2022; Accepted: 05/30/2022

INTRODUCTION

In today’s conditions, the solution of financial problems faced by Ukrainian enterprises requires the analysis of basic concepts and determination of priority directions for the effective administration of financial activities of business entities. In the conditions of an aggressive economy, the size of the company’s financial capital and its structure are the determining factors of sustainable development. Therefore, an essential direction of the financial activity administration of a business entity is the establishment of the optimal ratio of equity and loan parts of the capital, which

determines the conditions of development and the results of the enterprise activity. Capital structure is a factor that affects financial strength, solvency and liquidity, profitability and market value of the enterprise. Thus, the effectiveness of management decisions in the field of investment and financial policy is based on a qualitative diagnosis of the capital structure, an assessment of alternative options for financing the company activity.

Structural changes in economic processes in Ukraine alter the conditions of enterprises functioning, the conditions

Suggested Citation:

Berest, M., & Sablina, N. (2022). Diagnosis of capital structure as a tool for administering the financial activities of enterprises. *Economics of Development*, 21(2), 8-18.

*Corresponding author

of formation and use of their financial resources. In this context, the issue of improving the diagnosis of the capital structure as a tool for enterprise financial activity administration in both theoretical and practical aspects is growing in importance.

Both Ukrainian and foreign scientists paid attention to particular issues of diagnosing the capital structure of enterprises. So, O. Podolanchuk, T. Plakhtii, N. Gudzenko [1] emphasized revealing of the essence of the concept of “capital” and pointed out the problems of the content of equity and loan capital. The authors [2] also focus attention on the different understanding of capital category by scientists and the reflection of its circulation. However, in the works [1; 2] issues regarding the evaluation and optimization of the enterprise capital structure were left out of consideration. G.B. Pohrishchuk, R.E. Voloshchuk [3] formed the author’s definition of the company’s equity capital, analyzed the essential characteristics of the company’s equity capital, defined its functions, considered the sources of formation, summarized and characterized the advantages and disadvantages of the formation of the company’s equity capital. Nevertheless, the authors did not pay attention to the capital involved, which plays a significant role in the formation of the enterprise resource potential.

General issues of administrative management were studied in scientific works [4-6], where the authors highlighted the peculiarities of the functioning of administrative management systems in market conditions. A significant number of publications are devoted to public administration [7; 8]. In the articles [9; 10] the essence and features of business administration were analyzed, its place in the enterprise management system was determined, the principles of building an effectively functioning business administration system in the organization and at the enterprise were considered and characterized. The authors [11] studied the essence and content of the definitions of public management and administration. Scientists [12] summarized recommendations on tax administration. However, there are no studies as to the administration of financial activity of exactly enterprises in scientific works.

V.A. Petrenko, Yu.Yu. Gurbyk, M.V. Salnikova [13] in their scientific papers reflected the essence and characterized the components of the enterprise financial activity based on the analysis of the concepts of “finance” and “enterprise finance”. Therefore, the authors proposed to consider the interpretation of the concept of “enterprise financial activity” within the limits of two aspects: legal and economic-managerial. However, issues regarding managerial aspects and tools of enterprise financial activity administration were left out of consideration.

Thus, in the conditions of aggressive economy, in order to preserve competitive positions, ensure solvency and financial stability, stability of financial activity development, enterprises need to pay more attention to the diagnosis of financial activity, because effective capital management will allow enterprise to get stable positions.

The purpose of the study is the development and improvement of methodological approaches to the diagnosis of enterprises capital structure as a tool for justifying and making managerial decisions in the financial management system based on the generalization of theoretical approaches and clarifying the meaning of the concept of “enterprises financial activity administration”.

To achieve the aim of the study, the following tasks were set and solved:

- on the basis of studies of scientific projects and current legislation, to form and clarify the meaning of the concept of “enterprise financial activity administration”;
- to justify the expediency of using capital structure diagnosis as a tool for administrating financial activity of enterprises;
- to conduct diagnosis of enterprise capital structure, in particular, determine the level of its management, based on the application of Shuhart’s control charts.

The scientific novelty of the study: methodological support for the diagnosis of the capital structure of enterprises has been further developed, which, unlike the existing ones, is formed as a tool for the administration of financial activity and involves the use of Shuhart’s control charts, which allows to determine the level of manageability of the capital components of a business entity.

MATERIALS AND METHODS

The object of the study is the process of diagnosing the capital structure as a tool for administrating the financial activity of enterprises.

The study was conducted on the basis of statistical information using methods of scientific knowledge. The methods of system approach, analysis, synthesis, scientific abstraction, and generalization were used to research and clarify the conceptual apparatus of enterprise financial activity administration. The methods of analyzing financial ratios and creating Shuhart’s control charts were used to diagnose the capital structure on the example of JSC “Trest Zhytlobud-1” (Kharkiv) for 2014-2021.

RESULTS AND DISCUSSION

In today’s conditions, the sources of enterprise funding represent a set of functioning and expected sources of obtaining financial resources, as well as economic entities that can provide them. Therefore, a company faces acute problems of rational organization of finances and increasing the efficiency of their use, since these measures in particular allow to ensure the continuity of the production process and the appropriate level of production profitability. All the above mentioned determines special significance of the process of competent enterprise financial activity administration at various stages of its existence.

Respecting the research of scientists on defining the essence of the concepts of “administration” and “enterprise financial activity”, it should be pointed out that there is no single interpretation of the concept of “enterprise financial activity administration”. So, first of all, it is advisable to study the conceptual apparatus.

To determine the essence of the concept of “enterprise financial activity administration”, the existing approaches to the essence of administration will be analyzed in the first place. In general, administration is a form of providing a management service that takes into account the interests of society [14].

Theoretical and practical research on management activity allows to state that the concept of “administration” is quite often used in the system of knowledge about taxes, where the phrases “tax administration”, “public administration”, “personnel administration”, etc. are quite often used.

The scientist V. Dzyudzyuk notes that the term “administration” originated from the Latin “ministrare”, which means “to serve”. The researcher draws attention to the fact that the Oxford dictionary [15] and Webster’s dictionary [16] define it as “management of affairs” or “direction or management of execution” [17, p. 9]. According to the results of T. Semenchuk’s research, administration is “a method of managing society, which is based on the power and credibility of the authorities, that is, in orders, resolutions, commands, instructions and guidelines. This method is mainly used by executive authorities in the form of civil servants” [6, p. 387].

Theoretical and practical research on managerial activities allows to state that the concept of “administration” is quite often used in tax science, where the phrases “tax administration”, “public administration”, “personnel administration”, etc. are actively used.

The multifaceted views regarding the interpretation of the concept of “administration” are given in works [7; 8; 18], etc. So, I.P. Yakovlev [7, p. 121] states that the term “administration” is used, as a rule, to describe: “management and its mechanism; execution of administrative orders in the judicial branch of state power; executive and administrative activities of the state; processes of mandatory payments; science of public administration, etc.” Scientists O.Ya. Lazor and O.D. Lazor [8, p. 111-121], based on the analysis of dictionary editions, note that administration is: “leadership and management of the affairs of governments and institutions; controlling a deceased person’s estate to pay taxes and assign assets to heirs; execution and implementation of public policy; a generalized term for all political decisions of various government officials; time in the office of the main performer”. O.V. Serov [18, p. 18] notes that in foreign practice the essence of the analyzed concept is defined as: “control and management of something (systems, organization or business); a group of people who organize or control something; activities that combine the management of the work of an enterprise or organization; the government of the country in a particular period of time; the process of managing something (especially laws, government inspections, etc.)”.

A significant number of researchers adhere to the statement that the concept of “administration” is a constituent part of the concept of “management”. So, Yu.O. Myronenko [5, p. 65] considers administration as “an independent type of management activity or one of the functions of a manager”. L. Lypych and R. Hryniuk emphasize that “administration should facilitate prompt decision-making in the process of economic activity of enterprises, coordinate the functioning of their divisions, determine the organizational structure and coordinate the activities of divisions, as well as ensure the achievement of the main tax goals and objectives” [4, with. 44]. A.O. Savchenko [12, p. 147] in the work defines administration as “organizational and managerial activity of leaders and management bodies, which is carried out by issuing orders and commands”. A similar opinion regarding the essence of administration is expressed by M.P. Voynarenko and O.M. Kostyuk [9, p. 50], considering it as “the professional activity of managers of the organization or civil servants, aimed at implementing the decisions of the management, that is, the implementation of the tasks and the search for optimal ways to solve them”.

Taking into consideration the outlined direction of the research, administration will be considered as the process

of management activity, based on information, diagnostic and analytical provision of management procedures.

The concept of “enterprise financial activity” is also debatable. So, V.A. Petrenko, Yu.Yu. Gurbyk and M.V. Salmikova, conducting the analysis of the essence of “enterprise financial activity” concept, came to the conclusion that some scientists believed that the studied concept was the main category of economic science, while others considered it from the standpoint of legal science [13].

According to [19], financial activity of the subjects, operating in the market, includes financial intermediation, insurance and additional activity in the specified areas. A clearer definition of this concept is provided in [20], where it is stated that “financial activity is an activity that leads to changes in the size and composition of company’s equity and loan capital”.

Therefore, financial activity embodies the continuous process of capital formation of an enterprise, aimed at establishing the optimal ratio of loan and equity components, their rational use in order to ensure financial stability, profitability and creating conditions for fulfilling obligations to other business entities and the state.

The main tasks of enterprise financial activities are: provision of financial resources for current activities; search and analysis of reserves for increasing the level of profitability and solvency; repayment of financial obligations to enterprises and organizations, state bodies and financial institutions; mobilization and formation of the optimal level of financial resources to ensure industrial, economic and social development; control over the distribution and use of financial resources [13].

Summarizing the above, it can be noted that the administration of the financial activities of enterprises is the process of developing and implementing management decisions regarding the effective formation and rational use of its capital in order to ensure its financial stability, profitability and creating conditions for the fulfillment of obligations to other economic entities and the state based on information, diagnostic and analytical support for the implementation of management procedures.

Thus, enterprise capital is the object of financial activity administration.

The practical model of enterprise financial activity administration should be effective, flexible, meet the set strategic goal and take into account the influence of factors of both the external and internal environment. The leading role in this belongs to the rational application of management tools and their timely adaptation to the requirements of economic development. If the set of tools is considered directly, then their use in the management system ensures a direct and clearly defined effect. The complex of administration tools is the basis for the formation and organizational influence of the management subsystem of the economic entity, which is formed by combining the tools positioned in such a complex [21].

The term “instrument” comes from the Latin “instrumentum”, which is translated as “tool” and generally means an object, device or mechanism, machine or algorithm used to change or measure any object. Considering the term “tool” in a broad sense, a means of transformation and creation of an object can be understood. As for an enterprise, management tools are understood as mechanisms, means and methods of its managing subsystem influence

on the managed one in order to ensure the effective implementation of the process of management decisions [22].

The practice of management offers many administrative tools, but modern changes in the environment of the functioning of enterprises reveal their shortcomings, causing the impossibility or insufficient effectiveness of their application. Therefore, the intensity of economic competition requires the introduction of management tools capable of solving the tasks of efficiency and effectiveness and quickly responding to changes in the market environment. Today, tools of wide application, which will allow to combine information for effective management of company's financial activities, are of current interest.

A key element in the system of tools for enterprise financial activity administration is the diagnosis of the capital structure. This is explained by the fact that effective formation and rational use of financial resources in today's conditions are strategically important tasks of financial management of business entities. In turn, the implementation of the specified tasks requires the identification, research and consideration of the influence of internal and external environmental factors, as well as the need to diagnose and monitor the financial condition of an enterprise as a whole and, in particular, the structure of the involved sources of funding and their investment directions. This requires the formation of a well-founded set of relevant reliable diagnostic indicators and the establishment of

target or desired criteria for their values. It is possible to agree with the authors [23], who note that "the system of indicators for capital structure diagnosis should be based on the principles of completeness, reliability, consistency, openness and adaptability. Their observance will ensure efficiency and flexibility of the use of indicators, as well as allow a comprehensive and critical study of the peculiarities of capital structure formation and advantages in the choice of sources of enterprise financing.

The analysis of literary sources [24–26] and methodological recommendations regarding the analysis of the financial and economic state of enterprises [27; 28] showed that for assessing the capital structure, the indicators reflecting various ratios of funding sources are mainly used, which, in particular, include:

1. equity capital (EC);
2. loan capital (LC), which, in its turn, is divided into:
 - long-term loan capital (LLC);
 - short-term loan capital (SLC).

This is justified by the fact that the need to determine the optimal ratio between equity and loan funds at the expense of determining the compromise between the growth of the level of profitability and ensuring financial stability is the goal of managing the capital structure of an enterprise [29]. Thus, the authors formed a set of indicators that are proposed to be used to diagnose the capital structure of economic entities (Table 1).

Table 1. Indicators of an enterprise capital structure

Nº	Indicator title	Symbol	Economic content	Inf. provision for the calculation
1	Coefficient of autonomy	Caut	shows the share of own funds in the total volume of funding sources	$\frac{r.1495 f.1}{r.1900 f.1}$
2	Coefficient of financial leverage	Cfl	demonstrates the ratio of borrowed and own funds	$\frac{(r.1900 - r.1495) f.1}{r.1900 f.1}$
3	Share of SLC in the balance	Sslcb	shows the share of short-term loan capital in the total capital sum	$\frac{r.1695 f.1}{r.1900 f.1}$
4	Share of SLC in LC	Sslclc	shows the share of short-term loan capital in the loan capital cost	$\frac{r.1695 f.1}{(r.1595 + r.1695) f.1}$
5	Coefficient of financial strength	Cfs	demonstrates the share of long-term sources of funding in the total amount of the enterprise capital	$\frac{(r.1495 + r.1595) f.1}{r.1900 f.1}$
6	Coefficient of maneuverability EC	Cman _{ec}	reflects the share of own funds invested in current assets	$\frac{(r.1495 - r.1095) f.1}{r.1495 f.1}$
7	Coefficient of financial independence of capitalized sources	Cfics	shows what part of long-term sources of funding was formed at the expense of equity capital	$\frac{r.1495 f.1}{(r.1595 + r.1495) f.1}$

Source: compiled by the authors

However, it should be noted that there are no reference values for the vast majority of capital structure indicators in literary sources and methodological recommendations for the analysis of the financial condition. This is due to the fact that the specifics of the industry affiliation of enterprises, the selected financial strategy and type of credit policy, and other variable parameters do not allow to establish single unified characteristics regarding the ratio of various sources of funding. In this connection, it is suggested to use Shuhart's control charts to diagnose the capital structure of enterprises, in particular, to determine the level of its manageability.

A control chart is a graph (diagram) on which the values of a statistical indicator are sequentially plotted in

the order of sample selection, which is calculated based on sample data and which (graph) is used for analysis and process management in order to assess and reduce the variability of the studied statistical indicator [30]. Since the creation of charts is based on the theory of probability, and the economic processes for the characteristic of which the use of maps is proposed are subject to the normal distribution law, it allows the application of control charts to find reference values and evaluate the characteristics of the capital structure of an individual enterprise in terms of their deviation from the level that is usual for them in the studied period.

A peculiarity of the use of Shuhart's chart is the presence in it of marginal boundaries placed symmetrically relative to the central line of the map. The distances

between the central line and the marginal boundaries are determined based on the calculation of the standard deviation σ and are:

– 3σ – for the upper control boundary (UCB) and lower control boundary (LCB). This means that “approximately 99.7% of the indicator values fall within these limits, provided that the process is in a statistically controlled state” [31].

– 2σ – for the upper warning boundary (UWB) and lower warning boundary (LWB). This means that “any sample value outside 2σ can serve as a warning about the possibility of the process leaving the state of statistical controllability” [31].

Standard deviation is an indicator of the variability of the object that is actively used and shows how much on

an average the individual values of the characteristic x_i deviates from their average value X_{av} . It is calculated according to formula (1):

$$\sigma = \sqrt{\frac{1}{n} \sum_{i=1}^n (x_i - x_{av})^2}, \quad (1)$$

where x_i – that element of totality; x_{av} – the average arithmetic value of all totality indicators; n – number of indicators in the totality.

The initial data for calculating the indicators of Shuhart’s control charts for JSC “Zhytlobud-1” are presented in the Table 2. The calculation of statistics for indicators is presented in Table 3.

Table 2. Initial data for creating Shukhart’s control charts for JSC “Zhytlobud-1”

	31.12.14	31.12.15	31.12.16	31.12.17	31.12.18	31.12.19	31.12.20	30.09.21
Coefficient of autonomy	0.025	0.013	0.020	0.297	0.237	0.420	0.367	0.291
Coefficient of financial leverage	39.089	75.820	49.804	2.364	3.224	1.379	1.725	2.436
Share of SLC in the balance	0.351	0.305	0.536	0.542	0.475	0.338	0.448	0.625
Share of SLC in LC	0.358	0.310	0.547	0.771	0.623	0.584	0.707	0.881
Coefficient of financial strength	0.654	0.692	0.464	0.458	0.525	0.662	0.552	0.375
Coefficient of maneuverability EC	-2.351	-3.222	-3.235	0.800	0.781	0.896	0.857	0.843
Coefficient of financial independence of capitalized sources	0.038	0.019	0.042	0.649	0.451	0.635	0.664	0.775

Source: compiled by the authors

Table 3. Calculated indicators for creating Shuhart’s control charts

Indicator	The value of statistics					
	x_{cep}	σ	LCB ($X_{av} - 3\sigma$)	LWB ($X_{av} - 2\sigma$)	UWB ($X_{av} + 2\sigma$)	UCB ($X_{av} + 3\sigma$)
Coefficient of autonomy	0.209	0.155	-0.257	-0.102	0.520	0.675
Coefficient of financial leverage	21.980	27.2	-59.621	-32.42	76.381	103.581
Share of SLC in the balance	0.452	0.106	0.134	0.240	0.665	0.771
Share of SLC in LC	0.598	0.182	0.051	0.233	0.962	1.145
Coefficient of financial strength	0.548	0.106	0.229	0.335	0.760	0.867
Coefficient of maneuverability EC	-0.579	1.844	-6.110	-4.266	3.109	4.952
Coefficient of financial independence of capitalized sources	0.409	0.303	-0.499	-0.196	1.015	1.318

Source: compiled by the authors

Based on the calculated data, Shuhart’s control charts for JSC “Zhytlobud-1” were created (Figs. 1-7) and

the obtained results analyzed.

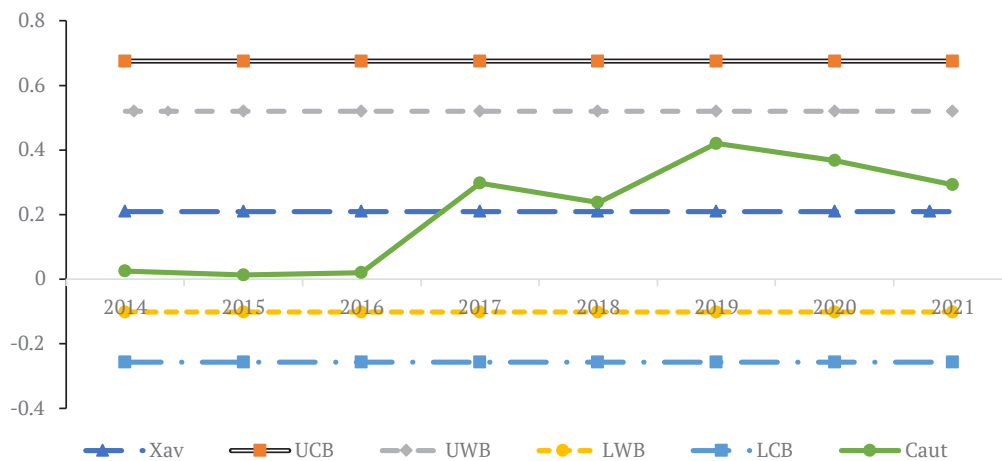


Figure 1. Shuhart's control chart for the coefficient of autonomy

Source: compiled by the authors in MS Excel

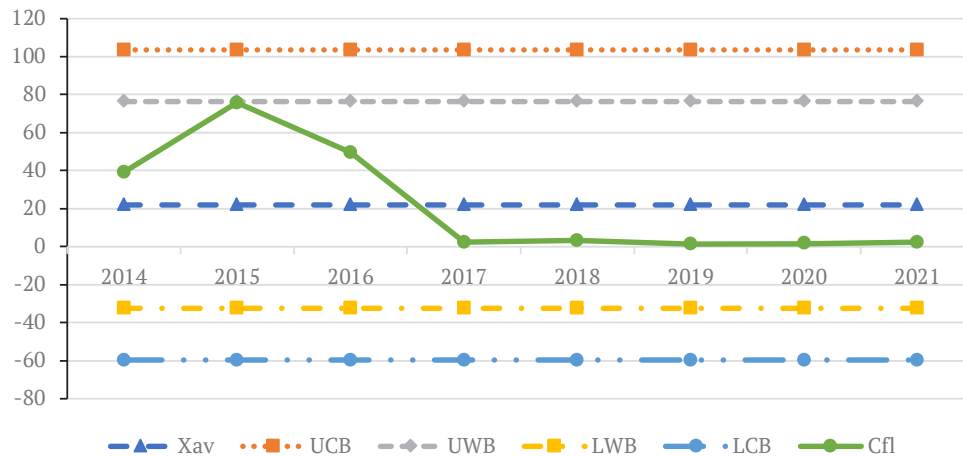


Figure 2. Shuhart's control chart for the coefficient of financial leverage

Source: compiled by the authors in MS Excel

So, as for the coefficient of autonomy (Fig. 1), it is significantly lower than the standard normative value (0.5) during the entire analyzed period, which indicates a low share of equity capital in the structure of the enterprise sources of finance and, accordingly, can negatively influence its financial stability. At the same time, its dynamics on Shuhart's chart shows that the indicator is within the control limits, not touching either the lower or the upper warning limits (LWB and UWB) throughout the studied period. This means that this indicator is well managed, and its dynamics is under control, does not cause threats to the company's financial condition.

The coefficient of financial leverage (Fig. 2) has very unstable dynamics in the period from 2014 to 2017. At the same time, its value is very high, which indicates a

significant excess of loan capital over the equity one. Such a situation indicates a significant threat to the loss of the company's financial stability. At the same time, attention should be paid to the fact that in 2015 the value of the indicator crossed the upper warning limit, which indicates its exit from the controllable zone. It can be seen that the company took measures to change the capital structure by increasing the amount of own funds, which led to a decrease in the financial leverage ratio and its subsequent stability. In the period from 2016 to 2021, the ratio is in the range between UCB and LCB, which indicates a high level of its manageability and maintenance of a stable ratio between loan and equity capital, and accordingly, maintenance of an acceptable level of financial risk for JSC "Zhytlobud-1".

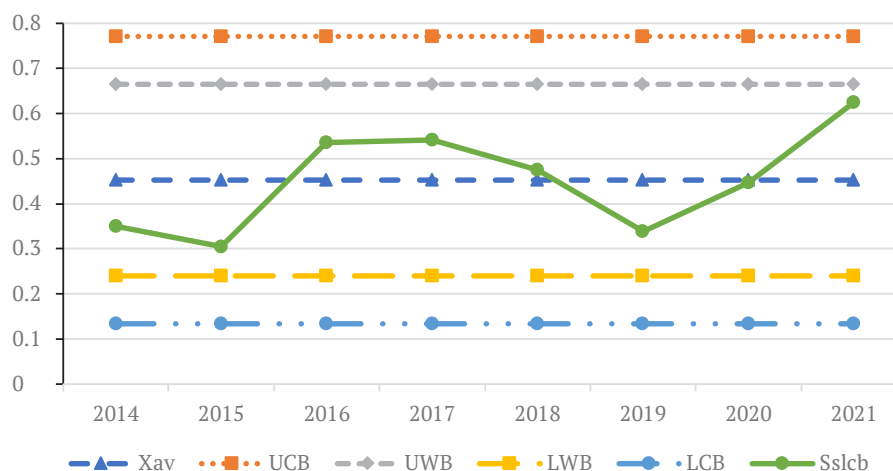


Figure 3. Shuhart's control chart for the share of short-term loan capital in the enterprise balance

Source: compiled by the authors in MS Excel

Analyzing the dynamics of the share of short-term liabilities in the company's balance sheet (Fig. 3), it can be seen that during the analyzed period, the indicator is mostly within the recommended limits. At the same time, it can be seen that its value is in the range from 0.3 to 0.6, and in 2016-2017 it exceeds 0.5, that is, more than 50% of the company's capital is formed at the expense of short-term loan

capital, which negatively characterizes its financial stability. It can be noted that in 2021 this indicator almost reached the value of the upper warning limit (UWB), therefore, financial managers should pay attention to this and take immediate measures aimed at restructuring the company's sources of financing, aimed at increasing the share of long-term funds in order to ensure sufficient level of financial stability.

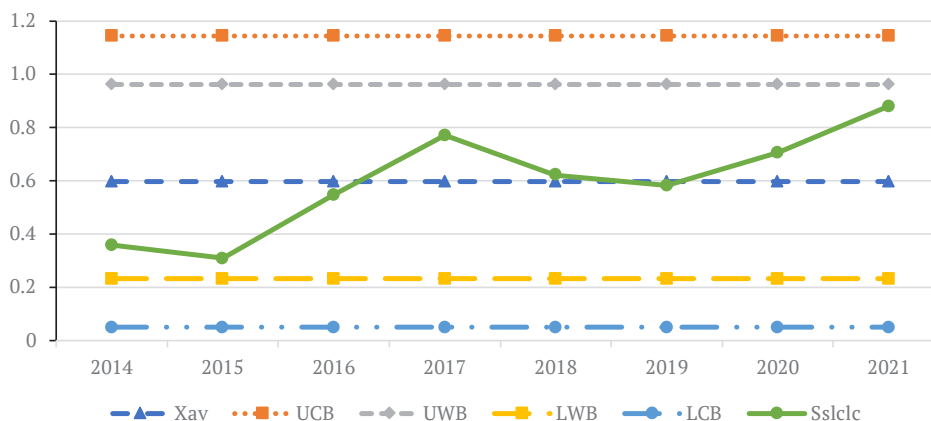


Figure 4. Shuhart's control chart for the share of short-term loan funds in the loan capital

Source: compiled by the authors in MS Excel

The analysis of Shuhart's control chart data (Fig. 4) shows that the structure of loan capital of JSC "Zhytlobud-1" has undergone significant changes during the period under study. Thus, in 2014-2015, the majority of loan funds were formed at the expense of long-term capital, however, since 2016, the share of short-term loan funds has begun to grow, and as of September 30, 2021, almost 90% of loan funds have a maturity of less than 1 year. Such dynamics negatively characterizes the enterprise financial stability. At the same time, as the control chart shows, the indicator is approaching the upper warning limit, which specifies possible threats of control loss and deterioration of the company's financial condition.

The coefficient of financial stability reflects the share

of long-term sources of funding in the structure of the company's balance sheet. The analysis of Shuhart's control chart (Fig. 5) reflects negative changes in the dynamics of this indicator starting from 2019. The share of sources providing financial stability decreased from 66% to 37%, the value of the indicator is approaching the lower warning limit. This may indicate that the enterprise has lost control over the process of forming the capital structure, which, accordingly, leads to a decrease in the level of its financial strength.

Regarding the level of maneuverability of the company's equity capital, the analysis of Shuhart's control chart (Fig. 6) shows that the indicator throughout the analyzed period is within the control limits, which indicates a high level of its manageability.

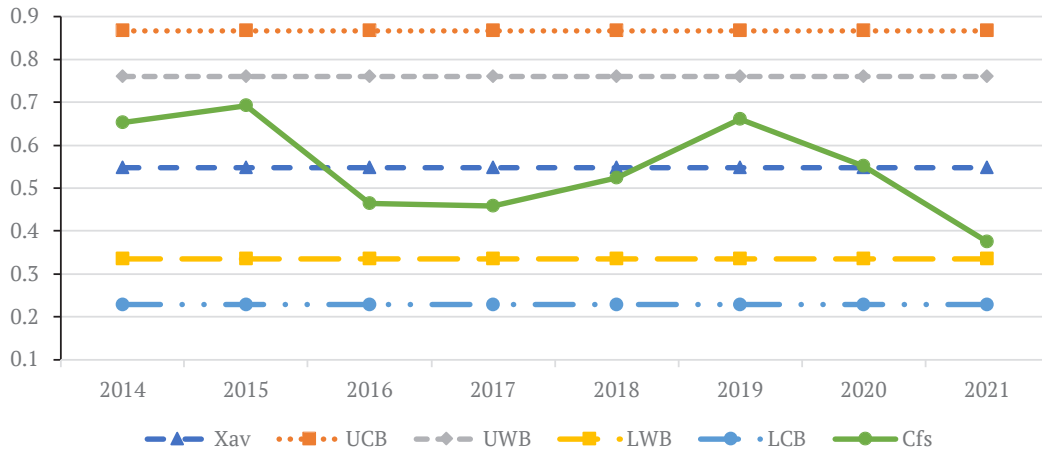


Figure 5. Shuhart's control chart for the coefficient of financial strength

Source: compiled by the authors in MS Excel

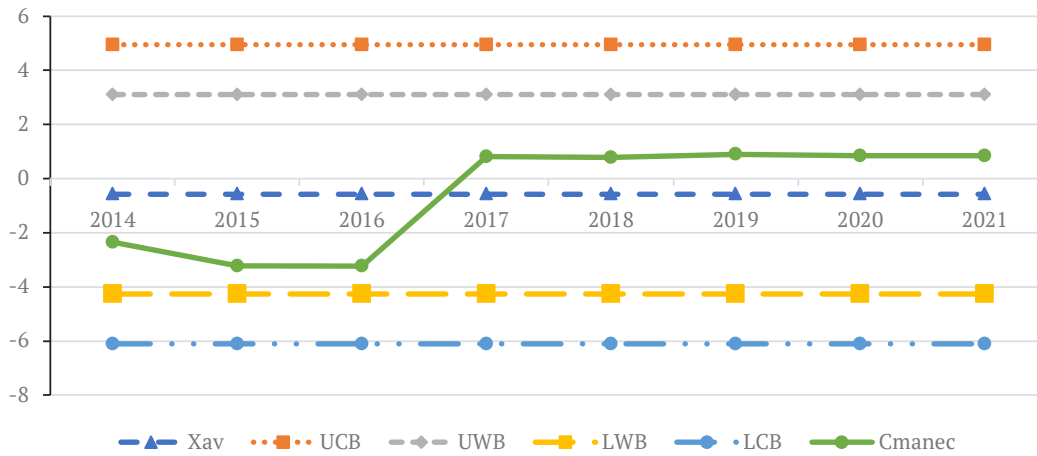


Figure 6. Shuhart's control chart for the coefficient of maneuverability of equity capital

Source: compiled by the authors in MS Excel

In addition, it is a positive fact that since 2017 to the present, the indicator has had a stable positive value. The share of equity capital invested in current assets is on average at the level of 80%, which indicates a high level of financial stability in the structure of the company's equity funds.

The coefficient of financial independence of capitalized sources demonstrates the share of equity funds in the structure of long-term sources of financing. The dynamics of this indicator on Shuhart's control chart (Fig. 7) is positive, it has an upward trend and is within manageability.

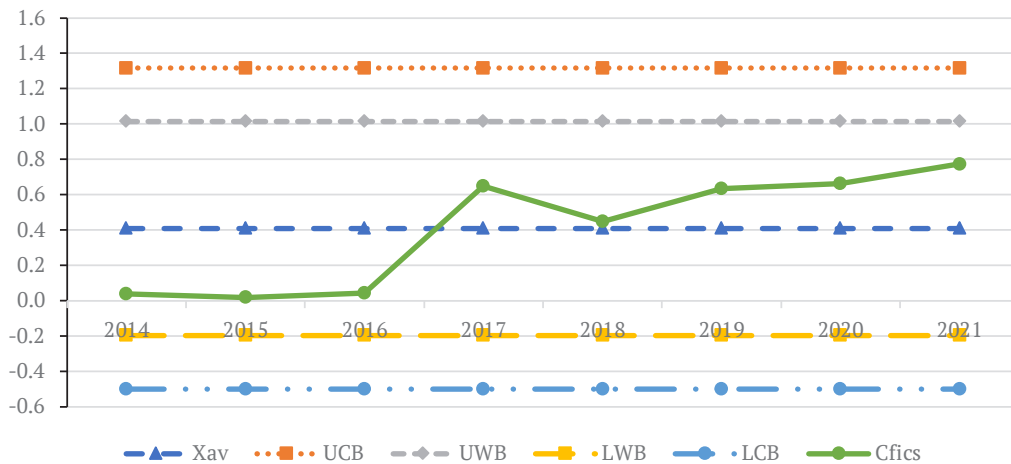


Figure 7. Shuhart's control chart for the coefficient of financial independence of capitalized sources

Source: compiled by the authors in MS Excel

Thus, the diagnosis of the capital structure of JSC “Zhytlobud-1” using Shuhart’s control charts allows to draw the following general conclusions:

1) the capital structure of the enterprise underwent significant changes during the analyzed period, while some of the indicators have a high level of manageability, but there are indicators that require additional attention from financial managers;

2) at the beginning of the studied period, the capital of the enterprise was mainly formed at the expense of loan funds, the share of equity capital was very low (2014-2016). At the same time, financial stability was maintained due to the predominance of long-term funds in the structure of loan capital;

3) since the beginning of 2017, the share of equity capital has increased significantly, but it has started to decrease again since 2019;

4) in the structure of loan funds, there is a significant increase in the share of short-term loan capital. Moreover, the indicators reflecting its share both in the total volume of financing and in loan capital tend to go beyond the zone of control limits, which indicates an insufficient level of their manageability;

5) in this connection, the key management objects in the capital structure of JSC “Zhytlobud-1” are the volume and share of short-term loan funds in the structure of the company’s financing sources.

In the work, the content of the concept of “enterprise financial activity administration” was formed and clarified, which, unlike the existing studies, is based on a combination of studies on modern research of scientists and current legislation regarding the content of the concepts of “administration” [4; 13; 18] and “enterprise financial activity” [18-20]. The result of solving the first task is an improved definition: enterprise financial activity administration is the process of developing and implementing management decisions regarding the effective formation and rational use of its capital in order to ensure its financial stability, profitability and creating conditions for the fulfillment of obligations to other business entities and the state, which is based on information, diagnostic and analytical support for the implementation of management procedures.

In the course of solving the second task, the expediency of using capital structure diagnosis as a tool for the enterprise financial activity administration was substantiated. The solution to the third task is confirmed by the results of the diagnosis of the capital structure on the example of JSC “Zhytlobud-1” (Kharkiv), which, in contrast to the existing studies, was carried out on the basis of the application of Shuhart’s control charts (Figs. 1-7). The use of Shuhart’s control charts as a diagnostic toolkit should be considered a positive direction in the development of the conducted research for the formation of sound management decisions in the field of financial activity of the enterprise, which made it possible to assess the level of manageability of capital components and to identify key

management objects in the structure of funding sources of JSC “Zhytlobud-1”.

CONCLUSIONS

The analysis of the treatises of the scientists, who studied the issue of defining the essence of the concepts of “administration” and “financial activity of an enterprise”, legislative and regulatory acts, revealed the lack of a single interpretation of the concept of “enterprise financial activity administration”, which determined the feasibility of conducting research in this direction. On the basis of the study and combination of the content of the categories “administration” and “enterprise financial activity”, the author’s vision of the essence of the administration of the financial activity of enterprises as a process of development and implementation of management decisions regarding the effective formation and rational use of its capital in order to ensure its financial stability, profitability and the creation of conditions for the fulfillment of obligations to other business entities and the state, which is based on information, diagnostic and analytical support for the implementation of management procedures.

In the work it was established that the key element in the system of tools for the enterprise financial activity administration is the diagnosis of the capital structure, which is determined by the following. Firstly, the practical model of the enterprise financial activity administration must be effective, flexible, meet the strategic goal and take into account the influence of external and internal factors. Secondly, the effective formation of the structure and the rational use of the enterprise capital are strategically important tasks of financial management. In its turn, this requires research, understanding and processing of the consequences of the influence of these factors, as well as determines the expediency of objective and comprehensive diagnosis and monitoring of the financial state, structure of financial resources and directions of their use.

In the study it was offered to use Shuhart’s control charts to diagnose the capital structure on the example of JSC “Zhytlobud-1”. The use of this tool provides an opportunity to determine the optimal values and manageability limits for indicators that do not have universal standards, and also makes it possible to diagnose and evaluate trends in their development, on the basis of which the management of the enterprise is able to make adequate managerial decisions. In this connection, the use of Shuhart’s control charts made it possible to assess the level of manageability of the capital components of the enterprise under study and to identify key management objects in the structure of funding sources of JSC “Zhytlobud-1”.

Prospects for further investigations in this direction are the application of economic and mathematical methods of forecasting the capital structure of the enterprise under study in order to ensure long-term financial stability and sustainable development.

REFERENCES

- [1] Podolianchuk, O., Plakhtii, T., & Gudzenko, N. (2019). Current liabilities and their accounting in the attracted capital management system. *Baltic Journal of Economic Studies*, 5(3), 159-169. doi: 10.30525/2256-0742/2019-5-3-159-169.
- [2] Gontareva, I., & Kurmaiev, P. (2018). Functionality and quality management of transformation of capital forms at an enterprise. *TEM Journal*, 7(3), 597-606.
- [3] Pohrishchuk, G., & Voloshchuk, R. (2020). Own capital of the enterprise: The essence and peculiarities of formation in Ukraine. *Economy and the State*, 7, 16-23.

- [4] Lypych, L., & Hryniuk, R. (2016). Administration as a tool for increasing the investment efficiency of direct taxation of enterprises. *Economic Journal of Lesya Ukrainka East European National University*, 3, 41-46.
- [5] Myronenko, Yu.O. (2014). The essence of the administrative management of the enterprise and its relevance in modern conditions. *Development Management*, 13, 65-68.
- [6] Semenchuk, T.B. (2013). The essence of the category “public administration” and the prerequisites for its formation. *Herald of the Economy of Transport and Industry*, 42, 385-390.
- [7] Yakovlev, I.P. (2015). Public administration in the field of state customs affairs: A terminological search. *European Perspectives*, 6, 119-125.
- [8] Lazor, O.Ya., & Lazor, O.D. (2015). Public management and administration: A retrospective of some theoretical aspects. *University Scientific Notes*, 56, 111-121.
- [9] Voynarenko, M.P., & Kostyuk, O.M. (2013). The essence and principles of business administration at enterprises under the conditions of a changing competitive environment. *Economy: Realities of Time*, 4, 49-51.
- [10] Krupelnyska, I.G., Yevas, T.V., & Zhukova, O.A. (2017). Theoretical aspects of business administration as a component of the enterprise management system. *Pryazovsky Economic Bulletin*, 3(3), 50-53.
- [11] Mihailovska, O.V., Filipova, N.V., Ladonko, L.S., & Tkalenko, N.V. (2016). Analysis of theoretical approaches to determining the essence of the constituent definitions of public management and administration. *University Scientific Notes*, 58, 241-253.
- [12] Savchenko, A.O. (2015). The concept, meaning and system of tax administration in Ukraine. *Pravo.ua*, 3, 147-152.
- [13] Petrenko, V.A., Gurbyk, Yu.Yu., & Salnikova, M.V. (2018). Theoretical analysis of the interpretation of the concept of “financial activity of the enterprise”. *Money, Finance and Credit*, 5, 180-185.
- [14] Chernova, S., Voronkova, V., & Banakh, V. (2016). *Public management and administration in the conditions of the information society: Domestic and foreign experience*. Zaporizhzhia: ZDIA.
- [15] Kazhdan, A. (Ed.). (1991). *Oxford dictionary*. Oxford: Oxford University Press.
- [16] Hughes, O. (2005). *Public management and administration: An introduction*. London: Macmillan Press LTD.
- [17] Dzyundzyuk, V.B. (2009). Modernization of authorities: Transition from public administration to public management. *Actual Problems of Public Administration*, 2, 9-14.
- [18] Serov, O.V. (2016). Analysis of the terminological support of the category-conceptual apparatus in the field of knowledge “public management and administration”. *Public Administration: Theory and Practice*, 2, 15-23.
- [19] Economic Code of Ukraine (2003, January). Retrieved from <http://zakon.rada.gov.ua/laws/show/436-15>.
- [20] Order of the Ministry of Finance of Ukraine No. z0336-13 “On the Approval of the National Regulation (Standard) of Accounting 1 “General Requirements for Financial Reporting” (2013, February). Retrieved from <https://zakon.rada.gov.ua/laws/show/z0336-13#Text>.
- [21] Kovbasiuk, Yu.V. (2013). *Governance*. Kyiv: NADU.
- [22] Semenchuk, T.B., Pakhota, N.V., & Shlenskovy, O.M. (2021). Ensuring the effective operation of the enterprise on the basis of modern management tools. *Black Sea Economic Studies*, 72-2, 13-17.
- [23] Netudikhata, K.L., Prokopovich, L.B., & Sachava, K.O. (2020). Diagnostics of the formation and optimization of the capital structure of enterprises in the construction industry. *Agroworld*, 3, 108-117. doi: 10.32702/2306-6792.2020.3.108.
- [24] Zhuravlyova, I.V., Berest, M.M., Poltinina, O.P., & Lelyuk, S.V. (2017). Detection of financial risks at macro-, mezzo and microlevels of economy. *Economic Annals – XXI*, 165(5-6), 31-35. doi: 10.21003/ea.V165-07.
- [25] Slobodyanik, Y., Bagatska, K., Silakova, H., Krot, L., & Korbutiak, A. (2021). Efficiency of capital formation of utility enterprises: The case of Ukraine. *Independent Journal of Management & Production*, 3(12), 1-18. doi: 10.14807/ijmp.v12i3.1501.
- [26] Pronoza, P., Kuzenko, T., & Saablina, N. (2022). Implementation of strategic tools in the process of financial security management of industrial enterprises in Ukraine. *Eastern-European Journal of Enterprise Technologies*, 2, 13(116), 15-23. doi: 10.15587/1729-4061.2022.254234.
- [27] Vakhovich, I.M. (2013). *Financial management and financial engineering of business processes*. Lutsk: Volyn Polygraph.
- [28] Order of the Ministry of Economy of Ukraine No. v0010557-01 “Methodological Recommendations for Identifying Signs of Enterprise Insolvency and Signs of Actions to Conceal Bankruptcy, Fictitious Bankruptcy or Bringing it to Bankruptcy”. (2001, January). Retrieved from <https://zakon.rada.gov.ua/rada/show/v0010557-01#Text>.
- [29] Ghoncharenko, A. (2020). Explanatory basis of enterprise capital structure management. *Adaptive Management: Theory and Practice. Series Economics*, 9(18), 1-24. doi: 10.33296/2707-0654-9(18)-15.
- [30] Solonin, S.I. (2014). *Method of control cards*. Retrieved from <https://elar.urfu.ru/handle/10995/36131>.
- [31] Pogosova, M.Yu. (2009). A methodical approach to diagnosing the level of financial security of a business entity. In *Theoretical and methodological support for managing the financial activities of enterprises* (pp. 54-66). Kharkiv: ADV.
- [32] Hobela, V. (2020). Economy offshoring in the national economic security. *Scientific Horizons*, 23(12), 109-120. doi: 10.48077/scihor.23(12).2020.109-120.
- [33] Antoniuk, N. (2019). Forecasting in anti-crisis management under reforming conditions. *Scientific Bulletin of Mukachevo State University. Series “Economics”*, 2(12), 15-20. doi: 10.31339/2313-8114-2019-2(12)-15-20.
- [34] Kryvenko, N. (2020). Features of international economic integration in Latin America. *Scientific Horizons*, 23(12), 99-108. doi: 10.48077/scihor.23(12).2020.99-108.
- [35] Hoblyk, V., Chernychko, T., & Khaustova, K. (2019). Resources supply of the hospitality sphere. *Scientific Bulletin of Mukachevo State University. Series “Economics”*, 2(12), 21-26. doi: 10.31339/2313-8114-2019-2(12)-21-26.

Марина Миколаївна Берест, Наталія Вікторівна Сабліна

Харківський національний економічний університет імені Семена Кузнеця
61166, просп. Науки, 9А, м. Харків, Україна

Діагностика структури капіталу як інструмент адміністрування фінансової діяльності підприємств

Анотація. Розвиток ринкових трансформацій в Україні призвів до суттєвих змін в сфері формування і використання капіталу підприємств. Ключовим чинником забезпечення ефективного функціонування є формування оптимальної структури капіталу, яка дозволяє поєднати зростання фінансових результатів з прийнятним рівнем ризику. У даному зв'язку процеси адміністрування фінансової діяльності вимагають переосмислення та удосконалення підходів до діагностики структури джерел фінансування як в теоретичному, так і практичному аспектах. Метою дослідження є удосконалення методичних підходів до діагностики структури капіталу підприємств як інструменту обґрунтування та прийняття управлінських рішень в системі фінансового менеджменту на підґрунті узагальнення теоретичних підходів та уточнення змісту поняття «адміністрування фінансової діяльності підприємств». В роботі використано методи наукового пізнання, а саме: системного підходу, аналізу, синтезу, наукової абстракції, узагальнення. Для проведення діагностики структури капіталу на прикладі АТ «Житлобуд-1» (м. Харків) було застосовано методи аналізу фінансових коефіцієнтів та побудови контрольних карт Шухарта. Сформовано авторське бачення сутності адміністрування фінансової діяльності підприємств як процесу розробки та впровадження управлінських рішень щодо формування та використання його капіталу з метою забезпечення фінансової стійкості, прибутковості та створення умов для виконання зобов'язань, який базується на інформаційному, діагностичному та аналітичному забезпеченні реалізації управлінських процедур. Встановлено, що ключовим елементом в системі інструментів адміністрування фінансової діяльності підприємств виступає діагностика структури капіталу. Запропоновано використання контрольних карт Шухарта для проведення діагностики структури капіталу та проведено відповідні розрахунки на прикладі АТ «Житлобуд-1», оцінено рівень керованості складових його капіталу та виділено об'єкти ключового управління в структурі джерел фінансування підприємства. Результати дослідження можуть бути корисними для науковців, здобувачів економічних спеціальностей закладів вищої освіти, керівників та працівників фінансових підрозділів підприємств і фінансових установ

Ключові слова: фінансовий менеджмент, джерела фінансування, управлінські рішення, аналіз фінансових коефіцієнтів, контрольні карти Шухарта