ECONOMIC AND FINANCIAL SECURITY OF THE STATE: INTERNATIONAL ASPECT

Monograph

Verlag SWG imex GmbH Nuremberg
Germany
2024

UDC 336(477)

Recommended for publication by the Academic Council of the State Tax University, (Protocol No 10, dated February 29, 2024)

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Economic and financial sequrity of the state: international aspect: Monograph. / Ed. by Doctor of Economic Sciences, Prof. N. Davydenko – Verlag. SWG imex GmbH, Nuremberg, Germany, 2023. 382 p.

The research is aimed at substantiating new approaches to the formation of the system of economic security and its components, in particular the financial component, in order to ensure the integrity of the system from the point of view of the possibility of effective functioning in new economic conditions, characterized by changes in the forms of interaction of industry with the banking system, the tax system; changes in the state policy, which complicate the mechanism of interaction with business structures. The monograph focuses on the economic essence of financial security and the interaction of its components. The generalisation and development of modern international experience are presented. The general concepts and possibilities of adaptation of foreign experience in the financial mechanism of social security for military personnel are substantiated, and the system of debt security indicators is analysed to determine the level of debt sustainability of the state.

ISBN 978-3-9819288-9-4

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CONTENTS

INTRODUCTION…….. 5

CHAPTER 1. TRANSFORMATION OF CHALLENGES AND THREATS TO THE ECONOMIC SECURITY OF THE STATE…… 7

1.1.The economic essence of financial security and the interaction of its components…….. 7

1.2. Debt security in the system of ensuring state financial security……. 54

1.3. Assessment of debt sustainability and public debt management problems in the country……. 70

1.4. Adaptation of foreign experience in the implementation of the financial mechanism of social security for military personnel…… 88

CHAPTER 2. PECULIARITIES OF THE FINANCIAL SECURITY OF ENTERPRISES UNDER CONDITIONS OF INSECURITY……. 107

2.1. Tax and social security liabilities for individuals earning income from websites (case in Bulgaria). 107

2.2. Mortgage lending as an investment center in Ukraine: banking during the war and the engine for post–war reconstruction…… 115

2.3. Financial and economic security of enterprises: tools, implementation measures and management methods……. 169

2.4. Formation off the financial and credit mechanism of enterprises……. 249

CHAPTER 3. FOOD SECURITY AND THE DEVELOPMENT OF AGRICULTURAL PRODUCTION IN TIMES OF WAR…….. 260

3.1. Modeling and optimal solutions for maintaining the stability of national food security system…… 260
3.2. The importance of credit resources in maintaining financial stability in the agricultural sector during wartime…..... 276
3.3. Methodical approaches to determining losses in the agricultural sector caused by the militaty aggression of the russian federation against Ukraine: legal and financuial aspects……. 287

CHAPTER 4. INVESTMENT AND INNOVATION SECURITY AS A FACTOR OF ECONOMIC GROWTH..... 314

4.1. Investment environment of the state and innovative strategies for its improvement……..... 314
4.2. Investment security as a component of economic security…… 327
4.3. Analysis of investment climate of Georgia……. 339
4.4. Investment potential of the country and regional investment attractiveness……. 353
4.5. The unseen consequences of prioritization. Dilemmas and investment security in European initiatives……. 368

INFORMATION ABOUT THE AUTHORS…….. 379

INTRODUCTION

One of the fundamental factors of Ukraine's independence in the current economic environment is the state of its financial security. Without ensuring the financial security of the state at all levels of government, it is impossible to solve the economic problems of the country, regions and businesses. This task is of particular priority in the context of instability and financial crisis, as well as the difficult military and political situation in which our country finds itself.

The financial security of the country, which is an important component of national security, is the basis for the economic development of the country, ensures its sovereignty and territorial integrity, and maintains an adequate standard of living for citizens. In times of peace, the strategy of public security and civil defence of Ukraine, the development of the defence industry, information security, cyber security, etc., as provided for by law, depend on the real economic and financial capabilities of the state.

At present, the financial resources of the state, which depend on the level of financial resources, remain quite limited. Limited and insufficient financial resources lead to an increase in public external and internal debt, rising inflation and the development of the shadow economy. The government must stop global capital outflows and the shadow sector, and control the level of public debt and deficit by taking drastic measures to stabilise the financial system and strengthen financial security. Implementation of these measures, which cover most of the components of financial security relevant to Ukraine, will boost the economy if fully supported by the legislative, executive and administrative levels. Solving these problems requires the development of balanced government

regulatory measures aimed at strengthening Ukraine's financial security.

This work examines the transformation of challenges and threats to the economic security of the state, the peculiarities of the financial security of business entities in conditions of uncertainty, food security and the development of agricultural production in times of war, and the security of investment and innovation as a factor of economic growth.

The monograph focuses on the economic essence of financial security and the interaction of its components. The generalisation and development of modern international investment experience is presented. The general concepts and possibilities of adaptation of foreign experience in the financial mechanism of social security of military personnel are substantiated, the system of debt security indicators is analysed to determine the level of debt sustainability of the state.

When assessing the level of financial security, it is proved that for objectivity and timeliness of flexible financial decisions to ensure the continuity of production activities of economic entities, it is advisable to conduct a diagnosis of financial security. In this case, the most important things are: determination and formation of the optimal amount and structure of financial resources, minimisation of costs for maintaining a certain amount of them, ensuring the solvency of business entities and the necessary density and direction of financial flows. Creative understanding of modern economic transformations, their dynamics and a wide horizon of current events require the use of diagnostics of financial support of production activities at enterprises in the development of a financial strategy.

CHAPTER 1. TRANSFORMATION OF CHALLENGES AND THREATS TO THE ECONOMIC SECURITY OF THE STATE

1.1 The economic essence of financial security and the interaction of its components

Financial security is a basic prerequisite for the development of the financial system of society and its financial relations, which will ensure its socio-economic and financial stability of development, guarantee the integrity and unity of the financial system (including budgetary, monetary, credit, tax and currency systems), its strength against threats in the financial sphere, both external and internal.

Recently, the financial security of Ukraine, along with society and economy, suffered a devastating blow caused by the war of aggression. Against the background of challenges that were formed by the peaceful development of society and the economy, financial infrastructure such as the financial crisis, the geopolitical situation, certain inconsistencies in the activities of international organizations and the imperfections of the legal field of Ukraine, inflationary processes that exacerbate the unpredictability of the course of processes that are formed and take place in its components at all economic levels, the imbalance of conditions for the development of the financial potential of regions and industries that remained unresolved was joined by urgent destructive factors that destabilize and ideologically have a life-affirming level. The current situation indicates the relevance of scientific research on "security" in general, as well as the further creation and development of a financial mechanism for ensuring financial security in particular, which involves, first of all, determining the factors affecting the state of financial security as a

hierarchical system, identifying external and internal threats, the interrelationship of individual constituent elements of this complex internal structure and hierarchical composition of the structure.

First of all, we need to define the category "security" itself and its etymology.

The historical aspect of the appearance of the concept of "security" dates back to the ancient cultures of the world. Although in most cases this concept was identified with the activity of the divine principle and meant the positive surrounding of a person by the divine principle and its influence on the life of the individual.

As the next stage, we can single out the flourishing period of ancient China, then for the first time this concept was used not only in the context of human survival and security, but also in the sense of the prosperity of the community and the state in general. The next stage of the development of the concept of "security" is associated with the thinkers of Greece and Rome.

The first who dared to identify the concept of "personal security" with "state security" was Plato, who interpreted it as the protection of individual citizens and the country as a whole from external critical destabilizing factors.

We consider the Middle Ages to be the next stage, when the concept of "security" was established as a cornerstone in the foundations of the functioning of society, as the duty of state structures and the church to take care of the citizen, his physical and spiritual stable condition. For the first time, the right to private property and its security were added to the concept of security.

The basic concepts regarding today's understanding of the concept of "security" were born in the Renaissance, T. Hobbes's work "Leviathan" became a guide to the

fundamentally creative idea that security is a basic component of any statehood, because "... people who live without other security than that, which is achieved thanks to their own strength, are in a situation where there is no place for industry, culture and society"[1].

And already in Robert's dictionary, this concept received its ideological meaning as "...a state of complete protection from all kinds of dangers"[2]. This was the first definition of this concept and the antonymic connection between the concepts of "security" and "danger" was clearly established.

The science of security studies itself is quite young, its foundations were laid during the Second World War and is connected in most cases with direct military aggression in the works of Karl von Clausewitz and Karl Haushofer. In the future, after the end of the war, security studies developed in several schools. Today, security science is represented by two main directions: "rational research", based on established concepts

interpretation of security, and "critical research", whose supporters prefer the development of security science based on new innovative concepts and approaches. American and European areas of security studies are also common. The representatives of the American school believe in me to achieve peace, and in the concept of the European point of view, the achievement of sustainable peace, which should be based on liberal views of the development of society with the criterion of respect for human rights.

V. Yarochkin's[3] proposal to establish a separate field of science as securitology deserves special attention. The main

[1] Hobbes T. Leviathan; trans. from English Kyiv: Duh i Litera, 2000. 606 p.
[2] Fundamentals of economic security (state, region, enterprises, personality) / Ed. E. A. Oleynikova. Moscow: Intel-Synthez, 1997. 278 p.
[3] Yarochkin V.I. Sekyutyrology – the science of life safety. URL: http://kiev-security.org.ua/b/x22/index.shtml.

task of this direction in the science of securitology should be the study and improvement of the basic laws of ensuring security at all levels of the existence of society and the individual, as well as the constant protection of the state and man from exogenous and endogenous destabilizing factors. Currently, securitology has begun its ideological development in the countries of Western and Eastern Europe, confirming the need to solve the problem of ensuring the security of each socio-economic system.

So, with the increase in the level of development of society, a certain step-by-step transformation of public opinion took place regarding the conceptual approach to the interpretation of the concept of "security", at each stage those things and phenomena that were the most necessary were reflected. Currently, there is a certain diversity regarding the views of the scientific community on the concept of "security", it is caused by the satisfaction of the primary needs of people and socio-economic systems. In our opinion, a successful grouping of scientists' views on the concept of "security" was carried out by Melnyk S.[4] Table 1 in his dissertation research.

Table 1.1

Basic views on the interpretation of the concept of "security"

Authors	Definition
1	2
V. Franchuk[5]	This is the goal of the system to which it strives, and the state that depends on the effectiveness of the results of its activities

[4] Melnyk S. I. Essential characteristics of the concept of "financial security enterprises". State and regions. 2019. Issue 3 (108). P. 234–239.

[5] Franchuk V. I. Theory of security of social systems: textbook. Lviv: LvDUVS, 2016. 216 p.

1	2
P. Nikiforova[6], S. Kuperivska	The concept, which applies to all aspects of human life and activity, means a certain state of society in which there are no threats
O. Halina, A. Stangret, L. Sukhomlyn, O. Melnikov[7]	A time-limited state in which an object, system, or process is able to fully protect itself from a hazard
H. Sytnyk, V. Oluyko, M. Varvynchuk[8]	Providing all citizens of the state with appropriate conditions for their self-realization, protection of their life, freedom, and property from encroachments by any individual person, organization, society, or state
O. Zaporozhets[9]	A state in which hazards and conditions that lead to physical, psychological, and material harm are controlled to preserve the health and well-being of individuals and society
R. Datskiv[10]	Satisfying such needs as existence, integrity, independence, peace and development
M. Voynarenko, O. Yaremenko[11]	The state of the economic entity, in which the mechanisms to prevent or reduce the impact of threats to the stability of development and functioning function effectively

[6] Nikiforova P.O., Kuperivska S.S. The essence and meaning of financial security of the insurance company. Finances of Ukraine. 2006. No. 5. P. 86–90.

[7] Theoretical and methodological principles of the formation of organizational support management of economic security of the machine-building enterprise: monograph / Halina O., Shtangret A., Sukhomlyn L., Melnikov O. Lviv: Ukr. Acad. printing house, 2016. 220 p.

[8] Sytnyk G. P., Oluyko V. M., Vavrynchuk M. P. National security of Ukraine: theory and practice: education. manual Kyiv: Condor, 2007. P. 20.

[9] Zaporozhets O. I. International modern aspects of life safety a person Safety of human life and activity - education, science, practice: materials of II science and method. conf. Kyiv: NAU, 2003. P. 3–8.

[10] Datskiv R. M. Economic security in the global dimension. Current problems of the economy. 2004. No. 7 (37). P. 143–153.

[11] Voinarenko M., Yaremenko O. Management of economic security enterprises based on the assessment of deviations of threshold indicators. Economist. 2008. No. 12. P. 60–63.

1	2
Yu. Shemshuchenko, V. Babkin, V. Horbatenko[12]	Activities of people, society, the state, the world community, peoples regarding the detection (study), prevention, weakening, elimination (liquidation) and averting the threat capable of losing them, depriving them of material and spiritual values, causing irreparable damage, blocking the paths for progressive development
A. Kaminsky[13]	The state of protection of the vital interests of the individual, society and the state from internal and external threats
O. Omelyanovych, G. Dolmatova[14]	Not only as a state, but also as protection from the danger of the most important trends in the development of the interests of society and its basic elements from the influence of internal and external factors
S. Marova[15]	A state in which the sum of the effects on the system of external and internal energy and information flows does not exceed the permissible value, which can lead to the destruction of the security system itself

Thus, the variety of views from security as the satisfaction of basic life needs, which R. Datskiv[16] offers us within the framework of the "security" of the individual, to the special state of the economic entity, with the most effective functioning of all its mechanisms, which are offered by M. Voynarenko and O. Yaremenko[17]. The latter definition

[12] Political science encyclopedic dictionary / edit. V. P. Horbatenko; under the editorship Yu. S. Shemshuchenko, V. D. Babkina, V. P. Horbatenko. 2nd ed., supplement. And processed Kyiv: Geneza, 2004. 736 p.
[13] Kaminsky A. Introduction to international relations. Lviv: Svit, 1995. 143 p.
[14] Omelyanovych L.O., Dolmatova G.E. Economic security of trade enterprises: monograph. Donetsk: DonDUET, 2005. 195 p.
[15] Marova S. F. Life safety management: monograph. Donetsk: Weber, 2009. 344 p.
[16] Datskiv R. M. Economic security in the global dimension. Current problems of the economy. 2004. No. 7 (37). P. 143–153.
[17] Voinarenko M., Yaremenko O. Management of economic security enterprises based on the assessment of deviations of threshold indicators. Economist. 2008. No. 12. P. 60–63.

distinguishes the concept of "security" as a certain state; system as a set of certain mechanisms. In our opinion, this definition is multifaceted. The definition of O. Omelyanovych and G. Dolmatov[18] outlines "security" not only as a state, but also as a countermeasure to endogenous and exogenous factors and addresses the achievement of a certain goal.

V. Franchuk[19] interprets "security" as the "goal" of the system and its ideal state, therefore, certain tasks are assigned to the management staff to achieve it. "Security" is no longer an accidental state of an individual or subject, but requires rational management of the process.

As for the etymology and history of the concept of "economic security", it arose at the beginning of the development of trade relations. On the territory of Ukraine, we can consider the beginning of the appearance of this concept in the times of Kievan Rus (XI century), when Yaroslav the Wise published the first code of laws "Russian Truth". In this document, for the first time, the legal foundations of the protection of private property and the interests of the wealthy part of society are taken into account at the state level.

As the term "economic security" was first highlighted in the 17th century. J. Lockcom[20]. He substantiates the importance of achieving economic stability and maintaining this state and the protection of private property in the interpretation of the general security of society.

The term was further developed by the works of A. Smith[21], who emphasized that the basic components of

[18] Omelyanovych L.O., Dolmatova G.E. Economic security of trade enterprises: monograph. Donetsk: DonDUET, 2005. 195 p.
[19] Franchuk V. I. Economic security of business entities: handyman Lviv: LvDUVS, 2015. 236 p.
[20] Franchuk V. I. Theory of security of social systems: textbook. Lviv:LvDUVS, 2016. 216 p.
[21] Smith A. An Inquiry into the Nature and Causes of the Wealth of Nations. University of Chicago Press. 1977. 443 p.

economic security should be the support of the interests of entrepreneurs and market regulation based on free competition.

J. Keynes[22], in turn, later outlined a range of certain problems weighing on economic security. In his opinion, this is an unsuccessful state regulation of the country's economy, unstable stochastic economic growth, a decrease in the purchasing power of the population due to its impoverishment, which is connected with the growth of unemployment.

The main components of economic security were highlighted in the composition of national security at the legislative level by F. Roosevelt. At that time, the creation of the federal Committee for Economic Security was initiated (1934). At the legislative level, a separate part of the law "On National Security" (1947) is devoted to the protection of economic security.

The official status of the term "economic security" at the international level was established only at the 42nd session of the UN General Assembly (1985). The concept of "international economic security" was also introduced into international circulation and the main fundamental principles of its provision were outlined.

Currently, the development of the state and international economic security of countries is carried out with the assistance of the ECOSOR and OSCE international communities through permanent monitoring of challenges, threats and dangers to the economic security of countries and regions of the world.

Investigating the concept of "economic security of enterprises", I would like to give an example of the original methodological approach of the scientist Melnyk S. through morpholism (Table 1.2).

[22] Kaynes J. M. The General Theory of Employment, Interest, and Money. Palgrave maclillan 1936. 300 p.

Table 1.2

Morphological analysis of the essence of the concept of "economic security of enterprises"

Sign	Components, authorship
1	2
Basic part concept	*the concept of state* [Zhivko Z.B.; O.M. Bondarenko; Horyacheva K.S.; V. O. Vasylenko; V.M. Yachmenyova; Arefieva O.V. Kuzenko T.B.; A.V. Kiriyenko; O.M. Bondarenko; Novikova O.F., Pokotylenko R.V.; Blank I.A.]; *security* [Chapter S.V.; Ortynskyi V.L., Kernytskyi I.S., Zhivko Z.B.; T.G. Vasiltsiv]; *ability* [Pilova D.P.]; *measure* [Marova S.F.]; *set of elements* [M. Voynarenko, O. Yaremenko; V.M. Shcherbina; I. Shevchenko]; *subsystem* [Yarochkin V.I.].
The main purpose	*resist negative influence* [Chapter S.V.; Pilova D.P.; O.M. Bondarenko; V. O. Vasylenko; Ortynskyi V.L., Kernytskyi I.S., Zhivko Z.B.]; *react to changes, counteract dangers and destabilizing factors* [Zhyvko Z.B.; O.M. Bondarenko; I. Shevchenko; Novikova O.F., Pokotylenko R.V.; T.G. Vasiltsiv; V.M. Yachmenyova]; effective functioning [O.M. Bondarenko; V. I. Yarochkin]; *guaranteeing the achievement of one's own interests and sustainable development* [M. Voynarenko, O. Yaremenko; Horyacheva K.S.; Kozachenko G.V., Ponomaryov V.P., Lyashenko O.M.; V.M. Shcherbina]; *maximum effective use of potential* [A.V. Kiriyenko]; *to ensure a stable state of security* [Blank I.A.].
The object of the action	*external and internal factors* [S.V. Chapter]; *strategic goal* [Pilova D.P.]; *enterprise* [M. Voynarenko, O. Yaremenko; Kiriyenko A.V.; O.M. Bondarenko; V.M. Shcherbina; V.I. Yarochkin; Blank I.A.]; *economic interests* [Horyacheva K.S.; O.M. Bondarenko; Novikova O.F., Pokotylenko R.V.]; *strategic potential of the enterprise* [Vasilenko V.O.; V.M. Yachmenyova; Ortynskyi V.L., Kernytskyi I.S., Zhivko Z.B.; T.G. Vasiltsiv]; *corporate resources* [Arefieva O.V. Kuzenko T.B.]; *progress* [Shevchenko I.].

1	2
Vectority of action	*negative impact* [Chapter S.V.; Kozachenko G.V., Ponomaryov V.P., Lyashenko O.M.]; *threats* [Pilova D.P.; O.M. Bondarenko; Horyacheva K.S.; V. O. Vasylenko; Ortynskyi V.L., Kernytskyi I.S., Zhivko Z.B.; Novikova O.F., Pokotylenko R.V.; T.G. Vasiltsiv]; *destabilizing factors* [M. Voynarenko, O. Yaremenko; I. Shevchenko; Ortynskyi V.L., Kernytskyi I.S., Zhivko Z.B.]; *danger* [Yachmenyova V.M.].

Source: systematized on the basis of research by S.I. Melnyk[23]

Analyzing the diversity of approaches to the definition of the concept of "economic security of enterprises", it can be stated that the largest vector has a resource-functional approach, which is focused on the provision of a resource base and the application of certain preventive measures against internal and external threats and their countermeasures. However, it should be noted the impracticality of equating the efficiency of work and provision of resources with the economic security of enterprises.

So, the main vectors regarding the interpretation of the concept of "economic security of the enterprise" are:

- resource-functional – focuses attention on resource provision of the business entity and prevention of internal and external threats in this direction;
- competitive – emphasizes competitive advantages and threats;
- protective – the main attention is paid to the enterprise's ability to protect itself;
- harmonization is the coordination of the interests of this enterprise with the interests of other subjects;
- sustainable – the main focus is on the financial stability

[23] Melnyk S. I. Management of financial security of enterprises: theory, methodology, practice: monograph. Lviv: "Rastr-7", 2020. - 384 p.

of the business entity;

- informational – attention is drawn to the importance of information provision in the process of achieving economic security;

- financial – attention to the use of financial resources and maximization of key financial indicators;

- target - outlines the achievement of goals and a specific final goal;

- complex - emphasizes the need to take into account different approaches in the process of achieving the subject's economic security.

Such a variety of approach vectors to the interpretation of the concept of "economic security of an enterprise" is due to the chaotic nature and stages of formation and awareness of the vital need to ensure the economic security of each individual enterprise and the peculiarity of each business entity and the priority of its security needs.

There is also a harmonization approach (G. Kozachenko, V. Ponomaryova and O. Lyashenko[24]) where the aspect of "economic security of enterprises" is considered in general terms without specifying any factors, such as "...a measure of harmony in time and space between the economic interests of the enterprise and the interests of the connected entities of the environment that operate outside the enterprise".

Thus, summarizing the approaches to the interpretation of the concept of "economic security of enterprises", it can be stated that this concept must be understood as such a state, according to which the security of each element and component will be ensured through the effective use of resources and the application of the necessary mechanisms to counteract the negative impact of external and internal threats.

[24] Kozachenko G. V., Ponomaryov V. P., Lyashenko O. M. Economic security enterprises: essence and mechanism of provision: monograph. Kyiv: Libra, 2003. 280 p.

The concept of "economic security" is a polystructural concept, and each of its constituent elements in the scientific world has a certain popularity, as well as the mechanism of its systematization in general.

An interesting structure of economic security was proposed by I. Moiseyenko and O. Marchenko[25]. They single out six of its components: personnel; informative; technical and technological; material and raw material; market and financial.

In turn, I. Trots[26] offers the following interdependent components of economic security: financial; technical and technological; personnel; power; intellectual; political and legal.

Studying the variety of structural elements proposed by researchers of this branch of science, we can conclude that the common element of any structural configuration is the "financial security" of the enterprise.

The relatively modern period of development of financial security in Ukraine can be characterized as short enough and its individual stages can be distinguished.

The first stage (1991-1995) when financial security was defined only as an element of economic security and at the level of the enterprise it concerned the stability of its financial system. This is the period of the beginning of the interest of scientists in this concept.

In the second stage (1996-2007), the concept of "financial security" became part of national security. The concept of national security adopted in 1997 does not yet introduce the concept of "financial security" as an independent category, but within the framework of national security it is a

[25] Moiseyenko I. P., Marchenko O. M. Financial and economic management enterprise security: education manual Lviv: LvDUVS, 2011. 380 p.

[26] Trots I. V. Ensuring economic security at the enterprise with the aim bankruptcy prevention. Visn. Zhytomyr State. technology university Economic sciences. 2012. No. 1 (59). Part 2. P. 223–227.

key element and its main components are outlined.

The third stage of development (2008 - present) is marked by the unanimous conclusions of leading scientists that "financial security" should not exist only as a separate category and only as a constituent element of the broader concept of "economic security".

Thus, at the third stage of the development of the concept of financial security, a whole categorical apparatus is distinguished within the framework of financial security:

- financial security of the state;
- financial security of the region;
- financial security of the industry;
- financial security of the enterprise;
- financial security of joint stock companies, etc.

Subjects of financial relations of the financial security system are presented in fig. 1.1

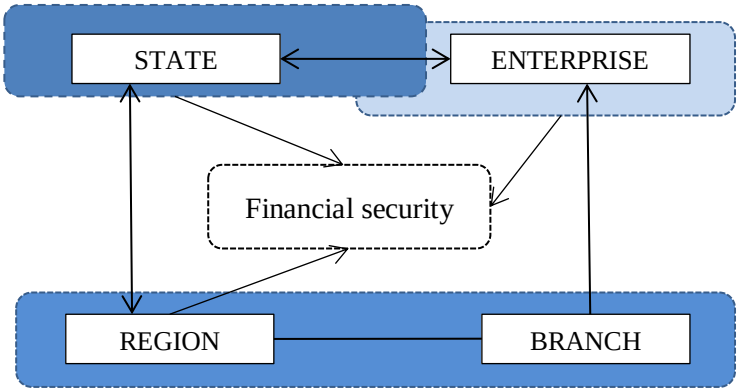


Fig. 1.1 Subjects of financial relations of the financial security system

Further research into the essence of the concept of "financial security" within the framework of each structural element, such as the state, region, industry, economic entity,

necessitates the provision of its essential characteristics of this category at each of the levels of the management hierarchy (Table 1.3).

Table 1.3

Essential characteristics of the "financial security" category

Hierarchy level management	The essence of the concept	Security facility	Subject of security guarantee
Financial security of the state	Independence, efficiency and competitiveness of the country's financial and credit sector; level of protection of financial interests; the ability to ensure financial stability and effective functioning of the national economy	Stability of the country's financial and credit sector	Central bodies of state admini-stration
Financial security of the region	The state of development of the region, which is characterized by the necessary financial resources to meet the needs of society, the fulfillment by all branches of the financial system of their functional obligations	Financial stability credit areas of the region	State, regional and local bodies of the state management and self-government
Financial security of the branch as a sector of the country's economy	A component of the financial security system of the state, which characterizes the level of support and functioning of the industry and its stable development	The stability of ensuring the functioning of the industry	Bodies of state management and control in the field of economic activity
Financial security of the enterprise	The level of financial security and economic efficiency of functioning and use of resources, resistance to bankruptcy	Financial resources of the enterprise	Management staff of the enterprise

Source: systematized on the basis of E.I. Parfenyuk, Yu.V. Shushkova[27]

[27] E. I. Parfenyuk, Yu. V. Shushkova. Clarification of the essential characteristics of the "financial security of entrepreneurship" category. Scientific bulletin of the National Forestry

Thus, having studied the existing approaches to defining the essence of financial security, we can claim that there is no single interpretation of it, because most scientists consider financial security either as a balanced certain financial level without the influence of threats, or as a complex process of ensuring it with the help of various financial instruments, i.e. only certain aspects of this category or essential characteristics are taken into account. In the future, we will focus on an elemental consideration of the financial security system.

Financial security of the state

Theoretical and methodological aspects of financial security at the macro level have been studied by many scientists. The scientific works of such well-known domestic and foreign economists as: Abalkin L., Alikperov I., Baranovskyi O., Bogachyov V., Bogdanov I., Burtsev V., Vershinin V., Vozzhenikov A., Delyagin M. deserve special attention., Ermoshenko M., Yechmakov S., Kozyrin A., Kolosov A., Kuklin A., Popov E., Senchagov V., Fokina N., Shnipko O. and others.

The majority of domestic scientists consider the financial security of the state as the protection of its interests in the financial sphere or such a state of the budget, tax and monetary system, which will guarantee the ability of the state to effectively form and rationally use the generated financial resources of the country to ensure its stable socio-economic development and service to all financial obligations.

Yermoshenko M.[28] examines the financial security of the state as the state of the financial and credit sphere of the state from the standpoint of the balance and quality of the system set

University of Ukraine: coll. science and technology works Lviv: RNV NLTU of Ukraine, 2014. Issue 24.1. P. 264–270.

[28] Yermoshenko M. M. Financial security of the state: national interests, real threats, security strategy / M. M. Yermoshenko. - K.: KNTEU, 2001. - 309 p.

of financial instruments.

Yepifanov A., Plastun O., and Dombrovskyi V[29]. follow the same opinion, but consider it from the standpoint of the ability to ensure sustainable economic development of the state.

Representatives of certain scientific schools believe that it is necessary to ensure sustainable development while maintaining the trends of sustainability dynamics. This will contribute to the full use of the potential, on the one hand, and, on the other hand, will not allow the excessive increase of resources that will be ineffectively used in the creation of additional value in the event of a reduction in sales markets for various reasons.

Shlemko V.[30], Sukhorukov A. and Ladyuk O.[31], Gubskyi B.[32] interpret the financial security of the state as some state of its components, but the main resulting feature of this state is distinctive and unique in its essence. This approach will make it possible to assess the dynamics of individual components of financial security, but the diagnosis of their mutual influence or interdependence requires additional research stages.

O. Tretyak and M. Kyrylov[33] define financial security as "a specific type of socio-economic relations";

S. Kuryakov[34] – as the implementation of an independent

[29] Financial security of enterprises and banking institutions: [monograph] / [A. O. Yepifanov, O. L. Plastun, V. S. Dombrovskyi, etc.] ; in general ed. Dr. Econ. Sciences, Prof. A. O. Epifanova. - Sumy: DVNOZ "UABS NBU", 2009. - 295 p.

[30] Shlemko V. Binko I. Economic security of Ukraine: essence and directions of provision: monograph. K.: NISD, 1997. 144 p.

[31] Sukhorukov A. I. Ladyuk O. D. Financial security of the state: [scholarship. manual]. K.: Center of educational literature, 2007. 192 p.

[32] B.V. Gubskyi Economic security of the state: measurement methodology, state and strategy of provision. K.: SE "Ukrakhbudynform", 2001. 121 p.

[33] Tretyak O.Z. Kyryliv M.V. Separate conceptual characteristics of the financial security category of the region. Scientific bulletin of the Lviv State University of Internal Affairs: coll. of science works 2009. No. 2. P. 221–228. – (Series: Economic).

[34] Kuryakov S. V. Characteristics of financial security. Trends in economic development: a collection of scientific works. Donetsk DonSU, 2001. C. 25–32.

financial policy aimed at preserving and strengthening the national financial system, that is, the concept is studied as a process or activity, while any process must lead to a certain result.

Scientist A.I. Sukhorukov[35] in his works more than once pays attention to the category of financial security of the state and equates it with the security of the state's interests in the financial sphere, or such a state of the budget, tax and monetary credit systems that guarantees the state's ability to rationally use financial resources.

In turn, S. Kulpinskiy[36] proposes to interpret the "financial security of the state" as a set of actions to achieve a certain result, namely the implementation of a targeted set of measures in the field of fiscal and monetary policy with the main goal of establishing the stability of the financial system and building a favorable investment climate of the state.

O.I. Baranovsky[37] defines "financial security of the state" as: some degree of protection of the state's financial interests; achieving a certain level of provision of financial resources for all subordinate subjects; a certain state of structural elements of the financial market; achieving the level of quality of financial instruments and services; the level of stable financial flows in the economy, which will allow it to be considered a system-forming element of the economic security of the state.

A more successful, in our opinion, interpretation of the concept of "financial security of the state" is provided by O. Baranovskyi[38], defining it both as a component of the

[35] Sukhorukov A. I. Problems of financial security of Ukraine: [monograph] K.: NIPMB, 2004. 117 p.
[36] Kulpinsky S. The role of financial security of Ukraine in deepening integration relations with European countries. Financial consultation. 2000. No. 5. P. 34–38.
[37] Baranovsky O. I. Financial security in Ukraine (assessment methodology and mechanisms of provision): [monograph] K.: KNTEU, 2004. 759 p.
[38] Baranovsky O. I. Financial security of the state. Finances of Ukraine. 1996. No. 11. P. 19–34.

economic security of the state, and as a certain state of the components, and as a state of financial flows.

However, all formulations of the concept of financial security of the state reflect only its individual facets and aspects, which makes it impossible to unanimously interpret the category.

In view of the above, it is only logical to highlight the macroeconomic aspect to clarify the possible connections between the levels in the management system. It should be added that an integral stage of management in this context is the monitoring of the state of certain components and the organization of the financial flows themselves in space and time.

According to O. Savytska[39], the category "financial security of the state" is a complete system that includes the following structural elements:

- budgetary;
- currency;
- monetary and credit;
- debt security;
- security of the insurance market;
- security of the stock market.

And based on this, ensuring the level of functioning of the financial and credit sphere that is defined as "safe" is possible only if a whole strategy for the development of all elements of the financial market of Ukraine is developed and implemented.

Thus, the interpretation of the concept of "financial security of the state" by various authors is presented in the table 1.4.

[39] Savytska O. Assessment and ways of ensuring financial security of Ukraine. Economic Forum. 2012. No. 3. P. 14.

Table 1.4

The economic essence of the concept of "financial security of the state" (FSS)

Source	Interpretation of the concept of FSS
1	2
Baranovsky O.[40]	FSS is: an important component of the economic security of the state, which is based on the independence, efficiency and competitiveness of the financial and credit sphere of Ukraine. It is reflected through a system of criteria and indicators of its condition, which characterize the balance of finances, sufficient liquidity of assets and the availability of necessary monetary and gold and foreign reserves; the state of the financial, monetary, currency, banking, budgetary, tax, settlement, investment, customs-tariff and fund systems, as well as the pricing system, which is characterized by balance, resistance to internal and external negative influences, the ability to prevent external financial expansion , ensure financial stability (stability), effective functioning of the national economic system and economic growth; the state of financial flows in the economy, characterized by balance and the presence of proven regulation and self-regulation mechanisms
Ermoshenko M.[41]	FSS is the state of the financial and credit sphere of the state, which is characterized by the balance and quality of the system set of financial instruments
Kulpinsky S.[42]	FSS is the implementation of a targeted set of measures regarding fiscal and monetary policy with the aim of achieving the stability of the financial system and creating a favorable investment climate

[40] Baranovsky O. I. Financial security of the state. Finances of Ukraine. 1996. No. 11. P. 19–34.

[41] Yermoshenko M. M. Financial security of the state: national interests, real threats, security strategy.. K.: KNTEU, 2001. 309 p.

[42] Kulpinsky S. The role of financial security of Ukraine in deepening integration relations with European countries. Financial consultation. 2000. No. 5. P. 34–38.

1	2
Epifanov A., Plastun O., Dombrovsky V.[43]	FSS is the state of the financial and credit sphere of the country, which is characterized by resistance to external and internal threats, as well as the ability to ensure sustainable economic development of the state
Shlemko V. Binko I.[44]	FSS is a state of the financial, monetary, currency, banking, budget and tax systems, which is characterized by balance, resistance to internal and external negative influences, the ability to ensure the effective functioning of the national economic system and its growth
Sukhorukov A, Ladyuk O.[45]	FSS is the protection of the state's interests in the financial sphere, or such a state of the budgetary, tax and monetary systems that guarantees the state's ability to effectively form, protect against excessive depreciation and rationally use the country's financial resources to ensure its socio-economic development and service of financial debts
Gubsky B.[46]	FSS is the state of the financial, monetary, currency, banking, budgetary, tax system, which is characterized by the state's ability to ensure the effective functioning of the national economic system, its structural balance, resistance to internal and external negative influences

Taking into account the above-mentioned approaches of scientists to the interpretation of the concept of "financial security", we define its essence as a multi-level system of protecting the financial interests of all individuals, elements and levels of the management hierarchy against both external and internal threats at the micro-, meso- and macroeconomic level, and its level - as the degree of protection of the priority

[43] Financial security of enterprises and banking institutions: [monograph] / [A. O. Yepifanov, O. L. Plastun, V. S. Dombrovskyi, etc.] ; in general ed. Dr. Econ. Sciences, Prof. A. O. Epifanova. Sumy: DVNZ "UABS NBU", 2009. 295 p.

[44] Shlemko V., Binko I. Economic security of Ukraine: essence and directions of provision: monograph K.: NISD, 1997. 144 p.

[45] Sukhorukov A.I., Ladyuk O.D. Financial security of the state: [study guide] K. : Education center l-ry, 2007. 192 p.

[46] Gubsky B. V. Economic security of the state: measurement methodology, state and strategy of provision. K.: SE "Ukrakhbudinform", 2001. 121 p.

financial interests of each of the subjects of financial relations.

Causes of threats to the financial security of the state:

- rapid development of the world economy, rapid emergence of international relations of the world economy, globalization and increased competition;

–increase in the scale and concentration of capital moving in global space and time; intellectualization of capital and its intangible component, digitalization, which will allow the introduction of innovative financial technologies;

–the flow of capital from state to private forms of ownership, the monopolization of certain industries and markets and the strengthening of their influence on all types of financial relations, which is a source of social fluctuations and acts as a destabilizing factor in financial and economic relations at all levels of the financial system;

–dynamic growth of the mobility of financial markets based on innovative technologies, which is based on the principles of development of the global information society, accelerates the formation and distribution of new intellectual products;

–variety of financial instruments both quantitatively and qualitatively, their intensively dynamic change and transformation;

– interdependence and interpenetration of the financial policies of states as components of a single global financial system;

– competition between countries in the economic and financial spheres, which leads to the activation of strategies for conquering the world economic space by powerful players;

– dependence of the state on the quantity and quality of foreign investments, which will contribute to the development of certain industries and regions and ensure their socio-economic security;

– a timely forecast of the emergence of negative trends that cause the emergence of a crisis state, which, in turn, is a source of instability of the financial system as a whole and its individual elements.

Therefore, the implementation of effective monetary, currency, budget, debt and investment policies, the construction of the state's financial security strategy should contain specific measures to develop, consolidate and further develop positive processes in the field of financial relations and overcome negative phenomena and trends.

Financial security of the state is a system aimed at developing organizational and institutional-legal methods of influence aimed at timely detection, prevention, neutralization and elimination of threats[47].

The mechanism for ensuring the "financial security of the state" includes the following elements: constant thorough monitoring of the economy in order to identify and forecast both internal and external threats; calculation of certain markers, critical threshold values of financial and socio-economic indicators that will help monitor and prevent financial destabilization and financial crisis; state monitoring of phenomena that lead to the appearance of internal and external threats to financial security[48].

Currently, the financial security of the state is taken care of by: the President of Ukraine; Verkhovna Rada of Ukraine; The National Security and Defense Council of Ukraine and its structures.

[47] Arefieva O.V., Kuzenko O.L. Components of financial security by the levels of subjects of financial relations. Scientific Bulletin of Kherson State University. 2014. Issue 9-1. Part 3. P. 184–187. – (Series "Economic Sciences").

[48] Arefieva O.V., Kuzenko O.L. A theoretical-methodical approach to the justification of strategies for providing macro-level financial entities. Electronic scientific publication "Global and national problems of the economy" of Mykolaiv National University named after V. O. Sukhomlynskyi. 2015. Issue 7. P. 709–713.

The following are responsible for the functional areas of financial security: the economic block of the Cabinet of Ministers of Ukraine with the allocation of relevant divisions; Settlement chamber; National Bank of Ukraine; local state administrations; local governments; bodies of judicial power and prosecutor's office[49].

Ensuring a stable level of financial security of the state requires systemic measures that should include developed mechanisms in the field of budgetary and monetary policy, the stock market, and the corporate sector of the economy.

In today's conditions, financial security must be considered not only from the standpoint of achieving a certain state of the financial system, but also from the standpoint of the process of achieving and maintaining the necessary state of the financial system at the proper level.

Lutsik-Dubova T.O.[50] in his pre-war writings, he proposes a system of measures to strengthen the financial security of Ukraine (under the condition of peaceful management of the economy and life support of the country), which includes the following vectors:

1. Reforming the budget system:

– on the basis of scientific reasoning and careful budgeting with coordination of actions, increasing the accuracy of forecasts of the main macroeconomic indicators, which are necessary for budget planning;

– a comprehensive approach to reforming the budget process covering all levels (state, local, inter-budgetary relations);

[49] Artus M. M. Financial Mechanism in Market Economy Conditions. Finances of Ukraine. 2005. No. 5. P. 54–59.

[50] Lutsyk-Dubova T. O. The main priorities of strengthening the financial security of Ukraine. Scientific works of the Kirovohrad National Technical University. 2012. Issue 22. Part II. P. 1–7. -(Series "Economic Sciences").

– increasing the effectiveness of budget expenditures based on the application of programmatic principles; reduction of Ukraine's foreign debt;

– improvement of the budget statistics system and subsequent diagnostics, taking into account monetary, debt and currency security indicators;

– development of a step-by-step strategy for reducing the budget deficit at the expense of: increasing own revenue potential, increasing the level of public debt management by implementing a modern strategy for attracting loan capital, inventorying and classifying all debts, transforming the debt structure, preventing the practice of making exceptional decisions that are not subject to a single debt policy, elimination of the hidden deficit.

2. Improvement of monetary policy:

– ensuring the necessary needs of the country's economic growth by liberalizing the nature of monetary policy;

– regulating the level of monetization of the economy;

– overcoming the deficit of means of payment;

– reduction of the share of cash in the total volume of money supply, which will automatically reduce the percentage of shadowing of the economy;

– balancing of the money and goods markets, which will lead to a decrease in the level of inflation;

– stopping the outflow of capital abroad and creating conditions for the return of exported capital.

3. Improvement of currency policy:

– reducing the level of dollarization of the economy, carrying out a policy of supporting the national monetary unit, stimulating transactions using it;

– formation of gold and currency reserves;

– development of the conceptual foundations of currency policy, which will involve the allocation of short-term and long-term goals of its formation and implementation.

4. Regulation of the stock market:

– capitalization and liquidity of the securities market;

– creation of a national stock exchange based on EU regulatory principles and integrated into the global financial space;

– creation of a single central depository of Ukraine;

– improvement of the institutional structure of capital markets.

5. Regulation of the sphere of corporate governance:

– harmonization of domestic legislation with international standards and modern requirements for the development of financial relations;

– increasing requirements for corporate governance;

– development of an effective system of state regulation of capital markets, strengthening of control over compliance with the requirements of legislation, prevention of fraud.

6. Regulation of the insurance market:

– promoting the development of the insurance market and improving the procedure for licensing the activities of insurers, complying with the requirements for the sources of the formation of the authorized capital and the financial position of the founders;

– creation of a fund guaranteeing insurance payments under insurance contracts;

– introduction of international norms of corporate governance for insurers and development of a state target program of scientific research works in the field of insurance and training of specialists for the insurance market.

Of course, these measures were proposed taking into

account the level of development of Ukraine before the start of open expansion in 2022 and currently require rethinking, significant amendments taking into account friendly financing and aid from Western countries during the war, therefore, the rampant growth of public debt, unrealistic challenges to the economy and financial infrastructure of Ukraine . But, in our opinion, they can be used as a basis.

Thus, the category "financial security of the state" is one of the main elements of "financial security" in general and a component of the entire national security of the country, and the well-being of the state as a whole depends on its level.

In order to improve the level of financial security of the state, Ukraine needs to develop a mechanism for ensuring financial security, as well as rebuild the infrastructure of financial institutions, which will ensure its financial security in the future.

Currently, in the scientific literature, the majority of studies are devoted to the financial security of the state and much less to the level of the region as the main consolidating element of the economy. Taking into account the fact that the financial security of the state and region depends on and is ensured by the state of financial security at the microeconomic level, and the financial security of business entities by its state at the meso- and macroeconomic level, which determines their interdependence, the concept of "financial security of the region" has to be investigated both from the standpoint of the region's ability to eliminate crisis phenomena, taking into account history, mentality, conditions of development, the needs of society, the operation of the budget decentralization mechanism, and the development of an effective program and road map for prevention and leveling of threats.

First of all, let's define what a region is.

In general, the region can be understood as:

- a certain part of the country's territory with certain similarities: geographical, mental, resource, natural and climatic, specialization of production and economic complexes, socio-economic problems;

- economic region of the country;

- a unit of the state system in the country[51].

From the point of view of issues related to regional management, this concept, in our opinion, is the most accurate, since the region is a state entity, and conducts state policy and power in this territory.

Therefore, the region is a structural unit of state building, and in total all regions make up the state itself. That is why the level of economic development of regions and their security is a guarantee of economic development and security of the state as a whole. The more developed each region is, the more developed the state becomes.

Well-known scientists dedicated their works to the financial security of the region, in particular: Vavdiyuk N., Sunduk A., Gerasimchuk Z., Medvid M., Horbulina V., Chervyakov I., Tretyak O., Karpinskyi B., Malinovska O., Miroshnychenko O.

Based on the research materials of the above-mentioned scientists, we propose to systematize the threats to the financial security of the region in terms of its constituent elements (Table 1.5).

In our opinion, the internal structure of financial security of the region consists of three blocks:

[51] Sverdan M. M. Regional economy and economic security of the region. Scientific Bulletin Kherson State University, 2013. Vol. 1. P. 46-52.

Table 1.5

Systematization of threats to the financial security of the region in relation to its components

Composite	Threats
1	2
Budget security[52]	Imperfectness of regulatory and legal support of the budget process and miscalculations in budget planning; a drop in business activity, a decrease in production volumes and an increase in the number of unprofitable business entities in the region; insufficient or untimely filling of budget deficit sources; large-scale "tinization" of national business; non-fulfillment by legal entities - residents of obligations under foreign loans received under the guarantee of local self-government bodies; untimeliness of budget planning and formation of local budgets; financing of specific budget expenditures without corresponding budget allocations; the lack of transparency of local budget expenditures, which leads to distortions in the distribution of state funds, violation of the priority of financing expenditures, and the accumulation of budget debt; illegal and inefficient use of budget funds; ineffectiveness of the control system over compliance with budget legislation
Monetary and credit security[53]	Deterioration of the structure of payment means in circulation; movement of significant amounts of foreign currency within the region; regional price disparities; artificial regulation of the volume of money in circulation; a significant share of non-bank money circulation and the presence of tendencies towards its increase; increase in non-payments; lack of an effective lending system

[52] Kochetkova K.Yu. Litvinov O.I. Problems of tax security in Ukraine [Electronic resource] Access mode: http://www.rusnauka.com.

[53] Economic security of Ukraine in the face of globalization challenges: [monograph] / [A. A. Mazaraki, O. P. Korolchuk, T. M. Melnyk, etc.] ; in general ed. A. A. Mazaraki. - K.: Kyiv. national trade and economy University, 2010. - 718 p.

1	2
Insurance security[54]	Insufficient liquid assets; unbalanced tariff policy; inefficient allocation of insurance reserves; imbalance of the insurance portfolio; high share of reinsurance; insignificant level of insurance coverage; fraudulent actions of insurance market entities; rapid development of globalization; outflow of capital abroad; dependence on foreign capital; crisis phenomena on international financial markets; constant changes in the legal framework; aggravation of the criminogenic situation in the field of finance; instability of the external environment
Investment security[55]	The increase in internal and external debt obligations, which exceed the rates of economic growth, negatively affect the investment climate of the territory

1) relative financial independence. Relativity is rooted in the fact that there is an economic-political and legal dependence of the region on the state center and the interconnection between other regional structures and their economies. Therefore, the state forms the legal field and establishes the rules of the game and, of course, carries out a control function in relation to regional resources, the functioning of the economy, the achievement of an acceptable level of production, efficiency and quality of products, which ensures the competitiveness of the region and encourages to work on uniform and equal terms in interregional domestic and international trade. encourages inter-industry and inter-regional cooperative relations and promotes information exchange and

[54] Sokol S. V., Derkach O. M. The insurance market and the main threats to its financial security. Problems and prospects of development of the banking system of Ukraine: coll. of science works Sumy: DVNZ "UABS NBU", 2012. Iss. 34. P. 285–291.

[55] Moroz M. O. Investment security of Ukraine: dissertation. ... candidate economy Sciences: 08.00.08. Kyiv: University of Banking, 2019. 252 p.

innovation;

2) stability and sustainability of the regional economy. The state provides regions with legal protection of property of subjects of all forms of business and non-business structures and institutions; contributes to the creation of guarantees and favorable conditions for entrepreneurship; ensures the fight against criminal elements, monopolization and raiding, monitors gaps in income distribution and other negative distortions that can cause social upheavals;

3) the ability for self-development and progress. The state creates prerequisites for the establishment of a favorable climate for investments and innovations in the regions, promotes the permanent modernization and development of production, encourages the improvement of the professional level of employees through a number of educational institutions, etc[56].

The financial interests of the region are focused on maintaining and increasing its financial potential, activating investment income and effective use of financial resources.

Systematizing the research of scientists in the field of financial security of regions, we agree with the structuring of N.I. Verhoglyadova[57]. and give the main general principles that must be followed:

- comprehensiveness, i.e. a comprehensive analysis of the research object;

- systemicity – taking into account both internal and external relationships and interdependencies, when diagnosing the research object as a structural element of the economic space;

[56] Antoshkin V. K. Economic and national security of regions. Bulletin of Berdyan University of management and business, 2014. No. 2 (26). P. 108-109.

[57] Verkhoglyadova N. I. Principles of ensuring the economic security of the region. URL: http://www.economy.nayka.com.ua/?op=1&z=2296.

- options - it is necessary to take into account the alternative development trajectories, the volatility of phenomena and threats, and apply multivariate modeling of the development of the region, taking into account the interests of financial security;

- coordination of connections and relations of all constituent elements of financial security of the region. Coordination performs the function of mutual coordination and ensures the avoidance of duplication or gaps in the interaction of the elements of the financial security of the region;

- specialization of elements - contributes to the ideological separation of functions and operations that must be performed by separate elements of financial security. Specialization allows regional management to focus on solving specific tasks and ensure more efficient distribution of resources, both material and labor and intellectual.

Therefore, the financial security of the regions has as its goal ensuring the stability of the development of the region's economy, the growth of its financial potential and investment attractiveness.

The system of financial security of the region is a set of interconnected elements, subsystems, financial instruments, methods and measures that ensure its security and the achievement of its main goal of activity.

We agree with the conclusions of A. I. Sukhorukov[58] regarding the characteristics of the region's financial and economic security system, namely

1. Uniqueness. The system of financial security of the region depends on its uniqueness. It cannot be the same for all regions. The war showed that, first of all, the geographical feature is key, but also the specialization and structure of

[58] Sukhorukov A. I. Modeling and forecasting of socio-economic development of regions of Ukraine: monograph. K.: NISD, 2012. 368 p.

production activity, resource and industrial potential, the place of economic entities in the market, etc.

2. Independence. Despite the fact that each region is a component of the state system, the economic security system of each region is relatively independent and separate from the security systems of other regions, at the same time, the financial security system of the region is a complex element of the financial security of the industry, the state.

3. Complexity. The financial security system of the region is complex and closely related to the level of ensuring other security, such as: criminal, scientific and technical, personnel, environmental, informational, physical, social, etc.

4. Dynamism. It is caused by a rapid change in the prerequisites for the functioning of the financial security of the regions and provides for the possibility of a rapid change in the road map and action program of priorities and strategies for ensuring the financial security of the region in the event of a rapid change in factors and conditions.

5. Efficiency. Effective provision of the financial security of the region by its management is possible under the conditions of multivariate predictive modeling of alternative development of the dynamics of conditions, when protective decisions are made by the management staff on the basis of a well-thought-out concept.

The goal of the region's financial security system is to timely identify and prevent all possible threats to ensure its financial stability and economic development.

The mechanism for ensuring the financial security of the region is formed through the system of managing financial relations based on the application of certain principles, methods, financial levers, tools, legal and information support, with the help of constant financial monitoring, which allow to achieve the main program goal of a specific region.

The financial security of each region should be characterized by a combination of security of different hierarchical levels, the state of guarantee of which determines the level of financial security of the territory. It should be noted, as practice during military operations has shown, that the financial security of an individual, household, region or enterprise can be ensured independently or even at the expense of each other or the state. But from a strategic point of view, these are not only interrelated, but also indivisible concepts.

The contradiction between the solution of issues and the functioning of security at different levels is one of the main problems of building the financial security of the state and regions at the current stage of economic development. Thus, the basis of increasing the efficiency of the functioning of the financial security system lies precisely in the task of managerial coordination of security at different levels of the hierarchy.

In the conditions of an aggressive war, the financial security of certain front-line regions will have significant ideological differences compared to more distant ones and among themselves, and requires a separate, more detailed study of each region, outlining the specifics of the threats and their assessment, with the development of a forecast for the region's exit from the state of collapse.

In general, we believe that the system of financial security of the state and individual regions should provide solutions to the following tasks: maintenance of the national currency in a stable and competitive state; sufficient saturation of the economy and the market with money supply for their full functioning; intensive formation of national financial capital denominated in the national currency; ensuring financial parity with the main counterparties of Ukraine.

Financial security of enterprises

The financial security of each individual country involves the formation of security characteristics of business conditions on its territory, including the possibility of ensuring the financial security of business entities, the leading ones of which are enterprises that carry out various types of economic activity. In the conditions of significant uncertainty of market economic processes, rather high competition of business entities, the presence of a wide range of threats and dangers, problems of ensuring the protection of vital resources, it is necessary to form a mechanism to ensure the activity of business structures and an individual enterprise, which led to the relatively recent appearance of the concept "financial security of the enterprise". In the process of uncovering the essence of this concept, different approaches of scientists and practitioners were distinguished regarding the content of its content. At this stage, there are five approaches to revealing the essence of the economic category "financial security of the enterprise": defensive, resource-functional, strategic, risky and complex.

Proponents of the defensive approach O.I. Blank, A.G. Zagorodniy, G.L. Vozniuk, I.P. Moiseyenko, O.M. Marchenko (table 1.6) interpret the financial security of the enterprise based on the state of security of the enterprise's financial interests. The main criteria are: protection of the company's financial and economic interests from identified internal and external threats at all levels of relations; ensuring the need for financial resources in order to finance activities and fulfill financial obligations in the process of simple and extended reproduction, that is, taking into account current needs and financial needs of development in the long-term period; stable protection of priority balanced interests due to the formation of certain quantitative and qualitative characteristics of the level of financial status, the parameters of which are determined on

the basis of its financial philosophy and ideology.

Table 1.6

Definition of the essence of the concept of "financial security of the enterprise" according to the protective approach

uthor	Content of the definition
I. O. Blank[59]	a quantitatively and qualitatively determined level of its financial condition, which ensures stable protection of its priority balanced financial interests from identified real and potential threats of an external and internal nature, the parameters of which are determined on the basis of its financial philosophy and create the necessary prerequisites for financial support of its sustainable growth in the current and future
A. G. Zagorodnii, G. L. Vozniuk[60]	protection of financial interests of business entities at all levels of financial relations, provision of households, enterprises, organizations and institutions with financial resources sufficient to meet their needs and fulfill financial obligations
I. P. Moiseyenko, O. M. Marchenko[61]	a state that ensures the protection of the financial and economic interests of the enterprise from internal and external threats and creates the necessary financial and economic prerequisites for sustainable development in the current and long-term periods

The resource-functional approach to revealing the essence of the concept of financial security of the enterprise is aimed at the aspects of ensuring the effective use of the

[59] Blank I. A. Management of financial security of enterprise K.: Elha, Nika-Center, 2004. 784p.
[60] Zagorodniy A. G. Vozniuk G. L. Financial and economic dictionary K.: Znannia, 2007. 1079p.
[61] Moiseyenko I.P., Marchenko O.M. Management of financial and economic security of the enterprise, Lviv, 2011. 380p.

enterprise's resources (Table 1.7).

Another important criterion is ensuring the highest efficiency of corporate resources.

Table 1.7

The concept of "financial security of enterprise" based on the resource-functional approach

Author	Content of the definition
1	2
N. Y. Reverchuk[62] S.F. Pokropivnyi[63] L. G. Melnyk[64]	protection from possible financial costs and prevention of bankruptcy of the enterprise, achieving the most efficient use of corporate resources
L. I. Donets, N. V. Vashchenko[65] O. V. Arefieva, T. B. Kuzenko[66] V.I. Muntian[67] O.A. Kyrychenko, S.M. Laptev, P.Ya. Prygunov, O.I. Zakharov[68]	the state of the most effective use of the company's corporate resources, expressed in the best values of financial indicators of business profitability and profitability, quality of management, use of the company's fixed and current assets, its capital structure, the rate of dividend payments on the company's securities, as well as the exchange rate value of its securities as a synthetic indicator of the current financial and economic condition of the enterprise and prospects for its technological and financial development

[62] Reverchuk N. Y. Management of economic security of business structures: monograph L.: LBI NBU, 2004. 195 p.

[63] Enterprise economics: a study guide. Under the editorship S. F. Pokropyvny. K.: KNEU. 2000. 528 p.

[64] Enterprise economics: textbook. Ed. L. G. Melnik. Sumy: ITD "University Book", 2003. 638 p.

[65] Donets L. I., Vashchenko N.V. Economic safety of enterprises in K.: Center for Educational Literature, 2008. 240 p.

[66] Aref'eva O.V., Kuzenko T.B. Economic basis for the formation of financial warehouse economic security. Current economic problems. 2009. No. 1. P.98–103.

[67] Muntiyan V. I. Economic security of Ukraine K.: KVITs, 1999. 464 p.

[68] Management of financial and economic security [O. A. Kirichenko, S. M. Laptev, P. Ya. Prigunov, O. I. Zakharov and in.]; per ed. member-corr. Academy of Pedagogical Sciences of Ukraine, prof. V. S. Sidaka. K.: Dorado-Druk, 2010. P.13–112.

1	2
A.O. Epifanov, O.L. Plastun, V.S. Dombrovskyi[69]	the ability of the business entity to carry out its economic, in particular, financial activities, effectively and stably by using a set of interrelated diagnostic, instrumental and specific measures of a financial nature, which should optimize the use of financial resources, ensure their appropriate level, level the impact of internal and external risks environment

Current advocates of this approach clarify the scope of the economic category with the position: protection from financial expenses and avoidance of bankruptcy of enterprises (N. Y. Reverchuk[70], S. F. Pokropivny[71], L. G. Melnik[72]); detailing the transfer of indicators to ensure their best value for the efficiency of management, profitability, efficiency of formation and exchange rate and capital, dividend policy and exchange rate exchange rate valuable papers of the world economy, financial and technological potential (L.I. Donets, N.V. Vashchenko[73], O. V. Aref'eva, T. B. Kuzenko[74], V. I. Muntiyan[75], O. A. Kirichenko, S. M. Laptev, P. Ya. Prigunov, O. I. Zakharov[76]); the selection of mutually interconnected

[69] Epifanov A. O., Plastun O. L., Dombrovsky V. S. Financial security of enterprises and banking institutions: monograph Sumi: DVNZ "UABS NBU", 2009. 295 p.

[70] Reverchuk N.Y. Management of economic safety of enterprise structures: monograph. L.: LBI NBU, 2004. 195 p.

[71] Economics of business: a basic guide. Per ed. S. F. Pokropivny. K.: KNEU. 2000. 528 p.

[72] Enterprise economics: textbook. Ed. L. G. Melnik. Sumy: ITD "University Book", 2003. 638 p.

[73] Donets L. I., Vashchenko N.V. Economic safety of enterprises in K.: Center for Educational Literature, 2008. 240 p.

[74] Aref'eva O.V., Kuzenko T.B. Economic basis for the formation of financial warehouse economic security. Current economic problems. 2009. No. 1. P.98–103.

[75] Muntiyan V. I. Economic security of Ukraine K.: KVITs, 1999. 464 p.

[76] Management of financial and economic security [O. A. Kirichenko, S. M. Laptev, P. Ya. Prigunov, O. I. Zakharov and in.]; per ed. member-corr. Academy of Pedagogical Sciences of Ukraine, prof. V. S. Sidaka. K.: Dorado-Druk, 2010. P.13–112.

diagnostic, instrumental and specific approaches of a financial nature by optimizing the financing of government activities and minimizing risks (A.O. Epifanov, O.L. Plastun, V.S. Dombrovsky[77]).

Table 1.8

The essential essence of the concept of "financial security of enterprise" behind a strategic approach

Author	Content of the definition
Yu.B. Krakos R.O. Razgon [78]	The importance of independently developing a business and pursuing a financial strategy
A. V. Gukova, I.D. Anikina[79]	The importance of independently developing and pursuing a financial strategy, presumably for the purposes of an overall corporate strategy, in the minds of an unimportant and competitive environment; such a business enterprise that makes it possible to ensure financial equality, stability, payability and liquidity in the long-term period; will ensure sufficient financial independence; satisfies the enterprise's needs for financial resources for sustainable expanded development; designed to confront existing and culpable insecurities in order to prevent financial harm from enterprises, change the essential structure of power capital, or liquidate enterprises; will ensure sufficient flexibility when making financial decisions; protects the financial interests of business owners

[77] Epifanov A. O., Plastun O. L., Dombrovsky V. S. Financial security of enterprises and banking institutions: monograph Sumi: DVNZ "UABS NBU", 2009. 295 p.

[78] Krakos Y.B., Razgon R.O. Management of financial security of enterprises. Economy and management of enterprises in the machine-building industry: problems of theory and practice. 2008. No. 1. P.86-97.

The strategic approach (Table 1.8), essentially, considers the financial security of an enterprise as the creation of a government entity to independently develop and implement a financial strategy (Y.B. Krakos, R.O. Razgon[79]) at the warehouse of the foreign corporate strategies to ensure optimal financial stability and ability to cope with internal and external threats to the competitive environment, financial equality, stable payability, liquidity, financial independence in the long-term period of settlement requirements for financial resources of simple and expanded creation, sufficient flexibility in the adoption of financial management solution and protection of the interests of government officials to protect financial security damage, changes in the structure of own capital or liquidation of the enterprise in the order of coercion (A. V. Gukova, I. D. Anikina[80]).

Under the risk approach, attention is focused precisely on risk management activities (Table 1.4), both current and long-term protection of the interests of the enterprise in the spectrum of internal and external threats in the process of stable development and increase of equity capital (O. A. Kyrychenko, I. V. Kudrya[81], V. I. Kutsyk, A. I. Bartysh[82]).

It is the comprehensive characterization of finances as a component of the economic security of the enterprise that is the key aspect of the developed approach to revealing the content

[79] Krakos Y.B., Razgon R.O. Management of financial security of enterprises. Economy and management of enterprises in the machine-building industry: problems of theory and practice. 2008. No. 1. P.86-97.

[80] Gukova A. V., Anikina I. D. The role of financial security of an enterprise in the system of its economic security. Education and society. – 2006. – No. 3. – P.98–102.

[81] Kyrychenko O. A., Kudrya I. V. Improving the management of financial security of enterprises in the conditions of the financial crisis. Investments: practice and experience. 2009. No. 10. P.22–26.

[82] Kutsyk V. I., Bartysh A. I. Financial security of the enterprise as an independent object of management: problems of provision. Scientific bulletin of NLTU of Ukraine. 2011. Issue 21.4. P. 250–255.

of the financial security of the enterprise (Table 1.9).

Table1. 9

Definition of the essence of the concept of "financial security of the enterprise" according to the complex approach

Author	Content of the definition
Yu. M. Vorobyov, O. H. Blazhevych[83]	complex characteristics of finances, the ability of the enterprise in full measure to satisfy both own needs and the interests of owners and other participants in financial relations. At the same time, the company's finances are directly characterized by the ability to normally create and distribute the value of products, works, services, generate income and profits, make necessary expenses, form, distribute and use financial resources, etc.
K. S. Horyacheva[84] V. L. Ortynskyi, I. S. Kernytskyi[85]	a state characterized, firstly, by the balance and quality of the set of financial instruments, service technologies used by the enterprise, secondly, by resistance to internal and external threats, thirdly, by the ability of the enterprise's financial system to ensure the realization of its financial interests, mission and tasks with sufficient amounts of financial resources, fourthly, to ensure the development of this financial system
L. A. Mohylina[87]	the dynamic financial condition of the enterprise, characterized by the stable protection of its priority financial interests from identified endogenous and exogenous threats and the ability to ensure the realization of its financial interests, missions and tasks, as well as its own development with sufficient amounts of financial resources

[83] Vorobyov Y.M. Blazhevich O.G. Financial security of recreational organizations. Scientific bulletin: Finances, banks, investments. 2010. No. 2. P.12–19.

1	2
O.I. Sudakova[86]	an important component of the economic security of the enterprise, which is based on the independence, efficiency and competitiveness of the enterprise's finances, which is reflected through a system of criteria and indicators of its condition, characterizing the balance of finances, sufficient liquidity of assets and the availability of necessary cash reserves, financial stability (stability); the level of provision of the enterprise with financial resources sufficient to meet its needs and fulfill existing obligations; the quality of financial instruments and services, which prevents the negative impact of possible miscalculations and direct abuses on the company's financial condition; degree of protection of financial interests at all levels of financial relations

The essential characteristic is based on the systematic protection of the interests of all participants in the exchange and distribution relations of the enterprise, its owners and partners (Y. M. Vorobyov, O. G. Blazhevich[83]). Leading specialists K. S. Horyachev[84], V. L. Ortynskyi, I. S. Kernytskyi[85] clearly define the aspects of the system that characterizes the financially secure state of the enterprise.

They single out four criteria in the company's activity:

–the use of optimally high-quality, balanced financial instruments, service technologies;

–ensuring resistance to threats;

–availability of financial potential for the realization of defined interests, missions and tasks;

[84] Horyacheva K. S. The mechanism of managing the financial security of the enterprise: diss. ... candidate economy Sciences: 08.06.01. Kyiv National University of Technology and Design. K., 2006. 174p.

[85] Ortynskyi V. L., Kernytskyi I. S., Zhivko Z. B. Economic security of enterprises: a textbook. K.: Alerta, 2011. 704p.

–improvement and self-development of the existing financial system.

In addition to the above O.I. Sudakova[86] emphasizes that the financial security of the enterprise must be based on the efficiency, competitiveness and independence of the enterprise's finances and requires the availability of reserves.

L. A. Mogilina[87] notes that this is a dynamic state of constant protection of the possibility of realizing interests and financing the development of the enterprise.

Therefore, in our opinion, under the financial security of the enterprise, it is appropriate to understand the state of the financial system, in which the financial balance is maintained and threats are countered, as a result of which its stability, stability and reliability are ensured, which contributes to the achievement of the defined goals and development strategy.

A complex methodological problem is the development of an effective system for determining the achieved level of financial security of the enterprise. Both scientists and practitioners offer monitoring systems and develop indicators of financial security of entities conducting economic activities at the microeconomic level. It is important that the system of indicators is comprehensive and takes into account all areas of financial relations.

It should also include quantitative and qualitative indicators with their sufficient, but not too large quantity, which will guarantee the most comprehensive and reliable assessment with the highest accuracy of calculations. The results of the calculations will make it possible to make

[86] Sudakova O. I. Strategic management of the financial security of the enterprise. Economic space. 2008. No. 9. P. 140-148.

[87] Mogilina L. A. Management of the financial security of enterprises in conditions of economic instability: autoref. thesis ... candidate economy Sciences: 08.00.08. Sumy, 2015. 24 p.

corrections precisely in that area of the company's activity, where there are specific problems that affect the level of financial security of the company.

The list of indicators for determining the financial security of an enterprise by its components, proposed by L.O. Matviychuk[88].

Indicators of financial security of the enterprise by components:

1. Budgetary:

- the share of indirect taxes in the amount of revenue from the sale of goods, works, and services;
- income tax rate;
- coefficient of diversion of current assets into accounts receivable according to calculations with the budget;
- the share of accounts payable for settlements with the budget and extra-budgetary payments in the total amount of current liabilities;
- the ratio of receivables and payables according to calculations with the budget and extra-budgetary payments;
- the share of deferred tax assets in the amount of the company's profit;
- coefficient of payment discipline.

2. Stock:

- capital coverage ratio;
- the ratio of the company's authorized capital to the volume of issued shares;
- the coefficient of share capital participation in the total amount of financing sources;
- profit per 1 share;
- book value of shares;

[88] Matviychuk L. O. Methodology for determining the level of financial security of machine-building enterprises. Actual problems of the economy. 2011. No. 5 (119). P. 109–114.

- ratio of dividend payments;
- dividend coverage ratio.

3. Investment:

- cash flow ratio as a result of operational activity;
- cash flow coefficient as a result of financial activity;
- coefficient of participation of monetary assets in working capital;
- the number of cash turnovers;
- profitability of the balance of funds;
- coefficient of sufficiency of net cash flow;
- profitability of net cash flow.

4. Financial and technological:

- investment ratio of non-current assets;
- the share of copyright in the total amount of intangible assets.

5. Credit:

- turnover ratio of receivables;
- the period of repayment of receivables;
- share of doubtful receivables in total debt;
- coefficient of diversion of current assets from accounts receivable according to calculations;
- accounts payable turnover ratio;
- payables repayment period;
- the share of accounts payable according to calculations in the total amount of current liabilities;
- ratio of receivables and payables;
- share of promissory notes received in current assets of the enterprise; - the share of promissory notes issued in the total volume of current liabilities.

6. Banking:

- debt ratio;
- current liabilities ratio;
- coefficient of long-term liabilities;

- interest coverage ratio;
- the ratio of received and repaid loans;
- profitability of loaned bank capital;
- the payback period of the loan capital.

7. Money:

- share of long-term financial investments in assets;
- share of current financial investments in assets;
- movement of cash flows from investment activities of the enterprise;
- the share of capital investments in the total amount of investments;
- the share of financial investments in the total amount of investments.

8. Insurance:

- the share of payables for insurance settlements in the total amount of current liabilities;
- business insurance ratio.

Among the economic-mathematical methods of diagnosing the level of financial security of an enterprise, the methods of predicting the bankruptcy of an enterprise, discriminant analysis of bankruptcy, have become the most widespread. Most commonly used are models for assessing the probability of bankruptcy based on Altman's Z-criterion, R. Lees' model, Taffler's predictive model, Springate's model, Beaver's model, and the rating number method. Their advantage is a small number of indicators with a high degree of significance, which can ensure high accuracy of forecasting results.

Currently, there is no unified system for diagnosing the condition and assessing the level of financial security of enterprises in Ukraine, they have certain shortcomings, namely:

–assessment of the level of financial security of the enterprise based on the analysis of the dynamics of one or more indicators is ineffective because it does not take into account the systemic nature of financial security;

–when assessing the level of financial security of the enterprise, preference should be given to the use of the integral security indicator, which should be obtained based on the use of multidimensional statistical methods;

–a significant part of the methods does not take into account the relationship between financial security and threats[89].

The mechanism of managing the financial security of the enterprise must be directed to the implementation of specific applied tasks[90]:

– highlighting the main priorities of ensuring the financial security of the enterprise;

– analysis of financial security threats of internal and external origin;

– multivariate model forecasting of the alternative development of events;

– formation of the necessary resource potential to ensure the financial security of the enterprise;

– operative, tactical and strategic planning of the enterprise's financial and economic activity;

– justification of the system of measures to eliminate and minimize threats and risks;

[89] Susidenko O. V. Modern paradigm of assessing the financial security of the enterprise. Bulletin of the Khmelnytskyi National University. Economic sciences. 2013. No. 5. Vol. 1. P. 146–151.

[90] Zakharova N. Yu., Vlasenko, O. O., Pokotilo M. S. Mechanism of managing the financial security of the enterprise. Modern technologies for managing the socio-economic development of Ukraine in the conditions of today's global challenges: collection of materials of the II All-Ukrainian Scientific and Practical Conference, December 22-23, 2022 (2023) 34-36.

– implementation of effective ways of minimizing financial losses;

– diagnosis of the state of the achieved security level;

– ensuring the protection of the financial interests of the enterprise, its founders (owners), structural units, employees;

- control over the implementation of relevant procedures for managing the financial security of the enterprise.

The composition of financial instruments for ensuring the financial security of the enterprise, which determine its financial relations, should include: payment instruments (order, letter of credit, etc.), credit instruments (credit agreements), deposit instruments (certificates of deposit, agreements), investment instruments (shares , shares), insurance instruments (insurance agreement).

Therefore, the level of financial security of the enterprise depends on the availability of a mechanism for ensuring financial security. Such a mechanism should be interpreted as a system that combines various methods, means, levers and tools that are used to counteract and/or adapt to the action of internal and external threats in order to achieve and maintain the financial stability, stability, balance and reliability of the enterprise.

Military aggression by Russia has increased the number of threats to the economy of Ukraine as a whole, and to each enterprise in particular. Direct losses, including complete or partial destruction of production facilities; markets of raw materials, labor resources, goods; possible relocation; broken supply chains and logistical problems; loss of investment attractiveness of both the region and the enterprise itself; increase in the cost of energy resources and their partial destruction; falling purchasing power of the population, etc. This requires every business entity to carefully develop systems for monitoring and diagnosing the level of financial

security.

Only with a systematic, regular approach to the management of financial security at the level of the state, regions, industries and enterprises, it is possible to achieve a positive result of the revival of the country's economy.

1.2. Debt security in the system of ensuring state financial security

The financial security of any country depends on the effective management of external public debt. Overcoming significant economic difficulties and the unstable situation in Ukraine's economy requires addressing key issues, one of which is ensuring an adequate level of financial base for the functioning of the economy. At the same time, the achievement of key strategic goals may require external borrowing, which constitutes external public debt.

External public debt is a normal and common phenomenon in the modern global economy. Indeed, the state is entrusted with many specific functions in the areas of social, regulatory, defence and other policies. These functions can only be performed with an adequate financial base, which is often lacking. For this purpose, they attract credit funds and form external public debt on this basis[91].

Ukraine's public debt is an important element of the economic system, reflecting the country's financial stability and ability to meet its obligations to creditors. The current state of public debt is crucial for the country's financial policy and

[91] Davydenko N., Mykhaylichenko M., Titenko Z., Tsiukalo L. (2023). External Debt Management in the System of Financial Security of the State. *WSEAS Transactions on Business and Economics*, vol. 20, 144-153 URL: https://wseas.com/journals/articles.php?id=7255

overall economic development. In this context, it is important to carry out a thorough analysis of the various aspects of the debt issue in order to ensure effective management of financial resources and sustainable economic growth.

An increase or decrease in public debt can reflect the effectiveness of fiscal management and the success of economic reforms. However, in order to achieve sustainable economic growth and improve living standards, it is important to identify strategies to reduce risks and optimise the use of borrowed funds in the face of challenges and adverse conditions, such as geopolitical crises or economic difficulties[92]. The analysis of the current state of public debt aims to reveal the dynamics, structure and consequences of debt obligations and to identify effective strategies for managing these issues.

The debt burden on the state budget is an important financial indicator that shows the amount of debt that the country has to repay in the form of interest and repayment of borrowed funds. Let's analyse this indicator for 2018-2022 (Table 1.10).

According to accepted methods, public debt is calculated as the difference between the sum of all positive and negative budget balances. We can also see that it is the budget deficit that is a determining factor in the formation of debt and its further servicing in the future[93].

The data presented in Table 1 confirm a steady trend of continuous growth of the total amount of public debt, with the exception of 2019, when there is a slight decrease compared to the previous year.

[92] Davydenko N.M., Zhovnirenko O.V., Volkov A.Y. (2021). Assessment of the level of debt security in Ukraine. *Business Navigator*, №4(65), 105 – 110.

[93] Khomenko I. O., Porytska A. O. (2018). Management of the budget deficit in modern conditions. *Economics and management on transport*, vol. 6, 160–166 URL: http://surl.li/fruya

Table 1.10

Debt burden on the State Budget of Ukraine in 2018-2022, UAH billion

Indexes	Years					
	2018	2019	2020	2021	2022	30.09.2023
State debt , including	1860.3	1761.4	2259.2	2362.7	3715.1	4560.4
external	761.1	829.5	1000.7	1062.6	1389.7	1481.0
internal	1099.2	931.9	1258.5	1300.2	2325.4	3079.4
State-guaranteed debt , including	308.1	236.9	292.7	309.3	357.7	325.7
external	10.3	9.4	32.2	49.0	72.2	71.4
internal	297.8	227.6	260.4	260.3	285.5	254.4
The total amount of debt	2168.4	1998.3	2551.9	2672.1	4072.9	4886.1

Source: created by the authors based on data [10]

It should be noted that the maximum amount of public debt at the end of 2022 will be UAH 4072.9 billion, which corresponds to an increase of UAH 1400.8 billion. In September this year, the debt already amounted to UAH 4886.1 billion, which is UAH 813.3 billion more than last year. Analysing the previous years, the debt increased by UAH 120.18 bn (+4.8%) in 2021 compared to 2020, and by UAH 553.6 bn (+27.7%) in 2020 compared to 2019. It should be noted that in 2019 there was a reduction in both guaranteed and public debt. It is also important to note that when analysed in another currency, such as the US dollar, there was an increase in debt by USD 6.1 billion. This is due to the appreciation of the national currency during this period. In the context of martial law, we can expect a significant increase in debt, which

may be one of the manifestations of the impact of conflict conditions on the economy.

In our opinion, it is advisable to analyze the domestic public debt that arises from the growth of the state's debt to securities holders and other creditors. This process occurs through the placement of securities by the government on the domestic stock market, where they are available for purchase by both individuals and legal entities. It is important to note that this type of borrowing is characterized by a lower level of risk (Figure 1.2).

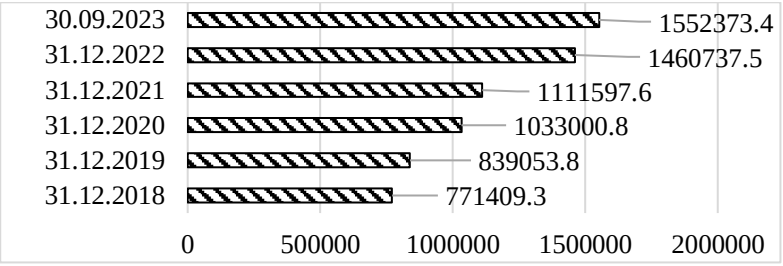


Fig. 1.2 Dynamics of the domestic public debt of Ukraine during 2018–September 30, 2023, UAH billion

Source: constructed by the authors based on data[94]

According to the data shown in Figure 1, there has been a steady and systematic increase in domestic public debt over the period under review. The continuous growth of this indicator is due to an increase in the volume of domestic government bonds issued. These are financial instruments issued by the government on the domestic market in order to raise funds. They are a form of long-term debt, i.e. the government commits itself to repay the funds invested within a certain period of time at a fixed interest rate. Investors who buy these

[94] Public debt of Ukraine. *Official website of the Ministry of Finance of Ukraine.* URL: https://index.minfin.com.ua/ua/finance/debtgov/

bonds provide a loan to the government, and the government in turn agrees to repay the invested funds with interest according to a specified schedule. In this way, the amount of accumulated financial resources coming to the state budget through transactions with domestic government bonds grows.

The detailed structure of the components of domestic debt is shown in Table 1.11.

Table 1.11

Dynamics of Ukraine's domestic debt by structural elements during 2018-2022 , UAH billion

Indicator	2018	2019	2020	2021	2022	Deviation 2022/2018
Debt for securities issued on the domestic market	759.8	764.2	868.5	998.73	1060.7	300.9
Share in domestic debt, %	99.1	99.1	99.2	99.8	99.8	0.7
Indebtedness to banks and other financial institutions	6.8	6.6	7.3	1.98	1.8	-5.0
Share in domestic debt, %	0.9	0.9	0.8	0.2	0.2	-0.7
Total domestic debt	766.6	770.8	875.8	1000.7	1062.5	295.9

Source: built by the authors based on data[95]

According to Table 1.11, the main part of the structure of domestic public debt consists of financial liabilities related to

[95] Public debt and publicly guaranteed debt. *Official website of the Ministry of Finance of Ukraine*. URL: https://mof.gov.ua/uk/derzhavnij-borg-ta-garantovanij-derzhavju-borg

the issuance of securities on the domestic financial market of Ukraine. The most important and attractive instrument in this context is the domestic government bond. It should be noted that the high discount rate of the National Bank of Ukraine led to an increase in interest rates on domestic government bonds, which resulted in an increase in the volume of public debt. This has also led to a crowding-out effect, whereby financial institutions channel their funds into buying government bonds rather than investing in the real economy.

It is also important to note that another important reason for the growth of domestic public debt was the expansion of opportunities for investing in government securities, especially in August 2020, when the possibilities for their initial placement were expanded. At that time, the procedures for managing payments on these securities were further improved and the strategy of lowering interest rates was continued.

There was little demand before the introduction of the freeze and as a result there were no auctions for the placement of domestic government bonds (DGBs). Auctions resumed at the end of April, but a new wave of the pandemic caused investors to change strategies again, leading to further changes in demand and rates. Demand did not recover until the end of the year. This had a positive impact on the implementation of the public borrowing plan and the financing of the budget.

The National Bank of Ukraine, on the initiative of the Ministry of Finance, organises auctions for the placement of domestic government bonds, in which the NBU itself and primary dealers participate. It is important to note that in order to obtain the status of a primary dealer, a bank must meet the criteria established by the Cabinet of Ministers of Ukraine[96].

[96] On Introduction of the Institution of Primary Dealers in the Government Securities Market : Decree of the Cabinet of Ministers of Ukraine of 14.04.2009 № 363. URL: https://zakon.rada.gov.ua/laws/show/363-2009-%D0%BF#Text

The initial public offering of government bonds is available only to primary dealers who have the exclusive right to purchase them. Investors wishing to purchase these bonds apply to these primary dealers. The category of investors purchasing domestic government bonds on the primary market in Ukraine includes the National Bank of Ukraine, banks, legal entities and individuals resident in Ukraine, as well as non-residents (Table 1.12).

Banks are intensively involved in the purchase and sale of government bonds both on the stock exchange and over-the-counter markets. The share of state-owned banks in the over-the-counter market is significant, accounting for 44.15%. Banks' activities in the securities market are considered reasonable, characterized by low risk, and generate stable and substantial income. This area is not limited to investment, which includes the placement of free resources in securities, but also includes the function of intermediation[97]. If a bank seeks to obtain a loan from the National Bank of Ukraine, government bonds can act as a reliable guarantee.

According to the NBU's annual report for 2022, banks' investments in government bonds increased by 60.4%, accounting for two-thirds of the nominal increase in banks' net assets during the year[98]. Domestic debt is characterized by an economic effect, as its participants are mainly residents, and thus funds are accumulated in the country itself. Thus, the analysis of the dynamics of domestic debt indicates its constant growth due to the expansion of domestic government bonds.

[97] Cherkasova S.V. (2019). Bank investment activity in the domestic stock market. *Entrepreneurship and trade*, Vol. 24. URL: http://lute.lviv.ua/fileadmin/www.lac.lviv.ua/data/DOI/2522-1256-2019-24-07.pdf

[98] Vodolazska O., Herman H. State debt management of Ukraine. *Economic scope*. 2020. URL: https://doi.org/10.32782/2224-6282/160-20

Table1.12

Information on holders of OVDP bonds in circulation as of December 30, 2022 (million UAH)

Date	Type of CPU	That's all	Bonds that are owned _					
			NBU	Banks	Legal entities	Territorial communities	Physical personal	Non-residents
30.12.2022	In total	1387971	704570	485646	107298.2	1884	30170.3	58,403.42
	OVDP denominated in hryvnia , including	1277 804.8	704570	403546.7	94998.6	1883.7	14,999.0	57,806.87
	OVDP denominated in foreign currency, including	110166.2	0.00	82098.8	12299.6	0.00	15,171.28	596.54
	T-bills denominated in US dollars	80876.5	0.00	54163.2	11521.7	0.00	14,595.04	596.54
	OVDP, nominated in the EURO	29289.8	0.00	27935.6	777.9	0.00	576.24	0.00

Source: based on[99]

[99] Volumes of active operations and share of non-performing assets in the system as a whole. *National Bank of Ukraine*. URL: https://bank.gov.ua/ua/statistic/supervision-statist

Another alternative for financing the budget is military bonds, which were proposed by the government from the very beginning of the full-scale invasion after the adoption of the relevant Resolution "On Issuing Domestic State Loan Bonds "Military Bonds" of 25 February 2022, No. 156[100]. It was planned to raise funds for the state budget through their placement in the amount of up to UAH 400 billion. According to the government, by February 2023 bonds worth more than UAH 100 billion had already been purchased under martial law. In addition, this type of debt has been available through the Diia portal since October 2022.

During the war, the National Bank of Ukraine was the main buyer of military bonds, and on 8 March 2002 the Board of the NBU adopted Resolution No. 43 "On the Purchase of Domestic Government Bonds "Military Bonds" During the Period of Martial Law"[101]. In accordance with the instructions of the Ministry of Finance of Ukraine, the National Bank of Ukraine purchased military bonds at their nominal value increased by the amount of accrued coupon income at the time of purchase. Transactions of this nature were discussed and approved by the NBU Board, taking into account the financial position and public finances. The NBU's purchases of military bonds were made by issuing hryvnia through an agreement between the NBU and the Ministry of Finance. It is important to note that these transactions were not taken into account when announcing the results of weekly auctions for the sale of

[100] Resolution of the NBU Board dated 08 March 2022 №43 "On the Purchase of Domestic State Loan Bonds "Military Bonds" during the period of martial law". URL: https://bank.gov.ua/ua/legislation/Resolution_08032022_43

[101] Resolution of the NBU Board dated 08 March 2022 №43 "On the Purchase of Domestic State Loan Bonds "Military Bonds" during the period of martial law". URL: https://bank.gov.ua/ua/legislation/Resolution_08032022_43

military bonds, which were regularly held on Tuesday[102]. Thus, the NBU's financing of the state budget with the help of military bonds amounted to 23.58%, while the funds received from the placement of domestic government bonds at auctions, including military bonds, amounted to 14.78%. This shows the effectiveness of using military bonds as an investment instrument. Figure 1.3 shows the monthly proceeds from the sale of military bonds.

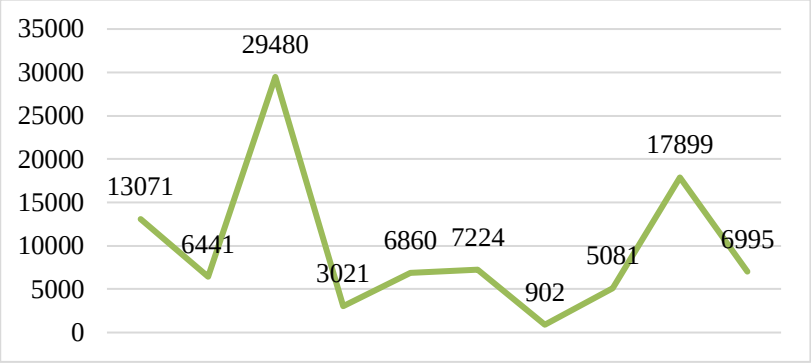


Fig. 1.3 Dynamics of changes in the amount of funds raised to the State budget from the sale of military bonds at auctions in 2022.

Source: built by the authors based on data[103]

The next step is to analyse the volume of external borrowing, as it plays an important role in meeting the basic needs of the economy in the presence of a budget deficit and serves to refinance past debts. If the efficiency of the management of these resources is insufficient, this may lead to

[102] Chubka O. Analysis of statistical indicators of the volume and structure of military bonds under martial law. *Eastern Europe: economy, business and management*. 2023. № 1(38). URL: https://doi.org/10.32782/easterneurope.38-12

[103] Announcements and results of auctions. *Official website of the Ministry of Finance of Ukraine*. URL: https://mof.gov.ua/uk/ogoloshennja-ta-rezultati-aukcioniv

an increase in the impact of the deepening economic crisis, as the state may not be able to meet its obligations in the future (figure 1.4).

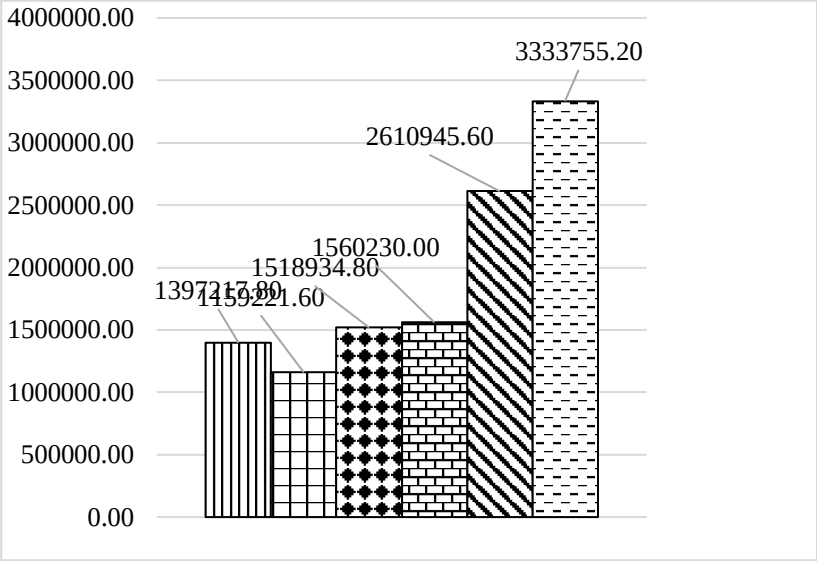


Fig. 1.4 Dynamics of external debt of Ukraine for 2018–30.09.2023, million UAH.

Source: constructed by the authors according to[104]

According to the information presented in the graph, it is clear that by the end of 2022 the total amount of public debt has increased by almost half in comparison with the same period of the previous year. As of 30 September 2023, the total debt amounted to UAH 3333755.2 million, which means that in 9 months the amount is already UAH 722809.60 million higher than the amount of debt at the end of last year. This may be due to a number of factors, such as the need for financial resources for the coverage of the budget deficit or the financing

[104] Public debt of Ukraine. *Official website of the Ministry of Finance of Ukraine.* URL: https://index.minfin.com.ua/ua/finance/debtgov/

of important sectors of the economy. Stability and effective debt management can help reduce the negative impact of external factors. With the increase in external debt, an important task is the rational management of these obligations. Effective use of the resources raised for economic development, reforms and allocation to priority sectors is an important aspect of external debt management.

Table 1.13

Dynamics of Ukraine's external debt by structural elements during 2018-2021 , UAH billion.

Source of debt / year	2018	2019	2020	2021	2022	Deviation 2022/2018
Loans from international financial organizations	637.2	607.7	483.1	581.7	463.1	-99.7
Loans from foreign governments	50.1	49.3	38.6	39.3	40.8	-9.85
Loans from foreign commercial banks and other foreign financial institutions	59	67.4	67.4	69.3	50.75	-11.16
Issue of securities on the foreign market	574.5	622.4	527.5	774.5	625	107.2
Debt, not assigned to other categories	52.3	50.5	42.9	54.1	120.5	72.7
Total foreign debt	1373.1	1397.3	1159.5	1159.5	1300.1	59,19

Source: built by the authors based on data[105]

Based on the data presented in Table 1.13, the size of the largest financial flows to the country is highlighted. In particular, there is a significant amount of resources received in

[105] Public debt and publicly guaranteed debt. *Official website of the Ministry of Finance of Ukraine.* URL: https://mof.gov.ua/uk/derzhavnij-borg-ta-garantovanij-derzhavju-borg

the form of loans from international financial organizations, as well as as a result of transactions on the issue of securities in the international financial market.

Let's take a closer look at the specific external debt instruments used by the government to raise foreign capital. In particular, we note that the main instruments are the conclusion of loan agreements and the issuance of external government loan bonds (EGLBs). The authorities use a variety of debt instruments to raise external funds, with a preference for the use of EGLBs and loan agreements. As shown in Table 4, at the end of 2022, the share of domestic government bonds was 48%, while loans from international financial organizations amounted to 35.6% (Figure 1.5).

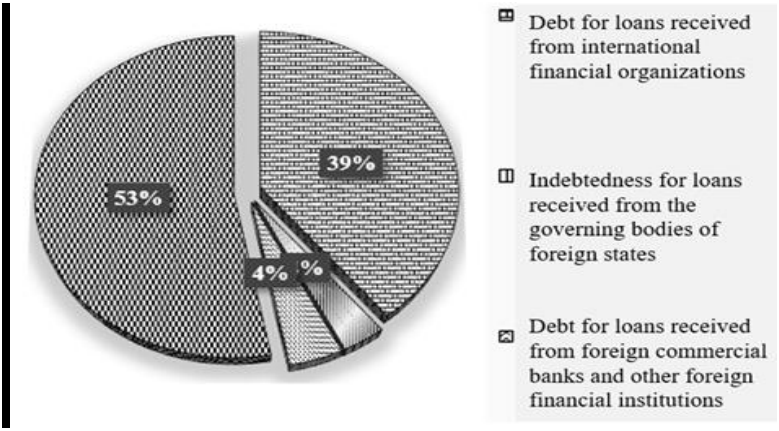


Fig. 1.5 The structure of external debt financing in Ukraine as of January 1, 2023, UAH billion.

Source: built by the authors based on data[106]

The deterioration of almost all debt sustainability indicators in 2020 and 2022 is due to the crisis caused by the

[106] Public debt and publicly guaranteed debt. *Official website of the Ministry of Finance of Ukraine.* URL: https://mof.gov.ua/uk/derzhavnij-borg-ta-garantovanij-derzhavju-borg

spread of COVID-19 and, in the latter case, the Russian invasion of Ukraine. The increase in the budget deficit has become relevant due to the need for public borrowing. The tense political and economic situation in the country also affected relations with international financial institutions.

Military events have a significant impact on all aspects of life, including the financial sector. This requires a rethinking of state, economic and political activities aimed at maximising resistance to the enemy on all fronts. Obviously, financial resources at all levels of the budget are now actively directed towards ensuring the defence capability of our country. However, the existing financial resources are not sufficient, so the state must find other sources to fulfil its functions. According to the Ministry of Finance of Ukraine, the cost of military operations for the state budget is estimated at about USD 10 billion per month, but this amount may be much higher[107].

A sharp increase in external and internal debt as a result of the military conflict is a natural phenomenon. For example, analysing the actions in 2022, the amount of public debt increased significantly by 3.7% in March, according to the Ministry of Finance of Ukraine. Experts predict that by the end of 2023 the gross public debt could rise to 82.6% of GDP. Compared to the same period in 2021, the volume of debt obligations has decreased by 49%. The main factors behind this growth are a fall in GDP of around 35% and a significant increase in the public deficit[108].

[107] Stepanenko S. V. (2020). State debt of Ukraine and its impact on the main socio-economic indicators. *Actual problems of innovative economy*, № 1, 5-10. URL: https://repo.btu.kharkov.ua/handle/123456789/942

[108] The International Monetary Fund has predicted a sharp rise in Ukraine's public debt due to the war. *Website*. URL: https://biz.censor.net/news/3335480/mvf_sprognozuvav_rizke_zrostannya_derjborgu_ukrayiny_cherez_viyinu

In the current period of our state's functioning, a modern approach to public debt management is being applied, which includes the creation of a new body - the State Debt Management Agency of Ukraine[109]. This decision was taken by the government in February 2020. The creation of this body was defined as one of the conditions for the implementation of the Public Debt Management Strategy for 2019-2024. This envisaged the introduction of a public debt management model similar to that used in EU countries such as Sweden, the Netherlands, Belgium, Austria and Germany, through the relevant state agency[110].

Even in difficult circumstances such as martial law, Ukraine continues to pay its debts on time and focuses on reducing and balancing its debt burden. To this end, the Public Debt Service and Repayment Fund has been established. In March 2022, a payment of USD 292 million was made on US dollar-denominated Eurobonds maturing in September of that year. The government plans to continue to meet its financial obligations and avoid a possible default or restructuring. In 2022, the government made payments of UAH 448.6 billion on its debt obligations.

In addition, the government is actively seeking international financial support and raises this issue in almost every negotiation, along with discussions on arms supplies. As a result, during the war, Ukraine has received support from most of the world's countries in the form of humanitarian, military or financial assistance, and some in all three (Figure1.6).

[109] Regulation on the State Debt Management Agency of Ukraine: *Resolution of the Cabinet of Ministers of Ukraine of 12 February 2020. № 127.* URL: https://zakon.rada.gov.ua/laws/show/127-2020-%D0%BF

[110] Regulation on the State Debt Management Agency of Ukraine: *Resolution of the Cabinet of Ministers of Ukraine of 12 February 2020. № 127.* URL: https://zakon.rada.gov.ua/laws/show/127-2020-%D0%BF

Small amounts have been provided by several European countries and Iceland. The financial assistance provided to Ukraine helps strengthen the country's sovereignty and defence against external threats, and is also used to purchase weapons, fuel and other necessities. In summary, the dynamics of public debt growth increased during the period under review, and this trend will continue due to the large-scale invasion of Ukrainian territory by russian troops. It is therefore important to continue efforts to attract additional financial resources, both external and domestic.

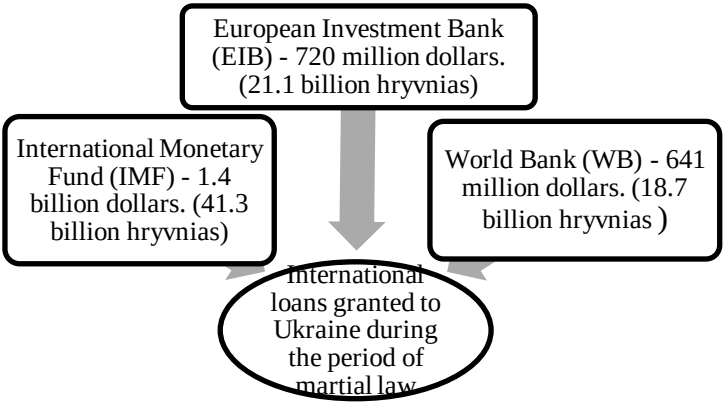


Fig. 1.6 International financial assistance to Ukraine as of December 31, 2022, UAH billion.

Source: built by the authors based on data[111]

In our view, in order to effectively control public debt, the Ukrainian government should develop alternative financing strategies that do not involve public spending commitments and are aimed at minimising risks to the country's debt

[111] Public debt and publicly guaranteed debt. *Official website of the Ministry of Finance of Ukraine*. URL: https://mof.gov.ua/uk/derzhavnij-borg-ta-garantovanij-derzhavju-borg

portfolio. In addition, such strategies should ensure a high level of financial security for the state. Let's take a closer look at the main problems of public debt management and assess its resilience to financial risks.

1.3. Assessment of debt sustainability and public debt management problems in the country

The main objectives of the country's debt policy are to ensure the resilience of the financial system to the impact of adverse debt-creating factors and to keep the debt burden within safe limits, or at least to ensure its stability.

Debt sustainability assessment is an important stage of financial analysis aimed at determining the sustainability and management of public debt. Its main purpose is to determine the country's ability to effectively meet its financial obligations and avoid the negative consequences associated with the growth of the debt burden. It is a complex task that takes into account various aspects of the economy and public finances. It is advisable to consider a number of theoretical aspects that define this process and influence its results.

The government and economic analysts are challenged to carefully consider the factors that determine debt sustainability, including key aspects of the country's economic health, budgetary management, and the relationship of debt obligations to the overall economic context. In this context, debt sustainability assessment becomes a necessary tool for developing effective financial management strategies and ensuring sustainable development of the national economy[112].

[112] Davydenko N.M., Zhovnirenko O.V., Volkov A.Y. (2021). Assessment of the level of debt security in Ukraine. *Business Navigator*, №4(65), 105 – 110.

First of all, we should pay attention to the state budget of Ukraine, in particular, to the dynamics of its performance in the period from 2018 to 2022. Particular emphasis should be placed on analyzing the expenditure and revenue parts of the budget, as this will contribute to a better understanding of the country's financial situation over the period (Figure 1.7).

Based on the information presented in Figure 1, we can note an increase in both revenues and expenditures of the state budget. The recorded total amount of revenues in 2022 amounted to UAH 1,787.3 billion, which is UAH 490.5 billion more than in the previous year 2021, which is an increase of 37.82% in percentage terms. When analysing the expenditure indicators, there is a consistent positive trend, which is reflected in the increase in the amount of expenditure from UAH 985.8 billion in 2018 to UAH 2705.4 billion in 2022.

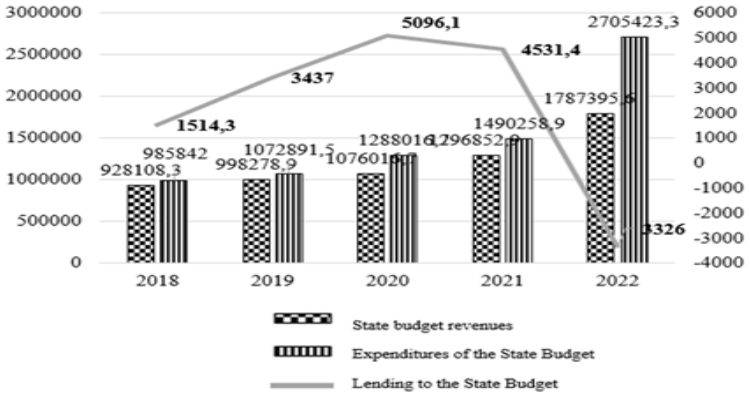


Fig. 1.7 Performance indicators of the State Budget of Ukraine for the period 2018–2022, UAH billion.

Source: built by the authors based on data[113]

[113] Public debt and publicly guaranteed debt. *Official website of the Ministry of Finance of Ukraine.* URL: https://mof.gov.ua/uk/derzhavnij-borg-ta-garantovanij-derzhavju-borg

This indicates an increase in the need for public funding. Compared to the previous year, the expenditure side increased by 81.54%. Such huge expenditures are related to military events on our territory. As for the volume of loans from budgetary funds, there is a downward trend since 2021, which indicates a negative value in comparison with the previous year and amounts to UAH 3,326 million. The excess of total revenues and the rapid growth of budget expenditures lead to an imbalance in the budget and cause an increase in the budget deficit. This deficit is becoming an integral part of the country's current budget policy, especially in times of war. It is important to note that even the most developed countries of the European Union have a deficit, and there is a direct link between this concept and public debt.

It is important to note that the Maastricht Treaty sets specific limits on the maximum allowable level of public debt, which should not exceed 60% of GDP. Let's make calculations for the period from 2017 to 2022 to further analyse the public debt as a percentage of GDP (Figure 1.8).

According to the data shown in the graph, which were recorded at the end of 2021, the ratio of public debt to GDP was close to 49%. This is below the emerging market average of 66.7% and the global average of 103.2% of GDP. However, in 2022 this ratio will increase significantly by 29.5%, as the total financing needs of the Ukrainian state budget (deficit + debt repayment) will amount to more than UAH 1.1 trillion, or almost 30% of GDP. This percentage was 78.4%, exceeding the acceptable value of 60%. Since the beginning of the war, foreign aid has covered 56% of the additional budget financing needs, i.e., the amount that the government could not raise from taxes and fees. In total, foreign aid is likely to have covered about 36% of total government budget expenditures in 2022 in the context of full-scale conflict.

This growth is due to the difficult economic and political situation in the country caused by the military events. Therefore, it can be argued that there is an urgent need for additional financing, in particular through the issuance of securities.

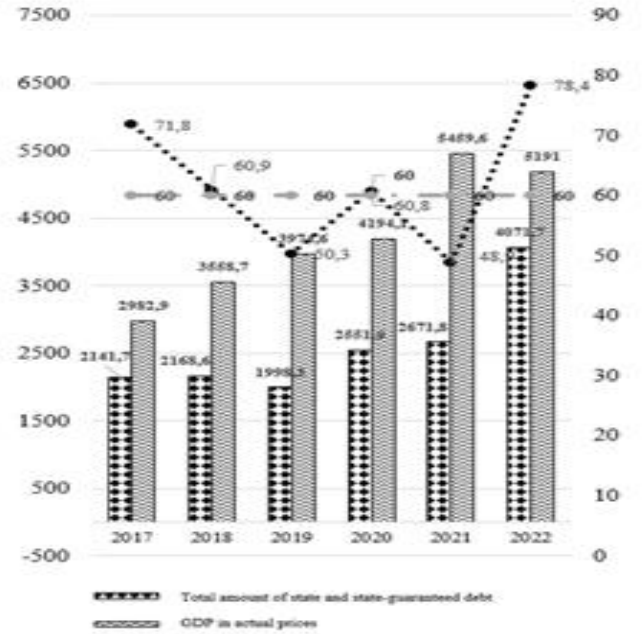


Fig. 1.8 The ratio of the dynamics of state and state-guaranteed debt to GDP for the period 2017–2022.
Source: built by the authors based on data[114]

In 2022, the total amount of financing for the state budget amounted to UAH 1.2 trillion, of which UAH 564.2 billion was

[114] Public debt of Ukraine. *Official website of the Ministry of Finance of Ukraine.* URL: https://index.minfin.com.ua/ua/finance/debtgov

in the form of external loans and UAH 666.9 billion was raised through the placement of domestic government bonds. It is important to note that the amount of external credit support is unprecedented, as the loans were provided on favourable terms, for long maturities and at low interest rates. Even taking into account the obligation to repay them in the future, their importance for the stabilisation of the Ukrainian financial system is extremely high[115].

Despite the challenges of debt reduction and martial law, Ukraine continues to meet its debt service obligations on time. To this end, the Public Debt Service and Repayment Fund has been established. In March 2022, a payment of USD 292 million was made on the US dollar-denominated Eurobonds maturing in September this year. The government is committed to ensuring that it continues to meet its obligations in order to avoid a possible default or restructuring. In total, UAH 448.6 billion was paid on the government's 2022 debt obligations.

Based on the analysis of the public debt of Ukraine by the International Monetary Fund (figure 1.9), forecasts have been obtained which are somewhat negative.

Thus, according to the information presented in Figure 1.9, there is an upward trend and it is projected that the public debt to GDP ratio could reach 92.3% in 2027. Such a situation is very risky for the country's economy, so it is important to take effective measures to address this problem. In March 2023, the International Monetary Fund (IMF) approved a new programme to support Ukraine through the Extended Fund Facility (EFF). This programme, which is designed for the medium term (4 years), provides assistance to Ukraine in the

[115] Ivashchenko A.G. State Debt of Ukraine and Sources of its Financing in the Conditions of War. URL: https://repo.btu.kharkov.ua/bitstream/123456789/36202/1/Stratehichnyi%20roxvytok%20Ukrainy%20heneruvannia%2C%20implementatsiia%2C%20raeliza

amount of USD 15.6 billion (SDR 11.6 billion) and is aimed at ensuring economic and financial stability and restoring the sustainability of the public debt.

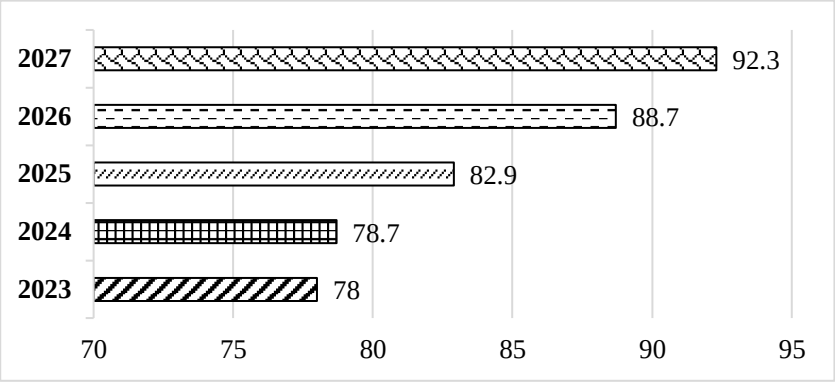


Fig. 1.9 State debt dynamics according to IMF forecasts, % of GDP during 2023-2027.

Source: built by the authors based on data[116]

The ultimate goal is Ukraine's recovery from war and its accession to the European Union. The approval of the Extended Fund Facility was a welcome step by the International Monetary Fund (IMF), as after two emergency financing transfers of about $2.7 billion, it became clear that Ukraine needed more stable and predictable support. The agreement with the IMF is intended to act as a catalyst for further international support by demonstrating Ukraine's reliability as a borrower and a strong partner. An analysis of the recipient country's debt sustainability is traditionally

[116] The International Monetary Fund has predicted a sharp increase in Ukraine's public debt due to the war. *Website.* URL: https://biz.censor.net/news/3335480/mvf_sprognozuvav_rizke_zrostannya_derjborgu_ukrayiny_cherez_viyinu

included in the disbursement report. Unlike the previous versions presented in March and October 2022, the latest debt sustainability assessment clearly shows the lack of such sustainability and the need for significant financing to restore it. In this context, the following International Monetary Fund (IMF) debt sustainability analysis should be considered[117].

According to an analysis by the International Monetary Fund dated 31 March 2023, without active debt management, debt sustainability is unstable in the baseline and pessimistic scenarios before restructuring. However, measures have been taken to restore debt sustainability, including exclusive financial support and debt relief. Therefore, in both the baseline and the pessimistic scenario, the public debt is considered to be sustainable in the long term. Based on the analysis of 22 April 2023, it has become clear that the public debt will only be recognised as sustainable in the long term if grant and concessional financing from multilateral and official bilateral sources continues to be forthcoming in this and subsequent years. Other important conditions are the rapid recovery of economic activity in the regions where no active hostilities are taking place, as well as compliance with the main provisions of the 2022-2024 budget statement and the 2021-2024 public debt management strategy. However, it is important to note that debt sustainability risks remain at an extremely high level. In general, the use of the debt sustainability analysis methodology for countries with market access is seriously complicated due to Ukraine's loss of the ability to attract external financing on market terms as a result of the war. In particular, Eurobonds have become less affordable due to the increased risk premium for investing in Ukrainian assets. Nevertheless, it is assumed that the

[117] Ukraine. IMF Country Report No. 23.132. March 2023. 167 p.

international community will continue to provide support by providing financing on preferential terms, and it may be possible to service external debt in the national currency in the future.

Overall, the impact of the war has a significant impact on the debt burden, especially as GDP declines. Although the situation is expected to improve from 2024 onwards, the forecast is sensitive to a number of factors and regular analysis during and after the military conflict is recommended. However, in addition to assumptions about changes in GDP and new debt, the evolution of the debt burden also depends on the exchange rate and interest rates. These parameters are currently stable, but significant changes in them could have a significant impact, especially if they change by more than assumed in this analysis. Although inflation will slow down, it will remain in double digits in 2023-2024 and is expected to reach the 5% target after the end of the forecast period, i.e. after 2025. According to the NBU, the factors leading to the decline in inflation in 2023 include tight monetary conditions, lower global inflation, improved logistics and relatively low demand. However, the main factor that could contribute to inflation in the coming years is a possible increase in administrative tariffs in line with market conditions, although this process largely depends on government decisions.

In 2023, the primary budget deficit will widen to 15.5% of GDP due to higher expenditures, especially military spending, and a slower recovery of revenues as a result of the economic slowdown. The forecast of fiscal revenues and expenditures is based on the data in the 2023 budget. Budget statement for 2022-2024 and information on expected grants. According to the Ministry of Finance, the budget deficit is expected to reach 20.6% of GDP in 2023. However, the economy is expected to continue to recover and revenues and

expenditures are expected to increase in line with the budget statement[118].

Among the external sources of financing, the DSA foresees macro-financial assistance from the EU, financing through the IMF's Extended Fund Facility (EFF), loans from the European Investment Bank and the World Bank, and further concessional loans from individual governments. Part of the external financing will be in the form of grants, which will be reflected in budget revenues and will not lead to debt accumulation. As regards domestic sources, the NBU plans to continue placing domestic government bonds, with a focus on medium-term securities. However, monetary financing of the budget by the NBU, as in 2022, is not expected. Thus, the NBU's portfolio of military bonds remains at around UAH 700 billion. The study found that after a sharp increase in the debt-to-GDP ratio in 2022, reaching 84.4% due to a sharp decline in GDP and debt accumulation, the dynamics of the debt burden will remain stable in 2023 and beyond, gradually declining to about 80%. Such a prospect is only possible if grants and concessional long-term external loans continue to be provided, as well as active placement of medium- and long-term domestic government bonds.

However, debt sustainability is vulnerable to potential challenges. A further decline in GDP, the need for a significant increase in interest rates to attract financing, a persistent large primary deficit or, more generally, any adverse shock could make the debt situation unsustainable. The overall economic situation in Ukraine is highly dependent on continued support and financing from international organisations and partner countries, as well as on the possibility of Ukraine being granted candidate status for accession to the European Union.

[118] Budget declaration for 2022-2024. *Official website of the Ministry of Finance of Ukraine.* URL: http://surl.li/xahi

The EFF will serve as a means of securing grants and concessional financing, but in the context of the ongoing war it is becoming impossible to avoid a primary budget deficit, high inflation and rising interest rates. Thus, winning the war remains the country's top priority. On the other hand, the forecast assumes full servicing of existing and new debt obligations. However, the Ministry of Finance has already entered into debt rescheduling agreements, suggesting some degree of default. Default is defined as the failure to fulfil debt obligations on time and in full. However, as long as creditors are willing to make compromises and defer payments on loans and debt securities, Ukraine does not fall under the definition of an actual default. Under the current strategy, the likelihood of a traditional default, when Ukraine declares itself insolvent and refuses to repay its debts, remains low. Instead, debt restructuring and repayment after the war is more likely.

In general, the Extended Fund Facility agreement with the IMF already guarantees concessional and grant financing in the coming years. It can be argued that the main efforts of the authorities and the NBU to attract financing have already been made, and the next step is to focus on fulfilling the conditions under which this financing has been received. However, the main risk to debt sustainability remains the ongoing war, as with each passing year resources, both ours and those of our partners, are depleted and the willingness to provide assistance is reduced, while fiscal imbalances continue to grow along with the debt burden. So the main task for citizens remains to support the Ukrainian army, while for the state, represented by its representatives, it is important to use the assistance from partners effectively. This is the only way to ensure that the debt burden schedule remains stable.

It is also worth noting that Ukraine, which is under martial law, faces numerous challenges and problems in public

debt management. In particular, we can highlight the following:

- economic difficulties - military operations lead to a significant decline in economic activity, which in turn affects tax revenues and general government revenues. This makes it difficult to meet debt service and repayment obligations.

- credit rating downgrade - a reduction in the country's credit rating due to uncertainty about the economic and political situation. This can make new borrowing more expensive and difficult.

- currency risk - for a country with external debt denominated in foreign currencies, this causes exchange rate fluctuations and large losses.

- the need for additional resources - martial law conditions create an additional need for financial resources to fund the army, leading to an increase in debt obligations.

- a decline in economic growth - lower investment and higher unemployment, which has an impact on economic growth and the country's ability to repay its debt.

- increased risk of default - military operations make forecasting more difficult and increase the risk of default, especially if it is not possible to secure stable revenues to service the debt.

- the need for emergency financing - under martial law there is a need for emergency financing to meet basic needs, leading to increased public debt.

Therefore, managing public debt under martial law requires the government to implement effective strategies and appropriate measures to ensure financial stability and minimise risks.

The need to effectively manage and service the ever-increasing public debt, as well as the lack of resources in the government budget, requires serious attention to the strategic

aspects of debt management policy. The choice of the right strategy and the systematic monitoring of the implementation of the decisions are the most important factors. The implementation of an effective and strategic public debt management policy is a crucial task for the country's economic stability and sustainability. In view of the challenges posed by martial law, it is necessary to focus on ways to improve public debt management in Ukraine and to examine the prospects for improving debt sustainability[119].

Following a thorough analysis of all public debt indicators, we can see that debt sustainability started to deteriorate with the onset of the 2008 crisis and has continued to worsen. This trend of increasing public debt remains relevant due to the large-scale aggression of Russian troops in Ukraine. One of the main problems in Ukraine's debt policy remains the lack of a clear debt management strategy. The necessary measures are taken without prior planning. They are taken only in response to the current needs of public finances. The mechanism of domestic and external debt management is largely limited to solving short-term tasks of the government's budgetary policy[120].

In view of this situation, at the current stage the government is faced with the important task of formulating a debt strategy in which the public debt is not only seen as a financial burden for the national economy, but also as an instrument for stimulating the socio-economic growth of the country. Such an approach will help reduce inflation and

[119] Davydenko N., Mykhaylichenko M., Titenko Z., Tsiukalo L. (2023). External Debt Management in the System of Financial Security of the State. *WSEAS Transactions on Business and Economics*, vol. 20, 144-153 URL: https://wseas.com/journals/articles.php?id=7255

[120] International experience of public debt restructuring in the context of Ukraine (2022). National Institute for Strategic Studies. URL: https://niss.gov.ua/doslidzhennya/ekonomika/mizhnarodnyy-dosvid-restrukturyzatsiyi-derzhavnoho-borhu-u-vymiri-ukrayiny

provide the necessary resources to develop entrepreneurship and attract foreign investment. Therefore, in order to create an effective mechanism for attracting and using borrowed funds, it is important to enshrine in current legislation a debt strategy that can be adapted to martial law conditions. This strategy should include the main goals, objectives and areas of use of financial resources attracted to the state budget through public borrowing During and after military operations, it is necessary to ensure that these financial resources are used exclusively for the urgent needs of the state, while ensuring that other areas are financed from alternative sources.

In our view, it is possible to reduce the financial burden in a targeted manner through debt restructuring. Although the Ukrainian government has opposed debt restructuring on the grounds that it could undermine investor confidence in Ukraine and have a significant impact on the country's creditworthiness, it is important to bear in mind that the war has already significantly undermined this confidence. The low value of Ukrainian bonds suggests that creditors are prepared for the possibility that Ukraine may have difficulties servicing and repaying its debt on time. As it is difficult to predict the duration of the war and its impact on the economy, creditors are already pricing in the worst-case scenario, including the possibility of debt restructuring[121].

The main objective of restructuring is to reduce creditors' losses while easing the debt burden for the borrower. The terms of restructuring are determined by individual agreements between the country and its creditors. The process can cover both internal and external debt. From the government's point of

[121] Vinokurov Y.(2022). Default or restructuring: what will happen to the Ukrainian state debt and what is expected from the US. *Ekonomichna Pravda*. URL: https://www.epravda.com.ua/publications/2022/05/18/687154

view, domestic borrowing is more attractive, and in some cases the state may even take enforcement action[122].

In international practice, the debt rescheduling approach is used for countries with high debt pressure, which is determined by high ratios such as the public debt-to-GDP ratio, the public external debt-to-GDP ratio, the public external debt-to-exports ratio, and others. This approach is particularly relevant in the context of the global financial and economic crisis.

If the country cannot meet its obligations, it may refuse to pay its debts at all. This is a negative phenomenon that leads to default and makes external debt servicing more difficult. However, it is unlikely to lead to a complete repudiation of its public obligations, given the various possibilities for restructuring the country. Given the peculiarities and trends in the growth of Ukraine's public debt, the urgent task is to stop its rapid growth[123].

One of the possible strategies to get out of the "debt spiral" situation, which is already being actively reproduced in the Ukrainian context, is to use the following potential instruments[124]:

- reducing public spending (budget deficit) while raising taxes can reduce demand and cause a recession. However, this can be used to avoid a recession if other government policy instruments are aimed at stimulating demand (e.g. monetary easing, devaluation, which can increase domestic demand);

[122] Kim K, Lim S. (2018). Determinants of state long-term debt: The political market framework. *The Social Science Journal*, Volume 55, Issue 3, 359-368.

[123] Perestiuk I.M. (2023). Improving the mechanism of public debt management in Ukraine. Law and public administration, №1, 223-227. URL: https://dspace.nau.edu.ua/handle/NAU/61467

[124] Sochka K. (2022). State debt of Ukraine: current realities and problems. *Acta Academiae Beregsasiensis. Economics*, № 2, 172–183. URL: https://doi.org/10.58423/2786-6742/2022

- reducing public expenditure that does not harm economic growth (for example, raising the retirement age, which allows the government to reduce pension costs while people continue to work and pay taxes to the budget); in this context, economic development is not halted, but public expenditure is reduced;

- increasing the efficiency of tax administration, preventing tax violations, reducing the size of the grey economy, legalising capital and actively attracting the support of foreign governments, international organisations, foreign citizens and companies;

- a fall in the value of the national currency due to devaluation can contribute to export growth by making domestic goods cheaper on international markets.

Reducing Ukraine's critical financial burden is appropriate given the composition of the existing public and guaranteed debt, which is dominated by external debt, including loans from international financial institutions and Eurobonds. In order to restore the sustainability of Ukraine's public finances and to overcome the problems of financing shortfalls in the context of the military conflict and post-war reconstruction, it is important to implement a public debt restructuring mechanism by implementing the following priority measures:

– the adoption of a new public debt strategy should consider methods of easing financial pressure (such as freezing, restructuring/debt relief) and the use of instruments to optimise public debt management, with a focus on balancing servicing costs and risks (by the Cabinet of Ministers of Ukraine and the Ministry of Finance);

– the support of international partners to ensure the government's immunity from default is being sought through the introduction of debt-freezing/deferral mechanisms and the

post-war restructuring of Ukraine's external public debt. This is seen as one of the prerequisites for securing financing for economic recovery and involves key agencies such as the Cabinet of Ministers of Ukraine, the Ministry of Finance, the National Bank of Ukraine and the Ministry of Foreign Affairs;

– submitting a request to the International Monetary Fund (IMF) and the World Bank to include Ukraine in the list of countries that can benefit from debt relief procedures under the HIPC and MDRI initiatives;

– agreements with the creditors of the Ukrainian state on the application of discounts to the nominal amount of debt or the current discounted value of liabilities under external bond loans;

– use the possibility of introducing debt swaps as an exchange instrument to finance special programmes aimed at preserving the environment and implementing measures to combat climate change as part of broader post-war reconstruction programmes (by the Cabinet of Ministers of Ukraine, the Ministry of Finance, the Ministry of Energy, the Ministry of Environmental Protection and the National Bank of Ukraine);

– Establish preliminary cooperation with creditors and potential partners on the implementation of debt swaps. This will include the involvement of reputable advisors from international financial institutions. The focus will be on the joint development of a mechanism that will take into account the experiences of the Caribbean, Belize and the Seychelles in debt conversion for the development of a "blue economy" and the issuance of "blue" bonds. It will also consider the transfer of international experience on sovereign debt restructuring, presented by the National Institute for Strategic Studies, to the Ukrainian context. (From the Cabinet of Ministers of Ukraine,

Ministry of Finance, Ministry of Energy, Ministry of Environmental Protection, National Bank of Ukraine)[125].

To optimise public debt management in Ukraine, a special document, the Medium-Term Public Debt Management Strategy, is being developed and approved. This document includes goals, objectives, indicators and expected results for the operational period. The main goals of public debt management in Ukraine for the period 2021-2024, defined by this government document before the outbreak of military events, include[126]:

- increase the share of hryvnia in total government debt;
- extend the medium-term maturity of debt obligations and optimise their repayment schedule;
- ensure conditions for effectively attracting favourable and profitable long-term financing;
- identify and actively engage with potential investors;
- improve the country's debt management strategy in the future.

It is clear that in the context of military operations, a rapid increase in public debt, economic downturn, destruction of economic and social infrastructure, mass emigration of the working population abroad and high inflation, Ukraine will have to use various instruments to manage public debt in consultation with creditors.

Therefore, in our view, the most effective ways for the government to implement debt burden reduction optimisation policies in the context of military operations are

[125] International experience of public debt restructuring in the context of Ukraine (2022). National Institute for Strategic Studies. URL: https://niss.gov.ua/doslidzhennya/ekonomika/mizhnarodnyy-dosvid-restrukturyzatsiyi-derzhavnoho-borhu-u-vymiri-ukrayiny

[126] Resolution of the Cabinet of Ministers of Ukraine "Medium-Term Strategy for Public Debt Management for 2021-2024" (09.12.2021) №1291) URL: https://www.kmu.gov.ua/npas/pro-zatverdzhennya-serednostrokovoyi-s1291-91221

- to gain international political support for the receipt of global financial assistance on a non-repayable basis;

- developing and adopting a new debt management strategy that takes into account the impact of martial law;

- a policy of rescheduling existing public debt obligations, subject to agreement with creditors, including a reduction in the total amount or in the interest rate, or a change in the terms of payment;

– make an official request and submit the necessary documents to the World Bank and the International Monetary Fund to include our country in the list of countries that can use the debt cancellation procedure and other similar initiatives[127].

In addition, we believe it is important to identify the most effective ways to improve public debt management strategies in the post-war period[128] [12]:

- raising additional funds through domestic loans rather than external borrowing will contribute to the development of credit resources in the national domestic market;

- the implementation of measures for the gradual minimisation of the attractiveness of external loans will effectively reduce the outflow of foreign currency funds abroad.

- the adoption of a prudent privatisation strategy for state assets with a view to the use of the proceeds for the repayment of the country's debt obligations;

− systematic monitoring of appropriate budget deficit levels is mandatory. It is important to maintain a balance between not overburdening the economy with domestic debt

[127] Kim K, Lim S. (2018). Determinants of state long-term debt: The political market framework. *The Social Science Journal*, Volume 55, Issue 3, 359-368.

[128] Stoyko O.Y., Shubenko I.A. (2021). Assessment of the state of public debt of Ukraine and directions of its optimisation. *Problems of economy*, №1, 123–133 URL: https://doi.org/10.32983/2222-0712-2021-1-123-133

and keeping the budget deficit at an acceptable level by gradually attracting domestic financing;

- increasing investment activity through government credit, which should be directed exclusively to highly liquid sectors and industrial development.

1.4. Adaptation of foreign experience in the implementation of the financial mechanism of social security for military personnel

Today, Ukraine is a strategic partner of the North Atlantic Alliance (NATO) and a candidate for accession to the European Union (EU). Achievement of the set goals and approximation to international standards is being carried out through profound socio-economic reforms and improvement of state policy in key areas of public life. International cooperation is an opportunity for Ukraine to gain experience in solving many problems and is one of the components of public policy development[129]. Implementing the experience of European Union and NATO member states in the field of social protection of military personnel is one of the priorities of cooperation with the Alliance and development of public policy[130].

That is why the issue of implementation of NATO standards has recently become quite relevant in all branches of

[129] Hordienko E. P. Foreign experience in the organisation of the system of social protection of combatants. Theory and practice of public management and administration in the XXI century: Materials of the First All-Ukrainian Scientific and Practical Conference, 30 November 2018 Kyiv. URL: http://academy.gov.ua/pages/dop/198/files/9e0c6916-89d9-4e68-bae0-7122d804a470.pdf

[130] Hordienko E. P.Characteristics of state policy in the field of social protection of military personnel. Problems of social and humanitarian development management: Materials of the XI regional scientific and practical conference with international participation, 1 December 2017. Dnipro: DRIDU NASU. 2017. pp. 336–338.

the Armed Forces, so in our opinion the foreign experience of the mechanism of social security for servicemen deserves a thorough study and the possibility of its application to the conditions of the Ukrainian Armed Forces.

Social protection of military personnel is a necessary element of ensuring the effective functioning of the armed forces of any state. The essence of social protection is to create conditions that neutralise or compensate for the effects of negative factors related to the professional activities of military personnel.

The countries that have achieved a high level of social protection for military personnel and are able to ensure the competitiveness of military service include The United States of America (hereafter - USA), the United Kingdom, the Federal Republic of Germany (hereafter - Germany) and France.

Comparing the social security of servicemen of the Armed Forces of Ukraine with the social norms of the personnel of the armed forces of other countries, it should be noted that, unlike the Ukrainian Armed Forces, the social guarantees of servicemen of other states are at a level capable of ensuring the proper existence of an individual, taking into account the necessary requirements of social and cultural development. In most economically developed countries, social protection refers to a whole range of state measures aimed at providing financial and material assistance to military personnel and persons discharged from military service in the event of illness, injury or disability. In addition, the choice, performance and completion of military service provide military personnel with a significant improvement in their standard of living compared to other groups of the population.

The state guarantees the soldiers sufficient material (food, clothing) and financial support. Let us note the main

points. Military personnel receive a monthly salary, allowances, surcharges and bonuses, as well as payments for participation in hostilities and/or captivity or encirclement. For the period of martial law, servicemen of the Armed Forces of Ukraine are paid additional remuneration of up to UAH 30,000 per month on a pro rata basis, and for those directly involved in hostilities the amount of this additional remuneration is increased to UAH 100,000 per month on a pro rata basis for the time spent in such actions[131]. In general, military personnel are also entitled to medical care. Military personnel are also entitled to leave during the period of martial law.

It should also be noted that in the area of social protection of servicemen of the Armed Forces of Ukraine, a significant number of adopted legal acts do not correspond to the standard of living and the costs (moral, spiritual, mental, psychological, physical) that servicemen incur in defending their country. There are types of social security that are purely declarative.

As of today, Ukraine has the status of a strategic partner of NATO, and its course of development should be oriented towards the European-American experience in the military sphere. Accordingly, analysing the social security system of NATO member states, we can say that there are five main elements in the system of material support for military personnel of foreign armies:

1. Direct payments on a regular basis: basic salary, housing allowance and food allowance. At the same time, the housing allowance and the food allowance may be paid in cash

[131] On the issue of certain payments to members of the Armed Forces, non-commissioned and senior officers, police officers and members of their families during martial law: Resolution of Cabinet of Ministers of Ukraine from 28/02/2022 № 168. URL: https://zakon.rada.gov.ua/laws/show/168-2022-%D0%BF#Text

as well as in kind[132].

2. Special incentive payments are payments made to certain categories of servicemen to encourage them to serve as crew members on ships, submarines and aircraft; to perform duties involving risk to life; to encourage the recruitment of specialists in shortage occupations, etc.

3. Compensation payments - provide for the reimbursement of unforeseen expenses related to the change of place of service, additional costs of accommodation in certain regions, etc. Nearly all the costs of moving to a new place of service for personnel and their families are covered[133].

4. Social benefits: free healthcare, various insurance schemes.

5. Other benefits, such as free education for both military personnel and their families, the possibility of purchasing goods and services under favourable conditions in the military trade system, benefits for social and domestic support for the families of military personnel, etc.[134].

The armies of NATO member countries are closely monitoring the implementation of social programmes for military personnel. The experience of European countries shows that they have achieved good results in solving the problems of social protection of military personnel and ensuring social standards. The system of social protection of military personnel in NATO member countries includes the

[132] Beikun A., Klachko A. Social protection of military personnel: regulatory and legal support and essence. Entrepreneurship, economy and law. 2021. № 6. pp. 90–94.

[133] Marko I.Y., Marko E.I., Chernysheva I.M. Foreign experience in providing social guarantees for servicemen: a collection of scientific papers of the Centre for Military Strategic Studies of the Ivan Chernyakhovsky National Defence University of Ukraine. 2019. № 2. pp. 135-142. URL: http://nbuv.gov.ua/ UJRN/Znpcvsd_2019_2

[134] Tsyukalo L.V., Chernysheva I.M. Features of social protection of servicemen in the countries of the world. Collection of materials of the permanent scientific and practical seminar "Actual problems of the construction of the Armed Forces, their application and comprehensive provision". Issue 2 (23). Kyiv: Central Research Institute of the Armed Forces of Ukraine. 2017. pp. 155-159.

implementation of state guarantees related to military service (pensions, state insurance, employment of wives), the creation of relevant organisations dealing directly with social protection issues (military trade unions, departments and services of the Ministry of Defence, various associations), as well as a coherent system of material and household support and social protection issues. The leadership of each country considers the most important component of army reform to be addressing the issues of social protection for soldiers, financial incentives for young people to join the military, and guarantees throughout their service. NATO leaders believe that for the army to be respected, it must attract the best people, who will only join if they feel cared for and respected, and if the state spares no effort to do so.

Thus, the system of direct incentives for servicemen adopted in the leading countries of the world - financial methods (financial support for servicemen, tax benefits, etc.) and indirect incentives - economic methods (free medical care for servicemen and benefits for family members, decent living conditions on military bases, discounts on the purchase of goods in military stores, etc.) - allows for a stable inflow of volunteers and an increase in the number of people willing to continue their service.

Although NATO countries are attempting to limit the resources allocated to military personnel maintenance by saving money and allocating a larger share to the development, modernisation and purchase of weapons, this does not affect the level of social protection of military personnel.

In most NATO countries, pension provision for those leaving military service contributes to the attractiveness and future prospects of service in the national armed forces, to the retention of the best trained professionals and to the morale of personnel.

For example, the US military retirement system is the main part of the financial incentive for military service. It consists of a military pension, a pension under the Federal Social Security programme and personal contributions by military personnel to personalised retirement accounts in banks, insurance companies, mutual funds or brokerage firms operating in the national securities market. This pension system makes US military personnel the most socially protected population group in the country.

The management of financial resources and the payment of pensions to members of the US armed forces is entrusted to the Military Retirement Fund, which receives annual allocations from the Pentagon's budget under the military retirement heading. There are three possible plans, one of which provides payments based on the length of time a person entered military service: Final Pay for those who entered military service before 8 September 1980, High-3 for those who signed a contract between 9 September 1980 and 1 August 1986, and CSB/REDUX for those who entered military service after 1 August 1986[135]. In addition, the Fund is financially supported by the budget of the Ministry of Finance, which allocates the necessary resources for the management of its assets.

The amount of a military pension is based on 40% of the average official salary for every three years of military service. For each year over 20, the pension is increased by 3.5% of the average official salary. In addition, a lump sum of $30,000 is paid if a soldier signs a contract for another five years after 15 years of military service. The maximum pension cannot exceed

[135] Marko I.Y., Marko E.I., Chernysheva I.M. Foreign experience in providing social guarantees for servicemen. Collection of scientific papers of the Centre for Military Strategic Studies of the Ivan Cherniakhovskyi National Defence University of Ukraine. Kyiv. 2019. № 2(66). pp. 135-142.

75% of the average salary used in the calculation[136].

Table 1.14

US military pension amounts (USD per month)

Military rank	Years worked		
	20 years	30 years	40 years and over
Ordinary soldier	664-1052	1049-1663	1399-2218
Sergeants and sergeants major	1336-2323	2121-4668	2828-6863
Warrant Officers	1999-2668	3363-5791	4484-8776
Officers and Generals	1585-5488	2588-12505	3340-18061

Source: Author's compilation based on 138

* *French White Paper of defense and national security (Press kit version). New York, 2008.*

Pensions under the federal social security programme are calculated on the basis of monthly social security tax deductions from military pay (15% to 25%). Pensions under this federal scheme are paid through the Social Security Administration and the US Department of Veterans Affairs.

In addition, military personnel may open an Individual Retirement Account with a bank, insurance company, mutual fund or brokerage firm that operates in the national securities market. Funds transferred to an Individual Retirement Account are not taxed. The right to use such an account begins at the age of 60, and the account is closed at the age of 80.

For example, when a US soldier leaves the armed forces, he or she is entitled to several types of pension, as well as the possibility of retraining or, for example, assistance and support in finding a job. In this way, the soldier has every chance of becoming a full member of society in the United States,

[136] The US Armed Forces: budget, structure, selection, salary. URL: https://armyinform.com.ua/2020/05/zbrojni-syly-ssha-byudzhet-struktura-vidbir-zarplata

without joining the ranks of the unemployed or the poor, who are supported by the state.

France has rather strict and regulated requirements for the amount of military pensions. For example, a French soldier's pension cannot be reduced to the level of an old-age pension or other pensions paid to citizens on a general basis[137]. This means that the nature of a French military pension implies that it is higher than the pensions paid to other categories of citizens on a general basis. The process of adjustment for demobilised military personnel is provided for, financed and controlled by the French Ministry of Defence, with guarantees of adjustment applicable to all categories of military personnel, regardless of their length of service[138].

According to US law, salaries, basic pay and pensions are regularly increased to reflect inflation and the cost of living. Such increases usually occur at the start of a new fiscal year[139].

The organisation of the allowance system in the armed forces of most NATO members is based on the same principles, with a similar structure and payment procedure. The structure of allowances is as follows: 70-80% is official pay and pay by military rank, and the remaining 20-30% is additional types of pay.

In the system of financial support for the armed forces, the issue of social protection of servicemen and their families in the Polish army occupies a special place. The structure of salaries and pensions for servicemen in the Polish and Ukrainian armies is similar, but the level of payments to

[137] French White Paper of defense and national security (Press kit version). New York, 2008.
[138] Shkuropatskyi O.I. World experience of administrative and legal regulation of social protection of the officers of the Armed Forces of Ukraine. Bulletin of V.N. Karazin Kharkiv National University. Series "Law". Issue 22. 2016. pp.118-122.
[139] BASIC PAY FOR ACTIVE DUTY OFFICERS// Official site of the Army of the United States of America. URL: http://www.goarmy.com/benefits/money/basic-pay-active-duty-soldiers.html

Ukrainian servicemen is much lower. According to statistical data, the average monthly salary of a serviceman in the Polish army is as follows: for senior officers - USD 1,600, for junior officers - USD 1,600. US dollars, for non-commissioned officers - 1100. US DOLLARS. The amount of pension paid to a person discharged from military service is 75% of the amount of remuneration for the last position held, and 80% in the case of dismissal due to disability.

A comparison of the level of remuneration of servicemen in the armed forces of the USA, Poland, Germany and Ukraine shows that the AFU servicemen are in last place in terms of remuneration (Table 1.15).

The provision of housing is an important issue in the study of the social security of military personnel in foreign countries. It should be noted that there are different approaches to solving this problem, including the provision of housing compensation and allowances. In accordance with US law, servicemen are provided with housing on the territory of the unit (garrison). If they live outside the garrison or purchase property, they are entitled to a special housing allowance. The amount of this allowance depends on military rank, official salary and marital status. In addition, officers who have served in the military for two or more years are entitled to a "housing loan" for the purchase of housing, with preferential repayment, provided by a private credit institution[140].

In France, housing for military personnel is provided in different ways. Privates and sergeants on contract live in barracks, while other categories of military personnel are provided with housing through rental or purchase.

[140] The US Armed Forces: budget, structure, selection, salary. URL: https://armyinform.com.ua/2020/05/zbrojni-syly-ssha-byudzhet-struktura-vidbir-zarplata

Table 1.15

Comparison of levels of financial support for military personnel of some NATO members and Ukraine by category (USD per month)

Military rank	Countries			
	USA	Poland	Germany	Ukraine
Ordinary soldier	1800	750	1800	270
Sergeant	2500	1000	3850	310
Lieutenant	3300	1100	4500	365
Captain	4200	1250	5100	400
Major	6300	1500	7200	420
Colonel	7300	2310	9300	615
General	12750	4400	15000	930

*Source: Author's compilation based on**

Note: USD/UAH exchange rate. USD to UAH at the official NBU exchange rate [https://bank.gov.ua/control/uk/curmetal/detail/currency?period=daily]

** BASIC PAY FOR ACTIVE DUTY SOLDIERS // Official site of the Army of the United States of America. URL: http://www.goarmy.com/benefits/money/basic-pay-active-duty-soldiers.html*

BASIC PAY FOR ACTIVE DUTY OFFICERS// Official site of the Army of the United States of America. URL: http://www.goarmy.com/benefits/money/basic-pay-active-duty-soldiers.html

Salaries of military personnel in the US, Ukraine and Europe. How much do defenders get paid. URL : https://tribuna.pl.ua/news/zarplati-vijskovosluzhbovtsiv-u-ssha-ukrayini-ta-yevropi-skilki-otrimuyut-zahisniki

In addition, the Ministry of Defence develops housing programmes that allow housing to be rented on favourable terms. To this end, the Ministry of Defence participates in the construction of housing on a shared-ownership basis and provides financial assistance to military personnel for the payment of utility bills. In France, military personnel also receive a housing allowance, the amount of which depends directly on the length of service, the military rank and the

composition of the family.

The cost of housing for German military personnel is covered by the federal budget and should not exceed 18% of their salary. Otherwise, if all the legal requirements for rented accommodation are met (a separate room of at least 6 square metres for each member of the family, including a child, and an additional room for the commander of a separate military unit - from the battalion commander upwards), the shortfall is covered by the French Ministry of Defence[141].

In the UK, the housing problem is solved as follows: unmarried soldiers and NCOs live in barracks. Military personnel with families are given service accommodation in garrisons and military camps. In addition, the Ministry of Defence rents accommodation for them from private individuals. Military personnel who are provided with service accommodation are charged a fee, the amount of which depends on their marital status and the quality of the accommodation. Military personnel who are provided with service housing are charged a fee, the amount of which depends on their marital status and the quality of the housing. Thus, for unmarried servicemen, this amount ranges from USD 43 to USD 371 per year, and for married servicemen - from USD 32 to USD 1125 per year. USD 371 per year for unmarried servicemen and between USD 32 and USD 1125 for married servicemen. Military personnel who rent housing receive an allowance of USD 592-4096 per year. US dollars per year. The amount depends on the military rank and the quality of the rented accommodation. Military personnel who have completed 22 years of service are entitled to a housing

[141] Todoroshko T.A., Oryshaka A. Social protection of military personnel in terms of housing. Bulletin of the Alfred Nobel University of Dnipro. Series "Legal Sciences". 2015. № 1 (6). pp.14-18.

allowance of USD 5,600[142].

Housing benefits are available to servicemen leaving the British Armed Forces. A special reserve housing stock of over 10,000 homes has been created to be sold on favourable terms to discharged personnel.

In addition, the Ministry of Defence provides financial assistance to soldiers who are discharged from the military to purchase their own homes. If a home is purchased, 30% of the cost is reimbursed, and if a loan is obtained from a bank to purchase a house or apartment, the MoD pays up to USD 320 per month towards the loan repayment. The Department of Defence pays up to USD 320 per month towards the repayment of the loan.

In Turkey, for example, military personnel are given service accommodation for the duration of their service, so they often use mortgages to buy homes in resorts where they move after leaving the military. Before that, they can rent the property out to tourists and pay off the loan with the rent they receive from them.

In our opinion, the experience of home ownership in Italy, where military personnel receive an interest-free loan to purchase a home, is interesting. Such a loan is granted at the expense of the state budget, its maximum amount can be 100 thousand euros and its duration is 10 years.

As far as Ukraine is concerned, it is the acquisition of own housing that often keeps servicemen in service, despite its effectiveness, the amount of state expenditure on its maintenance, etc. However, there is a huge problem of providing both permanent and temporary housing for servicemen and their families. The allowance for renting

[142] Foreign experience of legal regulation of housing provision for military personnel. Collection of scientific works of the Military Institute of Taras Shevchenko National University of Kyiv. 2013. Issue 39. pp. 253-256.

accommodation for servicemen is several times lower than the market average - USD 77 per month. The average market rent for an apartment is USD 77 per month, while the average market rent for a house is USD 200, and in large cities it ranges from USD 1,000 to USD 2,000. The average market rent for an apartment is USD 200 per month, and from USD 300 per month in major cities. USD per month in major cities.

The analysis shows that all developed countries have a clear procedure for providing housing for military personnel. The construction of housing where the client is a government agency is handled by the relevant Ministry of Construction. The sources of funding for capital construction are the investment and budgetary funds of the Ministry of Finance, which are accumulated at the expense of the funds allocated by the ministries, including the Ministry of Defence, within the limits of the budgetary funds allocated for this purpose. The pooling of financial resources in a state-owned company ensures planned and flexible cash flows and eliminates the possibility of cash shortages, as well as a significant reduction in the indirect costs of managing housing projects by consolidating administrative and engineering departments in one company. This merger reduces construction costs and ensures cost-effective use of budget funds allocated to customers.

Another form of social security in many countries is life and health insurance for military personnel, which varies in form and scope. One example is the organisation of life and health insurance for members of the US Army, for which there are 8 national insurance programmes. About 100 private insurance companies are involved in providing life and health insurance for military personnel.

Life insurance for the full sum insured comes into effect from the moment of enrolment in the US Armed Forces and is

valid for the entire period of service and 120 days after discharge. The US state life insurance programme for military personnel was launched in 1965 and the responsibility for its implementation is vested in the Department of Veterans Affairs. Initially, this programme provided life insurance only for regular military personnel, but by 1974 it included reserve and national guard personnel, as well as cadets of higher military educational institutions. At the same time, the sum insured since the approval of this programme has increased from USD 10 to USD 250 thousand.

In the United States, for example, a monthly premium is deducted from the military member's pay and paid into the insurance company's account, the amount of which depends on the amount of the insurance policy and the insurance programme.

The life and health of an American soldier on combat duty is insured by the Pentagon for $250,000. US DOLLARS. However, this insurance can be cancelled and a monthly supplement of 10 US DOLLARS. Soldiers under the age of 35 can also increase their coverage to USD 1-3 million by paying out of pocket. Coverage can also be increased to USD 1-3 million by paying additional money.

Health insurance for military personnel is provided by the CHAMPUS programme (The Civilian Health and Medical Programme of the Uniformed Services). A similar form of insurance for professional military personnel (a type of departmental insurance) is provided in France, Germany and the United Kingdom. This programme allows military personnel, veterans and their families to pay most of the cost of medical services received in civilian hospitals under contract with the Ministry of Defence. Up to $2.5 billion is spent annually on the CHAMPUS programme from the budgets of the Department of Defence and the Veterans Administration.

This is in addition to the funding for the above-mentioned programmes of medical and social support for subordinate contingents[143].

The British Armed Forces do not have a specific compulsory insurance scheme for servicemen, but servicemen are covered by the country's system of individual voluntary insurance for citizens, under which each serviceman voluntarily takes out a contract with an insurance company. The insurance contract usually contains two main clauses: disability or injury to health and death. At the same time, there is a special reduced scale of monthly insurance premiums for military personnel in the amount of £10 - £100 depending on the amount of insurance, which ranges from £10 to £100 thousand.

As far as military insurance in the Armed Forces of Ukraine is concerned, there is currently no state compulsory insurance for servicemen. Voluntary insurance provided by insurance companies is quite common. However, without state support, they will not be able to provide full protection for servicemen, as the risk of an insured event occurring as a result of military operations is an exception in all insurance contracts. The service can also be voluntary, but in this case the agreement of the insurers and the support of the state are required.

An analysis of foreign experience with the financial provision of social guarantees shows that the material support of the military personnel of NATO member states is at a level capable of ensuring a decent existence. However, the basis of their social security is not a monetary allowance, but a set of various social guarantees compared to the civilian population, which contributes to the prestige of military service and the

[143] Shekera O.G. Socio-economic aspects of the formation of the medical support system of the Armed Forces of Ukraine: a monograph. Kyiv: EKMO. 2006. 274 p.

combat capability of the armed forces. These measures are backed by real expenditure from the federal budget and are strictly implemented by the authorities at all levels.

In Ukraine, the basis of social security for servicemen is the level of financial support, which cannot meet Euro-Atlantic standards for social guarantees for servicemen.

According to recent opinion polls, the army is regaining a positive image in society and remains almost the only state institution trusted by the majority of the country's population.

According to international experience, developed countries transfer elements of social security into monetary relations. In Britain, for example, the army does not own land or housing. This is all done on the external specialised market, which does the necessary work much more efficiently and cheaply. During their service, military personnel only receive service accommodation or compensation for its rent. When they leave the service, they receive a cash bonus which they can spend on buying their own accommodation or travelling.

Thus, Ukraine should change its approach to the social security of the military and use international experience, as the financial support of the social sphere of the armed forces of foreign countries is quite diverse and more effective than in Ukraine.

At the same time, it should be noted that foreign experience in solving problems of social protection of military personnel and ensuring social standards of military service is not undisputed. Only a creative approach to the use of international experience, taking into account the current realities of Ukraine, will contribute to the creation of a professional army. Ukrainian legislation contains a sufficient range of social guarantees, benefits and compensations, but unfortunately some of them are declarative and have long since lost their incentive value.

Having analysed the experience of financial support for the social protection of military personnel in the armies of NATO member countries, we can identify the main features:

- - the issue of social protection of military personnel is relevant for most countries in the world;

- - in all the countries studied, military personnel belong to the group entitled to a greater number of state benefits, i.e. military personnel are the most protected social group in the country;

- the main types of social security for servicemen in the countries studied are: high level of servicemen's income, which is several times higher than the salary of servicemen of the Ukrainian army and consists of basic salaries, allowances, additional payments and compensations; timely and high-quality supply of food and clothing; provision of housing, medical care and sanatorium and resort services; organisation of leisure activities for servicemen and others; insurance guarantees; guarantees upon discharge from military service;

- loan rates, lump sums and other benefits enable servicemen of foreign armies to purchase housing without affecting the family budget of the serviceman and his family members.

On the basis of a comparative analysis of the social security of Ukrainian servicemen with the social norms of the armed forces of NATO member states, we can state that, unlike the armed forces of Ukraine, the social guarantees of the military personnel of the North Atlantic Alliance are at a level capable of ensuring a decent human existence, taking into account the necessary requirements of social and cultural development. Moreover, in most countries with a high level of economic development, the term "social protection" refers to a whole range of state measures aimed at providing financial assistance to retired, sick, injured or disabled servicemen.

A study of foreign experience in providing social guarantees for military personnel has made it possible to identify their main components and characteristics in NATO member states. The basis of social welfare and the ultimate goal of economic activity of any state is a high level of social guarantees. In our opinion, there are shortcomings in their practical implementation for military personnel in our country. For example, most of the existing benefits are compensatory rather than motivational. Certain provisions of a number of laws are still declarative. Approaches and methods for observing and exercising the constitutional rights of persons with disabilities, including those caused by war, need to be changed. There is currently no systematic rehabilitation infrastructure in Ukraine. Another problem for soldiers is the lack of an effective mechanism for solving the housing problem.

In our opinion, the relevant laws ("On compulsory state social insurance in the event of unemployment", "On collection and accounting of a single contribution to compulsory state social insurance", "On compulsory state social insurance") do not contain sufficient provisions for combatants. The shortcomings of the current legislation in the area of legal provision of social protection for servicemen and the legislator's miscalculations in financing this area lead to an inadequate level of such rights, which ultimately affects the level of trust in the government.

In order to improve the social situation and interest in military service, it is necessary to improve the social protection of servicemen, taking into account the experience of NATO member states. We also believe that it is appropriate to use extra-budgetary funds to implement social protection programmes for military personnel, as the centralised fund intended for national needs is insufficient. There is a need to

attract state and local government investment in the development of modern rehabilitation infrastructure for the treatment of military personnel. A comprehensive state programme should be developed and a register of servicemen in need of military housing or private property should be established. An important area for further improvement of the regulatory framework could be the development of a mechanism for support and joint responsibility of the State and local governments for life insurance of local residents who are military personnel participating in hostilities.

Therefore, we believe that in order to improve social guarantees, benefits and compensation, as well as the interest in military service, it is necessary to focus on areas of improving the social protection of servicemen, taking into account the experience of some NATO member states, such as the United States, Germany and France. Specific measures to strengthen the social protection of military personnel include additional payments in connection with the renewal of a contract for further service. In the world's leading countries, payments for contract renewal depend on the shortage of military skills and increase with each contract renewal. In the event of early termination of the contract, the amounts paid are withheld in proportion to the unexpired term.

Even in the context of a large-scale war, Ukraine is implementing defence reform in line with NATO standards, which raises the issue of forming the Armed Forces of Ukraine on the basis of the principle of professional recruitment, which also requires increased attention to the current system of social protection of servicemen, which should help motivate them to perform their service tasks efficiently.

CHAPTER 2. PECULIARITIES OF THE FINANCIAL SECURITY OF ENTERPRISES UNDER CONDITIONS OF INSECURITY

2.1. Tax and social security liabilities for individuals earning income from websites (case in Bulgaria)

Online communication has become an integral part of people's daily lives, so understanding the positive impact of these media is an important issue. In the social media environment, personal blogs have become an increasingly popular place for people to write their thoughts and experiences, and post their writings in an online space accessible to all, which in many cases becomes their presence in cyberspace. According to Technorati Media State of the Blogosphere (2011), sixty per cent of bloggers “blog for fun” and do not report any income. Half of these bloggers said they prefer to express their personal reflections when blogging. In this situation, when the personal website (or blog) has no advertising positions, there is no income, respectively no profit, and therefore no taxes. That is the basic principle of the income tax system for individuals who are not sole traders. So-called the "principle of taxation on admission" implies that the tax liability to the individual arises at the very moment when the income is credited to his account.

Blogging has evolved over the last decade, with bloggers putting more effort and time into creating complex textual and multimedia content. Accordingly, monetizing blogs is one of the biggest concerns among many bloggers[144]. From an

144 Technorati Media State of the Blogosphere (2011), http://technorati.com/socialmedia/article/state-of-the-blogosphere-2011-introduction [available at 10.01.2024]

insurance point of view, the situation is presented as follows: in the absence of contracts, for the purposes of insurance, working on an internet site constitutes an employment activity which individuals carry out at their own risk and expense. For the purposes of the Social Insurance Code, such persons are self-employed.

In this capacity are persons registered as implementing a freelance and/or craft activity; persons performing an employment activity as sole traders, owners or partners in commercial companies and individuals - members of unincorporated companies; registered farmers and tobacco growers.

Internet commerce has grown significantly over the years and has taken new forms. In this context, there is a growing need for information and clarification on the tax and social security rules applicable to websites. There are various mecha-nisms [145] for generating income that bloggers can use. Some of the most common revenue streams currently available and used by many bloggers to make money from their blogs are advertising, paid content and affiliate marketing, donations, paid subscriptions, consulting, journalistic work for other media [157]. If an individual has a profitable blog by generating income from internet activities, the tax rules are the same as any other income-generating business. Internet income-generating activities include online gaming, advertising revenue, affiliate and marketing activities, etc.

All benefits received through work, capital, business or other kinds of activity are taxable and must be declared.

As a rule, a distinction should be differentiated between commercial and non-commercial (hobby) activities. Exactly

[145] Zadeh, A., R. Sharda (2022). How Can Our Tweets Go Viral? Point-Process Modelling of Brand Content. Information and Management Volume 59, Issue 2, Article number 103594

what the business is (hobby or commercial) is judged according to particular criteria.

Today, anyone can create a blog for free to write about things that interest them [146]. That alone does not result in additional obligations for the person if his website does not contain advertising items that generate income for him. Therefore, non-commercial activities such as entertainment and community work are generally defined as hobbies. Commercial activities unlikely to generate profit or provide financial benefits may also be considered a hobby.

If the individual who owns a personal blog has featured advertising items or receives payments for reviewing material, then his pleasure to own such a site is associated with unexpected tax and social security liabilities. I.e. for an activity to be considered commercial, it must be likely to generate financial benefits for the taxpayer. The decisive factor is whether the activity is profitable when viewed objectively over a given period.

If the activity generates financial benefits during the ac-counting period, the income from the web-based activity will be considered taxable.

The general conditions for an income-generating activity to be considered a commercial activity are as follows:

- it is intended to have a specified duration,
- has a defined scope,
- it is likely to generate a profit and
- it is carried out for the taxpayer's own account and risk.

146 Müller, S., S. Goswami, H. Krcmar, (2011). Monetizing blogs: Revenue streams of individual blogs. 19th European Conference on Information Systems - ICT and Sustainable Service Development, ECIS 2011 Proceedings, http://aisel.ais- net.org/ecis2011/256 [available at 10.01.2024]

The statutory grounds for the existence of such obligations and how they are determined and implemented vary depending on the legal status of the individual.

In such a situation, it shall be assumed that the income derived from advertising is part of the trade because the individual and the sole trader have the same legal entity. If it is accepted that the order of income taxation from commercial activities is also applicable to the income, received from the personal blog, then the income from it will be taxed after deducting the costs of creating and maintaining the site.

For example, lawyers, notaries, chartered accountants, medical specialists, architects, programmers, cultural figures and others who meet the conditions for the existence of the concept of Freelancer as defined in paragraph 29 of § 1 of the additional provisions of the Personal Income Tax Act. The order of the tax treatment of income from such sites depends on to what extent they are related to the person's profession. It does not matter whether the income is earned through an advertising agency, Google, Easy Trade or another payer. If they are related to the individual`s professional activity, then based on Article 29, par. 1, т. 3 of the Personal Income Tax Act, the income shall be taxed after a deduction of 25 per cent of recognised expenses or, where the revenue is not related to such activity, it is taxed as income of an individual.

In this case, the received revenue is taxed on the entire amount without recognition of costs.

The arguments for the tax obligations of the persons and the application of this procedure for taxation of their income from advertisements on Internet sites are explained in an opinion of the National Revenue Agency, issued by letter No 24-34-35 from 06.04.2009. The statement is given in connection with a query relating to circumstances similar to those in the following case:

An individual has a blog on the internet with helpful articles under any of the following labels: shadow minister (about government, the state, public services, power, the EU), life economics (about the things of life from an economic perspective), macroeconomics (about unemployment, inflation, GDP and other macroeconomic issues), personal finance (about sources of income, saving, investing, budgeting). The blog has minimal fees for Domain (not purchased from Bulgarian websites) and hosting. In addition, the person has positioned ads on it, and also from the number of visits and clicks on the Domain, receives an income in a PayPal account of about 500 euros per year, through which to support the blog.

The following questions arise:

Should this income be taxed like it is not an occupation?

Is it necessary for the person to register that they are carrying on a business?

Does the person have any other tax effects or imperative obligations which, if they do exist, would completely negate the existence of the blog?

In this case, the individual receives income in a PayPal account from visits, clicks and advertisements posted on the blog, and according to the National Revenue Agency's opinion, the individual incurs income tax, value-added tax and social security tax obligations.

As a general rule, the tax treatment of income such as the above depends on the purpose and intended use of the relevant website and the practical possibilities can be summarized in two main hypotheses:

(a). The individual carries on a business and, as such, has a website or blog and accordingly pays certain expenses for its maintenance, including the purchase of a Domain, payment of fees, etc. In this case, the costs, as well as the income (revenue) from the maintenance, follow the taxation provided for in the

Personal Income Tax Act for the income from the respective business activity, as follows:

- Income from business activity as a sole trader. For sole proprietors who are traders within the meaning of the Commercial Law, regardless of whether they are registered or not registered as sole traders - the taxable earning income is formed by the procedures of Article 1-7 of the Personal Income Tax Act, and the annual taxable amount - by Article 28 of the Act.

- Income from other business activities. For sole proprietors who carry out business activities but are not traders within the meaning of the Commercial Act (for example, a freelance profession) - the taxable income is formed by the procedure laid down in Article 29 of the Personal Income Tax Act and the annual tax base by the procedure laid down in Article 30 of the Act.

Within the meaning of Article 1, par. 11 of the Personal Income Tax Act, income derived from business activity through a fixed base in the territory of the Republic of Bulgaria or from the disposition of the property of such fixed base shall be from a source in the country, the place of payment of the income not being taken into account. Therefore, the fact that the purchased Domain is not from the Bulgarian web has no bearing on the definition of the source of income in the present case.

(б). The individual is not carrying out a business activity (as it is in the case) or carrying out such business however, the website, also as the expenses paid by him, are not related to his business activity. In this case, the income falls under Article 35(6) of the Personal Income Tax Act, i.e. constitutes taxable income from so-called "other sources", being any income not specifically mentioned in this Act nor subject to final taxes under the Personal Income Tax Act or the Corporate Income Tax Act.

Cash income is taxed in advance when the payer for these other sources is an enterprise or a self-employed person. The annual tax base for such earnings shall be formed by Article 36 of the Personal Income Tax Act. Also, this income shall be taxable, acquired during the tax year, and reduced by the contributions which the individual is obliged to make for the tax year at his own expense under the Health Insurance Act. There is no legal possibility to deduct costs from income subject to taxation under Article 35 and Article 36 of the Personal Income Tax Act.

For the Value Added Tax Act, the services performed (in the case above) by the individual are classified as "electronic services". In this connection, there is one disturbing circumstance relating to supplies, which arises from providing such services to recipients not registered for VAT purposes and established in other member states of the European Union. That is the requirement to register suppliers of such services under Article 97a for the Value Added Tax Act within seven days before getting the first amount from a recipient of the service.

Registration obligations and contributions payable are as follows:

Under the provision of Article 10 of the Social Insurance Code, for insurance, work on an internet site constitutes an employment activity which individuals carry out at their own risk and expense. Such individuals within the meaning of the Social Insurance Code are self-employed persons. In this capacity are persons registered as exercising a freelance profession and/or craft activity; persons who are self-employed, sole traders, owners or partners in commercial companies and individuals - members of unincorporated companies; registered farmers and tobacco growers.

Their securing shall be conducted following Art. 3, items 1, 2 and 4 of the Social Insurance Code. According to Article 7

of the Social Insurance Code, social security contributions shall be at their own expense and be payable in advance between the minimum and the maximum monthly amount of social security income determined by the Law on the Budget of the State Social Insurance for the respective year. Self-employed individuals also form a final monthly amount of social security income, based on the data declared in reference to the annual tax return under the Personal Income Tax Act /by the argument of Article 6, paragraph 8 of the Social Security Code/.

Based on section 29(1) of the Additional Provisions of the Personal Income Tax Act, in the circumstances in question, an individual could only be regarded as a freelancer if he carries on a professional activity on his own account, is not registered as a sole trader and is a self-employed person within the meaning of the Social Security Code - which, as far as is understood, he is not.

Under Article 12, paragraph 2 of the BULSTAT Register Act, individuals implementing a freelance or craft activity shall be entered into the register within seven days from the commencement of the performing of an employment activity by submitting an application for registration in a form approved by the Executive Director of the Registry Agency to the relevant Registry Office. Under Article 45 of the Law, whoever fails to fulfill his obligations under Article 12 in due time shall be penalized with a fine for individuals in the amount of BGN 700 (approximately 350 euros) or a pecuniary sanction for legal entities up to BGN 1,000 (around 500 euros). In the event of a repeat offence under par. 1, the penalty shall be from BGN 50 to BGN 3 000.

According to the author, since the individual in question does not meet the criteria of a freelancer, he is not obliged to register. The opposite would indicate that all individuals owning websites with advertising positions would have to be

treated as freelancers with all the resulting registration and insurance obligations in order to be in breach of current legislation.

The commentary on the example illustrates the current legal regime for the tax and social security obligations of individuals in the Republic of Bulgaria who receive income from advertising positions, paid content, affiliate marketing, etc., on their personal sites, which is not related to the implementation of a "free profession". In this case, the received income is taxed on the entire amount, deducting only the cost of health contributions payable on these amounts. If the website (or blog) has no advertising positions, no revenue is received, no profit is made, and accordingly, there are no taxes. That is the principle of income taxation for individuals who are not sole traders - income is taxable when such is received.

2.2. Mortgage lending as an investment center in Ukraine: banking during the war and the engine for post–war reconstruction

Mortgage relations existed in Ukraine before 1917 (in Galicia and Volyn until 1939, in Northern Bukovina and Southern Bessarabia until 1940, in Transcarpathia until 1945). In Ukraine, mortgage relations are regulated by the Law of Ukraine «On Mortgage» (as amended on October 2, 1992), in particular, by Section 2 «Mortgage» (art.20-29), which facilitates the creation of mortgages, but not all legal prerequisites necessary for its active development have been created. The new Land Code of Ukraine (October 25, 2001) is expected to play an important role in the development of mortgages. The Ministry of Justice of Ukraine has drafted the Law of Ukraine «On Mortgage».

If this law is properly finalized and adopted by the Verkhovna Rada of Ukraine, the development of mortgage lending in our country will be greatly facilitated. The Law «On Valuation of Property, Property Rights and Professional Valuation Activity in Ukraine» (12.07.2001), adopted by the Verkhovna Rada of Ukraine, may play a significant role in the development of mortgage lending if national valuation standards are developed in full compliance with international standards [147][148][149][150].

It is also necessary to adopt a law that would establish a procedure for registering real estates and rights to it. A prerequisite for the development of mortgage lending in Ukraine is the development and adoption of the legislations regulating various aspects of mortgage institutions (for example, the Law of Ukraine «On Peculiarities of Establishment and Operation of Mortgage Institutions»). It is also important to simplify insolvency procedures for insolvent companies and speed up the sale of collateral.

Mortgage (Greek - ὑποθήκη) – pledge of land and real estate, in which the land and/or property constituting the subject of mortgage remains with the pledgor or a third party [151].

[147] Andreeva G.I. Instruments and technologies of mortgage lending. Collection of scientific papers «Economics: problems of the theory and practice». Dnipropetrovsk: DNU. 2015. V.3. No. 200. P.641-650.

[148] Basylevych V. Mortgage market. V. Basylevych, N. Pogoreltseva K.: Znannia, 2018. 717 p.

[149] Beregulia O. Application of new mortgage instruments as a means of increasing competitiveness. *Culture of people of the Black Sea coastal area*. 2018. No. 5. P. 42-49.

[150] Burmaka M. Securitization as the regulation of the mortgage capital market: international experience and perspectives of development in Ukraine. *Journal of the Academy of Banking*. 2018. No. 2. P. 13- 20.

[151] Mortgage of better times. When mortgage will be available in Ukraine. URL: https://propertytimes.com.ua/finance/ipoteka_do_luchshih_vremen_kogda_budet_dostupnaya_ipo teka_v_ukraine.

The Law of Ukraine «On Mortgage», adopted in June 2003, defines mortgages as follows: «A mortgage is a type of security for the fulfillment of the borrower's obligation to the lender by pledging real estate, which consists in the lender's right (in case of default by the debtor) to satisfy its monetary claims at the expense of the value of the pledged real estate».

Types of mortgages are types of agreements under which the debtor pledges an asset (usually property) to the lender (creditor). This agreement is shown to be related to a loan. In other words, the contractor must pay a number of payments for the loan taken out to purchase the housing. Depending on the repayment and the amount, we can say that the types of mortgage lending are the contractual terms offered in the banking world. As it was mentioned before, they depend on the form of payment, as well as on the terms agreed in the agreement. We propose to define the operations on mortgage lending as a set of interrelated actions of mortgage lenders to form and redistribute long-term resources to secure debts with real estate.

Mortgage lending can take various forms, which specifics may vary depending on the bank and terms of the loan agreement. The main forms of mortgage lending are as follows:

1. Classic mortgage loan (standard):

– In this form, the lender (bank) provides the borrower (client) with the amount of money secured by real estate.

– The borrower must regularly pay interest rate and part of the principal amount of the loan.

– The real estate pledged as collateral remain the property of the borrower, but it is prohibited from being alienated until the loan is repaid.

2. Mortgage loan with an option of the ownership transfer (sale or bail):

– In this form, the bank grants a loan, but the purpose of the loan is to sell real estate.

– The borrower can repurchase the real estate by paying interest and principal, and if the loan conditions are met, the real estate is transferred to the borrower.

3. Mortgage loan with a leaseback option:

– In this form, the real estate owned by the borrower is produced and leased by the bank.

– The borrower receives funds from the bank secured by the real estate, but remains the user of the real estate, paying rent.

4. Mortgage loan for construction (construction mortgage):

– This form of loan allows you to get financing for the real estate construction.

– The loan is secured by a future object of real estate.

5. Mortgage loan with possible debt consolidation (home equity loan):

– In this form, the borrower can use his or her own real estate as collateral to obtain a loan that can be used for any purpose, including repayment of other debts. These are just some of the main forms of mortgage lending. Each of these forms may have its own specific features and conditions, which must be agreed upon between the bank and the borrower in the loan agreement. To determine the criteria for classifying a particular transaction as a credit mortgage, it is necessary to define categorical boundaries of mortgage lending, i.e., a set of requirements and conditions under which a transaction can be considered a credit mortgage.

The most important and determinative of the above characteristics of mortgage lending transactions is the type of

collateral for the loan obligation. All bank lending transactions are considered mortgage loans if the debt is secured by real estate. Given the above features and characteristics, a bank's mortgage lending operations, being debt secured by real estate, should be able to use available credit resources to finance the activities that directly or indirectly increase the value of the real estate, change its structure or achieve other investment goals in the long term. It should be noted that transfer transactions have a number of specific features that distinguish them from other lending transactions of banks. Mortgage lending can take various forms and options, which differ in conditions, repayment methods, collateral, and other parameters. These are some of the main forms of mortgage lending:

1. Classic mortgage loan:

– This is the most common type of mortgage loan, where the borrower (property buyer) takes out a loan to buy a house and provides the property to the banks as the collateral.

– Loan instalments may be fixed or very over time (e.g., annuity payments).

2. Construction loan (mortgage for construction):

– This form of mortgage lending allows you to obtain financing for the construction of new housing or the reconstruction of existing housing.

– Funds can be allocated in stages depending on the progress of construction works.

3. Mortgage refinancing:

– This form of mortgage lending involves taking out a new mortgage loan to repay an existing one.

– It can be beneficial if interest rates decrease after the original loan.

4. Mortgage loans for commercial real estate:

– This form of mortgage lending is aimed at financing commercial real estate, such as offices, shops, hotels, etc.

– Terms may vary depending on the type of real estate and market conditions.

5. Reverse mortgage lending (mortgage annuity):

– This form of mortgage lending is intended for people of retirement age who own real estate.

– The bank pays them money in the form of an annuity for a certain period of time, and after the borrower's death, it received the right to own the property.

6. Mortgage bonds:

– This is an investment instrument issued by banks and other financial institutions to raise funds for mortgage lending.

– Investors buy these bonds, and money is used to provide mortgages.

7. Mortgage loan for commercial real estate:

– This form of lending is aimed at financing investments in commercial real estate, in particular, in purchase, reconstruction or development of commercial properties.

Each type of mortgage loan has its own specific features and conditions, and the choice of a particular form depends on the borrower's needs and financial situation. To determine the criteria for classifying a particular banking transaction as a mortgage transaction, it is also necessary to codify the main classification features of mortgage lending transactions, which are determined based on the classification limits of mortgage lending, i.e., a set of requirements and conditions that must be met to qualify a loan as a mortgage transaction. Thus, the parties to the mortgage relationship distinguish between a pledge of real estate by the borrower and a pledge of real estate by the guarantor (similarly, a mortgage of their own real estate and a mortgage of property of other

persons). Other types of mortgages include ordinary mortgages, compound mortgages, joint mortgages, subordinated mortgages and contingent mortgages.

1. A simple mortgage is a pledge of a single real estate owned by the pledge. A joint mortgage creates a pledge over two or more properties owned by the pledgee. A joint mortgage is secured by a pledge of two or more real estate objects owned by different persons. A subsequent mortgage creates a security interest in movable property that is already the subject of mortgage. If a mortgage is created on the pledged real estate, the claims of each subsequent pledgee are satisfied after the claims of each previous pledgees are fully satisfied.

2. Conditional mortgage – is a mortgage that arises if the mortgage agreement provides that it will become effective upon the fulfillment of the conditions specified in the agreement.

3. Contractual mortgage – is a mortgage that arises based on the mortgage agreement. It is the contractual mortgage that is the basis of mortgage financing. In addition to contractual mortgages, the laws of some countries (e.g., France, Portugal and USA) also define statutory and judicial mortgages.

4. Statutory mortgage is created by law (for example, on behalf of a minor ward in respect of the ward's land plot or on behalf of a state or local authority to secure payment of real estate taxes).

5. Judicial mortgage is created by a court decision to secure a plaintiff's claim.

Bank operations on mortgage lending are primary and form fundamental basis for the emergence of economic relations concerning the formation of other types of mortgage operations in the market. Banks provide mortgage loans to legal entities and individuals.

The real estate pledged by legal entities and individuals is the basis to issue mortgage-backed securities and intermediate mortgage transactions. By issuing mortgage-backed securities, the banks are able to mobilize free cash and convert it into mortgage loans. As the bank's borrowers repay their debts (the bank simultaneously returns the ownership of collateral to the borrower), the bank can settle accounts with its creditors (i.e., redeem mortgage securities). It is worth noting here that mobilization of free cash of legal entities and individuals by placing mortgage-backed securities and converting the mobilized cash into investment flows plays a very important role in the economy.

Investment projects are primarily financed in this way, with equity invested together with debt capital raised in the capital market. This is explained by the fact that without guarantees, not only will there be no incentives for investment, but capital prices will rise sharply as the supply of capital will decrease significantly. This applies to all countries, regardless of their specifics, and is particularly relevant for Ukraine. Only reliable guarantees, such as pledging real estate or issuing mortgage-backed securities, to encourage Ukrainian citizens on investing in promising sectors of the Ukrainian economy and ensuring the emergence of foreign portfolio investors who will invest in the national economy through the purchase of mortgage-backed securities, will make large-scale mobilization of savings possible.

– In accordance with current legislation governing the main features of the bank's activities, the main principles of the mortgage lending operations are as follows:

– legal nature and legality of implementation;

– mortgage lending transactions are concluded by the lender independently, within the limits of available credit resources;

– transactions are carried out on mutually beneficial terms in the interests of the client and the lender;

– lending is based on the borrower's creditworthiness;

– the client is free to choose the lender and the terms of the mortgage loan;

– universalization of transactions, improvement of quality and application of new and advanced banking technologies.

Mortgages play a crucial role in the market economy. In fact, they are a prerequisite for the capital of markets. Investments in the production sector are mainly in the form of long-term loans. At the same time, lenders require guarantees of repayment of these loans. Real estate, in particular, is recognized as a guarantee of repayment of long-term loans in the capital market. The link between mortgages and investments lies in the fact that, first, real estate itself is an investment, the acquisition of which requires financing.

Second, «movable» investments are linked to real estate and cannot be used without such property as collateral without significant losses. In most cases, it is not possible to create long-term debt capital without a pledge of real estate. Real estate may also be suitable for short-term financing, as mortgage loans are generally cheaper than loans secured by movable real estate. Housing construction, which has reached a huge scale in developed countries, is unthinkable without a mortgage. Housing buyers are a relatively small share of their own funds to build and purchase housing, with the remainder financed by mortgages.

Mortgages also play an important role in agriculture. Dr. H. Wolfsteiner, Vice-President of the Federation of German Notaries, notes: «In agriculture, the purchase of agricultural machinery can only be financed through land loans. Current loans are also important for agriculture. It is

necessary to be able to finance the purchase of seeds, fertilizers and plant protection products in spring in advance through loans that will be repaid from the actual harvest. This is usually only possible through the creation of collateral guarantee» [152].

The activities of banking institutions in the mortgage lending market are related to the provision of loans secured by commercial and residential real estate and land plots. Relationships between banking institutions and borrowers based on financial, organizational, economic, regulatory and legal principles and conditions of the mortgage lending regulation form the mechanism of the bank mortgage lending. The role of a banking institution in the mortgage lending process is threefold, namely: attracting investment resources at minimal costs; ensuring that investment transactions are carried out in the specified volumes and directions; efficient use of own, attracted and borrowed funds invested in investment assets.

Formation of the organizational and economic mechanism of the bank's mortgage lending is based on theoretical foundations that include a number of key aspects. Here are some of these theoretical foundations:

1. Role of mortgage lending in the financial system:

– Mortgage lending is an important instrument of the financial system contributing to the affordability of housing and the development of the real estate market.

– The theory of finance examines the role of banks in providing the real estate financing through mortgages.

2. The nature of mortgage loans – the theory of financial transactions examines the structure and nature of

[152] Dubyna M.V., Razgulina N.O., Maruga O.M. Features of the banking system development of mortgage lending for individuals in Ukraine. *Financial researches*. 2018. No. 2 (5). URL: https://fr.stu.cn.ua/tmppdf/124.pdf.

mortgage loans, including the concepts of collateral, interest rates, loan terms and risks.

3. Mortgage market – the theory of the financial market examines the mortgage market, including its structure, functions and interaction with other financial market.

4. Risks of mortgage lending – risk theory analyzes various risks associated with mortgage loans, such as credit risk, interest rate risk, real estate price risk, etc.

5. Assessment of the creditworthiness of borrowers – the theory of credit assessment considers the methods and criteria by which the banks determine whether the borrowers are able to take out a mortgage loan.

6. Legal and regulatory environment – the theory of law and financial regulation examines the legislation governing mortgage lending and the role of supervisory authorities in controlling this process.

7. Financial innovation – the theory of financial innovation looks at innovative approaches and tools than banks can use to develop mortgage lending.

8. Portfolio Management – the theory of portfolio management examines strategies and techniques for managing a portfolio of mortgage loans, including a variety of risks and returns.

9. Efficiency of mortgage lending – the theory of financial efficiency assesses the extent to which mortgage lending contributes to financial stability and economic growth.

These theoretical foundations contribute to the understanding and optimizations of the organizational and economic mechanisms of the bank's mortgage lending, helping banks to develop effective strategies, manage risks and ensure the availability of mortgage loans to customers.

A thorough analysis of mortgage lending by banking institutions shows that its use is based on the functioning of

appropriate mechanisms in relation to individuals and legal entities.

Thus, for example, N. Polishchuk forms the understanding of the «mortgage financing mechanism» as a set of models of legal, organizational, economic, motivational and political support. Legal support is provided by the Ukrainian legislation, resolutions of the Cabinet of Ministers of Ukraine, the NBU's directives, resolutions and decrees of the President of Ukraine. Economic support is based on macroeconomic influences (credit, policy, pricing policy, tax policy, regional policy). According to the author [153], organizational support includes the banking system of Ukraine (levels I and II) and credit information agencies.

Motivational support includes the participation of insurance companies in mortgage lending operations for individuals and legal entities. T. Yevtukh distinguishes the concept of «mortgage mechanism». It is understood as «relations between various market entities and objects based on certain principles, socio-economic levers, methods, norms and procedures that ensure a profitable flow of resources in the form of long-term loans by property that remains in the use of the pledgee of a third party».

Distinguishing the concept of «mortgage mechanism», the author emphasizes its ability to ensure the movement of resources in the course of mortgage relations arising between a banking institution and a borrower regarding the creation and servicing of a mortgage. The structure of the economic mechanism should be built as a functional-targeted scheme of interaction of functional subsystems, support subsystems and

[153] Website of the State Fund for Youth Housing. Retrieved: https://www.molod-kredit.gov.ua/

economic levers, the complex of which is aimed at achieving the goals of the banking institution.

Some authors consider organizational mechanisms as a system of methods, principles, forms or elements of management that regulate the management process; according to S.Vila, organizational and economic mechanisms are a special type of the economic mechanism – organizational and economic means and methods that influence the process, a set of organizational and economic means and methods that influence the process.

An organizational and economic mechanism is also a set of organizational and economic forms and methods linked by a single procedure in all types of activity. Organizational and economic mechanisms are interpreted as a system that form goals and incentives that allow to transfer the movement (dynamics) of material and spiritual needs of society members in the course of the labor activity into the movement of means of production and their final results aimed at satisfying the effective demand of consumers. Organizational and economic mechanisms are also considered as a constant set.

A. Kurman gives a general definition of organizational and economic mechanisms, emphasizing that they are «a constant set or series of economic phenomena». Considering organizational and economic mechanisms as a constant set, they can be interpreted as a set or combination of functions, methods, forms, levers of influence, economic phenomena, legal and procedural norms, procedures and decision-making techniques, which certainly enriches their content, but at the same time loses the dynamic aspect of this concept. Therefore, the organizational and economic mechanism of mortgage lending is a set of elements such as the subject, object, lending procedures, levers (incentives, sanctions), regulatory and legal support, institutional support, resource support and information

support that operate in a coordinated manner [172]. These components and their characteristics are determined by the development level of the country's economy.

Formation of the organizational and economic mechanism of mortgage lending in a bank is based on a number of theoretical foundations that help to develop and effectively implement the bank's strategy in this area. The main theoretical principles and aspects of the formation of this mechanism include:

1. Financial aspects: A bank that provides mortgage loans must have a stable financial position and sufficient internal resources to provide loans. Financial liquidity and the ability to attract additional financial resources play an important role in the formation of this mechanism.

2. Legal regulation: The bank shall comply with all relevant laws and regulations relating mortgage loans. This includes the rules for issuing the loans, debt collection procedures, rights and obligations of the borrowers and the bank, etc.

3. Credit analysis and risk management: The bank should have a system for accessing the creditworthiness of borrowers and an effective mechanism of credit risk management. This includes assessment of the real estate used as collateral and the analysis of the borrower's financial position.

4. Pricing: The bank should determine the interest rate and other lending terms that are in line with market conditions and ensure that the offers are competitive.

5. Valuation of real estate: An effective valuation of the property used as collateral plays an important role in the mortgage lending mechanism. The bank should have necessary expertise or cooperate with professional appraisers.

6. Strategic planning: The bank should develop a mortgage lending strategy that takes into account its goals, ambitions and capabilities. This strategy includes the choice of marketing campaigns, target audience, lending volumes, etc.

7. Information systems and technologies: The bank must have an efficient information system for processing and storing data on mortgage loans, as well as for communicating with customers and partners.

8. Marketing and advertising: Development of marketing strategies and advertising campaigns helps attracting clients and increase the volume of mortgage loans.

These theoretical foundations contribute to the creation of a well-organized mortgage lending mechanism, that allows the bank to operate successfully in the market and ensures sustainable mortgage lending for its clients. When developing organizational and economic mechanisms for mortgage lending, it is necessary to take into consideration specifics of the lending entity, in particular the impact of external environment elements (economic counterparties), as well as the principles and features of the formation, development and implementation of mortgage lending.

Since organizational and economic mechanisms are usually understood as a system, a set of instruments that determine the procedure for carrying out any type of activity, it is advisable to present a classic scheme of organizational and economic mechanisms of mortgage lending in banks (Fig. 2.1). The general scheme of the organizational and economic mechanism of mortgage lending determines the relationship between the subject and object of credit relations.

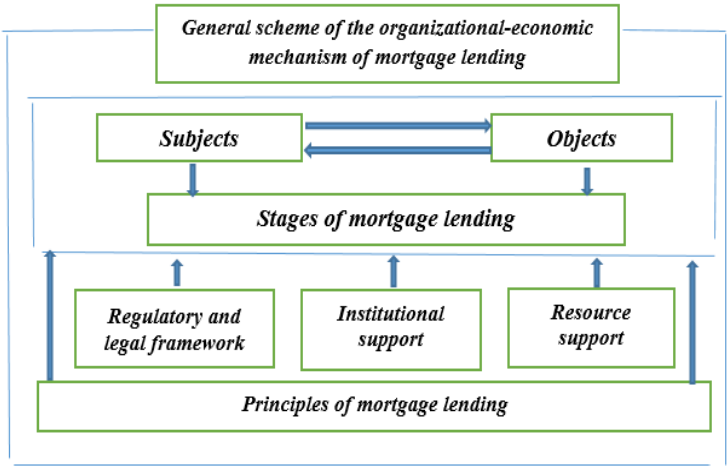


Fig. 2.1 General scheme of the organizational-economic mechanism of mortgage lending

Source: *compiled by authors based on the conducted research*

The subjects of mortgage lending are lenders (banking institutions), borrowers (physical and legal entities), insurance companies (providing insurance of collateral and borrower's life) and other institutions in the mortgage lending market (e.g., property valuation companies, state registers). Mortgage property includes real estate that is pledged as a collateral (residential, commercial and land).

The subject matter of a mortgage loan is closely related to the subject matter of the mortgage legal relations. By pledging the mortgaged property, an entity of mortgage lending enters into mortgage legal relations, which include a number of relations, stages, starting from the submission of a mortgage loan application and ending with the decision of the banking institution to grant a loan.

Credit relations include not only the relationship between the lender and the borrower, but also economic

relations regarding the valuation and insurance of the mortgaged property; second, collateral insurance determines the possibility of satisfying the creditor's claims in the event of destructions or damage to the property. In addition, if a borrower has a life or disability insurance, the bank receives and additional guarantee of satisfaction of its claims. Moreover, other participants of the mortgage lending market, such as notaries, law companies, real estate brokers and state registration authorities, are also the parties to mortgage lending relations. All relations between participants in mortgage lending are governed by Ukrainian laws and regulations, as well as internal documents and regulations of credit institutions. Therefore, the structure of mortgage lending by banking institutions is largely dependent on the regulatory framework.

The legal and regulatory framework for mortgage lending includes: laws of Ukraine, resolutions and orders of the Cabinet of Ministers of Ukraine, regulations of the NBU, decrees of the President of Ukraine, etc. The legal framework for mortgage lending includes: legal guarantees of private ownership of real estate; legal inviolability of land plots, buildings and structures located on them, and perennial plantations; legal regulation of the organization and operation of a mortgage institution; legal support for the fulfillment of mortgage obligations.

Without a legal guarantee of private ownership of the property, a mortgage cannot be initiated. A very important prerequisite for the development of mortgage lending is the guarantee of the legal integrity of the land plot and its structures and perennial plantings. Only if this condition is met, the real estate can be used as collateral for the loan without restrictions. Legal security of mortgages means an effective system of the registration of property rights and mortgages in

relations to real estate, as well as clear legal rules for foreclosure on the pledged real estate.

The next legal prerequisite for mortgage lending is a possible foreclosure of the mortgage subject if the borrower fails to fulfill its obligations to the bank. Such foreclosure allows the mortgagor to fulfill its obligations to the lender. In other words, the risks associated with the sale of mortgages directly affect the liquidity of the mortgage-backed securities and the banking system.

Mortgage lending is regulated in Ukraine by: the Law of Ukraine «On Mortgage»; the Law of Ukraine «On Financial and Credit Mechanisms and Property Management in Housing Construction and Real Estate Transactions»[154]; the Law of Ukraine «On Promotion of Mortgage Lending in Ukraine» [155]; the Law of Ukraine «On Mortgage Companies in Ukraine»[156], the Resolution of the Cabinet of Ministers of Ukraine «Procedure for Providing Financial State Support» and other regulatory acts. Institutional factors are closely related to the legal framework for mortgage lending.

The following institutions are involved in the legal support of mortgage financing: specialized mortgage institutions, land surveying services and property registration authorities, notary offices, appraisers, insurance institutions, etc. Institutions that provide collateral for mortgage lending include banking institutions, insurance companies, appraisal companies, credit bureaus and notary offices. Resource

[154] Zharikova O.B. Tendencies of the land market development in European countries. *Scientific journal of the National University of bioresources and nature management of Ukraine.* 2012. Issue 177, P. 3. P. 202 - 208.

[155] Zagorodniy A.G. Vocabulary of banking terms [Banking: Terminological vocabulary] / [A. G. Zagorodniy, O. M. Slipushka, G. L. Voznuik, T.S.Smovzhenko]. K.: Akonit, 2000. 608 p.

[156] Dubyna M. B., Razgulina N.O. Theoretical aspects of the functioning of the banking mortgage system on crediting individuals. *Problems of the economy and management perspectives.* 2018. No. 4 (16). P. 176–187. Financial researches No.1 (6) 2019.

collateral plays an important role in mortgage lending.

The bank's resource base is the financial resources underlying all types of active operations and used for lending and other banking activities. Banking resources include the bank's own funds (share capital, reserves and retained earnings), borrowed funds (deposits from legal entities and individuals, own bonds and funds from non-bank financial institutions) and borrowed funds (loans from the NBU, loans from other banks and bonds). The process of creation (formation) and functioning of the organizational and economic mechanism of mortgage lending in Ukraine is based on 21 principles of mortgage lending relations (general and special principles).

General principles of credit relations include principles of maturity, repayment, security, payment and intended use. The essence of these lending principles is so widely described in the economic literature that it would be inappropriate to describe them in detail. It should be noted, however, that all lending principles are closely interrelated, as they stem from the very nature of credit, and their observance can only be ensured through their combination. Therefore, compliance with all principles is a prerequisite for effective lending. Uncertainty about stability of the Ukrainian currency makes long-term financing unpredictable, and high interest rates severely limit this possibility.

Important prerequisites for mortgage lending are general economic growth with a significant increase in household income, bank savings, and appropriate development of the capital market. The legal framework for mortgage finance is also important. In this regard, the Commission in its White Paper on the European Community (1995) stated: «Mortgage lending is a very important sector, especially in national economies that are reforming into market economies».

An operating mortgage lending industry cannot exist without a proper legal framework, such as transparent regulation of the real estate ownership and a functioning industry on property registration that can register mortgage loans. This includes legal capacity to enforce mortgage loans. Thus, a mortgage cannot be created unless private ownership of real estate is legally guaranteed.

Another important prerequisite for the development of mortgage lending guaranteed of the legal integrity of the land plot and the buildings, structures and perennial plantations located on it. Only if this condition is met can the real estate be used without restrictions as collateral for a loan. Legal support for mortgages requires an effective registration system of real estate and related property rights and mortgages, as well as clear legal rules on foreclosure of the pledged property.

The proper functioning of a mortgage requires that tax, employee, social security and other claims be registered in the property registration system in the same manner as mortgage claims and, depending on the time of foreclosure, have priority or next priority over other claims. Foreclosure is carried out either through a forced sale of the real estate or through the forced administration for the creditor. In the event of a compulsory sale, the market value of the property is sold, and the owner of the property usually changes. In case of compulsory administration, the income from the use of the property is sols without changing the owner. As a rule, enforcement is carried out through the courts. In many countries (UK, the Czech Republic, Hungary, Slovakia), out-of-court sales are also permitted if the debtor has agreed to such a sale from the outset.

The use of the out-of-court sales speeds up the process and reduces the burden on the courts. The real estate that is the subject of a mortgage and is subject to foreclosure shall be sold

at a public auction in accordance with the procedure established by the law. Pledgees, as well as individuals and legal entities, including pledgers, are entitles to participate in the auction, unless otherwise provided by the law. It is extremely important to establish a legal framework for the organization and operation of a mortgage bank, in particular with respect to the terms of the mortgage loan, the valuation of collateral, and the procedure for issuing and redeeming mortgage securities. Thus, Ukraine is still far from creating all necessary preconditions for effective mortgage financing. This situation is not conducive to the establishment and development of mortgage relations. At the same time, the potential of such relations in Ukraine is enormous and can be gradually realized if they are fully secured.

Thus, mortgages play an important role in the country's economic and social development. The economic essence of the mortgage loan is the creation of the system of economic relations when granting a cash loan with real estate as collateral. The scope of mortgage lending is expanding significantly and includes not only the financial sector. Mortgages should be viewed from the perspective of their impact not only on the financial sector, but also on the macroeconomic, social and political spheres of society and the state. Mortgage loans can act as means of boosting investments in the industry, agriculture and housing. They contribute to the reforms in agriculture, as they are aimed at purchasing new equipment, materials and agricultural technologies.

The full-scale Russian war against Ukraine has been going on for two years. During this time, the population of Ukraine has faced many challenges, primarily related to security and military operations. The war has also led to rising unemployment, forced displacement and significant infrastructure damage. In response to the housing crisis, new

housing programs have emerged over the past year, and social housing projects have been launched in some cities. At the same time, general approaches to the housing policy have remained unchanged, and individual decisions and projects lack systematicity.

Mortgage lending is an important factor in the country's economic and social development. The economic essence of mortgage lending is that it is a system of economic relations created within granting a mortgage loan, i.e., a cash loan secured by real estate. Mortgage lending is much broader in scope and encompasses more than just a financial sector, and mortgage lending should take into account its impact not only on the financial sector but also on the macroeconomic, social and political spheres and the state of public life. The mortgage market is an important place for an efficient mortgage system. The mortgage market is defined as an organized system of economic relations that arise in the course of generating mortgage capital and converting it into financial liabilities secured by real estate.

Development of mortgage lending requires solving many problems in various areas, from creating guarantee systems and transparent conditions for the participants of the mortgage market to standardizing and unifying mortgage lending procedures. However, the immediate priority is to increase the ability of banks to attract financial capital. This will reduce mortgage rates and make it more affordable for people. Ukraine is dominated by a deposit-based financing model, which significantly limits the size of mortgage lending.

Development of the Ukrainian mortgage market is one of the most important issues that needs to be addressed immediately. Ukraine lags behind the countries of Eastern and Central Europe in mortgage lending, which negatively affects the pace of its development and solving social and economic

problems. Revival of the institutions of mortgage lending and establishment of the mortgage lending market in the country is an objective need that is related to the need to introduce credit mechanisms.

Today, the mortgage lending market is characterized by passive activities of banks prior to granting mortgage loans to individuals and legal entities. By the end of 2022, not all banking institutions were providing mortgage loans. In Ukraine, the cost and term of a mortgage loan is difficult for all groups of the population to accept. Currently, mortgage rates are so high that it is not in demand among the population. [165] In the overall structure of mortgage lending in 2022, it increased primarily due to the governmental programs «Affordable Mortgage» and «eOselya» on lending support. Under these programs, the borrowers can obtain mortgage loans at reduced rates of 7% and 3% per annum, respectively. The NBU website reported that in 2022, Ukrainian banks issues mortgage loans totaling UAH 1.96 billion in 2009. Compared to 2021, new mortgage lending decreased by 5.3 times in terms of the number of agreements and 4.3 times in terms of money.

Housing conditions are one of the most difficult indicators to measure, as economic opportunities and social priorities, personal wealth and budgetary constraints, personal preferences and national strategies, and personal and public interests are closely linked in the housing provision. The goal of the housing policy should be to find ways to reconcile them, find a balance between them and set certain limits in the current environment.

Between 2006 and 2012, mortgage loans for the purchase, construction and reconstruction of houses accounted for 25-55% of all loans issued by banks to households, of which foreign currency loans accounted for 67-88%, mostly for a term of more than 10 years. However, at current housing

prices, most citizens do not have access to credit, even though families want to improve their living conditions, use their own funds outside the Ukrainian banking system, and participate in preferential loans and government subsidies. Therefore, it is necessary to model the mortgage market in terms of the housing affordability.

The housing affordability coefficient (Ka) is used for international comparisons, especially in the UN Human Settlements Development Program) and is determined by the ratio of the average price of a typical dwelling to the annual family income, showing the number of years a household can purchase a dwelling with its current income, calculated using the following formula: [176]

$$K_d = \left(GC, CIN_{fhr}\right) = \frac{GC}{CIN_{fhr}} = C * S/CIN_{fhr}\ , \quad (2.1)$$

Where, CIN_{fhr}- minimal income of the family consisting of three persons;

GC- costs of housing;

S-total living space;

C- cost of m^2 of housing.

In Table 2.1, calculations of the housing affordability coefficients in 2019-2022 are presented.

Thus, taking into account the average living space per 3 people and housing prices with an average annual income, the most affordable housing was in 2021, where the housing affordability ratio was 2.32.

Table 2.1

Coefficients of the housing affordability in 2019-2022

Indicators	2018	2019	2020	2021	2022	Deviations +/-
Average income of the family consisting of three persons	281160	331386,8	372240	440028	446251	114864,2
Total living area	60	60	60	60	60	-
Cost of m2 of housing	11900	14170	16300	17004	26760	12590
Coefficient of the housing affordability	2,54	2,57	2,63	2,32	3,60	1,03

Source: compiled by authors based on the conducted research

That is, with an average income of UAH 440028, for 3 people, a family can afford to buy a 60 m2 apartment at a cost of UAH 17004/m2 for 3 years, but on condition that all available income is saved for housing. The most unaffordable hosing was in 2022, where the housing affordability ration was 3.6. In accordance with the Concept of the National Mortgage System, approved by the Cabinet of Ministers of Ukraine in 2004, the most effective model for our country is a two-tier mortgage market, which provides for a primary market and a secondary market.

In the primary market, the mortgage lender and the borrower form a relationship on the provision and repayment of mortgages. The secondary market is designed to refinance mortgage lenders to raise loans by issuing mortgage-backed securities, selling mortgage assets to banks, secondary

professional non-bank mortgage financial institutions, or using these mortgages assets as collateral.

Secondary mortgage institutions should ensure that mortgage lenders operate in the primary mortgage market with risk diversification and that mortgage lenders are refinanced with funds from the placement of mortgage securities. The secondary mortgage market was created because the banking system seeks to finance long-term mortgages with short-term liabilities of banks. That is why the creation of a secondary property market is one of the main priorities of the country's policy in developing the national mortgage system[157]. One of the important factors affecting mortgage loans is the interest rate on these loans. Therefore, this factor requires a broader analysis.

In Table 2.2, the rates of mortgage lending by terms in the secondary property market are presented.

Table 2.2

Rates of mortgage lending by terms in the secondary property market

Credit term	Average actual rate as of 2022	% change per year	Number of crediting banks for this term
1 year	16,9%	3,6 %	1(-6)
5 years	15,6%	3,3%	1(-6)
10 years	15,2%	3,9%	1(-6)
15 years	15%	4,6%	1(-5)
20 years	15%	4,7%	1(-4)

Source: compiled based on the «Prostobank Consulting» data

Thus, the research shows that lending rates are changing in the secondary real estate market. Over the year, the

[157]Annual Report of OJSC CB «PrivatBank» for 2018-2022 URL: https://privatbank.ua/about/finansovaja-otchetnost

interest rate on 1-year loans increased by 3.6% and averaged 16.9% per annum. The interest rate on 5-year loans also increased by 3.3% to an average of 16.6% per annum. Interest rates on 10-year loans increased to an average of 15.2%, while interest rates on 15-year loans increased by 4.6% to an average of 15% per annum. The cost of long-term loans changed the most. As of the end of 2022, the interest rate on mortgage loans increased by 4.7% and averaged 15%.

On Fig. 1, the dynamics of average percentage rates under mortgage loans in the secondary real estate market is presented.

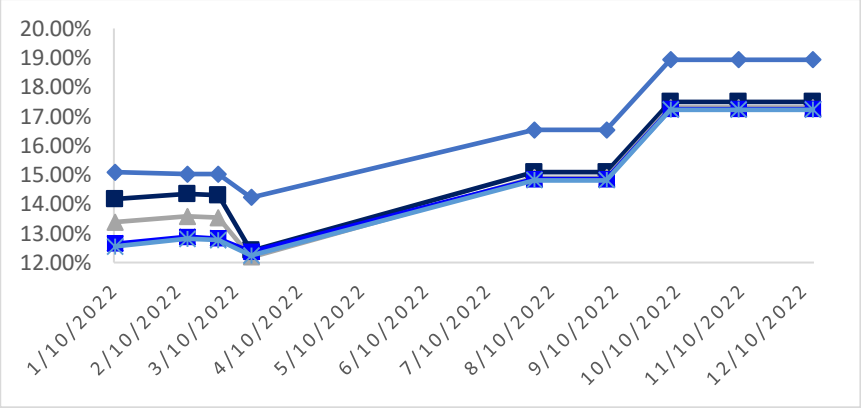


Fig. 2.2 Dynamics of average percentage rates by mortgage loans in the secondary real estate market data
Source: compiled based on «Prostobank Consulting» data

The rate of increase in average interest rates on loans for the purchase of new housing also gained momentum. In Table 2.3, the rates of mortgage lending by terms in the primary real estate market are presented.

Table 2.3

Rates of mortgage lending by terms in the primary real estate market

Term of credit	Average actual rate as of 2022	% change per year	Number of banks that credit for this term
1 year	15,9%	6,98%	1(-6)
5 years	15,4%	3,88%	1(-6)
10 years	15,4%	3,14	1(-5)
15 years	15,1%	3,83	1(-4)
20 years	15,1	3,81	1(-4)

Source: compiled based on the «Prostobank Consulting» data

Table 2.3 shows that the largest increase in average rates occurred for loans with maturities of 1 and 5 years. The average interest rates in 1-year loans were 15.9% and 15.4%, respectively, and increased by 6.98% and 3.88% during the year. Interest rates on 10-year loans have also changed. The increase was only 3.14%.

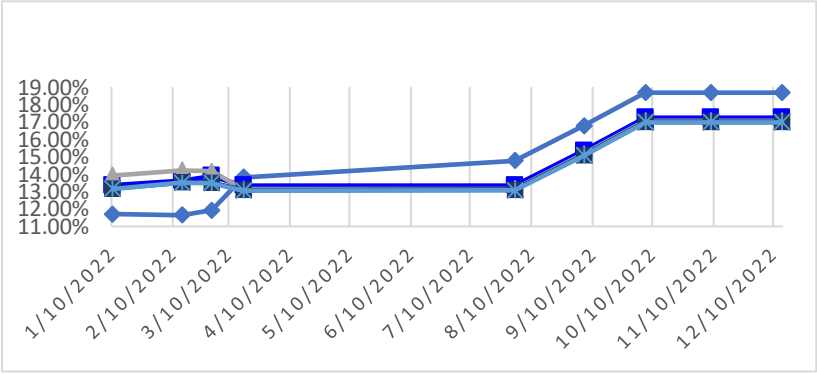


Fig. 2.3 Dynamics of average interest rates on mortgage loans in the primary property market

Source: compiled by the «Prostobank Consulting» data

The interest rates on 15-year loans averaged 15.1% and increased by 3.83% over the year. The interest rates on 20-year loans increased too. The average interest rate was 15.1% and increased by 3.81%. Figure 3 shows the dynamics of average interest rates in the primary real estate market.

Refinancing is the repayment of a mortgage loan from one bank with a new loan from another bank. In this case, the loan amount does not change, but the terms of its repayment become acceptable to the borrower. Refinancing rate for mortgage loans is an indicative rate for refinancing operations by the State Mortgage Institutions of primary lenders-banks by assigning the rights of claim on mortgage loans granted in accordance with the requirements of the SMI Standards (refinancing of mortgage loans).

The refinancing rate for mortgage loans is determined by the Board of the State Mortgage Institution (SMI) and takes into account the costs of borrowing funds by the SMI for refinancing operations. The interest rates on the loans refinancing of 2022 are shown in Table 2.4.

Table 2.4

Average interest rates on the loans refinancing as of 2022

Credit term	Average actual rate as of 2021	% change per year	Number of banks that issue credits for such term
5 years	14,8%	4,38%	1(-2)
10 years	14,6%	4,39%	1(-2)
15 years	14,5%	4,39%	1(-2)
20 years	14,5%	4,39%	1(-2)

Source: compiled by the «Prostobank Consulting» data

Thus, mortgage lending, which existed before the crisis, has not yet reached a large scale. By financing mortgage loans with short-term and expensive resources and public funds,

banks are unable to set attractive parameters for the borrowers. Although there have been positive developments in mortgage lending in Ukraine today. It is worth noting that the development of mortgage lending was affected by the legislative framework on mortgage lending, high mortgage interest rates, high cost of the residential real estate, conflicts of interests between the lenders and borrowers, and general economic and political uncertainty, all of which hampered the improvement of the situation in the residential real estate market. Based on the results of the study, it can be concluded that the real estate lending market in Ukraine requires significant improvement.

Currently, Ukraine has a state mortgage lending program for young people under the State Social and Economic Program «Affordable Housing». In accordance with the Procedure for Providing State Support and Affordable Housing for Citizens and the Procedure for Using Funds Provided in the State Budget for Providing State Support for Construction (Acquisition) of Affordable Housing, the mechanism of the program is to provide citizens with affordable housing by providing state support, which consists of state payments:

1) 30 percent of the cost of construction (purchase) of affordable housing;

2) 50 percent of the cost of construction (purchase) of the affordable housing for citizens;

3) 50 percent of the cost of construction (purchase of the affordable housing and/or preferential mortgage loans for citizens covered by the Law of Ukraine «On Ensuring the Rights and Freedoms of Internally Displaced Persons».

In accordance with the Procedure for providing State Support and Affordable Housing for Citizens, approved by the Resolution of the Cabinet of Ministers of Ukraine of October 10, 2018, the following categories of citizens are entitled for

state support:

1) persons registered as citizens in need of the improved housing conditions and family members registered as such;

2) persons who do not own a residential real estate and their family members who do not own a residential property, provided that such persons and their family members have not owned a residential property for the last three years prior to the application;

3) persons who own a living space (except for the real estate located in the temporarily occupied territory, in the settlements specified in the list of settlements in which the state authorities temporarily do not exercise their powers and the list of settlements located on the contact fire line) not exceeding 13.65 square meters, and their family members who won a living space not exceeding 13.65 square meters per person;

4) persons which data are included in the Unified Information Database on Internally Displaced Persons in accordance with the requirements of the Law of Ukraine «On Ensuring the Rights and Freedoms of Internally Displaced Persons», if such persons do not own and have not owned any residential property other than that located in the territory defined as the temporarily occupied territory during the last three years [158] [159].

In Table 2.5, the analysis of this program financing in 2012-2022 is presented.

Thus, Table 2.5 shows that the largest number of

[158] Zharikova, O., Zharikova, A. (2023). Specifics of foreign experience in mortgage lending adaptation in Ukraine: current state and prospects of development. Burgas, Bulgaria/ Avangard Prima. 2022. p. 121-133.

[159] Zhukova N. Features of crediting by commercial banks of economic entities in Ukraine. Banking. 2009. No.2. P. 65–72.

apartments was provided in 2012-2013, but in subsequent years the number of apartments provided varied dynamically from 11 to 974. In 2012-2021, a total of 3,748 apartments were provided, of which 3,374 apartments were provided at the expense of the state budget for a total of UAH 727.4 million, and 241 apartments were provided at the expense of the local budget for a total of UAH 56.5 million.

Table 2.5

Indicators of fulfillment of the State social economic program «Affordable Housing» in 2012-2022

Year	Number of apartments, TOTAL by years	State support was submitted, including at the expenses of			
		state budget		local budgets	
		Number of apartments	UAH mln	Number of apartments	UAH mln
2012	1258	1222	156,6	36	3,0
2013	823	802	91,1	21	1,6
2014	147	144	17,9	3	0,4
2015	11	0	0,0	11	1,3
2016	39	0	0,0	39	6,5
2017	111	91	29,6	20	4,9
2018	263	237	85,3	26	9,8
2019	974	878	346,9	31	9,1
2020	95	0	0,0	32	11,6
2021	27	0	0,0	22	8,3
2022	-	-	-	-	-
Total	3748	3374	727,4	241	56,5

Source: compiled based on the data of the State Fund for Youth Housing Construction

However, as of 2022, due to military operations on the territory of Ukraine, this program was temporarily suspended. The dynamics of financing the state program «Affordable

Housing» is shown in Figure 2.4.

As shown in Figure 2.4, funding for the state mortgage program «Affordable Housing» is at a rather low level. Until 2019, this program was funded by the state budget, but in the last two years it has been funded only by local budgets.

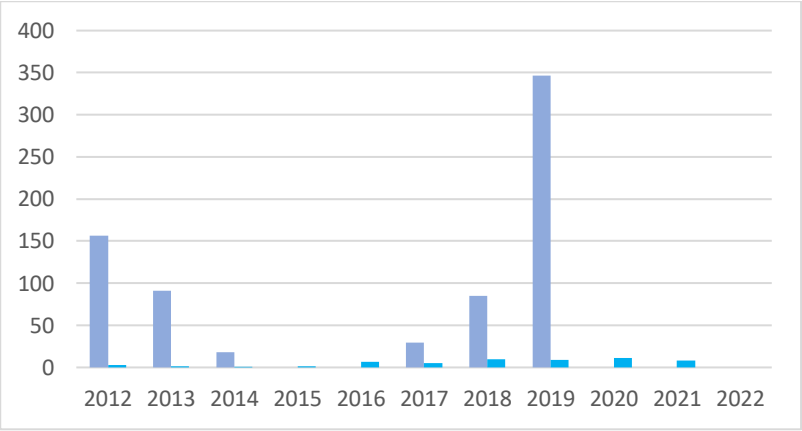


Fig. 2.4 Dynamics of financing of the state mortgage program «Affordable Housing»

Source: compiled by authors

On October 1, 2022, the state program «Affordable Mortgage» from the state-owned company Ukrfinzhytlo was launched in Ukraine. The following persons will be able to get a preferential loan at 3% for 20 years with the down payment of 20% to buy housing:

1. military personnel, employees of the security and defense sector;
2. medical staff;
3. teachers and pedagogical employees;
4. scientific workers.

Employers of these categories will be able to be

compensated for the down payment and part of the loan principal at the expense of budget programs (the amount of compensation depends on seniority). Later, the program will be available to all Ukrainians whose residential real estate does not exceed 52.5 sq. m + 21 sq. m for each family member.

As part of the «Affordable Mortgage» program, it will be possible to purchase housing up to 52.5 sq. m of total area + 21 sq. m for each individual family member. If we are talking about a regional centre, then in a building that has been in operation for more than 10 years. The value must not exceed the estimated value determined by an appraiser or a bank employee. Also, the cost of 1 sq. m. should not exceed the indirect cost of construction, determined by the Ministry of the Regional Development and increased by 2.5 times for regional centres, cities with a population of more than 300 thousand people, at a distance of up to 15 km from Kyiv, by 2 times – for cities with a population of 100-300 thousand people, by 1.75 times – for other settlements. Housing must be insured against the risks of accidental destruction or accidental damage at full appraised value.

State programs are currently ineffective. This is due to the low income of citizens, which does not allow them to use these programs; insufficient funding of programs from the state budget; and low public awareness of state programs. Addressing these issues at the government level will help to increase the effectiveness of the analyzed programs and improve social welfare of the Ukrainian population.

Mortgage loans declined in 2019-2020. The decrease was from UAH 11,467 million to UAH 9,566 million. However, in 2021, there was a positive increase to UAH 9,858 million. As of 2022, the amount of mortgage loans decreased by almost 9 times to UAH 1,806 million. Consumer loans declined markedly during 2019-2020. As of 2019, the figure

stood at UAH 4,148 million, and by 2020 it had decreased to UAH 3,500 million. However, already in 2021, the figure increased by one and a half times, to UAH 5,343 million. As of 2022, consumer loans almost doubled to UAH 2,608 million. Car loans are hardly popular. As of 2019, car loans amounted to UAH 250 million, but by 2020 they had decreased to UAH 35 million. In 2021, there was a significant increase to UAH 394 million. However, the following year, there was a decrease to UAH 228 million. Other loans decreased during 2019-2022 from UAH 498 million to UAH 8 million.

The dynamics of the credit portfolio structure of the JSC CB «PrivatBank» is shown in Fig. 2.5.

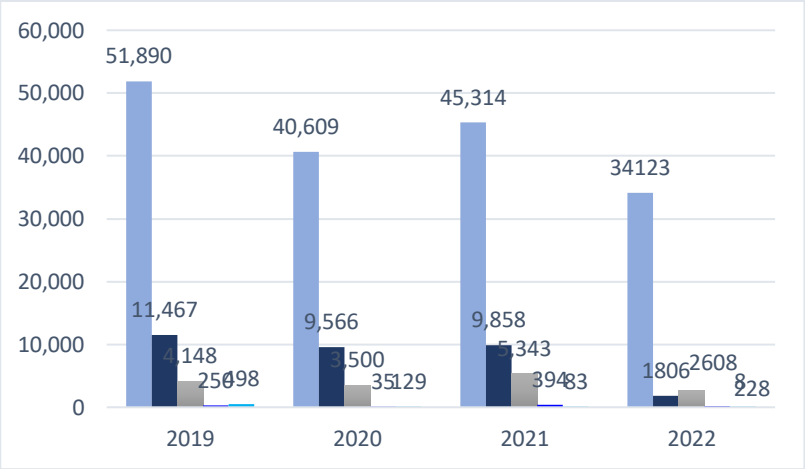


Fig. 2.5 Dynamics of the credit portfolio structure of the JSC CB «PrivatBank» in 2019-2022

Source: compiled based on the financial statements of the JSC CB «PrivatBank» in 2019-2022

Credit cards will show a significant increase in 2019-2022. The number of mortgage loans is growing, but slowly.

For example, mechanisms of mortgage lending

provided by banking institutions are growing significantly and are currently represented by lending programs for individuals who invest in real estate on a share basis or purchase of ready-made housing in the primary or secondary real estate markets. A number of Ukrainian banks, including JSC CB «PrivatBank», have joined the state mortgage lending program «Affordable Mortgage 7%» and «eOselya». JSC CB «PrivatBank» also provides a mortgage loan to individuals called «Home Loan». The main terms and conditions of mortgage lending under the state program «Affordable Mortgage 7%» of JSC CB «PrivatBank» are shown in Table 2.6.

The government program «7% Mortgage» is available to residents of Ukraine who intend to purchase their first residential real estate or property rights to this real estate, as well as to improve their living conditions, if the area of the residential real estate does not exceed the standard area.

The borrower's age must not exceed 65 years (inclusive) at the end of the mortgage loan term. The average monthly cash income of the borrower and each of his family members over the past six months must not exceed ten times the average monthly salary in the relevant region of Ukraine where the mortgaged real estate is located, calculated according to official data from the State Statistics Service.

The terms of this program are quite attractive. However, there are some restrictions on the size of the mortgaged real estate. The area of the real estate must be 50 sq. metres of the total area of the mortgaged real estate for a single citizen or a member of a family of two, and 20 sq. metres for each additional family member.

The interest rate on the mortgage loan is 7%, plus a one-off loan origination fee of 0.5% of the loan amount. However, interest rates are not fixed.

Table 2.6

Terms of mortgage lending of JSC CB «PrivatBank»

Type of real estate	Loan for the purchase of housing		«Affordable mortgage 7 %»	
	Primary real estate market	Secondary real estate market	Real estate of the bank	
Yearly percentage rate in the 1st year of crediting	12%	12%	12%	7%
Yearly percentage rate starting from the 2nd year of crediting	UIRD* 12M + 4%	UIRD* 12M + 4%	UIRD* 12M	UIRD12 M +4,5%
Term of crediting	from 12 to 240 months			
Credit amount	from 100 thousand to 4 mln hryvnia		from 100 thousand to 2,5 mln hryvnia	
Advance payment	starting from 25%			
Age of the borrower	from 21 to 65 (at the time of the loan repayment, the borrower's/guarantor's age should not exceed 65 years).		At the end of the mortgage loan term, the borrower must not be older than 65 years (inclusive).	
Scheme of interest accrual	annuity		annuity, classical	
Mortgage insurance	0,5% from the real estate cost			
Personal insurance	0,5% from the sum of the principal debt under the credit			
One-time fee	1%	1%	0%	0,5%
Notary's services	appr. 12 000 UAH			
Evaluation of the real estate	appr. 3 500 UAH			

Source: Programs of mortgage lending of JSC CB «PrivatBank» [180]

Interest rates are set individually for each borrower and

depend on conditions such as completed and unfinished real estate, as well as the Ukrainian index of retail deposit rates, which is calculated based on the nominal market rate of retail deposits published by Ukrainian banks and available on the NBU's official website.

If the borrower wants to take out a loan for a completed construction project, the interest rate will be calculated based on the average interest rate for retail deposits in the current year plus 4.5% per annum, but not more than 30% per annum.

If the borrower takes out a mortgage loan for residential real estate in an object under construction, the interest rate is: the average interest rate on retail deposits for the year plus 7% per annum, but not more than 30% per annum – until the commissioning.

The interest rate will be based on the average interest rate index for retail deposits plus 4.5% per annum, but not more than 30% per annum.

Under the program of JSC CB «PrivatBank» «Loans for the Purchase of Residential Real Estate», the interest rate for using a mortgage range from 12% in the first year of lending to 16% in the second year of lending. In addition, borrowers must pay a one-time fee of 0% to 1% of the loan amount.

The state program «eOselya», implemented by JSC CB «PrivatBank», provides for the provision of mortgage loans to residents of Ukraine who are intended to purchase their first residential real estate or property rights to such real estate, as well as to improve their living conditions, who do not participate in other existing state programs and fall into the following categories of persons: The Armed Forces of Ukraine, law enforcement officers, educators, healthcare professionals, and researchers. The main terms and conditions for mortgage lending under the state program «eOselya» of JSC CB «PrivatBank» are shown in Table 2.7.

Table 2.7

Terms of mortgage lending by JSC CM «PrivatBank» under the «eOselya» program

Minimal credit amount	UAH 100 thousand
Maximal credit amount	UAG 4 mln
Term	from 24 months to 240 months
First installment	starting 20% from the real estate cost
Rate for the client (considering compensation)	3% yearly
Compensation rate	7% yearly
Scheme of the loan repayment	Annuity
Payments for additional and related services required for the agreement conclusion	
Mortgage insurance	0,25% from the real estate cost
One-time fee	0,5% from the loan cost
Services of the notary	UAH 12,000 (approximately)
Evaluation of the real estate	UAH 3,500 (approximately)

Source: programs of mortgage lending by JSC CB «PrivatBank»

The results of the study of the organizational and economic mechanism of mortgage lending in banking institutions suggest that mortgage lending in Ukraine is characterized by a pronounced regional disparity and rising prices due to the lack of solvency of demand for housing. The wealthy population, labor migration, rising construction costs, speculative transactions and the lack of a more efficient alternative direction for investment funds have led to varying degrees of the supply and demand balance for different types of real estate. A mortgage institution must have an effective structure for monitoring and controlling the condition of real

estate. This is the only way for the mortgage market in Ukraine to reach a more efficient level.

According to the economic statistics, today more than 80% of liabilities traded in the capital market are mortgage-backed securities, and more than half of all loans issued by the European Union are mortgage loans. The volume of the mortgage loan portfolios in the European Union is about EUR 400 billion, which is equal to 40% of the GDP of the European Union. Statistics suggest that the modern financial market is based on mortgage-backed liabilities. The specificity of the real estate collateral gives the lender confidence that its obligations will be repaid. Real estate is the axis on which the creditor-debtor relationship is built.

During the war, commercial banks in Ukraine lent money for purchasing housing almost exclusively on the secondary real estate market. Since September last year, mortgage lending has been gradually recovering in Ukraine.

In the second half of October, the Government launched the program on affordable mortgage «eOselya», which has now been upgraded and adapted to meet the needs of wartime. The purpose of the program – to help Ukrainian get a decent housing.

The program is implemented in two stages:

Stage 1: from October 2022, military personnel, law enforcement officers, teachers and healthcare professionals, and scientists will be able to obtain a mortgage loan at 3%. These are people of extremely important professions today, because our safety, health, life and the future depend on their work.

Stage 2: from the beginning of 2023, affordable mortgages will become available to all Ukrainians who will be able to take out a loan to purchase housing at 7% per annul.

Instead, since September, mortgage lending has been gradually recovering, primarily due to the governmental programs to support lending, such as «Affordable Mortgage» and «eOselya». Under these programs, the borrowers can obtain mortgage loans at reduced interest rates of 7% and 3% per annum, respectively.

Compared to 2021, new mortgage lending decreased by 5.3 times in terms of the number of agreements and 4.3 times in terms of money. The vast majority of mortgage loans in 2022 – two-thirds by number of agreements – were granted in January-February before the start of the Russia's full-scaled aggression. For example, in March-May, mortgage loans were not granted at all, while in summer there were few disbursements.

In September-November 2022, banks issued 252 mortgages in total almost UAH 280 million, and in December - 405 loans worth half a billion hryvnias. This is the highest monthly figure since the start of the full-scale war. During the war, banks have been lending for housing purchases almost exclusively in the secondary real estate markets: the share of mortgage agreements in this segment accounted for 99% of all new mortgage loans in 2022.

In terms of regions, the largest number of mortgage loans were issued in Kyiv and Kiev region - 241 agreements for a total amount of almost UAH 345 million (43% of the total), in Volyn region - 48 agreements for UAH 60 million (8%), in Vinnytsia region - 37 agreements for UAH 50 million (6%), and in Chernihiv region - 54 agreements for UAH 47 million (6%).

To receive a preferential mortgage lending at the 3% and 7% yearly rate under the program, an applicant must meet several parameters:

✓ be a citizen of Ukraine and belong to the categories of persons specified in Resolution No. 856;

✓ be at least 18 years old at the time of signing the loan agreement and at least 70 years old at the time of full repayment of the loan debt;

✓ be solvent and make regular payments on the loan;

not have any valid mortgage agreements concluded under any other governmental programs.

In addition, a candidate for a mortgage loan and his or her family members must own at least 52.5 square meters of the total residential real estate for a family of one (single) person and additional 21 square meters for each additional family member. The real estate located in the hostilities area or in the territory under temporary occupation is not taken into account. Also, under the terms of the new mortgage program, the government has requirements for the real estate being purchased on credit.

What should be the subject of mortgage, according to the new program, namely:

✓ Located on the territory of Ukraine (but not on the occupied territory or in the area of military operations).

✓ The cost of housing should not exceed the appraised value determined based on the appraisal repost conducted by an appraiser or a bank employee.

The following items cannot be the subject of the mortgage:

✓ premises from the housing stock intended for temporary residence;

✓ apartments in a multi-apartment residential building that is subject to the state or municipal ownership;

✓ apartments in an apartment building put into operation earlier than ten years before the date of the agreement (for housing in the regional center).

In the future, other players in the banking market may issue such loans.

«The first will be the banks that already have expertise in assessing mortgage risks. First of all, state-owned banks. However, more financial institutions may join the program in the future. Currently, banks have enough liquidity, but almost no safe and highly profitable investment instruments. Therefore, if the war is over, many more financial institutions may become interested in preferential mortgages than they were before the war».

For banks, the increase in non-performing loans during the war was natural and expected. There are two reasons for this. First, solvency of borrowers has declined. Second, many of them lost the mortgage and collateralized real estate for which they have taken out the loans.

According to the NBU, the share of non-performing loans increased from 26.58% to 27.64%, or from UAH 305 billion to UAH 317.5 billion, between March 1, 2022 and June 1, 2022. The state cannot stand by and leave the issue of bad loans to the discretion of the bank and the borrower. In this case, we will face another wave of thousands of banking litigations. At the same time, the government's approach should be balanced and prudent. On the one hand, it is necessary to really support the borrowers, and on the other hand, not to cause another banking crisis and bank collapse by making populist decisions.

Thus, in 2022, the banking sector operated steadily despite the Russian terror on the energy sector. Banks continued to restore network operations in the liberated regions and maintained trust of depositors. The volume of customer accounts grew, in particular due to continued growth in household term deposits, with faster growth in foreign currency deposits. The net loan portfolio declined due to depressed

demand and growing credit risk losses. The share of non-performing loans continued to grow.

In 2022, a full-scaled armed attack by Russia, coupled with heightened global risks, increased uncertainty and made it more difficult for the NBU to fulfill its mandate ensuring price and financial stability and supporting sustainable economic growth. The National Bank of Ukraine has updated its research priorities until 2025.

The updated list of research priorities includes the following areas:

1. Monetary policy in the war period and during the post-war economic recovery. Given the challenges of a full-scale war, the NBU temporarily departed from the traditional format of inflation targeting, fixing the official hryvnia exchange rate against the US dollar and introducing a number of administrative restrictions on foreign exchange transactions and cross-border capital flows. At the same time, since June 2022, the NBU has returned to its active interest rate policy to maintain exchange rate stability, control price dynamics, and protect hryvnia incomes and household savings from inflationary depreciation. In addition, in the second half of 2022 and early 2023, the NBU used additional monetary tools, including raising the required reserves of banks, to strengthen the effectiveness of the monetary transmission mechanism amid a significant structural liquidity surplus in the banking system [160].

2. Ensuring financial stability in times of big and permanent shocks. The financial system is adequately meeting the challenges of a full-scale war. The banking system

[160] Dubyna M.V., Razgulina N.O., Maruga O.M. Features of the banking system development of mortgage lending for individuals in Ukraine. *Financial researches*. 2018. No. 2 (5). URL: https://fr.stu.cn.ua/tmppdf/124.pdf.

continues to function reliably and stably, and payments are made without interruption. in an effective and timely manner.

At the same time, the risks to the financial system due to consequences of a full-scale war were expected to increase. In this environment, an important task for the NBU is to monitor systematic risks and to improve its approaches to the macro-prudential policy to respond to shocks

3. The NBU's assessment of the long-term challenges in the real economy after the prolonged war is as follows: first, the NBU is focusing on research into demographic processes that will significantly affect labor markets and productivity in the medium and long term. Estimates of the impact of demographic processes on the country's economic development should be taken into account in macroeconomic forecasts for a timely and appropriate response from the economic policy; second, climate change poses new risks for the agricultural sector, and the transition to a green economy could lead to significant costs in energy-intensive industries. This also needs to be taken into account in the economic policy and the analysis of a set of instruments aimed at minimizing the risk of climate change; third, Ukraine needs to rebuild its lost capacity and destroyed infrastructure, and restore its potential. The «build back better» principle that underpins modern recovery strategies will require large-scale investment in the industry and infrastructure with a clear focus on the energy efficiency. Understanding the evolution and drivers of firm growth, entry and exit to the market, together with the implications for productivity and labor markets, becomes relevant to distinguish between the factors that cause short- and medium-term macroeconomic fluctuations.

4. Development of digital markets, products and their regulation. Introduction of the efficient digital financial ecosystem is a strategic opportunity for Ukraine. At the same

time, new technological innovations generate risks, in particular for the monetary policy and macro-financial stability of the state. Therefore, to take advantages of the innovation wave that has swept through the payment and market infrastructure and to ensure the accelerated development of Ukraine's digital financial markets without losing monetary sovereignty, a balance needs to be stuck between the promoting entrepreneurial innovation and ensuring robust regulatory requirements. Financial intermediation, insurance, pensions and investment products are undoubtedly necessary for proper functioning of the economy, but their form and functioning rely heavily on the interaction between new international legislation and capabilities of the distributed ledger technologies. New research in this area should provide an understanding of the joint evolution of private objectives and institutional requirements for the efficient functioning of the financial market in Ukraine.

In 2020-2022, despite the impact of the russia's full-scale military aggression and the global COVID-19 pandemic, financial regulators to make progress in implementing the Strategy for the Development of the Financial Sector of Ukraine until 2025. The National Bank of Ukraine, the National Securities and Stock Market Commissions, the Ministry of Finance of Ukraine and the Deposit Guarantee Fund are implementing the Strategy of the Financial Sector Development in Ukraine until 2025. As of the end 2021, 85% of the measures in the roadmap of the document's implementation have been completed or are being implemented according to the approved schedule.

The updated Strategy of the NBU was approved by the Board of the National Bank of Ukraine by its Resolution No. 97-рш dated March 18, 2021. In 2022, due to the Russia's full-scale war against Ukraine, financial regulators are also

reviewing the Strategy and plan to present its update in 2023, taking into account the priority measures in accordance with the Recovery Plan for Ukraine developed as part of the work of the National Recovery Council.

Strategy defines five strategic areas, namely: financial stability, macroeconomic development, financial inclusion, financial market development, and innovative development. Each area has its own strategic goals and performance indicators. The model of strategic development of the Ukrainian financial sector until 2025 is shown in Fig.2.6.



Fig. 2.6 Model of strategic development of the financial sector of Ukraine

Source: site of the NBU

Vision of the Ukraine's financial sector is to have an internationally integrated, efficient, resilient and competitive financial sector that is developing dynamically and making a significant contribution to the sustainable and inclusive economic growth of Ukraine. The financial sector of Ukraine is a driver of sustainable and inclusive development of the Ukrainian economy, contributing to the welfare of citizens by ensuring efficient accumulation, distribution and circulation of

financial resources in the economy.

Strategic Directions for the Development of the financial sector of Ukraine gave the following division structure:

Strategic direction 1: Financial stability. This direction includes the following factors: effective regulation of the financial sector and improved supervisory approaches, a transparent financial sector, resilience of the financial sector to challenges, and improved corporate governance and risk management in the financial sector.

Strategic direction 2: Macroeconomic development includes the following factors: ensuring sustainability of public finances, facilitating lending to the economy, strengthening protection of the creditors'- and investors' rights, and creating conditions for attracting long-term resources.

Strategic direction 3: Financial inclusion. This direction envisages the following: increasing the availability and use of financial services, strengthening the protection of the rights of consumers of financial services, and increasing the level of financial literacy of the population.

Strategic direction 4: Development of financial markets will ensure as follows: promotion of non-banking financial services markets, efficient infrastructure of capital markets, creation of liquid markets for financial instruments and mechanisms/tools to reduce the risks of financial transactions, integration of the Ukrainian financial market into the global financial system.

Strategic direction 5: Innovative development includes the following: development of an open architecture of the financial market and overseas markets, ensuring the development of the FinTech market, digital technologies and regulatory platforms, ensuring the development of SupTech & RegTech, and development of the digital economy. [162, 181-183]

Thus, the Strategy is implemented through the implementation of individual measures (projects) envisaged by the Strategy's roadmap in accordance with the of the project management. This strategy includes 5 strategic directions, which include 19 strategic goals for the financial sector development of Ukraine until 2025. Achievement of strategic goals is monitored by 85 indicators, which are almost equally divided into quantitative and qualitative. The Strategy Implementation Roadmap consists of 79 measures and 287 individual actions divided into strategic areas. More than 20 participants are involved in the Road map's implementation. A Financial Development Committee was established to coordinate and monitor the implementation of the measures, involving the heads of regulators, the Ministry of Finance, the Depost Guarantee Fund, and professional associations of market participants. The Strategy is updated by a decision of the Financial Development Committee.

The launch of a plan to finance the reconstruction of the Ukraine's economy with the participation of international partners is an obvious priority of the economic policy that should be implemented before the end of hostilities, even despite the risks. International aid should be received and distributed with the adequate functional participation of the national institutions governed by the government. This will allow for a more complete consideration of the national interests, which is especially important in reviving the industrial potential and ensuring the country's innovative development.

The key priorities of the monetary policy should be shifted from purely inflationary targets to more comprehensive priorities, such as the development of a financial intermediation institutions capable of ensuring the effective monetary transmission, i.e., transmitting impulses of interest

rate changes to financial and commodity markets. This requires:

✓ to reduce the NBU discount rate. The current level of the interest rate blocks the productive use of national savings and resources of the banking system in the economy, which is experiencing a dramatic reduction in nominal output of goods and services;

✓ to reform the banking system of liquidity charges. The existing liquidity of banks is not related to the productivity of the economy or the intermediary efficiency of the banking system, but is mainly caused by the inflow of the international aid and emission funds to the bank's accounts;

✓ remunerating by banks for the entire volume of such liquidity generates passive profits for banks, which discourages them from investing in business lending or government bonds. To offset these negative effects, it is proposed to:

✓ limit the maximum amount of bank's investments in NBU's certificates of deposit. For example, apply a limit equal to 100% of the bank's mandatory reserves formed in accordance with the NBU's requirements.

✓ revise norms for the formation of mandatory reserves for banks and introduce an interest-based remuneration for the NBU for their volume;

✓ introduce special instruments of the NBU for preferential targeted refinancing of the bank loans. Revival of the financial intermediation function of banks will require the launch of special lending mechanisms, especially in the sphere of small-and micro credits. Possible areas for targeting loans could include SME's projects and energy security projects.

✓ practice of targeted refinancing of bank loans has become particularly widespread during the Covid-19 pandemic. Loan reduction programs or other ways of encouraging banks to lend the SMEs have been applied by

central banks of Armenia, Belarus, Chile, Egypt, Georgia, Hungary, Indonesia, Kuwait, Mexico, North Macedonia, Pakistan, the Philippines, Russia, Sri Lanka, Thailand, Turkey, and the UAE. In addition to the obvious effect of the financial intermediation, such programs reduce the burden on the state budget, which is important for the economy operating under permanent military threats.

✓ strengthen the stabilizing role of the fiscal policy. The state stabilization programs of the government should be prioritized to create jobs (especially in terms of the production localisation and import substitution). This will allow the NBU to effectively link the new money supply to the economy and improve its circulation, reduce the risks of structural inflation, and prevent the loss of the country's labour resources (forced labour migration).

✓ forms of state participation in the stabilization of the country's production potential – preferential lending terms, loan guarantees, subsidies for jobs creation, government orders, assistance in obtaining international grants and loans;

✓ continued structural reforms in the judicial and law enforcement systems will gradually improve the legal framework for the business activity and protection of property rights. This will facilitate the inflow of private business investment into the country.

✓ The sound structural policy will promote gradual transition of the economy to market conditions and create a diversified and competitive sector.

✓ a separate resource for attracting private foreign capital to Ukraine is found in the part of multinational companies which production business units have left the Russian territory;

✓ To attract investors, it is important to implement projects to restore and develop the physical infrastructure. A high-quality infrastructure potentially reduces the transition

costs of investors and increases their willingness to invest in business projects.

✓ It is important to strengthen the redistribution function of the fiscal policy in terms of a more equitable distribution of economic income. This issue will become more acute after the war, when millions of disadvantaged people will need employment with adequate wages comparable to minimum social standards.

✓ Introduction of a differentiated income tax system and wealth taxation are possible options for strengthening a redistributive role of the fiscal policy. Domestic savings are the main resource for intensifying the development of any economy.

✓ A fairer distribution of economic revenues contributes to their more productive use in the country's economic turnover.

Constructive interaction of the monetary and fiscal policies is a particularly critical issue during structural crises, when traditional production and financial ties of the economy are destroyed, when the basis, on which instruments of the public policy are built, is destroyed. [164, 181, 182]

Therefore, the government and the NBU should pursue a unified policy of the macroeconomic stabilisation, coordination of the fiscal and monetary policies, support for production, employment and household incomes, taking into account the changing current economic environment and high military risks. The current legislation provides for possible use of the NBU's activities to support the economy, if this does not contradict the goals of the price and financial stability.

In my opinion, we are now in the situation where the focus of the Central bank on supporting the economy, restoring its productivity and transmission mechanisms is in line with both the objectives of the Central bank and the government. It

is important to present the agreed position of Ukraine to international partners in a meaningful and consistent manner (especially in negotiations with the IMF), since without their support there is no option for a successful recovery of the national economy.

Mortgage lending is an important factor in the country's economic and social development. The economic essence of mortgage lending is that it is a system of economic relations created by granting a mortgage loan, i.e. a cash loan secured by real estate. Mortgage lending is much broader in scope and encompasses more than just the financial sector, the mortgage lending should take into account its impact not only on the financial sector but also on the macroeconomic, social and political spheres, and the state of the public life.

The mortgage market is an important place for an efficient mortgage system. The mortgage market is defined as an organised system of economic relations that arise by generating mortgage capital and converting it into financial liabilities secured by real estate.

At the same time, a specific product in the mortgage market is the loan capital secured by real estate, which is circulated in the form of mortgage loans on the one hand, and mortgage-backed securities – on the other.

In the mortgage market, the most important function is to mobilise financial resources, as the structure and cost of funds directly affect the ability of banks to convert them into mortgage capital, i.e. to use them to finance the economy and business entities.

The efficiency of the mortgage system depends on the interconnection of all its structural elements. Development of the system is based on credit and financial, special credit and financial, social and legal, and social- economic principles.

Mortgage lending in Ukraine has been on an upward

trend in recent years, but mortgage loans account for a small share of the total portfolio of commercial banks. Development of mortgages is partly dependent on the state of the real estate market and its efficiency. Therefore, the formation of an effective mortgage lending mechanism requires not only improving the functioning of the real estate market, but also stabilising the national financial market, i.e., on the one hand, the policy in this regard should ensure full development of investment relations related to the real estate market, and on the other hand, protect mortgage markets from the instability of the global financial system.

Ukraine has government programs to support the development of mortgages, but they are ineffective. This is due to low incomes of citizens that do not allow them to use these programs, insufficient funding of projects from the state budget and insufficient public awareness of state programs.

Addressing these issues at the state level will help to increase the effectiveness of the analytical project and improve the social well-being of the Ukrainian population. None of the models of mortgage lending used in Ukraine to date has been able to account for long-term resources of banks or the flexibility of managing mortgage portfolios. If it is restructured, taking into account the reasons that led to the current mortgage crisis, it is possible to predict the future dominance of the US mortgage lending model in Ukraine.

One of the mechanisms for optimising mortgage lending is the creation of a system of savings and loan institutions (S&Ls). The basis of their operation will be the construction of savings and loan offices. Development of mortgage lending and its positive impact on the competitiveness of the national economy of Ukraine is possible due to the development of the real estate market, ensuring its transparency, fair pricing and balanced supply and demand for real estate.

2.3. Financial and economic security of enterprises: tools, implementation measures and management methods

The leveling of crisis phenomena in the maximum preservation of the security component of domestic enterprises requires the necessary potential for survival, and is strategically important for the country as a whole in ensuring its functioning. This leads to the emergence and spread of a new type of management, specific in terms of its tasks and functions - anti-crisis, as a tool for ensuring the financial and economic security of the enterprise. Of course, a crisis situation in the enterprise does not arise suddenly, it has its own reason, which is hidden in the market environment itself with a constant change in market orientations of consumers, the uncertainty of the economic behavior of counterparties, the need for constant adjustment of the main elements and functional subsystems of the enterprise.

The adverse influence of the external environment (economic, political, social) is also a significant factor.

The occurrence and deepening of the crisis are definitely influenced by economic factors, which traditionally distinguish general economic factors that determine the general conditions of operation and market trends in the development of individual markets for goods and services. However, internal factors are considered the main root cause of the development of the crisis and consist in poor management - crisis type management: the composition of the management with insufficient knowledge, managerial employees in an unbalanced administrative team, the lack of a strategic approach, weak discipline, which in general strengthens the action as insufficient control over the formation and use financial sources and inhibition of the investment component at the enterprise.

Depending on the formation of financial sources, it is necessary to single out the following crisis factors related to operational activities: ineffective marketing, the structure of current costs with a high share of fixed costs, low level of use of fixed assets, high size of insurance and seasonal inventory, insufficiently diversified range of products, inefficient production management at the production sites of the enterprise.

As for investment activity, the long-term development of investment resources with their overspending, failure to achieve the planned profit volumes for the investment projects implemented, gives rise to ineffective investment management.

In financial activities, an ineffective structure of the financial strategy from the point of view of the liquidity of the asset structure, an excessive share of loan capital with a high share of short-term sources in its involvement, exceeding the permissible limits of financial risks are a sign of ineffective financial management.

In practice, the crisis is identified with the threat of insolvency and bankruptcy of the enterprise, activity in the unprofitable zone, or its lack of potential for successful functioning. From the point of view of financial management, the state of crisis reduces the company's ability to provide financial support for current production activities, which threatens financial security as a whole. At the same time, an important prerequisite for the application of effective anti-crisis measures is the identification of the depth of the financial crisis, namely: the factors causing the crisis, its type and stage of development.

The existence of such cause-and-effect relationships leads to the company's loss of liquidity, which leads to a decrease in the volume of product sales, leads, on the one hand, to a decrease in profitability and an increase in unprofitability,

and on the other hand, to a decrease in the level of liquidity and solvency. In addition, the regularity of the symptoms of the financial crisis is excessive indebtedness, insolvency, and as a result - bankruptcy.

In the conditions of a market economy, domestic enterprises carry out their financial and economic activities under the constant influence of adverse internal and external factors that can lead to a financial crisis and bankruptcy. From these positions, the relevance of effective anti-crisis financial management as a system of timely methods and techniques capable of preventing a financial crisis and avoiding bankruptcy is objectively increasing.

The concept of anti-crisis financial management is very broad. It includes global problems of today and periodically arising current problems caused by violations of production strategy and business tactics.

In the economic literature, there are different approaches to defining the concept of anti-crisis financial management. Among them, this is the definition of a special mode of performance of financial management functions, which consists in the organization of financial work at the enterprise, taking into account the need for prevention and neutralization of the financial crisis. The main task is the effective use of the financial mechanism in order to prevent bankruptcy and ensure the financial recovery of the enterprise[161].

In addition, anti-crisis management of an enterprise is understood as management aimed at predicting the danger of a crisis, analyzing its symptoms and eliminating threats of the emergence of crisis situations, and in the event of their

[161] Bin'ko, I. and Shlemko, V. (2016), “How to ensure the economic security of Ukraine”, *Vseukrains'ki vidomosti*, vol. 138 (810), pp. 3–8.

occurrence, analyzing and taking quick liquidation measures with the least losses and negative consequences [162].

Consideration of the content of anti-crisis financial management, as the development of a set of measures for the prevention of a financial crisis and its overcoming, defines the very concept of anti-crisis financial management - the development and implementation of directions aimed at the rapid restoration of solvency and ensuring a sufficient level of financial stability of the enterprise to exit the crisis state. This characterizes the anti-crisis financial management of the enterprise as a type of management aimed at identifying the signs of crisis phenomena and creating appropriate prerequisites for their timely prevention, mitigation, and overcoming in order to ensure the viability of the subject of entrepreneurial activity, preventing the situation of its bankruptcy [163].

In general, anti-crisis financial management can be represented as a system of financial management techniques and methods aimed at preventing financial crisis and bankruptcy of the most economically vulnerable enterprise, taking into account the production factor. Hence, the anti-crisis financial management of the enterprise can be considered from two perspectives:

1) A system of preventive measures aimed at preventing a financial crisis with a constant analysis of the company's strengths and weaknesses, bankruptcy forecasting,

2) risk management with their minimization and neutralization, implementation of a system of preventive

[162] Vasyl'chak, S.V. Zhydiak, A.H. and Struchok, N.M. (2011), "Corporate security mechanism for business entities", *Naukovyj visnyk L'vivs'koho derzhavnoho universytetu vnutrishnikh sprav*, vol. 2, pp. 278–285.

[163] Holikov, I.V. (2014), "Eessence and evolution of the concept of economic security", *Problemy ekonomiky*, vol. 1, pp. 309–314.

measures;

3) A financial management system aimed at bringing the producer out of the crisis, including through rehabilitation or restructuring.

The above is closely related to the interpretation of the main goal of anti-crisis financial management, where it is determined that the development and implementation of such measures is primarily aimed at quickly restoring solvency and ensuring a sufficient level of financial stability of the enterprise to get out of the crisis [164].

To maintain financial balance, ensure stable liquidity, solvency and profitability, financial management must organize financial work at the enterprise in such a way that operational, investment and its financial activities are carried out taking into account the requirements of the anti-crisis financial management policy. And taking into account the factor of the financial crisis and the ineffectiveness of recovery measures at many enterprises, with a low level of operational and financial management in particular, it is advisable to introduce elements of the anti-crisis management system both at successfully functioning enterprises and at those that have found themselves in a financial crisis.

In the first case, the main task of the system is to prevent a financial crisis, in the second - to overcome it (financial recovery).

Based on the practice and experience of conducting economic activity, in scientific literary sources, the classification of the policy of anti-crisis financial management is presented as part of the general financial strategy of any economic entity, and consists in the development of a system

[164] Kyrylenko, V.I. (2015), *Investytsijna skladova ekonomichnoi bezpeky* [Investment component of economic security], KNEU, Kyiv, Ukraine.

of methods for preliminary diagnosis of the threat of bankruptcy and "turning on" the mechanism of financial security of the enterprise regarding its exit from the crisis state.

The implementation of the anti-crisis financial management policy at the threat of bankruptcy provides [165]:

1. Carrying out constant monitoring of the financial state of the enterprise with the aim of early detection of signs of its crisis development.

2. Determination of the scale of the crisis state of the enterprise.

3. Research of the main factors determining the crisis development of the enterprise.

4. Formation of a system of goals for the exit of the enterprise from a crisis state, adequate to its scale.

5. Selection and use of existing internal mechanisms of financial stabilization of the enterprise, which correspond to the scale of its crisis financial condition.

6. Selection of effective forms of rehabilitation of the enterprise.

7. Ensuring control over the results of the developed measures regarding the exit of the enterprise from the financial crisis.

Based on this, measures to overcome the financial crisis are divided into operational, tactical and strategic. Operational measures include those aimed at stopping the "outflow" of funds (freezing accounts payable, short-term debt payment concessions, payment of short-term obligations, suspension of expenses for technical modernization, professional development, etc.), as well as the intensification of "inflow" of

[165] Kozachenko, H.V. Ponomar'ov, V.P. and Liashenko, O.M. (2008), *Ekonomichna bezpeka pidpryiemstva: sutnist' ta mekhanizm zabezpechennia* [Economic security of the enterprise: essence and mechanism of providing], Libra, Kyiv, Ukraine.

funds (sale or lease of fixed assets, refusal to purchase materials in favor of the most necessary, consideration of lending options, etc.).

Tactical measures can take the form of permanent plans or special plans for financial recovery according to established periods (revenue budgets) of income from product sales.

Decision-making regarding the content and time characteristics of measures depends on the type and depth of the financial crisis. Thus, strategic measures are designed to provide a perspective in balancing income and expenses by types of enterprise, and especially the production component in terms of products, and to take into account the possibility of its investment and innovation progress.

Thus, for the financial recovery of the enterprise, depending on the causes of crisis phenomena in its financial subsystem, it is necessary to apply measures in the following areas:

- Overcoming the payment crisis;
- Restructuring of payables, in particular principal debt, sanctions;
- Ensuring a sufficient level of receipt of funds;
- Saving current costs.

Among the above measures, a special place is occupied by debt restructuring, which makes it possible to provide the basis for further anti-crisis transformations at the enterprise. Financial restructuring occupies a prominent place in the general process of restructuring of business entities, and its measures go beyond purely financial levers and require the participation of almost all divisions of the enterprise.

In addition to this, anti-crisis financial management should rely to a large extent on the functional and methodological tools of controlling and take into account the requirements of the legislation that determines the mechanism

of financial rehabilitation and bankruptcy of business entities.

Considering the economic and production essence of controlling, it should be noted that it is a special, self-regulating system of methods and tools aimed at functional support of the operational management of any business entity (in particular, a financial one), and includes information provision, planning, coordination, control and internal consulting [166].

In practice, it is customary to distinguish different sectors of controlling: financial, sales, divisional, controlling production and purchases, etc. Most of the methods and tools of controlling are universal and can be used in different sectors.

The functions of controlling consist in the formation of information provision of business entities, where its basic basis is the indicators of production and financial accounting, as well as information coming from the external environment, focusing on technical and economic data by individual users of information, as well as by its subject matter, which important for establishing an early warning and response system. This determines the coordination of production activity plans and contributes to the construction of a "tree of goals" that are set before the business entity.

From this, the "tree of goals" is a graphic representation of the subordination and interrelationship of goals, demonstrates the decomposition of the general goal into individual tasks that are embodied in strategic and operational planning.

Strategic and operational planning performs a number of tasks: determination of the strategic directions of the

[166]Kravchuk, O.Ya. Kravchuk, P.Ya. (2018), *Diahnostyka ta mekhanizm zabezpechennia korporatyvnoi bezpeky pidpryiemstva* [Diagnosis and mechanism of corporate security], Nadstyr'ia, Luts'k, Ukraine.

business entity, formulation strategies for its development, strategic success factors, planning horizons, development of a concept and plan for financial recovery.

An important component here is control and revision and internal audit, which is carried out to identify the causes of deviations from plans and identify the weak points of the business entity, mostly by means of factor analysis of deviations [167].

Thus, financial controlling can be distinguished as a self-regulating security system of methods and tools, aimed at functional support of the financial management of the enterprise by concentrating control actions on the main directions of managing its finances, identifying deviations of the actual values of control indicators from normative (planned) and taking operational measures for normalization financial management process.

The main goal of financial controlling is to focus the management process on maximizing profit and increasing the value of capital while minimizing risk and maintaining the liquidity and solvency of the enterprise.

Therefore, financial controlling is an integral subsystem of financial management, its main functions are manifested in the formation of information for the management of the enterprise and its processing, coordination of financial plans and various functional systems of financial management, strategic and operational financial planning, control over the implementation of financial plans, methodological support financial activity and internal consulting.

The implementation of the financial controlling system at the enterprise makes it possible to significantly increase the

[167]Liashenko, O.M. (2011), *Kontseptualizatsiia upravlinnia ekonomichnoiu bezpekoiu pidpryiemstva* [Conceptualization of economic security management], SNU im. V.Dalia, Luhans'k, Ukraine.

efficiency of its financial management, which serves as the basis for building a system of managing its financial and economic security. Where the basic components of operational financial controlling are the system of annual budgets and budgetary control.

If necessary, budgets can be broken down by quarters, months, decades or days.

The interrelationship of budgeting and budgetary control characterizes the main content of operational controlling, which actually consists in a systematic comparison of the actual indicators of the enterprise's production activity with the planned and further analysis of deviations with their prevention.

The range of tasks that belong to the competence of budget control includes management accounting, analysis of deviations, as well as reporting. Operational reports (reports) interpret the results of budget implementation, provide an assessment of the main economic indicators, and formulate proposals arising from the analysis of deviations, which is an effective tool in the management system of the financial and economic security of the enterprise.

Thus, the problem of inefficient risk management and prompt identification and use of additional measures to improve operations is typical for many domestic enterprises, the consequence of which may be a reduction in the potential for the development of a financial crisis.

In order to timely identify the factors that inform about individual economic indicators, internal and external parameters of the enterprise's activity, it is necessary to take preventive measures to its management system of operational response. This is the construction of a special information system that signals to management about potential risks of losses from both the external and internal environment. When

building such a system, elements of strategic and operational control are integrated. The same system logically fits into the planning system for the timely identification of a crisis and the threat of bankruptcy of an enterprise with the establishment of opportunities for its development or the development of additional measures to increase business activity.

The formation of a system of operational response will make it possible to identify and analyze information about circumstances, the occurrence of which may lead to the loss of potential business opportunities. The primary task of the system is timely identification of signs of crisis, i.e. forecasting possible bankruptcy. On the other hand, with the help of this system, additional opportunities for risk management are revealed, which includes the identification of risks, their assessment and neutralization.

The very process of creating an operational response system can consist of such stages as determining the spheres of observation, that is, establishing the objects of internal and external diagnostics. The main areas of observation within the framework of internal diagnostics include financial, production, sales, and organizational components.

External diagnostics is based on the analysis of the market situation (clients, competitors, business environment), the macroeconomic situation in the country and the economic and legal conditions of the enterprise.

The selection of operational response indicators that may indicate the development of a particular negative process is made possible by their limit values and safe change intervals. During this stage, the safety zone is calculated, that is, the determination of the positive difference between revenue and the cost of implementation, which corresponds to the break-even point, as well as the value of labor productivity, which ensures the competitiveness of enterprises. In addition, the

level of financial indicators sufficient to maintain stable liquidity and solvency of the enterprise is established and its market share necessary to ensure the planned level of profitability is determined.

The formation of specific analytical tasks for the company's management can be directed to bankruptcy forecasting, SWOT analysis and other financial tools. At the same time, the formation of information flows and their connection between information sources and the operational response system should cover the heads of all production units of the enterprise.

Based on the generalization of the obtained analytical conclusions and the preparation of proposals and recommendations for the development of strong points with the neutralization of weak points, it becomes the basis for the development of projects of management solutions for working out the financial and economic security of the enterprise. At the same time, it is necessary to orient the system to the internal parameters of the company's activity regarding the identification of risks and opportunities for development, for this, it is necessary to build a risk management system that includes their identification, assessment and neutralization.

Orientation to the external environment (state influence, counterparties, competitors) implies the flexibility of the production activity of the enterprise on the basis of possible business diversification, expansion or narrowing of sales markets.

The existence of various bankruptcy forecasting models is one of the inherent fundamental approaches - the collection and analysis of all information about the enterprise from internal and external sources related to it. On the basis of external information, the current and prospective situation in the industry to which the enterprise belongs, the general

development of the business environment is evaluated. Taking into account the obtained general economic data, internal sources of information and financial plans of the enterprise, the result of its economic activity for the nearest period is predicted and revealed.

In general, the fundamental approach to assessing creditworthiness and forecasting bankruptcy of domestic enterprises is oriented towards internal financial planning and budgeting and the assessment of their prospective development. Therefore, one of the most important tools of the system of prompt response to bankruptcy and the method of its forecasting is discriminant analysis, the meaning of which is that a function is built using mathematical and statistical models and an integral indicator is calculated, based on which the bankruptcy of the enterprise can be predicted with sufficient probability.

Discriminant analysis is based on an empirical study of the financial indicators of many enterprises in the industry, a certain proportion of which went bankrupt, and the rest continue to operate successfully. At the same time, a set of indicators is selected - coefficients for each of which the specific weight in the “discriminant function” is determined.

The weighting, as well as the limit value of the considered coefficients, can be adjusted. First of all, it depends on the industry, the general economic and political situation in the country, the level of inflation and other factors. As a result, the value of the integral indicator provides grounds for forming a conclusion about whether the subject belongs to bankrupt enterprises or enterprises that are successfully functioning.

The task that should be solved in the process of organizing an operational response system is the selection of early warning indicators and the definition of criteria for their interpretation.

In the scientific and practical literature, the following blocks of indicators are mostly distinguished:

1) General economic - allow timely detection of changes in the development trends of the economy as a whole (research results of relevant economic and sociological research institutes are used);

2) Market indicators - make it possible to identify trends in the markets in which the business entity operates;

3) Technological indicators - information on the appearance on the market of new products, methods, processes;

4) Social indicators - the demographic situation in the country, in particular the cost of labor and qualified personnel, the level of the minimum wage;

5) Political - influence on the activities of enterprises that have a political nature, in particular, trends in economic legislation, protectionism policy, etc.;

6) Internal indicators - a system of indicators calculated because of internal (management) accounting and reporting.

The combination of indicators, which serve as internal indicators of operational response, is selected taking into account the possibilities of forecasting based on the financial condition of the enterprise and the threat to its financial and economic security.

According to the latest developments in the field of financial management, it is recommended to use the Cash-flow indicator as a key internal indicator of operational responsiveness. This indicator is the result of the movement of cash flows within the framework of operational and investment activities, which quickly signals problems in the field of sales, production and management of current assets.

In addition, one of the most important tools of the operational response system and the method of forecasting the

bankruptcy of business entities, as mentioned earlier, is discriminant analysis.

The latter is understood as a set of mathematical statistics methods, which are used to classify the studied units (enterprises) depending on the values of the selected set of indicators according to the constructed metric scale. Such a scale is built on the basis of an empirical study of the financial indicators of a large number of enterprises, some of which have found themselves in a financial crisis, while others are successfully continuing their business activities [168].

In the process of such an analysis, a certain system of indicators is selected, after examining the values of which, it is possible to assign the enterprise to one or another class and with a high level of probability to predict its future financial condition.

In theory and practice, one-factor and multi-factor discriminant analysis are mostly distinguished.

The one-factor (one-dimensional) analysis is based on a separate study of individual indicators (a component of a certain system of indicators) and the classification of enterprises according to the principle of dichotomy. Classification of the enterprise into the category of "sick" or "healthy" is carried out in terms of individual indicators in accordance with the empirically constructed scale of the limit values of the studied indicator .

Thus, according to the scale of values of the indicator of profitability of assets, the limit value of this indicator is 2%. This means that enterprises with a return on assets >2% are considered "healthy", while if the value of this indicator is <2%, the enterprise belongs to the group of business entities

[168] Franchuk, V.I. (2010), *Osoblyvosti orhanizatsii systemy ekonomichnoi bezpeky vitchyznianykh aktsionernykh tovarystv v umovakh transformatsijnoi ekonomiky* [Features of organization of the system of economic security L'vivs'kyj derzhavnyj universytet vnutrishnikh sprav, L'viv, Ukraine.

that are at risk of a financial crisis.

The general conclusion about the financial condition of the enterprise is made on the basis of the analysis of compliance of each of the indicators included in the specially selected system according to their limit value. At the same time, the most well-known models of univariate discriminant analysis are the indicator systems of Beaver and Weibel.

The basis of V. Beaver's research is the 30 indicators most often used in financial analysis. According to the sign of homogeneity, they are grouped into six groups. From each group, one of the most typical indicators is chosen, which made up its forecasting system.

This can be the ratio of Cash-flow to borrowed capital, the ratio of net profit or borrowed or working capital to the currency of the balance sheet, the ratio of current assets to current liabilities (coverage ratio), the ratio of the difference between expected cash receipts and current liabilities to the company's expenses (without depreciation).

Weibel's system of indicators is almost identical to the previous one, its difference lies only in the detailing of the research periods (month, quarter, year). For each of these indicators, a corresponding scale will be constructed in the form of diagrams that show the dynamics of the values of the indicators during a certain period before the onset of financial insolvency in one of the groups of investigated enterprises. If the values of all indicators of the analyzed enterprise are in the safe zone of the corresponding scale, then this business entity is not at risk of bankruptcy. If the value of more than three indicators approaches the zone of “sick” enterprises, then the analyzed enterprise is considered to be at risk of bankruptcy.

For those enterprises in which less than three indicators are in the critical zone, additional analysis is recommended.

However, a controversial point of one-factor

discriminant analysis is that the value of some indicators may indicate positive development of the enterprise, and others - unsatisfactory. Such a situation makes it impossible to objectively predict bankruptcy and shifts the emphasis on the financial and economic security of such an enterprise.

One of the ways to solve this problem is to use multivariate discriminant analysis. In the process of such an analysis, a number of indicators are selected, for each of which the weight in the so-called discriminant function is determined.

In general, the algorithm of the linear multivariate discriminant function can be presented in the following form:

$$Z = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + \ldots + anxn, \quad (2.1)$$

where a_1, a_2, a_3, ..., an are the coefficients (weight) of the discriminant function;

x_1, x_2, x_3, ..., xn are indicators (variables) of the discriminant function.

Thus, the total value characterizes the different impact of individual indicators (variables) on the overall financial condition of the enterprise. Hence, the assignment of the analyzed enterprise to the group of “sick” or “healthy” depends on the value of the integral indicator, which is the result of the solution of the discriminant function, as well as on the direct division constructed on the basis of empirical data.

The dividing line characterizes the limit value of the Z-index and serves as the basis for developing a scale for interpreting the obtained Z values.

At the same time, the most famous bankruptcy forecasting model based on multivariate discriminant analysis is the Altman model [10].

The bankruptcy-forecasting model is also called “calculation of the Z-index”, is a classic in its field (financial

forecasting and assessment of the creditworthiness of enterprises), and has the following form:

$$Z = 0.012 \times X_1 + 0.014 \times X_2 + 0.033 \times X_3 + 0.006 \times X_4 + 0.999 \times X_5, \quad (2.2)$$

The model is five-factor, where the factors are individual indicators of the company's financial condition. Based on the five-factor model and adapting it to national financial reporting standards, the individual variables of the discriminant function have the following form:

X_1 - working capital divided by the currency of the balance sheet;

X_2 - the sum of retained earnings (uncovered loss) and reserve capital divided by the currency of the balance sheet;

X_3 - ordinary profit before taxation plus interest on the loan divided by the currency of the balance sheet;

X_4 - market value of enterprises (market value of corporate rights) divided by loan capital;

X_5 - net revenue from product sales divided by the currency of the balance sheet.

The average value of the Z indicator for financially insolvent enterprises is -0.29, and for the group of successfully operating enterprises +5.02.

According to some sources, the accuracy of predicting bankruptcy using this model is 36% five years before bankruptcy, four years 29%, three years 48%, two years 83%, one year 95%. At the same time, the interpretation of the Z-index values is (Table 2.8):

Table 2.8

Parameters of Altman's discriminant function

Z value	Probability of bankruptcy
up to 1.8	high
1,8-2,67	cannot be clearly defined
2.67 and above	low

The toolkit of multifactorial discriminant analysis can be used by the management of the enterprise to identify the symptoms of the financial crisis in a timely manner in order to work out operational tactics for safely overcoming it. However, the use of the methodology of multifactor discriminant analysis in domestic practice is quite limited, which is due to the impossibility of developing own, sectoral discriminant functions due to the lack of specialists with sufficient qualifications and the insufficient level of objectivity of indicators displayed by enterprises in financial reporting. At the same time, numerous methods of one-factor discriminant analysis are used in Ukraine, but they are unsystematic, do not take into account industry specifics and do not contain a relevant key interpretation.

Thus, the establishment of the national economy of Ukraine on market relations significantly complicates business conditions and means an increase in competition between business entities, which creates a risk of worsening their financial condition and leading to bankruptcy, which in general reduces the level of financial and economic security of the enterprise.

Ensuring the financial and economic security of enterprises and implementing a mechanism for its management is urgently needed at the level of any business entity. However, in Ukraine, the problem of managing financial and economic security at the enterprise level is insufficiently, not

comprehensively dealt with, the main attention is paid to financial security at the state level and anti-crisis management. The latter becomes necessary when enterprises are already in a state of financial danger. At the same time, the main task is to prevent this from happening.

The problem of ensuring financial and economic security, the presence of which does not require anti-crisis management, is solved fragmentarily, such studies lack comprehensiveness, and the conceptual (categorical) apparatus is also insufficient.

Perceiving the decisive role of financial and economic security of enterprises, the concept of "financial and economic security" in a certain branch of the economy has the right to independent existence and research as a separate economic category. This is due to the fact that financial and economic activity is primarily aimed at providing enterprises with the necessary resources, and their financial operations are of a stable nature. And assuming that the management of financial and economic activities plays a priority role in ensuring the stability of the economic development of the enterprise as a whole, then financial risks are the most dangerous due to their negative consequences. This approach shows that financial and economic security should act as a separate object of enterprise management.

The variety of global economic risks in general and in the national economy in particular have a destabilizing effect on the flow of business processes, which is primarily reflected at the micro level - the level of enterprises. In today's tough market conditions, enterprises need a high level of economic protection from external and internal factors of negative influence for their continuous functioning. Therefore, effective management of domestic enterprises involved in the process of an unstable modern market economy requires effective

scientific and methodological approaches to the assessment of the tools of their own economic security. Under these conditions, the task of developing a complex of operational and long-term economic security assessment measures, which will reduce uncertainty, prevent and neutralize external and internal threats, and ensure the effective development and competitiveness of domestic enterprises, becomes especially important.

However, the evaluation of the economic security of the enterprise is one of the least studied issues, but at the same time it has significant practical significance and value. It is the results of the assessment that are the basis for developing management influence measures to stabilize the company's activities. And obviously, the more reliable and timelier the assessment of economic security, the more justified and effective the measures to ensure it will be. With such an approach, the current state of the national economy with regularly occurring economic crises shows that the development of tools for influencing threats and a mechanism for increasing the economic security of enterprises' business has become particularly relevant, which will have a significant impact on their functioning and economic development prospects.

In this case, the question arises of identifying the very nature of the occurrence of economic threats and determining the managerial influence on it with the help of such tools as monitoring the algorithmizing of such threats, outlining directions for their neutralization.

It is an axiom that the effective functioning of any enterprise in modern economic conditions is impossible without an analysis of internal and external threats and related risks to its economic security. Therefore, the development of a mechanism for prevention and elimination of such economic

threats is related to the fact that economic activity is influenced by many factors that must be identified, systematized and taken into account when assessing the economic security of the enterprise.

If we consider the subjective point of view of conducting the analysis of economic security, then it is reduced only to the micro level, where the financial component of the enterprise's activity is mainly investigated, and the factor influence of the macro level on economic processes cannot be assessed either quantitatively or qualitatively. Therefore, in the modern conditions of conducting economic activity, the main task of enterprise management is the identification and assessment of the entire complex of risks and threats to economic security with the aim of their leveling and further consideration during the development of a strategy for own development.

Turning to the evolution of scientific views on the concept of "economic security of the enterprise", it was considered from different positions of its interpretation. Thus, the original concept of economic security was noted as "ensuring conditions for the preservation of commercial secrets and other secrets of the enterprise" [188]. Later, this concept began to be associated with the factor influence of the internal and external environment as a state of protection of the vital interests of the enterprise from real and potential sources of danger or economic threats arising in its internal and external environment.

Today, economic security acquires new features and is defined as a set of factors that ensure the independence, stability, ability of enterprises to progress in conditions of destabilizing factors, or the protection of the scientific and technical, technological, production and personnel potential of enterprises from direct or indirect threats, which speaks of

synergy in the definition of the concept of "economic security" and its consideration from the standpoint of macroeconomic influencing factors.

Thus, modern economic science considers the main types of threats to economic security to be informational, personnel, financial, technical and technological. That is, the state of effective use of resource potential is the main object of protection against threats and ensuring the stable functioning of the enterprise. Hence, the main goal of the economic security of the enterprise is to ensure its stable and maximally effective functioning, to ensure the high potential of business development.

In order to achieve this goal, it is necessary to identify the main groups of threats and identify their impact on the system of economic security of a modern enterprise, operating with theoretical approaches, which consider the signs of the main threats in their classification section, that is:

- By spheres of occurrence (internal and external);
- By objects of encroachment (property, information, technology, etc.);
- By nature of occurrence (economic, legal, environmental, competitive);
- By the number of losses (significant and catastrophic);
- By degree of probability (unlikely, likely, likely);
- By time interval (close, distant).

The classification of threats is the starting point of the formation of the system of economic protection; therefore, the systematic evaluation should cover an elementary number of indicators, namely:

- dynamism of the enterprise's development based on the degree of compliance with plans, norms, standards;

- Efficiency of resource use (fund return, labor productivity, material return, etc.);
- Comparison of own business processes with business processes of competitors.

Important components in the system of assessing the level of economic security are usually macro threats[169]. In this case, to assess macro-level risk factors, it is advisable to use the SWOT analysis, known in strategic planning, adapted for research purposes, supplementing it with a political and technological component, a social aspect, and legal and natural factors that have a significant impact on the activities of enterprises.

The latter can act as significant limitations, as there is currently a legal or institutional imperfection (uncertainty) in the entrepreneurial sphere. In addition, the assessment of macro threats can be understood both in the sectoral and in the territorial (regional) aspect[170], for which an algorithmic construction is necessary in conducting comprehensive monitoring of threats to the economic security of the enterprise (Fig. 2.7).

In general, the threats of the industry aspect are reduced to the characteristics of the sphere of functioning of the business structure, and from the point of view of the territory, the characteristics of a certain region will act as determinants.

The main elements of economic security assessment include the form of production organization, economic or business relations, incentive system, management, planning, financing, taxation, pricing.

[169] Zabrodskij, V. and Kapustin, N. (2019), "The theoretical basis for assessing the economic security of the industry and the company", *Biznes Inform*, vol. 15–16, pp. 35-37.
[170] Il'jashenko, S.N. (2017), "Components of economic security of enterprises and approaches to their assessment", *Aktual'ni problemy ekonomiky*, vol. 3 (21), pp. 11–19.

The most important elements of the economic mechanism are economic entities and the relations they enter into regarding the organization of production and economic relations.

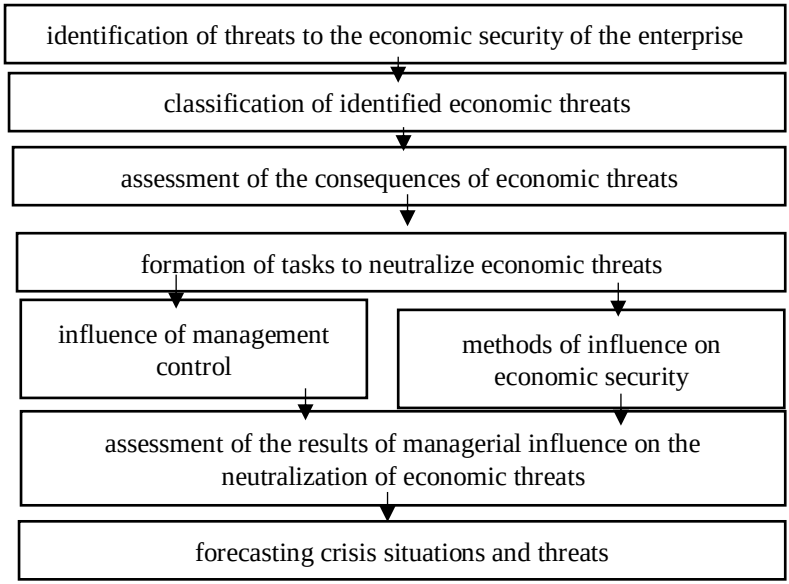


Fig. 2.7 Algorithm of complex monitoring of threats to the economic security of enterprises

At the same time, the complexity of the assessment includes the main groups based on the forms of security implementation. Thus, the groups can be organizational-legal, socio-economic, technical-technological, informational, personnel, etc., where the result of the assessment of the economic security of the enterprise is the choice of directions for neutralizing threats according to their importance and conditions of occurrence (Table 2.9).

The organizational and legal group includes a set of

methods that have an impact on the organizational structure of the enterprise, on the flow of business processes in it, as well as a number of management decision-making methods. In order to increase the efficiency of the transformation of resource potential into the final result of activity, the enterprise needs to apply business process reengineering as a set of methods and techniques used to design the entire economic process in accordance with its strategic goals.

Table 2.9

Directions for neutralizing threats to the economic security of enterprises

Factors economic security	Severity of threats	Direction of threat neutralization
Personnel	Staff turnover, low qualification competence of managers and employees	Training and retraining of personnel, creation of a system of allowances for qualification level
Industrial	High degree of wear and tear of fixed assets, low technical and technological level of production, lack of innovation	Moral and physical restoration of outdated equipment, introduction of the latest technologies, rationalization
Financial	Unreliability of business partners and investors, insufficient own working capital, low liquidity and solvency	Assessment of financial condition, rationing of working capital, assessment of the reliability of investors and business partners
Social-economic	Low business reputation, violation of commercial secrets, “documentary” bureaucracy	Fulfillment of contractual obligations, development of an information protection system, participation in social programs
Political-legal	Instability of the political situation, legal conflicts of doing business	Monitoring of legislative changes, diversification of production

Management actions for the timely detection of threats

and measures to neutralize them, aimed at increasing the level of economic security of the enterprise, will encourage the development of theoretical foundations and practical proposals for the organization of a comprehensive assessment of threats to the economic security of enterprises in market conditions of business both within the framework of the general economic scale and at the enterprise level.

The assessment of the elements of the economic nature of the enterprise's activity, as the most numerous, deserves special attention. In this case, an important economic element of the enterprise is its personnel, the quality and qualification of which directly affects the result of the entire financial and economic activity of the enterprise. It is also necessary to note the fact that the economic security of the enterprise, expressed through the assessment of its liquidity and competitiveness, can be ensured by constantly improving the qualifications of the working personnel.

The manifestation of this is the analysis of the characteristic features of the personnel, which consist in the orientation both on the processes of increasing the efficiency of production, and on measures to minimize (rationing) and prevent losses of the material component of production business processes.

The latter, the production component in the form of means of labor and the qualifications of workers, has an inextricable connection with the evaluation of the technical and technological support of the enterprise's activities, and includes an exclusive focus on the results of research, development and implementation of a number of various innovations, which, with their operational characteristics, will allow to increase efficiency production processes of the enterprise for the manufacture of the finished product.

Anti-crisis management is an important component of

the assessment of the economic security of the enterprise, which was mentioned earlier as the ascending point of ensuring the economic security of the enterprise, which determines the crisis state of the enterprise itself due to the reasons of its objective and subjective nature [171].

The need for anti-crisis management is to bring the enterprise out of the crisis based on the development of measures for the organization of activities in the regime of remedial influence, if the emergence of a crisis situation is initiated by objective reasons and there is no possibility of overcoming it.

Implementing this method of ensuring security, the company focuses on transformational processes, i.e. increasing work efficiency, accelerating the flow of business processes, creating and developing marketing services in product market research.

In general, the mechanism for assessing the economic security of an enterprise requires an appropriate approach, with at least five basic positions:

1. System analysis - a complex of interrelated elements, each of which can be a separate system, while the assessment of economic security involves a comprehensive study of all aspects of the enterprises functioning. This approach consists in the need to distinguish the external and internal environment of the enterprise and the possibility of establishing relationships between them.

2. Logical approach - is presented in the structuring of the management decision for each problem in accordance with the set goals and choosing the most effective way to solve them. It is a logical approach that implies the need to take into

[171] Kapustin, N. (2018), "Economic security of industry and company", *Biznes Inform*, vol. 11–12, pp. 44–49.

account factors of uncertainty, the quantitative measure of which is risk, during the development of economic security measures.

3. The process approach - provides a characterization of the elements in ensuring security and is based on the understanding of economic security as a continuous process at the enterprise, which is in a certain environment and prone to internal changes, the stability of functioning and the creation of opportunities for its development. In such a case, the assessment of economic security actually comes down to determining the effectiveness of measures to ensure the security of the enterprise.

4. Functional approach - the assessment of the economic security of enterprises is carried out in terms of the main functional components, such as financial, intellectual and personnel, technical and technological, political and legal and informational. The set of functional areas is not universal and is determined based on the branch affiliation of the enterprise, strategic goals and tasks set before it. The advantage of this approach is that it allows showing the relationship between organizational and economic decisions in the field of economic security and changes in the parameters of the enterprise's functioning at various stages of the enterprise's strategic development.

5. Resource approach - focuses attention on the role of resources, organizational capabilities and competencies in increasing the effectiveness of the organizational component in confronting the challenges of uncertainty. Here we are not talking about traditional resources, but about individual ones that determine the competitive advantages of a particular enterprise, which give it the opportunity to receive income that is unavailable to other business entities. The attractiveness of the resource approach in assessing economic security is

explained by the fact that it allows you to focus on intra-organizational sources of competitive advantages, using the opportunities of a fast-moving environment.

Despite the advantages of each of the considered approaches to the assessment of economic security, in practice their combination is necessary, this will allow to expand and more objectively assess the object of research.

Therefore, the diversity of the existence of tools and certain approaches to the assessment of the economic security of the enterprise allow us to outline its main initial parameters, which will characterize the indicators of achieving effective economic activity. However, the high variability of the external environment does not allow the full use of formalized forecasting methods, since information about the past can distort the quality of forecasts. In this case, informal methods for predicting the future should be used. The source of information here is the knowledge, qualifications and experience of experts. As possible options for the state of the external environment, it is advisable to develop several scenarios for assessing the business climate: pessimistic, optimistic and the most probable.

At the same time, the assessment of economic security should not be reduced to rigid contrasts, combined approaches are needed, including formalized and informal methods of assessing the functioning of the enterprise, aimed at harmonizing changes in internal factors with changes in the external environment. This will ensure the competitiveness and economic security of enterprises not only for the current period, but also for the future.

As previously mentioned, one of the conditions for the sustainable development of economic entities is the presence of an effective system for ensuring their economic security, which acquires a special object of management both at the macro and

micro levels. However, today the issues of economic security have turned out to be the least developed in theoretical and practical aspects. The vast majority of domestic enterprises still do not understand or underestimate the importance of this issue, do not have clear ideas about what should become the object and subject of the activities of economic security services. Moreover, often the services themselves do not fully understand what areas their activities should cover. In practice, the activity of the economic security service is mainly reduced to protection against competitors, unfriendly elements and criminal groups.

At the same time, one should not forget that an individual economic entity is an important part of society and the state, and it would be illogical to consider security at the macro level without affecting interconnected subsystems.

The safe state of each specific enterprise is in the sphere of interests of citizens, society and the state. This is obvious if only because the subjects of economic relations are important links in the implementation of social and fiscal policy by the state, regarding the creation of the institute of population employment and replenishment of the state budget. Therefore, in the absence of a complete and unified system for the organization of security, the imperfection of the legislative framework, undeveloped and non-unified mechanisms for the protection of the economic interests of business entities from external and internal threats, the problem of their economic security acquires special relevance today.

Previously conducted studies of the "economic security" category showed that it began to be used relatively recently in domestic economic literature and practical efforts to apply it. Until the beginning of the 1990s, research into the problems of economic security did not find sufficient coverage. The theoretical substantiation of the ways of ensuring

economic security became relevant during the transition to market relations, when the economy of economic entities, and accordingly their conditions, became the most vulnerable, which prompted the appearance of the first domestic publications at the turn of 1993-1994. After that, the issue of economic security occupied a special place in regulatory documents and became a broad field for political and economic discussions among scientists and practitioners.

The interpretation of the essence of economic security among scientific circles is quite ambiguous, due to parametric changes under the influence of the uncertainty of the economic environment, which prompted the perception by the scientific center of the need to provide a conceptual space for the economic security of economic entities. Thus, global trends on this issue indicate the formation of independent scientific directions for responding to threats to the economic security of economic entities in the light of the "eco-state" - the economic security of the state and the "eco-sector" - the economic security of the enterprise.

With this approach, one can observe various domestic scientific interpretations of "economic security", namely as a dynamic component of the economy, adapted to the requirements of its time [172], where the author's opinion is inclined to take into account the specific (addressable) features of the object of research in conditions of uncertainty and risk. In addition, there is a definition of economic security in the form of a set of measures to ensure the stable development of the enterprise through the creation of favorable conditions, as well as the neutralization and elimination of external and internal threats [197]. Here, the economic security of the enterprise must be considered from the point of view of the

[172] Koval'ov, D. and Plietnikova, I. (2021), "Quantitative assessment of the level of economic security of the enterprise", *Ekonomika Ukrainy*, vol. 4, pp. 35–40.

need for a systematic approach to substantiating its content, and also a number of authors present an extended essential characteristic of economic security as a state of protection of the interests of the enterprise from internal and external threats (sources of danger), which were formed through the implementation of the competences of legal, economic, organizational, engineering-technical and socio-psychological nature of influence and as a process of achieving system equilibrium, in which there are no factors of destructive influence on it .

The analysis of different approaches to understanding the concept of "economic security" provides an opportunity to systematize all directions along the lines of two main ones, the philosophical and the organizational approach.

Within the framework of the philosophical approach, which has many modifications, the most general one looks as follows: the economic security of the system is a state in which protection from internal and external adverse influences is ensured for the purpose of change. It is easy to see that this approach is based on determining the state of protection of the vital interests of the individual, society and the state from internal and external threats. An example of such a concept of security can be the definition of security as a state in which there is no threat of danger, it is protection against danger [173].

Authors who define economic security within the framework of this approach associate economic security with the state of the state's economy, which allows protecting its vital interests. However, when moving from macroeconomic to microeconomic concepts, the concepts of "danger" and "security" make sense only when applied to a specific function,

[173] Kozachenko, H.V. Ponomar'ov, V.P. and Liashenko, O.M. (2016), *Ekonomichna bezpeka pidpryiemstva: sutnist' ta mekhanizm zabezpechennia*, [Economic security of the enterprise: essence and mechanism of providing], Libra, Kyiv, Ukraine.

object, or process. Therefore, if we talk about the economic security of the enterprise, it is necessary to keep in mind not the state of security, but the degree of influence of various internal and external adverse factors and the environment on its economy. Otherwise, it is impossible to explain the specific difference between economic security and its other types: ecological, informational, technological, etc. In addition, giving a definition according to this approach, the concept of economic security is "replaced" by the concept of "security", which is also not clearly explained, instead it creates a lot of questions: how to measure it, how to evaluate the effectiveness of this state, how to determine the maximum permissible values, etc.

From the point of view of the organizational approach, security is not a state of protection of the interests of the subject, but is a set of conditions created in the economic subject, under which protection from internal and external threats is ensured, the fulfillment of the goals of its functioning [194]. At the same time, the state of security must be controlled by the economic entity itself, where the result of ensuring economic security is the stability of its functioning and the possibility of effective financial and economic activity.

Thus, among the most important conditions for the existence of a business entity in the framework of ensuring its economic security, it is necessary to highlight:

1) Sufficient need for resources for conducting economic activity (material, financial, labor, technical and technological, etc.);

2) Rational organization of the management system of the business entity;

3) Compliance with the social goals of the business entity's functioning, which is expressed in society's readiness to use the products produced or the service provided by the

business entity;

4) Existence of a system of effective protection of the economic activity of the business entity from external and internal threats, as well as ensuring the safety of its personnel, material, financial, informational and other resources;

5) Effectiveness of legislative and regulatory acts that regulate the right of an economic entity to conduct economic activity.

According to the approaches listed above, economic security and the definition of its essence can be considered from a different angle. Thus, the enterprise, as an object of economic relations, is created by the owner not to fight against threats, but to achieve the set goals, which are of an economic nature. However, for analysis and practical activities related to ensuring security, it is more convenient to first assume the theoretical presence of a possible threat, and only then to look for countermeasures. However, the consequence of this is that the concept of economic security is secondary to the concept of threat.

Our vision of the economic security of the enterprise is a system of measures to prevent various threats aimed at ensuring the normal functioning of the enterprise in achieving the set goals.

Ensuring the economic security of an enterprise can also be defined as a continuous process of reducing risks and emerging various threats to its effective functioning, sustainable development and achievement of its goals at various stages of the economic cycle. This definition, in our opinion, somewhat narrows the first one, since reducing the risks of threats is a preventive process, and threats can arise suddenly, outside of the foreseen risks. With regard to risks, it can be noted that the system of economic security should ensure risk reduction in many areas, including the loss of

credibility, efficiency and legality of the use of resource potential involved in economic processes.

It is well known that economic security is formed under the influence of internal and external conditions, which are closely interconnected. The external component is the enterprise's ability to organize relations with the external environment, ensuring its economic security as much as possible.

Internal conditions are formed under the influence of the internal structure and relationships within the enterprise in such a way as to ensure its economic security as much as possible. So, the concept of internal economic security characterizes the degree to which the internal organization of the enterprise contributes to ensuring economic security as a whole.

One of the most important features of modern business is the ability to work in conditions of current risks and threats to economic security. There are always factors that are clearly defined as threats to the economic security of the enterprise. In this regard, the classification of threats can be considered:

1. By scope of occurrence: internal - related to the economic activity of the enterprise and its personnel, they are caused by those processes that arise during the execution of business processes and can have an impact on business results; external - occur outside the enterprise, they are not related to its life activities, this is a change in the environment that can cause losses to the enterprise.

2. By the possibility of forecasting: predictable - not only the sources of such threats are known in advance, but also the nature of their impact on economic processes, the conditions of their appearance, time and period of action, methods and tools for minimizing the negative impact of such threats on business results; unpredictable - arise suddenly,

unexpectedly, the source of their generation and the direction of primary influence is unknown.

3. Depending on the source of occurrence: objective (force majeure) - occur without the participation and against the will of the managing entity, these are circumstances of irresistible force (war, local armed conflicts, natural disasters, scientific discoveries, etc.); subjective (not force majeure) - caused by the intentional or unintentional actions of individuals (third parties, company personnel) or the company's counterparties. If in order to minimize objective threats, it is important to reasonably and objectively determine the conditions for exiting such circumstances by prescribing them in agreements (insurance of resources, property, etc.), then in order to minimize subjective threats, the ability to influence subjects is necessary economic relations by timely and competent actions of the management of the enterprise.

4. According to the probability of occurrence: obvious - have a probabilistic nature, have a completely understandable nature and real weight, therefore they can be taken into account when developing a business plan of economic activity; hidden - pose a serious danger to business. In this case, the most characteristic are the actions of unscrupulous competitors, illegal actions of authorities or individual heads of these authorities, as well as criminal operations of criminal groups, their own personnel, etc.

5. By the purpose of influence: related to employees and types of resources used in the economic activity of the enterprise (material, financial, etc.).

6. According to the amount of damage: minor, significant, catastrophic.

7. By time of occurrence: immediate and distant threat.

Among the above-mentioned classification features of threats, the most widespread are threats depending on the

sphere of their occurrence (external, internal), which carry a significant number of them. This is due to the variety of the enterprise's economic ties and their relations, in which the enterprise necessarily takes part. Of course, “external” and “internal” threats are purely individual for each enterprise, but the main elements of such threats are acceptable for any entity of economic activity.

So, under the influence of various environmental factors, they can include:

- Threats related to the state: an unfavorable change in the political situation; change in legislation affecting the conditions of economic activity (tax, property relations, contractual, etc.);
- Macroeconomic instability: economic shocks (crises, disruption of production relations, inflation, loss of markets for raw materials, materials, energy carriers, goods, etc.);
- Illegal actions of criminal structures;
- Illegal actions of competitors: use of unfair competition, unauthorized access of competitors to confidential information, industrial and economic espionage;
- Emergencies of a natural and technical nature, etc.

Internal risks and threats to the economic security of business processes arise directly in the field of economic activity of the enterprise. Thus, the main threats include:

- Threats to the management system: insufficient level of discipline; the choice of unreliable partners and investors; significant omissions in both tactical and strategic business planning, which are associated with the wrong choice of goal, incorrect assessment of the company's capabilities, errors in forecasting changes in the external environment;
- Physical security: threat to the security of the enterprise as a property complex, preservation of material

values; damage to buildings, premises; threat to fire, environmental, radiation and chemical safety;

- Threat of leakage of commercial secrets and confidential information: violation of the regime of preservation of confidential information;
- Threat to information security: infection of computer programs with various types of computer viruses; illegal financial transactions; violation of communication security;
- Threats related to personnel: illegal actions of personnel employees; outflow of qualified personnel, incorrect assessment of the qualification component of personnel, their low competence; actions or inactions (including intentional and unintentional) of the company's employees, which are contrary to the interests of its business activities, the consequence of which may be the infliction of economic losses, leakage or loss of information resources (including trade secret or confidential information), undermining the business image of the enterprise in business circles, etc.

The above list of internal and external threats to the enterprise is closely intertwined with each other. This leads to certain complications in their identification when building a general system of economic security from the definition of subjects and objects of economic security. The creation of an effective system of economic security of the enterprise will provide an opportunity for the effective functioning of its business processes in the conditions of tough market competition through the timely detection and neutralization of certain threats. In addition, it should be noted that the creation of a system of economic security is unique for each enterprise, the functioning of which depends on the type of economic activity, production potential and features of its activity.

Thus, the current stage of the economic formation and development of business entities is characterized by radical

upheavals in the economic, political and social spheres of public relations and property relations. Not a single enterprise of any form of ownership is protected from the onset and progression of crisis phenomena, which needs to resolve the issue of creating its own economic security system, which would be able to timely identify and eliminate possible threats to its statutory activity.

In this case, it is urgent to identify such threats, study them and assess the consequences they can cause. This can be achieved on the basis of philosophical and organizational approaches in terms of systematization of the system of measures to prevent various threats, aimed at ensuring the normal functioning of the enterprise in achieving the set goals. But in order to systematize these directions, the necessary foundation is based on the identification of elements of threats and risks to the economic security of economic entities.

From these initial positions, economic security requires solving a wide range of issues in various spheres of influence, i.e., investment, technological, financial, social, etc., where each of the components of economic security of an enterprise is a set of tasks and criteria that require a certain methodical approach to their solution.

In such conditions, the enterprise must be considered as a complex hierarchical system that closely interacts with the constantly changing external environment, which has a direct impact on the process of organizing the enterprise's management system and its economic indicators. The development of such a concept for ensuring the economic security of the enterprise acquires exceptional importance, primarily because the process actively uses economic potential, which acts as a stabilizing factor of economic growth and security at the state level. Therefore, the enterprise faces the question of internal self-evaluation of its socio-economic

system and forecasting its development in the future from the point of view of ensuring the economic safety of production from the manifestation of negative factors that affect the potential of the enterprise, building a system of criteria and indicators of the state of safety, substantiating their threshold values, using preventive measures against these threats.

This approach must be considered by justifying the system of criteria, indicators and threshold values. At the same time, it is necessary, first of all, to classify the factors of economic security, both external and internal, which have a different nature of occurrence, and to develop a system for their monitoring.

The external environment of the enterprise must be considered as a set of factors that are outside the sphere of influence of the enterprise, characterized by a high level of uncertainty, the absence of a generally accepted system for diagnosing its condition and forecasting development.

The classification of environmental factors allows to divide them into main and secondary, objective and subjective, controlled and uncontrolled, real and potential, controlled and uncontrolled, random and deterministic [174]. This makes it possible to highlight the most significant factors and to abstract from insignificant ones, to focus the analysis on the key factors of success. And if you use this technique to build quantitative and qualitative factors of economic security of the enterprise, then factors of the external and internal environment should be included in it.

In the conditions of market relations, the influence of

[174]Heiets', V.M. Kyzym, M.O. and Klebanova, T.S. (2022), *Modeliuvannia ekonomichnoi bezpeky: derzhava, rehion, pidpryiemstvo,* [Modeling of economic security: state, region, enterprise], VD INZhEK, Kharkiv, Ukraine.

the external environment manifests itself in various forms - both positive and negative. Therefore, the task of the enterprise is the organization of control over the influence of the external environment and the development of measures with the aim of forming the protection of its activity to ensure the level of protection against its negative influence.

In the practical activity of the enterprise, it is quite difficult to determine all the factors of influence of the external environment on the economic security of the enterprise with the probability of causing damage. Therefore, among them, those that can be controlled by the company's security policy should be highlighted. At the same time, the control of the enterprise's influence on economic security factors is determined by the enterprise's ability to reduce such influence, and the enterprise can independently choose counterparties, resources, means of production, forms of customer stimulation, formation of segments and the target market, depending on the situation. However, the company is not able to control the decisions taken by the state in the field of fiscal policy, financial support of enterprises of certain industries, determining the exchange rate of the national currency, etc. The difficulty in assessing the impact of controlled environmental factors is that they cannot be formalized.

As a result, it is advisable to divide the factors of economic security of the internal environment of the enterprise into three groups: production, financial and social.

Thus, production factors determine the dynamics of production at the enterprise in a given period of time, the level of development of production capacities, the rate of renewal of the main production assets, the progressiveness of technology, the rhythm of production, technical resources, the necessary amount of investment in innovation.

The financial component of the enterprise's economic

security is characterized by the labor productivity of employees, return on capital, profitability of production, expenses, receivables and payables, the level of innovative activity, the share of provision of own sources of financing working capital,
material and energy resources for production [175].

Social factors are determined by the standards of living standards of the country's population, which include the level and system of remuneration, work and rest regime, work motivation, personnel structure.

Hence, the degree of influence of external and internal environmental factors on the economic security of the enterprise is determined by a system of criteria and indicators of assessment of such influence. In order to develop measures designed to prevent the emergence of threats to the economic security of the enterprise, it is necessary to clearly define the indicators (indicators) of its economic security and their threshold values. At the same time, it is advisable to divide all the indicators necessary for monitoring the state of the level of economic security into two groups: regulated by the state and analytical (calculated):

1. Regulated:
- Subsistence level;
- Legislative policy of the state;
- Environmental standards;
- Social standards.

2. Analytical:
- Production potential;
- Scientific and technical potential;
- Financial potential;

[175]Fomina, M.V. (2005), *Problemy ekonomichno bezpechnoho rozvytku pidpryiemstv: teoriia i praktyka*, [Problems of economically safe enterprise development: theory and practice], DonDUET, Donets'k, Ukraine.

- Personnel potential.

Based on the fact that the economic security of an enterprise is a multi-faceted concept that covers various spheres of its activity (technological, financial, marketing, social and economic), in each of the spheres standards can be developed and approved at different levels, which are controlled by special bodies. Requirements of standards that have macroeconomic significance can apply to all enterprises, regardless of their branch affiliation and forms of ownership.

Such standards can include: the level of remuneration, the limit value of which must be no lower than the subsistence minimum established by the state; cost of production - threshold values represent socially necessary costs that are determined by a certain methodology; profit rate - the lower value of which should ensure the payment of obligations; the presence of a market share (demand) for the supply of products in an amount not lower than the critical point, etc.

Regulated indicators are determined by the mechanism of the economic security system of the enterprise and its provision by the legislative policy of the state, which includes a set of legislative acts, legal norms, methods of influence on the volume in order to comply with safety standards in various spheres of activity.

By their nature, analytical indicators are calculated. Their threshold values are set in relation to the specifics of the enterprise and in accordance with the actual and normative values of its technical and technical indicators. Therefore, depending on the deviation of the calculated values from the threshold state of the enterprise, it can be characterized as normal when the indicators of economic security are in the zone of threshold values, and the strategic potential of the enterprise corresponds to the given level. Pre-crisis - when at least one of the indicators does not meet the threshold value,

and the strategic potential of the enterprise can be increased due to tactical measures. Instead, crisis - when several main indicators of economic security do not meet the threshold values, and the strategic potential of the enterprise cannot be improved.

According to such a conceptual approach, when the economic security of the enterprise is determined quantitatively by calculating the values of the indicators formed by the state and the strategic potential of the enterprise, there is a reason to use the methodology for calculating these indicators.

In this case, the main priority should be "economic stability" and "strategic development" of the enterprise. If the enterprise does not develop economically, then this sharply reduces one of the most important components of its economic security - strategic potential, which is a complex of opportunities, integrating the power of all types of resources that complement each other and strengthen each other.

The basis of the development of a complex system for ensuring the economic security of the enterprise should be a certain concept, which includes the purpose of the complex system for ensuring security, its tasks, principles of activity, object and subject, strategy and tactics. The purpose of this system is to minimize external and internal threats to the economic state of the enterprise, including financial, material, informational, and personnel resources, based on a developed set of measures of an economic, legal, and organizational nature. It should be borne in mind that the greatest importance in ensuring economic security belongs to the primary - economic, legal and organizational measures that provide the foundation, the basis of the security system, in contrast to the secondary - technical, physical, etc.

This approach provides for the provision of economic security by identifying, analyzing and evaluating existing

threats for each of the functional components, with further development based on them of a system of countermeasures and preventive measures, which must include:

1. Administrative and legal - avoiding raider seizure.
2. Financial - constant monitoring of the company's financial condition, ensuring financial stability and profitability of activities, effective use of resource potential.
3. Political and legal - legal support of the company's activities, compliance with legislation and constant monitoring of legislative and regulatory changes.
4. Marketing - constant monitoring of the market situation, study of potential competitors.
5. Innovative - introduction of innovative products and the latest business technologies at the enterprise.
6. Information - information support and a thorough analysis of the company's activities.
7. Intellectual - protection of property, effective use of labor resources and attraction of qualified personnel in the labor market.

However, each enterprise builds its own set of measures that adequately corresponds to its internal and external situation, these are:

- Uniqueness of the security system for a separate enterprise;
- Independence and separation from other production systems;
- Complexity and effectiveness.

The requirements of market relations impose on security specialists the ability to navigate in such new fields of activity as the organization of protection of commercial secrets and enterprise personnel. Ensuring the preservation of commercial secrets (information) is not only a legal, organizational, but also a psychological task. Therefore, when

starting a specific job, it is important to understand its value and necessity.

The basis of the manifestation of secrecy - professional, state, commercial, lies in mistrust between the subjects of activity. And the greater the mistrust, the more secrets that are used as a means of defense or attack for profit. In the process of achieving the set goal, specific tasks are solved, which unite all areas of security. At the same time, the tasks that are solved by the security system are manifested in the following:

1) Forecasting possible threats to economic security;

2) Organization of activities to prevent possible threats (preventive measures);

3) Identification, analysis and assessment of real threats to economic security;

4) Decision-making and organization of activities related to response to threats;

5) Constant improvement of the system of ensuring economic security at the enterprise.

The task and goal, which are the basis of the formation of the company's security policy, provide guidelines for actions and decision-making aimed at achieving goals in the following direction:

1. Purpose: protection of the legal rights of the enterprise and its structural units; preservation and efficient use of enterprise resources; minimization of loss; improving the image of the enterprise.

2. Task: timely identify and eliminate threats to the company's personnel and resource base; organization of intellectual property of the enterprise; organization of interaction with legal authorities; organization of the compensation system and localization of damage caused by the interference of competitors.

The assessment of the components of economic security

should be the basis for the development of a set of measures aimed at countering threats and increasing the level of economic security of the enterprise, and accordingly expanding its adaptation capabilities to changes in the conditions of economic activity, creating conditions for stable functioning and development.

Therefore, the scale of enterprise security measures is individual for each of them. Practice shows that most often the cause of failures in the system of economic security of the enterprise is low-quality legal support, or its absence at all. Conversely, the management of the enterprise, which paid due attention to ensuring high-quality legal support for its activities, as well as achieved high legal discipline in various areas of work, has already implemented a minimum package of measures for the security of its business.

The development of market relations requires enterprises to make independent economic decisions in both operational and strategic management. Objectively, the growth of dynamism and the complexity of socio-economic phenomena and processes require the development and application of new approaches to management. This is especially relevant for economic security, since economic security, or rather the management system of economic security, mostly deals with adverse effects on the management system and its measures to eliminate negative consequences.

The use of the category of economic security in management allows you to assess the extent to which the current state of the economy includes the prerequisites for ensuring its sustainability in the future. At the same time, the economic security of the system can be interpreted as a combination of economic security at the macro level and economic security at the micro level. On the other hand, the economic security of each level in separate periods of time can

be considered separately. At the same time, from a strategic point of view, these are interrelated and indivisible concepts. It is the inconsistency between dangers arising at different levels that is the main problem of economic security management at the present stage. Therefore, ensuring quality management of economic security consists in coordinating security at all levels of the enterprise and the state as a whole.

The economic security of an enterprise can be defined as a state in which the enterprise can sovereignly, without interference and pressure from outside, determine the ways and forms of its economic development. The category of economic security is closely related to the categories of economic stability, stability and independence, therefore the main object of economic security only at the enterprise level is the economic turnover of costs and revenues, goods (works, services) and resources.

The study of the features of the category of economic security of the enterprise made it possible to develop the concept of building a system for ensuring the management of economic security at the enterprise based on the selection of three spheres: production, social and the sphere of resources (resources in this case mean material, labor, financial, and other resources), which allows quite fully describe all the processes taking place at the enterprise.

In addition, at each stage of managing the economic security of the enterprise, it is also necessary to identify a set of threats that adequately describe the state of economic security of the enterprise and assess the level of these threats. For this, it is necessary to determine the critical values of each indicator of economic security. Thus, at the “input” of the economic security management circuit of the enterprise, the following input values are provided: the set and state of threats to the economic security of the enterprise, information about the

current state of the enterprise, strategic and tactical goals. On the basis of these data, the management circuit develops a set of programs to ensure the economic security of the enterprise. Based on the results of the developed programs, the necessary number of resources for their implementation is determined.

In the interactive mode, the possibilities of providing the developed programs with resources are also determined, and depending on this and the expected effectiveness of such programs and the state of the enterprise, development priorities are determined in the management circuit and the optimal distribution of resources is carried out in these conditions. As a result, programs can be adjusted based on the need to ensure the maximum level of economic security of the enterprise with the formation of a set of those programs that will be optimal in this economic situation.

The next step is the implementation of the developed set of measures as the “outgoing” contour of managing the economic security of the enterprise. The developed set of measures affects the composition and assessment of threats to the economic security of the enterprise, as well as its financial and economic condition. At the same time, the cycle of tasks to ensure the economic security of the enterprise is closed.

Thus, the process of managing the economic security of the enterprise as a whole should include the following sections:

1) Definition of goals and objectives of the enterprise's economy, analysis of resource possibilities for their implementation;

2) Determination of the enterprise's economic strategy, which should be ensured and defended in favor of the enterprise's economic security;

3) Determination of a balanced economic policy of the enterprise, which is necessary for the implementation of this strategy, as well as development of the basis for effective

management of resources.

Today, it is not possible to single out a universal approach to managing the economic security of an enterprise. However, the directions based on the application of expert assessments have become the most widespread.

The differences in this approach lie in the way experts' opinions are grouped and the number of evaluated indicators. It should also be noted that in the existing approaches to economic security, the tendency to decompose the opinions of experts regarding the objects of research is clearly visible.

The objective interdependence of the external and internal system of phenomena in the economy and society in general determines the need to apply a systemic approach to the study of economic security. It is proven that the management of economic security should be directed not only to the effective elimination of the consequences of the threat, but also to the reduction of losses from the occurrence of a certain threat through the development of appropriate measures and procedures.

Therefore, the process of developing governing influences should be preceded by an analysis of threats to economic security and its processing. The very process of developing governing influences in the economic security management system should include a procedure for assessing the controllability of many critical threats, a mechanism for countering threats, and the task of countering threats with this mechanism. Based on this task, a strategy for managing economic security is being developed.

When analyzing the system of economic security, the following components should be considered: lower-level systems, the level of the system itself and its environment, as well as the connections between these levels. It is assumed that the studied system consists of three subsystems, for each of

which it is also necessary to solve the issue of economic security. At the same time, the state of the entire system is determined by the state of each of the subsystems included in its composition and the ratio of this state. It is also assumed that each of the subsystems is exposed to both external and its own internal threats, which do not spread anywhere outside its borders. In turn, the external threats of the subsystem can be divided into threats emanating from the environment of the entire system under consideration, and from the control system of the entire system, that is, from the control unit of internal threats at the system level.

It has been proven that the development of adaptive qualities of the system in relation to external threats has a peculiarity, which is that the corresponding controlling influence acts on the entire system as a whole, and not on each individual subsystem. It can be a change in development priorities of various subsystems, a change in the structure of the system, etc. Therefore, the results of the functioning of the entire system depend on and are determined by the quantitative and qualitative results of the functioning of its entire subsystem, affecting the environment of such a system. Then the state of the level of economic security of the system is determined by the state of economic security of its subsystems. The security of the system implies its long-term functioning and maximum satisfaction of the interests of its subsystems.

Thus, the security of the management system of the enterprise is directly related to such a concept as the predictability of its behavior, because it is the predictability of behavior that allows to prepare and carry out a set of preventive measures for certain threats, and hence - to ensure the sustainable development and existence of the system itself, i.e., its security. Therefore, it is proven that for effective management and ensuring economic security, the economic

security management system of the enterprise must include an anticipation block, in which the forecast of the development of the management system and its environment, which outlines the life cycle of the enterprise, is carried out.

The main goal of ensuring the economic security of enterprises is not to achieve a higher degree of its stability, but to ensure growth and development. At the same time, it does not matter from which sources of financing the company achieves this goal. That is, there are enterprises that are stable, but stagnant, and vice versa - unstable, but rapidly developing. The latter, as the practice of their activity in market conditions shows, are the most successful.

Therefore, the strategy of the economic security of the enterprise, in our opinion, should be based on the creation of such conditions for the operation of the enterprise, which will contribute to the maximization of profit and at the same time ensure its growth.

In addition, ensuring the economic security of enterprises should include control over threats and possible losses that have an impact on the sustainable development of the enterprise. The more stable the enterprise, the more viable it is, and its security rating will be quite high. But then, as a rule, one should expect a possible violation of proportions and connections between various components of the system, which will lead to its destabilization and will become a signal of the transition of the enterprise from a safe to a dangerous state.

As a result, we came to the conclusion that the more stable the development of the enterprise, the less likely threats are, that is, any developing system periodically moves from one stable state to another, having a certain spiral pattern of its development. This requires the development of approaches to the cyclical transition from one stable state to another along the trajectory of the enterprise's sustainable development,

eliminating threats to its security.

As a result, it is possible to cite at least three main functional criteria that generate the financial component of an enterprise's economic security, i.e. profit, revenue and equity. In this triad, the main driving force and the target function of controlling threats and ensuring the development of the enterprise is profit. The growth of revenue ensures the economic strength of the enterprise, and the increase of equity capital - its financial growth and property stability. At the same time, it is necessary to recognize the added value of the enterprise as a generalizing indicator that synthesizes these characteristics.

Ensuring all components of the enterprise's stability will contribute to the preservation of optimal parameters of the development of the economic security system itself. And if we take into account the life cycle of an enterprise, which traditionally consists in a sequential movement from its birth through growth to sustainable development, decline and crisis, then using the same approach to determine the dynamics of the life cycle types of the financial and economic stability of the enterprise, it is possible to single out other successive phases of development, such as the transition from absolute stability to normal, and then to an unstable and crisis state, based on the types of enterprise development strategies at the stages of its life cycle (Table 2.10).

Summarizing the empirical data of the table. 2.10 allows us to state that in the practice of enterprises, such a sequence of changes in the phases of the life cycle has an impact on its financial and economic stability only if an aggressive strategy of enterprise development is used. Instead, conservative and moderate types of enterprise development strategy foresee a different, “non-classical” sequence of its development with varying types of financial and economic

stability.

Table 2.10

The relationship between the type of financial and economic stability and the development strategy of the enterprise at different stages of its life cycle

Enterprise development strategy	Stage of the life cycle of the enterprise	Type of financial and economic stability of the enterprise
Aggressive	birth	absolute
	growth	absolute/normal
	maturity	normal
	decline	unstable
	crisis	crisis
Conservative	birth	unstable
	growth	normal
	maturity	absolute
	decline	unstable
	crisis	crisis
Moderate	birth	normal/absolute
	growth	absolute/normal
	maturity	absolute/normal
	decline	normal/unstable
	crisis	crisis

Timely monitoring of the process of changes in the financial and economic stability of the enterprise in the direction of the phases of its provision (absolute and normal) or phases of its loss (unstable and crisis), allow to manipulate the size and structure of property, financial resources and competitive advantages of the enterprise in order to ensure its sustainable development. As a result, there is an urgent question of monitoring economic security at all stages without exception throughout the life of the enterprise to ensure its strategic security. At the same time, the logic of ensuring strategic security should be reduced to the assessment of

threats and their immediate elimination.

In this case, this approach will make it possible to adjust the elements of the basic mechanism and ensure a high level of economic security of the enterprise.

As modern practice shows, the need to ensure the economic security of enterprises requires the identification of the state of their economic security by diagnostic methods, which are formed on the basis of diagnostics and the general theory of knowledge (epistemology), as one of the tools for managing the economic security of an enterprise.

As one of the forms of knowledge of objective reality, diagnostics uses research and thinking methods common to all sciences. And since the economic activity of any business entity can have a theoretical or practical orientation, the concept of method applies equally to theory and practice.

In this case, it is necessary to take as a basis two areas of diagnosis of the enterprise:

1) Theoretical - study and modeling of essential definitions, signs and symptoms of problems and crises, systematic generalization of symptoms in order to describe general problems and crises;

2) Practical (applied) - using the symptoms of the condition and studying the individual characteristics of the enterprise in order to identify the signs and symptoms of the problem or crisis and make the appropriate diagnosis.

Diagnostics is a special process, a set of abstract logical operations, inductive and deductive conclusions, which begins with the formulation of a hypothesis, which is based on signs and symptoms and is carried out by means of an inductive conclusion. This is how the transition from knowledge of a smaller commonality to knowledge of a larger commonality is carried out, that is, from single signs and symptoms to the formulation of a diagnosis of a problem or crisis, and vice

versa.

Hypothesis testing is a deductive conclusion. Knowing the problem and the crisis situation makes it possible to identify or check the signs and symptoms. However, any initial position will already be a biased judgment that will affect the scientific process of cognition and will inevitably limit the possible result. However, using the "top-down" diagnostic tool - is aimed at overcoming this shortcoming, as it begins not with a hypothesis, but with the study of external needs that must be determined.

In our opinion, it is necessary to apply three approaches to forecasting and diagnosis:

1. Nosologically, when the diagnosis is considered as a function of matching the picture of a specific situation with known typical manifestations of a problem or crisis.

2. Syndromic - involves making a diagnosis based on signs of a problem or symptoms of a crisis.

3. Algorithmic, when in order to confirm the correctness of the diagnosis, a diagnostic algorithm is built and regulated actions are carried out, where the coincidence of the result with the predicted one is confirmed, and if there is a discrepancy, it is rejected.

Methods of detecting signs and symptoms in determining their diagnostic significance must be divided into subjective (determined based on the judgment of an expert diagnostician) and objective (established using formalized methods). Therefore, symptoms can be divided into two classes: subjective and objective.

When classifying signs and symptoms, it is advisable to divide them into non-specific or general, specific and individual (exclusive).

Non-specific signs and symptoms are characteristic of a wide range of phenomena and the state of the enterprise.

Specific signs and symptoms are revealed for a narrow range of phenomena and the state of the enterprise. Instead, it is an individual sign or symptom characteristic of a specific phenomenon and state of the enterprise.

On the one hand, diagnostics of the economic security of an enterprise is a systematic and complex methodology for the study of its economic activity regarding the study of phenomena and processes and the identification of regularities in the development of the enterprise, and on the other hand, it determines the prospects for development.

The specificity and complexity of diagnosing the economic security of an enterprise lies in the fact that the identification of signs and symptoms is a multifaceted process of evaluating deviations of indicators against the background of external situations and conditions of its functioning, taking into account individual and specific features. Therefore, recognition of the state of economic security of the enterprise must be carried out with the help of the use of a scientific diagnostic toolkit, which characterizes a combination of general scientific approaches and specific scientific methods of research.

The methodological side of diagnosing the economic security of the enterprise is based on a complex and systemic approach, and also includes other approaches, such as quantitative, qualitative, behavioral, marketing, reproductive, normative, functional, subject, process, integral, historical, dynamic and situational.

Using a comprehensive approach to the use of diagnostic methods to identify the state of economic security of the enterprise, it is necessary to evaluate it according to the following basic criteria:

- Future orientation: it involves the implementation of analytical technology, which should provide such a result, which would certainly become necessary for decision-making

in the future, since the analytical technology should take into account the trends of the past, but not be based on them. At the same time, the diagnosis of production systems is necessary for a well-founded determination of the reliability of the enterprise's functioning, which must be oriented towards the future;

- Accuracy and objectivity: obtaining data from one source, the information of which should be probabilistic in nature. At the same time, the objectivity of the information should minimize the potential negative nature of certain biases through analysis by independent analysts to ensure the high probability of the received information;

- Usefulness and timeliness: are the main methods in diagnostics, as they form the basis for structuring research directions regarding the time lag of diagnostics.

In general, diagnostic methods of research allow identifying the existing, necessary and forecast state of economic security of the enterprise, based on which it is possible to determine its normal and marginal value (Fig. 2.8).

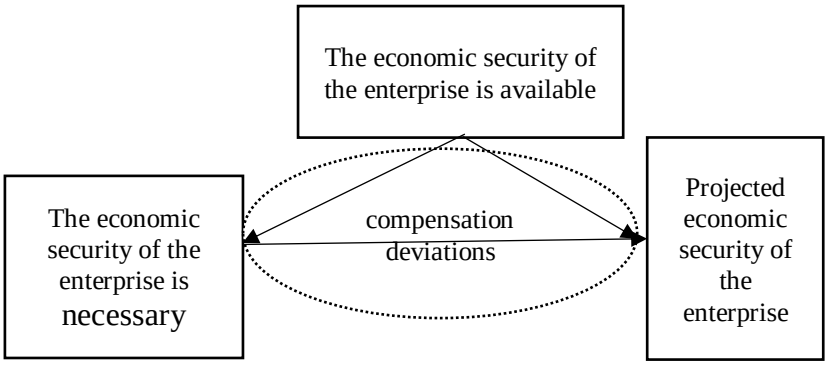


Fig. 2.8 State of economic security of the enterprise

In order to obtain the expected result, it is first

necessary to establish the parameters of the current state of economic security of the enterprise, later, based on the deviation from it, it will be possible to determine threats to the economic security of the enterprise. Moreover, the threshold values of economic security of the enterprise must be individual, taking into account its development strategy. Hence, the state of "necessary" economic security is defined as the economically safe state of the enterprise within the given parameters - it determines a certain norm - a temporary equilibrium that can change smoothly and in a given way.

To describe the balance of interaction between the elements of economic security of the enterprise, the concept of "homeostasis" can be used - the desire and ability of the system to maintain an equilibrium state or a process that regulates or maintains the system in a stable state in relation to the external environment, which tends to change in relation to the functioning of this system.

Thus, diagnostics operates with the concept of "norm" and is designed to help the management of the enterprise to determine: "how it should be", that is, to establish the "norm" and deviations from the "norm". And since the enterprise has a tendency to develop, the norms and standards used to describe and manage economic security are variables. Therefore, a smooth change and improvement of the economic security of the enterprise involves a consistent change in norms, which can increase and decrease depending on the change in the conditions of the external and internal environment.

In this case, to determine the desired state of economic security of the enterprise, it is necessary to use the norm, that is, the state described by a certain logical set of indicators and the presence of a suitable combination of enterprise resources (Fig. 2.9).

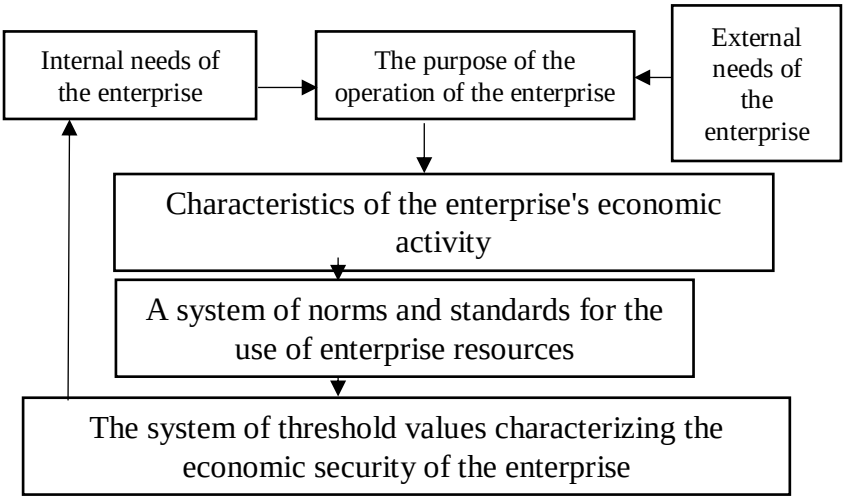


Fig. 2.9 Logical structure of the norm of threshold values of economic security of the enterprise

Therefore, the norm is a set of values of selected indicators (criteria) that describe the state of the internal and external needs of the enterprise in the system of its goals, the resource indicators of the enterprise and the system for achieving threshold values of economic security of the enterprise.

The study of diagnostic methods for identifying the state of economic security of an enterprise allows us to state that three approaches are used to establish a diagnosis and forecast the state of economic security of an enterprise:

1) Nosological, when the diagnosis is considered as a function of the coincidence of the picture of a specific situation with known typical manifestations of a problem or crisis;

2) Syndromes, which involves making a diagnosis based on signs of a problem or symptoms of a crisis;

3) Algorithmic, when a diagnostic algorithm is built to

confirm the correctness of the diagnosis and regulated actions are carried out, where if the result coincides with the predicted presence of a certain type of problem or crisis, it is confirmed, and if there is a discrepancy, it is rejected.

Thus, the diagnostics of the economic security of the enterprise is perceived as a logical-indicative system aimed at identifying indicators of its state, forecasting crisis phenomena, bankruptcy and the possibility of its prevention. In addition, diagnostics allows not only to assess the state of the enterprise from the point of view of its financial and economic positions, but also to detect the emergence of a crisis in a timely manner.

Economic security has a complex internal structure, in which three of its most important elements can be distinguished:

1. Economic independence, which does not have an absolute character, because the international division of labor makes the national economy interdependent. Under these conditions, the economic independence of the enterprise means achieving such a level of production, efficiency and product quality that ensures its competitiveness and allows it to participate on equal rights in world trade, cooperative relations and the exchange of scientific and technical achievements.

2. Economic stability, the essence of which is the ability of the enterprise to adapt to changes in internal and external economic conditions and to resist these changes in such a way as to maintain a stable and balanced dynamics of the enterprise's functioning in accordance with the current and prospective goals and objectives set for it.

3. Ability to self-development and progress, which is especially important in today's dynamic development. This involves creating a favorable climate for investment and innovation, constant modernization of production, and raising the professional, educational, and general cultural level of

employees.

From these initial positions, it is proposed to highlight components in the structure of economic security that are of leading importance in the modern conditions of enterprise management. First, it is the optimization of the relationship between the types of assets of the enterprise and the sources of their financing, which allows you to answer the question: to what extent the enterprise is independent from a financial point of view, and whether its financial condition is stable and whether financial resources are used effectively.

Secondly, investment attractiveness - implies the presence of such an investment climate of the enterprise, which will contribute to its continuous technical and technological renewal and will be characterized by a set of performance indicators that determine attractiveness for the investor.

Among the characteristics of the enterprise's investment attractiveness, such as the market position of the enterprise, the level of marketing management, the openness of information and the investment value of the enterprise can be distinguished. The latter is determined on the basis of cash flows using the method of discounting future income.

The third is corporate social responsibility, which involves the appropriate behavior of the enterprise and its system of interaction with other social institutions. A manifestation of social responsibility is the implementation of social investments, among the most significant ones we can highlight such as increasing the role of human capital and its quality for the successful economic activity of the enterprise and increasing its competitiveness, as well as the desire of the management to prevent the growth of social tensions and the emergence of conflict situations.

Solving management tasks related to maintaining the stability of economic security requires the creation of a special

toolkit, assessment of its condition, including a set of indicators, criteria and parameters characterizing the stability and development of the enterprise. Therefore, there is a need to form a special direction of managing the economic security of the enterprise based on a mechanism that monitors the dynamics of internal and external influencing factors on business sustainability regarding the adoption of preventive measures and their implementation. Thanks to this direction, the perspective of management will be supplemented by methods of strategic response to the challenges of a changing environment.

The above requires the development of a system for ensuring the economic security of the enterprise based on the development of the concept of enterprise security, which is a system of views, ideas and goal settings that are permeated with a single idea on the problem of enterprise security, as well as a system of measures and directions for achieving the set goals in conditions of uncertainty.

The concept should not act as a detailed program or plan to ensure economic security, but to carry a principled position, a plan with a system of views and requirements for the conditions of the enterprise's functioning from the side of conducting its security measures at various stages and levels of activity. As a result, the concept of enterprise security can include such blocks.

1. Description of the problematic situation in the field of enterprise security: analysis of the state of the enterprise, its resource potential, reliability of personnel potential.

2. Determination of the target installation of security: formulation of the security policy and strategy, definition of the security goal, setting tasks that will contribute to the achievement of the goal and implementation of this direction.

3. Construction of the enterprise's economic security

system: determination of the functions of the enterprise's security system and selection of the principles on which it is built, outline of security objects and analysis of their security status, development of a security mechanism.

4. Development of a methodological toolkit for assessing the state of economic security of the enterprise: determination of the main criteria, indicators of the state of economic security and methods of its assessment, formation of a system of economic risk analysis methods.

5. Calculation of the forces and means necessary to ensure security: determination of the necessary amount of human and financial resources, comparison of the necessary costs with possible damage from exposure to hazards and threats.

6. Development of measures to implement the main provisions of the concept of economic security of the enterprise: determination of conditions necessary and sufficient for the implementation of the concept, development of a strategy based on the defined concept.

7. Conclusion on the implementation of the concept of economic security of the enterprise and the effectiveness of its application: compliance of the goals and tasks formulated in the concept regarding the created security system with real and potential threats, the degree of sufficiency of resources for implementation, the effectiveness of the implementation of the concept of economic security of the enterprise.

The purpose of creating this system is to minimize external and internal threats to the financial and economic state of the enterprise, including its personnel potential, based on the development and implementation of a set of economic-legal and organizational-social measures. The latter are given leading importance, as they provide the foundation, the basis of the enterprise's economic security system. Therefore, the

system of ensuring the economic security of the enterprise should act as a guarantee of the independence of the enterprise, a condition for achieving its stability and efficient operation.

In the process of achieving the set goal, decisions are made regarding the implementation of specific tasks that combine all areas of ensuring the economic security of the enterprise, which should include:

- Forecasting possible threats to economic security;
- Organization of the company's activities to prevent possible threats (preventive measures);
- Identification, analysis and assessment of real threats to the economic security of the enterprise;
- Decision-making and organization of response to emerging threats.

At the same time, the concept of economic security of the enterprise must be constantly improved and updated based on the use of effective management methods and principles, as challenges and economic threats take on new and new forms of manifestation over time. Therefore, the introduction of a management component in the enterprise to ensure economic security should have a vector on the conceptual structure of effective strategic management, which in general will ensure the achievement of strategic goals in the enterprise. The content of the approach to such a concept will contribute to the sustainable socio-economic development of the enterprise, which will be manifested both in the degree of protection of its economy, and in the identification of the assessment of quantitative and qualitative characteristics of the conduct of activities and the identification of their possible deviations from the given parameters caused by the changing environment.

This approach requires the development of a comprehensive mechanism for managing the economic security

of the enterprise to ensure its sustainable development with sound economic calculations that will contribute to the adoption of rational management decisions in the field of sustainable development. Therefore, today there is a question of changing the theoretical and methodological principles of managing the economic security of the enterprise and its information support in order to comply with the provisions of the concept of sustainable development, according to which the enterprise is considered as a socio-economic system.

Based on this, there is a need to solve a complex of issues regarding the definition of the economic security of the enterprise as a socio-economic system, substantiating the foundations of managing the sustainable development of the enterprise by conducting a comprehensive assessment of the human capital and production management of the enterprise, as well as the direction of the mechanism for implementing the strategic concept in ensuring economic security.

Based on the fact that the goal of the enterprise's implementation of an approach to ensuring its economic security is to obtain sustainable competitive advantages in the form of an effective management strategy, then this provides a primary task in achieving the strategic goals of the enterprise. Despite the fact that at the first stages of the development of the theory of economic security, its content was reduced to ensuring the conditions for the preservation of the commercial secret of the enterprise, in the future - to the achievement of sustainable socio-economic development of the enterprise and the development of an action strategy in this direction.

Turning to the classical economic theory, which interprets three approaches to determining economic security in relation to the state of the economy of the enterprise, the security of its activity (the process of creating conditions for the effective use of limited resources) and the quantitative and

qualitative characteristics of the properties of the enterprise (production, financial, personnel potential, etc.), it is necessary to understand: under economic security is the activity of the enterprise - a process in which resources are used most effectively, which leads to the prevention of threats and ensuring the stable and sustainable functioning of the enterprise now and in the future. The priority in this is the production and economic activity of the enterprise, which is aimed at capital growth, therefore, for the development of an effective strategy, the assessment of human, production and financial potential is important.

It is sustainable development that is a process of change for an enterprise, in which the scale of consumption of material resources, directions of investments, orientation of scientific and technical development and management are consistent with current and future needs. In the course of its activity, the enterprise must effectively use resources on the basis of resource conservation and capitalization, continuous improvement of working conditions and the labor process, as well as create added value.

In general, sustainable development is based on the filling of its main components and the determination of threshold values of social and economic security of the enterprise. And also, in the context of economic security, it is no less important to determine the relationship between competitiveness and innovation.

On the one hand, competitiveness determines the contours of economic security and becomes the basis for sustainable development, and on the other hand, the sustainable development of an enterprise and its economic security lead to the creation of a competitive product, which is an inversely interdependent process.

To assess the functioning of the enterprise, it is

necessary to use the methodology, which provides for the calculation of single and integral indicators in the following areas:

1) Target subsystem - product quality, resource conservation, product sales, management;

2) Supporting subsystem - resource, informational, legal and methodical support;

3) Functional subsystem - planning, marketing, organizational and technical preparation of production, innovations;

4) Management subsystem - management solution development, operational management of decision implementation, personnel management, evaluation of human capital.

From these starting points, the formation and development of theoretical and methodological principles of management in strengthening the economic security strategy of the enterprise is based on its conceptual presentation as a functioning business model, which is organically included in the general system of enterprise security management, being one of its functional subsystems that ensures the implementation of management decisions in long-term perspective.

At the same time, the development of an economic security strategy should include several main stages:

1. Economic analysis of the enterprise's activity is one of the most important in the development of the strategy of economic security, because in the process of analysis, the achieved results of the enterprise's activity are compared with data for previous periods, as well as with the indicators of other enterprises and average industry indicators. In addition, at this stage, the influence of various factors on the value of performance indicators is determined, shortcomings, errors,

unused opportunities and prospects in the economic activity of the enterprise are revealed.

2. Establishing long-term goals, tasks and main directions of development - helps to develop an effective plan for the development of the enterprise, which in turn will ensure the appropriate level of economic security.

3. Development of the most effective ways of implementing strategic goals, which is the most difficult stage of forming an economic security strategy. This stage is not only difficult, but also responsible, as it is necessary to know and control the movement of the enterprise towards the set goal. And if suddenly a mistake was made, and the company does not reach the expected level, or receives losses, then it is necessary to carefully work out the strategy.

4. Specification by periods of implementation - the sequence and terms of achievement of individual goals and strategic tasks are established. The specification of the strategy of economic security by the periods of its implementation ensures external and internal synchronization in time.

5. Evaluation of the developed strategy is determined based on the following criteria:

- Consistency of the developed strategy with the general strategy of economic development: the connection of goals, directions and stages in the implementation of these strategies is analyzed;
- The internal balance of the strategy: the consistency of individual strategic goals and directions of activity among themselves, as well as the sequence of their implementation, is determined;
- Adaptability of the economic security strategy to the external environment: the level of adaptation of the developed strategy to the projected changes in the enterprise environment is assessed;

- Effectiveness of the strategy: the effectiveness of the implementation of the developed strategy is determined.

Thus, the development and formation of the enterprise's economic security strategy will allow effective management decisions related to the development of the enterprise in the conditions of constantly changing factors of the external and internal environment, which determine the vector of this development.

A rationally constructed strategy of the enterprise's economic security will allow not only to avoid significant financial and material losses, but also to increase profits and make the enterprise more attractive to investors, because, other things being equal, reducing the risk of unexpected costs is the most attractive. In this case, ensuring the economic security strategy of the enterprise is a single organizational and management complex, during the formation of which the concept of ensuring the security policy is developed based on a set of mandatory measures aimed at developing an action plan for the economic protection of the enterprise.

The strategic orientation of the enterprise's safety management is an important prerequisite for its functioning. At the same time, strategic management of economic security should apply to all areas of the company's activity. Under such conditions, the strategic management of the enterprise's economic security must take into account the cyclicality of development and the peculiarities of transformations of the domestic economy, which depends on the choice of tools, methods and models of the enterprise's security, as well as the need to use systemic, situational, system-situational and target approaches when choosing strategic development priorities.

The defining tasks of economic security in the procedure of strategic management of the enterprise are the assessment of the level and description of the characteristics of

the state of security for each strategic alternative, the study of risks and influencing factors on the implementation of the strategy, the coordination of the chosen strategy of the development of the enterprise with the basics of its vital activities when forming the final strategy, monitoring the state of security and its changes during the adjustment of the economic development strategy.

The development and implementation of a strategy for ensuring the economic security of an enterprise is inherently an element of strategic management, that is, as a multi-faceted, formal-behavioral management process that helps to formulate and implement effective strategies that contribute to balancing relations between the enterprise, including its individual parts, and the external environment. as well as the achievement of established goals. This is a process by which the enterprise management apparatus carries out its long-term management, determining the goals of activity, the strategy for their achievement, taking into account the relevant (essential) external and internal conditions, and also ensures the fulfillment of the developed relevant tasks, constantly developing and changing.

The need to support strategic orientation makes the process of strategic security management continuous, dynamic and defines its purpose as setting tasks, developing and ensuring the implementation of planned indicators within the framework of security subsystems, which is the basis for creating the foundations of dynamic competitiveness and viability in the long term.

In this case, there is a need for the formation of an adaptive security strategy of the enterprise, which should provide for its constituent elements such as goals, subjects, objects, resources and deadlines. Setting goals requires the use of an integrated approach, and takes into account, firstly, the

needs of the enterprise in relation to the external and internal environment, secondly, the desired state of indicators for the functional components of security, and thirdly, the passage of technological processes that are optimal in terms of intensity and economic efficiency.

In a broad sense, adaptation is understood as the adaptability of the system to changing conditions, and adaptive control is control in a system with incomplete a priori information about the controlled process, which changes during the accumulation of information and is used to improve the quality of the system. However, to date, there has not been a clear interpretation of the subject of adaptive management [195-198], where most researchers perceive adaptation as a set of processes and methods characterized by the ability of the management system to respond to changing environmental changes.

The adaptive strategy of managing the economic security of the enterprise is a separate type of economic security management, namely: flexible, innovative, able to adapt to new economic conditions with the help of new management tools and methods. As a result, when implementing an adaptive security strategy, it is necessary to take into account such important factors as the level of economic security and its characteristics, the state of the life cycle of the development of the enterprise, threats within the internal and external environment with their changes, the financial capabilities of the enterprise, the situation on the market, modification of the actions of sub economic entities, etc.

From these starting positions, it is advisable to start the formation of an adaptive strategy for managing the economic security of the enterprise from the existing level of the state of the life cycle of the enterprise and its development. As a result,

it is necessary to take into account the life cycle of the enterprise, which is formed under the influence of the development of the industry, technologies, products, organizational forms of business, personnel, which requires constant study of internal and external processes that take place inside and outside the enterprise.

The choice of a strategy for strengthening economic security largely depends on the competitive position of the enterprise. After all, the ability to function stably is achieved at the expense of competitive advantages, that is, a set of factors and parameters that ensure recognition and selection of the enterprise from the total number of competitors.

It is also important to monitor factors influencing the level of economic security of the enterprise, which should become an important component of both short- and medium-term forecasting and development of a strategy for strengthening the economic security of the enterprise within the framework of the policy of managing its economic development. For this purpose, the monitoring of factors and indicators of the state of economic security should be an integral part of the analytical work of the company's service.

In order to most effectively implement an adaptive strategy of economic security at the enterprise, it is advisable to develop and implement a system of plans that will cover all aspects of the strategic planning process, including target programs, strategic, tactical, calendar and individual. The system of plans (target program) must specify the purpose of changes in the functioning of the company's internal systems, the deadlines for making changes, the work that must be done to make such changes and their executors, as well as specify the necessary material, labor and investment resources.

In this case, the target program establishes the need for changes in the internal system of the enterprise, and the

strategic plan determines the terms and essence of measures aimed at achieving the goal, and should include such elements as assumptions about development trends and the nature of competition, changes in the external environment, analysis of strengths and weaknesses parties of the enterprise, the mission and goals, the general strategy, the action plan for creating competitive advantages, the functional strategy and the strategy in case of extraordinary circumstances, as well as the necessary resources for the implementation of the strategy, the assessment of the probability of strategic success and the schedule of the main activities.

At the same time, the tactical plan indicates the executors of work by divisions of the enterprise, and the individual plan - the most useful work to achieve the goals of the strategy, as it is a target management tool that formalizes the fixation of specific works, their terms and control. A drawn up and properly controlled individual work plan of a specific unit of the enterprise can combine target, strategic and tactical plans based on a single budget.

As a result, it should be noted that in the target, strategic and tactical plan, one of the main issues is the problem of ensuring the interconnection of internal systems and divisions of the enterprise. Solving this problem comes down to making the necessary changes in the operation of all internal systems and divisions of the enterprise, and within the agreed time frame.

The final link in the organization of adaptive strategic planning of the enterprise's economic security is the drawing up of individual work plans - documents specifying the work executors. Individual work plans are drawn up for a certain period, which must coincide with the period of drawing up reports on the progress of implementation of the selected strategy in the field of security, allowing to personalize

responsibility.

The formation of a conclusion about the rationality of the company's adaptive economic security strategy, as well as the effectiveness of its implementation, becomes possible only on the basis of the calculation of an integral qualitative or quantitative security indicator in comparison with the planned (normative) one. Moreover, adaptation should be understood as the system's ability to change conditions. The goal of adaptive management of economic security is to find effective options for making and implementing decisions aimed at the functioning and development of enterprises in a competitive environment.

The main task of adaptive management of economic security is to maintain the internal stability of the system in the conditions of a changing external environment. The functioning mechanism of the adaptive management system of the economic security of enterprises creates rules that regulate the interaction of system elements and parameters. And since the improvement of the system structure is connected with the establishment of spatial, synthetic, temporal and functional connections, one of the main tasks of creating an adaptive system of managing the economic security of the enterprise is the synthesis of the mechanism and structure of the system's functioning, the choice of the goal of managing the adaptive system. At the same time, the functions of the adaptive management system are directly related to the basic ones, such as forecasting and planning, work organization, activation and stimulation, coordination and regulation, control, accounting and analysis.

The main role in the implementation of adaptive management is played by the management decision as an assessment of integration approaches and methods of its implementation, under which the mechanism of adaptive

management of the economic security of the enterprise in a competitive environment acts as a set of principles, tools and technologies for making and implementing management decisions aimed at preventing possible threats. At the same time, there are different approaches to determining the integral assessment of decision-making on the economic security of the enterprise, such as indicator, economic-mathematical, resource-functional, economic stability of the enterprise, profit-investment, market value of the enterprise, etc.

It should be understood that security technology is also a business process, therefore it must cover all levels of business activity, all stages of the technological process, starting from planning and ending with the use of profits, where each of these stages is part of the overall process and cannot exist separately. Therefore, ensuring security at each stage of the technological process forms the basis of the proper security of the enterprise's activities in general. Thus, as the level of risk increases, and accordingly the economic security of the enterprise decreases, it is necessary to intensify activities to strengthen security, which requires an increase in the amount of funding for certain activities or the implementation of certain organizational processes.

Accordingly, if the level of security is low, but the enterprise has the opportunity to allocate significant financial resources to the policy of security management, then it is advisable to choose the strategy of “institutionalization and consistent strengthening”. In accordance with it, the enterprise needs to carry out a set of measures of an institutional and organizational nature, which involves the creation of appropriate internal regulatory documents that regulate the enterprise's security activities and create a corresponding structure (department) or grant certain powers to already existing departments.

In addition, this strategy provides for constant monitoring of the external and internal environment of the enterprise's functioning in order to identify factors affecting the functional components of its security, with the adoption of preventive measures to prevent the realization of potential threats. If the level of security is low, and the financial capabilities of the enterprise are average, then it is advisable to choose a strategy of "segmented security", which involves investing resources in security for the most important (least protected from economic risks) aspects of activity (functional components of security) in order to prevent critical changes in life activities.

In the case of limited financial capabilities and a low level of security of the enterprise, it is advisable to choose a strategy of "delegation of functions", which involves granting security powers to existing services and departments of the enterprise. In the event that the enterprise has sufficient resources and operates under conditions of insignificant risk, it can choose a strategy aimed at rapid response in case of threats. In this case, the company's economic security policy should provide for monitoring the environment of its functioning (both internal and external) with the aim of prompt response and taking measures to eliminate threats that may occur or be realized in the near future.

If the state of economic security and the financial capabilities of the enterprise are average, then it is necessary to pay attention to the implementation of the "sudden response" strategy. This variant of behavior allows, with average financial capabilities, to monitor the state of security by functional components and immediately react (eliminate) to emerging threats. That is, the enterprise operates under conditions where the allocated resources are able to weaken or prevent the actions of threats, but there may be a probable

situation when it may suffer some losses.

In a situation where the enterprise does not have sufficient resources for security policy and operates in medium risk conditions, it can choose a “selective response” strategy, which involves the implementation of measures to prevent individual, only the most significant risks, consciously accepting the occurrence of risk as a lesser threat. Here, the company's response is reduced to selective coverage of costs associated with the occurrence of threats.

In an acceptable state of economic security, an enterprise with large resource capabilities is suggested to use the strategy of systematic planned support. This involves the allocation of a sufficient number of resources necessary for planning the main indicators, full-fledged monitoring, control and ensuring security for each functional component in conditions of a low probability of the occurrence of a threat. It is clear that this type of strategy is better because it guarantees a complete systemic set of security management measures in the least likely threat scenario.

In the case of average resource capabilities and an acceptable state of security, it is appropriate to implement the strategy of “complex support” for which an enterprise, possessing the average potential of resources to cover threats and operating in conditions of low probability of the occurrence of such threats, is able to focus security policy on individual functional components.

Instead, it is advisable to choose the strategy of “compensation of losses” for those enterprises that, due to resource limitations, operate in an acceptable state of security and are able to compensate (compensate) for the losses incurred.

Thus, the expansion of the list of types of strategic approaches to the management of the economic security of the

enterprise allows not only to improve the methodological apparatus of the policy of its provision, but also leads to the conclusion of the need to define a security strategy in the strategic management system. In addition, the proposed directions of strategies can be supplemented with the strategy of economic security, in particular within the framework of its classification feature "by direction", in which corporate, business, functional, and operational are traditionally distinguished.

In this case, the adaptive strategy of managing the economic security of the enterprise must take into account the real state of the enterprise and its changes, the influence of external environmental factors, the industry structure of the economy, the level of competitiveness and the financial stability of the enterprise in a timely manner.

Therefore, the financial and economic security of enterprise activity in relation to its implementation tools, implementation and management measures is a system for preventing various threats aimed at ensuring the normal functioning of the enterprise in achieving its goals. Ensuring the financial and economic security of the enterprise can also be defined as a continuous process of ensuring the reduction of risks, the emergence of various threats with their identification regarding its effective functioning, sustainable development and the achievement of the goals set for it at various stages of the economic cycle.

In this case, it is urgent to identify such threats, study them and assess the consequences they can cause. This can be achieved on the basis of a management-organizational approach in terms of systematization of the system of measures and the available tools of the enterprise for the prevention of various threats aimed at ensuring its normal functioning in achieving the set goals

2.4. Formation off the financial and credit mechanism of enterprises

Establishing a financial mechanism is becoming increasingly important, as the effective use of financial resources has a direct impact on the financial performance of companies. Moreover, the stability of a company's economic growth is secured through a reliable process of expanded reproduction. This process heavily depends on the financial mechanism and its capacity to ensure steady financial health. By employing the financial mechanism to guide the development of companies with various ownership structures, we consider the micro-level operations of the state's financial and credit system. This approach allows for the enhancement of the current financial system by developing a new perspective on its evaluation, grounded in the fundamental principles of its design, establishment, and operation [176].

To efficiently manage and utilize a company's financial resources, a financial mechanism is employed. This mechanism, a part of the broader economic system, consists of various methods for organizing financial relationships. These methods aim to foster conditions conducive to both economic and social progress in society. The financial mechanism plays a crucial role in maintaining the smooth operation of a company's finances. While the company's finances represent an objective economic category that shapes monetary relationships at the microeconomic level, the company's financial mechanism is subjective.

It is crafted within the bounds of the state's existing legislation. The structure of the financial mechanism is complex and is conditioned by the operation of economic laws

[176] Artus M. M. Financial mechanism in a market economy. Finansy Ukrainy. 2005. № 5. C. 54-59.

in society. It includes various components that correspond to different aspects of financial relations. A significant number of financial relations determines the use of various types, forms and methods of their organization (elements of the financial mechanism). The combination of elements of the financial mechanism - forms, types, methods of organization of financial relations - forms a "model of the financial mechanism", which is activated by setting specific parameters of each element, such as rates and amounts of withdrawal, volumes of funds, level of expenditures, etc [177].

Quantitative indicators and various methods of their creation are a more flexible part of the financial mechanism. As a rule, they are subject to adjustment and are sensitive to changes in production conditions and the tasks facing society and business entities. When forming the financial mechanism, the state seeks to ensure its maximum compliance with the requirements of the financial policy of a particular period, which is a guarantee of the full realization of its goals and objectives. At the same time, there is a constant striving for the most complete compliance of the financial mechanism and its individual components with personal and collective interests, which guarantees the effectiveness of the financial mechanism of the enterprise [178].

Both the financial and financial-credit mechanisms have qualitative and quantitative characteristics. The quantitative parameters of the state's financial and credit mechanism are determined by the amount of financial resources that the government is willing to provide on a repayable (through

[177]Financial mechanism of agricultural business entities: a collective monograph. Davydenko N.M., Zelisko I.M., Beskorovaina O.S., Buryak A.V., Drobot N.M., et al. K.: CP "Komprint". 2016 318 p.

[178]Kramarenko G.O., Chorna O.E. Financial management: textbook K.: Center for Educational Literature, 2006. 520 p.

lending) or non-repayable basis to enterprises. These resources are intended to ensure that management decisions are made that can provide them with a competitive advantage in the domestic or foreign market, generate (increase) profits, create favorable conditions for their operation, etc. in order to meet their own interests and comply with applicable law. Quantitative assessment of the financial mechanism of enterprises involves the amount of financial resources spent by the business entity for similar purposes (financed by its own profits), while ensuring certain advantages in the market in which it operates [179].

As for the qualitative characteristic, it is based on methods of concentration and efficient use of financial resources. In the economic literature, the term "technology" of using financial resources is not used, as this concept is mainly described as a factor of production, not as an economic category. Thus, in this context, we will consider the concept of assessing the areas of spending funds, taking into account the availability of business plans and programs for the strategic development of the enterprise.

With the help of the financial and credit mechanism, which is a system of influence of financial factors and credit on the economic development of the country, as well as through the functioning of the financial mechanism of enterprises, which is considered as a subsystem that guarantees sustainable economic development of these economic units, and with their effective interaction, it is possible to ensure sustainable socio-economic growth of our country and its entry into the international arena as a state with a stable market economy.

The driving force of the financial and credit mechanism,

[179]Marusiak N. L. Financial mechanism of the enterprise and directions of its improvement in the modern economic environment. Economy and state. 2021. № 12. C. 94-97. DOI: 10.32702/2306-6806.2021.12.94

which ensures its operational capabilities, is the turnover of financial resources[180]. Undoubtedly, this can only be considered in the context of a dynamic approach that takes into account the amount of financial resources at each stage of the turnover and, importantly, the reasons for their increase or decrease at each of these stages. This is possible only if all links between all parts of the business process of a particular enterprise are properly organized and connected. Given the complexity of this issue, let us consider the main approaches to the formation and functioning of the financial mechanism of an enterprise.

Well-known Ukrainian scientists V.M. Fedosov and S.Y. Ogorodnyk believe that the financial and credit mechanism includes two subsystems - financial and credit provision and financial and credit regulation, as well as organizational structures and levers of influence [181].

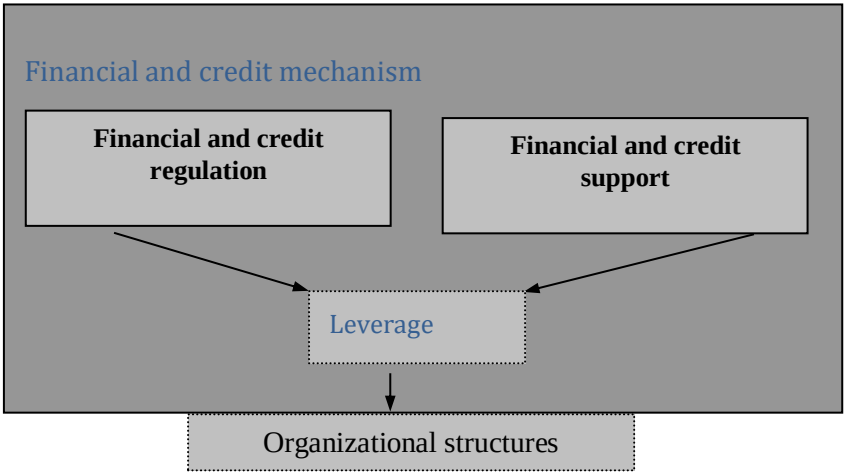
We present in Fig. 2.10 the structure of the financial and credit mechanism according to V.M. Fedosov and S.Y. Ogorodnik.

Our opinion, the optimal arrangement of the elements of the financial and credit mechanism would be in accordance with the above interpretation, since the sequence of the elements should not be clearly defined, given that each subsystem should influence the development of the enterprise.

In addition, the authors consider financial and credit regulation and financial and credit provision as subsystems. Leverages and organizational structures undoubtedly ensure their interaction within a single system, which is the financial

[180] Krupka M.I. Financial and credit mechanism of innovative development of the Ukrainian economy. Lviv: Ivan Franko National University of Lviv Publishing Center, 2001. 608 p.
[181] Finance: textbook / Edited by S.I. Yuriy, V.M. Fedosov. K.: Znannya, 2008. 611 p.

and credit mechanism [182].



Conventional notation:

- subsystems;
- elements of influence.

Fig. 2.10 Structure of the financial and credit mechanism according to V.M. Fedosov and S.Y. Ogorodnik

The scheme, as well as the interpretation of this concept, does not provide for financial indicators or any other components that can respond and take into account qualitatively or quantitatively the changes that occur in the financial condition of the enterprise as a result of this impact, and this, of course, is not a positive aspect in explaining the

[182] Marusiak N. L. Financial mechanism of the enterprise and directions of its improvement in the modern economic environment. Economy and state. 2021. № 12. C. 94-97. DOI: 10.32702/2306-6806.2021.12.94

financial and credit or financial mechanismdevelopment of society [183]. In this regard, we note that in this approach, the mechanism has signs of systemicity. However, the author assumes a linear form of connection between the elements of the mechanism, the absence of feedback and the absence of financial or economic, and possibly financial and credit elements that would ensure it. In view of this, this economic category needs to be clarified.

We would like to note that, in addition, the question arises as to the definition of all components of the mechanism in the context provided by V.M. Oparin. If the scientist considers the impact of these elements on socio-economic development, he undoubtedly meant the macroeconomic level of the financial and credit mechanism. In this case, we fully agree that this definition uses the concept of credit. However, having considered this approach, we emphasize that the author does not take into account the environmental factors, such as information and regulatory support, which create conditions for the effectiveness, expediency (from the legal point of view) and legality of the use of such a mechanism.

The financial mechanism as interpreted by A. M. Poderyogin does not contain such shortcomings. In the structure of this mechanism, the author identifies the following: financial methods, financial levers, legal, regulatory and information support. This position is quite interesting and reasonable. The author avoids defining financial forms, instruments and indicators of influence on the development of an enterprise, using only financial levers.

In addition, external influencing factors that ensure the functioning of this mechanism are taken into account, and these

[183] Oparin V.M. Finances (general theory): a textbook. K.: KNEU, 2001. 454p.

include legal, regulatory and information support. However, it is difficult to imagine how information can be transferred and evaluated at any stage of the enterprise's activity, since there is no feedback between individual elements. There are also no organizational structures that would ensure the implementation of enterprise management functions and no specific indicators - quantitative and qualitative indicators - that would allow to assess the effectiveness of the financial mechanism.

Let us consider the following approach to the definition of such an economic category as the financial and credit mechanism. The following Lviv scientist-financier M. Krupka has his own point of view on this matter. Considering the need for innovative development of the Ukrainian economy, he provides the structure of the financial and credit mechanism, taking into account the peculiarities of innovative activities of enterprises .

The author identifies two subsystems - financial and credit provision and financial and credit regulation, methods of income distribution, instruments and levers of influence. With regard to the definition, the author agrees with the theoretical approach conceptualized by the Ukrainian economist V.M. Oparin: "...the financial and credit mechanism is a set of methods and forms, instruments and levers of influence on the economic and social development of society" .

However, in the scheme presented in, the author does not show such an element as financial forms. Additionally, in the structure of the financial and credit mechanism of innovative economic development, he also identifies areas of influence, types of levers of influence, and financial instruments.

In the general model of the financial mechanism by G.G. Kireitsev, financial instruments and financial indicators are included in its components. In the theory of finance, the system of financial indicators includes: financial categories, financial

indicators, financial ratios [184].

In the author's opinion, the use of financial categories as financial indicators is unreasonable, since they only reflect a scientific abstraction of real economic relations, which are purely theoretical concepts and cannot serve as an information base. Financial indicators of an enterprise reveal the quantitative aspect of financial relations, indicating the volume of financial transactions, which makes it possible to assess the scale of financial activity. Financial ratios are relative financial indicators that perform an evaluative function, i.e., they make it possible to assess financial performance [201]. They can act as financial indicators, if the requirements of completeness, reliability and timeliness are met when determining them.

Taking into account financial indicators makes it possible to reflect the real financial condition of the enterprise, and to assess it, it is necessary to provide for the possibility of transferring, analyzing and processing the necessary information and ensure access to it for the relevant users (organizational structures or divisions).

An effective financial mechanism of an enterprise should fulfill the following tasks:

1) to provide a set of necessary resources and methods of their interaction for the implementation of a specific financial and economic process;

2) to use forms, methods and conditions for the practical implementation of financial functions to influence the subject on the object of the enterprise's financial system;

3) to form a set of direct and reverse relationships of the financial system components used by the entity to ensure the effective functioning, evolution and optimization of the financial and economic system.

[184]Kireytseva G.G. Finances of enterprises: a textbook. Kyiv: TsUL, 2002. 268 p.

The effective functioning of the financial and credit mechanism is conditioned by the interaction of its constituent elements, organizational structures, and environmental factors that directly or indirectly affect the performance of all participants in financial and credit relations.

The financial mechanism has a significant impact on the economy and social sphere, resulting in the implementation of a unified financial policy of the state, regions, local governments, and business entities. The influence of the financial mechanism on the economy and social sphere is exercised, on the one hand, through the structure of the financial mechanism and the focus of its functions on solving specific problems in order to achieve a real effect, and, on the other hand, through the amount of financial resources redistributed among economic entities to meet economic and social needs. The financial mechanism affects social production through financial support and financial regulation. At the same time, the higher the level of development of a society and its economy, the more significant is the role of financial regulation.

Financial support is realized through self-financing, self-sufficiency and non-repayment financing. The problem of practical use of these economic forms is to establish an optimal ratio between them in accordance with the current stage of development of society. This commonly accepted interpretation reveals the essence of the financial mechanism from the standpoint of recognizing its dual nature. On the one hand, this mechanism reflects the essence of the objective category of finance and in this sense is a carrier of objective production relations. On the other hand, it is the construction of specific financial relations (creation of trust funds, forms and conditions of formation of financial resources, methods of financial management, etc.) - a subjective side of the financial

mechanism. However, financial relations can be viewed as an object of action rather than a subject.

The subject can be the state, owners, and management agents that influence the set of economic relations that arise in the process of formation, distribution, redistribution, and use of financial resources. They carry out purposeful action with the help of financial levers, methods, and regulatory tools.

Due to the diversity of forms of organization of financial relations, the financial mechanism has a complex structure, since its functioning is conditioned by the amount of financial resources directed to specific purposes and depends on the methods and forms of their formation and use, as well as channels of cash flow.

Depending on how financial resources are formed and distributed, the financial mechanism is based on the following principles:

- centralization and concentration of funds (redistributive model or firm model);
- decentralization and self-financing of economic entities (market model).

The results of theoretical studies show that in modern conditions the issues of the essence of credit relations have not been fully investigated. This makes it impossible to determine the theoretical essence of the lending mechanism. This is manifested in the fact that theoretical limits of credit coverage of the need for financial resources to ensure the continuity of the production process have not yet been established.

The peculiarities of the financial and credit mechanism of agricultural enterprises are manifested in the composition of almost all its elements: in the system of financing and crediting methods, methods of managing financial resources, directions of their use, a set of financial levers, levers, and regulators. The structure of the financial and credit mechanism of the

agricultural sector of the economy is far from perfect, as its elements are not coordinated, functioning haphazardly, not ensuring the main goal - the continuity of the production process.

In our opinion, when forming a modern financial mechanism, an enterprise should ensure its fullest compliance with the requirements of the state's financial policy of a given period, which is a guarantee of the full realization of its goals and objectives, and constantly strive to ensure the fullest possible connection of the elements of the financial mechanism with the interests of the state, business entities, and the population.

CHAPTER 3. FOOD SECURITY AND THE DEVELOPMENT OF AGRICULTURAL PRODUCTION IN TIMES OF WAR

3.1. Modeling and optimal solutions for maintaining the stability of national food security system

Food security is at the forefront of the overall national security system. The level of food supply characterizes the level of general economic development, because, as we know, food production was, is and will be a crucial condition for efficiency of direct producers, and the degree of food supply is considered the most important factor, the capability of the state economy and the state system as a whole.

The importance of the food security problem in the national security system of the country lays in the fact that it is closely linked to environmental security. The development of agriculture has a decisive influence on worsening of the environmental situation in the world, which, on the one hand, hinders the growth of agricultural production as a raw material for food, and on the other – it leads to mass production of agricultural products contaminated with various toxic substances.

Within the worldwide global scale, the solution of the food security problem is associated with the disparity between the growing population of the planet and the potential capacity of the biosphere. Within one country, such as Ukraine, the optimal location of production should be based on the territorial division of labor, and its food security – on the basis of effective development of interregional food and raw material connections.

An important aspect is to identify and understand such key components of food security as the physical and economic

affordability of food. Physical accessibility implies the uninterrupted flow of food to places of consumption in appropriate volumes and assortment, and is characterized by the ratio of the food amount to the volume demanded by the population. Economic affordability is interpreted as the ability of different segments to receive the required amount and range of food by buying them at appropriate prices prices[210].

Currently, agricultural production is one of the key components of food security, as well as ensuring economic and social development of the country as a whole. In the conditions of acceleration of processes of intensification of agricultural production there are ecological problems caused by methods of food production and considerable volumes of production. Such a situation threatens the country's ability to produce quality food and in sufficient quantities in the long run. In this aspect, it is also worth noting the issue of climate change, the global impact of which directly affects the state and development of a significant share of the world's biodiversity prices[185].

The world's population is growing every year, which leads to an increase in per capita food consumption, taking into account the fact that, accumulating material goods, certain segments of the population thereby cause significant damage to the biosphere as a whole.

Addressing important issues of managing the dynamic processes of food security in overproduction, minimizing the risk of environmental damage, taking into account the factor of

population growth and, consequently, the level of per capita consumption today is very important [186]. In particular, it is necessary to focus on solving urgent problems of increasing

[185] Lutz W, Samir KC. (2010) Dimensions of global population projections: what do we know about future population trends and structures? Phil. Trans. R. Soc. B 365, 2779–2791. (doi:10.1098/rstb.2010.0133)

[186] Garnett T. (2019) Food sustainability: problems, perspectives and solutions. Proc. Nutr. Soc. 72, 29-39. (doi:10.1017/S0029665112002947)

agricultural productivity, minimizing environmental damage, and, consequently changing the management system of dynamic processes to ensure the sustainability of national food security.

During the studied period of 2015-2020, there was a relatively small rate of population growth in Ukraine. The reason for this is, first of all, the provision of access to the protection and development of reproductive health of the population, as well as the relative improvement of living standards. Accordingly, it should be noted that recently there has been an increase in the level of adequacy of food consumption in Ukraine for the period from 2017 to 2022 (Table 3.1).

The balance of consumption of basic food products shows that in 2022 the actual consumption of many categories of food in Ukraine was below rational norms, and compared to previous years the balance of indicators deteriorated. The largest lags behind the rational consumption norms were observed for milk and dairy products - by 42%, fruits, berries and grapes - by 42%, meat and meat products - by 33%, fish and fish products - by 45%. For the four food groups (bread and bakery products, eggs, potatoes, vegetables and melons), actual consumption exceeded the rational norm. This excess is evidence of an imbalance in the nutrition of the population, which is trying to meet their own needs through more affordable products due to low purchasing power of the population [187].

Improving the level of food security is possible by increasing the competitiveness of the agricultural sector, as the competitiveness of the agricultural sector is an integral part of the economic competitiveness of the country and is one of the

[187]Ministry of Health of Ukraine (2022). Retrieved from: https://moz.gov.ua/

main sources of Ukraine's biosafety and food security, as well as the basis for ensuring biological security and biological competitiveness of its population.

Table 3.1.

Status and dynamics of Indicator of food consumption adequacy (per capita in 2022), kg*

Food products	Rational norm*	Actual consumption norm						Relative deviation, %	Indicator of consumption adequacy
		Years							
		2017	2018	2019	2020	2021	2022		
Bread and bakery products	101,00	113,5	111,3	110,4	109,4	108,4	108,5	95,59	1,07
Meat and meat products	80,00	42,8	52,0	51,2	54,4	56,1	54,1	126,40	0,67
Milk and dairy products	380,00	199,1	206,4	204,9	214,9	220,9	222,8	111,90	0,58
Fish and fish products	20,00	10,4	14,5	13,4	13,6	14,6	11,1	106,73	0,55
Eggs (pcs.)	290,00	206	290	310	307	309	310	150,48	1,07
Vegetables and melons	161,00	131,7	143,5	162,8	163,4	163,3	163,2	123,91	1,01
Fruits, berries and grapes	90,00	39,3	48,0	52,6	53,3	56,3	52,3	133,07	0,58
Potatoes	124,00	135,4	128,9	139,3	140,2	135,4	141	104,13	1,13
Sugar	38,00	36,8	37,1	38,5	37,6	37,1	36,3	98,64	0,95
Vegetable oil of all kinds	13,00	10,4	14,8	13,7	13,0	13,3	13,1	125,96	1,00

**In the terminology of the Ministry of Health of Ukraine "Approximate set of basic food raw materials and food products to provide an average per capita.*

In direct dependence on the functional state of the agro-industrial complex, especially agriculture, are the economy and food security of the state, the development of domestic and foreign markets, and hence the standard of the population's living.

The level of food security depends on the effectiveness of public policy in developing mechanisms to support rural areas, international trade, managing private sector improvement and developing effective measures to reduce and dispose of waste with minimal impact on biodiversity growth.

The importance of stimulating the development of the agricultural sector of the country's economy is confirmed by the fact that it produces an average of 9.3% of GDP. It should be noted that during the crisis the agricultural sector was one of the growing sectors (Fig. 3.1).

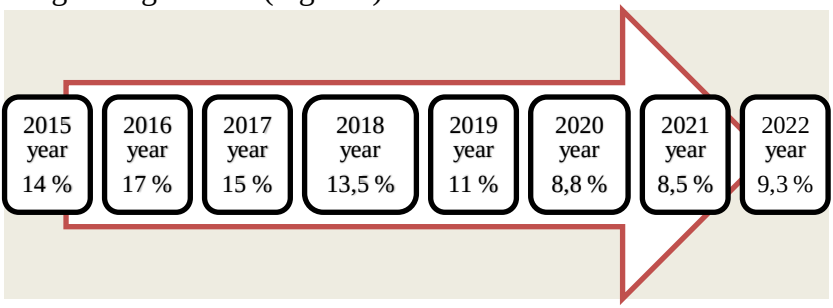


Fig 3.1. The share of agricultural products in the GDP of Ukraine (2015-2022)[188].

Traditional technologies of agricultural production significantly violate the natural balance and pollute the environment. It worse to noting that today there is a need to create a coherent and reliable system of state influence on the economy, which allows to regulate the most important

[188]Ministry of Health of Ukraine (2022). Retrieved from: https://moz.gov.ua/ (in Ukr.) (Accessed 14 December 2023).

economic transformations with the least losses from environmental impact, and which is able to take over management and support the economy by ensuring sustainability of food security. At the same time, it is necessary to clearly define the boundaries and criteria or conditions of state intervention in the economy, in particular, the boundaries of the public sector, as well as to ensure the development of effective methods for state regulation of environmental issues that have a significant impact on national food security.

Therefore, development and implementation of measures to eliminate threats to food security in the context of global economic processes require the development of a model of effective management of dynamic food security processes, taking into account the impact of environmental factors[189]. Let a given food security system be a system of linear differential equations with constant delay, which has the following form:

$$\dot{x}(t) = Ax(t) + Bx(t-\tau), \quad x(t) \in R^n, t \geq 0, \quad \tau > 0, \tag{3.1}$$

where $x(t) \equiv \omega(t), -\tau \leq t \leq 0,$ A, B - square matrices with constant coefficients.

$\omega(t)$ - arbitrary continuously differentiated initial vector function. Given a system with one constant delay with arbitrary constant matrices – initial conditions:

$$x(t) \equiv \omega(t), \qquad -\tau \leq t \leq 0. \tag{3.2}$$

where $\varphi(t)$ is an arbitrary vector function with elements continuously differentiated on the initial interval. Unlike systems without delay, the solution of the Cauchy problem (5.3) will be the following:

[189] D. Khusainov, G.V. Shuklin. Linear autonomous time-delay system with permutation matrices solving. Studies of the University of Zilina. Math. Series. Vol.17 (2003), 101-108.

$$x(t) = e^{A(t-\tau)} e_{\tau}^{B_1(t-\tau)} \omega(-\tau) + \int_{-\tau}^{0} e^{A(t-\tau-s)} e_{\tau}^{B_1(t-\tau-s)} e^{A\tau} \left[\omega'(s) - A\omega(s)\right] ds \tag{3.3}$$

In our research, a two-pronged approach is used to find the solution of the system (1). According to Ries's theorem, the linear operator is represented in integral form. The integral is constructed by a special solution of the system (fundamental matrix of solutions) in the presence of arbitrary initial conditions using the methods of operational calculation.

Let us denote $X_0(t)$ - a matrix function, which is the solution of system (1) with unit initial conditions

$$X_0(t) \equiv I, -\tau \le t \le 0, \; X_0(t) \equiv \Theta \; t < -\tau, \tag{3.4}$$

where I is a unit, and Θ is a zero matrix.

The solution of the system (3) with the initial conditions (2) can be written in integral form, namely:

$$x(t) = \mathrm{X}_0(t)\varphi(-\tau) + \int_{-\tau}^{0} \mathrm{X}_0(t-\tau-s)\omega'(s)ds \tag{3.5}$$

Since the system (3) is linearly homogeneous and $\mathrm{X}_0(t)$ is a matrix consisting of its solutions, for an arbitrary constant vector $c \in R^n$ and continuously differentiated vector functions, the equation $y(s) \in C^1_{[-\tau,0]}$ in the following form:

$$x(t) = \mathrm{X}_0(t)c + \int_{-\tau}^{0} \mathrm{X}_0(t-\tau-s)y(s)ds, \quad t \ge 0 \tag{3.6}$$

will also be the system solution (1).

Let us select the vector $c \in R^n$ and the vector function $y(s) \in C^1_{[-\tau,0]}$ in such a way that condition (2) is satisfied.

Divide the integrals (6) in the $-\tau \le t \le 0$ interval into two integrals. As a result, we obtain:

$$\varphi(t) = \mathrm{X}_0(t)c + \int_{-\tau}^{t} \mathrm{X}_0(t-\tau-s)y(s)ds + \int_{t}^{0} \mathrm{X}_0(t-\tau-s)y(s)ds.$$

Since by choosing the initial conditions for the matrix function $\mathrm{X}_0(t),$ the following is fulfilled:

$$\mathrm{X}_0(t-\tau-s) \equiv I, \quad -\tau \le s \le t;$$

$\mathrm{X}_0(t-\tau-s) \equiv \theta, \quad t \le s \le 0;$

then the resulting ratio will take the form of the following equation:

$$\omega(t) = c + \int_{-\tau}^{t} y(s)ds. \tag{3.7}$$

After transforming the differentiated expression (3.7), we obtain the following equation:

$$\omega^{/}(t) = y(t).$$

Let us substitute the obtained value of the vector function $y(t)$ into (5.7) and calculate the integral. We obtain the following equation:

$\omega(t) = c + \omega(t) - \omega(-\tau).$

Hence, it finally follows that:

$$c = \omega(-\tau).$$

In the given expression (5) under the sign of the integral there is an arbitrary continuously differentiated function, $\omega(t)$ i.e. the initial conditions are continuously differentiated functions. This condition can be "relaxed" by requiring only continuity from $\omega(t)$. To do this, construct an integral by dividing it into

parts, resulting in:

$$x(t) = \mathrm{X}_0(t-\tau)\omega(0) + \int_{-\tau}^{0} \left[A\mathrm{X}_0(t-\tau-s) + B\mathrm{X}_0(t-2\tau-s)\right]\omega(s)ds$$

In this form, the vector function $\omega(t)$ can only be continuous. But in this dependence, the solution is characterized by a more complex algorithm.

Representation of the solution of system (1) in integral form depends on the "special" solution $\mathrm{X}_0(t)$, i.e. on the matrix solution of equation (1) with unit initial conditions. To find it, we will use the Laplace integral transformation, namely:

$$\overline{X}_0(p) = \int_0^{\infty} e^{-pt}\mathrm{X}_0(t)dt. \tag{3.8}$$

Having arranged the images of the matrix function $\overline{X_0}(p)$ in a row and calculated the inverse transformation, we find the original. The solution of system (1), which satisfies the initial conditions (2), will look as follows:

$$\mathrm{X}_0(t) = I + \sum_{k=0}^{n-1} \varphi_k(t),$$

$$(n-1)\tau < t \le n\tau,$$

$$\varphi_k(t) = \frac{(t-k\tau)^{k+1}}{k!} \sum_{i=0}^{\infty} A^i \frac{(t-k\tau)^i}{(k+i+1)!} B^k (A+B) \tag{3.9}$$

To find a solution of $\mathrm{X}_0(t)$ that satisfies the initial conditions (2), using the Laplace integral transformation:

$$\frac{d\mathrm{X}_0(t)}{dt} = A\mathrm{X}_0(t) + B\mathrm{X}_0(t-\tau),$$

we obtain

$$p\overline{X}_0(p) - I = A\overline{X}_0(p) + Be^{-p\tau}\left[\overline{X}_0(p) + \frac{1}{p}\left(e^{p\tau} - 1\right)I\right].$$

Hence,

$$\overline{X}_0(p) = \left[pI - A - e^{-p\tau}B\right]^{-1}\left[I + \frac{1}{p}\left(1 - e^{-p\tau}\right)B\right].$$

The dependence is obtained as follows:

$$\overline{X}_0(p) = \frac{1}{p}\left[pI - A - e^{-p\tau}B\right]^{-1}\left\{\left[pI - A - e^{-p\tau}B\right] + (A + B)\right\}.$$

Hence,

$$\overline{X}_0(p) = \frac{1}{p}I + \frac{1}{p}\left[pI - A - e^{-p\tau}B\right]^{-1}(A + B).$$

Expanding the second summand of the obtained dependence in a series:

$$\overline{X}_0(p) = \frac{1}{p}I + \frac{1}{p}(pI - A)^{-1}\left[I - e^{-p\tau}(pI - A)^{-1}B\right]^{-1}(A + B) =$$

$$= \frac{1}{p}I + \frac{1}{p}(pI - A)^{-1}\left\{I + e^{-p\tau}(pI - A)^{-1}B + e^{-2p\tau}(pI - A)^{-2}B^2 + \ldots\right.$$

$$\left. + e^{-np\tau}(pI - A)^{-n}B^n + \ldots\right\}(A + B).$$

To find a solution of $X_0(t)$ we obtain the following equation:

$$\overline{X}_0(p)$$

$$= \frac{1}{p}I + \left\{\frac{1}{p}(pI - A)^{-1} + \frac{e^{-p\tau}}{p}(pI - A)^{-2}B + \frac{e^{-2p\tau}}{p}(pI - A)^{-3}B^2 + \ldots\right.$$

$$+\frac{e^{-np\tau}}{p}(pI-A)^{-(n+1)}B^n+\ldots\}(A+B)$$

, or

$$\overline{X}_0(p)=\frac{1}{p}I+\frac{1}{p}\sum_{n=0}^{\infty}e^{-np\tau}(pI-A)^{-(n+1)}B^n(A+B).$$

Having made the inverse transformation, we note that the first summand, i.e. the $\frac{1}{p}I$ matrix function corresponds to the $I\eta(t)$ prototype, where $\eta(t)$ is a unit function as follows:

$$\eta(t)=\begin{cases}1 & npu \quad t\geq 0\\ 0 & npu \quad t<0\end{cases}.$$

Since function

$$f_n(t)=\frac{e^{A(t-n\tau)}}{n!}(t-n\tau)^n\eta(t-n\tau)$$

where $\eta(t-n\tau)$ is a unit function, corresponds to an image

$$F_n(p)=e^{-np\tau}(pI-A)^{-(n+1)}.$$

After replacement of $s-n\tau=\xi$, while considering the properties of functions $\eta(s-n\tau)$, $\eta(t-s)$, we obtain:

$$\varphi_n(t)=\int_0^{t-n\tau}e^{A\xi}\frac{\xi^n}{n!}B^n(A+B)ds \qquad (3.10)$$

Using the definition of the matrix exponential as a matrix series, we obtain the following equation as follows:

$$\varphi_n(t) = \int_0^{t-n\tau} \left[I + A\frac{\xi}{1!} + A^2\frac{\xi^2}{2!} + ... + A^n\frac{\xi^n}{n!} + ... \right] \frac{\xi^n}{n!} B^n (A+B) d\xi$$

By constructing the integral of each summand, we obtain:

$$\varphi_n(t) = \left[I\frac{(t-n\tau)^{n+1}}{(n+1)} + A\frac{(t-n\tau)^{n+2}}{(n+2)1!} + A^2\frac{(t-n\tau)^{n+3}}{(n+3)2!} + ... + A^n\frac{(t-n\tau)^{2n+1}}{(2n+1)n!} + ... \right] \frac{B^n}{n!}(A+B)$$

Або

$$\varphi_n(t) = \frac{(t-n\tau)^{n+1}}{n!} \sum_{i=0}^{\infty} A^i \frac{(t-n\tau)^i}{(n+i+1)i!} B^n (A+B)$$

Thus, the matrix $\mathrm{X}_0(t)$ will look like:

$$\mathrm{X}_0(t) = \begin{cases} I & & \\ I + \varphi_0(t) & npu & -\tau \le t < 0 \\ I + \varphi_0(t) + \varphi_1(t) & npu & 0 \le t < \tau \\ ... & npu & \tau \le t < 2\tau \\ I + \sum_{i=0}^{n-1} \varphi_i(t) & ... & ... \\ & npu & (n-1)\tau \le t < n\tau \end{cases}. \qquad (3.11)$$

Let us consider a special case, when $\det A \neq 0$. In this case, the solution can be written not as a series, but as a final (residual) sum. Assuming that matrix A is nondegenerate, i.e. $\det A \neq 0$, the solution of equation (1), which satisfies the initial conditions (5.2), will take the form:

$$\mathrm{X}_0(t) = I + \sum_{k=0}^{n-1} \varphi_k(t), \quad with \quad (n-1)\tau < t \le n\tau, \text{ where}$$

$$\varphi_k(t)=\sum_{i=0}^{k}(-1)^i\frac{(t-k\tau)^{k-i}}{(k-i)!}A^{-(i+1)}e^{A(t-k\tau)}B^k(A+B)+(-1)^{k+1}A^{-(k+1)}B^k(A+B). \tag{3.12}$$

Let matrix A be nondegenerate. In this case there is A^{-1} inverse to it. After repeating the transformations presented in the previous theorem and constructing the integral (2.42) in parts, we obtain:

$$\varphi_n(t)=\frac{1}{n!}A^{-1}\left[e^{A\xi}\xi^n\Big|_0^{t-n\tau}-n\int_0^{t-n\tau}e^{A\xi}\xi^{n-1}d\xi\right]B^n(A+B)=$$

$$=\left[\frac{(t-n\tau)^n}{n!}A^{-1}e^{A(t-n\tau)}-\frac{1}{(n-1)!}A^{-1}\int_0^{t-n\tau}e^{A\xi}\xi^{n-1}d\xi\right]B^n(A+B).$$

As a result of integration in parts $(n-1)-$ times more, we obtain:

$$\varphi_n(t)=\left[\frac{(t-n\tau)^n}{n!}A^{-1}e^{A(t-n\tau)}-\frac{(t-n\tau)^{n-1}}{(n-1)!}A^{-2}e^{A(t-n\tau)}+...+(-1)^{n-1}\frac{(t-n\tau)}{1!}A^{-n}e^{A(t-n\tau)}\right]B^n(A+B)+$$

$$+(-1)^nA^{-n}\int_0^{t-n\varsigma}e^{A\xi}B^n(A+B)d\xi.$$

Taking the last integral, we finally get the equation:

$$\varphi_n(t)=\left[\frac{(t-n\tau)^n}{n!}A^{-1}-\frac{(t-n\tau)^{n-1}}{(n-1)!}A^{-2}+...+(-1)^{n-1}\frac{(t-n\tau)}{1!}A^{-n}+(-1)^nA^{-(n+1)}\right]e^{A(t-n\tau)}B^n(A+B)+$$

$$+(-1)^{n+1}A^{-(n+1)}B^n(A+B).$$

In this case matrix $X_0(t)$ will look like a dependency (11).
If matrices A and B are such that $A+B=\theta$, then

$X_0(t) = I$.

Taking $B = \Theta$,

$$\varphi_0(t) = \sum_{i=1}^{\infty} A^i \frac{t^i}{i!}, \quad \varphi_k(t) \equiv \theta, \quad k = 1,2,\ldots,$$ therefore, $X_0(t) = e^{At}$ is the solution of the system without delay. Therefore, we can call the matrix function $X_0(t)$ in the form of (11) a "generalized" matrix exponential of a delayed system. In the special case of a linear stationary differential equation of the first order with a constant delay we obtain:

$$\dot{x}(t) = ax(t) + bx(t-\tau)$$

solution $x_0(t)$, that satisfies unit initial conditions has the form

$$x_0(t) = \begin{cases} 1 + \left\{e^{at}\left[\frac{1}{a}\right] - \frac{1}{a}\right\}(a+b), 0 \le t < \tau, \\ 1 + \left\{e^{at}\left[\frac{1}{a}\right] - \frac{1}{a}\right\}(a+b) + \left\{e^{a(t-\tau)}\left[\frac{(t-\tau)}{1!a} - \frac{1}{a^2}\right] + \frac{1}{a^2}\right\}b(a+b), \tau \le t < 2\tau, \\ \ldots \\ 1 + \left\{e^{at}\left[\frac{1}{a}\right] - \frac{1}{a}\right\}(a+b) + \left\{e^{a(t-\tau)}\left[\frac{(t-\tau)}{1!a} - \frac{1}{a^2}\right] + \frac{1}{a^2}\right\}b(a+b) + \ldots \\ + \left\{e^{a(t-n\varsigma)}\left[\frac{(t-n\tau)^n}{n!a} - \frac{(t-n\tau)^{n-1}}{(n-1)!a^2} + \ldots + (-1)^n \frac{1}{a^{n+1}}\right] + (-1)^{n+1}\frac{1}{a^{n+1}}\right\}b^n(a+b), \\ (n-1) \le t < n\tau. \end{cases}$$ of (3.13)

Thus, the analysis of the impact of environmental factors on the level of food security showed that the intensity $I_\tau(t)$ of such impact over the τ time satisfies the ratio, as shown in Figure 1. From the obtained ratio it follows that the dynamics of the intensity of impact of interstate military conflicts on the system of economic security of foreign countries can be described by a

linear differential equation with a delay, which has the following form [215]:

$$I_\tau(t)=\begin{cases} 1+\left\{e^{rt}\left[\frac{1}{r}\right]-\frac{1}{r}\right\}\left(r+\frac{r}{K}\right), 0\le t<\tau, \\ 1+\left\{e^{rt}\left[\frac{1}{r}\right]-\frac{1}{r}\right\}\left(r+\frac{r}{K}\right)+\left\{e^{r(t-\tau)}\left[\frac{(t-\tau)}{1!r}-\frac{1}{r^2}\right]+\frac{1}{r^2}\right\}\frac{r}{K}\left(r+\frac{r}{K}\right), \tau\le t<2\tau, \\ \dots \\ 1+\left\{e^{rt}\left[\frac{1}{r}\right]-\frac{1}{r}\right\}\left(r+\frac{r}{K}\right)+\left\{e^{r(t-\tau)}\left[\frac{(t-\tau)}{1!r}-\frac{1}{r^2}\right]+\frac{1}{r^2}\right\}\frac{r}{K}\left(r+\frac{r}{K}\right)+\dots \\ +\left\{e^{r(t-n\tau)}\left[\frac{(t-n\tau)^n}{n!r}-\frac{(t-n\tau)^{n-1}}{(n-1)!r^2}+\dots+(-1)^n\frac{1}{r^{n+1}}\right]+(-1)^{n+1}\frac{1}{r^{n+1}}\right\}\frac{r}{K}^n\left(r+\frac{r}{K}\right), \\ (n-1)\le t<n\tau. \end{cases} \quad (3.14)$$

The last representation makes it possible to obtain the solution of equation (14) at $[(n-1)\tau; n\tau)$ time intervals. This means that, having information on the intensity of impact of the environmental factor over the previous period, we can predict the expected intensity of threats to ecosystems and biodiversity systems and, consequently, food security of Ukraine for the next time period[190]. It should also be noted that the intensity of impact of the environmental factor has fluctuating nature. This means that the $I_\tau(t)$ curve which is the solution of equation (13) has inflection points. That is, taking the second derivative, we can determine the period of quantization time when the sign of the second derivative of the $I_\tau(t)$ function changes. This makes it possible to choose the time of delay τ in such a way as to violate the stability of fluctuations in the intensity of

[190] Evans A. (2019). The feeding of the nine billion: global food security. London, UK: Chatham House

impact of key factors on the sustainability of food security in Ukraine.

Violations of stability will lead to the possibility of creating appropriate actions in order to ensure a more stable system of national food security.

Analytical dependences (14), which are the solution of equation 13, take into account not only the existing threats to Ukraine's food security, but also provide information on the possibility of predicting the time point from which the intensity of the impact may increase or decrease. The aforesaid is one of the important aspects in the face of the global food crisis threat, growing demand for agricultural products, as it allows to increase agricultural productivity, which in the long run will ensure sustainable food security in Ukraine.

Based on the conducted modeling of modeling and optimal solutions for maintaining the stability of national food security, it was determined that planning of economic activities of agricultural enterprises and elaboration of directions for sustainable development of the agricultural sector should be based on priority strategic objectives, taking into account natural resource potential, ecological status and biodiversity.

Therefore, we have obtained the analytical dependences of the intensity of the environmental factor’s impact on ensuring the sustainability of food security over time, based on systems of differential equations with initial conditions that take into account the behavior of the system over a certain period of time.

The method of modeling and optimal solutions for maintaining the stability of national food security has been improved, it differs from the existing ones taking into account the time delay of the food security system's response to the degree of the impact intensity. This method allows to synthesize the function of analyzing the level of protection of

the economic security system, which can be used to obtain recommendations for effective management decisions in the direction of ensuring the stable functioning of the national food security system.

3.2. The importance of credit resources in maintaining financial stability in the agricultural sector during wartime

In the face of today's global challenges, financial stability plays a crucial role in enabling a nation to pursue its interests and withstand economic crises, especially those caused by Russia's military actions. Agriculture is the cornerstone of our country, vital for producing crops and livestock that supply food to our citizens and raw materials to our processing industries. The health of the food and processing sectors is deeply intertwined with the agricultural industry.

The agricultural sector is significantly influenced by natural and climatic conditions. A downturn in agricultural output and efficiency can adversely affect food processing industries, leading to reduced production. This, in turn, often results in higher food prices, both in our domestic market and internationally.The agricultural sector of the economy has a number of features that define its specificity and affect both its functioning and the economic security of the state. The main ones include [191]:

- natural and technological, which include natural conditions (climatic conditions, temperature and humidity conditions, and the length of the growing season);
- means of production relations - land, animals, plants, and their reproduction;

[191]Davydenko N.M. Financial security of agrarian formations. K.: CP "Komprint". 2013. 357 p.

- labor resources, material and technical base;
- environmental impact on the natural environment (irrigation, reclamation, plant protection, etc.); degree of dependence on external conditions; geographical location (spatial arrangement) of the territory;
- socio-economic: production of the necessary amount of food to meet the needs of society; ensuring economic and food security; strengthening the export potential and ensuring the export security of the state;
- ensuring an adequate standard of living for the rural population; creating conditions for sustainable development of rural areas.

Certain uncontrollable elements inherent to the agricultural sector present unique challenges. Key among these are the natural climatic conditions, which significantly influence where and how agricultural subsectors develop, as specific crops require particular climate conditions for growth.

In the early spring of 2022, Ukrainian farmers were compelled to reduce the area they cultivated due to acute shortages of both working capital and seeds. This situation led to difficulties during the harvest phase, resulting in a marked decrease in both the volume and yield of crops. Adverse weather conditions, such as unseasonal rains and unusually cold summer temperatures, further compounded these challenges. However, the cooler temperatures in spring offered a silver lining by allowing an extension of the sowing period.

Due to Russia's occupation of part of Ukraine's land, a portion of the country's agricultural production potential has been lost. At the same time, Ukrainian agricultural producers demonstrate high resilience and adaptability to wartime risks. Gross harvests of agricultural crops are 1.5-3 times higher than domestic consumption needs, and significant harvests of grain and legumes have been harvested. The needs of the domestic

market for meat and meat products have been met, but the rise in price of some types of meat (beef, pork) has led to substitution with more affordable ones (poultry), as well as the dairy industry, and there is no shortage of vegetables and fruit and berries. At the same time, the population's diet has deteriorated and food prices are rising. In Ukraine, there is a discrepancy between the levels of consumption of meat and meat products (beef, pork) and their rational norms. The population is supplied with fish and seafood products through imports. Currently, there is a significant increase in food prices, which leads to a decrease in their economic affordability [192].

The existing peculiarities of the reproduction processes in the agricultural sector do not allow enterprises to fully carry out their activities using their own financial resources. It is very important for them to receive financial and credit support from the state, especially for seasonal field work throughout the production period. They also have to fulfill their obligations to the budget system, employees, upgrade agricultural machinery (a particularly pressing issue for enterprises in Sumy, Kharkiv, and Chernihiv regions), and so on.

Given the experience of developing financial relations in the agricultural sector and overcoming the crisis in agriculture, financial resources play a special role. Recent years have been characterized by a disruption in the turnover of financial resources in the agricultural sector in all major areas, including: generating revenue from the sale of agricultural products, attracting credit and investment resources by business entities on a commercial basis, creating favorable insurance programs, receiving state financial support, etc. That is why financial

[192]The state of food supply in Ukraine during the war. URL: https://niss.gov.ua/news/komentari-ekspertiv/stan-prodovolchoho-zabezpechennya-ukrayiny-pid-chas-viyny

resources should create a viable system of financial support for the agricultural sector of the economy in modern conditions [193].

Due to the small volume, short-term nature, and high cost of credit, the existing credit support system does not provide agricultural enterprises with the necessary credit resources in a timely manner and in full. Since agricultural producers need to accumulate large stocks of material and technical resources to ensure the continuity of the current production cycle, they need additional funds in the form of loans. Banks do not risk investing in Ukrainian agriculture because of the unpredictable policy of the government in this sector of the economy. Farmers are hostage to the situation, as they cannot attract credit resources.

The important role of credit resources in the agricultural sector is primarily due to the seasonal gap between investments and receipts, the continuity of reproduction processes, and the significant need for working capital [194].

There are a number of reasons for the high cost of credit for the agricultural sector:

First, most companies do not have sustainable long-term liabilities (due to the moratorium on the sale of land);

Secondly, a significant number of producers do not have liquid collateral (usually, the immovable and movable property of agricultural enterprises is heavily worn out and does not have sufficient value; at the same time, agricultural products are considered a risky collateral for a number of reasons), while domestic banking institutions practice taking collateral that is several times higher than the loan amount;

[193]Davydenko N.M. System of measures to improve financial security in agrarian business. Bulletin of Odesa National Economic University. 2014. №10 (218). P. 63 - 74.
[194]Baranovskyy I.M. Foreign experience of crediting agricultural producers. Scientific Bulletin of the National Agrarian University. 2008. № 119. P. 236-240.

third, the difficulty of forecasting the financial performance of agricultural producers due to their high dependence on natural and climatic conditions and periodic sharp fluctuations in the price environment (prices for agricultural products can fluctuate several times during the economic cycle), which increases the risk of bank lending to the agricultural sector; Fourth, the lack of developed criteria and methods for assessing the borrower's creditworthiness, taking into account the specifics of the industry [195].

In Ukraine, about 20% of working capital for the development of the agricultural sector of the economy is generated through bank lending (in developed countries, the share is as high as 70%). According to the Ministry of Agrarian Policy and Food of Ukraine, in 2017, agricultural enterprises were granted loans in the amount of about UAH 115.5 billion. In the same year, UAH 300 million was allocated under the state program "Financial Support for Measures in the Agricultural Sector by Reducing the Cost of Loans", which made it possible to reduce the cost of loans totaling UAH 7.8 billion.

Analyzing the volume of bank lending to agricultural enterprises before Russia's full-scale invasion, it should be noted that the share of loans to agricultural enterprises in the total volume of loans to business entities was low at 7.2% (average value), and this trend has remained virtually unchanged over the past 9 years (Figure 3.2).

As shown in Fig. 3.2, in 2022, the share of loans to agriculture, forestry, and fisheries enterprises is expected to

[195]Popov V. Modern features of financial support of agriculture. Scientific works of Kirovograd National Technical University. 2012. Issue 22(2). C. 163-169. [Electronic resource]. URL: http://www.kntu.kr.ua/doc/zb_22(2)_ekon/ stat_20_1/27.pdf

increase to 19.1% of the total volume of loans granted by the banking system to business entities.

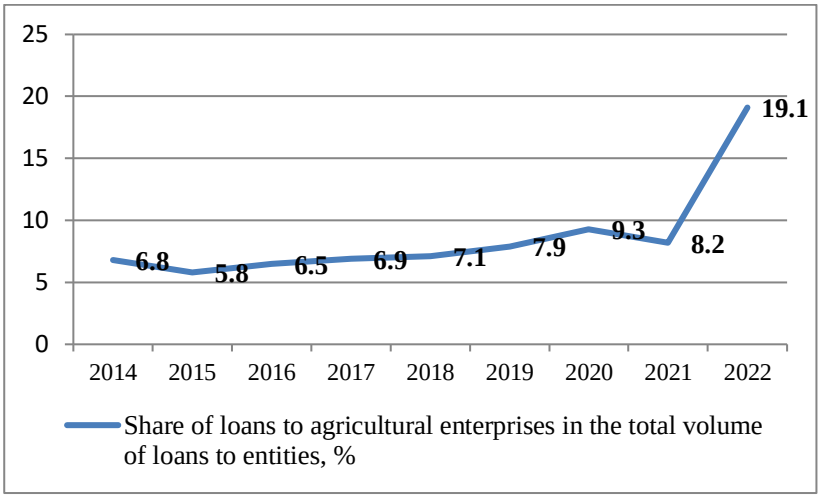


Figure 3.2. Dynamics of loans to agricultural enterprises

** built by the author on the basis of Sowing campaign 2023 is on the verge of failure. All-Ukrainian Agrarian Council website. 1.03.2023. URL: http://ukrsugar.com/uk/post/posivna-2023-roku-na-mezi-zrivu*

The program "Affordable Loans 5-7-9" has become a significant support for agricultural producers. The availability of such loans at a regular rate, with partial state compensation, and with state guarantees has attracted considerable interest from agricultural enterprises (Figure 3.3).

As we can see, a large number of agricultural enterprises across Ukraine have received loans to purchase seeds, fertilizers, and fuel and lubricants to prepare for the sowing and harvesting season, pay salaries to employees, etc.

In 2023, almost 14 thousand agricultural enterprises received UAH 78.8 billion in bank loans for development. Of these, 10.9 thousand farms received UAH 44.5 billion in loans under the state program "Affordable Loans 5-7-9".

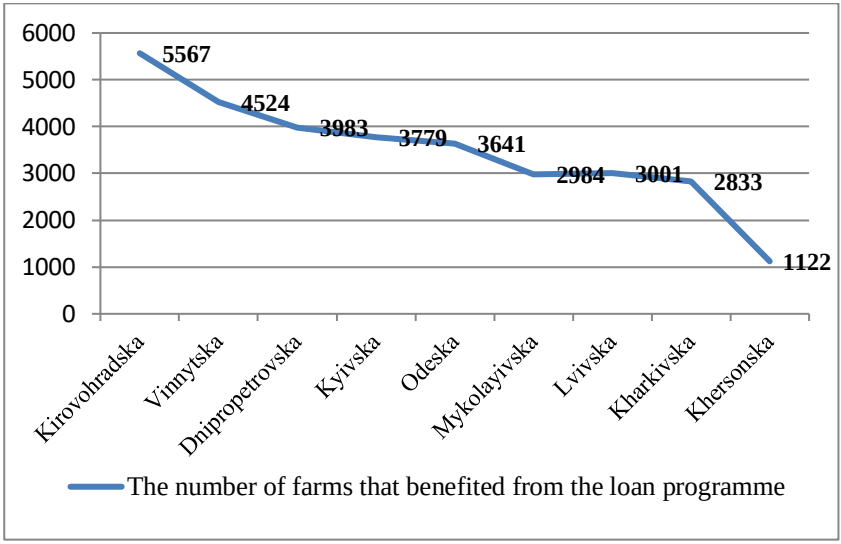


Fig. 3.3 The number of agricultural enterprises that used the program "Affordable Loans 5-7-9" in 2022*.

* ** built by the author on the basis of Sowing campaign 2023 is on the verge of failure. All-Ukrainian Agrarian Council website. 1.03.2023. URL: http://ukrsugar.com/uk/post/posivna-2023-roku-na-mezi-zrivu*

Farmers in the following regions received the largest volume of loans under various programs:

Kyiv - UAH 13.1 billion allocated to 1,029 enterprises;

Dnipropetrovs'k - UAH 7.2 billion - for 893;

Vinnytsia region - UAH 6.7 billion - for 1,558,

Cherkasy region - UAH 6.2 billion for 564 farms;

Kirovohrad region - UAH 5.6 billion - for 1,803;

Odesa - UAH 5 billion for 1,179.

Under the Affordable Loans 5-7-9 program, enterprises in the following regions received the most funds:

Kirovohrad region - UAH 4.67 billion allocated for 1,433 farms;

Vinnytsia region - UAH 4.5 billion for 1,183 farms;

Kyiv region - UAH 4.2 billion - 826 farms.

Odesa - UAH 4.18 billion for 952;

Currently, banking institutions are significantly simplifying the conditions for obtaining loans for farmers: this applies to the package of documents and various bureaucratic procedures, in some cases the need for notarization of pledge agreements is abolished, and the market for lending secured by land plots is operating.

We see a positive trend in the ability of agricultural enterprises to apply for state subsidies, targeted, subsidized loan programs, loans and technical assistance from the EU and other international donors on the online platform State Agrarian Register.

As for the structure of lending to agricultural enterprises, these are mainly short-term (up to 1 year) loans with a share of 49% (as of October 1, 2020) and medium-term (1 to 5 years) loans with a share of 46%, respectively. In addition, in the structure of short- and medium-term loans, about 70% are loans in national currency. Long-term loans are distributed more evenly - 52% in national currency and 48% in foreign currency[196].

We agree with the opinion of Borodina O., who spoke about the formation of a new European-oriented agri-food system of Ukraine based on the challenges of a full-scale war, which require a change in the vectors of development of the industry, such as support for small and medium-sized businesses as such, which ensure "their key role in the preservation and development of local markets and food supply chains". According to the author[197], "the pre-war success of

[196]Ukrainian farmers took out a record amount of loans in 2020. URL: http://naas.gov.ua/newsall/ newsukraine/?ELEMENT_ID=6482

[197]Ukrainian agriculture under martial law: lessons for society and politicians. URL: https://www.nas.gov.ua/EN/Messages/Pages/View.aspx?MessageID=9288.

Ukrainian agriculture (especially its corporate segment) in the form of technical progress, increased productivity, production and exports were accompanied by significant social and environmental losses within the country. Russia's aggression has revealed additional negative consequences of the agroholding model of Ukrainian agriculture. The war has extremely complicated the functioning of large-scale agricultural production due to the breakdown of logistics chains, environmental disasters at corporate livestock farms, blocked markets, etc."

To enhance the financial resilience of our country's agricultural sector, particularly through the utilization of credit resources, adopting strategies from European countries can be highly advantageous. In the European Union, agricultural enterprises generally have robust access to credit, which is greatly encouraged by the presence of various governmental and banking support mechanisms. This approach from overseas focuses on stabilizing the financial status of agricultural businesses and boosting their competitive edge in global markets. This strategy is especially crucial in the context of an increasingly interconnected global economy. Countries like France, Germany, the Czech Republic, and Poland have established specialized government agencies dedicated to offering financial support to the agricultural sector.

In these European models, a blend of government incentives and banking products work in tandem to create a supportive financial environment for agricultural enterprises. These incentives often include lower interest rates, extended repayment periods, and sometimes, subsidies or grants. The banking products are tailored to meet the unique needs of the agricultural sector, ranging from short-term loans for crop planting and harvesting to long-term financing for infrastructure development and technological upgrades.

Looking into the future, the trends in agricultural financing observed in these countries are expected to continue and evolve. Working capital lending, crucial for the day-to-day operations of agricultural enterprises, will likely remain the most common form of financing. Public sector banks are anticipated to maintain their dominant role in the agricultural lending market, supported by various government-backed schemes. These schemes might include guarantee programs, interest rate subsidies, and special funds dedicated to supporting specific segments within agriculture, such as organic farming or sustainable practices.

Moreover, in these European models, there's a keen focus on innovation and sustainability. Financial products are increasingly being linked to sustainable agricultural practices, with incentives for farmers who adopt environmentally friendly methods. This approach not only supports financial stability but also aligns with broader environmental goals.

However, it's important to note that during times of conflict or war, like the situation faced by Ukraine, the effectiveness of traditional market mechanisms in stimulating credit support is significantly diminished. In such scenarios, direct government intervention and support become even more critical to sustain the agricultural sector. This can take the form of emergency funds, targeted subsidies, or specific programs aimed at helping farmers overcome the challenges posed by the conflict.

In conclusion, the European experience in agricultural financing offers a comprehensive framework that combines government support, banking sector engagement, and a focus on sustainability and innovation. Emulating these strategies could provide a robust foundation for ensuring the financial security and competitiveness of our agricultural sector in both the domestic and international markets.

To safeguard the financial stability of the agricultural sector, focused financial backing is essential for both the growth of the sector and the support of agricultural business entities. At the governmental level, there's a pressing need for a legislative framework that clearly outlines definite sources of support for farmers. This framework should encompass efficient financial mechanisms that facilitate effective cash flows. These could include specialized financial assistance programs for repairing or replacing damaged property and equipment. Such programs might range from leasing schemes and grant initiatives to accessible financing options and crowdfunding efforts.

Expanding on this, the support system should not only address immediate needs but also aim for long-term sustainability and growth of the agricultural sector. This could involve introducing tax incentives for agricultural investments, subsidies for adopting new technologies, and programs encouraging research and development in agricultural practices. The government could also consider establishing partnerships with private sector entities to leverage their expertise and resources.

Moreover, training and educational programs for farmers and agricultural entrepreneurs are crucial. These programs should focus on financial literacy, modern farming techniques, and sustainable practices, ensuring that the agricultural community is well-equipped to manage financial resources effectively and adapt to evolving market demands.

Additionally, implementing a comprehensive insurance scheme to protect farmers against unforeseen events like natural disasters, pest infestations, or market fluctuations would be beneficial. This scheme could offer various levels of coverage, tailored to the diverse needs and capacities of different agricultural enterprises.

To further strengthen the sector, the government could establish a dedicated agricultural development fund. This fund would provide a steady source of financial assistance for innovative projects, infrastructure development, and emergency relief efforts. It could be financed through a combination of government allocations, international grants, and private investments.

In the context of global market integration, support should also extend to helping farmers access international markets. This includes assistance in meeting international quality standards, marketing support, and facilitation of export logistics. By doing so, the agricultural sector can expand its market reach, enhance its competitiveness, and increase its contribution to the national economy.

In summary, ensuring the financial security of the agricultural sector requires a multifaceted approach. This includes creating a robust legislative framework, introducing diverse financial support mechanisms, fostering long-term growth and sustainability, providing educational resources, implementing comprehensive insurance coverage, establishing a dedicated development fund, and assisting in global market integration. These efforts collectively would fortify the agricultural sector against current challenges and position it for future prosperity.

3.3 Methodical approaches to determining losses in the agricultural sector caused by the militaty aggression of the russian federation against Ukraine: legal and financuial aspects

The International Convention on the Laws and Customs of War on Land prohibits the destruction or capture of property not deemed necessary for military purposes. Presently, at both

the international level and within Ukraine's domestic legislation, there lacks a cohesive and explicit set of regulations pertaining to the compensation for losses incurred by business entities due to the destruction of property during hostilities. Specifically, uncertainties persist regarding the authorized entity to adjudicate such disputes, the procedural protocols, and the criteria for seizure. The question of compensability for such damages remains unresolved. Experts observe the absence of a dedicated legislative framework for compensating losses sustained by business entities resulting from the destruction and/or damage to their property during the russian military invasion of Ukraine. Despite this, the potential approval of such a mechanism in the future cannot be discounted. Consequently, a pivotal facet of safeguarding the rights and interests of business entities amidst military operations involves formulating algorithms and procedures for documenting instances of property damage and/or destruction arising from the military aggression of the russian federation[198].

The russian military invasion of Ukraine on February 24, 2022, precipitated significant social, economic, and environmental losses. Presently, evidence indicates that since the commencement of Russia's full-scale military invasion in Ukraine, the agricultural sector has borne the brunt of these losses. Preliminary estimates from the World Bank suggest a 29.2 percent contraction in Ukraine's economy in 2022 due to the armed aggression of the russian Federation. Simultaneously, the costs of Ukraine's restoration have surged to USD 411 billion, surpassing more than double the size of the country's 2021 economy. The international community widely

[198]Recording and indemnification of losses caused by military actions to business entities / Law Firm "ANK" URL: https://ank.odessa.ua/konsultatsii/poriadok-vyznachennia-shkody-ta-zbytkiv-zavdanykh-ukraini-vnaslidok-zbrojnoi-ahresii-rf/

recognizes and condemns the act of armed aggression by the Russian Federation against Ukraine, as evidenced by the UN General Assembly resolution of March 2, 2022, garnering support from 141 countries. Additionally, 40 of the most developed nations globally have imposed economic sanctions against the russian Federation and individuals affiliated with its government, including the seizure of their assets. Within the legal framework of Ukraine, an intricate and comprehensive mechanism for compensating damages and losses incurred due to the actions of the russian federation, including those affecting the agricultural sector, is under development [199].

In the pursuit of scientific inquiry, the terminology prescribed by pertinent normative legal instruments of Ukraine has been employed. The concept of "losses" encompasses the value of property that has been lost, damaged, and/or destroyed due to the devastating impacts of hostilities, acts of terrorism, sabotage, missile and bomb attacks during the armed aggression by the Russian Federation. It also includes the costs required for the restoration of violated rights (real losses) and/or the income that the victim could have accrued in the absence of armed aggression by the russian Federation (forgone benefit). The term "victims" encompasses Ukrainian citizens, foreigners or stateless individuals, business entities irrespective of their organizational and legal structure and ownership, state or communal institutions, organizations, state authorities, and local self-government bodies, as well as the state of Ukraine itself, all of whom suffered losses resulting from the armed aggression of the Russian Federation [200].

[199] Legal mechanisms for compensating farmers for losses due to military aggression of the Russian Federation, March 22, 2023. / Think brave. URL: https://biz.ligazakon.net/analitycs/218308_pravov-mekhanzmi-vdshkoduvannya-zbitkv-agrarv-cherez-vonnu-agresyu-rf

[200] On the approval of the Procedure for determining damage and losses caused to Ukraine as a result of the armed aggression of the Russian Federation. Resolution of the Cabinet of

The assessment of damage serves the purpose of determining the actual monetary value of the losses, identifying lost profits, and ascertaining the costs essential for the restoration of property and property rights subjected to destructive forces. Objects of damage encompass properties, property rights, and other assets owned by the victims and impacted by destructive forces.

The evaluation of direct damage to the agro-industrial complex and agricultural infrastructure encompasses factors such as the loss of agricultural machinery, damage to elevators and other granaries, livestock losses due to animal deaths and slaughter caused by the impossibility of their maintenance, losses incurred by producers of perennial crops due to plantation damage, beekeeping losses, and the loss of production factors and finished products due to damage and theft. Estimations of the aforementioned losses employ indirect methods, combining relevant state and regional statistics with data derived from surveys of agricultural producers conducted in 2022. This research is undertaken by the public organization known as the "Institute of the Kyiv School of Economics."

The examination of scholarly sources pertinent to this research theme has identified two academic publications: "State Regulation of the Processes of Determining Damages Caused by the Military Aggression of the Russian Federation Against Ukraine in the Field of Agriculture" by Maslak, O. M. (2023), and "The Application of Accounting for the Assessment of War Losses for Ukrainian Agro-Industrial Complex Enterprises" by Zhuk V. and others (2023). In the work of O. Maslak, the extant legal aspects within the Ukrainian legislation pertaining to the identification,

Ministers of Ukraine dated March 20, 2022 No. 326. URL: https://zakon.rada.gov.ua.

acknowledgment, and certification procedure for damages caused by the military aggression of the Russian Federation were meticulously examined [201]. Conversely, the collaborative publication led by Zhuk V. et al. delves into the application of accounting principles in assessing war losses for enterprises in the Ukrainian agro-industrial complex [202]. While both studies offer comprehensive insights into their respective topics, several unresolved questions, constituting the focal point of this investigation and serving as a natural continuation of Maslak's study, persist in the existing body of knowledge.

The objective of this scientific research is to scrutinize the mechanisms of state regulation concerning the processes of determining losses incurred in the field of agriculture due to the military aggression of the Russian Federation against Ukraine. Aligned with this research objective, specific tasks have been outlined:

1. Conduct a comprehensive analysis of regulatory and administrative acts, along with other documents governing approaches and procedures for determining socio-economic losses in agriculture caused by the armed aggression of the Russian Federation against Ukraine, and the processes for their recording.

2. Analyze the system for collecting information necessary to determine losses attributable to the armed aggression of the Russian Federation in the field of agriculture, including the procedures for processing and summarizing such information.

[201] Maslak, O. M. (2023). State regulation of the processes of determining the losses caused by the military aggression of the Russian Federation against Ukraine in the field of agriculture / Modern Aspects of Science: XXXVIII. Part of an international collective monograph. Czech Republic: International Economic Institute s.r.o., 21-47.

[202] Zhuk, V., Pugachov, M., Shpykuliak, O., Bezdushna, Y., & Popko, Y. (2023). Application of accounting for the assessment of war losses for agribusiness enterprises of Ukraine. *Agricultural and Resource Economics: International Scientific E-Journal*, *9*(3), 197–215. https://doi.org/10.51599/are.2023.09.03.09

3. Examine statistical, analytical, and other official information, including data from electronic platforms, pertaining to socio-economic losses in the field of agriculture.

4. Analyze information from central executive bodies and regional state administrations (or military administrations during martial law) concerning socio-economic losses in the field of agriculture.

In the course of this scientific inquiry, methodologies such as systematization, statistical-economic comparison, calculation-constructive analysis, induction and deduction, analogy, and comparison have been applied.

The research findings covering the entire period of hostilities, spanning from February 2022 to September 1, 2023, reveal direct losses to the agro-industrial complex of Ukraine totaling $8.7 billion. Predominantly, losses stem from the destruction and damage of agricultural machinery, amounting to over $4.66 billion for agricultural producers. The second most significant category comprises losses attributable to the destruction and theft of manufactured products, estimated at 1.9 billion[203].

Significant losses also extend to the agricultural market infrastructure, particularly storage facilities for agricultural products. The combined capacity of destroyed granaries reaches 8.2 million tons, with an additional 3.2 million tons in damaged granaries. The cost of reinstating these facilities is estimated at $1.32 billion.

Indirect losses encompass crop and livestock losses, disruptions in agricultural commodity exports, increased

[203]Report on the results of the analysis of the current situation regarding the assessment of socio-economic losses in the field of agriculture / Accounts Chamber, Kyiv. URL: http://www.rp.gov.ua

production costs, and reclamation needs. Indirect loss estimations for the agro-industrial complex from February 2022 to August 2023 amount to $40.3 billion, determined through indirect methodologies involving state, regional statistics, and data from a 2022 survey of agricultural producers.

The foremost contributor to indirect losses is the reduction in crop production. A decline in cultivated areas and changes in production technology led to decreased yields of major agricultural crops. Cumulative indirect losses attributed to reduced plant product production stand at $23.0 billion, reflecting diminished annual crop production in 2022 and 2023.

The second-largest category of indirect losses arises from export violations. The Russian Federation's blockade of sea routes for the sale of domestic agricultural products, coupled with the limited functionality of the "grain corridor," increased logistics costs, impacting domestic prices for key export-oriented agricultural products. Losses from the impact on the export of domestic agricultural products are estimated at $14.5 billion.

Other indirect losses include those from reduced animal husbandry production at $1.7 billion, increased prices of certain production inputs (fuel and mineral fertilizers) at $0.8 billion, and land reclamation needs at $0.2 billion[204].

Government Resolution No. 326 of March 20, 2022, has sanctioned the procedure for assessing damage and losses inflicted upon Ukraine due to the armed aggression of the Russian Federation. This resolution outlines distinct areas for determining damage and losses in agriculture:

[204] Report on direct infrastructure damage and indirect economic losses from the destruction caused by Russia's military aggression against Ukraine as of June 2023. Public organization "Institute of the Kyiv School of Economics". July, 2023. 59 p.

1. Damage to land resources involves harm from the destruction of the fertile soil layer and damage resulting from pollution and clogging of land resources.

2. Economic losses of enterprises encompass losses of enterprises of all ownership forms due to property destruction, financial asset losses, and foregone profits arising from impediments in conducting economic activities.

3. Damage to personal peasant farms and/or farms registered as natural persons - entrepreneurs covers harm from mutilation, bodily injury, death of farm animals, and damage due to the destruction or damage of agricultural machinery and equipment for the agro-industrial complex [205].

The primary metrics considered in assessing the damage inflicted on land resources encompass:

1. Expenditures for land reclamation necessitated by disturbances resulting from hostilities, including the construction, organization, and upkeep of engineering, technical, and fortification structures, fences, border signs, border crossings, and communications for state border arrangements.

2. Damages incurred by owners (land users) of agricultural land parcels.

3. Costs associated with the restoration of reclamation systems.

4. Impacts on soils and land parcels due to soil contamination by substances adversely affecting fertility and other beneficial properties.

5. Harm to soil and land parcels resulting from the deposition of foreign objects, materials, waste, and/or other substances.

[205] On the approval of the Procedure for determining damage and losses caused to Ukraine as a result of the armed aggression of the Russian Federation. Resolution of the Cabinet of Ministers of Ukraine dated March 20, 2022 No. 326. URL: https://zakon.rada.gov.ua

The determination of damage and losses to Ukraine's land fund following the armed aggression by the Russian Federation involves the utilization of inspection reports on land parcels, commissions' reports assessing losses to landowners and land users, expert monetary valuation reports for land parcels, primary documents, accounting records, and other reports derived from the accounting data of enterprises, institutions, and organizations. Additionally, design and estimate documentation, information from the State Land Cadastre, land management documentation, and data from remote sensing of land form part of the documented information forming the foundational basis for evaluating the relevant damage and losses.

The costs incurred by landowners and land users for land reclamation due to disturbances from hostilities, as well as for the construction, organization, and maintenance of engineering, technical, and fortification structures, are determined based on the estimated cost of the executed works outlined in corresponding implemented working projects of land management. These projects adhere to the Rules for the development of working projects of land management, endorsed by Cabinet of Ministers Resolution No. 86 on February 2, 2022 [206].

The valuation of damages to owners (land users) of agricultural land parcels, factoring in the actual expenses to render the land parcels usable, is determined according to the Procedure for determining and compensating landowners and land users, sanctioned by Cabinet of Ministers Resolution No.

[206] On the approval of the Procedure for determining damage and losses caused to Ukraine as a result of the armed aggression of the Russian Federation. Resolution of the Cabinet of Ministers of Ukraine dated March 20, 2022 No. 326. URL: https://zakon.rada.gov.ua.

284 on April 19, 1993.

Costs for the restoration of reclamation areas encompass losses incurred in the reinstatement of reclamation lands, water management and reclamation systems, engineering infrastructure objects of irrigation and drainage systems, drainage infrastructure, and agricultural water supply and drainage objects. These losses, resulting from hostilities, are appraised based on the estimated costs outlined in relevant projects for the reconstruction and capital repair of reclamation systems and/or individual engineering infrastructure objects.

These projects align with DBN V.2.4-1-99 "Reclamation systems and structures," approved by the State Building Order No. 153 on June 25, 1999.

Entities whose land parcels suffered damages, as per the aforementioned indicators, inform regional and Kyiv city state administrations (or military administrations during martial law) regarding the extent of damage and losses.

The assessment of damage due to soil pollution is calculated by authorized personnel overseeing compliance with environmental protection legislation. This calculation relies on normative monetary assessments of contaminated land plots, supported by materials confirming instances of soil pollution.

Substances responsible for land plot pollution are categorised into four hazard groups, delineated by values of Maximum Permissible Concentrations (MPC) and Tentatively Permissible Concentrations (UDC) of chemical substances in the soil. This classification is based on the Appendix 1 to the Methodology for determining damage caused by pollution and the soiling of land resources due to breaches of environmental protection legislation. This methodology was approved by the Ministry of Environmental Protection and Nuclear Safety of Ukraine on October 27, 1997 (amended by the Ministry of Environmental Protection of Ukraine on April 4, 2007) and

aligns with the Cabinet of Ministers of Ukraine resolution dated December 15, 2021, titled "On approval of standards for maximum permissible concentrations of hazardous substances in soils, as well as a list of such substances".

Categorisation of waste that led to land plot soiling as hazardous (toxic) waste adheres to extant regulatory documents in waste management. These documents, duly approved, include lists of hazardous (toxic) waste, among other relevant guidelines.

All materials employed in the computation of damage arising from soil pollution and land littering are archived within the authorised body overseeing state supervision (control) of compliance with environmental protection legislation. Copies of pertinent materials can be furnished to state authorities, local self-government, and law enforcement agencies.

As per the Ministry of Environmental Protection and Natural Resources of Ukraine, the State Ecological Inspection of Ukraine has estimated the damage to soils and land plots, excluding losses in the land fund in temporarily occupied territories, at UAH 867,951.2 million. This comprises damage from land littering at UAH 856,035.1 million and damage from soil contamination at UAH 11,916.1 million.

According to the Ministry of Agrarian Policy and Food of Ukraine and regional state (military) administrations, the pre-calculated damage to land and agricultural soils in the production direction totals UAH 5,694.8 million. This includes damages to landowners (land users) at UAH 5,584.2 million, expenses for the restoration of reclamation systems at UAH 110.5 million, and expenses for land reclamation at UAH 0.1 million.

Additionally, data from the State Service of Ukraine for Emergency Situations records costs incurred due to

fires/explosions impacting agricultural lands, amounting to UAH 2,243.1 million.

Primary indicators considered in evaluating the economic losses of enterprises, institutions, organizations, and economic entities of varied ownership forms encompass the value of lost, destroyed, or damaged property; the loss of financial assets; lost profits; and losses from unpaid goods, services, and works provided and consumed in temporarily occupied territories.

The quantification of real damages, lost profits, and assessment of restoration needs adhere to both national and international evaluation standards, incorporating guidelines from the World Bank on damage assessment and materials developed by internationally recognized organizations.

The evaluation of economic losses of business entities serves several objectives, including determining damages for criminal proceedings within the framework of Ukrainian legislation, seeking compensation applications by victims, filing lawsuits (including collective ones) with judicial authorities, particularly international bodies, and initiating lawsuits by the state of Ukraine before international judicial authorities. In pursuit of these goals, the assessment involves determining, in value terms, the actual damages, lost profits, and necessary expenses for the restoration of property and property rights impacted by armed aggression.

Damage assessment resulting from armed aggression is conducted through independent assessments or forensic examinations. Independent assessments are undertaken by entities recognized as subjects of assessment activity, in compliance with national and international standards. Forensic examinations related to damage assessment, and the activities of forensic experts evaluating property, align with the Law of Ukraine "On Forensic Examination," considering methodological regulations on assessing losses due to loss,

destruction, and damage of property of state, communal, and private ownership during armed aggression [207].

Post-independent damage assessments, a report is prepared in electronic form and, if necessary, in paper format. The report is signed by all assessors directly involved in the evaluation and by the head of the subject of assessment activities or their authorized representative.

The damage assessment report is crafted by the subject of assessment activity in accordance with legal acts on property assessment, either in abbreviated or full form.

For claims submitted to international courts, a full-form damage assessment report is produced, complying with international valuation or recognized standards, if mandated by the relevant international court. A concise-form report should include information on the assessment object, a brief description of property damage, the purpose of the assessment, type of cost, assessment date, input data and sources, analysis of reliability, assumptions, evaluation procedures, value conclusion, and the report's date.

An expert's opinion is prepared by a forensic expert, adhering to legal requirements outlined in the Law of Ukraine "On Valuation of Property, Property Rights and Professional Appraisal Activities in Ukraine," the Law of Ukraine "On Forensic Expertise," and relevant procedural legislation. The investigative part of the expert's opinion details all procedures pertinent to damage assessment.

The valuation date, denoting when the loss is appraised, is determined in accordance with the third part of Article 225 of the Economic Code of Ukraine. The assessment date, critical

[207] On the approval of the Methodology for determining damage and losses caused to the land fund of Ukraine as a result of the armed aggression of the Russian Federation: Order of the Ministry of Agrarian Policy and Food of Ukraine dated May 18, 2022 No. 295. URL: https://zakon.rada.gov.ua

for legal proceedings or compensation claims, is any date preceding or coinciding with the court filing date (or application for compensation), but not earlier than February 23, 2022. The damage assessment report remains valid until the indemnification date, and during the evaluation of losses, various value types may be considered, including market value, replacement value, reproduction value, and gross development value.

Assessors, tasked with determining the extent of damages, possess the right to access the assessment object, relevant documentation, and other essential information. They are authorized to seek explanations, additional information from the assessment client and other pertinent individuals, and conduct inspections using technical means and information sources such as remote sensing data, photographs, and videos.

A personal inspection of the evaluation object is conducted by either an independent appraiser assessing damages or a forensic expert performing a forensic examination. This is contingent on regulatory constraints and the assurance of safe access to the property, including demining activities.

The assessment of damages requires the presence of necessary initial data and information sources, with clear and certified copies of documents used as source data following the procedures established by law. Information sources include inspection results, market data, and other acts based on damage assessment results, utilizing analytics from social networks and public information.

A crucial requirement for damage assessment is obtaining a legally specified document confirming property loss or destruction due to armed aggression. Mandatory review of damage assessment reports applies when evaluating state or communal property, with the State Property Fund of Ukraine,

its branches, and local self-government bodies authorized to conduct assessments. Reviews are conducted by designated bodies or expert councils of self-regulatory organizations of assessors. In other cases, reviews are initiated at the request of an interested party, providing an unbiased and critical evaluation in the presence of conflicts or disputes.

In disputes related to loss assessment results, a deficient (unreliable) assessment is established solely through the review of the damage assessment report. If the assessment is deemed of poor quality based on the review, a reassessment is conducted.

The damage assessment process unfolds in three stages: preparatory, implementation of evaluation procedures or expert studies, and drafting a damage assessment report or expert's opinion. The preparatory stage involves familiarization with the evaluation object, analysis of initial data, assessment of information sources, and agreement on the assessment of losses, as applicable under the Law of Ukraine "On Forensic Examination" and relevant legislation.

During the preparatory stage of conducting an independent assessment or forensic examination (expert study), the entity engaged in assessment activities or the forensic expert evaluates the reliability of market data in each specific loss assessment case[232]. This evaluation is duly reflected in the report on the assessment of losses or the expert's opinion. Market data is categorized into three distinct classes for this purpose:

1. Category "A" - Direct Comparisons: This category encompasses all forms of pertinent evidence concerning prices paid, offered, or requested in the market for similar properties.

2. Category "B" - General Market Data: This category incorporates data serving as an indirect source of cost information, including information from published sources or

commercial databases. The relative importance of this data hinges on its relevance, authority, and verifiability. Additionally, it may include other indirect evidence such as indexes, historical records, and data on demand (or offer) for rent, vacancy, investments, etc.

3. Category "C" - Other Sources: This broad category comprises data providing a general understanding of value, including transaction certificates for properties of different types and locations. It may also encompass other inputs, such as interest rates, stock market movements, and yields, serving as indicators of a property's profitability.

The remuneration for work related to independent damage assessment, forensic examination (expert research), and the review of damage assessment reports, in case of review by expert councils of self-regulatory organizations of assessors, is covered by enterprises, institutions, organizations, individuals, or other lawful funding sources.

According to data from the Ministry of Agrarian Policy and Food of Ukraine and regional state (military) administrations, the economic losses of enterprises, excluding those of the defense-industrial complex, including agricultural entities, amount to UAH 21,370.4 million. Direct losses, valued at UAH 10,216.1 million, consist of the value of lost, destroyed, or damaged property of non-state-owned enterprises (UAH 10,206.9 million) and losses from unpaid goods, works, and services in temporarily occupied territories (UAH 9.2 million). Indirect losses (forgone benefit) total UAH 11,154.3 million, while expert opinions confirm only UAH 40.9 million, representing 0.2% of the total amount.

Regional state (military) administrations report damage and losses to 1,444 non-state-owned agricultural enterprises (farms), which lost 12,400 units of machinery (including agricultural), 398 buildings of livestock complexes, 5.5 million

heads of farm animals (including poultry), and 6,000 bee farms.

When assessing the damage caused to personal peasant farms and/or farms registered as natural persons - entrepreneurs, key indicators include losses due to mutilation, bodily injury, or death of agricultural animals, particularly cattle, pigs, sheep, goats, horses, and bee colonies. Additionally, losses attributed to the destruction or damage of agricultural machinery and equipment for the agro-industrial complex are considered.

The information base for determining damage and losses sustained by personal peasant farms and/or farms registered as natural persons - entrepreneurs, due to the armed aggression of the Russian Federation, relies on relevant acts of commission surveys, referred to as commission survey acts. Organizational measures to assess losses of agricultural animals and damage caused to agricultural machinery and equipment resulting from the armed aggression of the Russian Federation are conducted by the executive committees of village, settlement, and city councils. In their absence, military administrations (hereinafter, the authorized body) take on this responsibility based on appeals from personal peasant farms and/or farms registered as natural persons - entrepreneurs. Regional and Kyiv city state administrations, during the period of martial law, assume responsibility for determining damage and losses in this domain (hereinafter, responsible bodies).

Following the commission examination results, a report is compiled, encompassing the following attachments:

1. In the case of determining losses of agricultural animals:

- A copy of the veterinary and sanitary passport of the apiary.

- Extract from the Unified State Register of Animals as

of the loss assignment date.

- Extract from the Unified Register of pre-trial investigations related to the event causing losses due to armed aggression by the Russian Federation (if available).

- Results of photo and/or video documentation capturing mutilation, bodily injury, or death of agricultural animals (cattle, pigs, sheep, goats, horses, bee colonies) if available.

2. In the case of determining damage to agricultural machinery and equipment:

- Copies of the technical passport and other documents containing information on technical characteristics.

- Copies of the machine registration certificate and other ownership confirmation documents for agricultural machinery and equipment (if available).

- Acts of inspection of the technical condition (if available).

- Copies of other documents detailing technical characteristics, composition, necessary costs for restorative repair, or disposal of agricultural machinery and equipment, and any relevant information.

- Extract from the Unified Register of pre-trial investigations related to the event causing damages due to the armed aggression of the Russian Federation (if available).

- Results of photo and/or video documentation capturing the destruction or damage of agricultural machinery and equipment (if available).

The commission examination report consists of two copies, with the first copy given to the owner of the affected animals or damaged machinery, and the second copy retained by the authorized body, sending its duplicate to the responsible authority. The report remains valid until the date of compensation for losses and damages in monetary terms.

Upon commencing payment and to affirm the intention to

receive the calculated amount of losses and damages (monetary compensation), victims additionally submit the following documents to the responsible authorities: a copy of the passport of a Ukrainian citizen, a copy of the document confirming registration in the State Register of natural persons - taxpayers (unless due to religious beliefs a person refuses the taxpayer's registration number), and a certificate of a current account issued by the bank.

To conduct a commission survey of losses of agricultural animals and damages caused to agricultural machinery and equipment due to the armed aggression of the Russian Federation, an authorized body establishes a commission, including a representative from the territorial body of the State Production and Consumer Service. The commission may involve specialists from units of the State Emergency Service of Ukraine, the National Police of Ukraine, and, if necessary, units of the Armed Forces of Ukraine and the Security Service of Ukraine.

As per the Ministry of Agrarian Policy and Food of Ukraine and regional state (military) administrations, the damage inflicted on personal peasant farms and/or farms registered as natural persons - entrepreneurs amounts to UAH 41.0 million, with specific information on destruction or damage limited to the field of plant growing, specifically vegetable growing, as reported by the Donetsk military administration.

In aggregate, considering information from various sources, including the Ministry of Agrarian Policy and Food of Ukraine, the Ministry of Environmental Protection and Natural Resources of Ukraine, the State Environmental Inspection of Ukraine, the State Emergency Service of Ukraine, the National Police of Ukraine, and 24 regional state (military) administrations, pre-calculated losses in the agriculture sector,

accounting for damage to land resources, economic losses of enterprises (excluding the defense-industrial complex), and damage to personal peasant farms and/or farms registered as natural persons - entrepreneurs, total 897,300.5 million hryvnias.

However, it is crucial to note that 4,124 business entities remain in the temporarily occupied territory, making it currently impossible to calculate the damage and losses incurred by agricultural enterprises (farms) in these territories until their complete de-occupation.

The evaluation of damage and losses is presently analytical and incomplete, rendering it inadequately evidential for court proceedings. A comprehensive assessment of the actual scale of losses, particularly in the agricultural sector, can only occur upon the restoration of Ukraine's territorial integrity.

At the national level, the determination and compensation of damage and losses are governed by various legislative instruments, including the Constitution of Ukraine, the Civil and Criminal Procedure Codes of Ukraine, and specific laws such as "On ensuring the rights and freedoms of citizens and the legal regime in the temporarily occupied territory of Ukraine" and "On compensation for damage and destruction of certain categories of real estate objects as a result of hostilities, acts of terrorism, sabotage caused by the armed aggression of the Russian Federation against Ukraine, and the State Register of property damaged and destroyed as a result of hostilities, acts of terrorism, sabotage caused by the armed aggression of the Russian Federation against Ukraine" (hereinafter referred to as Law No. 2923).

In addition to the provisions of Law No. 2923, national legislation governing the determination and compensation of damage and losses allows individuals and legal entities to seek

compensation, including losses resulting from the armed aggression of the Russian Federation against Ukraine, through civil action in criminal procedure.

Article 124, part three, of the Constitution of Ukraine delineates the jurisdiction of Ukrainian courts to encompass any legal dispute and criminal accusation. Courts, as stipulated by law, are empowered to adjudicate in various cases [208].

Article 55 of the Criminal Procedure Code of Ukraine stipulates that in criminal proceedings, a victim may be a natural person who has suffered moral, physical, or property damage due to a criminal offense, as well as a legal entity that has sustained property damage resulting from a criminal offense [209].

Law No. 2923 outlines the legal and organizational principles for providing compensation for damage and destruction of specific categories of immovable property due to hostilities, acts of terrorism, and sabotage resulting from the armed aggression of the Russian Federation against Ukraine.

It also establishes the legal principles for creating and maintaining the State Register of Property Damaged and Destroyed due to hostilities, terrorist acts, and sabotage from the armed aggression of the Russian Federation against Ukraine [210].

However, Law No. 2923 does not apply to immovable property located in Ukraine's temporarily occupied territory by the Russian Federation on the day of the entry into force of the President of Ukraine's Decree No. 64/2022 of February 24,

[208] Criminal Procedure Code of Ukraine. URL: https://zakon.rada.gov.ua

[209] Constitution of Ukraine. URL: https://zakon.rada.gov.ua

[210] On compensation for damage and destruction of certain categories of immovable property as a result of hostilities, terrorist acts, sabotage caused by the armed aggression of the Russian Federation against Ukraine, and the State Register of property damaged and destroyed as a result of hostilities, terrorist acts, sabotage caused by armed aggression of the Russian Federation against Ukraine: Law of Ukraine. URL: https://zakon.rada.gov.ua

2022, on the introduction of martial law, as approved by the Law of Ukraine "On the approval of the Decree of the President of Ukraine on the introduction of martial law in Ukraine."

Furthermore, Law No. 2923, in Article 2, designates compensation recipients for damaged or destroyed real estate objects exclusively as Ukrainian citizens (paragraph 1 of the first part of Article 2) and associations of co-owners of apartment buildings, managers of apartment buildings, and housing and construction (residential) cooperatives. Consequently, Law No. 2923 does not address issues related to the compensation for damage and destruction of real estate objects for any economic entities resulting from hostilities, terrorist acts, and sabotage caused by the armed aggression of the Russian Federation against Ukraine.

Law No. 2923, in Article 14, delineates the legal foundation for establishing and maintaining the State Register of property damaged and destroyed due to hostilities, acts of terrorism, and sabotage resulting from the armed aggression of the Russian Federation against Ukraine.

However, paragraph 2 of the first part of Article 14 specifies that the register is instituted to facilitate the collection, accumulation, accounting, processing, storage, and safeguarding of information and documents pertaining to damaged and destroyed property.

This encompasses damage to land plots, lands, subsoil, forests, water, and other natural resources, as well as biological diversity. Importantly, the register's purpose transcends whether compensation for damage or destruction is provided in accordance with this Law. Consequently, there remains a necessity for further refinement in national legislation, particularly in articulating legal and organizational frameworks for providing compensation for damage inflicted upon land

plots, land, subsoil, forests, water, and other natural resources, as well as biological diversity.

Given the Committee of Ministers of the Council of Europe's decision on 12th May 2023 to establish the Extended Partial Agreement on the Register of Damages Caused by the Russian Federation's Aggression Against Ukraine and the accompanying Statute Governing the Register, coupled with the European Union and 43 countries' accession (or expressed intention to join) to the Register formed by participants of the Summit of Heads of State and Government of the Council of Europe in Reykjavík on 16-17 May 2023, there arises an immediate imperative to devise a legal mechanism. This mechanism is needed for the inclusion in the international Register of damages resulting from the aggression of the Russian Federation against Ukraine, utilizing data from the State register of property damaged and destroyed as a consequence of hostilities, acts of terrorism, and sabotage caused by the armed aggression of the Russian Federation against Ukraine, as established in accordance with Law No. 2923 [211].

The Extended Partial Agreement on the Register of Damages Caused by Russian Aggression Against Ukraine outlines the creation of a database for documenting evidence of losses or damages incurred by the State of Ukraine, individuals, and legal entities due to the illicit actions of the Russian Federation from February 24, 2022. This database will also incorporate financial claims of victims against the Russian Federation, with the understanding that these acknowledged and confirmed claims will be addressed later when the international community reaches consensus on the

[211] The international register of damages caused by the aggression of the Russian Federation against Ukraine has been created / website of the Ministry of Justice of Ukraine. URL: https://minjust.gov.ua

compensation mechanism and its funding sources [212].

The envisaged registry will span a three-year period, recording evidence and information about claims for loss, damage, or harm inflicted by the armed aggression of the Russian Federation against Ukraine. The register represents an initial step towards establishing a comprehensive compensation mechanism, with the ultimate goal of compelling the Russian Federation to pay complete compensation in accordance with international law. This may include leveraging assets located in other countries. The overarching objective is to institute a Compensation Commission entrusted with adjudicating claims and awarding compensations, complemented by a Compensation Fund that will amass resources for fulfilling compensations, all predicated on an international agreement.

Presently, details regarding the harm inflicted by the military aggression of the Russian Federation can be disseminated through pertinent online platforms:

1) [https://dokaz.gov.ua/]: This web portal, instigated by the Office of the President of Ukraine, the Ministry of Justice, the Office of the Prosecutor General of Ukraine, the Ministry of Information, the Representation of the President of Ukraine in the Autonomous Republic of Crimea, and the Kyiv School of Economics, serves as a repository for documenting war crimes and crimes against humanity.

All gathered evidence is intended for use in legal proceedings against the Russian Federation, including venues such as the International Criminal Court in The Hague, the European Court of Human Rights, and a specialized tribunal once established.

2) [https://warcrimes.gov.ua/]: This web portal,

[212] Legal mechanisms for compensating farmers for losses due to military aggression of the Russian Federation. / Law League. URL: https://biz.ligazakon.net

established by the Office of the Prosecutor General, is dedicated to the meticulous documentation of war crimes and crimes against humanity perpetrated by the Russian army in Ukraine.

3) [https://damagedagro.in.ua]: An electronic platform specifically designed for the aggregation of information concerning damage incurred by the agricultural sector in Ukraine. The platform's objective is to record and document losses and damages systematically, facilitating processing by state authorities for subsequent compensation and redress .

Based on a scholarly examination of legal instruments governing the processes related to ascertaining damage to land resources, agricultural animals, equipment, and economic losses of agro-industrial enterprises, it has been determined that the pertinent legal framework is currently in the developmental phase. To enhance the regulatory structure and establish a comprehensive mechanism for evaluating and compensating losses and damages resulting from the armed aggression of the Russian Federation, it is imperative to introduce amendments to the legal regulations in the following domains:

- Determination of Compensation Sources, Procedures, and Mechanisms: Revision of legal provisions to elucidate the sources, procedures, and mechanisms for compensating losses sustained by business entities due to the armed aggression of the Russian Federation.

- Amendments to the Procedure for Determining and Indemnifying Damage to Land Owners and Users: Modifications to the existing Procedure for determining and indemnifying damage to land owners and users, as stipulated by Cabinet of Ministers Resolution No. 284 of April 19, 1993. This entails accounting for the specific considerations in determining damage and losses caused by armed aggression and identifying the owners or users of damaged land plots

through land management documentation, expert opinions, loss calculations, etc.

- Revision of Procedures for Assessing, Documenting, and Registering Macroeconomic Damage: Reviewing the procedures for assessing, recording, documenting, and registering macroeconomic damage, losses, or deficits incurred by the state of Ukraine, individuals, and legal entities due to the internationally illegal actions of the Russian Federation in or against Ukraine.

- Legal Mechanism for International Register Inclusion: Modification of the legal mechanism for including data from the State Register of property damaged and destroyed, as a consequence of hostilities, acts of terrorism, and sabotage caused by the armed aggression of the Russian Federation against Ukraine, into the international Register of damages caused by Russian aggression.

- Amendments to Methodology for Determining Damage and Losses to the Land Fund: Introduction of changes to the Methodology for determining damage and losses to the land fund of Ukraine, specifically addressing the nuances of land reclamation and restoration under martial law. This includes aspects such as prioritizing demining activities for land/buildings and designating the initiator and procedure for recording facts by authorized bodies (National Police, Security Service of Ukraine, State Emergency Service).

- Initiating Regional Measures by Military Administrations: Advocating regional (district) military administrations to engage in outreach efforts with agricultural enterprises (farms) for recording, accounting, and disseminating information about damage and losses. Furthermore, devising a step-by-step plan for the restoration of disturbed lands, encompassing ecological and geochemical assessments, land management projects for reclamation, and

projects for the reconstruction and capital repair of reclamation systems and/or specific engineering infrastructure components.

CHAPTER 4. INVESTMENT AND INNOVATION SECURITY AS A FACTOR OF ECONOMIC GROWTH

4.1. Investment environment of the state and innovative strategies for its improvement

The research is dedicated to the modern challenges of the formation of the investment environment of Georgia and innovative strategies for improvement. The paper discusses the main factors affecting the formation of the investment environment, identified the close financial and economic ties between them, highlighted major issues. Based on the analysis of quantitative data, the main reasons hindering the improvement of the investment environment and the circumstances hampering the growth of direct foreign investments have been established. In the final part of the paper, it is proposed strategic measures for improving the investment environment of modern Georgia.

Investments have always been of special importance in the economic development of any country, and the modern global competitive environment has doubled its role. For developing countries with a shortage of domestic investment resources, such as Georgia, attracting foreign direct investment is vital. In modern conditions, the effective utilization of the local investment potential and the growth of direct foreign investments are conditioned by a favorable and attractive investment environment. The formation of an attractive investment environment requires a reasonable state investment policy and modern mechanisms and strategies for its implementation.

The purpose of the study is to determine the current state of the investment environment of Georgia, to identify the main problems, to develop proposals to overcome them and to offer appropriate recommendations. In accordance with the goal, the following tasks are set: determining the mutual influence of the

determining components of the investment environment; small analysis of business environment and entrepreneurial environment; revealing trends in the development of factors affecting the investment environment; dynamics of direct foreign investments in Georgia; assessment of the current level of innovative development of Georgia; developing an innovative strategy for improving the investment environment.

While working on the issue, qualitative and quantitative research methods are used. Within the framework of the qualitative research, the theoretical materials about investments are studied and the legal norms regulating the investment field in Georgia are analyzed. Within the framework of the quantitative research, statistical data was processed, which was taken from the publications of the National Statistics Office of Georgia and the results of the studies of international rating organizations.

The investment environment is a complex system of social and economic relations, which is formed as a result of the impact of interconnected events and processes on the economy and creates powerful investment incentives. The formation of the investment environment is determined by many factors, which can be grouped as follows: 1. Macroeconomic factors; 2. Financial situation; 3. business operation conditions; 4. State regulation and legal framework; 5. The level and scale of innovative development of the country; 6. Socio-economic situation; 7. Geopolitical location.

The investment environment refers to the real conditions in the country that determine the amount of investment resources [213], [214].

Depending on the specific situation, the investment

[213] Abuselidze, G., & Slobodianyk, A. (2019). Investment of the financial instruments and their influence on the exchange stock market development. Economic Science for Rural Development, 52, 211-221

[214] Abuselidze, G., & Zoidze, G. (2023, a). Economic analysis of factors associated with education and employment. CTE Workshop Proceedings, 10, 366-379.

environment can be favorable or unfavorable, which is the primary task of investors to thoroughly analyze and identify risks [215].

The current state of the investment environment significantly affects productivity, as it directly affects the effective allocation of financial and other resources in the private sector. In today's global competitive environment, business requirements are rapidly changing, therefore, it is necessary to constantly take care of the improvement of the entrepreneurial and investment environment, for which important steps were taken in Georgia since the beginning of the 2000s and reforms aimed at the liberalization of the economy began [216].

The formation of the legal basis for investment activities in Georgia dates back to 1996, when the Law of Georgia "On Promotion and Guarantees of Investment Activities" came into force, which defined the legal bases and guarantees of protection of both foreign and local investments in the territory of Georgia (Law of Georgia, 1996). In 2006, the Parliament of Georgia adopted the Law "On State Support of Investments", the purpose of which was to facilitate the implementation of investments by improving the necessary procedures for investment and entrepreneurial activities and by creating an additional legal regime. The law applied to both local and foreign investments [217].

In 2002, the National Investment Agency of Georgia was established, the purpose of its operation was to ensure the management of the effective spending mechanism of the funds allocated for the financing of investment projects corresponding to the priorities determined by the economic development plan of

[215] Baratashvili, E., Magrakvelidze, D. (2009). Principles of improving the investment environment in Georgia. Tbilisi.

[216] Government of Georgia. Strategy of socio-economic development of Georgia - Georgia 2020. Tbilisi
[217] Law of Georgia "On Promotion and Guarantees of Investment Activities". Tbilisi

Georgia and to promote the activation of investment activities in Georgia [218]. The operation of the agency is determined by the Law of Georgia "On the National Investment Agency of Georgia", which must ensure the protection and promotion of the implementation of legal, organizational and economic principles of public goals in the field of state production and investment policy. The improvement of the investment environment is emphasized in the state strategies, visions and programs of financial and economic development studied at different times in the country.

The country's investment environment is closely related to entrepreneurship and business, moreover, the country's entrepreneurial environment and business conditions are the most important and primary component of the country's investment environment. A number of international organizations conduct research on the business environment of countries worldwide and publish the relevant results every year, one of the most important of them is the World Bank research to reveal the ease of doing business in different countries.

Doing Business covers several important dimensions of regulatory bodies that affect the functioning of firms within a country, it provides quantitative indicators of the regulations for doing business. Doing Business studies are based on data on 10 primary and 2 secondary areas, namely: 1. Starting a business; 2. Permits related to construction; 3. Receiving electricity; 4. property registration; 5. Receiving credit; 6. Monitoring of investor protection; 7. Payment of taxes; 8. International trade; 9. Execution of agreements; 10. Decision on insolvency; 11. Regulation of personnel employment; 12. Signing agreements with the government.

The last two of the listed are secondary directions that do not

[218] Abuselidze, G., & Zoidze, G. (2023, b). The use of transferable skills in education and its impact on the economy. CTE Workshop Proceedings, 10, 124-138.

participate in the formation of the final evaluation score and the determination of the ranking place, while the first ten determine the final results, which in turn are divided into 41 indicators. The mentioned research is conducted by the World Bank (2023a) according to the data of 190 countries of the world.

In order to present a general picture of the state of ease of doing business worldwide, below is "Table 4.1", which shows the top ten countries according to the World Bank's "Doing Business" research for the years 2016-2020.

Table 4.1.

Top ten ranking of countries, according to the ease of Doing Business, 2016-2020

Rank	2016	2017	2018	2019	2020
1	ingapore (87.3	New Zealand (87.0)	New Zealand (86.6)	New Zealand (86.6)	New Zealand (86.8)
2	ew Zealan 36.8)	Singapore (85.1)	Singapore (84.6)	Singapore (85.2	Singapore (86.2)
3	enmark (84.4)	Denmark (84.9)	enmark (84.1	Denmark (84.6	Hong Kong (85.3)
4	outh Kore 33.9)	Hong Kong (84.2)	South Korea (84.0)	Hong Kong (84.2)	Denmark (85.3)
5	long Kon 33.7)	South Korea (84.0)	Hong Kong (83.4)	South Korea (84.1)	South Korea (84.0)
6	nited Kingdo 32.5)	Norway (82.8	USA (82.5)	Georgia (83.3)	USA (84.0)
7	SA (82.1)	United Kingdom (82.7)	United ingdom (82.2	Norway (83.0)	Georgia (83.7)
8	weden (81.7)	USA (82.5)	Norway (82.1)	USA (82.8)	United Kingdom (82.6)
9	orway (81.6)	weden (82.1	Georgia (82.0	nited Kingdom (82.7)	Norway (82.6)
10	inland (81.1)	Macedonia (81.7)	weden (81.2	acedonia (81.6	Sweden (82.0)

Source: Compiled by the author based on World Bank research,

(2023b).

The table shows both the ranking places of the countries and the evaluation scores, which are the weighted averages of the evaluation scores of the ten components named above. Table 4.1 clearly shows that in recent years the first place in the ranking has not been given to anyone by New Zealand (since 2017), the second and third places are shared alternately by South Korea and Hong Kong, and in 2020 Denmark takes the second position. United Kingdom, USA, Norway and Sweden are stable in the top ten. Finland and Macedonia are also advanced countries. As for Georgia, in 2016 it was in 24th position with 77.5 points, in 2017 it rose to 16th position with 80.2 points, in 2018 it took 9th place with 82.0 points, in 2019 it was 6th in the world with 83.3 points, and in 2020 with 83.7 points - 7 place. The dynamics of Georgia's evaluation score and ranking place in the mentioned period is given in Figure 4.1.

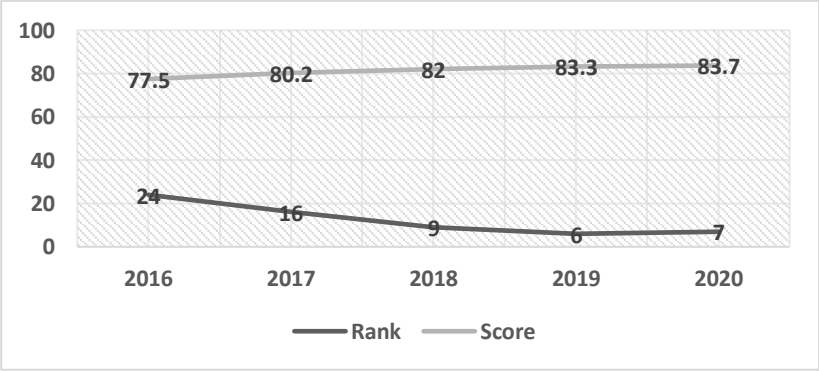


Figure 4.1. Georgia's ranking position and evaluation score, according to ease of doing business. 2016-2020.

Source: Compiled by the author based on World Bank research, (2023c).

If we look at the Figure 4.1, we will see that the images showing the dynamics of the rating place and the evaluation score are symmetrical to each other, which means that an increase in the evaluation score in most cases is accompanied by an improvement in the rating position. Although in 2020, compared to 2019, the rating point increased by 0.4, which resulted in not an improvement in the rating position, but a decrease by one level, however, the reason for similar facts is the change in the rating points of other countries (in most cases, an increase), which affects the rating. However, it should be noted that doing business in Georgia has become easier in recent years, the result of which is that according to the results of the Doing Business survey, Georgia occupies a place in the top ten.

In terms of the ease of doing business, the positive trends in the country should first of all be reflected in the entrepreneurial field and the investment flows. Below, in the form of Figure 4.2, it is given the dynamics of the main economic indicators of the entrepreneurial sphere of Georgia for the years 2017-2021.

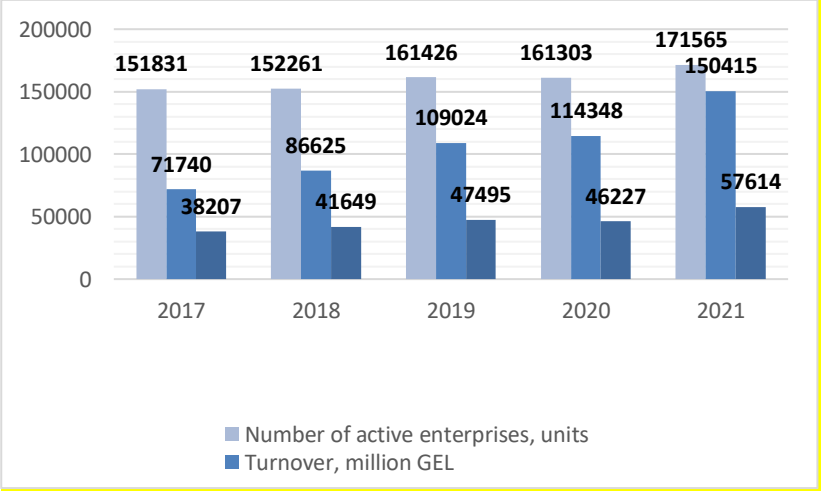


Figure 4.2. Dynamics of the main economic indicators of the

entrepreneurial sphere, 2017-2021.

Source: compiled by the author, based on the data of the National Statistics Office of Georgia, (2023a).

In this case, we considered the number of active enterprises in the country, the annual turnover of enterprises and the number of released products, expressed as a value indicator, as the main economic indicators of the entrepreneurial sphere. Figure 4.2 shows that all the three components we selected, determining the development of the entrepreneurial field, are characterized by a growth trend for the mentioned period, and the growth rates for each component are almost identical (based on the image of the diagram), which is natural and logical. An increase in the number of active enterprises is accompanied by a corresponding increase in annual turnover and an increase in the number of released products. However, taking into account that in 2018, 2019 and 2020 Georgia ranks 9th, 6th and 7th respectively in terms of ease of doing business, the mentioned growth rates are insufficient, one of the main reasons of which can be the lack of investments in the entrepreneurial sector. Let's name it, which at the same time is the result of the steps taken to improve the investment environment in the country.

Due to the fact that Georgia is a developing state at the modern stage, for which there is an acute problem of savings and domestic investment, improving the investment environment should serve to attract foreign direct investment and increase its volume every year. The dynamics of foreign direct investments made in Georgia for the years 2012-2021 is presented below in the form of Figure 4.3.

By looking at Figure 4.3, it becomes clear that the dynamics of changes in direct foreign investments made in Georgia in the mentioned period are uneven, namely, in a specific period, the volume of investments increases compared to the previous year, and in the following years, the dynamics is characterized by a

decreasing trend, and vice versa, in a specific period, a decrease is followed by an increase.

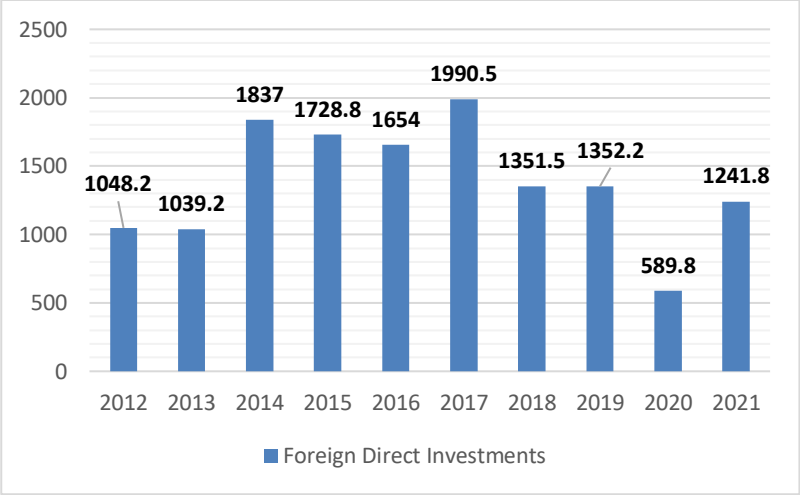


Figure 4.3 Foreign direct investments in Georgia, dynamics of 2012-2021. million USD.

Source: compiled by the author, based on the data of the National Statistics Office of Georgia, (2023b).

The most significant decrease was observed in 2020 compared to the previous year, which amounted to almost 57%. It is logical and understandable that the mentioned decrease is caused by the spread of the Covid pandemic and its negative impact on the economy. Since the mentioned period, precisely in those years (2018, 2019, 2020), when Georgia is in the best position in the international ranking in terms of ease of doing business, the volume of foreign direct investments is significantly lower and does not show a growth trend.

Based on this, it can be said that the legal and organizational-technical processes implemented in the country in order to simplify doing business, and which were also reflected in international rankings (Figure 1), do not contribute to the

improvement of the investment environment and/or are insufficient, and as a result, the increase in the volume of direct foreign investments cannot provide. Among other factors, we consider the low level of innovative development of the country's economy to be one of the main causes of the mentioned problem, because, as we mentioned above, the current level of innovative development of the country's economy is one of the important determining factors of the formation of the investment environment.

One of the main means of gaining a competitive advantage in the conditions of a difficult investment environment is the rapid assimilation of scientific and technological progress, technological development and activation of innovative processes, where knowledge takes the form of an intellectual resource, which appears as new products, types of services and means of business management. In this case, we mean the activation of innovative processes, as well as the promotion of investment in innovations, as well as the introduction of innovative approaches in matters of management and regulation of organizational processes. All this leads to the promotion of the innovative development of the country's economy, which is the reason for improving the investment environment.

The great importance of technology and innovation in the economy was pointed out at the beginning of the twentieth century by Joseph Alios Schumpeter, who in his work "The Theory of Economic Development" considered the use of innovations as the basis of economic development and defined innovation as the main means of obtaining higher profits and economic effect (Schumpeter, 1934). The specific share of investments made in the innovative sector of the economy in the total volume of investments is an important determining factor of the country's innovative development. The higher it is, the more

developed the country's economy is, and vice versa [219].

Based on this, there are close financial and economic relationships between innovations and investments, in particular, innovative strategies are a modern lever for improving the investment environment, and investment financing of innovations promotes the activation of innovation processes, while innovations are the basis of economic development, and investments are the basis of economic growth.

Based on the above, it is important to take a look at the international trends of innovative development and the position of Georgia in the global space, for which we will be guided by the results of the research of the World Intellectual Property Organization (WIPO), which annually publishes the Global Innovation Index (GII). The Global Innovation Index (GII) studies are based on up to 80 parameters, which are grouped into 7 categories, namely: 1. Institutions; 2. Human capital and research; 3. infrastructure; 4. Level of market development; 5. Level of business development; 6. Knowledge and technologies; 7. Creativity. Table 4.2 below presents the top ten ranking of the most innovative countries for 2020-2022.

Table 4.2.

Global Innovation Index (GII), top ten - 2020-2022.

Rank	2020	2021	2022
1	Switzerland	Switzerland	Switzerland
2	Sweden	Sweden	USA
3	USA	USA	Sweden
4	United Kingdom	United Kingdom	United Kingdom
5	Netherlands	South Korea	Netherlands
6	Denmark	Netherlands	South Korea
7	Finland	Finland	Singapore
8	Singapore	Singapore	Germany
9	Germany	Denmark	Finland

[219] Chikava, L. (2006). Innovative economy. Tbilisi, Publishing company "News".

10	South Korea	Germany	Denmark

Source: Compiled by author based on GII data (2023a).

Table 4.2 shows that in recent years Switzerland ranks first in the ranking of the most innovative countries, Sweden and the USA are in the top positions. It should be noted that the composition of the first ten member states does not change significantly. Below, in the form of Figure 4.4, it is given the change in the rating position of Georgia for the years 2011-2022, according to the results of the research of the Global Innovation Index.

Georgia took the best, 48th place in 2019, when it improved the result of the previous year by 11 positions, the lowest, 74th place in the ranking was recorded in 2014 and 2022. If we compare the results of the 2022 GII survey with the initial results of the 2011 survey, it is clear that the development trend is negative, because in 2011 Georgia was ranked 73rd, and in 2022 it is 74th.

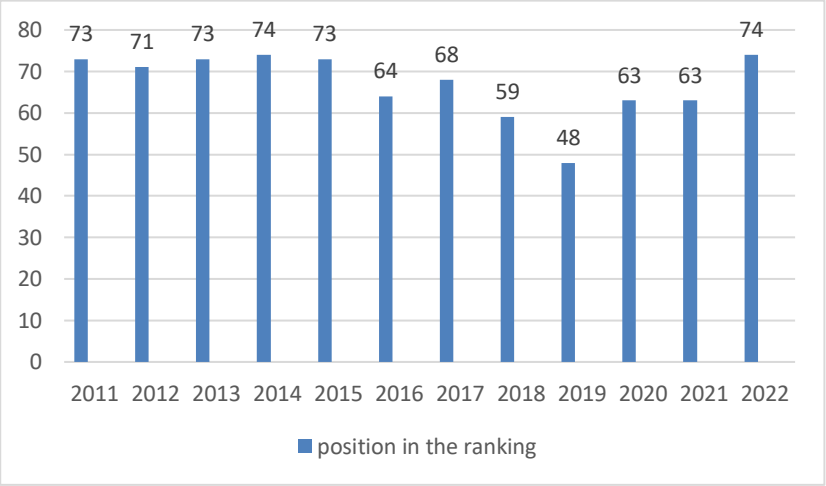


Figure 4.4 Global Innovation Index, Georgia's ranking - 2011-2022.

Source: Compiled by authors based on GII data (2023b).

It is noteworthy that Georgia's best positions in the Global Innovation Index are in 2018-2021, which coincides with the period of best positions in the Ease of Doing Business rankings (Figure 4.1). This makes us think that the measures implemented for the country's innovative development and ease of doing business should be considered in one context and should be implemented in a complex manner, which in our opinion will form an effective mechanism for improving the investment environment. In addition, we consider it important to use the following strategic approaches to improve the investment environment:

1. Formation of the legal base based on international practice and scientifically substantiated;
2. Non-existence of monopolies and creation of a competitive environment for business;
3. State support of the business sector, including financial, organizational, technical, marketing, consulting directions;
4. Institutional development of the country, formation of institutions and infrastructure supporting activation of investment processes;
5. Ensuring protection of intellectual property rights, strengthening with relevant legal norms;
6. Stimulation of investments in priority sectors, by developing a state co-financing system and using tax benefits;
7. Formation of free economic zones and free industrial zones.

In modern conditions, taking care of the improvement of the investment environment is the primary task of the state and the strategic direction of the country's financial policy, because the existing conditions of the investment environment determine the effective use of local investment resources and the inflow of direct foreign investments. The investment environment

established in Georgia today is unfavorable, as evidenced by the dynamics of direct foreign investments inflowing into Georgia in recent years.

In terms of ease of doing business, Georgia has become one of the leading countries in the world and has been in the top ten of the world ranking in recent years, although this fact has not led to a significant improvement in the main economic indicators of entrepreneurial and business activities. Georgia is at a rather low level in terms of technological and innovative development, which prevents the health of the investment environment and further hinders the inflow of investment flows [243].

Observing the experience of the countries of the world shows that it is easier to create an attractive investment environment in technologically and innovatively developed countries, that's why, under the current conditions, the main directions of Georgia's innovation policy should be planned and implemented in a complex manner in terms of harmonization with innovative processes. Along with this, the improvement of the country's investment environment will be facilitated by the formation of a modern legal base, establishment of a competitive economic environment, institutional development, selection of priority sectors for investment and appropriate stimulation, protection of intellectual property and existence of free zones.

4.2. Investment security as a component of economic security

In modern conditions, when a war of aggression is being waged against Ukraine and a sharp increase in threats to its state sovereignty, the issue of economic security and its component - investment, becomes extremely urgent. According to Article 1 of the Law of Ukraine "On National Security", the national security of Ukraine is recognized as the protection of

state sovereignty, territorial integrity, democratic constitutional order and other national interests of Ukraine from real and potential threats[220].

Even after the end of the war and the restoration of territorial integrity, it will be necessary in some places to adjust the economy of certain regions from scratch, the issue of economic security and its investment component will not lose its sharpness as a driving progressive factor.

We agree with the opinion of scientists that "economic security" must meet the following prerequisites:

1. this is the economic independence of the country, the ability to make decisions regarding the development of the economy in general in one's own interests;

2. this is the preservation of the achieved standard of living of citizens and the possibility of its further improvement[221].

Ensuring economic security should, in our opinion, be considered primarily as a guarantee of the country's economic independence, stable development of society, as well as the growth of the population's welfare and protection of its interests. Therefore, ensuring the economic security of the state is one of the most important national priorities.

The tasks of ensuring the economic security of the country are the protection of national interests:

- territorial integrity of the state;
- competitive positions in the global environment;
- improvement of socio-economic stability, guarantee of high standards of quality of life;
- economic growth of the state.

[220] On the national security of Ukraine: Law of Ukraine dated June 21, 2018 No. 2469-VIII. Information of the Verkhovna Rada of Ukraine. 2018, No. 31. Article 241.

[221] Shlemko V.T. Economic security of Ukraine: essence and directions of provision: monograph / author. col.: I.F. Binko K.: NISD, 1997. 144 p.

According to the theory of economic growth, economic security can be ensured using two approaches: extensive and intensive[222].

According to the extensive approach, ensuring the economic security of the state is determined by the expansion of the economy on the basis of increasing the generation of the volume of resources in the production process, the growth of labor potential and fixed assets. This is a driving factor in the growth of the production and resource potential of the economy, the improvement of the socio-economic level of the regions, which will give impetus to the development of new industries and lead the territories out of the post-war economic collapse. The vector of an intensive approach to ensuring the economic security of both the state as a whole and a certain territory involves the use of more effective innovative technologies, processes, means of production, the appropriate intellectual product of advanced world assets and personnel training[223].

The main requirements for ensuring economic security are, of course:

- ensuring reliable protection of national interests;
- functioning within the limits defined by law;
- clear structure and demarcation of authorities (legislative, executive and judicial branches);
- forecasting and timely elimination of threats to economic security;
- effective functioning in any conditions (ordinary and extraordinary);
- openness and transparency regarding the activities of

[222] Kravchenko M.V. State policy of ensuring the economic security of the development of the agrarian sector. Formation of market relations in Ukraine: coll. of science pr. Kyiv, 2020. No. 12 (235). P. 135-145.

[223]Shubravska O.V. Modern risks of agro-food production and market development. Actual problems of the economy. 2011. No. 5. P. 48–55.

relevant bodies that are part of the system[224].

What is the economic essence of the concept of "economic security". Modern economic literature demonstrates the multifaceted views regarding this concept, which is explained by the complexity and interdependence of its components.

Let's outline the main vectors of views regarding this concept (Table 4.3).

Table 4.3

Interpretation of the category "economic security" in the opinion of scientists

Author	Definition
1	2
Akimov V.A.[225]	is a set of conditions that ensure the independence, stability and sustainability of the national economy; protection of economic, legal, political, environmental and other needs of the state and its citizens; protection of the vital interests of the state in accordance with the resource potential and dynamics of development; ensuring proper living conditions of the population and preservation of the country's ecology; protection from destabilizing factors; the country's competitiveness in foreign markets; stability of the financial situation
Vlasyuk O.S.[226]	is the science of the safety of socio-economic systems at different levels of the hierarchy (individual, household, industry, region, sector, national economy, world economy)

224 Hrabovetskyi B.E. Methods of expert assessments: theory, methodology, directions of use: monograph. Vinnytsia: VNTU, 2010. 171 p.

[225] Akimov V.A. Actual problems of sustainable development: col. monograph / pod obsch. ed. I.V. Nedina, E.I. Suhyna Ed. "Knowledge of Ukraine", 2003. 430 p.

[226] Vlasyuk O.S. Theory and practice of economic security in the system of economic science. National Institute of Problems international Security at the Council of National security and defense of Ukraine. 2012. 48 p.

1	2
Denisov A.I.[227]	interprets as the state of the national economy, where resistance to threats (internal and external) is maintained, high competitiveness in the world economic system is ensured with stable and balanced growth of the national economy
Ermoshenko M.M.[228]	is characterized by resistance to the influence of negative internal and external threats and is able to ensure stable and effective development of the social sphere and the domestic economy
Makara O.V.[229]	states as a state of equilibrium and socially oriented development of the national economic system thanks to the implementation of forms and methods of economic policy

First of all, all scientists unanimously believe that it is the cornerstone of the theory of public administration and modern economic theory. Economic security has a unifying character with respect to the components of national security, because all sectors of state activity directly depend on its condition[248].

A certain cohort of scientists interprets the concept of "economic security" as the comprehensive satisfaction of society's needs and the protection of the national interests of the state as a whole, as its economic independence, as a set of factors and conditions that ensure the independence of the national economy[230] .

Guaranteeing economic security involves the following

[227] Denisov A.I. Economic security of the state: the task of economic and legal support. Bulletin of the National University "Law Academy of Ukraine named after Yaroslav the Wise". Ser.: Economic theory and law. 2014. No. 2. P. 197-206.

[228] [3]Ermoshenko M.M. Financial security of the state: national interests, real threats, security strategy. K.: KNTEU, 2001. 309 p.

[229] Makara O.V. Economic security as a factor in the development of entrepreneurial activity in the system of formation of social guidelines of the national economy. Scientific bulletin of NLTU of Ukraine. 2013. Issue 23.18. P. 131-137. URL: http://nbuv.gov.ua/jpdf/nvnltu_2013_23.18_23.pdf

[230]Kozlovskyi S.V., Zhurakivskyi E.S. Theoretical and methodological approaches to the definition of the category "economic security" and the components of economic security of Ukraine. Economy and the state. 2015. 42. No. 6. P. 37

actions:

1) the possibility of exercising economic sovereignty;

2) accumulation of economic potential;

3) increasing competitiveness;

4) economic growth;

5) increase in well-being or quality of life;

6) formation of the international economic and geo-economic structure.

In the system of building a road map of economic security, it is necessary to distinguish the following ideological blocks: the concept of national security → national interests of Ukraine in the economic sphere → threats in the economic sphere → indicators of economic security → their limit values → organization of economic security → legal guarantee of economic security.

One of the most important components of economic security is investment security. It is an intensive approach to ensuring an increase in the level of economic security that involves the use of investment and its innovative nature.

However, investments are quite an influential means of destabilizing interference in economic sovereignty. For the steady development of the economy of both the state and regions, individual industries, territorial communities, and enterprises, not only the quantitative, but also the qualitative innovative side of investment investments is important. The qualitative component of investments, their content, lack of good faith, or criminal negligence in researching the origin of the elements of the investment package can lead to the emergence of threats to the national security of the state on a global scale.

Currently, Ukraine remains vulnerable to the actions of unscrupulous investors, which is due to the imperfect legal provision of investment security in the state (regulate the

mandatory investigation of sources of investment capital).

According to the Methodological Recommendations[231], investment and innovation security is the state of the economic environment in the state, which stimulates domestic and foreign investors to invest in the expansion of production in the country, promotes the development of high-tech production, the integration of research and production spheres with the aim of increasing efficiency, deepening the specialization of the national economy on the creation of products with a high share of added value.

Unfortunately, the terms "economic security" and "investment security" are not defined at the legislative level, only at the sub-legal level. The National Institute of International Security Problems under the National Security and Defense Council of Ukraine defines investment security as the level of investment in the economy that would ensure its expanded reproduction, restructuring, and technological rearmament.

Investment performs the following specific functions in ensuring economic security: accounting; distributive; stimulating

According to accounting, investment is considered as a process that outlines the main macro- and microeconomic trends of development, the dynamics of structural changes in the economy and is expressed by a group of qualitative and quantitative markers of development.

As part of the distribution function, investments are a kind of catalyst for economic activity.

The essence of the stimulating function is manifested in the close combination of the investment process with the development of scientific and technical potential, the use of

[231] On the approval of Methodological recommendations for calculating the level of economic security of Ukraine https://zakon.rada.gov.ua/rada/show/v1277731-13#Text

innovations that guarantee a qualitatively new economic and technological level of the economy.

Investment security is realized by observing the maximum investment norm, which will ensure:

- reproduction of scientific, technical and intellectual potential;
- extended qualitative reproduction of fixed capital;
- competitiveness of the economy;
- sustainable GDP growth;
- creation of strategic reserves;
- depressive phenomena in the regions of the country;
- restoration and efficiency of use of natural resources;
- at a safe level of ecology.

Thus, the investment component of economic security is the quintessence of legal, social and environmental prerequisites that characterize the type and dynamics of the reproduction process and ensure the efficiency of the use of invested capital.

Therefore, investment security guarantees a level of the investment sphere at which the economy maintains a sufficient amount of investment resources in the conditions of constant internal and external threats, and this provides an opportunity for sustainable development and socio-economic prosperity of the country.

The main marker of the adequacy of investment security is a decent level of competitiveness. The practical use of investment security criteria is based on the determination of the threshold limit values of indicators of probable security violation.

The methodology for delineating investment security criteria defines two vectors: positive and regulatory aspects of investment security.

The positive aspect is a combination of security and

development of the national economy. From the point of view of "security", investment security involves overcoming certain threats and achieving the maximum level of socio-economic indicators. From the point of view of development, it is necessary to ensure certain rates of economic growth.

The normative aspect of the assessment of investment security acts as a combination of the state and the development process. The key is the competitiveness of the economy, and the tools of state and market regulation mechanisms act as a guarantee of this.

When studying the structure of the investment component of economic security, it is suggested to take into account:

- differentiation of the investment component according to the levels of the economy (country, region, industry, enterprise);
- the investment component of economic security is not a simple set of investment component levels of the economy, but there is a mechanism of synergism of interests;
- the multifactorial influence on the formation of the investment component and their certain dynamism;
- constant occurrence of various types of risks.

The latter prompts the study of the risks and threats themselves and the dynamics of their accumulation, which lead to them and require the need for their diagnosis and impact assessment.

At the same time, it is necessary to consider both internal threats, such as the state of development of the stock markets, the banking system, the innovativeness of the technological level of production, the degree of provision of basic resources, all kinds of unpreparedness for the implementation of measures, etc., and external threats caused by war, globalization, competition, external conditions, etc. .

The main task is to build a system of criteria and their

evaluations, which will make it possible to quantify the threat of a decrease in the investment flow in order to react in time when building investment security.

The mechanism of implementation of investment security as a system is manifested through its functions:

1) maintenance of structural proportions in the economy;

2) provision of advanced innovative reproduction;

3) coordination of economic interests vertically and horizontally in the structure of the national economy;

4) protection of national interests;

5) ensuring socio-political stability in society;

6) guaranteeing socio-economic security at the global, national and regional levels.

The mechanism of investment provision of economic security affects the level of security in two directions:

1) direct – expressed in the direct formation of macroeconomic indicators of the investment sphere (indicators of the economic security of the state);

2) indirect influence, which manifests itself in the process of investment circulation itself and is expressed in the parallel development of related industries and industries of counterparties (suppliers and consumers), increase of general public welfare.

The investment security implementation mechanism has, in turn, the following components:

- market mechanism;
- state mechanism;
- the mechanism of investment partnership, as a subsystem of the synergy of the state, entrepreneurs and the population.

The market mechanism encourages self-regulation and facilitates the interaction of various business entities and promotes economic development. Analysis of the role of each

component of the investment market in attracting investments, as well as taking into account the requirements for their attraction, includes the following, in our opinion, main indicators:

- significance of subjects in the national economy;
- ability of subjects to attract resources on the free market;
- the potential of stock brokers and managers;
- the level of development of the infrastructure of the securities market;
- level of investment risk.

The strategic task is the formation of an effective investment market, which will consist of the following sectors that should determine the prices of objects that circulate on the market: investment resources; liabilities and shares; guarantees

The state mechanism for ensuring investment security is manifested through two methods of influence: investment management and investment regulation. State investment regulation is carried out along two vectors; the state assumes the maximum part of the functions of the investor (concentration of capital, provision of design and estimate documentation and material and technical resources, etc.); private investors are given the widest freedom (through tax, depreciation and credit policies, a system of sanctions and subsidies, etc.).

The mechanism of investment partnership in ensuring investment security takes place through the cooperation of the state, the real sector of the economy and the financial sector, the population, can be considered as a form of investment partnership.

Investment partnership is the implementation of an investment policy, which involves the agreement by the subjects of investment relations of purposeful investment

activities to ensure the development of the national economy.

The essence, the purpose of the existence of an investment partnership is to determine and observe certain agreed rules and norms of behavior by each subject, which will contribute to the establishment of a positive investment climate and activate investment activity.

In contrast to the general trends of defining investment security from the standpoint of providing certain resources, scientists E. V. Mishchuk and Yu. B. Kashubina[232] point out that investment security should not be limited either to the level of investments or to the ability to generate them. We agree, and even more so during a war, the investment security of the state must be considered in the context of the state of security and guarantees of the state during the investment of both the country itself and investors of other levels (industries, regions, enterprises, territorial communities, population) operating on the territory countries that contribute to the neutralization of threats and compensation of risks as much as possible.

Priority directions for increasing the level of investment security of Ukraine:

- raising the international level of the country through reforms (judicial, anti-corruption and pension reforms);
- stabilization of the macroeconomic environment (territorial integrity, inflation, reconstruction of the network of financial institutions);
- optimization of channels of inter-industry and inter-regional inflow of investments;
- implementation of measures to strengthen investment incentives of leading industries;

[232] Mishchuk E. V., Kashubina Yu. B. Definitions of the economic category "investment safety". Investments: practice and experience No. 2/2015. P. 12-16. URL: http://www.irbisnbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe.

- stimulation of investment activity by implementing a system of tax benefits for investors;
- cessation of hostilities, reduction of the level of political risks in the state and removal of socio-economic tension;
- continuation of institutional reforms to strengthen the protection of investors' rights, improve antimonopoly legislation and strengthen the institutional capacity of the Antimonopoly Committee of Ukraine;
- creation of a favorable tax environment for investments;
- combating tax evasion, reducing the shadow economy within the framework of tax legislation;
- development of digital infrastructure and harmonization of digital standards with the countries of the European Union;
- creation of the Development Bank to finance state investment projects;
- active promotion of Ukrainian goods on European export markets, etc.

Therefore, the implementation of the above measures will increase the level of investment attractiveness of our state, contribute to the development of investment security, increase both quantitatively and qualitatively investment capital in the economy and contribute to its development.

4.3. Analysis of investment climate of Georgia

Foreign direct investments are the country's economic development, especially for Georgia's rise in foreign investment inflows, it is important to balance domestic and foreign investments, although internal investments are deficient and dramatically lagging behind the rate of foreign direct investment.

In order to evaluate Georgia's investment potential, we need to analyze the legal status of the country's economic and

social factors that have a significant impact.

The positive effect of foreign direct investments is that foreign investments in a particular field lead to the development of not only this field but also related fields, but the Noujau is important in terms of employment. On the development of the country's economy.

Georgia's investment potential that is growing this has shown to show the dynamics of foreign direct investment in recent years.

We note that it should be a predominant importance for any country to create a healthy investment climate and develop new potential investors' encouragement mechanisms, as a result, high -income jobs will be reduced in the country, unemployment rate will increase, economic favor will increase and be able to overcome poverty.

The main goal of the paper is to study the investment environment of Georgia and forecast the trends of direct foreign investments. The growth of foreign direct investment is considered to be one of the main determinants of economic development in the host country, new jobs are created, the influx of new technologies is accompanied by technical expertise. It should be noted that in the conditions of increasing competition between countries in terms of attracting direct foreign investments, states have to make more efforts to create a favorable environment.

One of the main factors of socio-economic development of any country is investment. Today, investments provide not only financial support, but also the exchange of experience and technology. Thus, investments are important for countries, especially developing countries. They increase the attractiveness of investments and improve the investment environment.

"Investment climate" is quite widely used in scientific

literature. It is defined as a set of factors that are typical for a specific location and affect its development. It can be said that a favorable investment climate allows not only the increase in profits, but also creates the conditions for creating new jobs, reducing prices and improving the socio-economic background. A stable macroeconomic environment, an educated and cheap labor force, and a strategic geographic position are important factors in assessing the investment climate, but these are insufficient components. The assessment of the investment environment should also include factors such as legal regulatory mechanisms and safeguards.

The investment climate has improved significantly: according to World Bank ratings. In addition, in order to improve the business and investment environment in Georgia, it is advisable to eliminate bureaucratic and business administration barriers, create a more meaningful business tax environment, reduce bureaucracy in tax administration, and ensure flexible labor relations.

The research was carried out on the basis of a complex assessment of the existing investment climate, and accordingly, relevant directions will be identified, the improvement of which will contribute to the growth of investment flows, the main purpose of the research is to determine the investment climate of the country, to determine its role and importance for the economic development of the country. in development

It should be noted that in terms of foreign investments, the peak was 2.75 trillion US dollars in 2015, and the following years are characterized by a downward trend, and in 2018, it was the lowest in the last decade, at 927.11 billion US dollars, and the following year, when the growth trends compared to the previous year began, covid was added to this. - 19, which further worsened the existing situation.

Table 4.4

Direct foreign investments in Georgia 2013-2022. (million USD)

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*
Total	1 039.2	1 837.0	1 728.8	1 654.0	1 990.5	1 351.5	1 352.2	589.8	1 241.8	2 000.0
Q I	291.8	331.9	343.4	392.9	415.0	337.3	318.4	173.8	134.3	575.5
Q II	224.1	217.6	493.2	452.6	398.1	423.3	249.6	246.4	322.5	361.3
Q III	271.6	749.5	531.1	507.8	637.0	373.0	406.2	296.9	373.9	739.3
Q IV	251.6	538.0	361.0	300.6	540.5	218.0	378.0	-127.2	411.1	324.0

Preliminary data

Source: National Statistical Service of Georgia

It is important to note that as a result of the reforms carried out in Georgia, until 2019, Georgia was distinguished by the growth rate of foreign investments and amounted to 1352.2 USD, and the following year, like the whole world, Georgia was hit by the Covid pandemic, which stopped the level of inflow of foreign investments and amounted to 589.8 USD. and in 2021 amounted to 1,241.8 US dollars, and according to the data of the three quarters of 2022, the current situation in terms of the inflow of foreign investments improved even more, and according to the preliminary data of the three quarters, it

amounted to 1,675.6 million US dollars. , however, more work will be done to be able to surpass the pre-pandemic data, which will help the country's economy in the process of recovery.

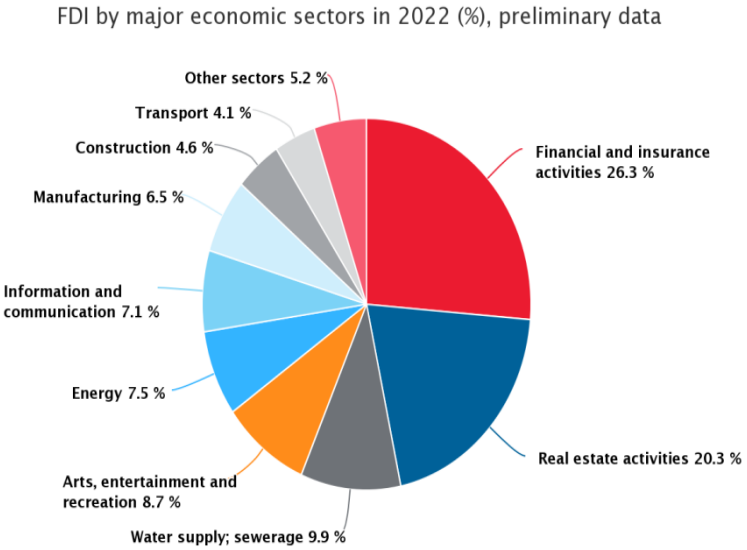


Figure 4.5. FDI major economic sectors in 2022
Source: National Statistical Service of Georgia

It should be noted that in the III quarter of 2022, the largest foreign direct investment was made in the sector of activities related to real estate and amounted to 265.3 million. USD, which is 35.6 percent of the total foreign direct investments. The second place is occupied by the sector of financial and insurance activities - 159.0 million. with US dollars (21.3 percent), and the arts, entertainment and recreation sector is on the third place with 143.2 million. in US dollars (19.2 percent).

The legislation provides the basis for the protection of physical and legal entities of Georgia as well as the legal

protection of foreign investments.

Guarantees of their protection are provided by various normative acts - the Constitution, international agreements and the Law "On Promotion and Guarantees of Investment Activities" and "On State Support of Investments".

It should be noted that investors are always looking for a calm and stable environment. Accordingly, we can highlight the factors hindering investments, namely:

- Existence of conflict regions;
- low qualification level of the workforce;
- Lack of key market;
- high rate of corruption;
- high taxes;
- Improper legal framework;
- Geographical location.

Accordingly, the authorities of different countries should work on overcoming the hindering factors, open the door and facilitate the inflow of foreign investments.

Georgia's investment advantage is enhanced by the liberal foreign trade regime (in particular, agreements on free trade with the European Union, CIS countries, Turkey, China and the Hong Kong Special Administrative Unit) and the absence of control over the movement of foreign capital. In this regard, the strategic geopolitical location of Georgia is important, which adds additional value to the country's investment potential. However, we are facing certain obstacles here as well, which is due to the less developed transport and logistics infrastructure, to which is added the suspension of the construction of the key transport/transit project - Anaklia deep-water port.

It should be emphasized once again that the achievements of Georgia, which are the result of the right policies of the government, let us consider some data that play a critically important role in creating the country's image.

According to the data of the World Bank, Georgia is in the 7th place among 190 countries in terms of ease of doing business, which is the result of 51 reforms.

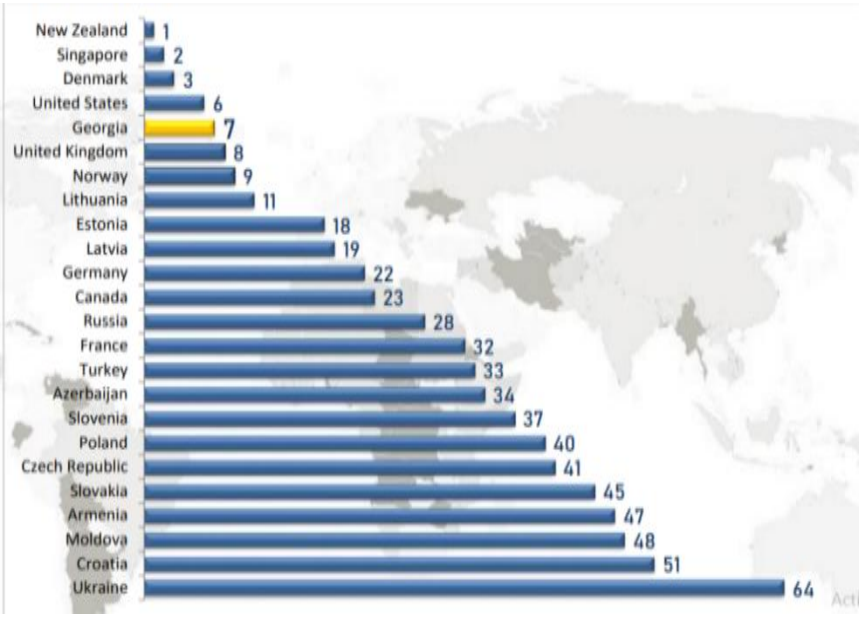


Figure 4.6 Georgia's ranking of ease of doing business among countries

Source: World Bank

Georgia is in the top ten according to the following components: Starting a business - 2nd place Property registration - 5th position Protection of minority investors' rights - 7th position In 2020, Georgia again took the first position in the Europe and Central Asia region (among 23 countries).

The next important rating is "World Economic Freedom" according to the 2021 report, Georgia is in the top five world leaders with 8.26 points.

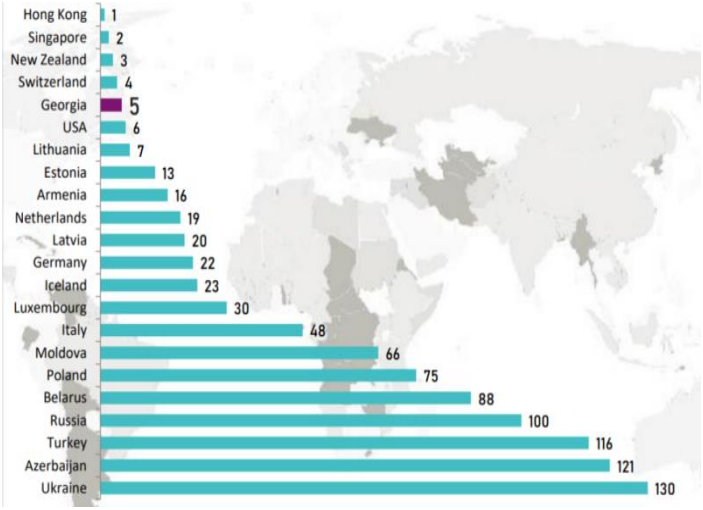


Figure 4.7 Georgia's rating in relation to the "Economic Freedom of the World" countries

Source: World Ban

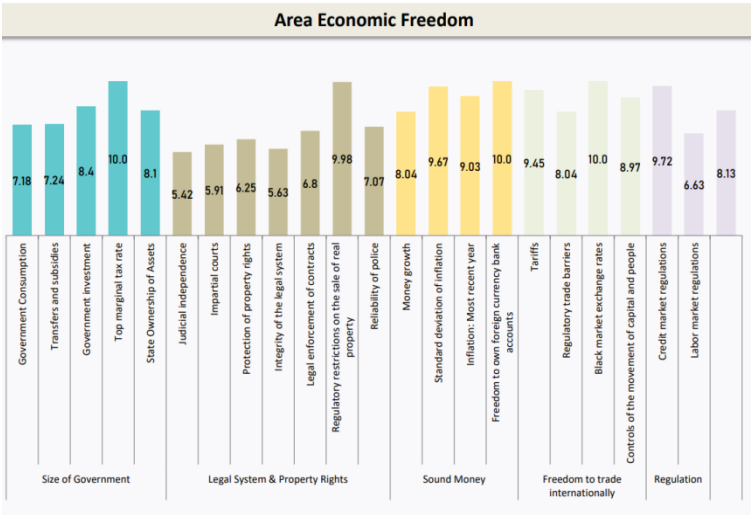


Figure 4.8. Area economic freedom

Source: World Bank

The next ranking on which our attention will be focused is the "Index of Economic Freedom" in 2022 Georgia is in the 26th position among 177 countries with 71.8 points. In 2022 Georgia remains in the mostly free group.

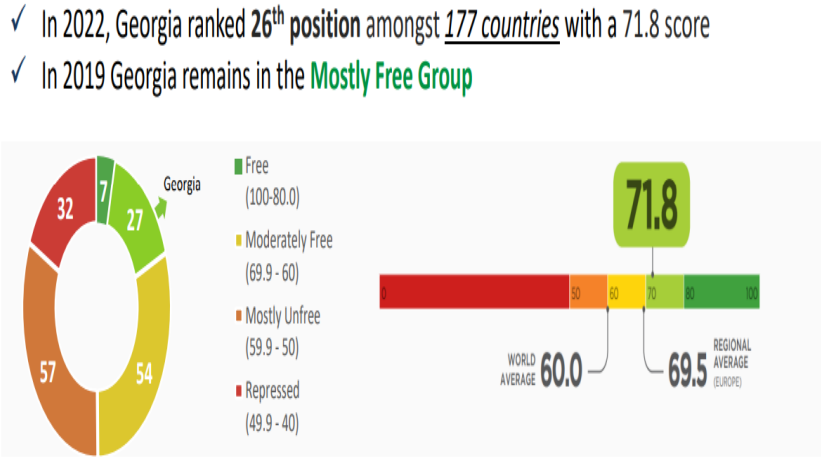


Figure 4.9 Index of Economic Freedom Georgia
Source: World Ban

In the Democracy Index study published on February 1, 2023, the ranking of countries according to the level of democracy has changed. According to a new study, Georgia has a score of 5.20 and ranks 90th in the world in terms of the level of democracy. The index published in February actually reflects the situation in 2022.

Georgia was in 91st place in 2021 and had 5.12 points, 0.08 less.

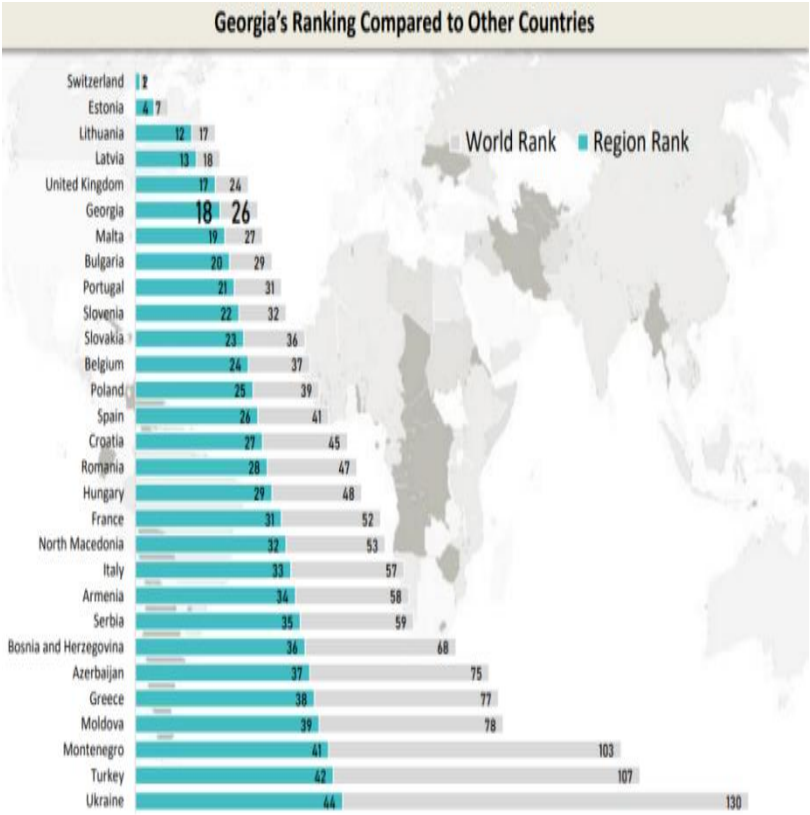


Figure 4.10 Georgia is in the 18th position among 45 countries of the European region
Source: World Bank

One of the key factors of attracting foreign direct investments is the country's corruption level indicator, which is given a lot of attention by potential investors, therefore it is important to see the position of Georgia in the corruption rating.



Figure 4.11 Georgia's position in the democracy index
Source: Economist Intelligence Unit

According to the report published on January 31, 2023, which reflects the situation in 2022, Georgia has 56 points in the Corruption Perceptions Index and shares the 41st place with the Czech Republic, Italy and Slovenia. Last year, Georgia had 55 points in the Corruption Perception Index. Georgia's score improved by one.



Figure 4.12 Georgia's position in the rating of corruption perception

When we talk about the assessment of Georgia's

investment potential and focus on readiness for foreign investments, we must analyze the state's investment policy and the existing legislative environment.

The goal of the economic policy will be a new positioning of Georgia in the post-Covid reality and maximum use of new opportunities for the further development of the country, especially in terms of promoting the growth of domestic investments and attracting foreign investments. Unwavering protection of property rights will be ensured, intensive communication with business will continue, new regulations will be adopted in consultation with business.

Investment activity is protected by the legislation of the Law of Georgia on Investment Activity Promotion and Guarantees.

which ensures the security of domestic investments as well as determines the mechanisms of legal protection of foreign investments.

It is important to note that both local and foreign investments will be on equal terms, both in terms of financial benefits and legal proceedings, in accordance with the guarantees defined by the law.

Due to the nature of direct foreign investments, the political stability in the country and the region has a significant impact. In this regard, the stable political environment of the Georgian government is worth noting, however, the existence of occupied territories of Georgia, which make up 20% of the territory of Georgia, hinders many investors in the process of making new investments.

The Russia-Ukraine war is still one of the hindering factors of the ongoing processes in the region, which will have a negative impact on both European and regional countries, as well as on Georgia.

In order to improve the investment environment of

Georgia, it is important and necessary for the rapid economic development of the country. For this, more investments should come in every year than in recent years, and the existing challenges should be responded to immediately, in terms of offering a more favorable investment climate for investors.

The Agreement on Deep and Comprehensive Free Trade Area (DCFTA) with the European Union is critically important for our country, because it includes the mechanism of economic integration with the European Union and opens the internal market of the European Union for Georgia.

Unlike other free trade agreements signed by Georgia, the DCFTA implies the liberalization of trade in both goods and services. In addition, the DCFTA covers a wide range of trade-related issues (eg: food safety, competition policy, intellectual property protection, financial services, etc.) and provides for the gradual convergence of trade-related legislation of Georgia with the legislation of the European Union.

DCFTA allows Georgia to gradually adopt three of the four freedoms of the EU internal market: free movement of goods, services and capital. The fourth freedom refers to the free movement of people

With the implementation of DCFTA, goods and services produced in Georgia, if certain conditions are met, will open the world's largest market, which at this stage unites 28 countries and more than 500 million consumers. Free movement of goods and services will contribute to the growth of Georgia's export potential. Georgia will become an attractive country for investors, which will lead to the growth of investment flows in the country and the creation of new jobs. In addition, the implementation of the DCFTA will contribute to the emergence of new enterprises and export products, the provision of safe and harmless products to Georgian

consumers, the development of state administration bodies in accordance with European best practices. In the end, this will have a positive impact on the economic growth and development of the country.

It should be noted that during the DCFTA negotiations, the Georgian side reached an unprecedented agreement with the European Union in terms of tariff liberalization. All products of Georgian origin, if certain conditions are met, will enter the EU market with zero customs tariff.

The export of services from Georgia to the European Union will be significantly simplified. Companies will be given the opportunity to export their products without additional barriers.

To conclude, let's once again draw attention to the investment potential of Georgia, which should be used as much as possible to attract investments. We should also clearly show the advantages that Georgia has compared to other countries in the region, these advantages are:

- Natural, geographical climatic conditions of Georgia;
- Growing tourist infrastructure;
- tax and customs benefits;
- free trade regime;
- Deep and Comprehensive Free Trade Agreement with the European Union;
- Consolidation of positions in international business ratings.

Taking into account all of the above, we can conclude that reforms should not be stopped in terms of improving the investment environment. It is also a critically important part of the process of starting a new reform, or even speeding up an already initiated one.

In order to attract investments in the service sector, it is necessary to promote new technologies. One of the important

recommendations in this regard is to accelerate the transition to 5G, which will encourage local and foreign startups to implement business projects based on technology and innovation;

In terms of improving the investment environment, it is necessary to have an impartial and fair justice system in the country, which will be based on the principle of the rule of law. Strategic partners of Skartvelo also name the mentioned circumstance as one of the most important factors.

4.4. Investment potential of the country and regional investment attractiveness

For the rise of the country's economy, it is necessary to carry out such economic and political processes that will contribute to the achievement of the goal set by the country. Taking into account the current reality, it is important for our country to perfect and develop the investment environment and investment policy, since it is a powerful tool for influencing economic parameters, and it should determine the dynamic development of the country's economy in the future.

In order for the country to get out of the current crises of a different format (atypical crisis), it is necessary to attract foreign investments and investors, which will develop not only one specific sector of the economy, but the entire economic system. However, it should be considered here how appropriate it is to give important facilities to foreign investors and whether this will pose a threat to the country in the future. However, we still believe that the country cannot get out of the crisis without foreign investments. In the investment policy, we should take into account the interests of both sides (the country and investors) as much as possible.

In the short term, it is advisable to attract foreign investments, which determines economic efficiency. In this regard, it is important to ensure national and international legislation. In the long term, it will be better if we activate the country's reserves. Georgia has enough resource potential to use it to actually create new businesses and as a result to contribute to the further socio-economic development of the country.

Georgia's positions on the international scale have a significant impact on the attraction of investors and the number of their investments. Georgia has quite a good rating in several directions. However, there are directions in which Georgia is not in a very reliable position. Despite the fact that Georgia manages to advance in the ratings every year, the number of direct foreign investments has not increased significantly. Despite all this, these positions of Georgia do not mean that we have an ideal investment environment, because there are indicators that lose value to the indicators of these ratings.

Many factors influence the economic well-being of Georgia, and investments and savings hold a prominent position among them. Most of the population in Georgia has a low income, which is why the existence of savings is distinguished by a low percentage. That is why it is important to promote the attraction of foreign investments. For the implementation of foreign investments, it is necessary to create an attractive investment environment, favorable conditions for foreign investors. Georgia actively attracts foreign investments, which is due to: natural resources, geographical location, openness to the international trade market, low level of crime, existence of supportive regulations and other factors. Although the COVID-19 pandemic and the Russia-Ukraine war had a significant impact in this direction, we should hope that these crises will end soon and the country will start receiving

investments again and we will be able to activate the process of economic recovery and have a rapid growth rate.

The purpose of the study is to analyze the development of investment processes in the two strategic regions of the country (Tbilisi, Autonomous Republic of Adjara) and Kakheti (with a large volume), to determine the problems related to the investment opportunities of the regions and to outline the ways of improvement, which will have a great impact on the economy of the region or the country as a whole. It should also be clarified how big the role of investments is in the development of the region and in the increase of budget revenues. To determine the list of the main priorities or directions that are implemented in the regional investment policy and which should ensure the fulfillment of the investment potential of the individual region.

Research objectives are:

- Economic analysis of the investment environment of mentioned regions;
- Studying the features and tendencies of the development of the investment environment of mentioned regions;
- Detection and assessment of the circumstances hindering the development of the investment environment of mentioned regions;
- Determining the correlation between the investments made in a seperate region and the added value produced, calculating the economic utilization index of the region;
- Studying the dynamics of added value and investments in the regional context of the country in the pre-pandemic, pandemic and post-pandemic period.

Qualitative, quantitative and statistical methods will be used in the research. The research tool is statistical analysis. The sampling is random. Collecting, comparative and

correlation-regression methods were also used for data accuracy.

The position of direct foreign investments plays an important role in the development of the economy of the countries, and this fact makes it even more valuable and contributes to the activation of this direction. The investments resulting from the latter are one of the main stimulating levers for the improvement of the country's economic situation. Foreign direct investments are actively related to gross domestic product(GDP). Global flows of foreign direct investment have been severely affected by the COVID-19 pandemic. In 2020, they fell by one-third to $1 trillion, well below the level reached after the global financial crisis a decade ago. Greenfield investments were particularly hard hit. This is a difficult issue because international investment flows are vital for sustainable development in the world's poorest regions.

The world trend in terms of foreign direct investment inflows is important. According to this indicator, the maximum result was in 2007, and since then it has been quite variable. In 2018, global net investment inflows fell to $0.931 trillion. It increased in 2019 and decreased again in 2020 by almost 0.3 trillion USD.

Along with the inflow, the dynamics of the outflow rate is important. It makes sense that the outflow rate was at its peak in 2007 and we also had a significant drop in the outflow rate in 2018. In 2020, it reached 1.01 trillion US dollars, which is less than the figure of the previous year by 0.115 trillion US dollars.

„Motivation and driving force of foreign direct investment varies by country and economic sector. In general, Eastern and Central Europe increasingly attracts relatively high-value-added manufacturing (such as electronics and mechanical

engineering), characterized by geographical concentration of production, proximity to the final manufacturer, and high demands for quality control. In the sectors mentioned above, efficiency-oriented foreign direct investments are mainly carried out, while Southeast Europe, Turkey and such sectors as - textile, food processing and services - are the target of market exploitation-oriented foreign direct investments[233].

Based on the fact that, according to the data of the National Statistics Service of Georgia, the volume of foreign direct investments is presented in thousands of US dollars, let's convert it into millions of national currency according to the average annual exchange rate (see table 4.5).

Table 4.5

The average exchange rate of the national currency 2015-2022

	2015	2016	2017	2018	2019	2020	2021	I 22	II 22	III 22	IV 22	2022	I 23
Money supply (M3), billion GEL	13.1	15.9	18.2	20.7	24.4	30.4	33.8	33.1	33.7	35.2	37.7	37.7	36.4
Domestic Claims of Depository Corporations, billion GEL	16.6	19.9	23.0	28.1	33.3	40.2	45.4	46.1	46.1	45.1	47.2	47.2	47.2
Deposits, total, billion GEL	14.3	17.0	19.8	23.0	26.3	34.6	37.2	37.1	38.3	42.1	44.3	44.3	43.3
Exchange rates													
USD/GEL (Period average)	2.2702	2.3667	2.5086	2.5345	2.8192	3.1097	3.2209	3.1136	2.9967	2.8235	2.7339	2.9156	2.6366
EUR/GEL (Period average)	2.5204	2.6172	2.8322	2.9913	3.1553	3.5519	3.8140	3.4933	3.2000	2.8491	2.7847	3.0792	2.8279

Source: National Statistical Service of Georgia, Monetary Statistics

[233] Sikharulidze, D., Charaya V., Foreign direct investments: theory and Georgian experience, 2018., p. 96.

„The Covid-pandemic created a significant financial crisis and put the Georgian economy in front of great challenges. Due to the pandemic situation, a crisis was created in the country, which increased the level of unemployment and caused a decrease in financial resources. A similar situation has emerged around the world, and it is logical that this situation has affected foreign direct investment. Priority areas have also emerged where free financial resources are invested"[234].

To determine the Pearson correlation coefficient of direct foreign investments and the added value created in the regions (Tbilisi and Autonomous Republic of Adjara as economically active regions and Kakheti as a region with the largest area), let's calculate some indicators of the dynamics of investments, regional gross domestic product and added value. Let's take the pre-pandemic, pandemic and post-pandemic period (2017-2021) for analysis.

We note here that the largest share of direct foreign investments made in the Autonomous Republic of Adjara in 2014-2017 comes from the construction, energy and accommodation and food supply sectors. During this period, foreign direct investments in the construction sector made up 28% of foreign direct investments made in the region as a whole, foreign direct investments made in the energy sector - 27%, and foreign direct investments made in the accommodation and food supply sector - 25%.

In total, for this period, the foreign direct investments made in the Autonomous Republic of Adjara make up 10% of the foreign direct investments made throughout the country, in the capital - 79%, and in Kakheti - 1%.

[234] Gamtenadze, Z., „Analysis of investment attractiveness of Georgian regions“, Journal of Economics and Business, 2021, No. 2, 69-82. http://eb.tsu.ge/uploads/images/2021.pdf

Table 4.6

Investments, Gross Domestic Product Distribution and Added Value in Tbilisi, Autonomous Republic of Adjara and Kakheti Region

region	period	2017	2018	2019	2020	2021	2022*
Tbilisi (the capital)	Value Added, (million GEL)	12731,2	14075,7	15378,7	14826,5	18244,1	
	(GDP) (million GEL)	18151,8	20063,7	22077,4	21786,7	26288,7	30096.1
	FDI (one thousand dollars)	1534471,6	1072822,4	947519,5	340199,7	1043437,0	1713825.4
	FDI (million GEL)	3849,375	2719,068	26712,47	1057,919	3360,806	4838,986
Autonomous Republic of Adjara	Value Added, (Billion Gel)	1509,7	1784,4	2382,2	1768,7	2328,7	
	(GDP) (million GEL)	3 059,6	3 491,5	4 377,1	3 832,4	4 857,5	5561.0
	FDI (one thousand dollars)	212909,2	85015,2	193271,3	78482,0	84938,2	116542.8
	FDI (million GEL)	534,104	215,471	544,8705	244,0558	273,5775	329,0586
Kakheti	Value Added, (Billion Gel)	468,4	436,0	481,2	474,1	705,8	
	(GDP)ο (million GEL)	1 902,2	2 017,6	2 187,6	2 208,5	2 762,2	3162.2
	FDI (one thousand dollars)	12437,3	8237,7	2260,4	4795,2	1145,4	3324,2
	FDI (million GEL)	31,2002	20,8785	6, 3725	14,9116	3,6892	9,38588

Source: The table was compiled by the authors based on the data of the National Statistical Service of Georgia

The mentioned indicators continue with the same trend in the post-pandemic period.

Table 4.7

Correlation analysis of investments, GDP and added value in Tbilisi, Adjara Autonomous Republic and Kakheti region

Tbilisi			
GDP	Foreign Direct Investments	-0,049	Std.dev
Value Added	Foreign Direct Investments	0,087	9695.44
Autonomous Republic of Adjara			
GDP	Foreign Direct Investments	-0,307	Std.dev
Value Added	Foreign Direct Investments	0,618	146.42
Kakheti			
GDP	Foreign Direct Investments	-0,676	Std.dev
Value Added	Foreign Direct Investments	0,632	0.010

Note: The table is compiled based on calculations made by the author

As we can see, the correlation between FDI and the level of gross domestic product is weakly negative in all three regions, indicating that the sharp drop in FDI during the Covid-pandemic(data contains informations for post pandemic period but only for 2022) has negatively affected the overall results. Generally speaking, the growth of foreign investments is directly proportional to the growth of GDP.

It is generally known that Pearson's correlation coefficient indicates the strength of the relationship between variables. The coefficient can take any value from -1 to 1. -1 is a perfect negative correlation, 0 is no correlation, and 1 is a perfect positive correlation. The correlation index of FDI and GDP in Tbilisi, Kakheti and Adjara region is characterized by a

negative correlation. Kakheti has a higher correlation between FDI and GDP, followed by the Autonomous Republic of Adjara, and in the case of Tbilisi, it is very weak, as it approaches the zero level. The latter indicates that in the case of Kakheti and Ajara regions, the influence of foreign investments on GDP is greater than that of Tbilisi. It should be noted here that the correlation between direct foreign investments and the level of added value is weakly positive in two regions, the advantage belongs to the Adjara region (despite the fact that during the research period the official figures for the year 2022 were not yet published by the National Statistical Service of Georgia), and to Kakheti In the region - there is an average negative correlation, i.e. Pandemic processes affected the uneven development of indicators.

As for the standard deviation, it is generally known to be a statistical measure of the diversity or variability of a data set. A low standard deviation indicates that the dispersion of the data is generally close to the mean or a deviation from the mean. A high standard deviation indicates a large variation in the data.

The standard deviation of foreign direct investment in the Autonomous Republic of Adjara is 146.42, which is close to the average and is therefore characterized by changes in the average range. In the capital city (Tbilisi) this indicator is 9695.44 and is characterized by the greatest variability, while in Kakheti - the standard deviation is 0.010, that is, it is small and therefore not characterized by large range changes.

Let's calculate the economic utilization index for these two key regions of Georgia and the Kakheti region using the following formula:

$$R^{i}_{reg} = VA_i / S_i$$

R^{i}_{reg} - is the index of economic utilization of the region;

VA_i - added value created in this region;

S_i - is the area of this region[235].

Table 4.8

Area of territorial units of Georgia (square km)

Region	area
Tbilisi	504,2
Autonomous Republic of Adjara	2900
Imereti	6414,7
Guria	2033,2
Racha-Lechkhumi and Kvemo Svaneti	4600
Shida Kartli	3428,3
Kvemo Kartli	6436,2
Kakheti	11375
Mtskheta-Mtianeti	5606
Samegrelo-Zemo Svaneti	7468,2
Samtskhe-Javakheti	6436,2

Source: National Statistical Service of Georgia

Let's calculate the coefficient of utilization of the region according to the regions marked above, the years 2017-2021 were again selected as the analysis period.

As can be seen from the analysis, Tbilisi has the highest absorption rate among these three regions - in the pre-pandemic period - in 2018 - this rate is equal to 29.9, it slightly decreases in 2020 (-1.7%) and there is a positive change in the post-pandemic period - in 2021 (+19%).

In general dynamics, it increased by 30% according to the years 2017-2021. We have a different situation in the Autonomous Republic of Adjara, in particular, the utilization rate of 2021 is almost identical to the rate of 2019, and the

[235] Chikhladze N., „Theoretical and practical approaches of regional economic policy“, 2021., p. 80.

general dynamics here is also positive and increased by 35% in 2017-2021. As for Kakheti, although it is the largest in terms of area, the coefficient of utilization of the territorial unit changes slightly in a separate period, and the increase in 2017-2021 is 33%.

Table 4.9

Utilization ratio of individual regions (2017-2021)

Region	2017	2018	2019	2020	2021
Tbilisi	25.25	29.92	30.50	29.40	36.18
Autonomous Republic of Adjara	0.52	0.62	0.82	0.61	0.80
Kakheti	0.04	0.038	0.04	0.04	0.06

Source: The table is compiled according to the data calculated by the author

For greater clarity of the analysis, let's calculate the amount of investments made in these three research objects per square km.

Table 4.10

Volume of investments in these regions (per square km) (2017-2021, dollars)

Region	2017წ.	2018წ.	2019წ.	2020წ.	2021წ.
Tbilisi	3 043300	2127800	1879300	674730	2 069500
Autonomous Republic of Adjara	73400	29310	66650	27060	29289
Kakheti	1093,4	724.2	198.72	421.56	100. 70

Source: The table was compiled by the authors based on the data of the National Statistical Service of Georgia

It can be seen from the table that after the capital, the most of investments, on 1 square kilometer, was made every year in the Autonomous Republic of Adjara. Finally, it can be said that if the area remains unchanged, the increase in the

coefficient leads to an increase in the added value of an individual region, in which an important role belongs to direct foreign investments.

Thus, the impact of foreign direct investment and investment in general in the economy of the receiving country is increasing(atypical crisis period results cannot be generalized to general results). Based on international experience, we can conclude that investments are additional and one of the main stimulators for the overcoming of socio-economic problems. However, it is important to note that "a coin has two sides". Foreign direct investment has negative consequences in addition to positive consequences. Although the negative consequences are smaller, it would not be correct to completely ignore it. The influence channels of foreign direct investment are very large on the economy of any country. This impact affects not only the country receiving investments, but also the origin of these investments. Foreign investment is often related to economic recovery and growth of employment but it may also have a negative impact on some other small or large sectors. That is why foreign direct investment, the same as FDI, should be analyzed in a positive and negative context.

„Evaluating the attractiveness of a self-governing unit for investment will allow decision-makers to determine close connections between specific indicators, plan the development of the municipality in the medium and long term, develop appropriate policies and be able to present the attractiveness of the municipality for specific investments to potential investors. Economic policy decision-makers should clearly know the factors influencing the attraction of investments in a particular region, as well as the importance and proportion of each of them in the investment process. This knowledge allows the heads of the self-governing unit to more easily gain advantages

and increase competitiveness in the process of obtaining future investments“[258].

At the contemporary stage, in the background of atypical crises, it became clear that investments have a great impact on the economy of the country, its development and growth rates. Especially in this difficult situation, we should try in every possible way to facilitate the implementation of both foreign and local investments. Nowadays this is one of the main factors of the rise of our country. After the development of this field we can talk about the development of the economy, political situation and the country.

The country's investment opportunities and investment attractiveness depend on the investment environment, which includes the existence of conditions that influence investors to give preference to certain objects. The investment environment at the micro level is determined by the mutual relations of clients, banks, the state, and financial structures. And in a broad sense, the investment environment refers to the financial, economic and other conditions that affect the effectiveness of investments. In this case, it can be interpreted as creating a favorable situation for investors who should invest their money in the country's investments.

„In Georgia, special attention should be paid to the development of regional investment programs, the main goal of which can be considered to be the achievement and maintenance of the predetermined level of investment activity in the region, which is necessary for stable production, development of the social sphere and provision of economic growth“[236].

The crisis had a great negative impact on the most productive types of investments, namely industrial and

[236] Tsinaridze R., „Actual issues of improving the financial and economic mechanism of regional investment process regulation“, monograph, 2013., p. 214.

infrastructure projects. Given the magnitude and variety of challenges, we need a consistent political-economic approach that promotes the development of investments, as well as measures that increase infrastructure and stimulate the priority sectors of individual regions. We should also pay attention to the fact that foreign direct investments can make a great contribution to the development of the country or its individual region. Although there is an increase in investments, it will take some time to compensate for the losses caused by the pandemic (which was also clearly shown in the case of correlation analysis).

In the Autonomous Republic of Adjara, economic indicators are increasing at a growth rate, during the pandemic period, like general global trends, their slowdown was observed, which cannot be said about the post-pandemic period, there is an increase in economic activity, an increase in demand for real estate and an increase in prices, an increase in the demand for accommodation and food delivery sector services. In order to maintain the mentioned pace and grow in perspective, it is vital for the region to utilize the "passive zones" and reveal new opportunities. It is worth noting the fact that in the autonomous republic of Adjara, the largest contribution to the turnover and added value of the business sector comes from the small and medium sector, which is far inferior to the capital, which is the "locomotive" of the country's economy. This indicates that it is critically important for the region to attract large and specifically direct foreign investments.

During the research period, it was interesting to discuss the correlation between value added and foreign investment. Unlike GDP, in this case there is a positive correlation. However, even here, Tbilisi is characterized by a less correlated connection, while the Autonomous Republic of

Adjara and Kakheti are almost similar. Correlation analysis showed that the impact of foreign investments on GDP and value added is high in the regions, while this indicator is relatively weak in Tbilisi.

In our opinion, it is necessary to develop a spatial-territorial development plan of a separate region in a timely manner, which will become the basis for fully revealing the investment potential and making an effective decision for the investor in the long term. It is also necessary to involve the civil society and take into account the interests of the local population as much as possible. „In our reality, lack of knowledge and inexperience of the forms, methods and ways of involving stakeholders in the decision-making process based on social partnership remains a big problem for territorial units. If foreigners are characterized by the active involvement of the public in the planning process, relying on their initiatives, in our case the interest and participation of the local population in these processes is limited and it is mainly limited to the general attention to the spatial-territorial development plan of the settlement" [237].

The low activity of the private sector in some municipalities of the Autonomous Republic of Adjara (mountainous Adjara) remains a problematic issue, and therefore the economic value created here is low, there is a place for the concentration of resources in the administrative unit. However, the still unformed market, diversity of natural resources, flexible legal regulations, tax incentives and programs supported by international financial institutions, organizations and the state create favorable opportunities for start-up or operating business entities to carry out economic activities.

[237] Ugulava G., "Strategic planning of territorial economic development, 2023., p. 61

Foreign direct investments mean not only the capital available to the economy, but also the confidence expressed by foreign investors in the country's economy. No one invests money where they do not see a real possibility of return and profit. In recent years, investments in the service sector have been growing relatively rapidly, which is relevant and welcome for its social purpose.

4.5. The unseen consequences of prioritization. Dilemmas and investment security in European initiatives

Prioritization is a strategic process that can ensure the efficiency and effectiveness of actions at personal, organizational, national, and international levels. In the context of limited resources and various constraints, prioritization can bring credibility, the preservation of essential values, the survival of companies, and even of states or individuals. The European Union, through its programs, supports the priorities established at both the community and national levels. The vision is from general to specific: after establishing key priorities at the community level, which are subsequently aligned with global priorities expressed through Sustainable Development Goals238, each member state negotiates its own priorities and programs. However, in this transfer from general to specific, gaps and deficiencies may arise. Setting priorities at both the community and, especially, at the national or regional levels can create a framework for differences, rigidity, and may generate effects such as resource wastage, demotivation, and the neglect of key aspects. The major risks are twofold: either at the community level, a certain aspect is considered irrelevant and, consequently, is not included among the priorities, or at

[238] United Nations (2015). Transforming our World: The 2030 Agenda for Sustainable Development. *United Nations Documents, A/RES/70/1.*

the national and regional levels, priorities established centrally are automatically adopted without adaptation to national and regional specificities.

Our paper aims to identify the tools through which community programs support the security of investments, specifically addressing aspects related to the security of investments and businesses: social, economic, ecological, criminal, financial, political security, etc. This approach falls within the first type of prioritization dysfunction, where at the community level, extremely important aspects are insufficiently analyzed and integrated, affecting only a limited number of regions or states differentially. The premise of our research is that aspects related to investment security are inadequately and inefficiently integrated into European programs. Even at the global level, although we cannot speak of a prioritized order, the objective directly addressing security is placed second to last and is detailed much less compared to other global objectives.

Investment security can be defined as a comprehensive and integrated approach to ensure the protection, stability, and sustainability of the investment process in the economic and social environment. It involves managing risks and threats that can impact investments and innovative processes, aiming to create a favorable framework for long-term economic development. Several components interfere in ensuring this economic security climate: protection against financial risks; legal security and intellectual property rights; managing geopolitical risks; cybersecurity; regulatory climate and transparency; human resource development and education; promotion of sustainability.

From a methodological standpoint, the approach is qualitative. By analyzing relevant literature and official documents supporting the implementation of European

programs, we have identified the ways in which specific aspects of investment and organizational security are targeted.

From the relevant literature, we selected works focusing on the forms and regions directly impacted by European Union policies. Special attention was given to cross-border programs, where the issue of investment security is crucial, considering the EU expansion plans. The paper also integrates the authors' previous research results on the integration of EU's horizontal objectives, the orientation towards sustainability in community development programs, extended partnerships as solutions for ensuring regional development, and the resilience of sectors affected by crises. The main premise of the research is to demonstrate the existence of a gap between the needs of entrepreneurs and the priority areas at the national and community levels in investment and business security. Around this premise, the results of other studies are highlighted, the tools for managing risks and threats within EU programs are outlined, and recommendations are formulated.

The topic of investment security is insufficiently debated in the specialized literature – a search for the keywords "investment security" on the Web of Science platform at the beginning of 2024 reveals only 71 publications addressing this aspect. The operationalization of the term "investment security" is complex and multifaceted. Specialized literature has focused on several key aspects.

An integrated approach239 views economic security as a concept that has changed its scope, evolving from a national system ensuring protection against external factors, through the social sphere ensuring the economic well-being of individuals, to a current integrated approach involving all instruments

[239] Prokopenko, O., Slatvinskyi, M., Biloshkurska, N., Biloshkurskyi, M., Omelyanenko, V. (2019). Methodology of national investment and innovation security analytics. *Problems and Perspectives in Management, 17*(1), 380-394.

ensuring economic stability.

Investment and innovation security are multi-level phenomena that encompass global, national, corporate, and household levels. Key global factors encompass international economic globalization, disparities in economic development among nations, restricted resource access, the extent of reliance on foreign investments, and the volatility of financial markets. At the domestic level, factors arise from the extent of institutional and infrastructure development, property rights, the flow of domestic capital abroad, the prevalence of the shadow economy, and the fiscal policies adopted by the state. Microeconomic influences become apparent through the financial landscape, production capacity, knowledge and technical capabilities, resource availability, market conditions, poverty and savings rates, health status of the population. The impact of sustainability on investment security is another integrated topic. Investigating how sustainability and environmental factors affect investment and innovation security240 and examining sustainable investment initiatives and their contribution to economic growth241 represents key pillars in shaping regional resilience policies.

At the macroeconomic level, research has focused on analyzing the role of government policies in promoting investment and innovation security and examining the impact of legislative measures on the overall climate of investment and innovation. These policies, aimed at addressing national security concerns related to foreign investment, can be

[240] Manolescu I.T., Percic, S., Talmaciu, M. (2019). Declarative vs. operational in the orientation of the non-reimbursable financing programs of investments towards sustainability, *CES Working Papers, 11*(4), 365-384.

[241] Talmaciu, M., Manolescu, I.T. (2023). The multi-stakeholder network as policy tool for a robust governance of the public organizations in turbulent times. *A.M. Bercu, I. Bilan, C.M. Apostoaie (eds.). Elevating Europe. Smart Initiatives and Administrative Innovation. Proceedings of the International Conference EU-PAIR 2023*, Iași: Editura Universității „Alexandru Ioan Cuza" din Iași, 273-287.

categorized in three dimensions242: the degree to which regulations limit foreign investments in a broad or specific manner; whether the policy pertains to ownership or acquisitions; and the types of assets covered by foreign investment policies. The legal framework for protecting intellectual property is another frequently encountered topic in specialized literature, investigating how legislation regarding copyrights, trademarks, and patents can influence investment and innovation security and identifying legal gaps and necessary improvements to enhance security.

At the microeconomic level, the analysis of risks in investments and innovations has involved investigating the main risks associated with investments and the innovation process in the context of economic growth, as well as evaluating ways to minimize risks to encourage investments and innovations. The proposed construction of economic security systems for firms is based on the following main considerations243: aligning security objectives with other internal objectives; identifying and forming a reserve of sufficient resources to support the sustainable operation and development of the firm, based on self-organization and self-preservation; detailing and adapting the mechanisms of the security system in relation to the action of external factors. Prerequisites for building such an economic security system at the firm level or transforming an existing one include244: normative support; the existence of a national-level strategy in

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economic security; protection of investments financing sources; personnel and logistic components of economic security; determining the status of the system and its subordination within the enterprise. The direct connection between investment and innovation security is even clearer in the conditions of an unpredictable environment and provides the basis for sustainable firm growth245.

The connection between the macro and microeconomic levels is the subject of most articles among those studied and highlights the components of the investment climate and various types of investment security246: political, social, economic, ecological, criminal, financial-legislative. The link between micro and macro levels is expressed through modeling, with investment security seen as an integrated and measurable concept, with optimizable parameter values, fundamentally ensuring the national security of the country as a whole247. The technological component248 involves examining the relationship between technological development, cybersecurity, and economic growth, as well as analyzing cyber threats to investments and innovations and identifying security solutions. Public-private partnerships represent the conducive framework for infrastructure development, an essential element of the investment ecosystem249. Analyzing the collaboration between the public

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and private sectors in supporting investment and innovation security, as well as evaluating the effectiveness of partnerships in promoting a conducive climate for economic development, can lead to highlighting social and community innovations250, and ways in which social initiatives can have a positive impact on the business environment.

Based on the results of the researched studies and the programs and official documents related to the implementation of these programs251252, we have highlighted the gaps and inconsistencies between the priorities of the programs and those of entrepreneurs, as well as the specific tools through which risks and aspects related to the survival of businesses and investments are evaluated and considered in community initiatives, along with measures to integrate the concept of investment security into these programs.

Thus, the gap between the needs of entrepreneurs and the priority areas of the country/ EU takes on several facets: the business is in a stage of the life cycle where it cannot or does not need to access European programs but applies, either through imitating competitors or to obtain free funding; the firm's development strategy differs from the sector and/or funding program strategy. For example, in agriculture, there is a need for investments in processing and storage equipment, but funding has been directed towards marketing and sales. Additionally, there is funding supporting diversification strategies, although that was not the current strategic direction

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of the firm's development.

Concrete situations of businesses in the regions involved in cross-border programs reveal significant limitations253: restricted funds, a crucial monitoring system, and data accessibility issues, disparities in legislation between the EU and partner countries, a shortage of skilled human resources in project management, and economically divided regions, with several areas marked by poverty and social issues.

The main tools used for assessing risks and/or implementing measures aimed at investment security through community programs include: encouraging the formation of clusters; requiring project proposals to include a Logical Framework Structure and focusing on project sustainability.

Clusters - represent a tool with a decisive impact on intra- and inter-sectoral collaboration. Based on the principles of diversification, a traditional method of risk reduction, clusters operate at the inter-organizational level rather than intra-organizational, a aspect that generates both benefits and challenges. In the case of superficial partnerships with organizations that have different organizational cultures (influenced by national cultures), collaboration difficulties can be significant. A successful variant of clusters is represented by Local Action Groups254, heavily supported by EU policies.

Logical Framework Structure: Through this matrix, risks are highlighted, but risk management is left in the hands of the beneficiaries. If the risks are deemed unacceptable, the project is more likely to be rejected, considering it has low feasibility. This matrix is imperative in pre-accession programs to

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familiarize beneficiaries with risk assessment and assumption. However, after the initial programming periods, it may become optional, although evaluators follow this logic in estimating project feasibility. For example, in the Joint Operational Programme Romania – Republic of Moldova 2014-2020, the analysis of risks and the logical framework matrix were requested in the funding application, but in the current program, Interreg VI-A NEXT Romania-Republic of Moldova 2021-2029, this analysis was no longer required.

The sustainability of the project represents an integrated aspect, the most complex among those highlighted. It intervenes in various aspects during the stages of project implementation:

Project proposal evaluation: enforcing a sustainability period does not guarantee success but appears to be a way for the funder to 'protect' the investment, acknowledging the possibility of failure after a few years. The imposition of co-financing means the direct participation of the beneficiary in the risks induced by the project. Correlating production capacity with the market (balancing subject to external forces that may pose challenges in operationalizing the investment) and the first-come, first-served principle may negatively affect the selection of projects with high survival and performance potential.

Implementation period: monitoring and reducing the risk of error or fraud are essential. Problems arise due to the prioritization of short-term operational aspects to meet the contracted parameters of the project, rather than focusing on integrating the project into the company's strategy or its long-term flexibility.

Post-implementation monitoring period: prohibiting the use of purchased equipment for other purposes for a period after the project's completion, such as machinery that the

beneficiary cannot use even within the co-financing limit for service delivery, does not ensure the success of the investment; it may even hinder it. Resilience of projects and businesses should become a priority, especially in sectors affected by crises255 (Talmaciu, M., Manolescu, I.T., 2021).

In setting the parameters of programs, these risk evaluation and management tools must gain much greater importance than their current status, especially in the context of their implementation in candidate countries where various factors affecting the economic security of investments manifest with varying intensity.

The results indicate a tendency to "externalize" these aspects of economic security and investment to organizations and a low prioritization of investment security within European programs. This situation may be deemed inadequate in the current global context, where the integration plans of the European Union target countries for which the components of economic security, investment, and innovation indicate high alert levels. The recommendations focus on:

Agencies negotiating funding programs for candidate countries: prioritizing aspects related to economic security, differentiating project evaluations, considering measures to support force majeure cases, including funding lines for risk analysis and management systems in programs, and flexibility in analyzing project sustainability periods.

Beneficiary firms: prioritizing project sustainability over obtaining funding for low-relevance objectives for the company; establishing own reserves to support business operations; forming extended partnerships such as clusters for access to key resources like information, human resources,

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consultancy, and logistics chains.

Business resilience has gained new dimensions in the aftermath of successive crises, and prioritizing aspects related to the security of investments and innovations, as a foundation for resilience, becomes imperative in the new context.

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Verlag SWG imex GmbH

ECONOMIC AND FINANCIAL SECURITY OF THE STATE: AN INTERNATIONAL ASPECT

Monograph

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ISBN 978-3-9819288-9-4