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Audit of Financial Statements as a Component of Economic and Financial Security of an Enterprise under Martial Law: Approaches and Analysis

La Auditoría de Estados Financieros como Componente de la Seguridad Económica y Financiera de una Empresa bajo la Ley Marcial: Enfoques y análisis

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Resumen

El análisis de la seguridad financiera de una empresa se utiliza principalmente para identificar las amenazas que se ciernen sobre su desarrollo estable y su capacidad de desarrollo a largo plazo. No cabe duda de que los estados financieros de una empresa son un reflejo de su situación financiera y, por consiguiente, la evaluación del nivel de seguridad financiera debe basarse principalmente en la auditoría de los estados financieros. En vista de ello, el objetivo del estudio es generalizar los enfoques de la auditoría de los estados financieros de una empresa para determinar el nivel de seguridad financiera de la misma. En el transcurso del estudio, se determinó que hoy en día existen muchos enfoques para determinar el nivel de seguridad financiera en la literatura, la mayoría de ellos se basan en la auditoría de los estados financieros, pero no se ha formado un enfoque único para diagnosticar el estado de la seguridad financiera. El artículo generaliza los trabajos científicos e identifica una lista de los indicadores más importantes para determinar el nivel de seguridad financiera. Se demuestra que una auditoría sistemática de los estados financieros utilizando el enfoque propuesto puede garantizar la detección a tiempo de las amenazas a la seguridad financiera y crear una base para responder con prontitud a las amenazas identificadas.

Palabras clave: Amenaza a la seguridad financiera, enfoque metodológico, indicador de seguridad financiera, riesgos, potencial de desarrollo, beneficios, pérdida del equilibrio financiero.

Abstract

The analysis of the financial security of an enterprise is used primarily to identify threats to its stable development and the ability to develop in the long term. Undoubtedly, the financial statements of an enterprise are a reflection of its financial condition, and accordingly, the assessment of the level of financial security should be based primarily on the audit of financial statements. In view of this, the purpose of the study is to generalize approaches to the audit of the financial statements of an enterprise to determine the level of financial security of an enterprise. In the course of the study, it was determined that today there are many approaches to determining the level of financial security in the literature, most of them are based on the audit of financial statements, but a single approach to diagnosing the state of financial security has not been formed. The article generalizes scientific works and identifies a list of the most important indicators for determining the level of financial security. It is proved that a systematic audit of financial statements using the proposed approach can ensure the timely detection of threats to financial security and create a basis for early response to identified threats.

Keywords: Threat to financial security, methodological approach, financial security indicator, risks, development potential, profit, loss of financial equilibrium.

Introduction

The current trends in the development of the Ukrainian economy require the creation of an effective system for ensuring and maintaining the financial security of organisations at a high level. One of the key links in this process is the analysis and assessment of the level of financial security of an enterprise (FSE). Determining the level of financial security of an institution is still an open problem at the national level, which leads to scientific research on the optimal methodological approach to determining the level of FSB (Hrynyuk et al., 2021; Rekunenko et al., 2022; Tkachuk et al., 2022), which will provide an overall picture of the state of protection of the financial interests of the institution.

The development of methods for assessing the level of FSB is of crucial methodological importance. This is due to the need to monitor the financial condition of enterprises on an almost daily basis and, as a result, to maintain it at an appropriate level in a competitive market environment (Hurzhyi et al., 2022). Assessment of the financial security of an enterprise is also important when obtaining a loan from a commercial bank. Obviously, banks will not lend to enterprises with insufficient financial security (Vysotska et al., 2021; Baranovskyi et al., 2020). Therefore, an important element of ensuring the financial security of an enterprise is an objective and timely determination of its level.

The ability to continuously examine the company's financial security barriers allows for the timely formulation of measures to stabilize its financial position and neutralize emerging risks in the external and internal environment. Based on this information, financial managers can also formulate financial security systems that allow for the efficient use of financial resources (equity and borrowings), the introduction of innovations and the expansion of production.

However, the lack of a single optimal method for assessing the level of financial security of an enterprise hinders the establishment of an effective system for assessing the level of financial security.

Today, the literature (Denisova et al., 2021; Nosan et al., 2022; Zimon et al., 2022) contains enough publications that contain methodological recommendations for calculating the level of financial security of the enterprise and the state, but there is no regulatory act that would regulate the process of assessing the level of financial security at enterprises. However, an increasing number of scholars (Barrafrem et al., 2020; Gasparian et al., 2021) are paying attention to the problem of assessing the financial security of an enterprise and providing their own recommendations for improving existing methods. However, there is no methodological approach fully adapted to the current conditions of the Ukrainian economy to determine the likelihood of deterioration of the financial condition of an enterprise, diagnose the onset of bankruptcy, and determine the level of FSB.

One of the most serious shortcomings in the diagnosis of financial security is the lack of reliable methods for predicting the likelihood of crises and possible bankruptcy of a business entity (Bannikova et al., 2022; Riabov et al., 2021). Indeed, there are a number of methods for predicting crises and bankruptcy today, but the problem is that most of them were developed for Western enterprises, and a long time ago.

It should also be borne in mind that today, financial managers of business entities have the opportunity to use modern economic, mathematical, and information technology tools that expand the possibilities of analysing the spheres of influence on the enterprise's activities (Poltorak et al., 2021).

A review of the literature shows that among the significant number of methods identified as tools for analyzing the state of the FBP, methods for assessing the probability of bankruptcy, evaluating financial potential and determining the financial stability of a company predominate, while there are very few methods that assess the level of financial security in terms of diagnosing specific threats or conducting a comprehensive study of the internal and external environment.

Materials and Methods

The theoretical and methodological basis of the study is formed by scientific works of domestic and foreign researchers devoted to ensuring and diagnosing the financial security of enterprise.

The following methods were used in the study:

- monographic and structural-functional analysis - in the process of analyzing and summarizing existing approaches to determining the level of financial security of an enterprise;
- generalization - when determining the indicators that should be used to determine the level of financial security of an enterprise;
- systematization and grouping - to combine indicators into groups for further monitoring and auditing of the company's financial statements in order to determine its financial security.

The research was informed by the scientific works of leading scholars focusing on the analysis of the financial security of an enterprise.

Result and discussion

Based on a summary of the literature on assessing the financial security of companies, it can be said that, in general, all approaches to determining the level of FSB can be conditionally divided into four main groups of methods:

- indicator;
- resource and functional;
- programmatic and targeted;
- ranking method.

A critical analysis of each of these methods is summarized in Table 1.

Table 1: Characteristics of approaches to determining the level of FBP

Approach	Characteristics	Disadvantages / Advantages	Features of application
Indicative	Based on a comparison of the values of the calculated indicators with the recommended thresholds. Non-compliance with the recommended values indicates the presence of threats to financial security. The highest level of financial security is achieved when all indicators meet the recommended thresholds.	Disadvantages: the normative values for indicator indicators may vary depending on the state of the business entity's external environment, industry, life cycle, etc. Advantages: makes it possible to assess the state of the business entity in various areas of activity, the approach is comprehensive, allows identifying areas for improving the situation	It does not require significant time and resources (financial, labour), but gives a comprehensive result. The process of determining the level of FBP using the indicator approach can be adjusted to the current needs of the business entity
Resource and functional	It is based on determining the use of financial resources (the ratio of equity to borrowed resources) and the performance of the function (ensuring the financial efficiency of the enterprise). It is based on the degree of efficiency in the use of available financial resources and the ability to fully perform financial functions.	Disadvantages: financial security cannot be defined simply as efficiency in the use of financial resources, which is time-consuming and difficult to implement. Advantages: in conditions of limited resources, it allows determining the performance of the JV in terms of resource efficiency	Requires a large information base as input, a rather extensive approach that does not always yield concrete results
Programme-targeted	It is based on the definition of integral indicators of the FBP, and several levels of integration can be used. It is used to solve a specific problem situation and provide directions for achieving a certain goal.	Disadvantages: the method involves the use of rather complicated mathematical tools, which does not always lead to the most objective result, and due to the complexity of calculations, it can produce a result with a significant degree of error in the calculation results. Advantages: allows you to get results within the framework of solving a specific task of ensuring the FSB	The approach involves multi-level integration, which can reduce the quality of the results obtained, and is complicated to calculate
Ranking method	It is based on the use of ranking features. The assessment of the level of the FSF is carried out in points as the sum of the products of the rating of each indicator by the class, which is determined depending on the value of the normative indicator.	Disadvantages: cannot be assessed as a general indicator of its level and subjective factors have a significant impact on the results. Advantages: allows comparing the current state of the business entity with competitors, determining which company can be targeted	Can be used in conjunction with other methods, especially should be applied to enterprises operating in a highly competitive industry

Compiled by the authors based on (Kulanov et al., 2020; Pronoza et al., 2022; Kvasnytska et al., 2019; Salnikova et al., 2019; Kendall et al., 2019; Verbivska et al., 2022).

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The methodological approaches to assessing the level of FBP described in Table 1 have advantages and disadvantages, but each of them is based on the calculation of indicators characterising different areas of the business entity's activity, which makes it possible to identify problematic segments of activity in the future, i.e. these methods are based on monitoring and auditing financial statements.

A noteworthy approach to determining the state of financial security is proposed by researchers Fedorushchenko and Baranovskyi (2021), who believe that the best approach is to use an additive model of financial security of an enterprise that allows taking into account the impact of the macro- and microenvironment. After analysing the works of other researchers (Franchuk et al., 2020; Sylkin et al., 2018; De Goede, 2021) on the outlined topic, we can state that macro-environmental factors have a degree of influence of 30% and micro- 70%, the authors note that this methodology is developed for enterprises of the fuel and energy complex of Ukraine. The level of financial security is determined by the formula:

$$FB = \sum \quad \text{Кзн}_{ij} * F_{ij}; \qquad FB \ \to 1$$

$$\text{Кзн} = \frac{\text{В}}{100\%}$$

$$FB = 0{,}7 * F_{micro} + 0{,}3 * F_{macro}$$

where: FB - financial security;

Кзн_{ij} is the coefficient of significance of the influence factor;

F_{ij} is a factor influencing financial security;

C - the impact of the factor on the financial security of the enterprise (in %);

F_{micro} - micro environmental factors;

F_{macro} - macroeconomic factors;

i, j are micro- and macro-environmental factors, respectively.

In particular, the influence of macro and micro environmental factors differs and does not take into account the amount of accounts payable and receivable, the liquidity of the company and the results of financial statement audits, which form the basis for assessing the financial security of the company.

However, determining the list of indicators of the financial security of an enterprise is not the last step in the formation of a methodological approach to determining its level. In addition to the actual definition of the indicators of financial security of the enterprise, attention should be paid to the interpretation of the results obtained. This is because it is precisely the conclusions on the state of financial security of the enterprise that allow formulating a set of measures to stabilize the state of the enterprise (Bilozubenko et al., 2020; Redko et al., 2023).

In general, when determining the level of FSB, it is advisable to proceed from the classification of business risks and determine the areas and degrees of riskiness of the functioning of each particular enterprise:

1. a risk-free zone
2. risk tolerance zone (potential risk of loss of profit);
3. critical risk zone (real risk of loss of profit);
4. catastrophic risk zone (risk of loss of all assets, i.e. bankruptcy).

According to this approach, there are four levels of financial security of a business:
normal level: the financial resources of the business are sufficient to ensure financial security unstable level - to ensure its financial security, the business needs to increase its financial resources in addition to its own funds; and crisis level - the company does not have sufficient equity and borrowed funds to ensure its financial security; and crisis level - the company is declared bankrupt.

When choosing the optimal methodological approach to determining the level of FSB, it is necessary to take into account the extremely important fact that financial security is a multilevel structure of means, actions, and use of forces in different directions.

It is imperative to take into account the specifics of the activities of business entities in various areas, in particular:

- the market for goods and services;
- quality of cooperation with counterparties;
- the degree of risk of using each type of financial resources;
- determining the effectiveness and riskiness of transactions;
- Gathering information about potential partners;
- assessing the position of the client's competitor (partner) in the market;
- monitoring the terms and conditions of financial services, etc.

However, it is impossible to take into account all of the above characteristics in a single resultant indicator without losing accuracy and objectivity, so it is advisable to assess the level of financial security by a detailed list of financial indicators that reflect the real financial condition of the enterprise and, if properly selected, allow to identify bottlenecks in the financial activities of business entities and, as a result, to identify the dangers that threaten the business entity.

Determining the level of financial security should be based on a thorough analysis of the financial performance indicators of a business entity since they provide a deterministic definition of the degree of protection of financial interests. Thus, in one way or another, it is impossible to determine the level of FSB without using the indicator approach. Therefore, we believe this approach is the most optimal for use in modern conditions.

The views of scholars on the list of indicators that should be analysed to determine the level of FBP within the indicator approach differ. Various groups of indicators are proposed, with emphasis on different aspects of the financial activity of an enterprise. In view of this, it is necessary to analyse which indicators are proposed to be calculated by different researchers (Table 2).

Table 2: Indicators for assessing the level of financial security of an enterprise

Authors Indicators	(Pronoza et al., 2022)	(Hrynyuk et al., 2021)	(Franchuk et al., 2020)	(Kvasnytska et al., 2019)	(Fedorushchenko et al., 2021)	(Poltorak et al., 2021)	(Sylkin et al., 2018)	(Rekunenko et al., 2022)	(De Goede, 2021)	(Shkolnyk et al., 2019)	Bottom line.
1. Solvency indicators											
Absolute liquidity ratio	+	+			+	+	+		+		6
Quick (interim) liquidity ratio		+			+	+			+		4
Total (current, coverage) liquidity ratio	+	+	+	+	+	+	+	+	+	+	10
Inventory coverage ratio		+							+		2
The current ratio of own working capital	+								+		2
The ratio of accounts receivable to accounts payable	+		+				+		+		4
2. Financial stability indicators											
Coefficient of autonomy	+	+	+		+	+	+	+	+	+	9
Financial risk ratio	+			+	+		+		+	+	6
Financial stability ratio	+	+				+	+		+	+	6
Debt ratio							+				1
The current ratio of current debt							+			+	2
Interest coverage ratio								+			1
Equity gearing ratio	+		+		+		+			+	5
Funding ratio	+					+			+		3
Investment ratio	+									+	2
Financial leverage ratio	+							+			2
Financial safety margin										+	1
Weighted average cost of capital								+			1
3. Business activity indicators											

Current assets turnover ratio	+				+	+	+		+		5
Non-current assets turnover ratio	+				+						2
Asset turnover ratio		+	+	+	+	+	+		+		7
Equity turnover ratio	+		+			+					3
Inventory turnover ratio	+	+				+			+		4
Accounts payable turnover ratio	+	+				+		+	+		5
Receivables turnover ratio	+	+						+	+	+	5
Sustainable economic growth rate			+								1
Product price index			+								1
4. Indicators of property status											
Return on equity		+	+	+							3
Depreciation ratio of fixed assets			+	+		+					3
Fixed asset ratio						+				+	2
Asset mobility ratio						+					1
Ratio of non-current to current capital	+										1
Index of sales volumes			+								1
Product quality			+								1
5. profitability indicators											
Return on assets ratio	+	+	+	+	+	+	+	+	+		9
Return on current assets ratio					+						1
Return on non-current assets						+					1
Product profitability ratio		+			+						2
Return on sales (net profitability) ratio	+		+		+		+		+		5
Return on equity ratio	+		+			+	+	+	+	+	7
Permanent capital ratio										+	1
Gross profit margin on sales	+					+					2
Production profitability ratio			+								1

Compiled by the author on the basis of (Pronoza et al., 2022; Hrynyuk et al., 2021; Franchuk et al., 2020; Kvasnytska et al., 2019; Fedorushchenko et al., 2021; Poltorak et al., 2021; Sylkin et al., 2018; Rekunenko et al., 2022; De Goede, 2021; Shkolnyk et al., 2019)

Based on the analyzed financial security indicators of the entity (Table 2), a list of indicators can be prepared that will be the basis for determining the level of FBP based on the financial statement audit. It is recommended to use the indicator with the highest score in the final calculation (Table 3).

Table 3

Indicators for assessing the level of financial security of business entities (based on the analysis of the author's methods)

Group of indicators	Indicator		Classification of the indicator as a stimulant or a destimulant
1. Capital structures	1	Coefficient of autonomy	Stimulant
	2	Debt ratio	Destimulator
	3	Financial leverage ratio	Stimulant
	4	Financial risk ratio	Stimulant
2. Business activity	1	Asset turnover ratio	Stimulant
	2	Capital turnover ratio	Stimulant
	3	Receivables turnover	Stimulant
	4	Accounts payable turnover	Stimulant
3. Solvency and liquidity	1	Financial stability ratio	Stimulant
	2	Current solvency ratio	Stimulant
	3	Ratio of accounts receivable to accounts payable	Stimulant
	4	Absolute liquidity ratio	Stimulant
4. Profitability.	1	Return on assets ratio	Stimulant
	2	Return on equity ratio	Stimulant
	3	Net profitability ratio	Stimulant
5. Financial sustainability	1	Coverage ratio	Stimulant
	2	Manoeuvrability factor	Stimulant

Compiled by the authors

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The list of indicators presented in Table 3 makes it possible to objectively assess the level of FSB, as it evaluates various aspects of financial activity and protection of financial interests in various areas, in particular:

- capital structure indicators reflect the security of financial interests aimed at ensuring stable development using own financial resources and the ability to meet its financial obligations;
- business activity indicators reflect the degree of optimality of the ratio of limited financial resources and production volumes;
- Solvency and liquidity indicators reflect the security of the financial interests of the targeted parties and the ability to convert the company's assets into cash, and thus the ability to pay off the most urgent liabilities;
- Profitability indicators reflect the degree of protection of one of the key financial interests the organization of efficient operations and profit generation;
- financial stability indicators reflect the protection of financial interests aimed at ensuring financial stability in the long term.

Thus, after determining the possible ways of processing information related to assessing the level of financial security of business entities, it should be concluded that the most common among researchers are the indicator and resource-functional approaches, each of which has advantages and disadvantages, but there is no consensus on which approach provides the most complete and objective characterization of the financial security status. However, it has been determined that the indicator approach is optimal in terms of the ratio of obtaining objective information on the level of financial security and labour intensity. The combination of the indicator approach with the calculation of the integral indicator of FSB allows not only to determine the level of FSB, but also to compare the results obtained with those in the industry.

Conclusion

To date, a significant number of academic papers have been devoted to the problem of determining the FSB level, and all assessment methods can be categorized into approaches to determining the FSB level, in particular, indicator, resource-function, program-target and ranking. During the research the author analyzed each approach and concluded that the indicator approach is the most suitable for use in a contemporary context as it is flexible to small changes in a company's financial activities and is based on the results of audited financial statements, thus providing a dynamic assessment of the company's financial security status. After establishing the appropriateness of using the indicator approach to determine the level of FBP, the author examines the views of scholars on the list of indicators as a basis for assessing the level of financial security.

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