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**STRATEGIC PRIORITIES FOR ENSURING THE FINANCIAL
SECURITY OF THE ENTITY**

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SUMMARY

Matushevskiy O. V. Strategic priorities for ensuring the financial security of a business entity. Specialty 072 Finance, banking and insurance. Educational program «International Financial Management». Vasyl' Stus Donetsk National University, Vinnytsia, 2024.

The paper examines the theoretical aspects of enterprise financial security management, in particular, modern views on the formation of financial security and the basic principles of enterprise financial security management. The current state of financial security of APS Planconsulting is analyzed, in particular, the methodology for assessing the financial security of an enterprise, the financial condition of APS Planconsulting, and indicators of financial security of APS Planconsulting.

The concept of improving the system of ensuring the financial security of an enterprise is developed, strategic directions for improving the financial security of an enterprise are developed, and the predicted values of financial security assessment are calculated, taking into account the proposed strategic priorities.

The purpose of developing strategic directions for improving the financial security management of APS Plan Consulting is to improve the system of management and financial security of the business entity, increase financial stability, reduce the likelihood of bankruptcy, and implement a subsystem for monitoring and controlling financial security.

Keywords: financial security, economic security, financial stability, financial security management system, business entity, financial stability, profitability, methods of financial security assessment.

103 p., 16 tables, 44 figures, 2 appendix, 67 sources.

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INTRODUCTION

Relevance of the topic. The socio-economic and political crisis in Ukraine has created a new system of dangers and threats that affect both the national economy and individual business entities. The aggressive economic environment necessitates a strategic approach to managing the financial security of an enterprise. As of today, the main strategic priorities for ensuring financial security are risk management, liquidity management, optimisation of the capital structure, and focus on opportunities for profitable growth and development.

The traditional approach to financial security focuses on risk management with an emphasis on insurance and hedging strategies. However, this approach may not be sufficient in an aggressive economic environment where risks are systemic and interconnected.

The strategic approach is more comprehensive and takes into account not only risks but also liquidity, capital structure and profitability. It aligns the financial security of an enterprise with its overall strategic goals, thereby enhancing the sustainability and long-term stability of the entity.

In industries with a high level of volatility or risk (such as energy or manufacturing), strategic provides a solid foundation for managing financial security. The strategy enables companies to survive economic crises, adapt to market changes and take advantage of growth opportunities. Thus, this approach contributes to the stability and development of these industries.

Adapting the strategic management of enterprise financial security to the conditions of an aggressive economic environment is not only relevant, but also necessary for the survival and growth of Ukrainian enterprises. It represents a paradigm shift from a reactive to a proactive approach, from risk management to strategic financial management.

The purpose of the research. The aim of the research is to develop strategic directions for improving the management of financial security of an economic entity.

Achievement of the research goal is possible provided that the relevant **research objectives are met.**

1. To study modern views on the formation of financial security.
2. Determine the basic principles of financial security management of the enterprise.
3. To study the methodology for assessing the financial security of a business entity.
4. To analyse the financial position of «APS Plankonsulting».
5. Conduct a comprehensive analysis of the financial security indicators of «APS Plankonsulting».
6. Develop a concept for improving the financial security management system of an enterprise.
7. Develop strategic directions for improving the management of financial security of the enterprise.
8. Calculate the forecast of financial security assessment of «APS Plankonsulting» and determine the economic feasibility of the proposed strategic priorities.

The object of the research is the process of ensuring the financial security of a business entity.

The subject of the research is the methodological provisions and practical recommendations on strategic priorities for improving the financial security of an economic entity.

Research methods. In the theoretical section of the master's thesis, the following methods were used: literature review, conceptual analysis and theoretical modelling. The analytical chapter used such research methods as financial analysis, coefficient analysis, expert opinion method, trend analysis, etc. In the design part of the work, methods such as strategic planning, conceptual diagram (building a concept for improving financial security management), external factor analysis and strategic mapping were used.

Scientific novelty of the study: the concept of improving the management of financial security of enterprise is proposed, a model of the monitoring subsystem as part of the system of financial security management of enterprise is proposed.

Theoretical significance of the results. The results of the master's thesis contribute to the theoretical understanding of financial security management in several ways: the work provides a clear and comprehensive conceptualisation of the financial security of an enterprise, especially in the context of an aggressive economic environment; integrates various aspects of financial security - risk management, liquidity management, capital structure and profitability - into a single strategic system; offers a new understanding of the role of external factors, the tasks of controlling subsystems and strategic directions for improving financial security.

Practical significance of the research results. The strategic directions developed in the study can be used by enterprises for strategic planning of financial security management. The developed model of the monitoring and controlling subsystem will allow the enterprise to increase operational efficiency and improve financial performance. The strategies identified in the study will contribute to the development of the consulting industry in Bulgaria, namely, allowing consulting firms to improve financial security, thereby increasing their competitiveness and contributing to the overall development of the industry.

Approbation of research results. The theoretical provisions and practical proposals of the study were presented and discussed in 2023 at the All-Ukrainian Scientific and Practical Conference dedicated to the 55th anniversary of the Department of Finance and Banking "Actual Problems of Finance Development in the Context of Digitalisation of the Ukrainian Economy" and at the International Scientific and Practical Conference "Topical Issues of Economics, Finance, Management and Law in Modern Conditions".

Matushevskiy O. V. The state of financial security of business entities in the context of digitalisation. Actual problems of finance development in the context of digitalisation of the Ukrainian economy: materials. All-Ukrainian scientific and practical conference dedicated to the 55th anniversary of the Department of Finance

and Banking (27 April 2023, Vinnytsia). Vinnytsia: Vasyl' Stus DonNU, 2023. C.81-83.

Matushevskiy O., Matviychuk V.I. Concept and provision of financial security in domestic banking institutions. International scientific and practical conference "Topical issues of economics, finance, management and law in modern conditions". 10 January 2023, Rivne, Ukraine. C.48-50.

Matushevskiy OV, Matviychuk VI Formation of financial security of an economic entity under martial law. *Economics and organization of management*. №4 (52). Vinnytsia: Vasyl' Stus DonNU, 2023.

The provisions submitted for defence are: proposed definition of financial security of an enterprise, the concept of improvement of the system of management of financial security of an enterprise, the developed subsystem of monitoring and controlling in the system of management of financial security of an enterprise, strategic priorities of improvement of management of financial security of an enterprise, the result and forecast of financial security of an enterprise.

Structure of the work. The qualification work consists of an introduction, 8 subsections, conclusions, a list of references, and appendices. The total number of pages is 110.

The provisions submitted for defense: the proposed definition of financial security of the enterprise, the concept of improving the system of management of financial security of the enterprise, the developed subsystem of monitoring and controlling in the system of management of financial security of the enterprise, strategic priorities for improving the management of financial security of the enterprise, the result and forecast of financial security of the enterprise.

Structure of the work. The qualification work consists of an introduction, 3 chapters, conclusions, a list of references, and appendices. The total volume of the work is 103 pages.

CHAPTER 1

THEORETICAL ASPECTS OF ENTERPRISE FINANCIAL SECURITY MANAGEMENT

1.1 Modern views on the formation of financial security

Given the growing instability and number of threats in the modern world (such as fluctuations in financial markets, volatility in prices of key assets and resources, and geopolitical conflicts), the issue of security has become of unprecedented importance. In this context, national, regional and company-level actors face the need to apply innovative approaches to security. Financial security is emerging as a key subsystem in the broader security framework, playing a critical role in addressing these evolving challenges.

It is difficult to overestimate the importance of financial security in a business. It serves as a protective shield against potential financial threats, both internal and external, and ensures the financial stability and sustainability of the enterprise. Financial security is a key factor in a company's ability to achieve its economic goals and ensure its long-term viability.

Financial security is a key element of economic security, especially in the context of transformations taking place in the global economy. In economic science, the economic security of a business entity is of fundamental importance, being an integral factor in ensuring the sustainable development of an enterprise.

A number of scholars, such as V. M. Tumin [67], A. A. Kozitsyn and M. V. Dudinska [58], studying the essence of economic security, argue that for an enterprise it means stability, optimal functionality and reliable potential for success in the future. N. Yershova, V. Tkachenko, and V. Harkush [10] formulate the essence of economic security as protection, preservation, and support of the vital activity of a business entity in order to promote the realisation of interests, rational use of resources, increase profitability, return on investment, and liquidity. From their point of view, economic security encompasses two aspects: protection and a state that covers other aspects: interests, resources and financial condition. Skilful and

adaptive management of activities becomes a crucial factor for the successful operation and economic development of enterprises.

Studying the evolution of the term "economic security of enterprises", T. Fedorenko and S. Dolinsky [57] emphasise its narrower, more specific meaning. In this sense, the economic security of an enterprise appears as a primary characteristic that indicates the degree of use of all enterprise resources to prevent, mitigate or protect against existing dangers, threats or unforeseen circumstances.

T. B. Kuzenko [23] points out that within the approach caused by the influence of the external resource-functional approach, there are seven functional components of the economic security of the enterprise, one of which is the financial security of the company. Listing all seven functional components of economic security, the researchers do not take into account the eighth component of economic security - environmental security.

The functional components of economic security have evolved over time to adapt to the changing business and economic environment. It is impossible to say which of the eight components mentioned in Fig. 1.1 came into being last, as different sources interpret and classify these components in different ways. However, one of the components that has received increased attention in recent years is environmental safety. Defining the essential characteristics of the functional components of economic security, K. O. Utenkova points out that this is primarily due to the growing recognition of the impact of environmental factors on the economy and business sustainability. Environmental safety involves measures taken by an enterprise to reduce environmental risks and ensure that its activities are sustainable and do not harm the environment [45].

Taking into account the statements and opinions of modern scholars, it is important to emphasise that financial security is not just a component, but an important and integral component of the economic security system of an enterprise. Financial security is a part that combines various components of the economic security system, ensuring the long-term resilience of a business entity to economic fluctuations and market volatility.

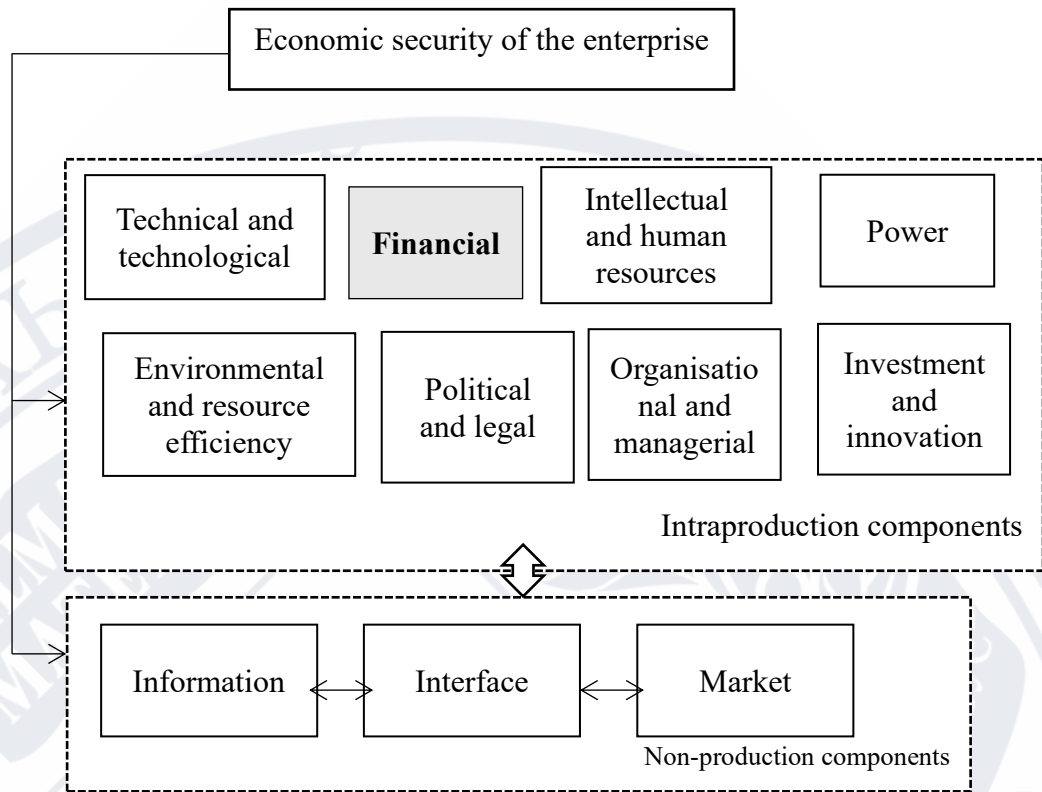


Figure 1.1 - Place of financial security in the system of economic security of enterprises

Source: compiled by the author based on [19, 11, 54, 45].

G. Blakytá and T. Ganushchak [54], studying the financial security of enterprises as a component of the economic security of the state, emphasise that the financial security of an enterprise is a part of the economic security of an enterprise that determines the process of development of an enterprise on the basis of certain resources, sufficient capital structure used by the enterprise, compliance with the goals and mission, based on the level of internal and external threats, certain factor influence in the changing current and future periods of development.

According to the results of their study, the researchers point out that the financial security of an enterprise is also a component of the economic security of the state. This statement is provable, since the enterprise creates added value, which forms the gross domestic product at the state level. In addition, enterprises are the main taxpayers that influence the formation of state and local budget revenues. Thus, an appropriate level of financial security will ensure the ability of the state to perform

its functions and ensure the economic development of the state and the improvement of social standards.

In view of this, it should be borne in mind that in the conditions of economic and political instability, variability of micro- and macro-environmental factors, the study of the essence of financial security of an enterprise and its impact on the enterprise as a whole becomes especially relevant. Timely assessment of financial security will allow the enterprise to minimise the threat of financial instability.

In the hierarchical structure, the financial security of enterprises occupies a significant place, as it indicates the possibilities for further development of the business entity (Fig. 1.2).

Given the above statement, in the context of economic security of an enterprise, financial security can be seen as an important component that contributes to the ability of an enterprise to achieve economic goals and ensure long-term sustainability.

In the modern scientific literature, there is no single interpretation of the term "financial security of an enterprise", as authors have been considering financial security from the point of view of at least six aspects for decades (Fig. 1.3).

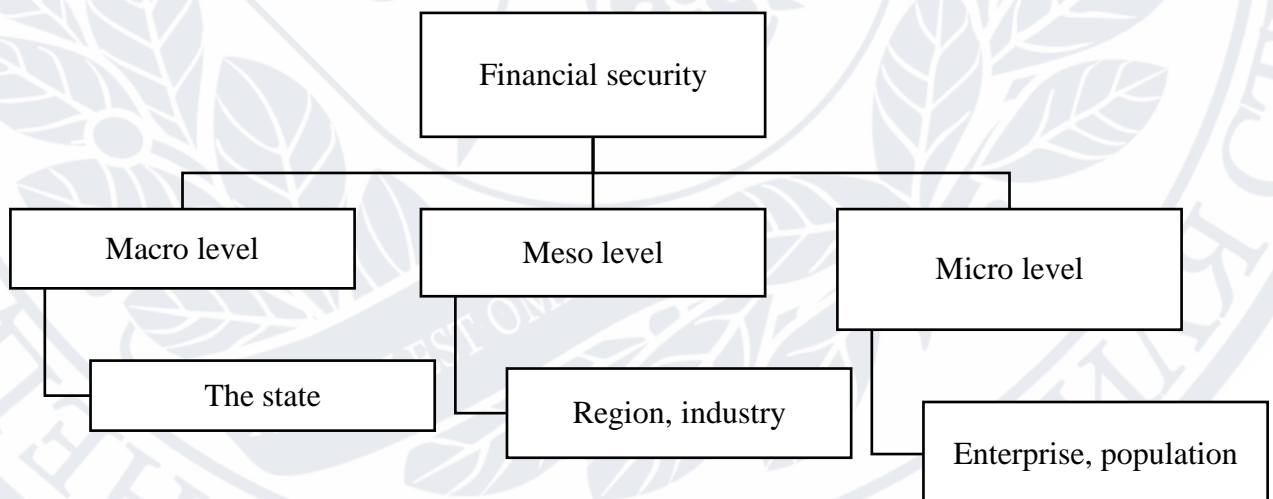


Figure 1.2 - Hierarchical structure of the "financial security" category

Source: compiled by the author based on [51, 65].

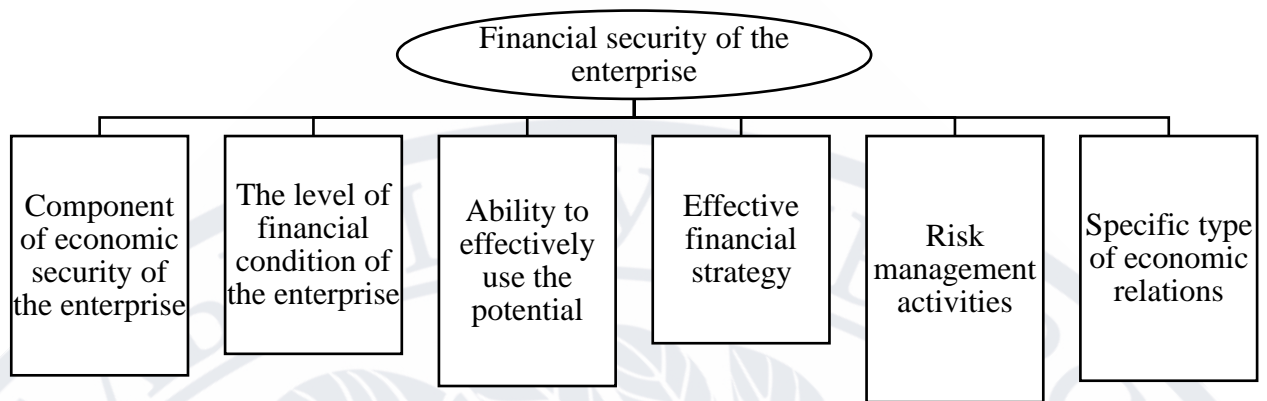


Figure 1.3 - Aspects of determining the financial security of an enterprise

Source: compiled by the author based on [19, 3, 53, 5].

The ability to ensure the continuous growth of an organisation depends on the state of its financial security system, which forms a "defence" against threats from the internal and external environment. In the works of I. A. Blank [53], the financial security of an enterprise is considered in terms of the level of the company's financial condition and is interpreted as a quantitatively and qualitatively determined level of the company's financial condition, which ensures stable protection of priority balanced financial interests from identified real and potential threats of the external and internal environment. The parameters of these threats are determined on the basis of the company's financial philosophy, thereby creating the necessary preconditions for financially ensuring sustainable growth.

A similar opinion is shared by O.N. Sorokina [60], but the researcher clarifies that financial security determines the level of financial condition of an enterprise, which creates conditions for stable, reliable functioning capable of systematic development, while maintaining financial balance, solvency and liquidity in the short and long term.

In her research, K. S. Goryacheva [5] proposes the following provision on the category of financial security of an enterprise, which is manifested in the existing financial condition, characterised by the balance and quality of financial instruments, technologies and services, resistance to threats, the ability of the financial system of an enterprise to ensure the realisation of its own financial

interests, mission and tasks with sufficient financial resources, as well as to ensure the efficient and sustainable development of this financial system.

While financial security is indeed crucial, it is also important to take into account the dynamic nature of the business environment. The financial position of an enterprise is not static, but is constantly changing under the influence of various factors, such as market trends, competition, regulatory changes, technological advances, etc. Therefore, an effective financial security system should not only be aimed at maintaining financial balance, solvency and liquidity, but also be flexible and adaptive to these changes.

In addition, the financial security of an enterprise is closely related to its overall economic security. While financial security focuses on financial aspects, economic security takes a broader view, considering other aspects such as the enterprise's market position, competitiveness and ability to withstand economic challenges. According to research, economic security of an enterprise is a state of efficient use of resources and existing market opportunities, which allows to prevent threats and ensure its long-term survival and sustainable development [55].

Modern researchers T. B. Kuzenko [24] and A. Bieniaz [52] consider "financial security" as an integral part of economic security. The place of financial security in the system of economic security of business is shown in Fig. 1.2.

A. Bieniaz [52] believes that financial security is a component of economic security and can be considered in relation to a number of entities, including, but not limited to, the following.

Having considered the concept of financial security as a component of economic security of an enterprise, the state and as a level of financial condition of an enterprise, it becomes clear that these aspects are inextricably linked to the financial strategy of an economic entity.

An effective financial strategy is not only about maintaining financial stability in the present, but also about planning for the future. It involves making strategic decisions about investments, capital structure and resource allocation to ensure long-term financial sustainability.

In this context, financial security is both a goal and a guiding principle of financial strategy. As a goal, the financial strategy is aimed at strengthening the financial security of the enterprise by improving its financial position and resilience to potential threats. As a guiding principle, the concept of financial security underpins strategic decisions made within the framework of the financial strategy, ensuring that these decisions are in line with the financial interests of the enterprise and contribute to its economic security.

L. S. Kryuchko [21], studying the financial security of an enterprise, indicates that it is a primary component of economic security, which allows businesses to ensure financial stability, liquidity and solvency, allows to identify both internal and external risks and challenges faced by the enterprise, and contributes to the development of strategies to overcome these obstacles. According to the author, financial security has a quantitative and qualitative expression and provides an opportunity to independently formulate, select and implement a financial strategy.

Y. B. Krakos and R. O. Razgon [20] point out that the peculiarity of financial security is the ability of an economic entity to independently develop and implement a financial strategy, in accordance with the goals of the corporate strategy of the enterprise, in an unstable and competitive environment.

Financial security of an enterprise is often discussed in the context of enterprise strategy formation, but it is important to note that it can also be viewed as a separate mechanism. This perspective, although not widely explored in the academic literature, offers valuable insights into the operational aspects of financial security.

As a mechanism, financial security includes a set of processes, controls and measures aimed at protecting the financial resources of an enterprise and ensuring its financial stability. It covers various activities such as risk management, financial planning and control, investment management, etc. These activities work together to identify potential financial threats, assess their impact and implement appropriate strategies to mitigate them.

I. V. Chibisova presents financial security as a mechanism that, on the one hand, ensures the stability of the financial system of an entity through the use of protective financial instruments, and on the other hand, ensures its efficiency by organising the rational use of financial resources [51].

In this case, the term "mechanism" is used in a figurative sense and reflects the system that ensures financial stability, efficient functioning and economic growth of an enterprise. From the author's point of view, financial security is characterised by the balance and quality of the set of financial instruments used by an enterprise, resistance to internal and external threats, and the ability of the enterprise's financial policy to ensure that its financial interests, mission and goals are realised with sufficient financial resources.

This mechanism-oriented view of financial security emphasises its dynamic nature. It is not only about responding to financial threats when they arise, but also about anticipating them and implementing preventive measures.

Among the leading foreign scholars, the approach proposed by H. Shinazi [64], who defines financial security of enterprises as "the ability to stimulate and expand business processes of an enterprise, effectively manage risks and eliminate consequences", is of great importance.

A. Zagorodniy in his research proposes to consider the financial security of an enterprise as protection of financial interests of business entities at all levels of financial relations, as well as provision of enterprises, organisations and institutions with financial resources sufficient to meet the needs and fulfil financial obligations[13].

Z. M. Vasylchenko and I. P. Vasylchenko emphasise that "financial security of an enterprise is the very protection of financial interests of business entities at all levels of financial relations" [2].

Therefore, it can be argued that financial security is a complex category that characterises the efficiency of using available financial resources, taking into account threats from the external and internal environment, in order to develop and

implement a financial strategy of the enterprise that will contribute to the achievement of the overall goals of the enterprise.

Thus, the concept of financial security is truly complex and multifaceted. It covers various aspects: from one of the most important components of economic security to the ability to stimulate and expand business processes. It also plays a crucial role in shaping the company's strategy and acts as a separate mechanism for protecting the company's financial interests.

Based on research by scholars, the author formulates her own definition of financial security of an enterprise. Financial security of an enterprise is a state of stability and sustainability achieved through strategic financial management. It ensures the ability of a business entity to fulfil financial obligations, maintain operations and invest in growth. This state is achieved by reducing potential risks and uncertainties, which reflects the ability of the enterprise to absorb financial shocks without threatening its operations.

Thus, financial security is not just a concept, but a critical aspect of a company's operations and financial strategy. This is an area that requires constant attention, strategic planning and effective management to ensure the financial stability and economic security of the business entity.

1.2 Basic principles of enterprise financial security management

The increasing number of threats in the external and internal environment of modern economic systems at the micro and macro levels leads to the need to transform and complicate the processes of financial security management. management of their financial and economic security. Financial security management of an enterprise is a system of methods and measures aimed at developing and implementing management decisions related to the protection of its financial interests from various threats.

Defining the essence of the financial security of an enterprise allows to formulate its main goal - ensuring maximum stability and efficiency at the current stage of the enterprise's functioning, as well as ensuring a reliable potential for future

development and growth of the business entity. In order to optimise the use of enterprise resources and achieve the set goals, management must adhere to the key functional objectives related to the financial security of the enterprise [39] (Fig. 1.4).

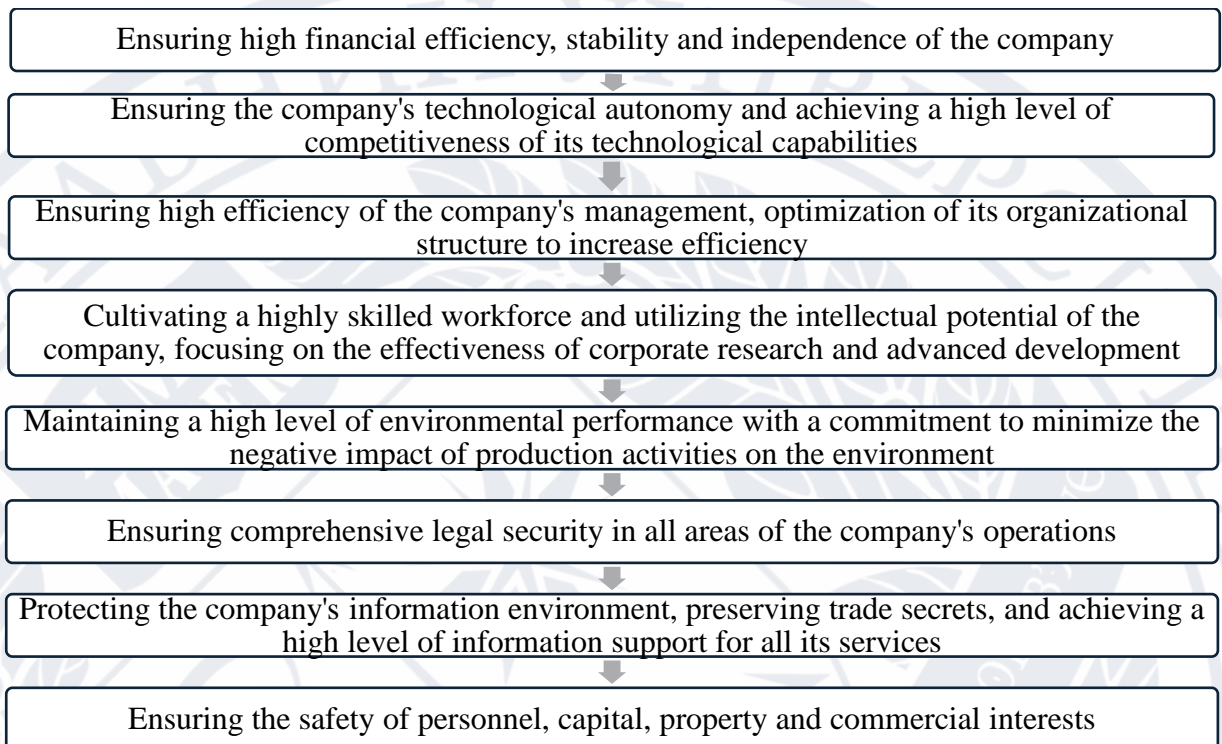


Figure 1.4 - Functional objectives of financial security of the enterprise

In the scientific literature on financial security of an enterprise, there are such key concepts as "management system" and "security system". When considering the financial security of an enterprise, the term "management" covers a wider range than "provision". Management covers activities related to the influence of the management entity on the management object aimed at achieving specific results. In essence, while ensuring the financial security of an enterprise is concerned exclusively with creating the necessary conditions for achieving the desired level, financial security management also involves the constant maintenance and improvement of this level.

M. Y. Pogosova [34] considers the system of ensuring the financial security of an enterprise as an ordered set of interrelated elements that form a single functional integrity designed to protect the financial interests of the enterprise from external and internal threats.

L. A. Parfentiy, studying the system of financial security management of a business entity, pointed out that it is a system of principles and methods of developing and implementing management decisions related to ensuring the protection of its priority financial interests from external and internal threats [32].

V. Delas [56], studying the essence of financial security of an enterprise, determines that the system of management of financial security of an enterprise provides for a detailed assessment of both quantitative and qualitative parameters aimed at protecting the financial interests of an enterprise in accordance with a unique financial philosophy.

Thus, the creation of a company's financial security is inextricably linked to its specific financial philosophy, which outlines the fundamental principles that comprehensively define the company's financial activities. The financial security management system goes beyond purely economic considerations to include behavioural aspects of management, structured in accordance with the progress of the company's financial development. Financial security as a component of the company's economic security is of paramount importance, given its key role in organising cash flows and generating income, affecting many components of the economic system of the entity.

H. Sablina and T. Kuzenko [25, p. 54] are of the opinion that the financial security management system is a set of hierarchically interrelated and interdependent elements of financial management, the content of which reflects the specifics of specific processes in the management of the financial sphere of activity, which are currently a priority for the enterprise.

L. M. Petrenko [33, p. 332], studying the modelling of the processes of managing the financial security of an enterprise, indicates that it is a system of principles and methods for developing and implementing management decisions related to ensuring the protection of its priority financial interests from external and internal threats.

Thus, while N. Sablina and T. Kuzenko highlight the structure and specifics of the financial security management system, L. Petrenko emphasises the

importance of strategic decision-making processes within this system to protect the financial interests of an enterprise. Both approaches provide a comprehensive understanding of the financial security management system, focusing on both its structural components and strategic operations.

The concept of financial security at an enterprise is based on a clearly defined sequence of management stages (Figure 1.5). This sequence subsequently forms a mechanism that is a tool for managing the financial security of an enterprise

Thus, one of the main stages in the management of the financial security of an enterprise is the construction of an appropriate financial security supervision apparatus focused on the timely detection and prevention of both external and internal threats. The main goal is to guarantee the protection of the company's financial interests. The financial security management system or mechanism consists of fundamental elements that influence the formulation and implementation of management decisions to protect the financial interests of the enterprise from various threats.

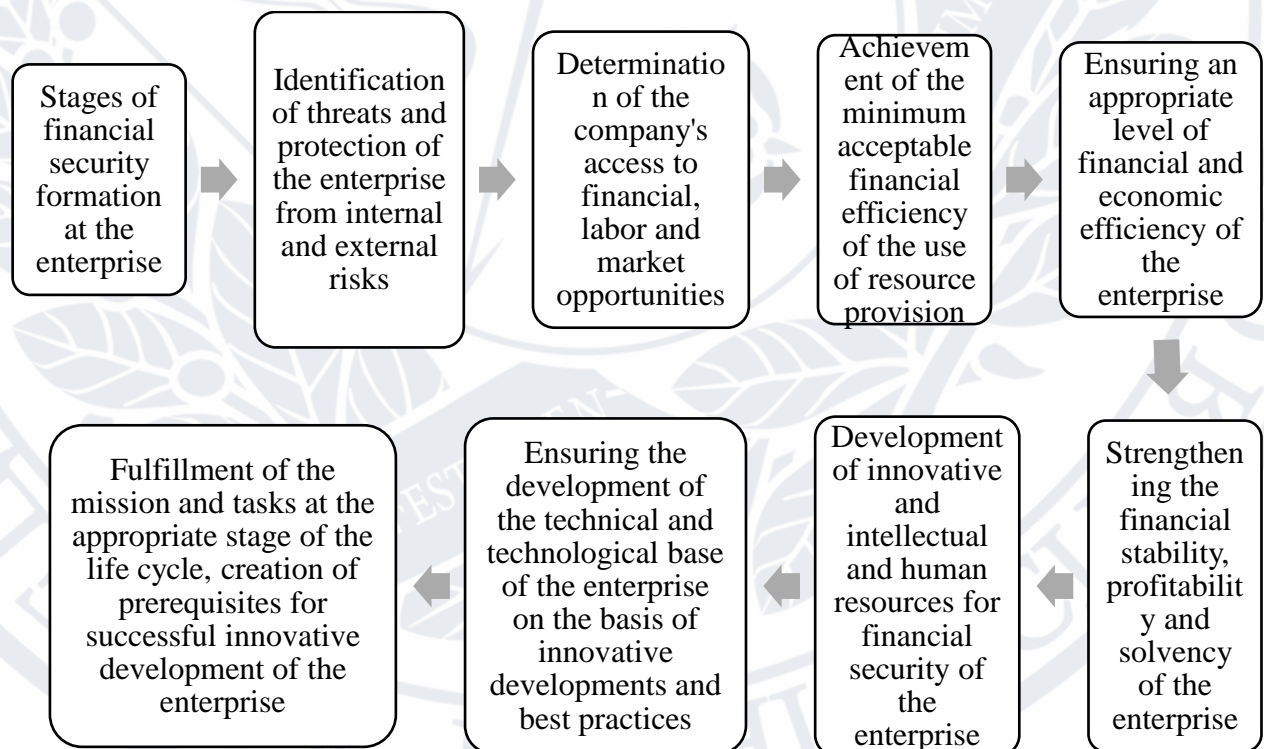


Figure 1.5 - Stages of financial security formation at the enterprise

Source: compiled by the author based on [26, 63, 8, 30].

The mechanism of financial security management should include such elements as a set of financial methods, principles, as well as levers and tools (Fig. 1.6). In such a configuration, the mechanism provides a comprehensive presentation of the general concept of enterprise financial security management.

To be more specific, financial methods include financial accounting, analysis, forecasting and planning, regulation, incentives, operational and current management, financial risk assessment and monitoring of plan implementation. Financial instruments include investments, loans, insurance, pricing and taxation, and they are implemented through such levers as income, expenses, depreciation, wages, prices, dividends, taxes, etc.

There are scholars who supplement this mechanism with additional components. As noted by M. M. Yermoshenko [9], the financial security management mechanism consists of such elements as economic laws, management goals and objectives, functions, organisational structure, management principles, management methods, management personnel, technical and technological infrastructure, as well as criteria for evaluating the system's effectiveness.

According to K. S. Goryacheva's research, the mechanism for managing the financial security of an enterprise consists of the following elements: a set of financial interests inherent in the enterprise; functions, principles and methods of management; organisational structure; management personnel; technical and technological means of management; financial instruments; criteria for assessing the level of financial security.

It is crucial to recognise that the development of policy measures to ensure the financial security of an enterprise depends on the presence and characteristics of external and internal threats. The ability to effectively defend against adverse factors and threats is a prerequisite for creating a foundation for improving the efficiency of resource use and financial and economic activities in general. In addition, regular monitoring of the factors that pose a risk to financial security and form the basis for the development of the enterprise is also important.

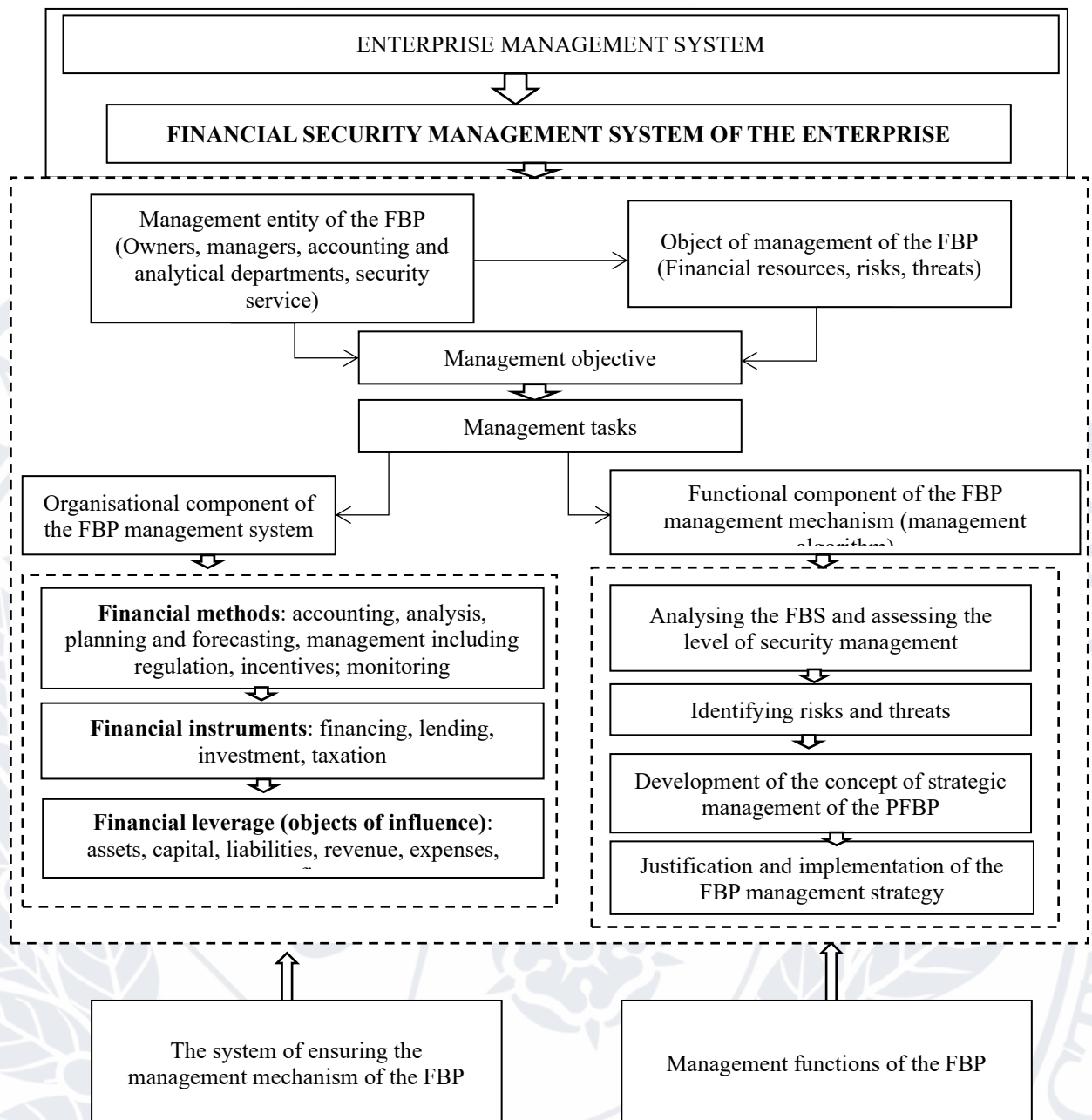


Figure 1.6 - Enterprise financial security management system

Source: compiled by the author based on [26, 63, 27, 40].

Repeatedly, in the statements and interpretations of various scholars, whose opinions were highlighted above, the influence of external and internal factors on the financial security of an enterprise was mentioned. For example, O. P. Hetmanets [4] in his study states that "financial security of an enterprise is a financial condition characterised, firstly, by the balance and quality of the set of financial instruments, technologies and services used by the enterprise; secondly, by resistance to internal and external threats.

According to Zh. V. Kudrytska [22], the financial security of an enterprise should be understood as a balanced state of its elements and subsystems as a separate economic system, which can be expressed in quantitative or qualitative terms and is characterised by resistance to negative influences of the internal and external environment and the ability to ensure its effective functioning, stability of development and economic growth in the long term.

Based on the opinions of the above-mentioned scholars, it becomes obvious that threats to the financial security of an enterprise can be divided into external and internal. External threats are often related to the general economic environment, market competition, legislative regulation and other factors beyond the direct control of the enterprise. Internal threats, on the other hand, are usually related to operational inefficiencies, financial mistakes or strategic shortcomings.

The importance of these factors cannot be overstated. External factors can impose significant restrictions on a company's financial performance and growth prospects. At the same time, internal factors can undermine the financial stability of an enterprise and its resilience to external factors. Therefore, a comprehensive understanding of these factors is crucial for developing effective strategies for managing the financial security of an enterprise.

Studying external and internal risks to the financial security of business entities, O. V. Stashchuk [41] introduced a classification of external risks to financial security by the areas in which they manifest themselves (Fig. 1.7).

Each threat level has a list of specific threats. Threats to the budgetary sector include the state budget deficit, local budget deficits, and the targeted use of budget funds. Threats to the credit sector of the economy include threats from the foreign exchange market, instability of the national currency exchange rate, dynamics of the NBU discount rate, etc. Foreign exchange market threats are represented by the dynamics of foreign exchange reserves, changes in the official exchange rate of the national currency, and the volume of foreign currency deposits and loans.

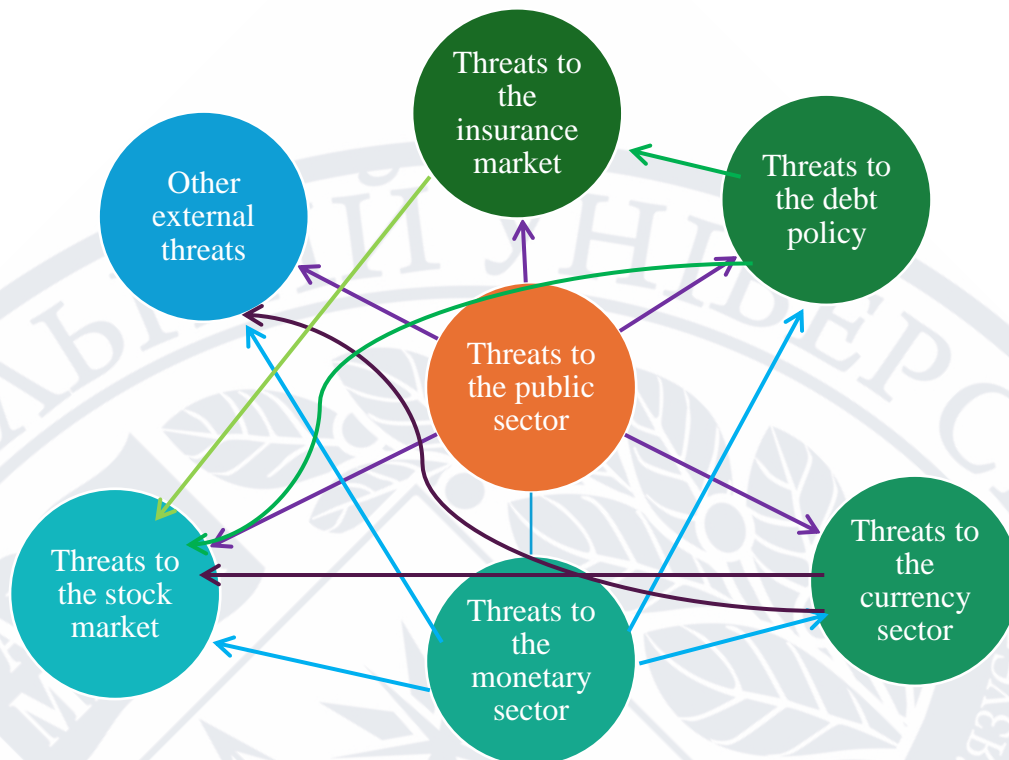


Figure 1.7 - Classification of external threats to the financial security of an enterprise

Source: compiled by the author based on [41, 14, 35].

Threats to the debt policy include trends in the country's external debt, the state of the country's internal debt level, and the level and efficiency of the use of financial instruments to repay domestic and external debt. Threats to the insurance market include the availability of financial resources for insurance organisations, the level of insurance payments in the event of an insured event, the share of long-term insurance, etc.

The stock market has a number of threats that affect financial security: low level of stock market capitalisation, low level of liquidity of securities, use of derivative securities. There is also a group of threats that do not relate to any of the above: low real incomes, high level of shadow politics, inability of the population to save, frequent changes in economic legislation.

There are different interpretations [41, 14] of internal threats to financial security. These threats can be classified into separate levels. At the initial level, there are organisational risks, which include shortcomings in the management of

departments and the enterprise as a whole, insufficient labour discipline, disclosure of confidential information constituting a trade secret, which affect financial security.

Moving to the second level implies shortcomings in the company's planning and strategy, such as strategic planning errors, suboptimal marketing policies, pricing miscalculations, ineffective internal audit and other controls, and ill-considered transactions that affect financial security.

The third level includes technical factors that contribute to the emergence of threats to financial security. Technical threats include insufficient technical support of enterprises, lack of both plans and practical steps for modernisation, outdated technological processes, excessive consumption of gas, electricity and other energy-intensive materials.

Thus, the basic principles of the enterprise financial security management system are multifaceted and interrelated. They include clear goals and objectives, clearly defined stages of financial security, and a reliable financial security management mechanism. The management mechanism itself is a complex system that includes various elements, such as financial methods, principles, levers, tools, etc. It is designed to protect the financial interests of the company from both internal and external threats. Threats, when taken into account in the management mechanism, can significantly affect its effectiveness.

In general, the financial security management system of an enterprise is a dynamic and complex system that requires careful planning, strategic management and constant vigilance to effectively protect the financial interests of the enterprise. It is not only about maintaining a balanced state of its elements and subsystems, but also about navigating the ever-changing landscape of internal and external threats. This dual focus ensures the effective functioning of the enterprise, its sustainable development and long-term economic growth. Thus, understanding and implementation of these basic principles is the key to successful management of the financial security of an enterprise.

Conclusions to chapter 1

Financial security, a key aspect of enterprise management, is viewed by different authors in different ways: as a part of economic security, a reflection of financial condition, an indicator of effective use of potential, a result of an effective strategy and risk management, and a type of economic relations. The main goal of financial security is to protect against financial threats and ensure financial stability and sustainability. The actual definition, based on the views of scientists, describes financial security as a stable, sustainable state achieved through strategic financial management, which allows businesses to fulfil their obligations, maintain operations and invest in growth by reducing risks and uncertainty.

The mechanism of financial security management, based on the existing views of scholars, includes the subject and object of management, goals and objectives, organisational component (financial methods, tools and levers), functional component (management algorithm), as well as the system of ensuring the mechanism and management functions. The research highlights the impact of external factors (threats to the budgetary sphere, monetary sphere, debt policy, foreign exchange market, insurance market, stock market, etc.) and internal factors (organisational risks, planning and strategy deficiencies, technical factors) on the financial security management system.

The theoretical foundations of financial security require practical application. This is crucial because it allows testing the theories and their effectiveness on the example of an entity's financial activities. The application of the theories not only deepens the understanding but also contributes to the development of promising financial security strategies for enterprises.

CHAPTER 2

ANALYSIS OF THE CURRENT STATE OF FINANCIAL SECURITY OF «APS Plankonsulting»

2.1 Methodology for assessing the financial security of an entity

There are various methodologies in the scientific literature for defining the essence of financial security and its main components. This diversity leads to the emergence of numerous methods of assessing the level of financial security, the authors of which focus on certain aspects of activity and different categories of threats to the financial well-being of the enterprise.

The study and careful analysis of the formulated methods for assessing the level of financial security indicates that they can be divided into two main groups: those based on traditions and those characterised as non-traditional [46, p. 32].

Non-traditional approaches involve risk assessment, thorough analysis and determination of the market value of an enterprise. However, these methods are not widely used in the modern Ukrainian scientific literature. Their main disadvantages are the complexity of the analysis and the need for a significant amount of hard-to-find information on market trends. In addition, methods focused on determining market value, while demonstrating the real value of an enterprise to investors, do not reflect its financial condition and, accordingly, its ability to withstand both internal and external threats.

Among Ukrainian researchers, the use of traditional approaches focused on assessing the reliability and sustainability of an enterprise prevails (Fig. 2.1). Based on the diagram, the groups of methods are studied. In Fig. 2.2 shows a list of methods for integral assessment of financial security of an enterprise and defines their essence, advantages and disadvantages.

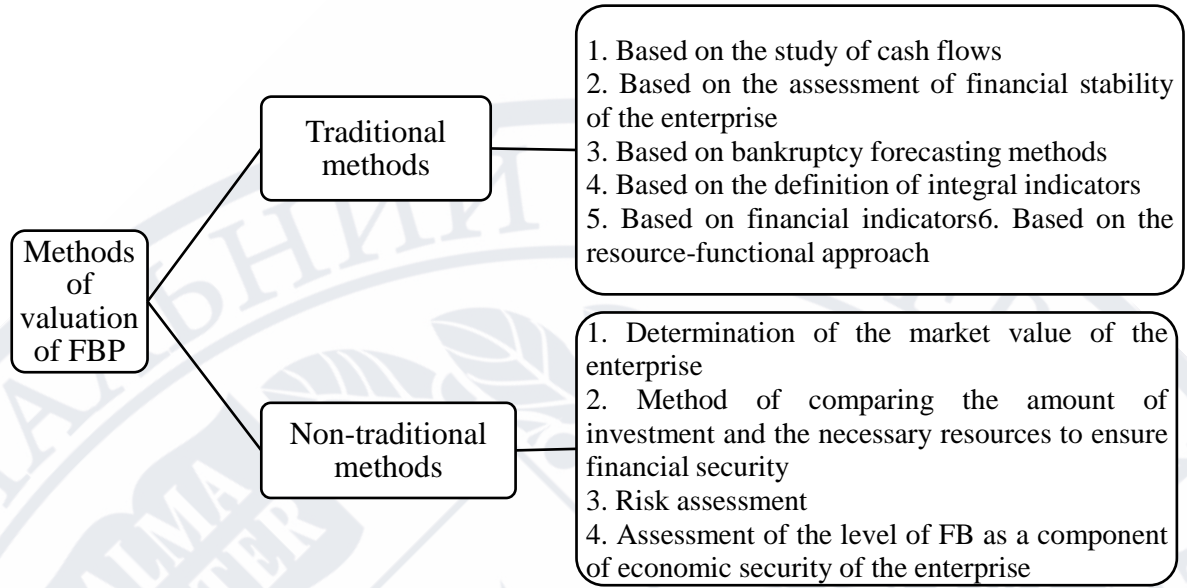


Figure 2.1 - Grouping of methods for assessing the financial security of an entity

Source: compiled by the author based on [43, 47].

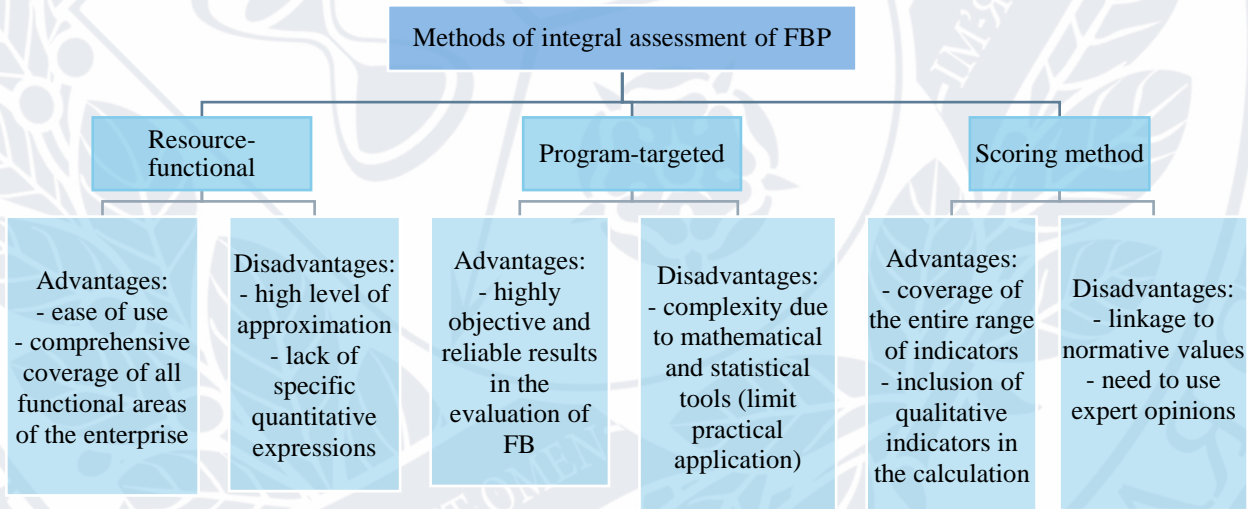


Figure 2.2 - Methods of integral assessment of financial security of an enterprise

Source: developed by the author based on data from tables A.4 - A.5 Appendix A

The integral approach allows combining a set of indicators into a single indicator that determines the degree of financial security. These methods can be used to study various aspects of a company's activities, and the chosen approach can be

adapted to a particular enterprise. Thus, integral methods of assessing the financial security of a business entity remain relevant for enterprises of any industry.

Fig. 2.3 shows the results of considering the essence of the methods of indicator assessment of financial security of business entities

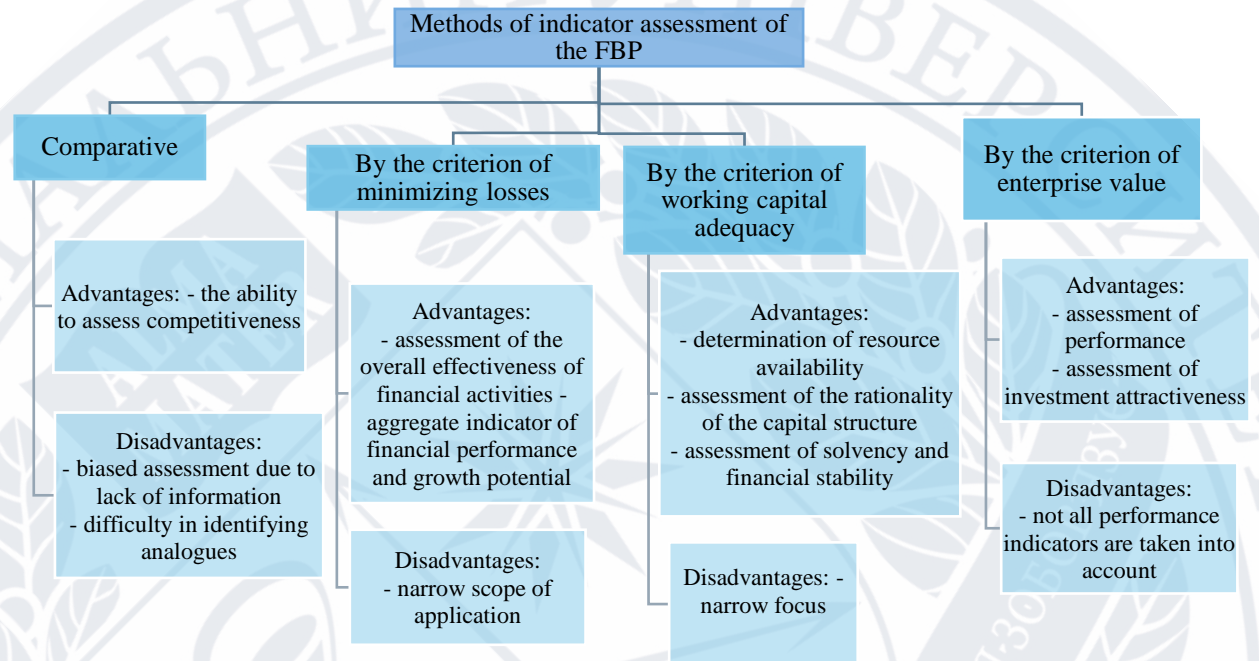


Figure 2.3 - Methods of indicator assessment of financial security of a business entity

Source: developed by the author based on data tables A.4 - A.5 Appendix A

Unlike integral methods, indicator-based assessment methods are more specific, focusing on individual components of financial security and applied in specific scenarios. The limitations of this approach are the narrower scope of information and the susceptibility to subjective influence in the assessment process. Therefore, these methods are best suited for companies operating in traditional industries and having sufficient information about their competitors. By "traditional industries" we mean industries that have a long history and are well-established, where business models and market dynamics are relatively stable and predictable. This stability allows for more accurate data collection and trend forecasting, making them suitable for the application of indicator-based financial safety net assessment methods. Such industries include banking and finance, industry, and agriculture.

In Fig. 2.4 defines the essence of methods for assessing the financial security of an enterprise based on bankruptcy analysis.

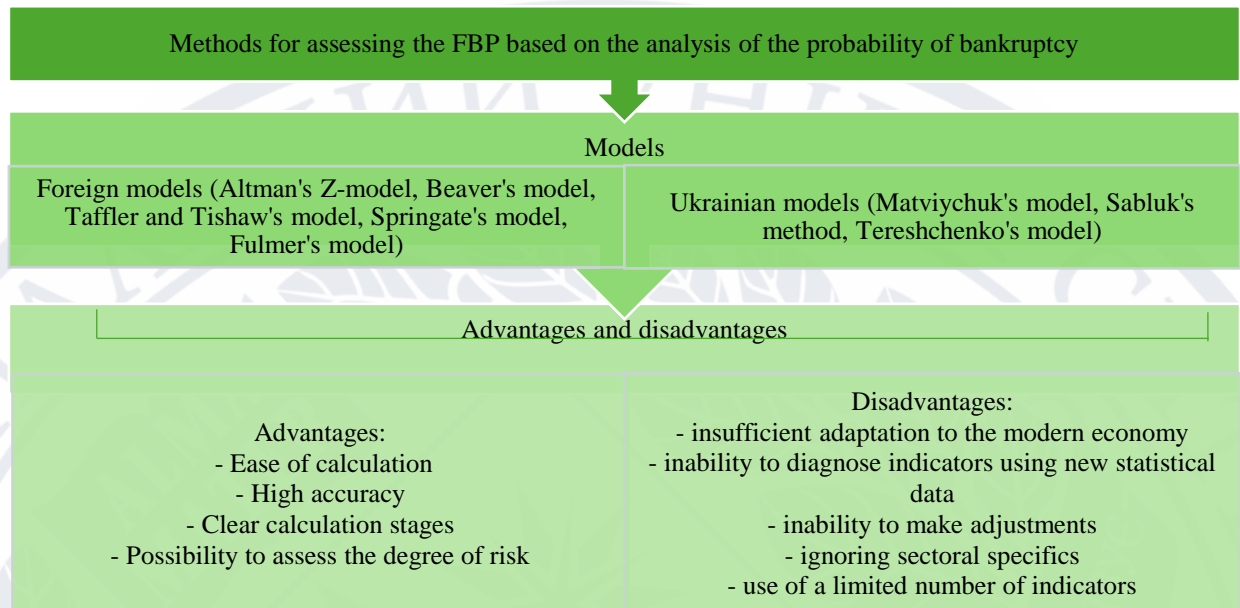


Figure 2.4 - Methods of assessing the financial security of an enterprise based on bankruptcy analysis

Source: developed by the author based on data from tables A.6 Appendix A

The described approach to assessing financial security based on bankruptcy analysis focuses on predicting the risk of an enterprise's bankruptcy in future periods, rather than on analysing its current financial condition and protection from internal and external threats [47].

Among the studied methods for assessing the financial security of an enterprise, the most common is the indicator approach [27, p. 110, 47, 50, 18], which is explained by the simplicity of calculation and comprehensive coverage of various aspects of the enterprise's activities. The fundamental principle of the method is that financial security indicators are primarily focused on changes in the value of the enterprise. The critical aspect in measuring financial security is not the indicators themselves, but their thresholds. Thresholds are the limits, the violation of which leads to financial instability, disrupts the normal development of reproductive elements, intensifies negative and destructive trends, and threatens competitiveness in both foreign and domestic markets. The highest level of financial security is

achieved when the entire set of indicators approaches the thresholds, while the thresholds of one indicator do not jeopardise the others.

The indicator approach is distinguished by its objectivity and comprehensive analysis of the financial condition of an enterprise from various perspectives. The system of quantitative indicators facilitates early detection of potential dangers, which allows for preventive measures to be taken. However, it is important to note that the effectiveness of the approach depends on the definition of changing thresholds influenced by the external environment, to which the company can only adapt, not control. Another complicating factor is the definition of these thresholds for enterprises, as they vary for each individual company [9, p. 187].

This approach distinguishes different levels of financial security of an enterprise: [23, c. 190]

- Normal state - the company's financial security indicators meet the defined thresholds;
- pre-crisis state - triggered when at least one financial security indicator does not reach the threshold;
- crisis state - occurs when most financial security indicators deviate from the thresholds;
- critical condition - indicates a critical situation when all financial security indicators do not meet the established standards.

When discussing specific threshold values of the financial security indicators of an enterprise, it is possible to define their threshold values as an important benchmark. Exceeding these limits signals an increase in both internal and external threats to the stability and development of the financial system. The level of thresholds can be justified by:

- the method of analogies - setting the threshold value of the indicator based on its equivalent in countries with the closest level of economic development.
- Normative method - setting a threshold value for the indicator in line with the macroeconomic policy objectives.

- expert method - determination of the threshold value by synthesising expert opinions and methodologies that reflect a collective and reasonable point of view [7, p.340].

The study of existing methods within the indicator approach to assessing financial security identified separate groups of financial security indicators. The indicators are shown in Fig. 2.5.

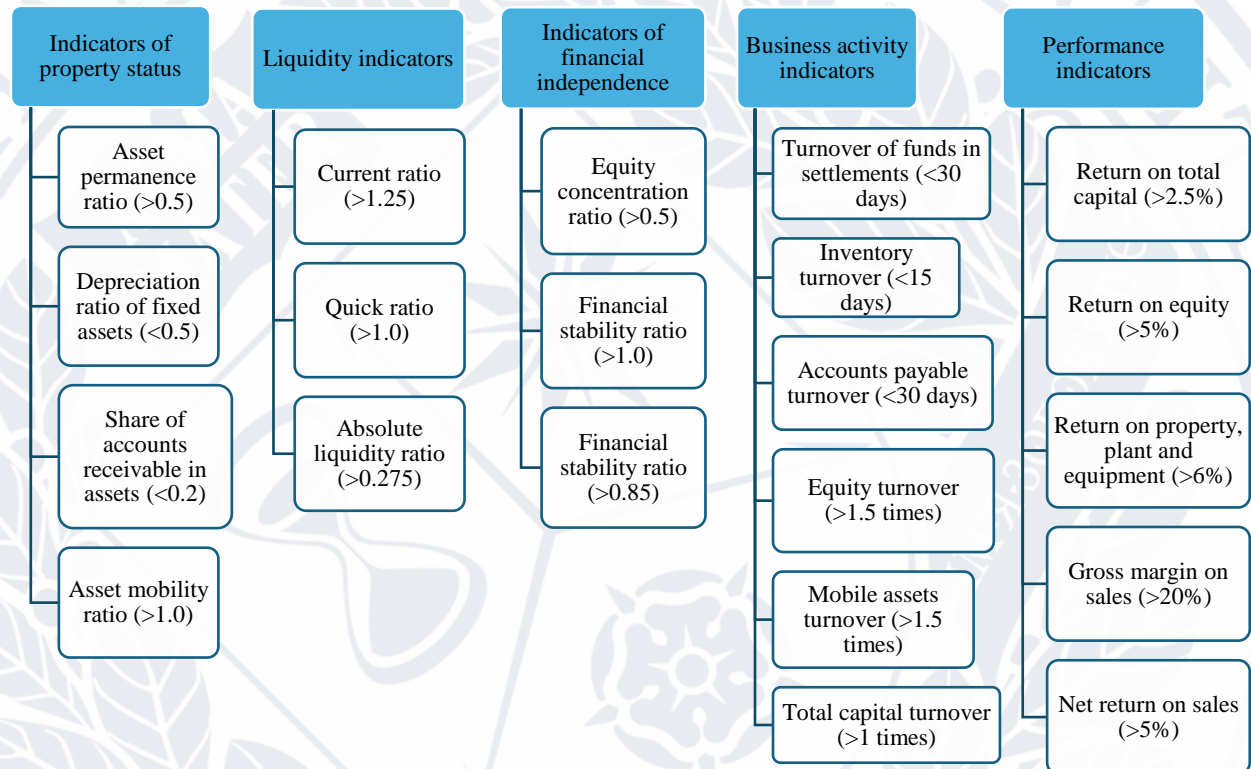


Figure 2.5 - Financial security indicators of the enterprise

Source: developed by the author based on data from tables A.7 Appendix A

The study allows us to conclude that financial security stands out as an extremely relevant and important area of research in modern conditions. Nevertheless, there is an urgent need for additional research and improvement of scientific approaches and methodological foundations for assessing the level of financial security of enterprises. Therefore, a potential direction for further research is to develop a comprehensive approach to assessing the financial security of enterprises.

2.2 Analysis of financial results of «APS Plankonsulting»

«APS Plankonsulting» is registered in Svishtov, Bulgaria. «APS Plankonsulting» is a Bulgarian company that has been operating in the consulting services market since 2005. The main areas of activity are [16]:

- consulting activities;
- financial analysis and forecasts;
- financial advisory services;
- training courses; training, qualification and retraining of specialists;
- organising domestic and international seminars, conferences and forums;
- transactions with intellectual property;
- author's consulting work;
- regional planning, design and programming;
- other activities and services not prohibited by law.

Highly qualified specialists of «APS Plankonsulting» are constantly developing innovative solutions for advising companies on the specifics of financial consulting, in accordance with changes in legislation.

«APS Plankonsulting» pays special attention to post-sales support, from the moment of initial consultations, purchase of the service, to the moment of its implementation in the company.

A team of professional specialists with the appropriate level of experience and knowledge to meet the needs of the most demanding client.

Based on market needs, «APS Plankonsulting» provides professional advice that meets European requirements and has gained a well-deserved reputation among consulting companies.

The basis for the activity of «APS Plankonsulting» is a written agreement between its members in the form of a charter. It contains: full requirements of each partner; the amount of funds invested by each partner; the scheme of distribution of profits and possible losses; the procedure for liquidation of the company; restrictions on the amount of funds that can be withdrawn from the company's capital by each partner; the method of compensation for losses incurred by the partners, etc.

«APS Plankonsulting» has an independent balance sheet, settlement and other bank accounts, a round seal, a stamp, letterheads with its name, a trademark, a logo and other attributes. The company uses modern computing equipment and applies the latest software to automate accounting, analytical and control work.

A comprehensive assessment of a company's financial security requires a thorough study of the dynamics of the company's assets and liabilities. This preliminary analysis is an important step in understanding the financial position of an enterprise. First of all, it is necessary to consider the specific situation in the Bulgarian economic and business environment in order to further understand the reasons for certain trends in the financial position of the company. In 2022, several factors in the Bulgarian business and economic environment had an impact on the company's financial position.

1. Economic growth. In the first half of 2022, Bulgaria's GDP growth rate remained high due to strong exports and rising inventories. However, annual GDP growth declined from 3.8% in 2022 to 2.0% in the first half of 2023 [61]. This slowdown in economic growth had a negative impact on the financial performance of companies in the country.

2. Inflation and energy prices. Bulgaria faced high inflation in 2022 [66]. The increase in energy prices led to an increase in operating costs for companies, which affected their profitability.

3. Interest rates. Expectations of rising interest rates have led to an increase in borrowing costs for companies [66].

4. Business sentiment. In 2022, business sentiment weakened slightly, indicating increased uncertainty. This had an impact on investment decisions and financial planning in the country's companies.

5. External crises. The global financial crisis, the European debt crisis, the COVID-19 pandemic, and Russia's invasion of Ukraine have affected foreign investment and reform progress, slowing the pace of convergence to the EU average income level [61].

6. Weakening external demand. Economic activity in Bulgaria has been negatively affected by weak external demand after a boom in exports in 2022 [55]. This also had an impact on sales and earnings of local companies.

The structure of assets and liabilities, which includes both current and non-current assets and liabilities, provides a detailed picture of an entity's financial position. An entity's assets, which consist of cash, inventories, accounts receivable and property, plant and equipment, represent the resources controlled by the entity. On the other hand, liabilities, which consist of accounts payable, borrowings and other financial liabilities, represent the state of management of the company's financial obligations.

The evolution of these assets and liabilities over time can reveal important trends and patterns. For example, an upward trend in assets relative to liabilities indicates an improving financial position, while a downward trend indicates potential financial difficulties. Fig. 2.6 shows the dynamics of assets of «APS Plankonsulting» during 2018-2022.

The data on the dynamics of the company's assets over a certain period of time allowed us to draw certain conclusions about financial trends. First, the decrease in receivables indicates an improvement in the company's credit management, which may improve its liquidity. However, the growth of inventories in 2018-2021, followed by a decline in 2022, indicates a change in market demand.

Secondly, the decrease in non-current assets by 45.2% during 2018-2022 is the result of depreciation, disposal of assets or impairment losses. This trend will have a negative impact on the long-term financial stability and ability to financially develop the company.

Conversely, the 94.5% increase in property, plant, and equipment over the same period indicates significant investment in these assets, which increases the company's production capacity and profitability in the long term. The constant upward trend in this item is a positive sign for the financial security of the company.

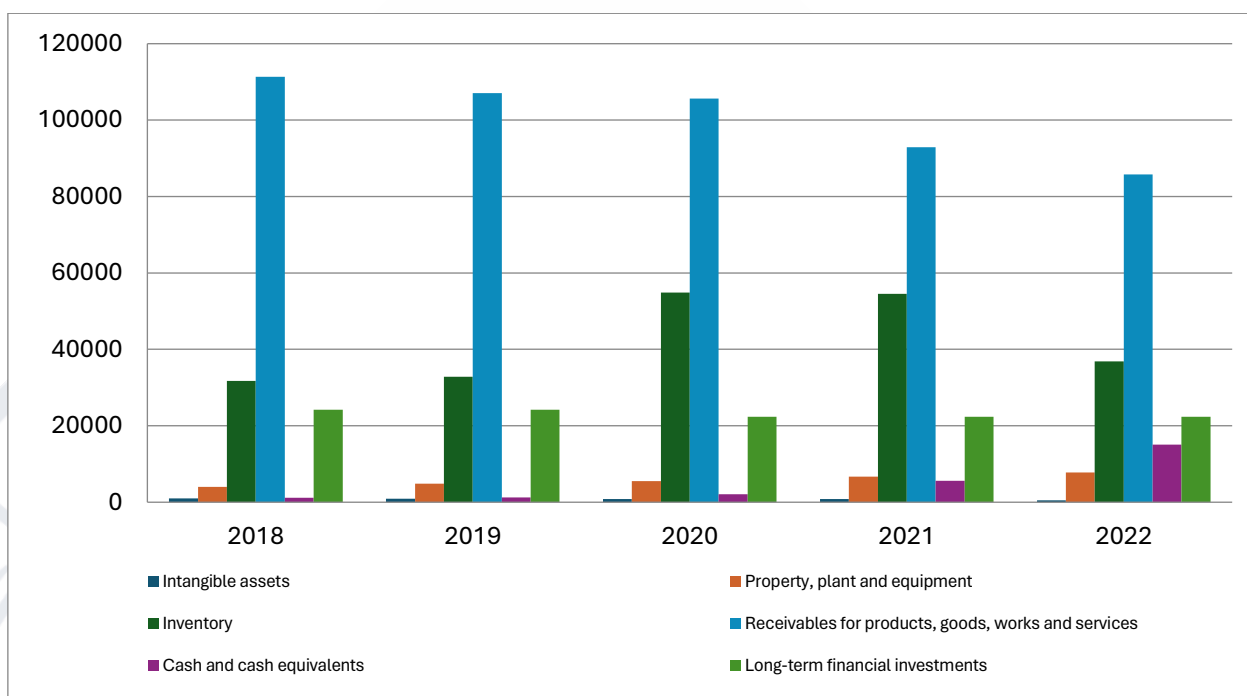


Figure 2.6 - Asset dynamics of «APS Plankonsulting» in 2018-2022.

Source: compiled by the author on the basis of tables A.1 - A.3 Appendix A

The positive dynamics of the cash and cash equivalents indicator, which increased by 1166.4% in 2022 compared to 2018, is a significant indicator of the company's improved liquidity. The significant increase in cash during 2021-2022 (169.5%) is due to improved operational efficiency, profitable business activities or successful fundraising efforts.

However, the decrease in long-term financial investments by 7.6% in 2018-2022 indicates the need to reallocate resources to meet other financial obligations.

As an entity operating in Ukraine, these trends may be affected by various external factors, such as economic conditions, industry trends, regulatory changes and currency fluctuations. For example, an increase in inventories may be due to an expectation of increased demand or a fear of supply disruptions due to economic or political instability.

Therefore, although the company shows some positive trends in property, plant and equipment and cash, there are areas of concern, such as the decrease in non-current assets and long-term financial investments. These trends, in combination with the external economic environment in Bulgaria, will have negative

consequences for the financial security of the Company. Therefore, it is crucial for the company to continue to monitor these trends and take appropriate measures to ensure its long-term financial security.

In Fig. 2.7 and Fig. 2.8 show the structure of the company's assets as of 2018 and 2022.

From the above dynamics, we can see that during 2018-2022, the percentage of accounts receivable decreased, which indicates the company's ability to collect obligations from customers to cover accounts payable. The share of long-term financial investments increased significantly, which is also a positive development. The share of cash and cash equivalents in the structure has increased, which potentially indicates an increase in the company's liquidity. However, the decline in the share of intangible assets and a slight increase in fixed assets indicate no changes in the company's modernisation (investments in digitalisation, etc.).

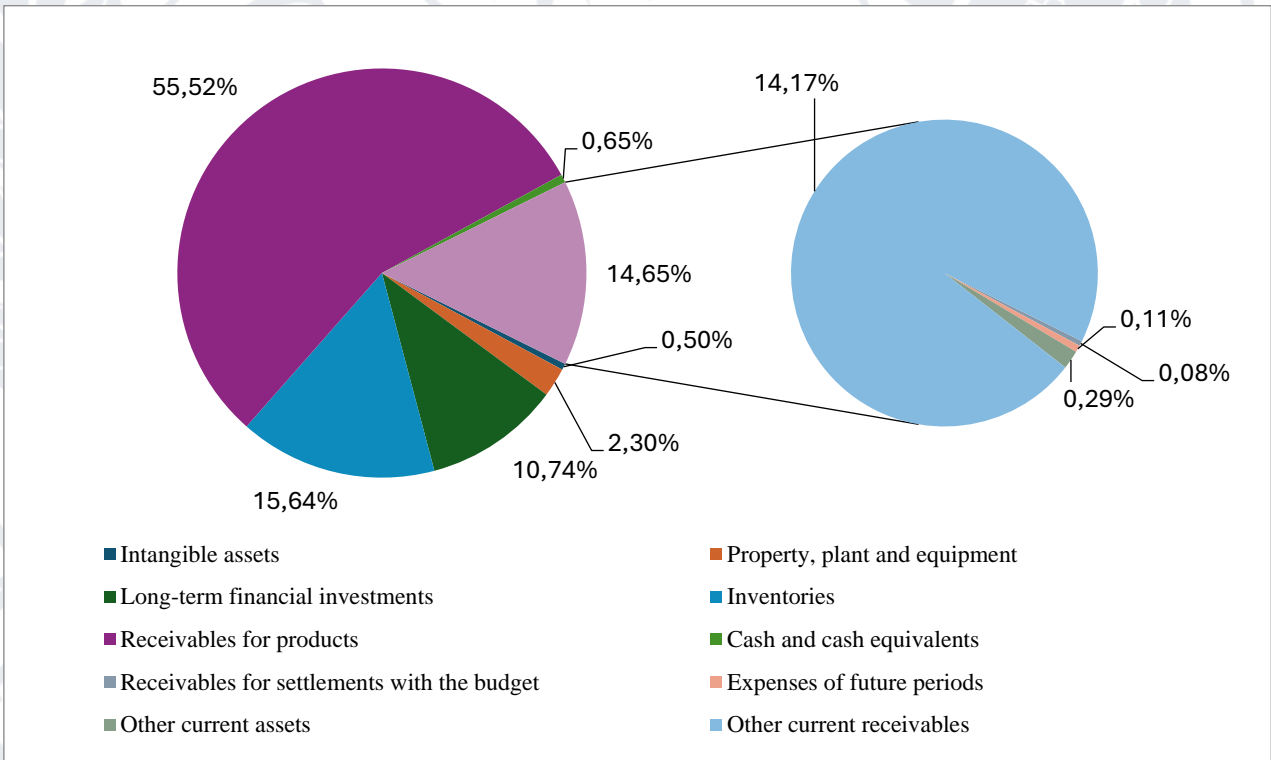


Figure 2.7 - Asset structure of «APS Plankonsulting» in 2018

Source: compiled by the author on the basis of tables A.1 - A.3 Appendix A

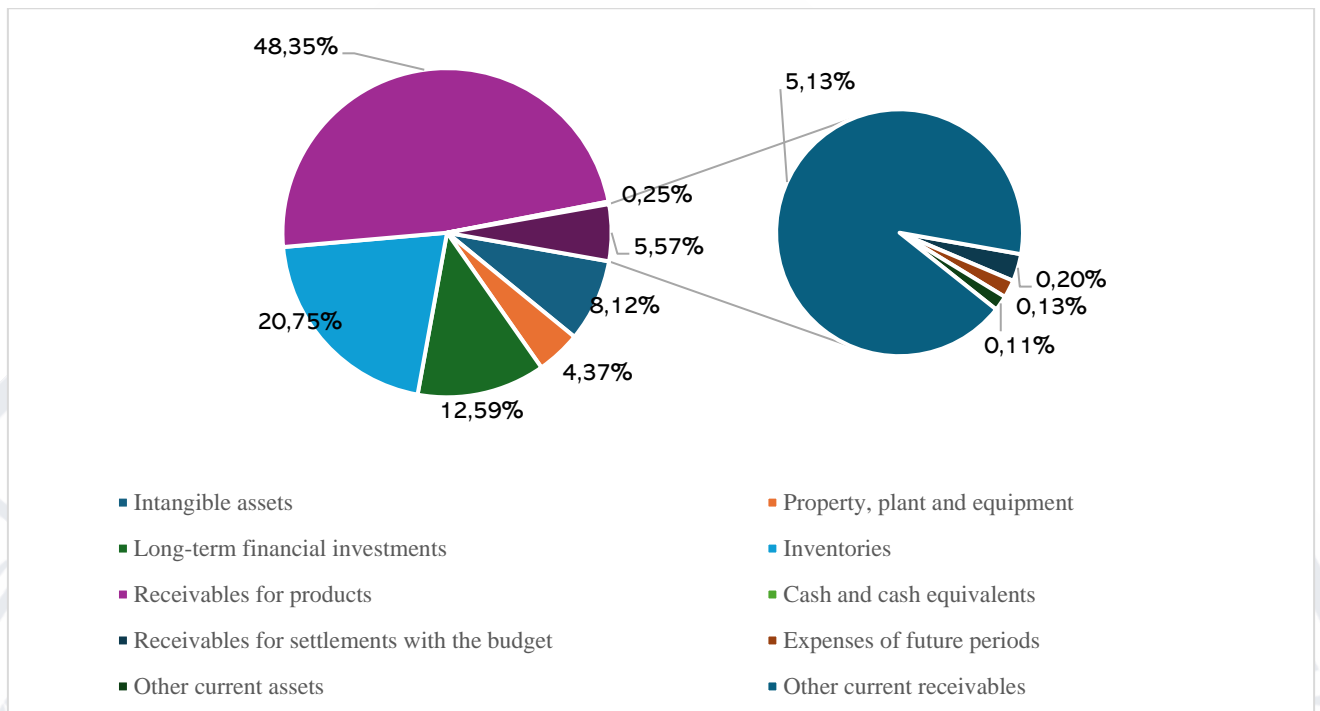


Figure 2.8 - Asset structure of «APS Plankonsulting» as of 2022

Source: compiled by the author on the basis of tables A.1 - A.3 Appendix A

The company's asset structure as at 2022 shows a significant concentration of accounts receivable and inventories, which together account for approximately 69.52% of total assets. Such a high concentration indicates that the company's operations are heavily dependent on its trading activities and the ability to convert these assets into cash.

However, the relatively low proportion of cash and cash equivalents (8.52%) is potentially a cause for concern for the company's liquidity. The ability to meet short-term obligations and respond to financial emergencies often depends on the availability of liquid assets.

The company's long-term financial investments account for 12.59% of total assets, which indicates a strategic allocation of resources for future growth or income generation. However, the relatively small share of property, plant and equipment and intangible assets (3.88%) indicates limited investment in long-term production facilities.

From a financial security perspective, a company's heavy reliance on accounts receivable can expose it to credit risk. The ability to collect these receivables in a

timely manner is critical to maintaining cash flow and financial stability. Similarly, a high proportion of inventory requires effective inventory management to avoid obsolescence or costs that could affect profitability.

Thus, while a company's asset structure reflects its operations and strategic investments, it also indicates potential areas of risk. Managing these risks, particularly in relation to receivables and inventories, is crucial to ensuring the financial security of the company.

Fig. 2.9 shows the dynamics of liabilities of the company under study in 2018-2022.

The dynamics of the company's liabilities and assets gives a complete picture of its financial position. A significant decrease in retained earnings (-88%) combined with an increase in long-term (67.3%) and other current liabilities (7.5%) indicates a change in the company's financial strategy or potential problems in financial management.

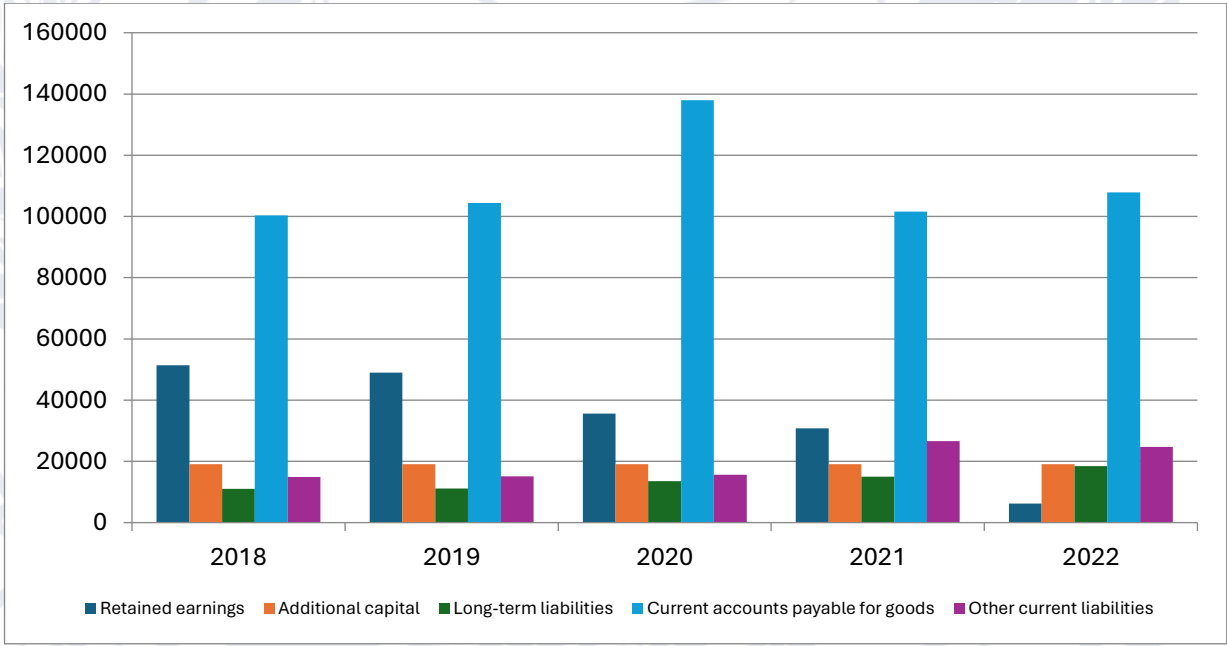


Figure 2.9 - Dynamics of liabilities of «APS Plankonsulting» in 2018-2022

Source: developed by the author based on data from tables A.1 - A.3 Appendix A 3

Conversely, the stability of additional capital and mixed trends in current liabilities indicate a certain level of financial control. However, the high

concentration of assets in accounts receivable and inventories, as well as the low proportion of cash and cash equivalents, indicate potential liquidity risks.

It should be emphasised that the company is able to take the necessary steps to eliminate the consequences of the growth of current payables. An example of this is the increase in accounts payable for goods and services in 2019-2020. Already in 2021, the company reduced its liabilities by 26.4%, thanks to a factoring operation that allowed it to convert part of its receivables in 2020-2021 into cash (cash in the amount of 12% of receivables as of the end of 2020 was transferred to cover accounts payable for goods).

In Fig. 2.10 and Fig. 2.11 show the structure of the company's liabilities in 2018 and 2022.

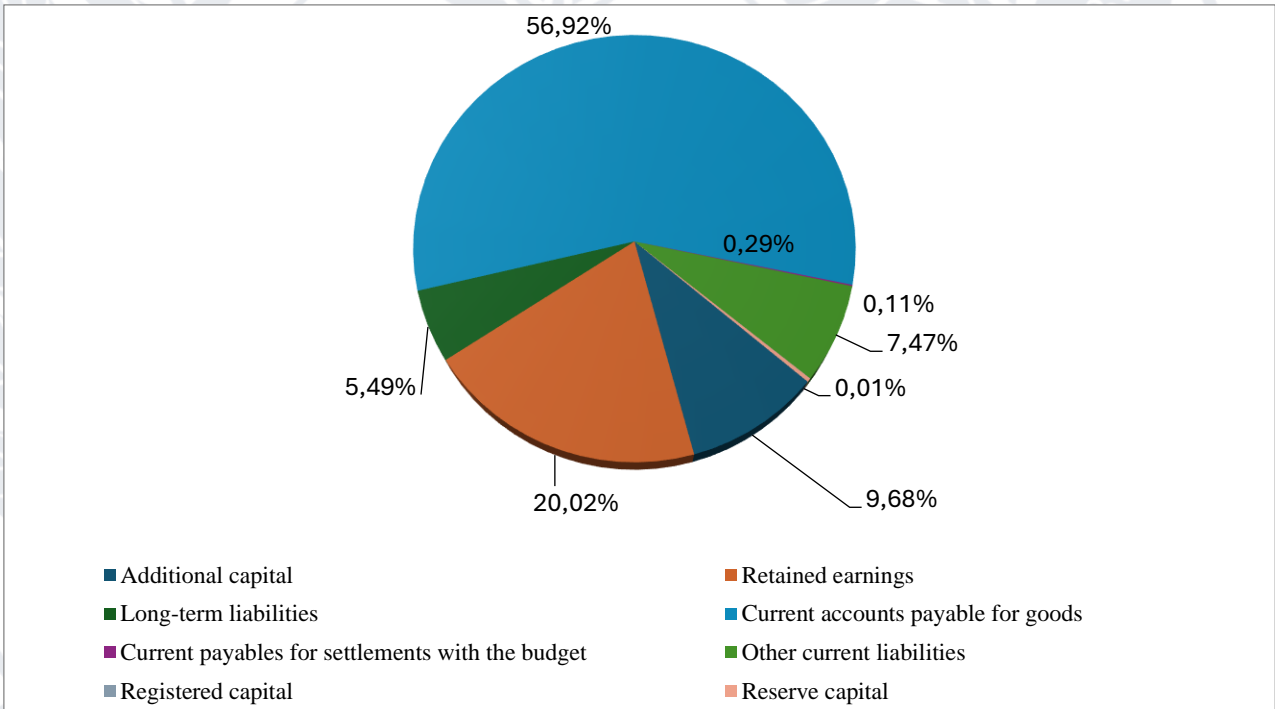


Figure 2.10 - Structure of liabilities of «APS Plankonsulting» in 2018

Source: compiled by the author on the basis of tables A.1 - A.3 Appendix A

An analysis of the dynamics of the liabilities structure during 2018-2022 indicates an increase in current liabilities, in particular accounts payable for goods and services, which is a potential risk to the company's liquidity. The long-term liabilities item has a similar trend, having also increased over the past 5 years. Thus, the share of liabilities in the structure of the entity's liabilities in 2018-2022 has

significantly increased, indicating the need to raise funds and a potential decline in the company's solvency.

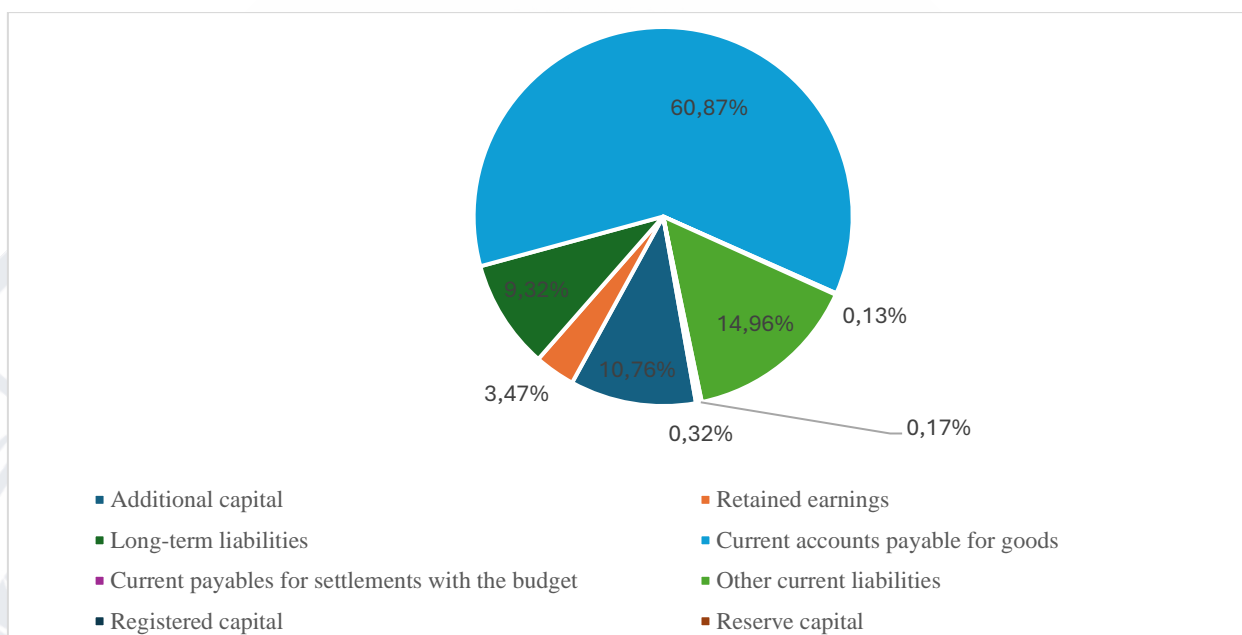


Figure 2.11 - Structure of liabilities of «APS Plankonsulting» for 2022

Source: developed by the author based on data from tables A.1 - A.3 Appendix A

The structure of the company's liabilities in 2022 shows a significant concentration of current accounts payable for goods, which accounts for the majority of the company's liabilities (60.76%). This indicates that the company's financial liabilities are mainly short-term and related to its operating activities.

The presence of other current liabilities, additional capital and long-term liabilities indicates a combination of financial liabilities and equity financing. The relatively small share of retained earnings, other liabilities and current payables to the budget reflects the company's financial management strategy and its interaction with shareholders and the state.

A certain structure of liabilities has a direct impact on the financial security of an enterprise. A high proportion of current liabilities creates liquidity risks if the company faces difficulties in meeting these short-term obligations. On the other hand, the presence of additional capital and long-term liabilities indicates a balance between equity and debt financing, which can increase the company's financial stability.

However, a low share of retained earnings may limit the ability of an enterprise to reinvest in its operations or cover future losses, thereby affecting its financial security. The stability of reserve capital and share capital over the years indicates a stable capital structure, which may be a positive sign of financial security.

Thus, the structure of a company's liabilities reflects its financial strategy and risk profile. The management of these liabilities, especially the high proportion of current accounts payable for goods, is crucial to ensuring the company's financial security.

To study the financial condition of «APS Plankonsulting», we analysed the financial results (income) of the company in 2018-2022 (Fig. 2.12).

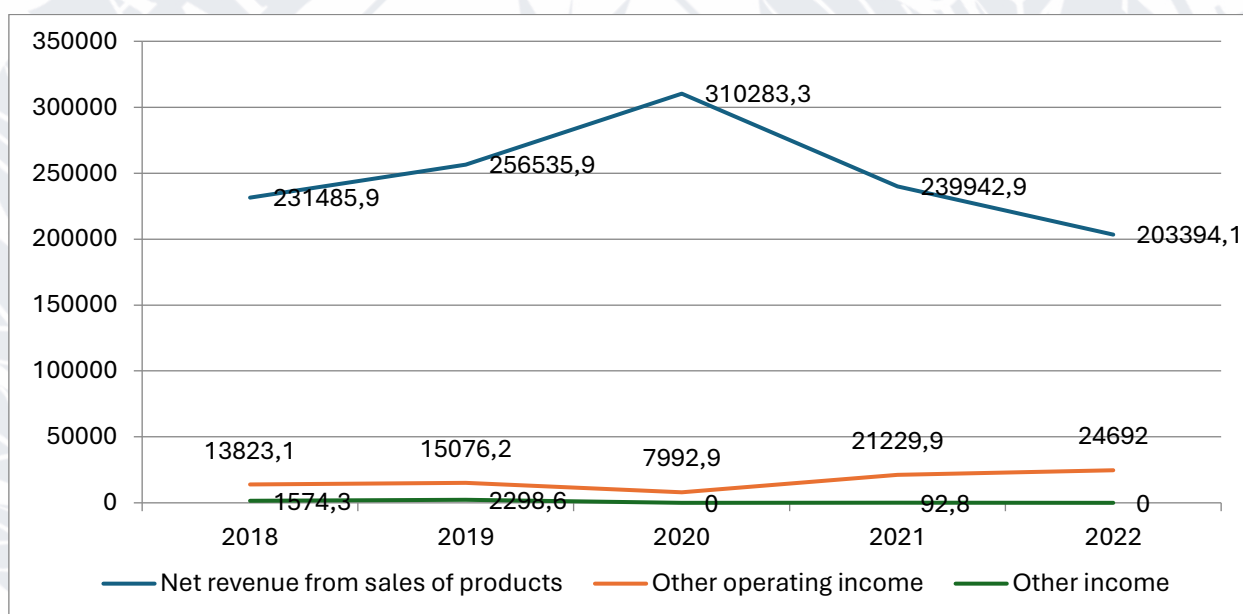


Figure 2.12 - Revenue dynamics of «APS Plankonsulting» in 2018-2022.

Source: developed by the author based on data from tables A.1 - A.3 Appendix A

The company's revenue dynamics demonstrate a challenging financial situation. The initial increase in net sales revenue in 2018-2020, followed by a decline in 2020-2022, indicates fluctuations in sales performance. This is primarily due to the outbreak of the COVID-2019 pandemic, which affected the company's sales of services, after which the company was unable to recover.

Other operating income and other company income show a similar pattern of volatility. A significant increase in other operating income in 2020-2022, despite a

drop in 2019-2020, indicates a potential diversification of the company's revenue sources or a successful cost management strategy. However, the fluctuations in other income, with a drop to zero in 2019-2020 and 2022, indicate potential instability in non-operating income sources.

Such revenue dynamics should be viewed in the context of the company's asset and liability structure. The high concentration of assets in accounts receivable and inventories, combined with a significant share of current liabilities, indicates that the company's financial position is closely linked to its operating activities. Thus, fluctuations in net sales revenue have a direct impact on the company's liquidity and financial stability.

In addition, the external business environment in Bulgaria, including economic conditions and industry trends, had an impact on these revenue developments. For example, the impact of the pandemic and changes in the regulatory environment have affected market demand, operating costs and return on investment.

Fig. 2.13 shows the dynamics of the company's expenses.

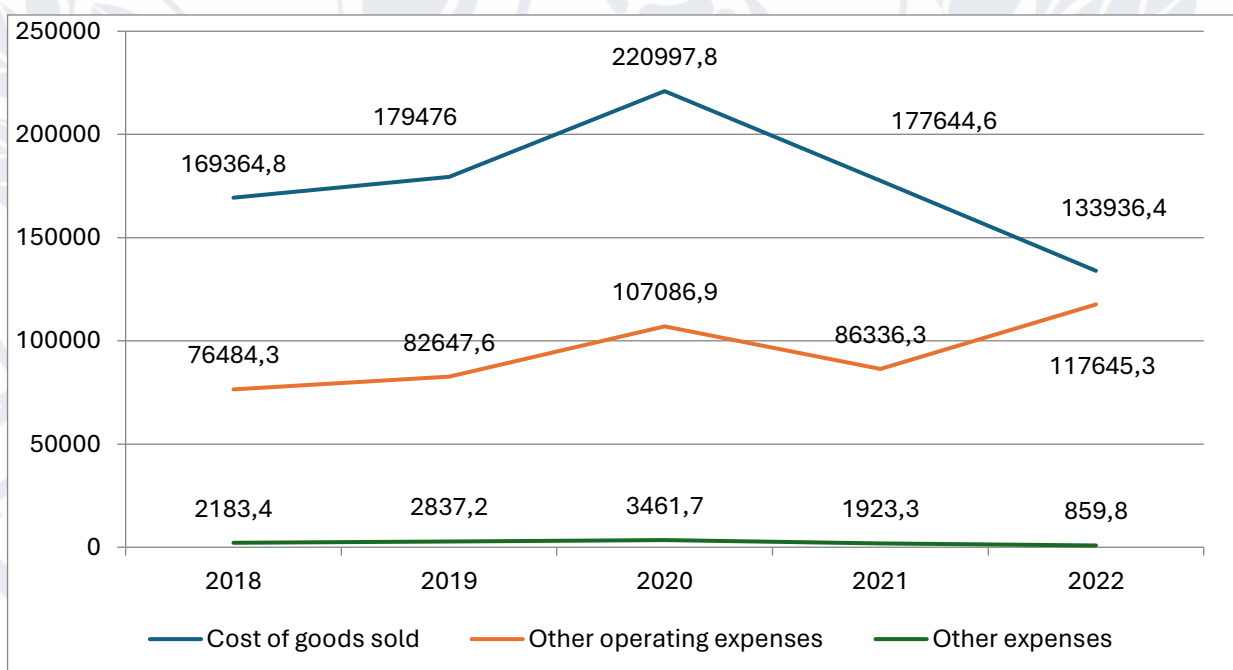


Figure 2.13 - Dynamics of expenses of «APS Plankonsulting» in 2018-2022.

Source: developed by the author based on data from tables A.1 - A.3 Appendix A

The financial trajectory of a company, as reflected in the dynamics of costs and net sales, presents a complex picture. Fluctuations in cost of goods sold, other operating expenses and other expenses, combined with changes in net sales, indicate a changing financial position.

The relationship between costs and net sales revenue is a crucial factor in determining a company's profitability and, therefore, its financial security. An increase in costs without a corresponding increase in net sales revenue can lead to a decrease in profits, potentially causing financial difficulties. Conversely, effective cost management combined with strong sales performance can increase profitability, contributing to financial stability.

However, in this case, the simultaneous decline indicates that the company faced challenges and risks in the external environment. In particular, the effects of the COVID-2019 pandemic affected the demand for consulting services in the Bulgarian market, which led to a decrease in the volume of services sold and a parallel decrease in the cost of services.

In the process of analysing the financial condition of the company, the dynamics of the company's net profit for 2018-2020 was considered (Fig. 2.14).

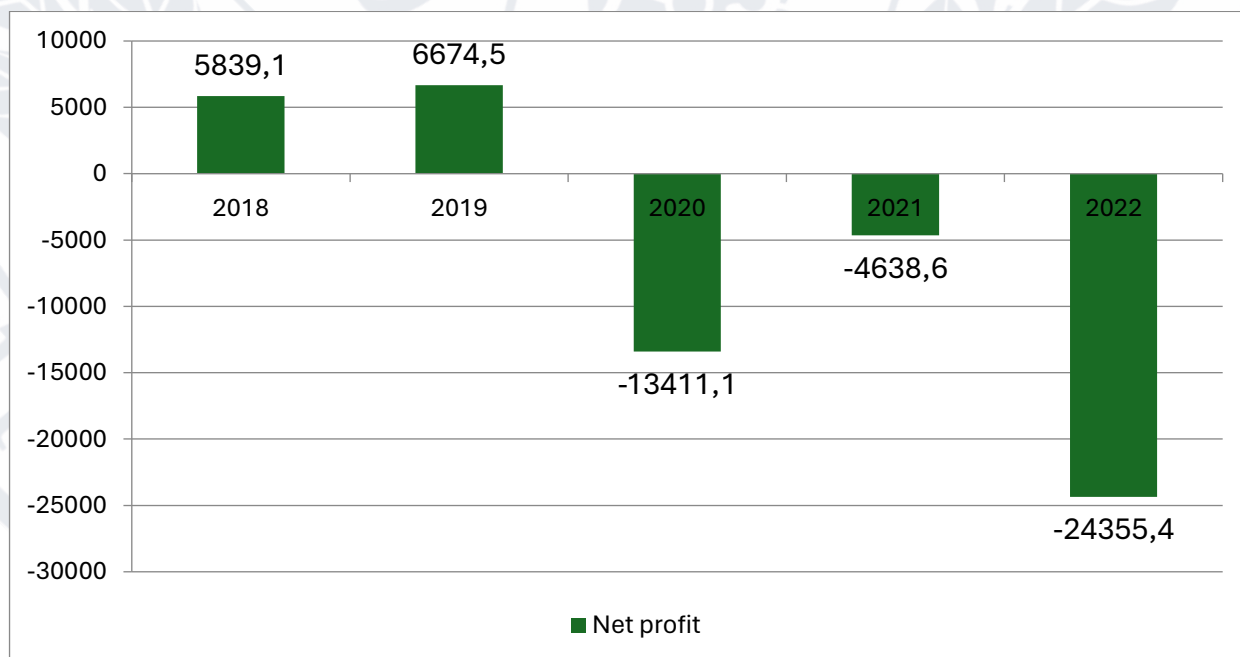


Figure 2.14 - Dynamics of net profit of «APS Plankonsulting» in 2018-2022.

Source: developed by the author based on data from tables A.1 - A.3 Appendix A

The initial increase in net profit during 2018-2019 indicates a period of financial success, possibly due to increased sales, cost efficiency or profitable investments. However, the subsequent decline in net profit during 2019-2020 and 2021-2022, when the company's net profit became negative, indicates periods of financial difficulties. The company's financial result was affected by a decline in the volume of services sold, unfavourable economic conditions, a drop in demand for services in the market, etc.

Thus, the profitability indicators of «APS Plankonsulting» in 2022 deteriorated compared to 2018, a decrease in net sales revenue led to a decrease in net profit, which negatively affected profitability indicators.

The profitability indicators were calculated, which allow assessing the impact of competitiveness of «APS Plankonsulting» on profitability indicators (Fig. 2.15).

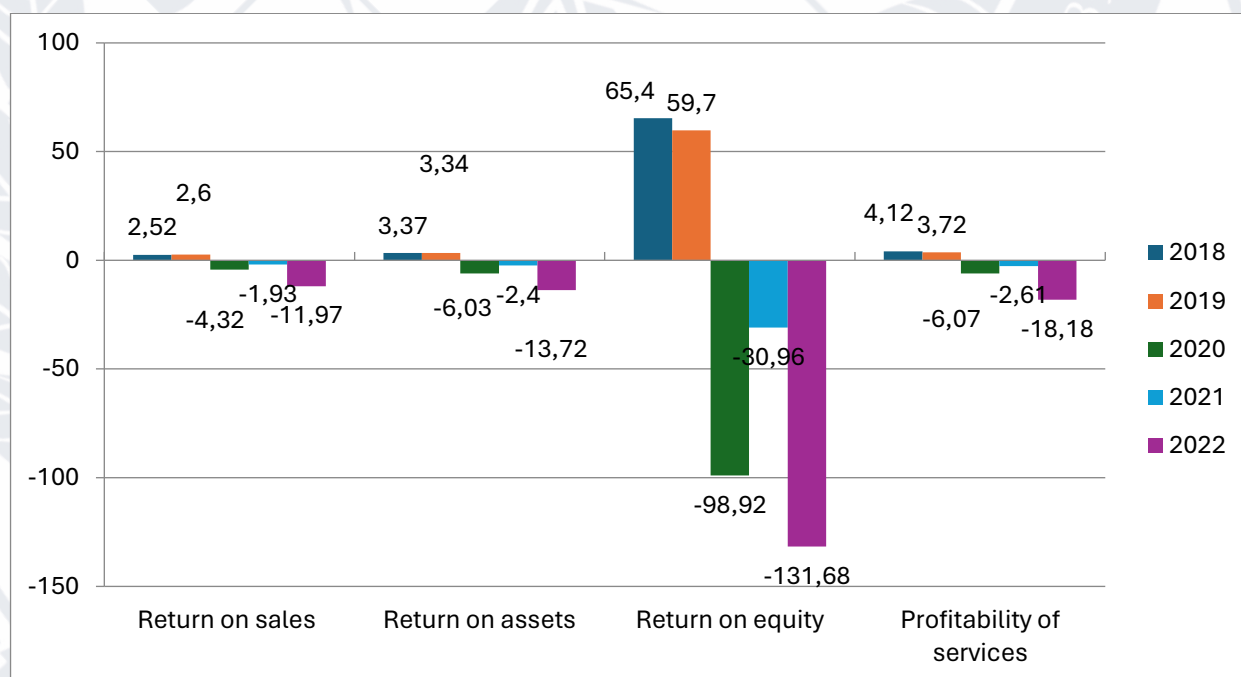


Figure 2.15 - Key profitability indicators of «APS Plankonsulting» in 2018-2022.

Source: developed by the author based on data from tables A. 8 Appendix A

Based on the calculations of profitability indicators, it is concluded that during 2018-2022 the company has only negative profitability indicators, which is a consequence of the negative value of the company's net profit.

Thus, the key problem of «APS Plankonsulting» is a decrease in net profit, which may lead to the company's bankruptcy. The company is directly dependent on the impact of the external environment and cannot adapt to changes in the political and economic environment, which leads to a deterioration in other financial indicators.

2.3 Comprehensive analysis of financial security indicators of «APS Plankonsulting»

The financial security of «APS Plankonsulting» is protection from possible financial losses and prevention of its bankruptcy, achievement of the most efficient use of corporate resources.

For an in-depth study aimed at developing a strategy for improving the financial security of an enterprise, it is advisable to analyse the financial security of «APS Plankonsulting» from the point of view of various methods. The paper proposes to consider the analysis of financial security of an enterprise using the indicator approach and methods of assessment based on bankruptcy analysis.

It should be noted that the indicator approach is used more often in assessing and analysing the level of financial security of an enterprise, as it is simple to calculate and covers various areas of the business entity's activities. To analyse the level of financial security of «APS Plankonsulting», using the indicator approach, the indicators presented in the first subsection of this section were used. The results of the calculations are presented at in Table D.1.

The results of the calculations are divided into 5 groups for ease of analysis.

1. Property status indicators. The depreciation ratio of fixed assets and the share of receivables in property show positive dynamics, as their decrease indicates an increase in the efficiency of the company's asset management. The asset mobility ratio declined during 2018-2019, followed by an increase in 2020, which had a positive impact on the company's financial position. However, from 2021 to 2022,

inclusive, the level of asset mobility decreases, which is caused by a decrease in the share of current assets in the asset structure (due to a reduction in receivables).

2. Liquidity indicators demonstrate negative dynamics, which is associated with an uneven decrease in current assets in relation to the company's current debt, and therefore indicates a decrease in the company's ability to cover its liabilities with assets. However, the absolute liquidity ratio has a gradual increase due to a slight increase in cash and cash equivalents in the structure of the company's assets.

3. Financial independence indicators. Throughout the analysed period, the financial independence ratios have a similar trend: an increase in 2018-2019 and a decrease in 2020-2022, due to the company's growing financial dependence after the outbreak of the Covid-19 pandemic and the subsequent fight against the consequences of the pandemic and other political factors.

4. Indicators of business activity. The optimal dynamics for business activity indicators is their decline. In general, the dynamics of the indicators are unstable, especially since 2020, as evidenced by a sharp increase in values and their decrease over the next year.

5. The indicators of the company's performance are its profitability. During the analysed period, «APS Plankonsulting» lost net profit due to a decrease in production and sales volumes, and an increase in production costs. The trend for all indicators is below 0, which indicates that the company's activities are inefficient in all aspects.

The article also highlights that in 2020-2021 (the first year of recovery from the Covid-19 pandemic), management took actions aimed at increasing the company's profitability. Despite the fact that the company's net profit in 2021 was still negative, the positive changes led to an increase in the company's financial results. However, already in 2022, profitability indicators fell below the level of 2020, which was also due to the influence of external factors.

Thus, it is concluded that the financial security of an enterprise, according to the indicator methodology of assessment, has an unsatisfactory level and indicates the presence of significant problems of the enterprise, which primarily indicate the

company's ability to survive in the current conditions and its inability to adapt internal processes to changes.

The financial security of «APS Plankonsulting» was also assessed on the basis of the methodology for analysing the indicators of bankruptcy probability. First of all, the calculation was carried out according to several well-known discriminant models, in particular, those of foreign scientists - the model of bankruptcy probability assessment based on the Z-criterion by E. Altman; the model of financial condition assessment by R. Lees and the bankruptcy model by R. Taffler and G. Tishaw (Figures 2.16-2.17).

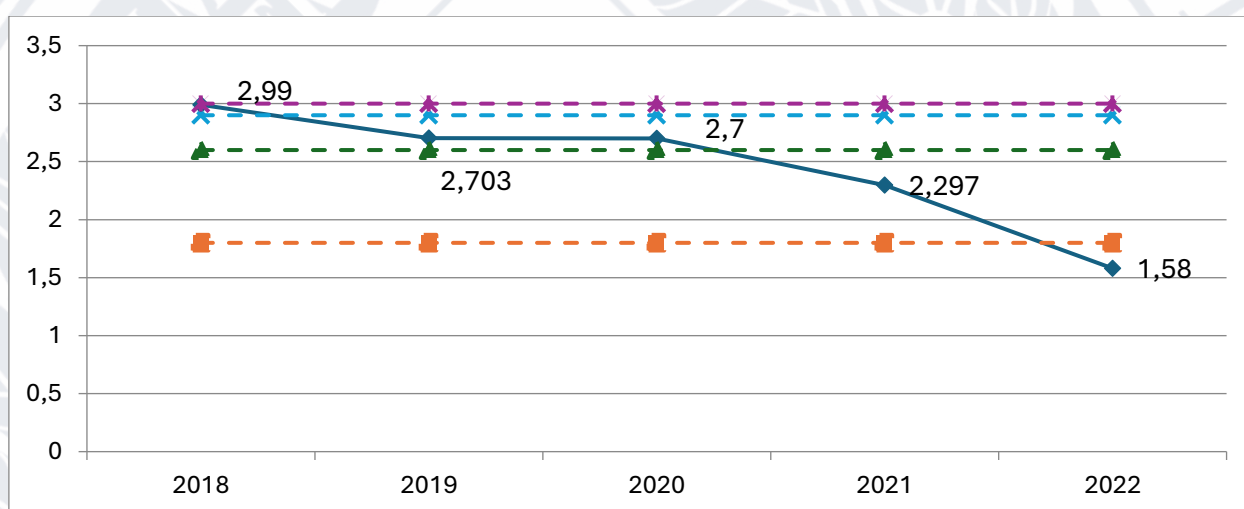


Figure 2.16 - Calculation of the probability of bankruptcy of «APS Plankonsulting» according to the Altman model

Source: developed by the author based on data from tables A.10 - A.11 Appendix A

According to the generalised Z-score of the Altman model, «APS Plankonsulting» had a low probability of bankruptcy in 2018-2019, and from 2020 to 2022 inclusive, the probability increased to reach a very high probability of bankruptcy.

According to the Lees model, the company had a high probability of bankruptcy in 2018-2022, while the Taffler and Tishok model indicates that there is no probability of bankruptcy of «APS Plankonsulting» .

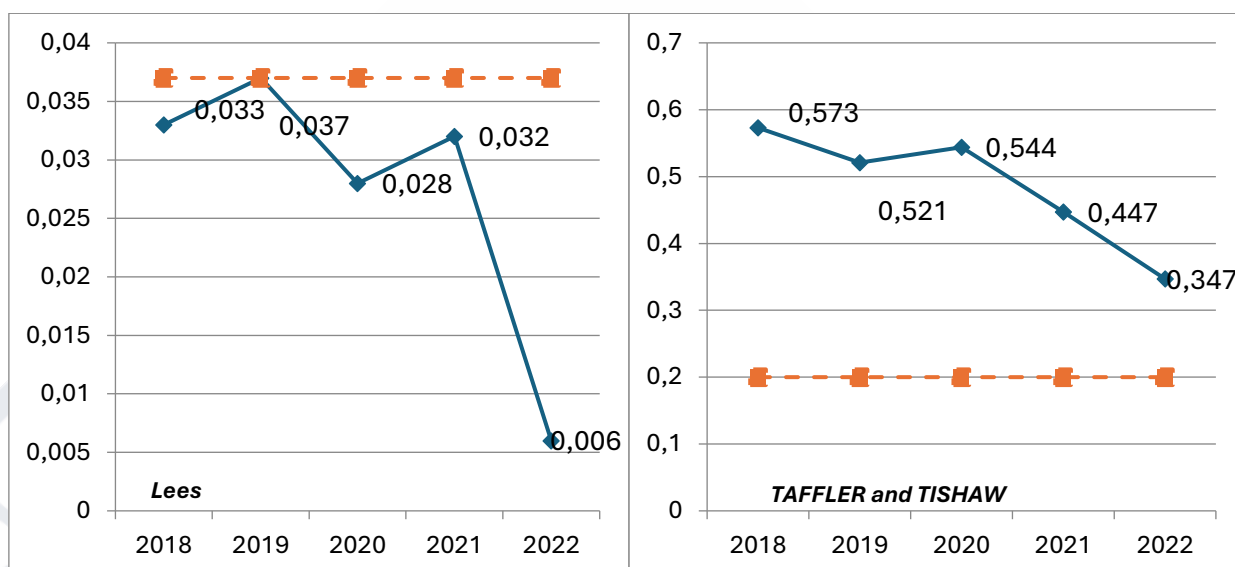


Figure 2.17 - Calculation of the probability of bankruptcy of «APS Plankonsulting» by the Lees model and the Taffler model

Source: developed by the author based on data from Tables A.10 - A.11 Appendix A

It is important to emphasise that discriminative models from foreign sources may not take into account the external risk elements that prevail in transition economies. Aspects such as inflation, the development of financial markets, the tax burden and the stability of the monetary system are not taken into account. A thorough assessment of a company's financial position should therefore include a comprehensive analysis. It should cover not only international methods of integral assessment, but also include domestic methods. Therefore, when analysing the financial security of «APS Plankonsulting», two more models were used in addition - by A. V. Matviychuk and O. O. Tereshchenko (Fig. 2.18).

O. Tereshchenko's model determined that in 2020 and 2022, «APS Plankonsulting» became semi-bankrupt. The company improved its financial security in 2021, when it moved from the semi-bankruptcy status to the level of the threat of bankruptcy. However, the deterioration of the company's financial condition in 2022 again increased the likelihood of bankruptcy.

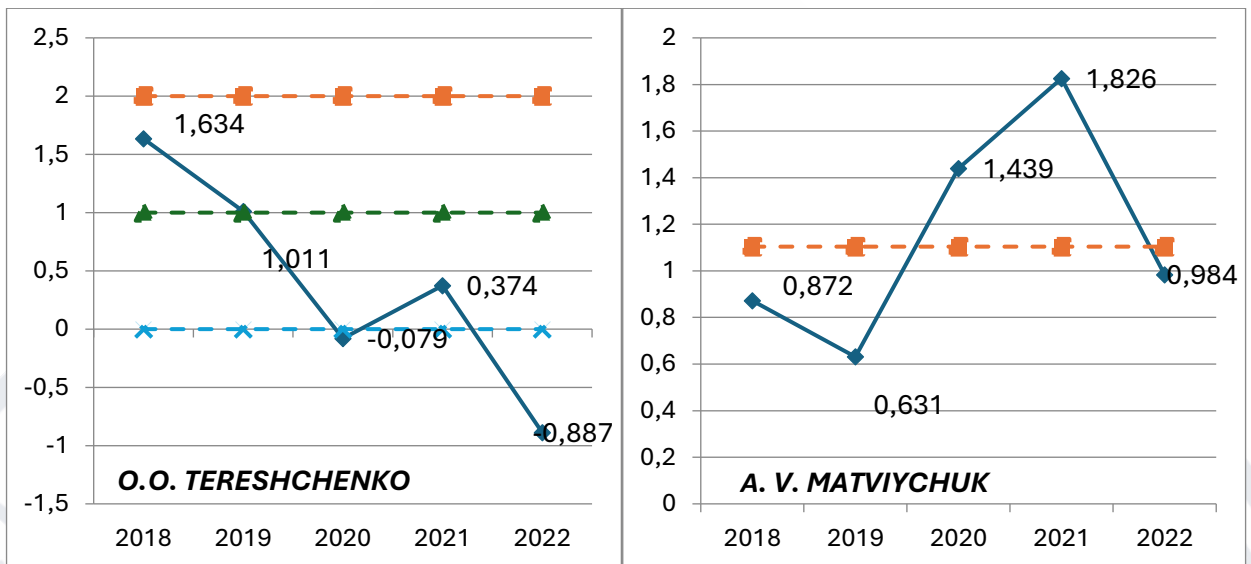


Figure 2.18 - Calculation of the probability of bankruptcy of «APS Plankonsulting» based on the Tereshchenko and Matviychuk model

Source: developed by the author based on data from Tables A.10 - A.11 Appendix A

According to Matviychuk's model, 2020 is assessed as a "stable financial position", but in 2022 there is a threat to the financial position, which indicates an increase in the probability of bankruptcy.

In their study of approaches to assessing the level of financial security, Y. Shvets and K. Tsikalo [50] proposed an indicator approach of their own design, based on indicators that characterise the financial condition, production efficiency and dynamics of economic development of an industrial enterprise, which create the basis for ensuring stable economic and financial development. It should be borne in mind that according to this methodology, all indicators are stimulants, which means that the higher the value of a particular coefficient, the higher the level of financial security of the enterprise.

Table E.1 shows the calculation of the indicators of the integral model of Y. O. Shvets and K. S. Tsikalo. To determine the weighting values in Table 2.10, the Fishburne formula (2.1) was used, which allows them to be calculated by ranking the indicators:

$$W_i = \frac{2(m - i + 1)}{m(m + 1)} \quad (2.1)$$

where W_i is the share of the i -th indicator in the integral indicator;

and - the rank of the individual indicator;

m - the total number of indicators.

The obtained assessment of the weight of the coefficients is necessary for further calculation of the integral indicator of the level of financial security of «APS Plankonsulting», which is calculated using formula (2.2):

$$I_{FS} = \sum_{i=1}^m W_i * K_i \quad (2.2)$$

where I_{FS} is an indicator of financial security;

W_i is the share of the i -th indicator in the integral indicator;

K_i is the calculated value of the i -th indicator.

The calculated total indicator reflects the current level of financial security of the enterprise. Thus, the final step in assessing the financial security of an enterprise using the integral approach is to interpret the result of the integral value of financial security (Table E.2).

The methodology for assessing the financial security of an enterprise proposed by Y. Shvets and K. Tsikalo allows to assess the current level of financial security with less time to identify weaknesses for making appropriate adjustments and developing a strategy for improvement.

Fig. 2.19 shows the dynamics of the integral indicator of financial security of «APS Plankonsulting» during 2018-2022.

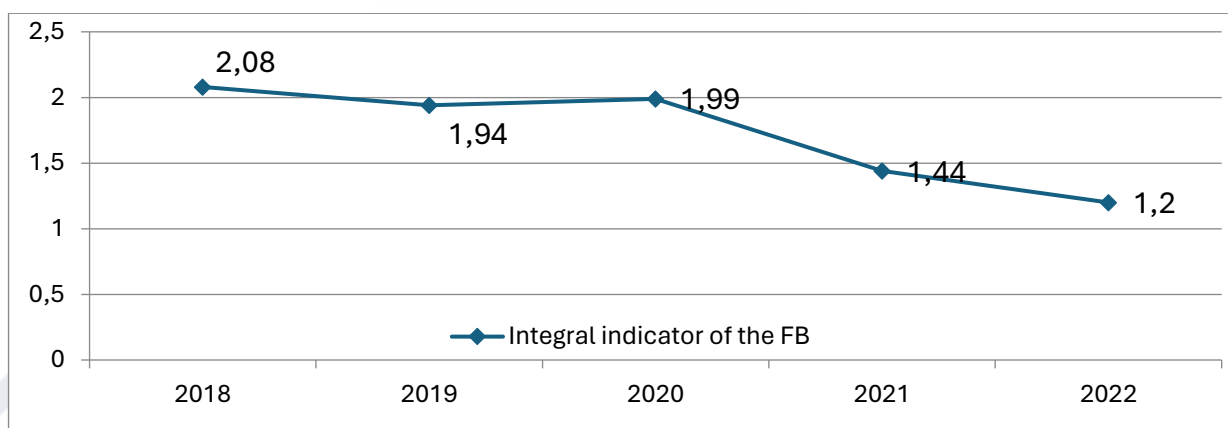


Figure 2.19 - Dynamics of the integral indicator of financial security of «APS Plankonsulting» during 2018-2022.

Source: developed by the author based on data from tables A.12 - A.14 Appendix A

During 2018-2019, there was a decline in the integral indicator of financial security of the enterprise. Although in 2020 the integral indicator of financial security of «APS Plankonsulting» is growing, the indicator is rapidly declining for the next two years. Despite this, according to the proposed system for assessing the level of financial security, «APS Plankonsulting» adheres to the highest level of the integral indicator, which is 1.17, indicating that the company has an excellent level of financial security. The rapid decline of the indicator states the fact of approaching the unsatisfactory or critical level of financial security.

In general, the results of the analysis and assessment of the financial security of «APS Plankonsulting» indicate an unsatisfactory state of the enterprise's financial security and the need for further development of a strategy that will focus on improving the financial security system. The main guidelines for it should be: increasing the level of financial independence of the enterprise, neutralising the impact of external factors, searching for and identifying reserves to increase the profitability of the enterprise.

Conclusions to Chapter 2

In this chapter of the qualification work, the methods of assessing the financial security of a business entity are investigated, which are divided into traditional and

non-traditional. Traditional methods, including cash flow studies, financial stability assessment, bankruptcy forecasting, integral indicators, financial indicators and the resource-functional approach, are widely used due to their simplicity and comprehensive coverage.

In general, during 2018-2022, «APS Plankonsulting» showed the ability to withstand external threats. During 2021, the company took the necessary actions to gradually overcome the crisis. As a result, the company reduced accounts payable, increased the share of equity in the structure of liabilities, improved asset management, reduced production costs, increased net income from sales, and as a result, reduced net loss.

However, the events that took place in 2022 raise concerns and direct threats to the financial security of the enterprise.

CHAPTER 3

STRATEGIC DIRECTIONS FOR IMPROVING FINANCIAL SECURITY MANAGEMENT AT «APS Plankonsulting»

3.1. The concept of improving the enterprise financial security management system

The concept of improving the financial security management system of an enterprise such as «APS Plankonsulting» is a multi-stage process. It involves a systematic combination of control, planning, feedback and information support.

1. Control is the process of observing a company's activities to ensure that they are carried out as planned. This includes overseeing financial transactions, ensuring compliance with regulatory requirements and managing risk.

2. Planning involves setting goals and determining the best way to achieve them. It includes financial planning, which involves forecasting revenues, expenses and profits, and strategic planning, which involves setting long-term goals and determining the resources needed to achieve them.

3. Feedback is the process of using the information obtained in the control process to adjust the company's plans and activities. Feedback includes adjusting financial forecasts based on actual results or changing strategic plans based on new information or changes in the business environment.

4. Information support involves the use of information systems to support control, planning and feedback processes. These may include financial information systems, management information systems and decision support systems.

The developed concept of improving the financial security management system of «APS Plankonsulting» is based on the shortcomings and risks of the enterprise identified during the analysis of the current level of financial security.

In order to improve the financial security of «APS Plankonsulting», it is necessary to take certain measures to address weaknesses.

1. Efficiency in the use of working capital. Improvements in production processes or technology can lead to more efficient use of working capital. For

example, investing in new equipment or software that speeds up workflows or training staff in more efficient methods. The result is faster inventory turnover, which improves cash flow and reduces the amount of money tied up in inventory.

2. Reducing costs through automation. Automation can significantly reduce labour costs by replacing manual tasks with automated processes. For example, AI-powered customer service chatbots can handle routine queries, freeing up staff for more complex tasks. This not only reduces labour costs but also increases efficiency and customer satisfaction.

3. Revision of financial policy. A review of the company's financial policy may reveal new sources of income. This may include diversifying the company's product or service offerings or finding ways to monetise existing assets. For example, if a company has large premises, it can rent out unused space. Or it can offer consulting services based on its experience.

4. Reducing liabilities. Reducing liabilities, especially accounts payable, can improve a company's liquidity. The process involves negotiating better terms with suppliers or improving inventory management so that stocks do not sit idle. Higher liquidity means that the company has more capacity to meet its short-term obligations, which increases its financial security.

5. Strategic management. Strategic management involves setting long-term goals and making decisions on the allocation of company resources to achieve those goals. It is about looking at the "big picture" and making sure that the company is moving in the right direction. For example, a company may decide to focus on high-growth markets or develop new products that meet consumer trends. Effective strategic management will lead to increased profitability and business growth, which in turn improves financial security.

Thus, improving the financial security management system of an enterprise such as «APS Plankonsulting» involves a systematic approach that integrates control, planning, feedback and information support, and takes into account the specifics of the company's activities and services. The management system requires continuous operation, careful planning and seamless integration into the overall

management structure of the enterprise. Thus, the system will allow the company to manage financial risks, optimise financial performance and achieve its strategic goals.

In order to build an effective financial security management system, «APS Plankonsulting» requires a thorough study of the factors that affect its stability. This includes industry-specific considerations such as market trends, competitive forces, regulatory changes and technological developments. Based on the results of the industry analysis, we classify threats and opportunities for the company's development

According to the data in tables B. 1 Appendix B, a diagram of the factors of influence that create opportunities and threats for «APS Plankonsulting» has been built (Fig. 3.1).

One of the tools of the enterprise financial security management mechanism is the monitoring and controlling subsystem. For the future, the necessary action for «APS Plankonsulting» is to improve the monitoring of financial security, taking into account the sharp changes in the external environment that affect the financial condition of the enterprise. When creating or improving the financial security management system, it is advisable to adhere to the following criteria:

- The subsystem should operate continuously, providing real-time information and analysis to support decision-making;
- It should be carefully planned, with clear objectives, defined responsibilities and established procedures;
- The subsystem should be functionally independent, but at the same time easily integrated into the overall management structure of the enterprise. This means that it should have its own resources and powers, but its activities should be coordinated with those of other parts of the organisation.

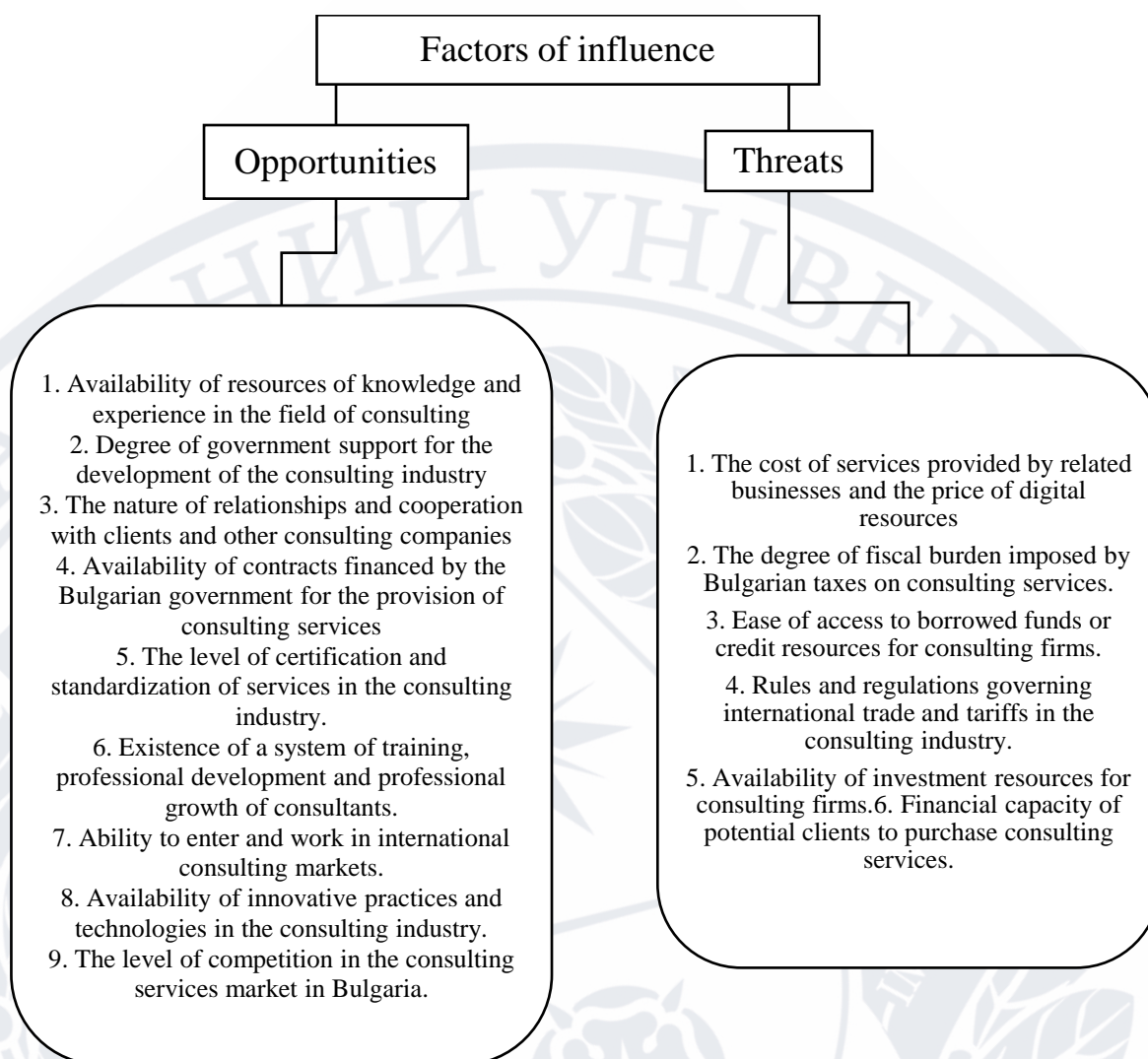


Figure 3.1 - Opportunities and threats of the external environment affecting the financial security of «APS Plankonsulting»

Source: developed by the author based on data from tables B. 1 Appendix B

Taking into account that «APS Plankonsulting» is also engaged in consulting activities, financial analysis and forecasting, financial advisory, training courses, organisation of domestic and international seminars, conferences, forums, transactions with intellectual property, author's consulting works, regional planning, design and programming and other activities and services not prohibited by law, these factors should also be taken into account in the financial security management system. For example, the system may include modules for managing the financial aspects of these activities, such as budgeting and cost control for consulting projects,

financial analysis for advisory services, and management of income from training courses and seminars.

The monitoring subsystem for a consulting company such as «APS Plankonsulting» should be adapted to its specific needs and characteristics. The tasks of the monitoring subsystem are shown in Fig. 3.2.



Figure 3.2 - Tasks of the monitoring subsystem of the «APS Plankonsulting»

The process of financial security management is illustrated in Fig. 3.3.

Therefore, the monitoring subsystem should be designed to take into account the unique challenges and opportunities of the consulting industry, helping «APS Plankonsulting» to navigate the complex financial environment and ensure its financial security.

Fig. 3.4 shows the developed substantive model of organisation and functioning of the controlling and monitoring system in the context of the financial security management mechanism of «APS Plankonsulting» .



Figure 3.3 - Financial security management process at «APS Plankonsulting»

Based on the information received on the aspects of building the concept of improving the financial security management system, a scheme consisting of the goal, objectives, principles, management tools and criteria for evaluating the effectiveness of the proposed concept is built (Fig. 3.5).

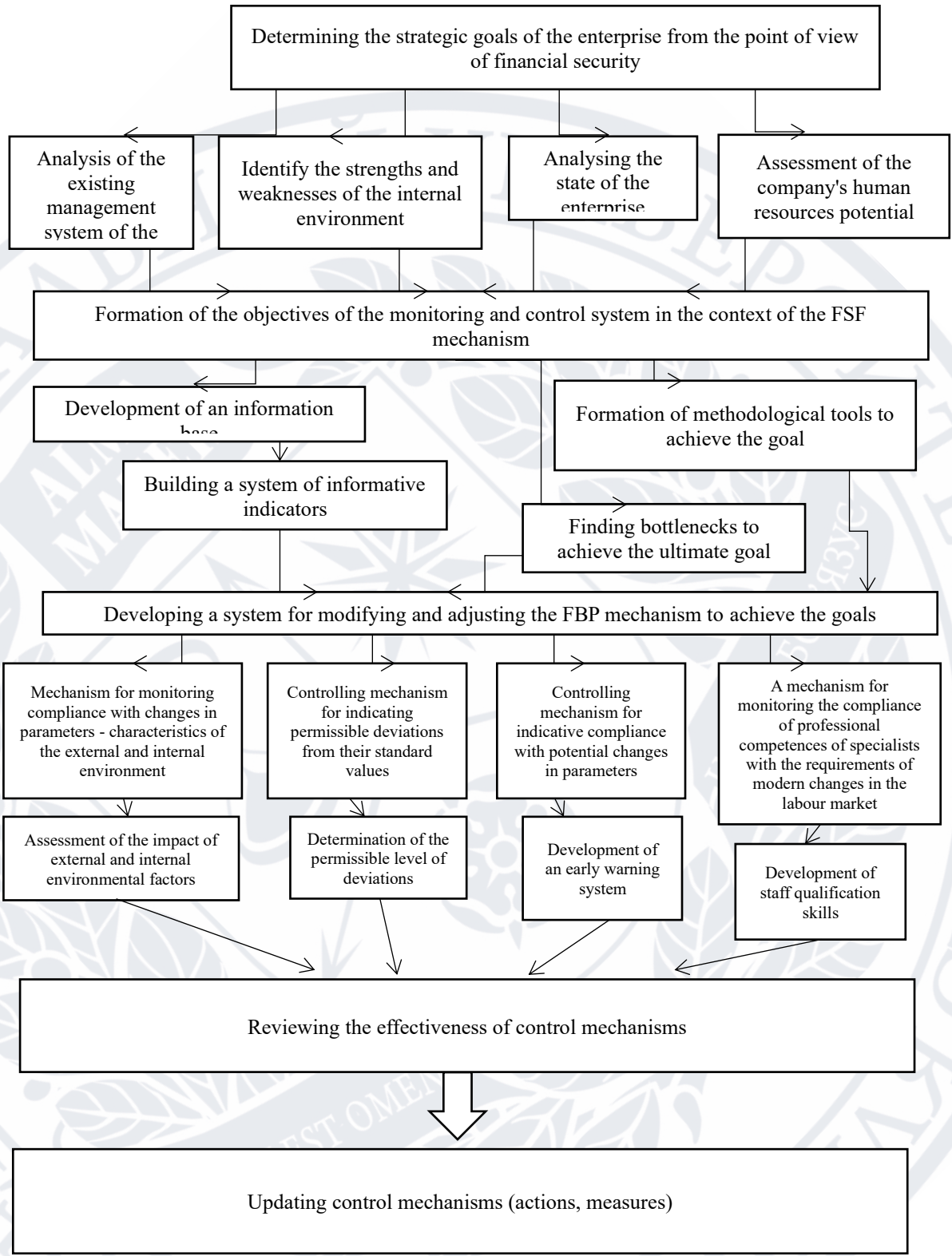


Figure 3.4 - Content model of the organisation and functioning of the monitoring system in the context of managing the FB of «APS Plankonsulting»

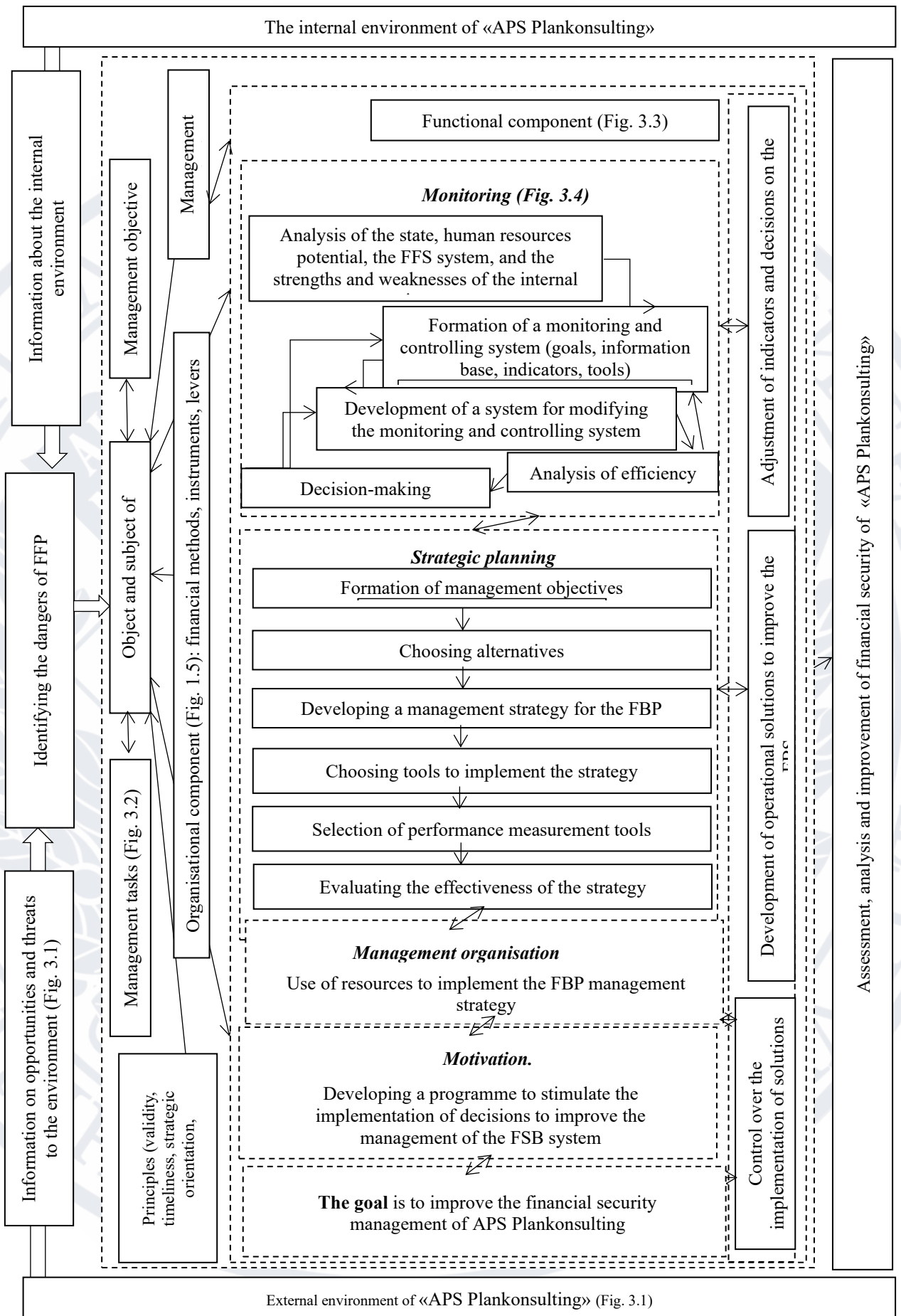


Figure 3.5 - Concept of improving the management system of the FBP of «APS Plankonsulting»

3.2. Strategic directions for improving the financial security management of the enterprise

Taking into account the unique features of the consulting industry, the development of a comprehensive financial security management model for «APS Plankonsulting» involves a detailed breakdown of these components or subsystems. This means that each component is analysed in depth, taking into account such factors as the nature of consulting services, the dynamics of the consulting market, as well as the specific needs and features of «APS Plankonsulting».

Fig. 3.6 shows the strategic directions aimed at strengthening the financial security of «APS Plankonsulting».

According to experts specialising in financial security management, adopting a well-thought-out strategy helps to improve key performance indicators reflecting the level of financial security, while creating a reliable safety net. A strategic approach to a company's financial security should be organically integrated with both the general and financial strategies of the enterprise. It should cover the methodology and practice of generating financial resources, as well as careful planning and ensuring financial stability in market conditions. The successful implementation of this strategy depends on the achievement of its main objectives.

At the stage of strategic development, due attention should be paid to the dynamics of macroeconomic processes, trends in the development of domestic financial markets and potential ways of diversification. Thus, taking into account the external and internal elements that affect financial security, and based on the analysis of financial indicators related to «APS Plankonsulting», combined with the assessment of the probability of bankruptcy, it can be concluded that it is necessary to develop a financial security strategy for the enterprise.

This strategy should be subordinated to the overall business strategy. Given the identified insufficiency of the company's financial potential, the best course of action is to implement a strategy aimed at building financial potential, combined with a targeted approach to strengthening the company's financial security, in particular, by increasing attention to solvency. In addition, in order to increase

economic potential while strengthening financial security, attention should be paid to improving the governance system. Taking into account the existing strategic directions, a strategic map for improving the financial security management of «APS Plankonsulting» has been built (Fig. 3.7).

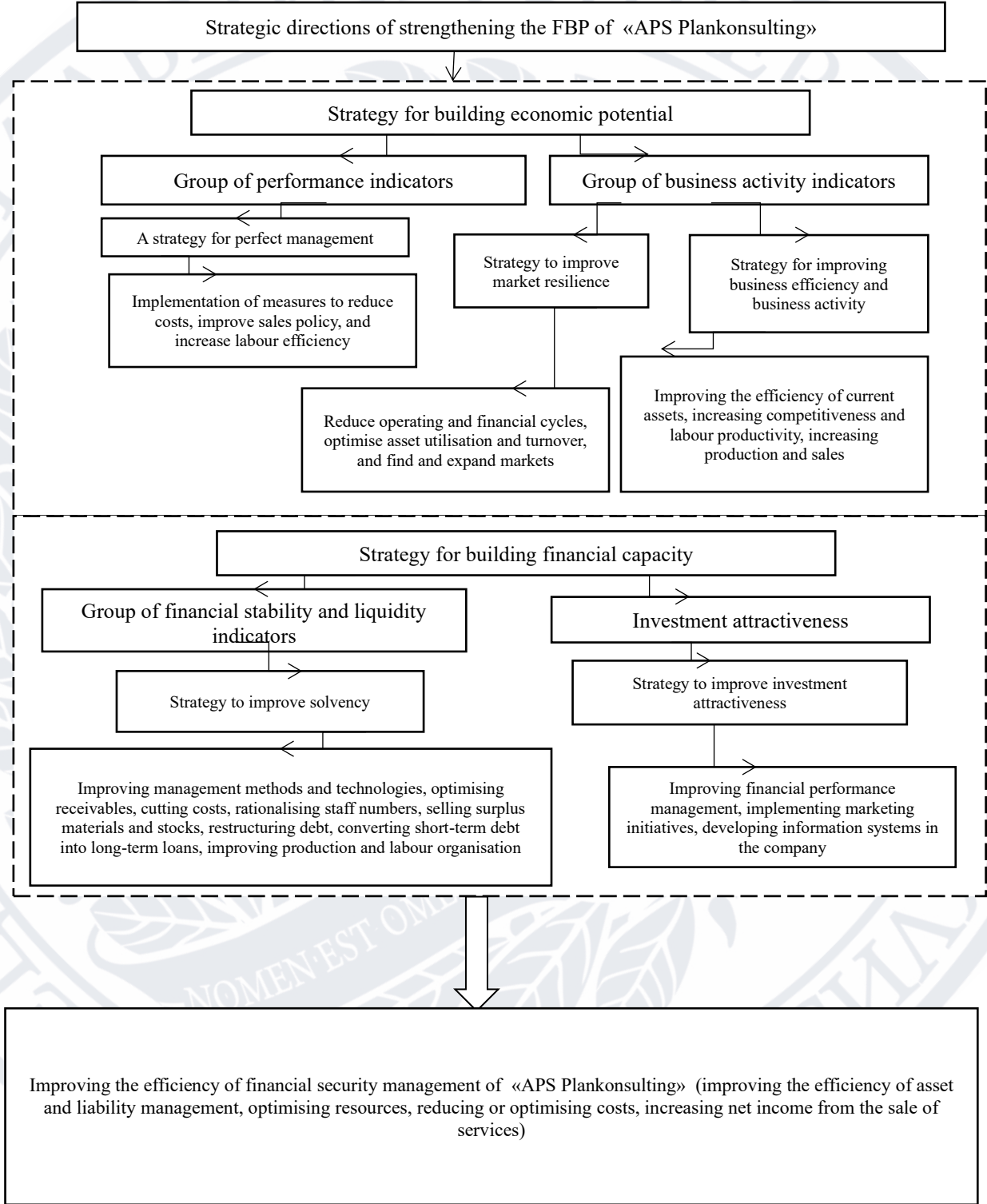


Figure 3.6 - Strategic directions aimed at strengthening financial security

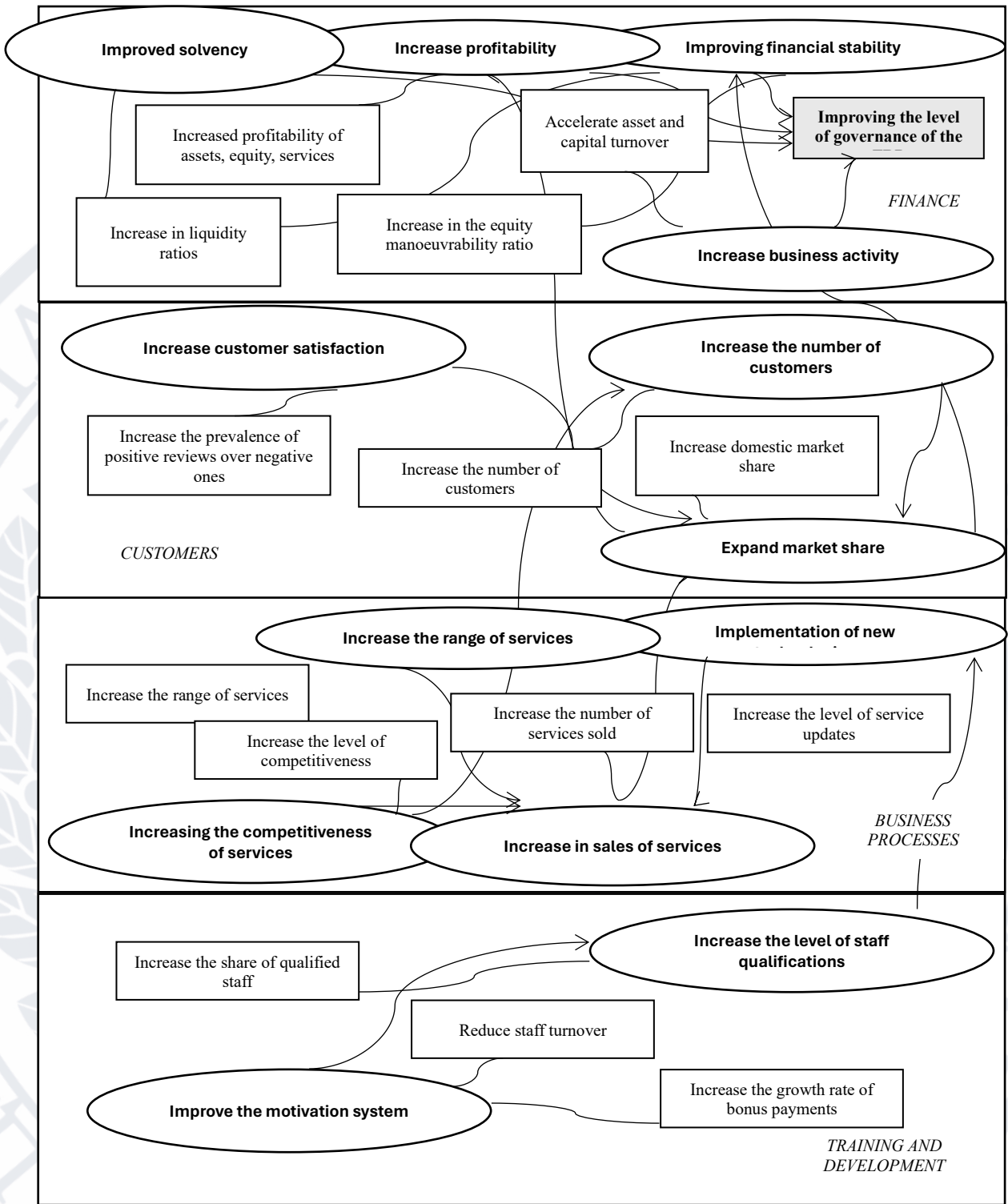


Figure 3.7 - Strategic map of improvement of financial security management at «APS Plankonsulting»

The structure of the above strategic map covers four levels: the financial position of the organisation, customer relations and market positioning, internal

business processes, and the development of the company and its staff. These levels serve as the basis for analysing and implementing the company's strategy.

The interconnection of objectives within each pillar creates a web of cause and effect. Aligning the objectives of these components is a fundamental tool for creating value and ensuring a focused and coherent strategy. This cause and effect architecture linking the components of the balanced scorecard serves as the fundamental structure for the strategic map.

The financial segment of the strategic map reflects the company's financial position, ensuring optimal financial stability and comprehensive growth and efficiency strategies. The Customers segment outlines how the company seeks to be perceived by its customers, playing a key role in defining the company's market position and key customer relationships.

The Internal Business Processes segment has a significant impact on business processes, shaping the key internal processes in which an organisation must excel to outperform its competitors and deliver its competitive proposition. The training and development segment outlines the main elements of the company's culture, technology and employee skills. This perspective requires the implementation of goals aimed at increasing labour productivity through motivation and improving employee skills.

Fostering a positive team environment where performance is rewarded encourages employees to strive for excellence, leading to increased productivity. Increased productivity forms the basis for improving the quality of service within business processes, which is in line with the company's goals in the Finance segment. The goals include optimising profit, liquidity and profitability management, as well as increasing financial stability and reducing current liabilities, among other financial optimisation objectives.

To improve financial security and promote sustainable financial stability, certain recommendations should be followed (Figure 3.8).

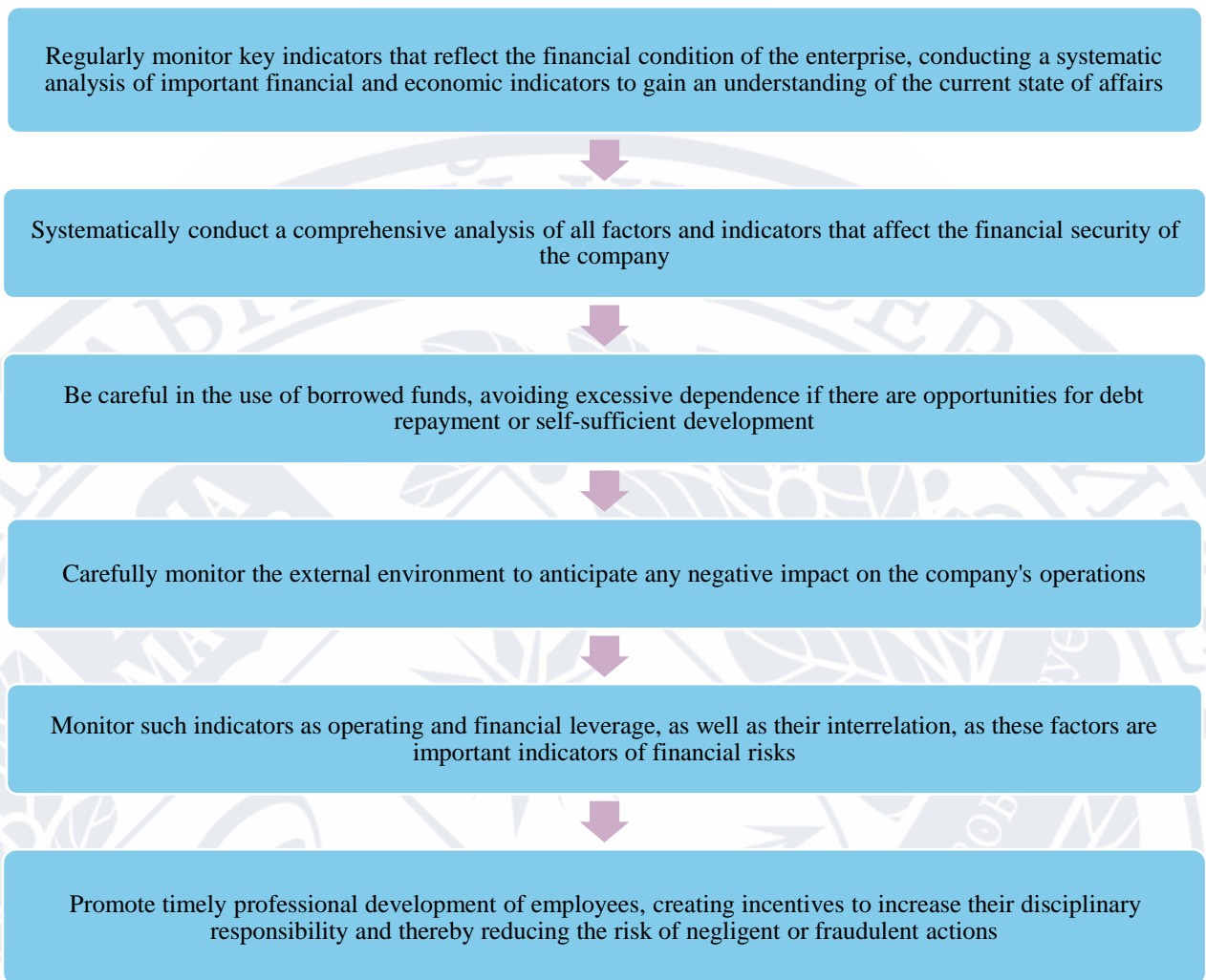


Figure 3.8 - Recommendations for improving the level of financial security and promoting sustainable financial stability of «APS Plankonsulting»

Thus, it can be concluded that the problem of financial security has become much more acute for many enterprises due to the current economic circumstances. Managers and entrepreneurs should prioritise this issue, paying due attention to target indicators of financial security when formulating the overall financial strategy of the enterprise. In other words, the fundamental prerequisite for maintaining an acceptable level of financial security at an enterprise is to achieve financial sustainability. Conversely, financial security can be achieved only through the realisation of financial stability of the enterprise.

3.3 Forecasting the financial security of «APS Plankonsulting» and determining the economic feasibility of the proposed strategic priorities

Forecasting the financial security of «APS Plankonsulting» and determining the economic feasibility of the proposed strategic priorities is based on the specification of changes that will occur at the enterprise after the implementation of the strategy for improving the financial security management system.

Fig. 3.9 shows the impact of the proposed changes to the financial security management system on the financial performance of the enterprise.

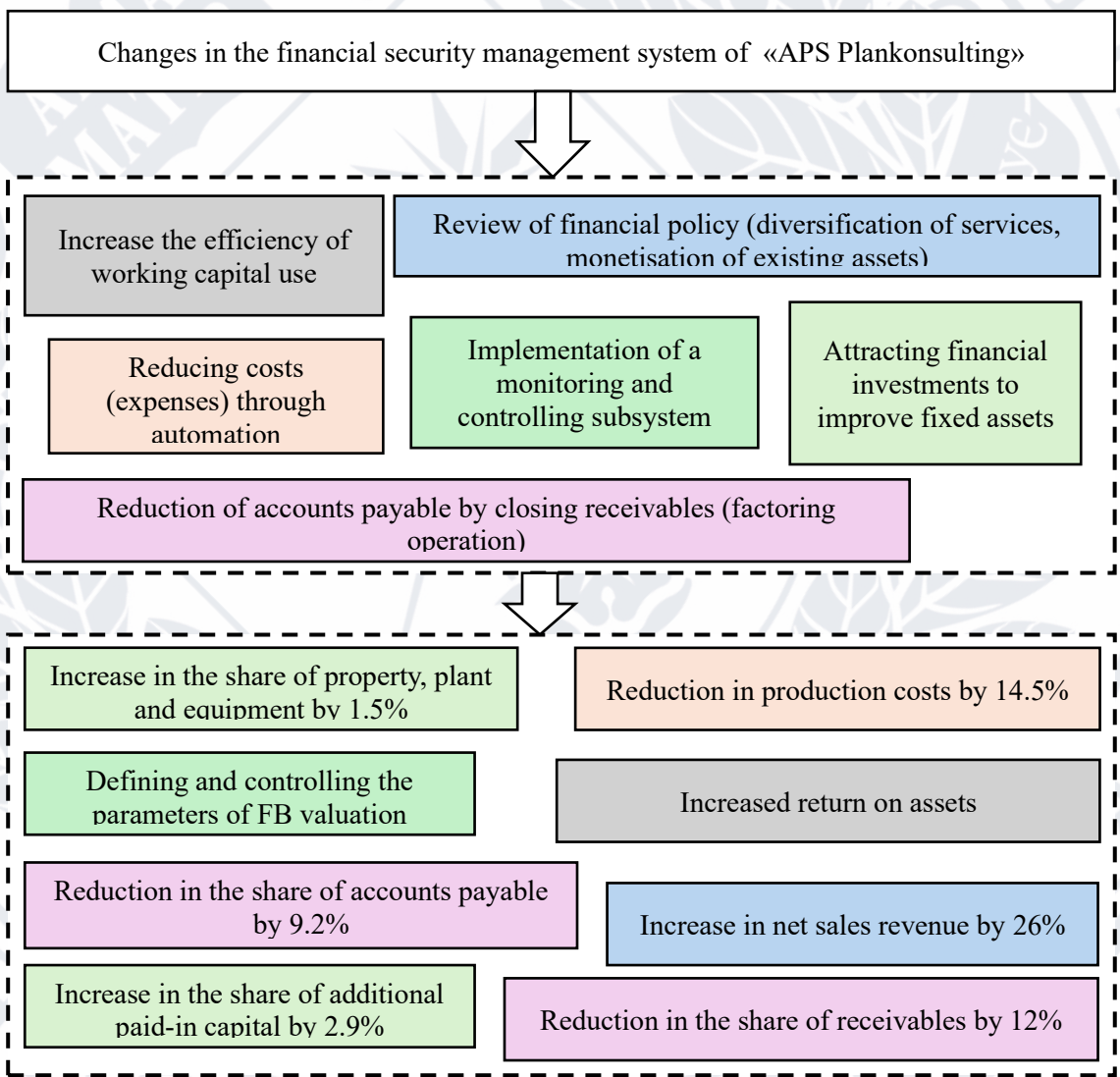


Figure 3.9 - Diagram of the impact of strategic priorities for improving the FB management system on the financial performance of «APS Plankonsulting»

The diagram shows the main proposals implemented in the strategic priorities for improving the company's financial security management system. Each of the

steps has its own impact on the company's financial performance. Thus, the proposed steps allowed to reduce the level of accounts payable and accounts receivable at «APS Plankonsulting». In addition, steps to improve the financial security management system affect the level of return on assets, the structure of assets and liabilities (fixed assets and additional capital, which takes into account the amount of investment that was directed to modernisation or purchase of fixed assets). Based on the results of the implementation of strategic priorities, the Group expects to increase net sales revenue and reduce the cost of services by automating the service delivery process and diversifying services to increase the number of

Fig. 3.10 shows the change in net profit from the sale of services and cost price in terms of forecasting the results of implementation of the proposed measures to improve the financial security management of the enterprise.

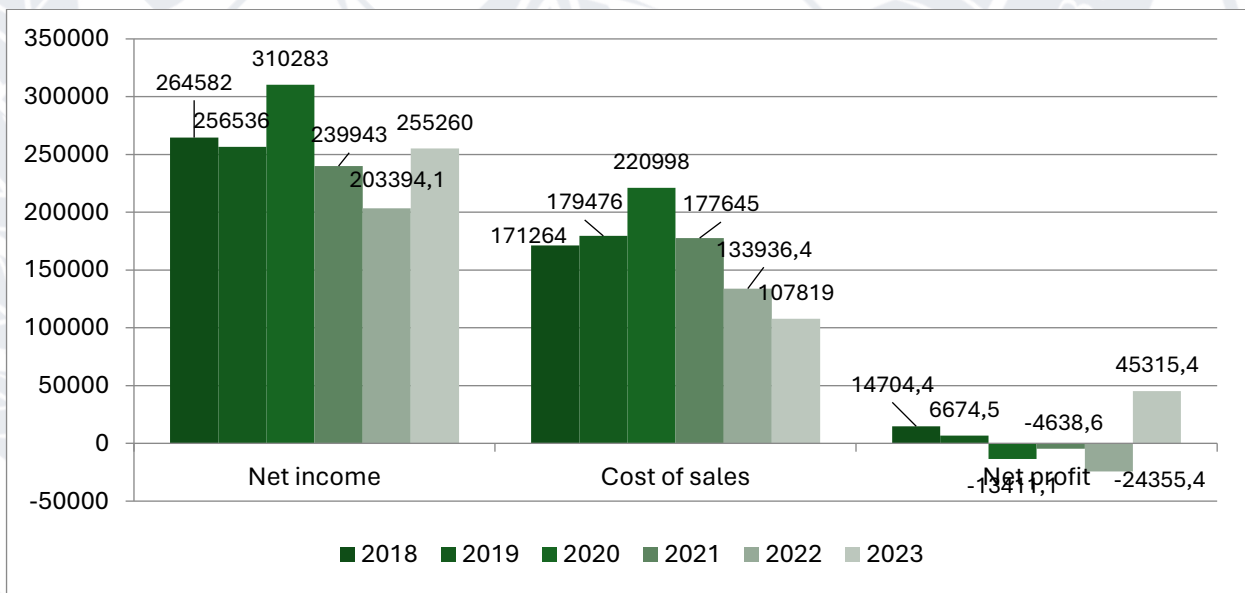


Figure 3.10 - Dynamics of financial performance indicators of «APS Plankonsulting» after implementation of the proposed measures

The main result is the elimination of net loss in the forecast period due to an increase in net income from sales of services and a decrease in cost.

The economic feasibility of the proposed strategic priorities for the financial security of «APS Plankonsulting» is shown on the basis of the results of the assessment using two methods: the integral method of assessment and the method of assessment based on the analysis of the probability of bankruptcy.

To compare the forecasted results, the value of the integral indicator for 2023-2024 is calculated, provided there are no changes in the management of the enterprise's financial security (Fig. 3.11).

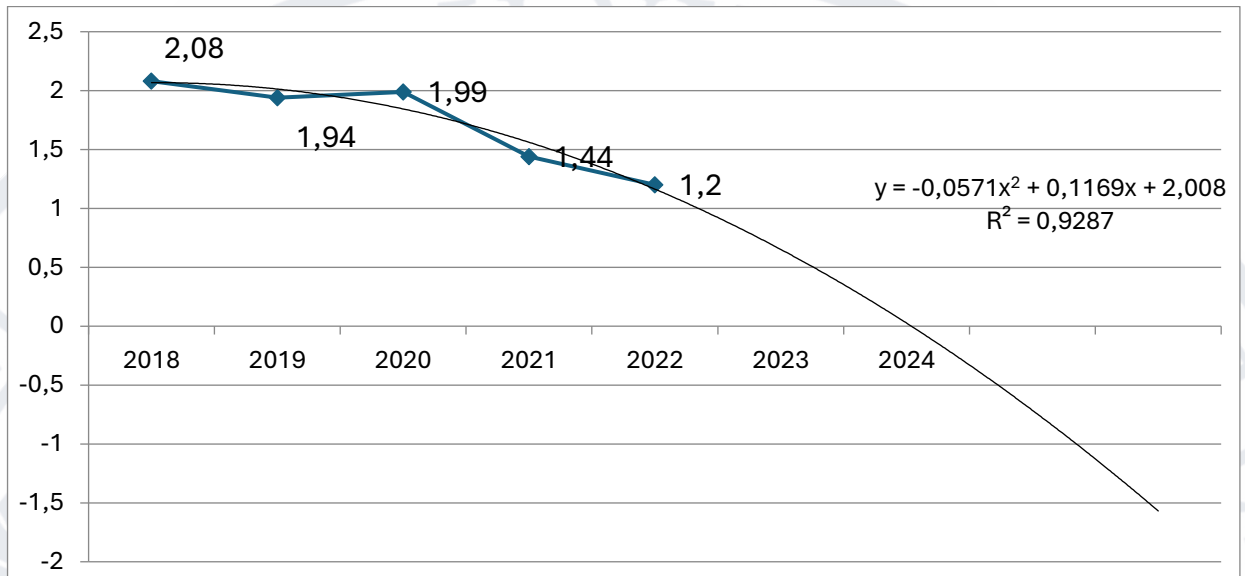


Figure 3.11 - Projected dynamics of the integral financial security indicator of «APS Plankonsulting» during 2023-2024.

The predicted value of the integral indicator of financial security of the enterprise, in the absence of changes, is calculated by the equation of the polynomial trend line, which was chosen taking into account the largest value of R^2 . In this equation, "x" is calculated as the serial number of the year displayed on the graph. That is, the value of the integral indicator for 2023 and 2024 is equal:

$$y_{2023} = -0,0571 * (6^2) + 0,1169 * 6 + 2,008 = 0,65$$

$$y_{2024} = -0,0571 * (7^2) + 0,1169 * 7 + 2,008 = 0,03$$

Given the previous rate of decline in the integrated financial security indicator of «APS Plankonsulting», the results are justified. However, it is necessary to check the error in calculating the forecast of the indicator. The data for calculating the forecast error are shown in Table L.1.

The root mean square error of the forecast is calculated using formula (3.1):

$$M.S.E. = \sqrt{\frac{1}{n} \sum_{i=1}^n (y_i - y_i^*)^2} \quad (3.1)$$

For «APS Plankonsulting», the standard deviation of the forecast of the integral financial security indicator is as follows:

$$M.S.E. = \sqrt{\frac{1}{5} * 0,04} = 0,09$$

The average relative forecast error is calculated using formula (3.2):

$$M.A.P.E = \frac{1}{n} \sum_{i=1}^n \frac{|y_i - y_i^*|}{y_i} \cdot 100 \quad (3.2)$$

For «APS Plankonsulting», the average relative error of the forecast of the integral financial security indicator is as follows:

$$M.A.P.E = \frac{1}{5} \sum_{i=1}^n 0,23 \cdot 100 = 4,6 \%$$

Thus, the obtained value of the average relative error in the calculations of the forecast of the integral indicator of financial security of the enterprise is 4.6%, which ensures high quality of the forecast, since the error level does not exceed 10%. Thus, it is concluded that in the absence of changes, the integral indicator of the Plan Consulting IRD in 2023-2024 will decrease to 0.65 (unsatisfactory level) and 0.03 (critical level), which is less than the normative value established by the authors in the course of modelling the integral methodology for assessing financial security (tables A. 13 Appendix A).

Fig. 3.12 shows the projected result of the integral indicator of financial security of «APS Plankonsulting», subject to the implementation of the proposed changes.

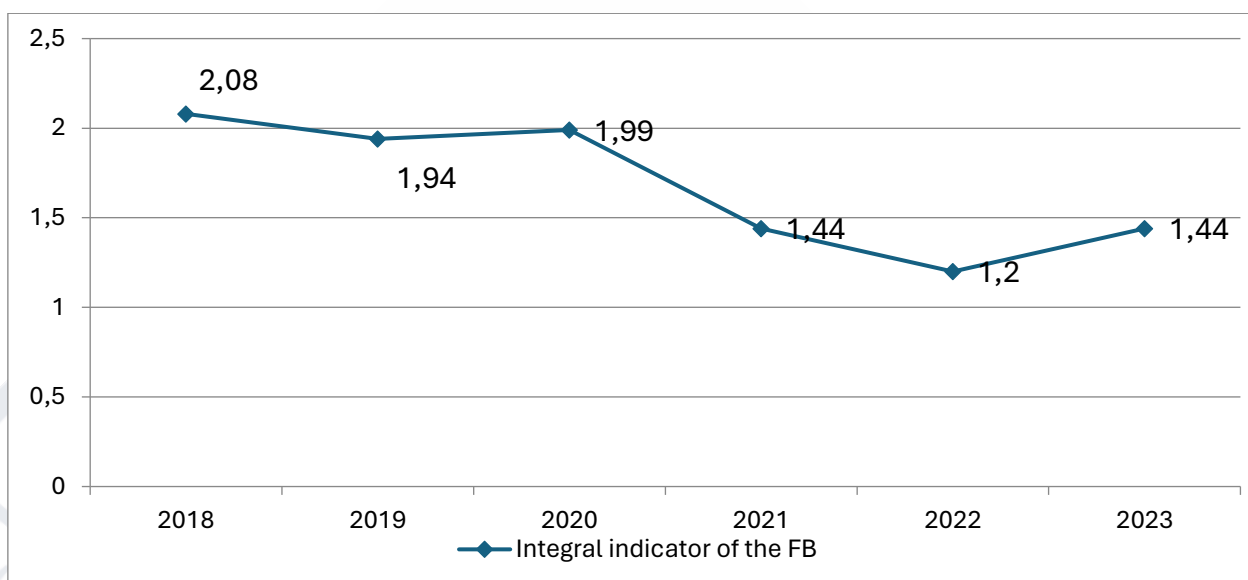


Figure 3.12 - Dynamics of the integrated financial security indicator based on the results of the proposed measures

Source: developed by the author based on data from tables B. 3 Appendix B

The resulting projected value is 1.44, which is higher than in 2022 and returns to the level of 2021, with the main difference being the absence of a net loss for the company.

Fig. 3.13 shows the change in the results of calculations of bankruptcy probability models after implementation of changes in the financial security management of «APS Plankonsulting» .

For comparison, two models were chosen that provide a better understanding of changes in the financial security of the enterprise due to the greater number of indicators in the calculation of the generalised indicator Z. The values obtained by O. Tereshchenko's model indicate that the enterprise is not expected to face bankruptcy threats. The result of Altman's model reflects the predicted absence of the probability of bankruptcy.

Thus, the proposed measures to improve the financial security management system of «APS Plankonsulting» are considered economically feasible, as the company's assets and liabilities were optimised, the integral indicator of financial security increased, and the threat of possible bankruptcy of the company disappeared compared to previous periods.

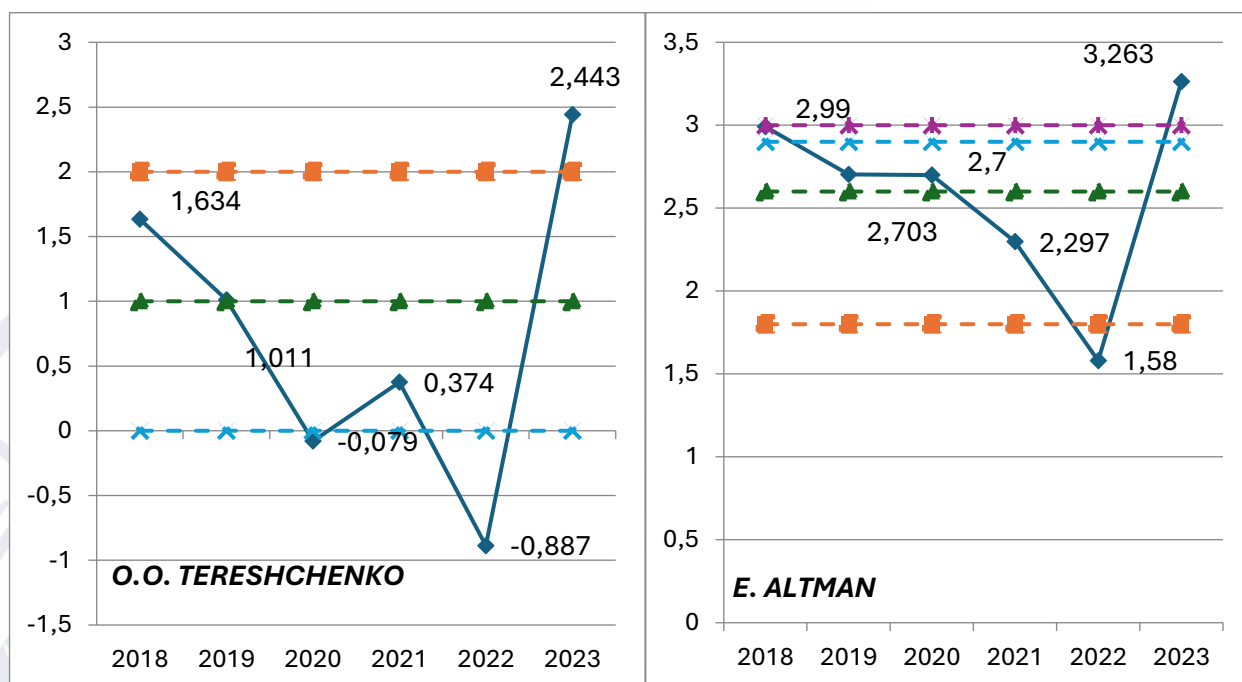


Figure 3.13 - Forecasted dynamics of the probability of bankruptcy of «APS Plankonsulting» according to the Altman and Tereshchenko models

Source: developed by the author based on data from tables B. 4 Appendix B

Conclusions to Chapter 3

This section of the qualification work is devoted to the improvement of the financial security management system of «APS Plankonsulting» SIC with the help of a concept that includes control, planning, feedback and information support. The concept consists of the external and internal environment that generates hazards, the subject and object, goals, objectives, principles and methods, organisational and functional components, control system and the process of improving the efficiency of the financial security management system.

Taking into account the unique features of the Bulgarian consulting industry, the development of the concept involves the development of a strategy to achieve the goal. Strategic areas include increasing economic and financial potential. The strategic map with four levels - finance, clients, internal business processes, training and development of personnel - contributes to the achievement of the main goal of improving the financial security management system of the enterprise.

The forecasting of the financial security assessment of «APS Plankonsulting» was carried out using two methods: the integral method of financial security assessment and the assessment of the probability of bankruptcy of the enterprise. The proposed strategic priorities for improving the financial security management system are effective, which is confirmed by the results of the calculations.



CONCLUSIONS

According to the results of the study, all the tasks set to achieve the goal of the master's thesis were completed.

1. In the course of studying the theoretical aspects of enterprise financial security management, the article considers modern views on the formation of financial security of an economic entity. Ukrainian and foreign authors consider financial security from several points of view: as a component of economic security of an enterprise, as a level of financial condition of an enterprise, as an ability to use potential effectively, as an effective financial strategy, as risk management activities, as a specific type of economic relations. Financial security serves as a shield against potential financial threats, both internal and external, and ensures the financial stability and sustainability of the enterprise.

2. Taking into account the current opinions of the authors, a scheme of the mechanism for managing the financial security of enterprise is built, which consists of the subject and object of management, the purpose and objectives of management, the organisational component (financial methods, instruments and levers), the functional component (management algorithm), the system for ensuring the mechanism and management functions. The studies of many scholars have repeatedly highlighted the idea of the impact of external and internal factors on the financial security management system. In general, external factors are divided into threats to the budgetary sphere, the monetary sector of the economy, debt policy, the foreign exchange market, the insurance market, the stock market, etc. Internal threats are divided into three levels: the first level - organisational risks (shortcomings in the management of departments, lack of labour discipline, etc.), the second level - planning and strategy shortcomings (strategic planning errors, suboptimal marketing policy, miscalculations in pricing, etc.), the third level - technical factors (insufficient technical support, lack of plans and practical steps for modernisation, outdated technological processes, etc.).

3. It has been researched that there are many methods for assessing the financial security of an economic entity. The analysis of methods has revealed the possibility of dividing them into two main groups - traditional and non-traditional. Ukrainian scholars define the following traditional methods for assessing the financial security of an economic entity: based on a study of cash flows, based on an assessment of the financial stability of an enterprise, based on methods of forecasting bankruptcy, based on the definition of integral indicators, based on financial indicators, based on the resource-functional approach. The integral approach allows to combine a set of indicators into a single result that determines the degree of financial security, so that integral methods remain relevant for enterprises of any industry. Indicator methods are more specific, as they focus on individual components of financial security and are applied in specific scenarios. Nevertheless, this approach is the most widespread, due to its simplicity of calculation and comprehensive coverage of various aspects of the company's activities. The level of thresholds for this method is determined by applying the analogy method, the regulatory method or the expert method.

4. The analysis of the financial results of «APS Plankonsulting» activities identified a number of external factors that influenced the company's financial results during 2018-2022: economic growth and slowdown, inflation and rising energy prices, rising interest rates, weakening business sentiment, external crises (Covid-19, full-scale invasion of Ukraine), weakening external demand.

The dynamics of the state and structure of the company's assets indicates a decrease in non-current assets and long-term financial investments, a high share of receivables, a low share of cash, a high share of inventories, which have negative consequences for the financial security of the company, in particular, the emergence of credit risk, inventory obsolescence and the emergence of related expenses. The dynamics of the state and structure of liabilities indicates a decrease in retained earnings, a high share of current liabilities and an increase in long-term liabilities. The state of liabilities has a direct impact on financial security, in particular, it creates liquidity risks, limits the ability to reinvest and cover future losses. The

disproportionate decline in net sales revenue and cost resulted in a net loss for the company in 2020-2022, which is a consequence of the impact of external economic and political factors in Bulgaria. The key problem of the company is the decrease in net profit, which may lead to the company's bankruptcy.

5. Three methods were used to analyse the financial security indicators of the enterprise: indicator, bankruptcy probability analysis, and integral. According to the results of all methods, «APS Plankonsulting» has problems with financial security, which were especially evident during 2020-2022. The indicator approach focuses on liquidity problems, financial dependence and instability of business activity. The analysis of the probability of bankruptcy based on the models of foreign and Ukrainian authors identified a generally high level of bankruptcy probability in 2020-2022, with a slight improvement in 2021. The integral indicator of financial security of the enterprise has a negative trend in 2020-2022, but remains within the regulatory value. The rapid decline in the indicator indicates that the company is approaching an unsatisfactory or critical level of financial security.

6. It has been determined that the concept of improving the financial security management system of enterprise should combine control, planning, feedback and information support. Based on the main weaknesses of the enterprise in terms of analysing the level of financial security, the main measures to be taken are identified: increasing the efficiency of working capital use, reducing costs through automation, revising the financial policy, reducing liabilities, and introducing strategic management. The concept of improvement of the financial security management system of «APS Plankonsulting» includes: the goal, objectives of the management system, principles of system formation, management methods, organisational component (financial methods, tools, levers), functional component (monitoring, strategic planning, organisation and motivation), controlling processes for the financial security of the enterprise, the process of forming management decisions to improve the efficiency of the financial security management system of the enterprise. Thanks to the developed concept, it is found that the subsystem of monitoring and controlling financial security plays an important role in the system.

Based on the tasks of the subsystem and management processes, a substantive model of organisation and functioning of the controlling and monitoring subsystem in the context of ensuring the financial security of enterprise has been developed.

7. Taking into account the unique features of the consulting industry in Bulgaria, the development of the concept of improving financial security involves the development of strategic directions to achieve the goal. Strategic directions for strengthening the financial security of «APS Plankonsulting» include the strategy of increasing economic potential (strategy of perfect management, strategy of increasing market stability, strategy of increasing efficiency of management and business activity) and the strategy of increasing financial potential (strategy of increasing solvency, strategy of increasing investment attractiveness). Taking into account the existing strategic directions, a strategic map was drawn up with four levels: finance, customers, internal business processes, and training and development of personnel. Each of these levels contributes to the achievement of the main goal of improving the financial security management of the enterprise.

8. Forecasting of the financial security assessment of «APS Plankonsulting» was carried out using two methods: the integral method of financial security assessment and the assessment of the probability of bankruptcy of the enterprise. The proposed strategic priorities for improving the financial security management system are effective, which is confirmed by the results of the calculations.

LIST OF REFERENCE SOURCES

1. Блажевич О. Г. Финансовая безопасность предприятий: определение минимально необходимого уровня. *Науковий вісник: фінанси, банки, інвестиції*. 2010. № 3. С. 25–31.
2. Васильченко З. М., Васильченко І. П. Теоретична концепція оцінки економічної безпеки банку. *Банківська справа*. 2006. № 4, 36–38.
3. Гайдуков М. О., Шуміло О. С. Визначення суті поняття «фінансова безпека підприємства» та загроз для неї. *БізнесІнформ*. 2021. № 3. С. 87-93.
4. Гетманець О. П. Фінансова безпека як об'єкт правового регулювання. *Підприємництво, господарство і право*. 2020. № 3. С. 218-223.
5. Горячева К.С. Механізм управління фінансовою безпекою підприємства : дис. канд. екон. наук: 08.06.01 / Київський національний університет технологій та дизайну. Київ, 2006. 174 с.
6. Грабовецький Б.Є. Економічний аналіз : навч. посіб. Вінниця : ВНТУ, 2007. 191 с.
7. Даниленко А. І. Фінансова політика та податково-бюджетні важелі її реалізації. Київ : Фенікс, 2008. 467 с.
8. Дрибас М. В. Організаційні аспекти формування системи фінансово-економічної безпеки підприємства. *Економіка і суспільство*. 2016. № 7. С. 303-306.
9. Єрмошенко М. М., Горячева К. С. Фінансова складова економічної безпеки: держава і підприємство: монографія. Київ: НАУ, 2010. 232 с.
10. Єршова Н. Ю., Ткаченко М. О., Гаркуш В. О. Моніторинг та оцінка господарської діяльності для забезпечення економічної безпеки підприємств ресторанного бізнесу. *Modern Economics*. 2018. Вип. 11. С. 66-71.
11. Желізко О. О. Система економічної безпеки підприємництва : сутність, характеристика, теоретичні підходи до формування та структуризації. *Науковий вісник МГУ*. 2017. № 26. С. 96-100.

12. Журавльова І.В., Лелюк С.В. Морфологічний аналіз фінансової безпеки суб'єкта підприємництва. Вісник НТУ «ХП». 2013. № 49 (1022). С. 51–60.
13. Загородній А. Г. Фінансово-економічний словник. Львів: Вид-во НУ «Львівська політехніка», 2021. 607 с.
14. Заросило В. О. Загрози фінансовій безпеці та їх класифікація. *Наукові праці МАУП*. 2017. № 1. С. 17-22.
15. Зоріна О.А. Основні показники аналізу фінансового стану акціонерних товариств. *Вісник ЖДТУ*. 2010. № 4(54). С. 82–88.
16. Інформація про компанію. URL: <https://paragal.bg/eik/104651721/c14e> (дата звернення 11.10.2023).
17. Кокнаєва М.О. Особливості формування методичного інструментарію дослідження фінансово-економічної безпеки торговельних підприємств. *Економічний часопис-XXI*. 2012. № 5. С. 53–55.
18. Корецька О. В., Ширяєва Л. В. Моделювання індикаторного підходу до оцінки фінансово-економічної безпеки стивідорних компаній. Розвиток методів управління та господарювання на транспорті. 2019. № 3 (68). С. 137-148.
19. Кость К. О. Сутність фінансової безпеки підприємств хімічної промисловості. *Студентський вісник НУВГП*. 2015. № 2(4). С. 162-165.
20. Кракос Ю. Б., Разгон Р. О. Управління фінансовою безпекою підприємств. *Економіка та управління підприємствами машинобудівної галузі: проблеми теорії та практики*. 2008. № 1 (1). С. 86–97.
21. Крючко Л. С. Теоретичні засади фінансової безпеки підприємства. *Інвестиції: практика та досвід*. 2013. № 15. С. 49–52.
22. Кудрицька Ж. В. Система управління фінансовою безпекою підприємства. *Ефективна економіка*. 2012. № 1. URL: <http://www.economy.nauka.com.ua/?op=1&z=897>. (дата звернення 24.11.2023).
23. Кузенко Т. Б., Мартюшева Л. С., Грачов О. В., Литовченко О. Ю. Фінансова безпека підприємства: навч. посіб. Харків: ХНЕУ, 2010. 304 с.

24. Кузенко Т. Б., Прохорова В. В., Сабліна Н. В. Управління фінансовою безпекою на підприємстві. *БізнесІнформ*. 2007. № 12 (1). С. 27–29.
25. Кузенко Т. Б., Сабліна Н. В. Фінансова безпека підприємства: навч. посіб. Харків : ХНЕУ ім. С. Кузнеця, 2020. 123 с.
26. Малик О. В. Концептуальні засади механізму управління фінансовою безпекою підприємства. *Економіка: реалії часу*. 2015. № 4(20). С. 82-87.
27. Малик О. В. Концептуальні основи формування механізму управління фінансовою безпекою підприємства. *Університетські наукові записки*. 2017. № 64. С. 207-218.
28. Малик О. В. Формування механізму управління фінансовою безпекою підприємства: дис. ... канд. екон. наук: 08.00.04. Хмельницький, 2015. 263с.
29. Матушевський О., Матвійчук В.І. Поняття та забезпечення фінансової безпеки у вітчизняних банківських установах. *Актуальні питання економіки, фінансів, менеджменту та права в сучасних умовах: Міжнарод. наук.-практ. конф.* (10 січн. 2023 р., м. Рівне). Рівне, 2023. С. 48-50.
30. Мельник С. І. Особливості формування та розвитку системи управління фінансовою безпекою підприємства. *Ефективна економіка*. 2018. № 11. URL: http://www.economy.nauka.com.ua/pdf/11_2018/112.pdf (дата звернення: 29.12.2023).
31. Молодецька О.М. Методологічні особливості оцінки технікоеконімічної безпеки підприємств. *Економічні науки*. 2010. № 7 (2). С. 313–322.
32. Парфентій Л. А. Управління фінансовою безпекою підприємств в умовах економічної нестабільності: монографія. Суми : видавничо-виробниче підприємство «Мрія», 2019. 184 с.
33. Петренко Л. М. Моделювання процесів управління фінансовою безпекою підприємства : автореф. дис.. на здобуття наук. ступеня канд. екон. наук : 08.00. 11. Київ, 2010. 20 с.
34. Погосова, М. Ю. Діагностування безпеки промислового підприємства у трирівневій системі фінансових відносин: монографія. Харків : ХНЕУ, 2011. 264 с.

- 35.Полторак А. С. Класифікація факторів впливу на рівень фінансової безпеки. *Обліково-аналітичне і фінансове забезпечення діяльності суб'єктів господарювання: освітньо-наукові та виробничі засади* : матеріали Міжнар. наук.-практ. конф. (м. Миколаїв, 22–24 листопада 2019 р.). Миколаїв : МНАУ, 2019.
- 36.Портнова Г. О. Фінансова безпека підприємств: сучасні погляди щодо сутності та оцінки. *Збірник наукових праць ДПУ*. 2012. № 1. С. 345–355.
- 37.Почечун О. І. Проблеми методики оцінки стану і рівня системи фінансової безпеки підприємств залізничного транспорту. *Вісник ДНУЗТ ім. В. Лазаряна*. 2012. № 41. С. 212-216.
- 38.Пустовгар П.А. Визначення рівнів неплатоспроможності підприємств металургійної галузі України. *Економіка. Фінанси. Право*. 2015. № 6/1. С. 15–21.
- 39.Родіонов О.В. Формування фінансової безпеки підприємства: монографія. Луганськ: Вид-во «Ноулідж», 2011. 248 с.
- 40.Ставерська Т. О., Шевчук І. Л. Механізм управління забезпеченням фінансової безпеки підприємства. URL: <https://conf.ztu.edu.ua/wp-content/uploads/2017/09/253.pdf> (дата звернення: 30.12.2023).
- 41.Стащук О. В. Зовнішні та внутрішні загрози фінансової безпеки суб'єктів підприємництва. *Наукові записки НУ «Острозька академія»*. 2012. № 19. С. 220-222.
- 42.Ступка Н.М. Окремі аспекти оцінки фінансової стійкості підприємств. *Університетські наукові записки*. 2005. № 4. С. 348–354.
- 43.Сусіденко О. В. Сучасні підходи до оцінки фінансової безпеки підприємства. *Економічні науки*. 2014. №4. С. 75-79.
- 44.Тимошенко К. С. Фінансовий механізм фінансової безпеки суб'єктів підприємництва: дис. ... канд. екон. наук: 08.00.08. Дніпро, 2015. 310 с.
- 45.Утенкова К. О. Сутнісна характеристика функціональних складових економічної безпеки. *Облік і фінанси*. 2018. № 3(81). С. 146-156.

46. Фещенко О. П. Розрахунок показників фінансового стану господарських товариств з урахуванням нових форм фінансової звітності. *БізнесІнформ*. 2015. № 2. С. 229–236.
47. Хижняк Ю. О. Методичний підхід до оцінки рівня фінансової безпеки підприємства. *Гроші, фінанси і кредит*. 2018. № 23. С. 305-312.
48. Чернега О. М. Критерії та показники фінансово-економічної безпеки підприємства. Науково-методичні аспекти забезпечення економічної безпеки : монографія. Одеса : Атлант, 2013. С. 56–61.
49. Чорна М.В. Проектний аналіз : навч. посіб. Харків : Консум, 2003. 228 с.
50. Швець Ю. О., Цикало К. С. Методичний підхід до оцінки рівня фінансової безпеки промислових підприємств. *Науковий вісник МГУ*. 2017. № 25 (1). С. 162-168.
51. Шлемко В. Т., Бінько І. Ф. Економічна безпека України: сутність і напрямки забезпечення. Київ : НІСД, 1997. 144 с.
52. Bieniasz A., Czerwinska-Kayzer D. (2016). Bezpieczeństwo finansowe przedsiębiorstw przemysłu spożywczego w Polsce. *J. Agribus. Rural Dev.* 2(40), 239–247.
53. Blank I. A. (2009). *Management of financial security of the enterprise*. Kyiv: Elga.
54. Blakytta G., Ganushchak T. (2018). Enterprise financial security as a component of the economic security of the state. *Investment management and financial innovations*. 15(2), 248-256.
55. Bulgaria selected issues (2022). Washington: International Monetary Fund Country Report. 27 p.
56. Delas V., Nosova E., Yafinovych O. (2015). Financial Security of Enterprises. Economic Prospects in the Context of Growing Global and Regional Interdependencies: *22nd International Economic Conference*, 248-266.
57. Fedorenko T., Dolynskyi S., Zahorodnia A. (2022) An Evolutionary Approach to The Interpretation of The Term «Economic Security of Enterprises». *International Journal of Innovative Technologies in Economy*. 4(40). Pp. 1-6.

58. Kozitsyn, A. A., Dudinskaya, M. V. (2015). Competitiveness and economic security - Priority problems of the region's metallurgical complex and its leaders in the conditions of instability. *Economy of Region*. vol. 3, Pp. 204-215,
59. Matushevskiy O. V. The state of financial security of business entities in the context of digitalization. *Актуальні проблеми розвитку фінансів в умовах цифровізації економіки України: матер. Всеукр. наук.-практ. конф., присвяченої 55-річчю кафедри фінансів і банківської справи (27 квіт. 2023 р., м. Вінниця)*. Вінниця: ДонНУ ім. Василя Стуса, 2023. С.81–83.
60. Sorokina O. N. (2011). Essential characteristics of the financial security of the enterprise. *Almanac of modern science and education*. 6, 224-225.
61. OECD Economic Outlook, 2022. Bulgaria. URL: https://www.oecd-ilibrary.org/sites/f6da2159-en/1/3/2/6/index.html?itemId=/content/publication/f6da2159-en&_csp_=761d023775ff288a22ebcaaa183fbd6c&itemIGO=oecd&itemContentType=book (дата звернення: 30.12.2023).
62. Pilipenko N. M., Pilipenko V. V. (2017). Economic security as a dynamic characteristic of an enterprise. *Економіка і суспільство*. 10, 338-342.
63. Rushchyshyn N., Nikonenko U., Kostak Z. (2017). Formation of financial security of the enterprise based on strategic planning. *Baltic Journal of Economic Studies*. 3(4), 231-237.
64. Schinasi, Garry J. (2014) Definition of financial stability. *IMF Working Paper Series*, WP/04/187, 1–16.
65. Semenog A. Y. (2018) The essence and significance of the financial security of the state. *Scientific Bulletin of Kherson State University*. 29 (2), 117–120.
66. The World Bank In Bulgaria. URL: <https://www.worldbank.org/en/country/bulgaria/overview> (дата звернення: 30.12.2023).
67. Tumin V. M., Koryakov A. G., Nikiforova E. P. (2013) The main factors of socio-ecological-economic stability and development of industrial enterprises. *World applied sciences journal* vol. 25 (6). Pp. 645-949.



APPENDICES

APPENDIX A

Financial statements of «APS Plankonsulting»

Table 1 - Financial statements (as at 31.12.2020)

1.Баланс на 31 грудня 2020 р.

Актив	Код рядка	Форма № 1-м Код за ДКУД	
		На початок звітного року	На кінець звітного періоду
1	2	3	4
I. Необоротні активи			
Нематеріальні активи	1000	956,7	870,2
первісна вартість	1001	1 818,8	1 980,9
накопичена амортизація	1002	(862,1)	(1 110,7)
Незавершені капітальні інвестиції	1005	-	-
Основні засоби :	1010	4 890,3	5 543,6
первісна вартість	1011	11 879,4	13 845,6
знос	1012	(6 989,1)	(8 302,0)
Довгострокові біологічні активи	1020	-	-
Довгострокові фінансові інвестиції	1030	24 183,3	22 337,3
Інші необоротні активи	1090	-	-
Усього за розділом I	1095	30 030,3	28 751,1
II. Оборотні активи			
Запаси :	1100	32 814,0	54 872,5
у тому числі готова продукція	1103	15 926,3	16 794,4
Поточні біологічні активи	1110	-	-
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	107 035,8	105 603,6
Дебіторська заборгованість за розрахунками з бюджетом	1135	124,1	2 721,2
у тому числі з податку на прибуток	1136	-	164,9
Інша поточна дебіторська заборгованість	1155	27 689,3	27 175,0
Поточні фінансові інвестиції	1160	-	-
Гроші та їх еквіваленти	1165	1 226,3	2 109,9
Витрати майбутніх періодів	1170	218,7	291,6
Інші оборотні активи	1190	663,1	894,4
Усього за розділом II	1195	169 771,3	193 668,2
III. Необоротні активи, утримувані для продажу, та групи вибуття	1200	-	-
Баланс	1300	199 801,6	222 419,3

Пасив	Код рядка	Форма № 1-м Код за ДКУД	
		На початок звітного року	На кінець звітного періоду
1	2	3	4
I. Власний капітал			
Зареєстрований (пайовий) капітал	1400	28,1	28,1
Додатковий капітал	1410	19 093,8	19 093,8
Резервний капітал	1415	562,2	562,2
Нерозподілений прибуток (непокритий збиток)	1420	48 972,8	35 584,4
Неоплачений капітал	1425	(-)	(-)
Усього за розділом I	1495	68 656,9	55 268,5
II. Довгострокові зобов'язання, цільове фінансування та забезпечення			
III. Поточні зобов'язання			
Короткострокові кредити банків	1600	-	-
Поточна кредиторська заборгованість за:			
довгостроковими зобов'язаннями	1610	-	-
товари, роботи, послуги	1615	104 432,6	137 984,4
розрахунками з бюджетом	1620	389,4	3,9
у тому числі з податку на прибуток	1621	229,0	-
розрахунками зі страхування	1625	-	2,1
розрахунками з оплати праці	1630	-5,4	-
Доходи майбутніх періодів	1665	-	-
Інші поточні зобов'язання	1690	15 154,0	15 602,3
Усього за розділом III	1695	119 970,6	153 592,7
IV. Зобов'язання, пов'язані з необоротними активами, утримуваними для продажу, та групами вибуття	1700	-	-
Баланс	1900	199 801,6	222 419,3

2. Звіт про фінансові результати
за _____ Рік 2020 _____ р.

Стаття	Код рядка	Форма № 2-м Код за ДКУД 1801007	
		За звітний період	За аналогічний період попереднього року
1	2	3	4
Чистий дохід від реалізації продукції (товарів, робіт, послуг)	2000	310 283,3	256 535,9
Інші операційні доходи	2120	7 992,9	15 076,2
Інші доходи	2240	-	2 298,6
Разом доходи (2000 + 2120 + 2240)	2280	318 276,2	273 910,7
Собівартість реалізованої продукції (товарів, робіт, послуг)	2050	(220 997,8)	(179 476,0)
Інші операційні витрати	2180	(107 086,9)	(82 647,6)
Інші витрати	2270	(3 461,7)	(2 837,2)
Разом витрати (2050 + 2180 + 2270)	2285	(331 546,4)	(264 960,8)
Фінансовий результат до оподаткування (2280 – 2285)	2290	(13 270,2)	8 949,9
Податок на прибуток	2300	(140,9)	(2 275,4)
Чистий прибуток (збиток) (2290 – 2300)	2350	(13 411,1)	6 674,5

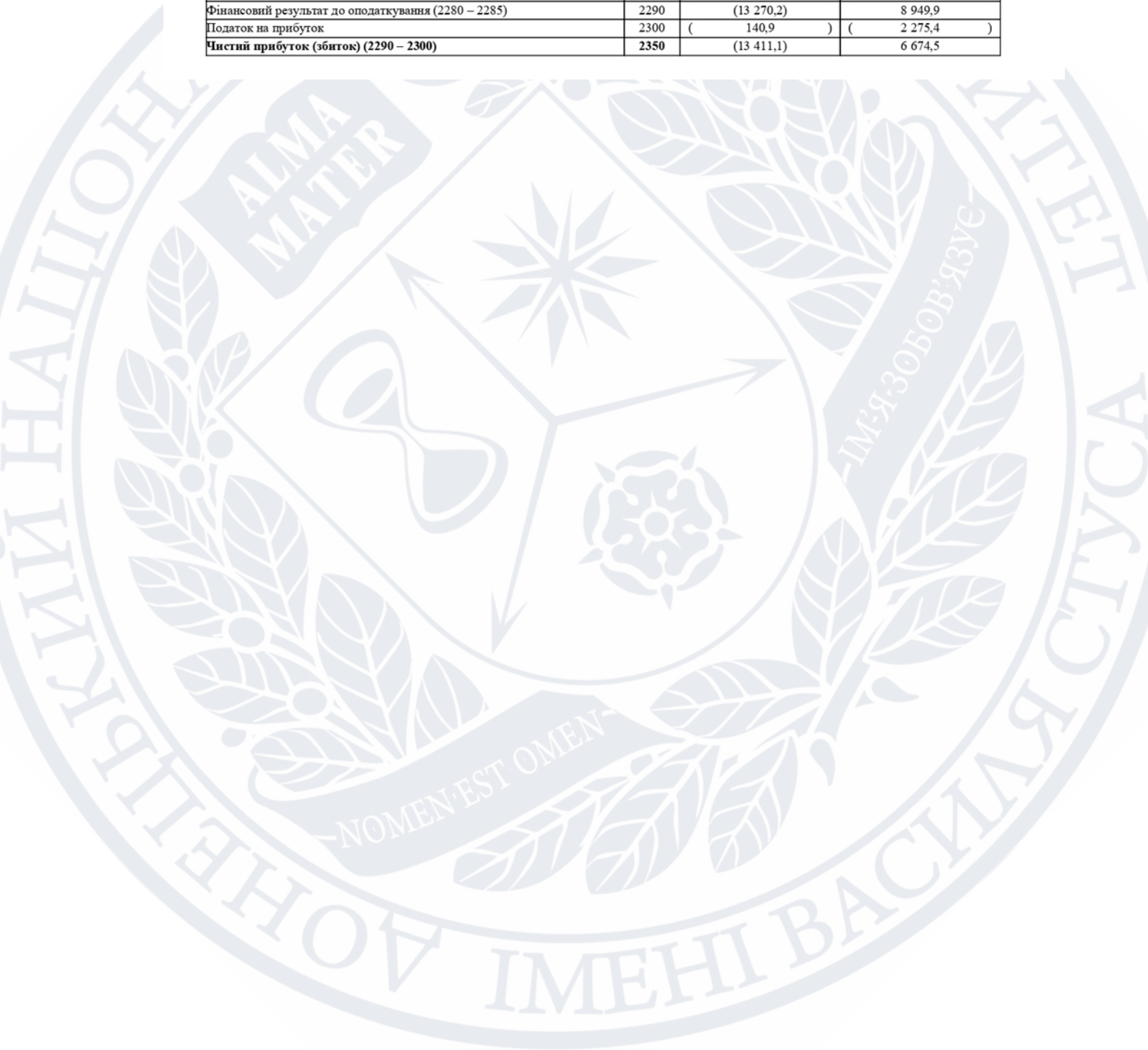


Table A.2 - Financial statements (as at 31.12.2021)

1.Баланс на 31 грудня 2021 р.

Актив	Код рядка	Форма № 1-м Код за ДКУД 1801006	
		На початок звітного року	На кінець звітного періоду
1	2	3	4
I. Необоротні активи			
Нематеріальні активи	1000	870,2	794,9
Первісна вартість	1001	1 980,9	1 528,4
Накопичена амортизація	1002	(1 110,7)	(733,5)
Незавершені капітальні інвестиції	1005	-	-
Основні засоби :	1010	5 543,6	6 725,1
первісна вартість	1011	13 845,6	14 001,4
знос	1012	(8 302,0)	(7 276,3)
Довгострокові біологічні активи	1020	-	-
Довгострокові фінансові інвестиції	1030	22 337,3	22 337,3
Інші необоротні активи	1090	-	-
Усього за розділом I	1095	28 751,1	29 857,3
II. Оборотні активи			
Запаси :	1100	54 872,5	54 533,6
у тому числі готова продукція	1103	16 794,4	15 813,4
Поточні біологічні активи	1110	-	-
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	105 603,6	92 877,6
Дебіторська заборгованість за розрахунками з бюджетом	1135	2 721,2	1 771,2
у тому числі з податку на прибуток	1136	164,9	164,9
Інша поточна дебіторська заборгованість	1155	27 175,0	8 433,8
Поточні фінансові інвестиції	1160	-	-
Гроші та їх еквіваленти	1165	2 109,9	5 609,3
Витрати майбутніх періодів	1170	291,6	320,0
Інші оборотні активи	1190	894,4	179,0
Усього за розділом II	1195	193 668,2	163 724,5
III. Необоротні активи, утримувані для продажу, та групи вибуття	1200	-	-
Баланс	1300	222 419,3	193 581,8

Пасив	Код рядка	На початок звітного року	На кінець звітного періоду
1	2	3	4
I. Власний капітал			
Зареєстрований (пайовий) капітал	1400	28,1	28,1
Додатковий капітал	1410	19 093,8	19 093,8
Резервний капітал	1415	562,2	562,2
Нерозподілений прибуток (непокритий збиток)	1420	35 584,4	30 784,2
Неоплачений капітал	1425	(-)	(-)
Усього за розділом I	1495	55 268,5	50 468,3
II. Довгострокові зобов'язання, цільове фінансування та забезпечення			
III. Поточні зобов'язання			
Короткострокові кредити банків	1600	-	-
Поточна кредиторська заборгованість за:			
довгостроковими зобов'язаннями	1610	-	-
товари, роботи, послуги	1615	137 984,4	101 531,3
розрахунками з бюджетом	1620	3,9	-
у тому числі з податку на прибуток	1621	-	-
розрахунками зі страхування	1625	2,1	-
розрахунками з оплати праці	1630	-	-
Доходи майбутніх періодів	1665	-	-
Інші поточні зобов'язання	1690	15 602,3	26 598,8
Усього за розділом III	1695	153 592,7	128 130,1
IV. Зобов'язання, пов'язані з необоротними активами, утримуваними для продажу, та групами вибуття	1700	-	-
Баланс	1900	222 419,3	193 581,8

2. Звіт про фінансові результати
за _____ Рік 2021 _____ р.

Стаття	Код рядка	Форма № 2-м Код за ДКУД 1801007	
		За звітний період	За аналогічний період попереднього року
1	2	3	4
Чистий дохід від реалізації продукції (товарів, робіт, послуг)	2000	239 942,9	310 283,3
Інші операційні доходи	2120	21 229,9	7 992,9
Інші доходи	2240	92,8	-
Разом доходи (2000 + 2120 + 2240)	2280	261 265,6	318 276,2
Собівартість реалізованої продукції (товарів, робіт, послуг)	2050	(177 644,6)	(220 997,8)
Інші операційні витрати	2180	(86 336,3)	(107 086,9)
Інші витрати	2270	(1 923,3)	(3 461,7)
Разом витрати (2050 + 2180 + 2270)	2285	(265 904,2)	(331 546,4)
Фінансовий результат до оподаткування (2280 – 2285)	2290	(4 638,6)	(13 270,2)
Податок на прибуток	2300	(-)	(140,9)
Чистий прибуток (збиток) (2290 – 2300)	2350	(4 638,6)	(13 411,1)

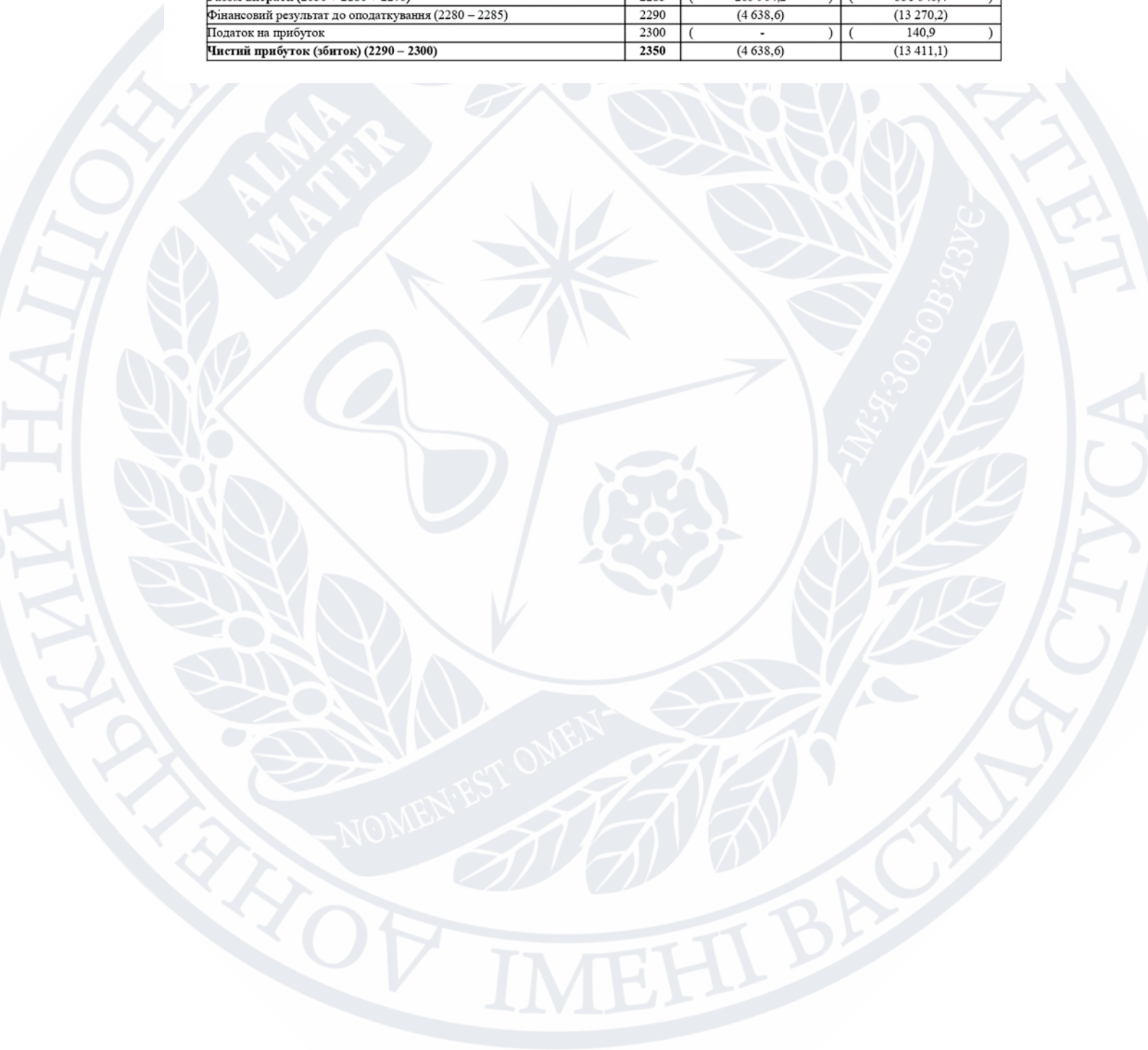


Table A.3 - Financial statements (as at 31.12.2022)

1.Баланс на 31 грудня 2022 р.

			Форма № 1-м Код за ДКУД	1801006
Актив	Код рядка	На початок звітного року	На кінець звітного періоду	
1	2	3	4	
I. Необоротні активи				
Нематеріальні активи	1000	794,9	539,7	
Первісна вартість	1001	1 528,4	1 528,4	
Накопичена амортизація	1002	(733,5)	(988,7)	
Незавершені капітальні інвестиції	1005	-	-	
Основні засоби :	1010	6 725,1	7 748,8	
первісна вартість	1011	14 001,4	16 994,6	
знос	1012	(7 276,3)	(9 245,8)	
Довгострокові біологічні активи	1020	-	-	
Довгострокові фінансові інвестиції	1030	22 337,3	22 337,3	
Інші необоротні активи	1090	-	-	
Усього за розділом I	1095	29 857,3	30 625,8	
II. Оборотні активи				
Запаси :	1100	54 533,6	36 823,6	
у тому числі готова продукція	1103	15 813,4	12 628,2	
Поточні біологічні активи	1110	-	-	
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	92 877,6	85 820,0	
Дебіторська заборгованість за розрахунками з бюджетом	1135	1 771,2	215,8	
у тому числі з податку на прибуток	1136	164,9	164,9	
Інша поточна дебіторська заборгованість	1155	8 433,8	8 184,1	
Поточні фінансові інвестиції	1160	-	-	
Гроші та їх еквіваленти	1165	5 609,3	15 114,3	
Витрати майбутніх періодів	1170	320,0	350,9	
Інші оборотні активи	1190	179,0	352,1	
Усього за розділом II	1195	163 724,5	146 860,8	
III. Необоротні активи, утримувані для продажу, та групи вибуття				
Баланс	1300	193 581,8	177 486,6	

Пасив	Код рядка	На початок звітного року	На кінець звітного періоду	
1	2	3	4	
I. Власний капітал				
Зареєстрований (пайовий) капітал	1400	28,1	28,1	
Додатковий капітал	1410	19 093,8	19 093,8	
Резервний капітал	1415	562,2	562,2	
Нерозподілений прибуток (непокритий збиток)	1420	30 784,2	6 180,2	
Неоплачений капітал	1425	(-)	(-)	
Усього за розділом I	1495	50 468,3	25 864,3	
II. Довгострокові зобов'язання, цільове фінансування та забезпечення				
III. Поточні зобов'язання				
Короткострокові кредити банків	1600	-	-	
Поточна кредиторська заборгованість за:				
довгостроковими зобов'язаннями	1610	-	-	
товари, роботи, послуги	1615	101 531,3	107 838,9	
розрахунками з бюджетом	1620	-	531,7	
у тому числі з податку на прибуток	1621	-	-	
розрахунками зі страхування	1625	-	-	
розрахунками з оплати праці	1630	-	1,1	
Доходи майбутніх періодів	1665	-	-	
Інші поточні зобов'язання	1690	26 598,8	24 755,0	
Усього за розділом III	1695	128 130,1	133 126,7	
IV. Зобов'язання, пов'язані з необоротними активами, утримуваними для продажу, та групами вибуття				
Баланс	1900	193 581,8	177 486,6	

2. Звіт про фінансові результати
за _____ Рік 2022 _____ р.

Стаття	Код рядка	Форма № 2-м Код за ДКУД 1801007	
		За звітний період	За аналогічний період попереднього року
1	2	3	4
Чистий дохід від реалізації продукції (товарів, робіт, послуг)	2000	203 394,1	239 942,9
Інші операційні доходи	2120	24 692,0	21 229,9
Інші доходи	2240	-	92,8
Разом доходи (2000 + 2120 + 2240)	2280	228 086,1	261 265,6
Собівартість реалізованої продукції (товарів, робіт, послуг)	2050	(133 936,4)	(177 644,6)
Інші операційні витрати	2180	(117 645,3)	(86 336,3)
Інші витрати	2270	(859,8)	(1 923,3)
Разом витрати (2050 + 2180 + 2270)	2285	(252 441,5)	(265 904,2)
Фінансовий результат до оподаткування (2280 – 2285)	2290	(24 355,4)	(4 638,6)
Податок на прибуток	2300	(-)	(-)
Чистий прибуток (збиток) (2290 – 2300)	2350	(24 355,4)	(4 638,6)

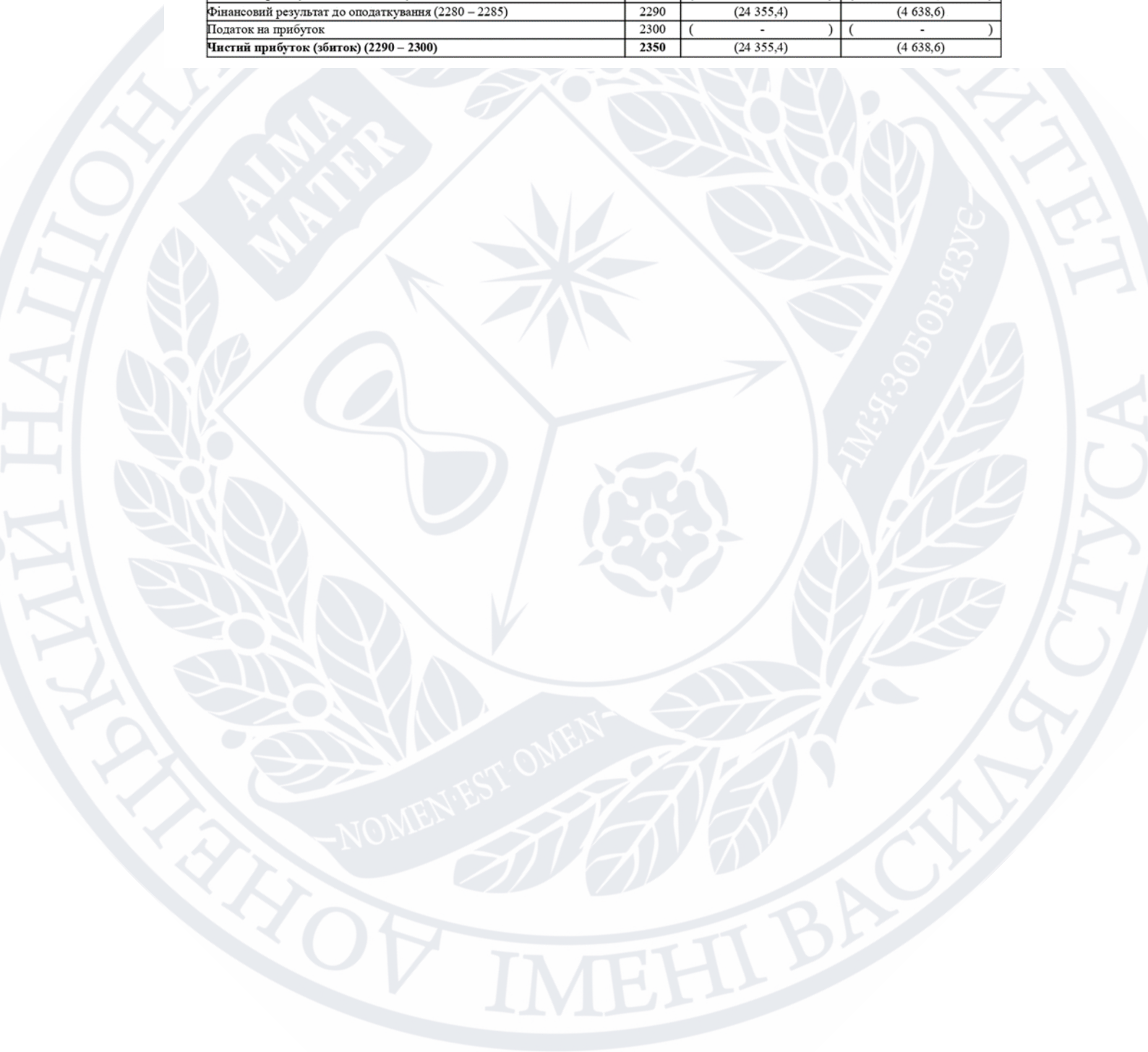


Table A. 4 - Methods of integral assessment of financial security of an enterprise

Methods.	Essence.	Advantages.	Disadvantages.
The Resource-Functional Method for Assessing the Financial Security of an Enterprise (K. S. Goryacheva, I. V. Zhuravleva)	Determining the level of FBP by assessing the degree of use of financial resources within each functional component of the enterprise. Subsequently, by means of expert evaluation of the calculated indicators obtained in the course of such analysis, an integral indicator is derived	Ease of use and comprehensive coverage of all functional areas of the enterprise	A high level of approximation and lack of specific quantitative expressions, with a tendency to maximise the value. In addition, the method is subject to significant subjective influence of expert opinions
Software Target Method for Assessing the Financial Security of an Enterprise (I. V. Zhuravleva)	It involves the integration of a number of indicators. Financial security assessments use different levels of integration of indicators, using methods such as cluster analysis and multivariate analysis.	Obtaining highly objective and reliable results in financial security assessment	Complexity associated with mathematical and statistical tools that may limit its practical application
Scoring Method for Assessing the Financial Security of Enterprise by Indicators of Financial Condition (O. Y. Lytovchenko, H. O. Portnova)	It involves a multi-level integration of indicators that accurately reflect the financial security index, using cluster and multivariate analysis to assess them	Comprehensive coverage of the entire range of financial stability indicators and the possibility of including qualitative indicators in the calculation	Strict linkage to the normative values of indicators and the need to use expert assessments when evaluating qualitative factors

Source: compiled by the author based on [5, 12, 36, 23].

Table A. 5 - Methods of indicator assessment of financial security of a business entity

Methods.	Essence.	Advantages.	Disadvantages.
Comparative methods for assessing the financial security of an enterprise	Assessment of the financial security level involves the use of indicators as benchmarks that reflect various functional aspects of the company's activities. The indicators are calculated and compared with established standards or competitors' indicators	The ability to assess the competitiveness of the company in the market	Biased estimates due to lack of information from peers, difficulty in identifying analogues and the influence of subjective factors
Method for assessing the financial security of an enterprise by the criterion of minimising the total damage caused to security	Setting a certain threshold for the level of financial security of an enterprise, deviation from which signals negative trends that could potentially lead to bankruptcy	Reflects the overall effectiveness of measures that ensure the financial component and serves as an aggregate indicator of the company's financial security and growth potential	A narrow scope that does not cover all aspects of financial security and requires additional accounting due to the lack of necessary data.
Method for assessing the financial security of an enterprise by the criterion of sufficiency of working capital for economic activity	Assessment of financial security based on the sufficiency of own or borrowed working capital for production and sales activities, taking into account such indicators as the availability of inventories and expenses by sources of their financing	Determination of the company's resource provision, assessment of the rationality of the capital structure, determination of solvency and financial stability	Narrow focus on certain types of financial activities
Method for assessing the financial security of an enterprise based on the enterprise value criterion	Determining the level of financial security based on the potential to increase the company's capitalisation and market value	Assessment of performance and investment attractiveness	Not all performance indicators of the company are taken into account

Source: compiled by the author based on [5, 53, 9, 44].

Table A. 6 - Essence of methods for assessing the financial security of an enterprise based on bankruptcy analysis

Methods.	Authors.	Essence.	Advantages.	Disadvantages.
Foreign models: Z-models E. Altman W. Beaver's model The R. Taffler model by G. Tishaw G. Springate's model J. Fulmer's model	E. Altman, W. Beaver, G. Depallens, R. Taffler, H. Tishaw, G. Springate, J. Fulmer	Assessing the level of financial security involves a comprehensive analysis of a large set of financial ratios. The result of this process is a comparison of the obtained indicator with the critical value, which determines the probability that the company will face bankruptcy in future periods. The methods allow for timely detection of financial insolvency, which is a key indicator of financial security.	Simplicity of calculation, high forecast accuracy, clear and reasonable calculation stages, ability to assess the degree of risk associated with financial security	Insufficient adaptation of the method to the nuances of the modern economy, inability to diagnose model indicators using new statistical data or make necessary adjustments, ignoring sectoral features of the economy and using a limited number of indicators in calculations
Ukrainian models: Model Matviychuk The Sabluk method Tereshchenko's model	A.V. Matviychuk, P.T. Sabluk, O.O. Tereshchenko			

Source: compiled by the author based on [53, 17].

Table A. 7 - Financial security indicators of the enterprise

Indicator.	Evaluation of the indicator	
	Threshold value	Optimal dynamics
1. Indicators of property status		
Asset permanence ratio	0,5	Enlargement
Depreciation ratio of fixed assets	0,5	Reduction
Share of receivables in property	0,2	Reduction
Asset mobility ratio	1,0	Enlargement
2. Liquidity indicator		
Current liquidity ratio	1,25	Enlargement
Quick ratio	1,0	Enlargement
Absolute liquidity ratio	0,275	Enlargement
3. Indicators of financial independence		
Equity concentration ratio	0,5	Enlargement
Financial stability ratio	1,0	Enlargement
Financial stability ratio	0,85	Enlargement
4. Business activity indicators		
Turnover of funds in settlements (days)	30	Reduction
Inventory turnover (days)	15	Reduction
Accounts payable turnover (days)	30	Reduction
Equity turnover (turnover)	1,5	Enlargement
Turnover of mobile assets (turnover)	1,5	Enlargement
Total capital turnover (turnover)	1	Enlargement
5. Performance indicators		
Return on total equity, %.	2,5	Enlargement
Return on equity, %, in	5,0	Enlargement
Return on property, plant and equipment, %.	6,0	Enlargement
Gross profit margin on sales, %.	20	Enlargement
Net return on sales, %, net profitability	5,0	Enlargement

Source: compiled by the author based on [47, 50, 1].

Table A. 8 - Key profitability indicators of «APS Plankonsulting» in 2018-2022.

Indicator.	Years					Deviation, +/-
	2018	2019	2020 p.	2021 p.	2022 p.	
Return on sales, %.	2,52	2,60	-4,32	-1,93	-11,97	-14,50
Return on assets, %.	3,37	3,34	-6,03	-2,40	-13,72	-17,09
Return on equity, %, in	65,40	59,73	-98,92	-30,96	-131,68	-197,08
Profitability of services %.	4,12	3,72	-6,07	-2,61	-18,18	-22,30

Source: developed by the author based on data from tables A.1 – A.3 Appendix A

Table A. 9 - Results of calculations of the main indicators that determine the financial security of «APS Plankonsulting»

Indicator.	Years				
	2018	2019	2020	2021	2022
1. Indicators of property status					
Asset permanence ratio	0,14	0,15	0,13	0,15	0,17
Depreciation ratio of fixed assets	0,61	0,59	0,60	0,52	0,54
Share of receivables in property	0,70	0,67	0,61	0,53	0,53
Asset mobility ratio	6,38	5,65	6,74	5,48	4,80
2. Liquidity indicator					
Current liquidity ratio	1,34	1,42	1,26	1,28	1,10
Quick ratio	1,10	1,15	0,90	0,85	0,83
Absolute liquidity ratio	0,01	0,01	0,01	0,04	0,11
3. Indicators of financial independence					
Equity concentration ratio	0,30	0,34	0,25	0,26	0,15
Financial stability ratio	0,43	0,52	0,33	0,35	0,17
Financial stability ratio	0,36	0,40	0,31	0,34	0,25
4. Business activity indicators					
Turnover of funds in settlements (days)	1,55	1,51	1,60	1,47	1,38
Inventory turnover (days)	5,64	5,73	5,10	3,25	2,93
Accounts payable turnover (days)	1,50	1,65	1,82	1,48	1,28
Equity turnover (turnover)	4,50	4,01	5,01	4,54	5,53
Total capital turnover (turnover)	1,34	1,29	1,47	1,15	1,10
5. Performance indicators					
Return on total equity, %.	7,46	3,34	-6,03	-2,40	-13,72
Return on equity, %, in	24,85	9,72	-24,27	-9,19	-94,17
Profitability of property, plant and equipment, %.	324,09	136,48	-	-68,97	-
Gross profit margin on sales, %.	7,41	3,49	4,28	-1,93	-11,97
Net return on sales, %, net profitability	5,56	2,60	-4,32	-1,93	-11,97

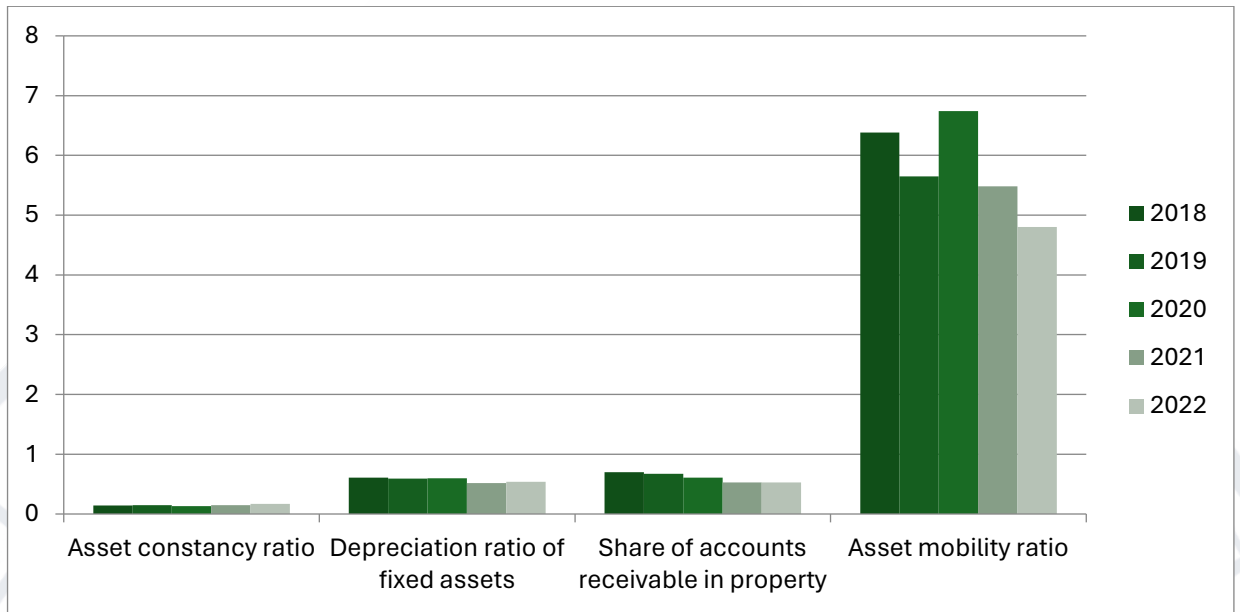


Figure A. 1 - Results of calculations of the property status indicators of «APS Plankonsulting» in 2018-2022.

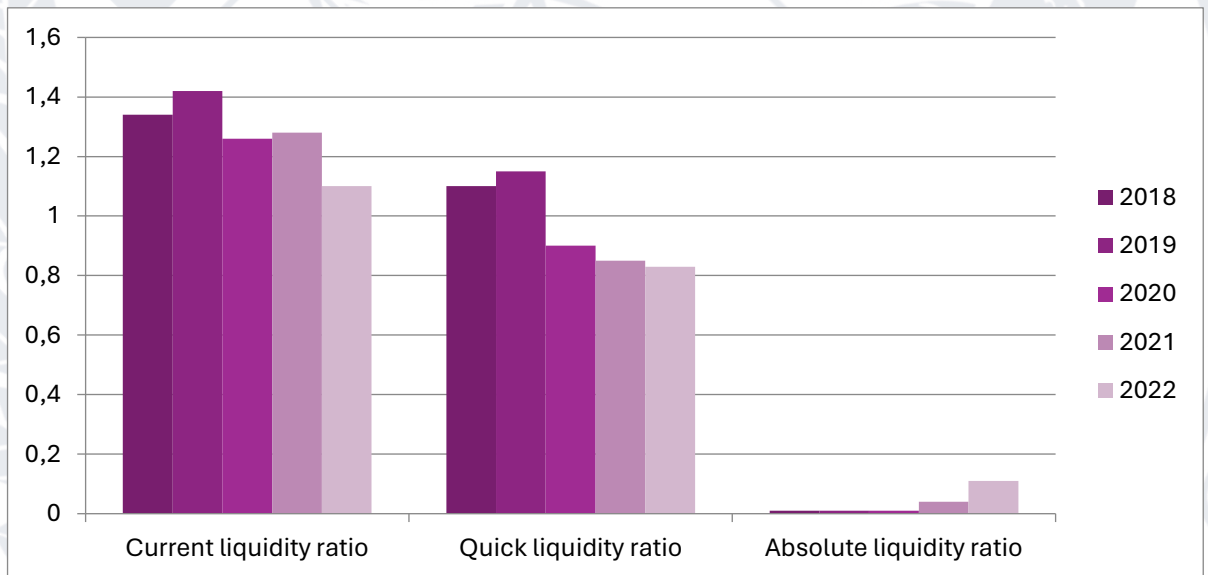


Figure A. 2 - Results of calculations of liquidity indicators of «APS Plankonsulting» in 2018-2022.

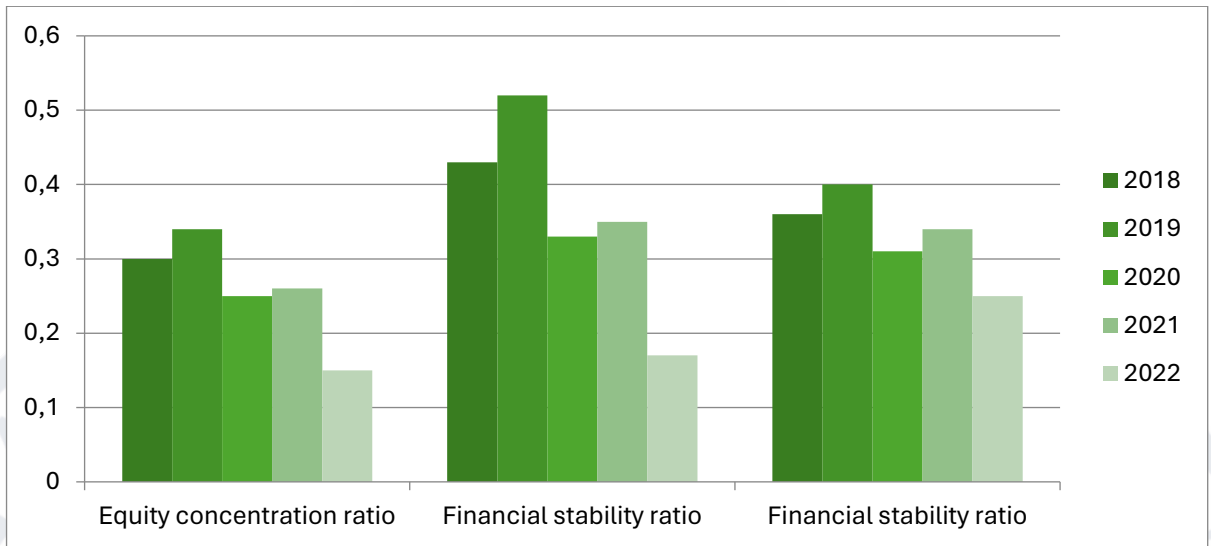


Figure A. 3 - Results of calculations of financial independence indicators of «APS Plankonsulting» during 2018-2022.

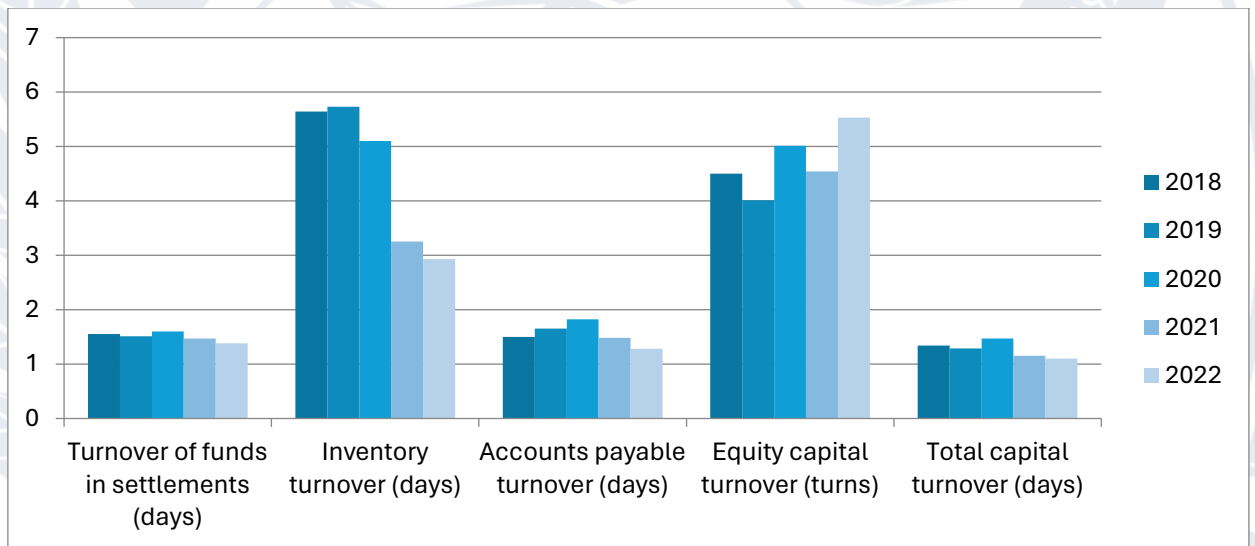


Figure A. 4 - Results of calculations of business activity indicators of «APS Plankonsulting» in 2018-2022.

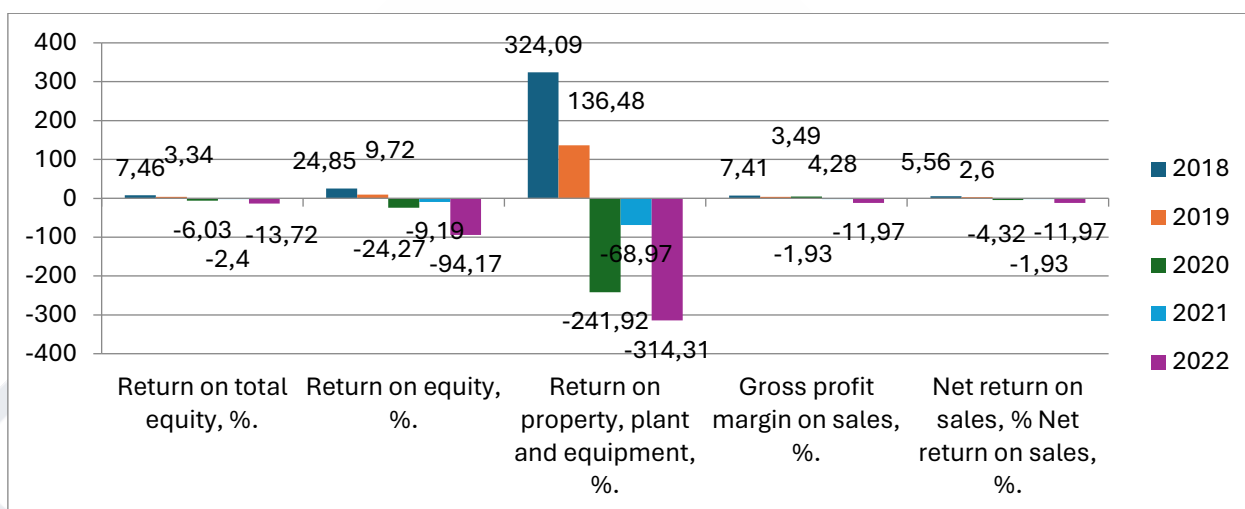


Figure A. 5 - Results of calculating the performance indicators of «APS Plankonsulting» in 2018-2022.

Table A. 10 - Calculation of the probability of bankruptcy of «APS Plankonsulting»

Indicator.	Years				
	2018	2019	2020	2021	2022
according to the Altman model					
X ₁ - working capital / total capital	0,865	0,850	0,871	0,846	0,827
X ₂ - net profit/total assets	0,075	0,033	-0,060	-0,024	-0,137
X ₃ - profit before tax/total assets	0,099	0,045	0,060	-0,024	-0,137
X ₄ - equity/total assets	0,300	0,344	0,248	0,261	0,146
X ₅ - net income/total assets	1,342	1,284	1,395	1,239	1,146
The summary indicator Z	2,990	2,703	2,700	2,297	1,580
Probability of bankruptcy	Small	Small	Small	Medium	Very high
based on the Lees model					
X ₁ - working capital/assets	0,865	0,850	0,871	0,846	0,827
X ₂ - operating profit/assets	-0,361	-0,338	-0,446	-0,336	-0,524
X ₃ - retained earnings/assets	0,200	0,245	0,250	0,159	0,035
X ₄ - equity/debt capital	0,429	0,524	0,331	0,353	0,171
The summary indicator Z	0,033	0,037	0,028	0,032	0,006
Probability of bankruptcy	High	High	High	High	High
based on the Taffler and Tishaw model					
X ₁ - profit before tax/current liabilities	0,154	0,075	0,086	-0,036	-0,183
X ₂ - current assets/liabilities	1,235	1,295	1,159	1,144	0,969
X ₃ - current liabilities/assets	0,645	0,600	0,691	0,662	0,750
X ₄ - sales revenue/amount of assets	1,342	1,284	1,395	1,239	1,146
The summary indicator Z	0,573	0,521	0,544	0,447	0,347
Probability of bankruptcy	Low	Low	Low	Low	Low

Table A. 11 - Calculation of the probability of bankruptcy of «APS Plankonsulting» during 2018-2022 based on the models of Ukrainian scientists

Indicator.	Years				
	2018	2019	2020	2021	2022
based on the model of A. V. Matviychuk					
X ₁ - Asset mobility ratio	6,384	5,653	6,736	5,484	4,795
X ₂ - Accounts payable turnover ratio	1,502	1,650	1,819	1,483	1,276
X ₃ - Equity turnover ratio	4,501	4,014	5,008	4,538	5,329
X ₄ - Return on assets	12,944	29,740	-15,741	-44,841	-7,618
X ₅ - Own current assets ratio	0,190	0,228	0,137	0,126	-0,032
X ₆ - Capital concentration ratio	0,700	0,656	0,752	0,739	0,854
X ₇ - Debt to equity ratio	0,429	0,524	0,331	0,353	0,171
The summary indicator Z	0,872	0,631	1,439	1,826	0,984
Probability of bankruptcy	The threat of a financial crisis	The threat of a financial crisis	Strong financial position	Strong financial position	The threat of a financial crisis
based on the model of O. Tereshchenko					
X ₁ - cash/borrowed capital	0,009	0,009	0,013	0,039	0,100
X ₂ - balance sheet currency/equity	1,429	1,524	1,331	1,353	1,171
X ₃ - net profit/equity	0,075	0,033	-0,060	-0,024	-0,137
X ₄ - net profit/revenue from product sales	0,056	0,026	-0,043	-0,019	-0,120
X ₅ - production inventory/sales revenue	0,117	0,124	0,177	0,227	0,181
X ₆ - sales revenue/equity	4,472	3,736	5,614	4,754	7,864
The summary indicator Z	1,634	1,011	-0,079	0,374	-0,887
Probability of bankruptcy	Financial stability is compromised	Financial stability is compromised	Is semi-bankrupt	Threat of bankruptcy	Is semi-bankrupt

Table A. 12 - Calculation of indicators of the integral model for assessing the level of financial security of «APS Plankonsulting»

Indicator.	Normative value	Rank	Weight value
Return on equity	>1 [50]	13	0,03
Fixed asset serviceability ratio	$\geq 0,5$ [6, 31]	15	0,01
Coverage ratio	≥ 2 [46, 48]	6	0,08
Quick ratio	$0,6 \leq K \leq 0,8$ [46,48]	5	0,08
Absolute liquidity ratio	$0,2 \leq K \leq 0,5$ [46,48]	4	0,09
Coefficient of autonomy	≥ 2 [46,48]	2	0,1
Financial stability ratio	>1 [6]	1	0,11
Long-term financial independence ratio	$0,7 \leq K \leq 0,8$ [6,42]	3	0,1
Equity gearing ratio	>0,5 [46]	8	0,07
Receivables to payables turnover ratio	≈ 1 [37]	7	0,07
Working capital turnover ratio	>0 [6, 38]	14	0,02
Balance sheet currency change ratio	>0 [15]	16	0,01
Net profit change ratio	>0 [15]	9	0,06
Return on equity	>0,15 [6,49]	12	0,03
Return on assets	>Inflation index [6]	11	0,04
Return on sales	>0,24 [49]	10	0,05

Source: developed by the author based on [50].

Table A. 13 - Assessment of the financial security level of «APS Plankonsulting»

Level of financial security	Meaning, I_{FS}	Characteristics of the state
Excellent	$1.17 < I_{FS} >$	The company skilfully confronts both external and internal challenges, laying the groundwork for consistent progress and successful implementation of the company's strategic plans in future periods
Satisfactory	$0.93 < I_{FS} < 1.17$	The company is resilient to external and internal challenges, which ensures its continuous development in the future
Unsatisfactory	$0.56 < I_{FS} < 0.93$	The company does not have sufficient capacity to withstand external and internal threats, which creates a risk to its effective operation in the coming periods
Critical	$I_{FS} < 0,56$	The company is unable to counteract external and internal threats, which increases the likelihood of financial instability and potential bankruptcy

Source: developed by the author based on [50].

Table A. 14 - Assessment of the financial security of «APS Plankonsulting» by means of an integral approach

Indicator.	2018		2019		2020		2021		2022	
	Calculated value	Weighted value	Calculated value	Weighted value	Calculated value	Weighted value	Calculated value	Weighted value	Calculated value	Weighted value
Φ_0	59,00	1,770	54,42	1,633	59,48	1,784	39,11	1,173	28,10	0,843
$K_{\text{пр.оз}}$	0,39	0,012	0,41	0,012	0,40	0,012	0,48	0,014	0,46	0,014
$K_{\text{покр}}$	1,34	0,040	1,42	0,042	1,26	0,038	1,28	0,038	1,10	0,033
$K_{\text{шв.л}}$	1,10	0,033	1,15	0,034	0,90	0,027	0,85	0,026	0,83	0,025
$K_{\text{абс.л}}$	0,01	0,0003	0,01	0,0003	0,01	0,0004	0,04	0,001	0,11	0,003
$K_{\text{авт.}}$	0,47	0,014	0,57	0,017	0,36	0,011	0,39	0,012	0,19	0,006
$K_{\text{ф.ст}}$	0,43	0,013	0,52	0,016	0,33	0,010	0,35	0,011	0,17	0,005
$K_{\text{ф.нез}}$	0,70	0,021	0,66	0,020	0,75	0,023	0,74	0,022	0,85	0,026
$K_{\text{м.вк}}$	0,73	0,022	0,73	0,022	0,73	0,022	0,71	0,021	0,53	0,016
$K_{\text{дз/кз}}$	2,00	0,060	2,01	0,060	2,15	0,064	2,08	0,062	1,79	0,054
$K_{\text{об.оа}}$	3,10	0,093	3,02	0,091	3,20	0,096	2,93	0,088	2,77	0,083
$K_{\text{вал.бал}}$	0,00	0,0001	0,01	0,0004	0,11	0,003	-0,13	0,004	-0,08	0,002
$K_{\text{чп.}}$	-0,21	-0,006	-0,55	-0,016	-3,01	-0,090	-0,65	0,020	4,25	0,128
$P_{\text{вк}}$	0,25	0,007	0,10	0,003	-0,24	-0,007	-0,09	0,003	-0,94	0,028
$P_{\text{а}}$	0,07	0,002	0,03	0,001	-0,06	-0,002	-0,02	0,001	-0,14	0,004
$P_{\text{прод}}$	0,06	0,002	0,03	0,001	-0,04	-0,001	-0,02	0,001	-0,12	0,004
Integral indicator	2,08		1,94		1,99		1,44		1,20	

Source: developed by the author based on [50].

APPENDIX B

Table B. 1 - Factors of influence of the external environment of «APS Plankonsulting» as of 2023

Factors.	The importance of the factor	Threats	
		Threats (-)	Features (+)
1. Availability of knowledge and experience resources in the field of consulting	0,07		0,3
2. Degree of state support for the development of the consulting industry	0,05		0,1
3. The cost of services provided by related businesses and the price of digital resources	0,04	-0,9	
4. Nature of relations and cooperation with clients and other consulting firms	0,06		0,5
5. The degree of fiscal burden imposed by Bulgarian taxes on consulting services	0,07	-0,8	
6. Availability of contracts funded by the Bulgarian government for consulting services	0,05		0,3
7. Level of certification and standardisation of services in the consulting industry	0,05		0,8
8. Existence of a system of training, professional development and professional growth of consultants	0,07		0,6
9. Ability to enter and work in international consulting markets	0,07		0,9
10. Ease of access of consulting firms to borrowed funds or credit resources	0,09	-0,9	
11. Rules and regulations governing international trade and tariffs in the consulting industry	0,06	-0,5	
12. Availability of investment resources for consulting firms	0,08	-0,1	
13. Financial capacity of potential clients to buy consulting services	0,10	-0,85	
14. Availability of innovative practices and technologies in the consulting industry	0,06		0,2
15. The level of competition in the consulting services market in Bulgaria	0,08		0,8
Overall.	1,00	-0,296	0,292

Table B. 2 - Initial data for calculating the forecast errors of the integrated financial security indicator of «APS Plankonsulting» during 2018-2022.

t	Year	Integral indicator of the FBP		The difference	$ y - y_{ii}^* / y_i$	$(y_i - y_{ii}^*)^2$
		actual value (y_i)	theoretical value (y_{ii}^*)			
1	2018	2,08	2,07	0,01	0,01	0,0001
2	2019	1,94	2,01	-0,07	0,04	0,005
3	2020	1,99	1,84	0,15	0,07	0,021
4	2021	1,44	1,56	-0,12	0,08	0,015
5	2022	1,2	1,17	0,03	0,03	0,001
Overall.		8,65	8,65	-0,003	0,23	0,04

Table B. 3 - Projected assessment of financial security of «APS Plankonsulting» by means of an integral approach for 2023.

Indicator.	2023	
	Calculated value	Weighted value
Φ_0	33,82	1,015
$K_{\text{пр.оз}}$	0,49	0,015
$K_{\text{покр}}$	1,14	0,034
$K_{\text{шв.л}}$	0,77	0,023
$K_{\text{абс.л}}$	0,15	0,005
$K_{\text{авт.}}$	0,27	0,008
$K_{\text{ф.ст}}$	0,22	0,007
$K_{\text{ф.нез}}$	0,82	0,025
$K_{\text{м.вк}}$	0,52	0,016
$K_{\text{дз/кз}}$	3,19	0,096
$K_{\text{об.оа}}$	4,51	0,135
$K_{\text{вал.бал}}$	-0,25	-0,008
$K_{\text{чп.}}$	1,72	0,052
$P_{\text{вк}}$	0,49	0,015
$P_{\text{а}}$	0,09	0,003
$P_{\text{прод}}$	0,05	0,002
I	1,44	

Source: developed by the author based on data from tables A.12 – A.14 Appendix A

Table B. 4 - Projected estimate of the probability of bankruptcy of «APS Plankonsulting» by Altman and Tereshchenko models for 2023.

Indicator.	Year
	2023
according to the Altman model	
X ₁ - working capital / total capital	0,784
X ₂ - net profit/total assets	0,089
X ₃ - profit before tax/total assets	0,097
X ₄ - equity/total assets	0,183
X ₅ - net income/total assets	1,769
The summary indicator Z	3,263
Probability of bankruptcy	Very low
based on Tereshchenko's model	
X ₁ - cash/borrowed capital	0,127
X ₂ - balance sheet currency/equity	1,224
X ₃ - net profit/equity	0,089
X ₄ - net profit/revenue from product sales	0,050
X ₅ - production inventories/sales revenue	0,143
X ₆ - sales revenue/equity	9,662
The summary indicator Z	2,443
Probability of bankruptcy	No threat of bankruptcy

Source: developed by the author based on data from Tables A.10 - A.11 Appendix A