

**Financial support for the functioning of the  
agricultural sector in modern conditions**

**Collective monograph**

**Verlag SWG imex GmbH  
Nürnberg, Deutschland  
2020**

**Verlag SWG imex GmbH**

**Financial support for the functioning of the agricultural  
sector in modern conditions**

**Financial** support for the functioning of the agricultural sector in modern conditions. N. Davydenko, O. Gudz, L. Gutsalenko, Ye. Kaliuha, N. Prokopenko, N. Trusova and others: [Ed. by Doctor of Economic Sciences, Prof. Davydenko N.M.] – Collective monograph – Verlag SWG imex GmbH, Nürnberg, Deutschland, 2020. – 264 p.

**ISBN 978-3-9819288-6-0**

**ISBN 978-3-9819288-6-0**

© 2020 Verlag SWG imex GmbH  
© 2020 N. Davydenko, O. Gudz, L. Gutsalenko,  
Ye. Kaliuha, N. Prokopenko, N. Trusova and others

## CONTENTS

FOREWORD	5
<b>SECTION 1. MODERN TRENDS OF FORMATION OF COMPETITIVENESS OF THE AGRICULTURAL SECTOR</b>	
1.1. PARADIGM OF ENTERPRISE MANAGEMENT PROCESS BASED ON INFORMATION TECHNOLOGY COMMUNICATION	7
1.2. ENSURING THE COMPETITIVENESS OF UKRAINE'S AGRICULTURAL SECTOR IN THE FACE OF GLOBAL CHALLENGES	25
1.3. MODERN APPROACHES TO ENTERPRISE PERSONNEL DEVELOPMENT MANAGEMENT	37
1.4. THE PROFITABILITY OF OIL CULTURE PRODUCTION AND THE FACTORS THAT CONCERN	49
1.5. PRIORITIZED DIRECTIONS OF AGRICULTURAL SECTOR OF ECONOMY STATE REGULATION	60
<b>SECTION 2. FINANCIAL AND INVESTMENT SUPPORT OF THE AGRICULTURAL SECTOR ACTIVITY AS A NECESSARY PREREQUISITE FOR ITS STABILITY</b>	
2.1. THEORETICAL PRINCIPLES OF CAPITAL OPENING IN INTERPRETATION ECONOMIC SCIENTISTS OF THE XVI - XIX CENTURY	78
2.2. THEORETICAL PRINCIPLES OF THE STATE FINANCIAL CONTROL ON THE USE OF BUDGETARY EXPENDITURE	100
2.3. RISK MANAGEMENT IN FUNCTIONAL ECONOMIC FINANCIAL SECURITY SYSTEMS	116

2.4. DEBT BURDEN OF THE FINANCIAL SYSTEM OF UKRAINE AND COUNTRIES THE EUROZONE	154
2.5. INVESTMENT ATTRACTIVITY: FEATURES IN THE AGRARIAN ECONOMY SECTOR	165
2.6. ASSESS THE IMPACT OF CORPORATE GOVERNANCE ON FINANCIAL CAPACITY OF THE ENTERPRISE	177
2.7. OPTIMAZATION OF THE COMPANY'S LIQUIDITY LEVEL IN CORPORATE FINANCE MANAGEMENT SYSTEM	187

### **SECTION 3. ANALYTICAL PROCEDURES AND ACCOUNTING POLICY OF AGRICULTURAL ENTERPRISES**

3.1. ORGANIZATIONAL AND METHODOLOGICAL ASPECTS OF THE AUDIT PLANNING OF FINANCIAL STATEMENT	196
3.2. ENTERPRISE ACCOUNTING POLICY: THE ESSENCE, IMPORTANCE AND ITS FORMATION FEATURES	208
3.3. ANALYTIC ACCOUNTING OF PAYROLL EXPENSES IN CROP PRODUCTION	219
3.4. ANALYTICAL PROCEDURES IN NATIONAL AND INTERNATIONAL AUDIT PRACTICE	230
3.5. PROVISIONS FOR PAYMENT TO EMPLOYEES: FEATURES OF FORMATION AND USE	240
3.6. ACCOUNTING POLICY: THE BASIS OF ENTERPRISE STRATEGIC PLANS	251
INFORMATION ABOUT THE AUTHORS	262

## FOREWORD

Nowadays, when the results of globalization become significant, Ukrainian community has an extremely important issue connected to choosing and creating effective ways of development in new geopolitical conditions. Globalization processes play a particularly important role for future prospects in the field of Ukraine`s agricultural sector. This sector is entering a new phase of its development, means traditional forms of management give a way to new agricultural formations, it leads to controversial consequences. According to this, increasing the importance of business development strategy in agrarian enterprises.

To sum up, all that indicates high demand for theoretical research and practical recommendations in order to upgrading methods of effective activity organization and management practice of agricultural enterprises in market conditions based on the development strategies. Effective economic activity requires increasing scientific support and the development of effective algorithms for the practical implementation of market requirements.

In the foundation of socio-economic agricultural sector transformations should be involved new ideology of production, accounting and financial relations. All this significantly increase the role of organizational and social decisions that must take into account the probability of risk in the agrarian enterprises management. At the present stage, the development and implementation of business development strategies includes a systematic solution to a number of other complex problems for Ukraine, including the location and specialization of agricultural production, compliance with national standards of corporate activity, the use of special equipment in agriculture, prevention of parcelization (grinding) of production, etc.

According to national agricultural enterprises to demand for attracting investment and financial resources, the need to analyze trends and problems of the stock market, which in turn contributes to the mobilization of financial resources, there is a great emphasis on this problem of scientists - researchers, both national and foreign.

Researching in the field of these problems require a systematic presentation of corporate activities (needs, incentives, development goals, organization of production), which is possible in the development of agricultural enterprises.

In the monograph we consider all the processes associated with the financial support of development in the agricultural sector of Ukraine's economy. The structure of the work is focused on solving a dual task - to conduct research on financial support for the agricultural sector development and the corresponding analysis and explanations of an applied nature. The monograph is supplemented by statistical data and references to national and foreign sources of information.

## **SECTION 1. MODERN TRENDS OF FORMATION OF COMPETITIVENESS OF THE AGRICULTURAL SECTOR**

### **1.1. PARADIGM OF ENTERPRISE MANAGEMENT PROCESS BASED ON INFORMATION TECHNOLOGY COMMUNICATION**

Traditional management methods, models and technologies do not provide the desired results for enterprises in the conditions of modern crisis deformations, the aggravation of competition, the deepening of the business environment integration and globalization processes. At the same time control functions require the attraction of more employees, additional resources and the complexity of managerial hierarchical chains. The decision-making process requires more and more time and information, the number of financial transactions and business combinations exceeds the limit, beyond which there are no understandable factors and prerequisites that form the final results for the enterprise.

Therefore, there is a growing scientific and practical interest in transforming the paradigm for enterprise management based on information and communication technologies (ICTs). This is explained by the fact that ICTs change the modern management models, organizational design, reformat the management structure, communication and business combinations of enterprises, and simultaneously generate unique competitive advantages that allow enterprises to function successfully, minimizing risk and improving their efficiency, profitability and competitiveness. All noted in the aggregate justifies the need to transform the paradigm for enterprise management based on information and communication technologies.

The systematization of accumulated knowledge and experience, the development of modern information and communication technologies and their application in enterprise management are reflected in the scientific research by many domestic and foreign scientists. So interesting proposals are highlighted in the works by I. Ansoff, R. Ackoff, A. Balan, V. Goetz, P. Doyle, P. Drucker, M. Castells, I. Novakivsky, M. Porter, P. Stetsyuk, A. Thompson, E. Toffler V. Trubilin and others.

At the same time, beyond the limits of scientific developments, there are problems concern to the transforming the paradigm of enterprise management based on the extensive use of information and communication technologies, the identifying prerequisites, opportunities and directions for modernizing the new management paradigm for modern enterprises.

The aim of the article is to substantiate the need to transform the paradigm for enterprise management based on information and communication technologies, identify existing problems, identify the prerequisites, opportunities and directions for modernizing the new management paradigm for modern enterprises with extensive use of information and communication technologies for providing the flexibility, adaptability of management, successful partnerships, client-oriented approach, value orientation, unique competencies and competitive advantages development.

The economic shocks, problems and conflicts, that are observed in the business environment, pose new challenges for the transformation of the paradigm for enterprise management on the basis of information and communication technologies, the application of effective management approaches that would contribute to the maximum symbiosis of the situational, systemic, dynamic, structural, process, and functional management. This position is supported by many scientists:



"Highly dynamic, competitive and unpredictable working conditions require the creation of a new management paradigm that would integrate all achievements in management and would be aimed at creating an effective integrated approach to enterprise management"<sup>1</sup>; "... a modern management attracts to the full extent all ideas and approaches developed during its existence. But, despite the cardinal changes in the economic environment of the enterprises, it is important to switch to new management methods that make it possible to meet the requirements of the present. All these requirements are based on the modern paradigm of the management sphere"<sup>2</sup>; "Probably, the development of the new management paradigm meets the requirements of the emerging knowledge society, is the most important task of scientists ... With the benefit of hindsight, it is necessary to create a new management science, considering that a person has become an important element of an organization that is open to complex systems"<sup>3</sup>.

In the English dictionary it is noted that the definition "paradigm" is introduced into the English language from the Greek "paradeigma", which means "sample"<sup>4</sup>. In "Management" (the conceptual-terminological dictionary) we find the following definition: "paradigm is a theory, theoretical model, which is in somebody's possession and is used as a

---

<sup>1</sup> Kuzmin O. E. (2011) Diagnostika v sistemi protsesno-strukturovanogo menedzhmentu [Diagnostics in the system of process-structured management]. Bulletin of the National University "Lviv Polytechnic". No. 714, P. 9-14. [in Ukraine].

<sup>2</sup> Fominih T.O. (2010) Suchasna paradigma menedzhmentu yak osnova dlya formuvannya novoyi kontseptsiyi upravlinnya lyudskimi resursami [Modern paradigm of management as a basis for the formation of a new concept of human resource management]. Bulletin of the Khmelnytsky National University. Economic sciences. №5, P. 134-138. [in Ukraine].

<sup>3</sup> Krizis sovremennoy paradigmy menedzhmenta [The crisis of a modern management paradigm]. Retrieved from : <http://scgovern.org/?p=14> [in Ukraine]

<sup>4</sup> Krizhko V.V. (2005). Antologiya aksiologichnoyi paradigmy osviti [Anthology of the axiological paradigm of education]. Kiev: Education of Ukraine, p. 197 [in Ukraine] -

model for setting, substantiating, solving problems within the framework of a particular subject of research "<sup>5</sup>.

In the middle of the last century the notion of the paradigm in the scientific sphere was introduced by T. S. Kun. He has defined that the paradigm accumulated "... scientific achievements that have been recognized by all, who, during the relevant time, gave the scientific community a model of problem formulation and its solution" and further "... paradigms give scientists not only an activity plan, but also indicate some directions, which are essential for the draft implementation. Mastering the paradigm, the scientist immediately takes over the theory, methods and standards, which are thus closely intertwined with one another <sup>6</sup>. That is, with changing paradigm worldview systems and the entire system of scientific ideas has been changing. In the context of changing the management paradigm, P. Drucker argued that "the paradigm of any social science, in particular management, is based on ideas about reality, formed by scientists and practitioners." The notions of reality existing within this theory determine its content, that this theory considers "facts", and the way it treats itself. Moreover, the notion of reality largely determines what the theory pays attention to, and what it ignores or rejects as "annoying exceptions." This means that the views that were justified yesterday can literally become insolvent at one point and, moreover, erroneous "<sup>7</sup>. The determining moment of the formation of a new paradigm is considered the ability to solve new problems, the existing paradigm cannot be solved.

---

<sup>5</sup> Menedzhment: ponyatiyno-terminol. slovnik (2007) [Management: Conceptually-terminological vocabulary] [Shchokin G.V, Golovaty M.F, Antonyuk O.V., Sladkevich V.P.]. Kiev: MAUP, 744, p. 401. [in Ukraine].

<sup>6</sup> Kuhn T. (2002) Struktura nauchnykh revolyutsiy [Structure of Scientific Revolutions]. Moscow: AST, p. 148 [in Russia].

<sup>7</sup> Druker P. (2000). Zadachi menedzhmenta v XXI veke [Management tasks in the XXI century]. Moscow: Williams Publishing House, P.. 15-17 [in Russia].

It should be noted that today, the existing paradigm for enterprise management doesn't solve pressing problems, but also is a brake for the enterprises development. When studying the new format of the new management paradigm, mostly scientists justify the need to transform economic priorities. The formation of a new management paradigm is closely connected with new realities and challenges of the economic space, with a new worldview of different schools and managerial thought trends.

So, the paradigm of enterprise management is in constant dialectical development: models and technologies of management are being improved, new management approaches are being formed, a new business philosophy is emerging with new stereotypes of thinking. All these require of managers to implement changes, not just reactionary actions. With the changes of the enterprise management paradigm the issue of managerial quality, the intellectualization of management models and the proliferation of information and communication technologies are acute. Let us note that Ukraine has a high index for the development of human capital due to the relatively high level of literacy of the population and a high percentage of people entering higher education institutions. However, the indicator of the number of people enrolled in higher education institutions for Ukraine is quite formal, since it does not reflect the effectiveness and quality of training managers.

Now ICT is used to solve a number of modern challenges, in particular: the exhaustion of cheap natural resources, the aging of the population; deterioration of the environment; strengthening and diversity of interrelations between enterprises and their partners and consumers; ousting national producers from domestic markets; globalization of information and organizational communications; high staff mobility; the volatility of the global economic and political

system; a growing imbalance between security requirements and individual personal freedom; increasing the intensity of information flows; the growth of cybercrime, the scale-up of its effects and the like.

Accordingly, new tasks arise for enterprises, in particular, the need: introduction of a client-oriented approach; expansion of sales markets; rapid response to the actions of competitors; qualitative processing of large information arrays; the improvement of business communications with partners; the activation of innovative processes; the diversification of activities; the expansion of business combinations; taking into account the resource and time constraints; the provision of 24-hour customer service.

We add to this list that the multidimensionality of the activities of modern enterprises exacerbates the task of an effective management system development that is oriented not only to the internal business chain of the enterprise, but also to external business opportunities. "Traditional modifications of hierarchical management chains do not allow to solve existing problems of coordination of functional links horizontally, increasing the responsibility and the empowering for lower-level managers and middle ones, releasing top managers from operational control, which at the expense of the released time increases the opportunities for creative activity" <sup>8</sup>.

The inefficiency of the management models of most domestic enterprises is manifested in a belated reaction to the pace of changes in the external environment. Therefore, fundamentally new problems are observed for domestic enterprises concern to the interaction with partners, customers, suppliers, authorities (attraction of investment resources,

---

<sup>8</sup> Novakivsky I.I. (2015) Zasadi formuvannya konkurentospromozhnyh sistem upravlinnya pidpriemstvami z vrahuvannyam rivnya suspilno-ekonomichnogo rozvitku [Principles of the formation of competitive business management systems taking into account the level of social and economic development]. Vysn. National Lviv Polytechnic University. Series: Problems of Economics and Management. No. 815, P. 104-112. [in Ukraine].

organization of marketing activities, construction of logistics chains, etc.). The domestic enterprise's weak adaptive capacity led to a drop in competitiveness in the world dimension.

Thus, the new paradigm of enterprise management should include the following general key provisions: the recognition the central role for human; the customer-oriented approach; democratization and multidimensional management based on a network approach; the development of partner chains and communications; proactive nature of management; consideration of the enterprise as an "open system"; new values; the increasing role of knowledge and innovation and its management; globalization and integration; wide use of information and communication technologies.

It is information technology that helps business leaders in solving various complex tasks. Information and communication technologies have been one of the key drivers of enterprise development in recent decades. In economically powerful countries, ICT has long become a vital and necessary element of enterprise management. Their development and dissemination contribute to qualitative changes in many sectors of the economy; efficiency of doing business; the emergence of new forms of partnership and communication; ensuring timely access to various information. Therefore, to solve new management problems, it is advisable to actively use ICTs by the domestic enterprises.

In recent years 95.2% of enterprises use computers (including small enterprises - 93.8, medium-sized enterprises - 98.7%, large ones - 99.6%), 98.2% of enterprises use the Internet (including: small - 97.8, medium - 99.3 and large 99.6%. Internet is used: for sending or receiving messages by e-mail - 97.0% of enterprises, for making phone calls through the use of Internet / VoIP communications or video conferencing - 28.4%, to get information about goods and services - 85.7%, to use instant messaging and electronic

bulletin board - 45.3%, to receive information from state authorities - 78.1%, for carrying out various operations with state authorities - 48.7%, for banking operations - 95.3%, for access to other financial services - 38.2% of enterprises. The number of enterprises amounts to 6.0% that receive orders through computer networks for the sale of goods or services, and the number of enterprises is 17.2% that purchase goods through computer networks of goods or services. Of the total number of enterprises that had access to the Internet, social networks were used by 24.7% enterprises (in 2015 - 17.9%), knowledge sharing tools were used by enterprises of 12.7% (in 2015 - 19.1%), the web - site with multimedia content - 12.6% (in 2015 - 11.1%), blogs and microblogs of the enterprise were used by enterprises of 6.9% (in 2015 - 5.2%)<sup>9</sup>. It should be noted that enterprises use social networks mainly for: representing the enterprise or advertising its work (goods, services); receiving customer feedback or providing answers to their requests; attracting customers to the development or innovation of goods and services; cooperation with business partners or other organizations; hiring of workers; exchange of views, thoughts or knowledge within the enterprise.

Unfortunately, most domestic enterprises use ICTs in a haphazard manner. Small businesses often use ICTs to be able to survive alongside large ones. They can coordinate actions such as fulfilling orders or tracking inventory, keeping a small number of personnel. Large enterprises use ICTs to increase maneuverability and sensitivity.

The highest level of computerization was found in enterprises that carried out activities in the field of information and telecommunications - 98.3%. The lowest level of computerization was observed in enterprises with activities in the field of administrative and support services - 89.1%.

---

<sup>9</sup> Derzhavna sluzhba statistiki Ukrainini (2017). [State Statistics Service of Ukraine, E- source] <http://www.ukrstat.gov.ua>

Now the following problems of introducing ICTs into the practice of domestic enterprises management are observed: the growth of investments and expenditures in the sphere of ICTs, the strengthening of dependence on external IT services and service maintenance; changing the role of ICTs in the activities of enterprises, especially when performing internal operational processes. Extremely acute problems of accumulation, efficiency and objectivity of information flows arise for managers of large enterprises. Such enterprises are characterized by the presence of an extensive network of communications with subsidiaries and branches that operate relatively autonomously and territorially remote. "The collection and processing of data on all such structures often turns into a long and ineffective procedure. In these circumstances, IT is the only opportunity to collect, process data and present them in a form that is convenient for making managerial decisions"<sup>10</sup>.

The basic principles of ICTs are integration, flexibility and informational content. They are characterized by the following features<sup>11</sup>: full information support at all stages of information flow on the basis of an integrated database; paperless process of document processing; interactive problem-solving mode; group collaboration for the documents and tasks preparation; the possibility of adaptive restructuring for forms and ways of presenting information.

ICTs provide a qualitatively new approach to the organization of human-computer interaction through an appropriate decision support system. Under the influence of the use of ICTs, the nature of the managerial interaction between

---

<sup>10</sup> Kuzmin O.E.(2006) Formuvannya i vikoristannya informatsiynoyi sistemi upravlinnya ekonomichnim rozvitkom pidpriemstva [Formation and use of the information management system by the economic development of the enterprise. Monograph]. Lviv: Lviv Polytechnic National University, 368 p. [in Ukraine].

<sup>11</sup> Denisova O. (2004). Informatsiyni sistemi i tehnologiyi v yuridichniy diyalnosti [Information systems and technologies in legal activity] Kiev: KNEU, 307, P. 7-9. [in Ukraine].

enterprises and their divisions, and the organizational and communication chains, essentially changes.

When moving to a new paradigm for the enterprise management based on information and communication technologies, it is necessary to begin with a full diagnosis for the management system and assess the company's technological, information and communication readiness for change. In the future, it is necessary to develop a strategy for the development of the enterprise, to take specific actions to inform the management processes of the enterprise as a whole and in certain areas of activity (production, finance, accounting, interaction with partners and customers, marketing, procurement, sales, etc.), implement appropriate measures and evaluate their effectiveness. The success of the introduction the enterprise management new paradigm based on information and communication technologies will be determined by the renewal of information and organizational design and the entire management system that will be consistent with the principles of enterprise innovative proactive client-oriented development based on partnership relations.

The new paradigm for the enterprise management based on information and communication technologies changes the traditional notions about the contours of enterprises, destroys their closeness and explains the inefficiency of those enterprises that are based on hierarchical, mechanistic, bureaucratic administrative structures.

The introduction of a new paradigm for the enterprise management based on information and communication technologies provides to reduce management costs, to improve the system of relationships, to enhance the access of enterprises to markets and different spheres of activity, to increase the effectiveness of economic contacts of enterprises, to make possible providing sustainable competitive advantages generated by new distribution channels, attracting new and



improving the service of existing consumers, with greater mobility to make management decisions. The new paradigm assumes: the orientation of management to a strategic perspective; diversification of operations; increasing the role of innovation; wide use of e-commerce; maximum use of staff creative activity; transition from a narrow functional specialization to integration in the content and nature of management activities; de-bureaucratization based on a network approach; refusal of formalization and hierarchy; reduction in the number of hierarchical levels; transformation of organizational structures of enterprises from pyramidal to horizontal; the decentralization of a number of management functions, primarily production and distribution; raising the status and importance of information and personnel integration tools; development of cluster technologies; transition to electronic document circulation between departments, between the enterprise and controlling bodies, between enterprises, customers and partners; building a rational structure for information exchange within each enterprise; information management improvement; effectiveness control; the business environment improvement at the enterprise; creation the information culture among managers; increasing the efficiency and quality of the process of making managerial decisions; more free placement of production, without binding to large cities.

Simultaneously with the advantages of the new paradigm for the enterprise management based on information and communication technologies there are a number of new problems and risks that are not typical for traditional business: the imperfect regulatory support; increased risk in the identification of partners, suppliers, customers; problems of confirming electronic digital signatures; unauthorized access is possible to commercial or official information of the enterprise, its theft / destruction, the threat of hacker attacks or viruses.

These risks can inhibit the development of the enterprise and require the introduction of preventive measures.

The study of domestic enterprises managerial aspects shows that in general they are very difficult to make a decision about radical restructuring of their management systems and organizational and information design, limiting themselves, as a rule, to minor adaptive changes. The majority of modern enterprises are fundamentally unprepared to solve the following basic management problems: developing a strategy for modernizing the management system in the enterprise development loop; refusal to concentrate key authorities at the higher levels of management; reorientation of marketing priorities to service specific customer's requests; the use of qualitatively new decision-making technologies, including the widespread use of information and communication technologies of new generation; overcoming the natural inertia of management personnel and specialists in mastering various innovations; ignoring informal business entities and public organizations.

According to the classical paradigm, the focus of the enterprise was on order, uniformity, balance and stability of organizational formations, that is, parameters characterizing them as closed systems with linear interrelations, predictable competitive behavior and the possibility of reverse playback.

It should be noted that a consistent shift in the emphasis of the management paradigm of enterprises based on information and communication technologies in today's conditions requires a creative rethinking of the order and scope of the changes taking into account the characteristics of each enterprise. As a result, the enterprise receives a definite positive specific impetus for the use of qualitatively new models, tools, and management technologies.

Characteristic features of the organizational and information design of modern enterprises should be such

properties as distribution, multilayering facility, flexibility, adaptability, dynamism. Such organizational and information design of modern enterprises can be considered as networked with virtual management chains built on the information integration of various entities of labor, material, financial and information flows managing without rigid subordination.

For the modern period various hybrid structures are interesting that combine features of different polar types of control models. Thus, in tensor structures, along with the classical levels and control chains, additional new levels of control are allocated. At large enterprises making managerial decisions takes place at different hierarchical levels. The tensor structure supports the further development of the matrix structure, contributes to its gradual transformation into a format of multi structural properties based on a network approach.

Diffuse structures are structures without clear contours, which differentiate the influence and actions of factors by different nature. Characteristic features of the diffuse structure are fundamental instability and stochasticity, dynamic equilibrium and partial uncertainty of information. A feature of the diffuse management contour is the totality of departments with different levels of autonomy, whose activities are directed to such areas: ensuring production activity with the necessary resources; production of a product / service for a specific consumer; individual personal service, development or penetration into a particular market and the like.

At the same time, we emphasize that the development of modern ICTs in the management of enterprises can be an impossible task for the enterprise due to high costs. Today, this issue can be relatively cheaply solved due to cloud technologies, the essence of which is to concentrate technical and software centers in a certain computing complex that may be outside the enterprise. An additional advantage is that the issues of ICTs standardization are largely transferred to a

specialized external organization that offers the user a typical management solution. The number of enterprises that bought cloud computing services during the year was 8.8%, mainly they used them for: e-mail, office software, hosting of the enterprise database, file storage service, financial or accounting applications, management applications relationships with customers, increase in computer capacity for the operation of enterprise software<sup>12</sup>.

Thus, the expediency of forming a new paradigm for enterprise management based on information and communication technologies is conditioned by:

the emergence of a networked economy based on an integral, open global innovation space;

mass intellectualization of goods / services through the development and dissemination of personalized network technologies based on innovation;

personalization of customer service in the market, reduction of the life cycle of technologies and products, aggravation of the competitive environment;

application of progressive methods for managing latent multiplicative risks and resources, decentralization of organizational structures, increasing the efficiency of decision-making;

the use of modern ICTs, largely intellectualized, can calculate in advance the effect of even insignificant crisis fluctuations and propose the adoption of appropriate measures;

standardization of business combinations, facilitates the development of an agreed upon plan with the partners or consumers;

the possibility of personifying the processing of customer requests, which significantly improves the reliability of the relationships and the trust of customers and partners;

---

<sup>12</sup> Derzhavna sluzhba statistiki Ukrainy (2017). [State Statistics Service of Ukraine, E- source] <http://www.ukrstat.gov.ua>

deploying e-tag technologies that provide unique capabilities for multi-parameter distributed data collection;

the need to introduce new management ICTs to develop more powerful information flows;

the growth of material costs for organizational and information support for business combinations and the inertia of traditional paperwork that determine the formation of a multilevel organizational and information design;

the lack of unified universal software and tools that hinders the problems of describing, integrating, identifying various innovations and requires a broad involvement of diversified specialists;

the need for servicing large information arrays, consulting and training of enterprise employees;

mastering of cloud technologies that provide instant access to all information resources, which allows to form the basis of a fundamentally new organizational and information design, capable of responding timely to critical deviations.

An essential element is the information and communication center, which the effectiveness of management activities will depend on. Such center ensures the unification of supply, consumption and service processes, turning them into a single highly efficient system.

The opportunities of the new paradigm for enterprise management based on information and communication technologies are expanding under the influence of changes in the business space in the following areas:

the importance of the interconnection of technologies for the activity of enterprises from supply chains of raw materials to the products delivery to the target consumer is reinforced;

the information-technological system and cooperation, which encompasses the growth of intellectualization of the enterprise's activity through the capitalization of intellect and the mass dissemination of innovations, is increasing;

the adaptability, creativity and mobility of staff is growing;

the science intensity, dynamism, importance of innovations, organizational culture, education as indispensable factors for the multivector development of the enterprise are multiplying;

a new type of competition is asserted;

a need for continuous professional development of employees is appear;

the number of various business ties increases, which is accompanied by an increase in the organizational discreteness for control;

environmentalization and sociologization of the business environment is intensifying.

It is obvious that the emphasis of transformations is transferred from quantitative material introduction of modern information and communication technologies for information non-material transformations of a control system. Processing of content at a high intellectual level becomes a key competitive advantage of the enterprise, and, therefore, a target point of the enterprise management transformation.

The article is about the necessity for the transform the enterprise management paradigm based on information and communication technologies. It is identified the existing problems, determined the prerequisites, opportunities and directions for modernizing the new management paradigm for modern enterprises with extensive use of information and communication technologies for providing the flexibility, adaptability of management, successful partnership, client orientation, value orientations, unique competencies and competitive advantages development. In particular, it was noted that in the context of the modern transformation of economic relations, the effective use of innovative IT is becoming one of the most important factors for the survival of

enterprises. The realization of new business opportunities is hampered by the fact that, in general, knowledge and actions continue to unreasonably adhere to the rules and approaches of the traditional economy. Primarily, the management systems of modern enterprises are still not adapted to the new conditions of ICTs use, taking into account the growth of the possibilities of the Internet and globalization, and therefore require cardinal changes and modernization.

The essence of the new paradigm for enterprise management based on information and communication technologies is concentrated in the transition from price parameters and volumes to quality, flexibility, and then to systemic innovations, uniqueness, partnership interaction and client-oriented approach, values and competencies. The defining vector of the new management paradigm should be the maximum approximation of management to managed structured processes that are distributed in space and time (for example, using cloud computing). Due to high data transfer speeds in the network with minimal delays, the controllability of business chains will significantly increase, which will allow to react quickly to the crisis deviations in the operating activity of the enterprise, preventing the occurrence of a crisis.

The new paradigm for the enterprise management on the basis of information and communication technologies provides the improvement of models, methods of enterprise management technologies, the rationalization of management mechanisms at all hierarchical levels of management, the dynamic scenario of multivector development for enterprises, the shortening of the life cycle of products and services, the strengthening and individualization of partner relationships and relationships with clients (client-oriented management), nonstop staff education, system innovation, the intensification of the human factor, the convergence of the technology used, the individualization of requirements management technology

and production quality, flexibility of production technology, the multiplicative approach to assessing the results of the enterprise. Such paradigm of enterprise management based on the wide use of information and communication technologies with the provision of its flexibility, adaptability through the wide introduction of innovations, the use of uniqueness, successful partnership interaction, client-oriented approach, value orientations and build-up of competences determines the logical sequence of organizational and structural construction of the entire management system.



## **1.2. ENSURING THE COMPETITIVENESS OF UKRAINE'S AGRICULTURAL SECTOR IN THE FACE OF GLOBAL CHALLENGES**

The competitiveness of Ukrainian enterprises is insufficient, one of the main reasons being the low ability to fight for expansion of their share in the domestic and foreign markets, to promote their goods and to win the consumer, putting the interests of the latter in the center of their production and commercial activity. This raises the urgent problem of assessing the level of competitiveness, and therefore enhancing the competitiveness of national producers should be a top priority of their competition policy.

As a result, the business entity, having a certain set of comparative and competitive advantages, goes to one level or another of competitiveness. One of the prerequisites of this process was the stiffness of global economic competition for the right of each country to occupy a worthy place in the system of world economic relations, which, in turn, is one of the most important factors that stimulate the efficiency of the domestic economy of each country, including Ukraine. .

The main role in the production of agricultural products in the market conditions should belong to agricultural enterprises with a high level of concentration of capital, fixed assets and labor, which allows to increase specialization, to more actively introduce modern means of production, to improve technology and organization of production processes and labor and on this basis to reduce production costs. It is a fair view of economists who believe that agricultural enterprises have significant potential for economic growth: a high level of concentration of skilled labor, capital resources, and agricultural land, which under certain conditions can give a

rapid return<sup>1</sup>.

When analyzing the structure of the market, it is necessary to consider not only the number of enterprises in the market, but also their size. There may be many sellers on the market, but one or more will dominate.

To describe the market structure and assess its level of monopolization, it is necessary to study the degree of concentration of sellers in the market, and as auxiliary information to use data on the level of market (monopoly) power of sellers and non-strategic factors of market structure.

Concentration indicators characterize the degree of uneven distribution of production or sales of goods between economic entities, as well as the ability of each of them to influence the general conditions of circulation of goods in the relevant market.

Concentration factor (CR). It is calculated as the percentage of sales (delivery) of products by a certain number of the largest sellers to the total sales (delivery) in a given commodity market. The seller's market share can be calculated as the ratio of not only sales but also the number of employees, the size of assets or the value added of the enterprise to the total value of the indicator for the market as a whole<sup>2</sup>.

In most industrialized countries, the concentration ratio is obligatory for statistical monitoring of the state of the market, with different countries calculating the shares of different number of enterprises.

The Herfindahl-Hirschman coefficient (HHI), the most popular summarizing indicator, takes into account both the number of enterprises and the inequality of their position on the market, characterizing the level of monopolization. The value of the coefficient decreases with the increase in the number of

---

<sup>1</sup> Shnytko O.S. Konkurentospromozhnist' Ukrainy v umovakh hlobalizatsiyi. K.: In-t ekon. ta prohnosuv. NAN Ukrainy, 2009. 456 p.

<sup>2</sup> Martynchik O. Assessment of competitive branch enterprises of Zhytomyr region. Business Inform. 2014. № 7. P. 149–153.

enterprises and increases with the increase of inequality between enterprises with any number of them. This means that if there is no accurate market share data for very small businesses, then the total error will not be large.

In accordance with the different values of the concentration coefficients and the Herfindahl-Hirschman coefficients, three types of market are distinguished by the degree of concentration<sup>3</sup>.

Table 1

Concentration of the agricultural market  
in Ukraine in 2018

Product	Concentration factor	Herfindahl-Hirschman Index
Wheat	49,9	76,6
Barley	49,2	15,39
Maize	68,4	71,71
Rape	51,1	41,58
Sunflower	45,57	6,59
Increase in pigs	83,24	206,81
Cattle fever	49,35	30,57
Milk	55,5	32,71

*Source: author's calculations*

Conducted studies on the concentration of the agricultural market indicate that in 2018 in Ukraine was low, as the Herfindel-Hirschman index was less than 1000 for all types of products (table 1). Regarding the concentration coefficient, it can be noted that the pork market is highly concentrated, since this indicator is 83,24%.

The development of market relations requires, first of all, the study of theoretical prerequisites and practical recommendations on ensuring the competitiveness of agricultural enterprises. Addressing the issue of increasing the competitiveness of the operation in modern integration processes requires solving a set of problems, both at the

<sup>3</sup> Kosar, N. S. Marketynhovi doslidzhennia. Lviv: Lviv. politekhniky. 2018. 457 p.

practical level, so to speak, and theoretically. In the current conditions of housekeeping, the development and implementation of modern technologies in agricultural enterprises is of paramount importance, which will ensure the economic efficiency of the enterprises.

Agricultural producers need to develop a clear development strategy and identify their competitive advantages in the market for specific goods. Agrarian enterprises must determine the competitive advantage that creates a certain priority for them over competing enterprises.

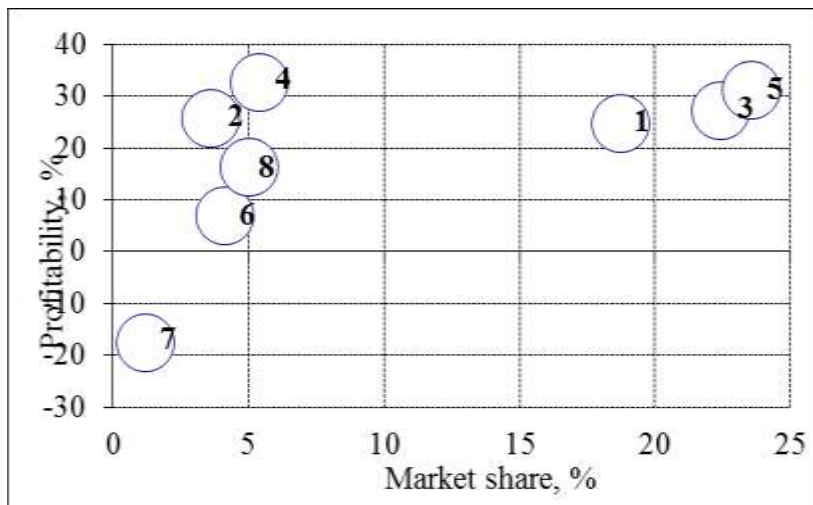
Note that the competitive advantage of agriculture may be external when it implies a difference in the quality parameter compared to analogies. Special features allow you to influence the agricultural business in this market by selling these products at a slightly higher price. At the expense of simple quality parameters, to provide a higher price than for products of competitors, which do not provide high quality of the product<sup>4</sup>. Analysis of the competitiveness of products shows that sunflower occupies a significant share of the market 23.6% and has a high level of profitability 31.6%, corn also occupies a significant share in the market 22.4% and provides a profitability of 27.2%. There are certain types of products that have a high level of profitability, including rapeseed and barley, but they have a small market share (Fig. 1).

In a market economy, the decisive factor in the commercial success of a product is its competitiveness. This is a multifactorial concept that implies the conformity of a particular product to the conditions of a given market, specific requirements of consumers not only in terms of quality, technical, economic characteristics, but also taking into account commercial and other conditions of sale of the product

---

<sup>4</sup> Kyrylov Yu. Forming the paradigm of competitive development of the Ukrainian agricultural sector under conditions of globalization. Management Theory and Studies for Rural Business and Infrastructure Development. 2015. Vol. 37. No. 1. P. 70-79.

(price, delivery time, channels of sale, service, advertising) . Moreover, an important part of a product's competitiveness is the level of consumer spending over its lifetime.



*Fig. 1. Analysis of agricultural competitiveness indicators in Ukraine in 2018*

1	Wheat	5	Sunflower
2	Barley	6	Increase in pigs
3	Maize	7	Cattle increase
4	Rape	8	Milk

*Source: author's calculations*

The process of gradual integration of Ukraine into the world economic community should be based on a certain specialization of the Ukrainian economy, taking into account certain competitive advantages of the industry level. Competitive advantages ensure the efficient operation of agricultural enterprises in the long run that is the competitiveness of a particular entity is largely ensured by its competitive advantages, due to the fact that they have the opportunity to offer a specific consumer goods with a specific value for him.

Transformation of market relations between agrarian

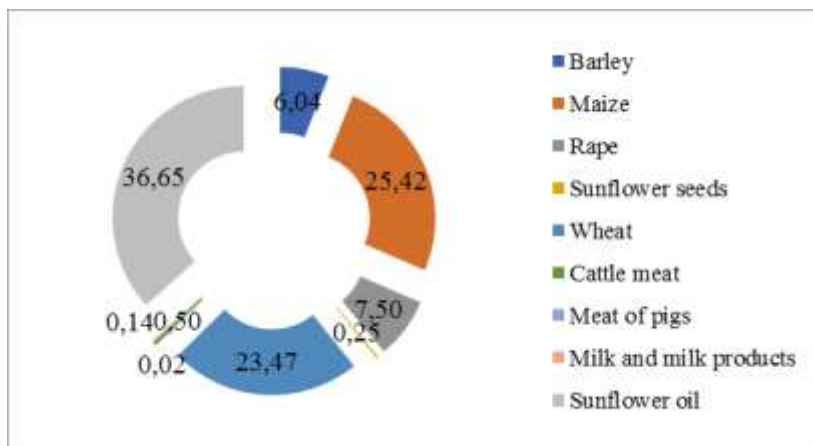
units, increase of competitiveness and economic efficiency of agrarian production has a direct connection with the development of foreign trade in agricultural products. Ukraine's place in the global food market is determined by the quantity of products exported, its quality and value. Achieving stable profits from exports of agricultural products and raw materials requires constant analysis of the development of agro-food markets, as well as a systematic and effective assessment of the competitiveness of export groups of goods in the international market. In these circumstances, due attention should be paid to diagnostics of the competitiveness of domestic agricultural products on the foreign market<sup>5</sup>.

Analyzing the dynamics of exports of basic agricultural products, it was found that during 2017 Ukraine exported most of sunflower, corn and wheat oils. It should be noted that during the period under review the export of pig meat increased by almost four times. Studies have shown that the export of dairy products decreased by almost 31.5%, the export of sunflower seeds decreased by almost 40%. Although the volume of corn exports is quite significant, it decreases from year to year and during the period under review this decrease amounted to 22%.

Analyzing the structure of exports of basic agricultural products in 2017, it should be noted that the largest share is occupied by sunflower oil 36,65%, corn - 25,42% and wheat - 23,47%. Studies have shown that the smallest share in the structure of agricultural exports belongs to livestock products and sunflower seeds (Fig. 2).

---

<sup>5</sup> Pavlikha NV Managing the national economy's competitiveness: a regional dimension. Lutsk: Tower-Printing, 2014. 184 p.



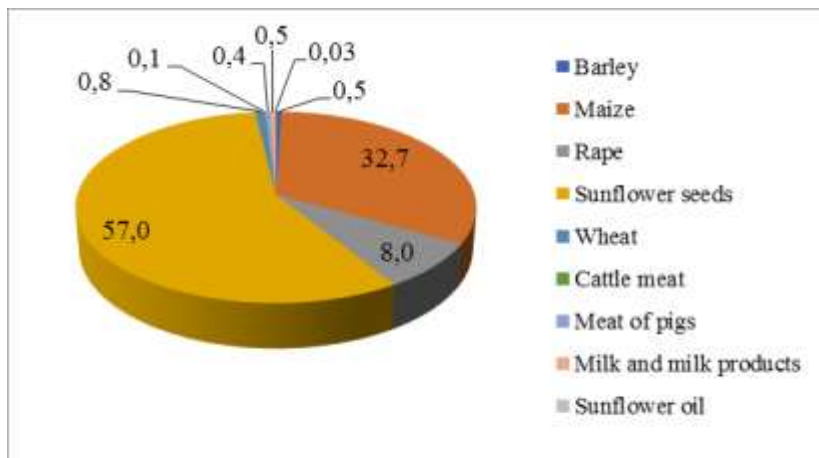
*Fig. 2. Structure of exports of basic agricultural products in 2017, %*

In the current economic conditions, certain laws are followed, in particular, agricultural formations, which have sufficient resources to ensure their effective development and conditions for providing high quality agricultural products, cannot compete with foreign producers in the domestic market, so provide sufficient competitive advantages in the foreign market and stimulate development of export potential of agricultural sector of economy.

Regarding the import of agro-industrial products, it is worth noting that there has been mixed dynamics over the period under review. In particular, it is worth noting a significant increase in cattle meat imports by more than 4.5 times. Also in 2017, imports of wheat and sunflower seeds increased by 56.94% and 8.73%. With regard to these types of products, it should be noted that during 2013-2016 a relatively stable situation followed, and the increase in imports in 2017 is explained by a much lower yield and as a consequence of the gross collection. As regards barley and maize, imports decreased by almost half during 2013-2017, it should be noted that agricultural enterprises are trying to meet domestic

demand for their own production. The biggest decrease is seen in the import of dairy products and pig meat.

In terms of the structure of imports of basic agricultural products, sunflower seeds accounted for the largest share (57% in 2017) and maize, which accounted for 32.7% of total agricultural imports. It should be noted that about 8% of the structure is rapeseed for other types of agricultural products their share is small and is less than 1% (Fig. 3).



*Fig. 3. Structure of imports of basic agricultural products in 2017, %*

Among the main indicators most often used by researchers in assessing the competitiveness of products in the foreign market are the Relative Comparative Benefits Index RCA, the Relative Export Competitiveness Index RXA, the Relative Import Import Index RMP, and the Relative Trade Benefits Index RTA.

The importance of using both export and import in calculating competitiveness is becoming increasingly important as intra-industry trade grows. The indices of relative competitiveness of agricultural products allow us to draw several general conclusions. The RACA relative export



competitiveness index for all types of products is more than one, which indicates that there are certain competitive advantages in these products on the foreign market. We have significant advantages over barley, maize, rapeseed and wheat, as this indicator is essential for these types of products. For other types of agricultural products, in particular livestock, these benefits are insignificant, since this index is only slightly higher than the limit value.

An analysis of the relative import index of the RMP demonstrates the absence of competitive disadvantages and indicates a low dependence on world agricultural imports. RTA Relative Trade Benefits Index, which has a positive impact on virtually all product types studied and indicates a relative competitive advantage in foreign trade in these goods. The negative value of this indicator on sunflower seeds and pork indicates that there are no advantages in foreign trade of this product (Table 2).

In market conditions, the efficiency of production of agricultural products in the economy is accompanied by radical changes in the economic activity of enterprises. High performance in the field of changes in agricultural production technologies, increasing competition in the agrarian food market reduces agricultural producers to take a new approach to the development of competitive strategies. In today's market and market conditions, competitiveness determines the degree of development of society: the higher the competitiveness of a country, the higher the standard of living in that country. The competitiveness of a country is characterized by the level of competitiveness of enterprises, which depends on numerous factors: the competitiveness of manufactured goods in foreign and domestic markets, the capacity and homogeneity of the market, the ease of access to the market, the competitive position of other enterprises in this industry, the competitiveness of other industries, technical competitiveness.

Table 2

## Comparative analysis of indices of relative competitive advantage of agricultural products

Product	2013	2014	2015	2016	2017
RMP					
Barley	0,08	0,09	0,07	0,07	0,10
Maize	1,31	2,42	1,45	1,43	1,57
Beef	0,00	0,02	0,04	0,02	0,02
Pork	0,98	0,15	0,01	0,01	0,05
Rape	0,52	0,60	0,83	0,91	1,08
Sunflower seeds	11,19	13,15	15,38	25,58	26,14
Wheat	0,01	0,01	0,01	0,02	0,03
Milk and dairy products	0,95	0,61	0,13	0,24	0,33
RXA					
Barley	5,96	10,56	9,86	10,46	9,23
Maize	12,63	11,69	12,61	9,85	10,32
Beef	0,75	0,50	0,68	0,60	0,57
Pork	0,00	0,10	0,36	0,02	0,01
Rape	9,16	7,45	6,03	3,76	6,84
Sunflower seeds	0,97	1,09	0,59	1,86	0,63
Wheat	3,51	4,73	6,07	7,92	6,89
Milk and dairy products	0,71	0,75	0,77	0,62	0,57
RTA					
Barley	5,88	10,47	9,78	10,39	9,13
Maize	11,32	9,27	11,17	8,42	8,75
Beef	0,75	0,48	0,65	0,58	0,55
Pork	-0,98	-0,04	0,35	0,01	-0,04
Rape	8,64	6,86	5,20	2,84	5,76
Sunflower seeds	-10,22	-12,07	-14,78	-23,72	-25,51
Wheat	3,51	4,72	6,06	7,90	6,86
Milk and dairy products	-0,24	0,14	0,64	0,39	0,23

Source: author's calculations

The current state policy regarding the development of the agro-industrial complex is intended to ensure the food security of the country, as well as to improve the quality of life of the rural population and to promote the conservation of resources for agricultural production. This is aimed at the implementation

of the priority national law of Ukraine "On State Support for Agriculture of Ukraine", which provides for the procedure of state procurement and commodity interventions: procedures have been developed to stabilize the domestic market for agricultural products, raw materials and food<sup>6</sup>.

In Ukraine, the agrarian sector is a typical branch of the domestic economy, the rise and management of competitive potential, which is of particular importance, especially in the development of import-substituting industries. The policy pursued by the state to protect the economic interests of domestic producers through the application of customs regulations on certain agricultural products is not sufficient to develop import-substituting production and to stimulate the export of competitive agricultural products on the world market. The agricultural sector of the economy needs to increase its production volumes and increase the competitiveness of its products in order to provide domestic producers with a dominant position in the domestic food market. Moreover, in the context of trade liberalization, which is becoming more and more evident for Ukraine with its accession to the WTO, the ban on certain imported products will be restricted by internationally accepted rules.

Leading WTO countries are striving to achieve from Ukraine that they have made as many maximum commitments as possible after opening their market. Their requirements are reduced to the liberalization of the customs tariff, reduction of the level of internal support to the enterprises of the agro-industrial complex, weakening of veterinary and phytosanitary requirements for imported products, removal of restrictions on conditions of access of foreign companies to the internal market, market of services, access to wholesale and retail.

Competitiveness management is the most important

---

<sup>6</sup> Putsentylo, P. R. Competitive development of animal husbandry sector as the highest level of manifestation the competition. Innovative economy. 2014. vol. 3 (52), P. 55-61.

factor in the long-term success of any enterprise. The main objective of agricultural enterprises in a market economy is to ensure the competitiveness of goods. Practical experience shows that this goal is most often achieved by enterprises with higher, more modern production potential.

Also, in order to obtain reliable results of the evaluation and formation of competitive potential, it is necessary to have at the agricultural enterprise a qualified intellectual center with staff, professionally possessing methods of economic work, well-known in the sources of information, capable of objectively assessing the degree of reliability of information, qualified to process and formalize its conclusions. Therefore, the enterprises aim to develop, produce, market competitive products.

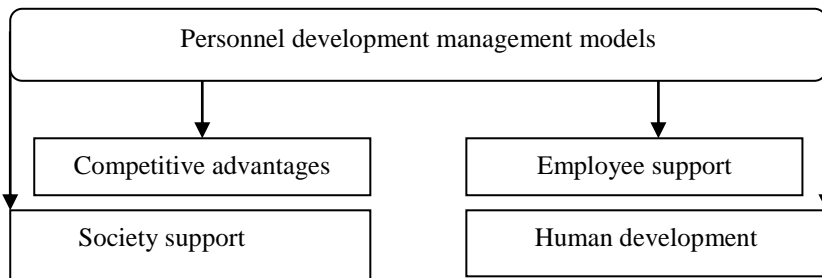
Studies have shown that in the external market for certain types of agricultural products, including meat and dairy products, Ukraine has almost lost its trading advantages in this market. In order to restore them, Ukraine needs to increase, first of all, the production of basic products, but it should be remembered that, in the current context, non-price factors in the global competitiveness come to the fore, among which is the quality of products.

### **1.3. MODERN APPROACHES TO ENTERPRISE PERSONNEL DEVELOPMENT MANAGEMENT**

The level of competitiveness of any enterprise in market conditions is determined by the professional level of staff. The introduction of scientific and technological progress and increased competition between enterprises in the market significantly accelerates the aging of professional skills, knowledge and skills, which in turn reduces the competitiveness of staff and, consequently, enterprises in the market. This necessitates the purposeful professional development of employees according to modern approaches.

Effective personnel development management is especially important in today's global competition and rapid scientific and technological progress, when products, technologies, operating methods and even organizational structures are aging at an unprecedented rate, and knowledge and skills of employees become the main source of long-term prosperity.

The set of actions of the management of a particular enterprise for staff development can be reflected in the form of a model that corresponds to the implementation of strategic goals by attracting human resources to obtain economic effect. Under the model of personnel development management should be understood as a set of certain features and elements that distinguish the company in its behavior in relation to the development of its staff. Currently, there are four effective models used in the practice of domestic and foreign enterprises (figure 1).



*Fig. 1. Models of enterprise personnel development management<sup>1</sup>*

The model of competitive advantage is based on creating conditions for competition of personnel in the enterprise, according to which individual abilities, knowledge, skills of employees should be used as effectively as possible to increase the level of competitiveness of the enterprise. The use of this model provides a constant audit of staff to find the real needs of the enterprise both in quantity and quality. There is a constant control over employees, analysis of their abilities and knowledge, finding out the correspondences between the needs of the company and employees.

In our opinion, the advantages of this model are that each employee aims at continuous self-improvement, improving the level of knowledge and skills.

However, the model of competitive advantage has significant disadvantages, namely:

- a significant level of conflicts in the workplace;
- high level of staff turnover due to: unwillingness of staff to work under constant stress; low team cohesion, etc.

The model of employee support involves increasing the quality of working life of employees. The main measures for implementing the model are:

<sup>1</sup> Plugina, Yu. A. (2013), "Enterprise staff development: approaches, essence, models", *Bulletin of Transport Economics and Industry*, vol. 42, P. 323-327.

- elimination of hard physical labor, mechanization and automation of labor;
- organization of social support programs for employees;
- creation of optimal working conditions, implementation of programs on labor protection and personnel health;
- formation and implementation of organizational culture of the enterprise, etc.

The implementation of this model is aimed at creating a strong individual motivation of employees for self-development and the degree of loyalty to the company.

Among the advantages for the company it is advisable to highlight the developed organizational culture and low staff turnover. However, the implementation of the above measures will not always lead to a real improvement in the knowledge of employees, ie the employee is not always ready to “give” the company as much as received from him. This is a significant disadvantage and risk of implementing this model.

The model of public support involves the implementation through the mechanism of socially responsible enterprise, which is declared as a component of corporate culture and overall strategy. A socially responsible enterprise undertakes to operate in accordance with ethical norms and for economic development by improving the quality of life of the population and society as a whole. That is, socially responsible enterprises carry out their activities in such a way as to meet the expectations of society in compliance with legal, ethical, environmental, charitable, commercial and social principles. Unfortunately, this model of activity is not typical for some domestic enterprises and does not meet the principles according to which economic activity is conducted today.

The model of human development is based on the elements:

- providing the employee with continuing education and training opportunities;
- maintaining the health of the employee;
- maintaining an appropriate level of material support for the life of the employee and his family members.

The main purpose of this model is to reveal and realize the potential of staff, which focuses on all aspects of potential:

- intellectual;
- educational;
- cultural;
- physical;
- creative;
- labor.

That is, the implementation of such a model includes all the best characteristics of the above models, aimed at the multifaceted development of employees, the convergence of coalition goals in the enterprise, which naturally leads to an increase in the level of competitiveness of the enterprise. However, this model is the most difficult to implement due to the large financial, managerial, organizational investments for its implementation.

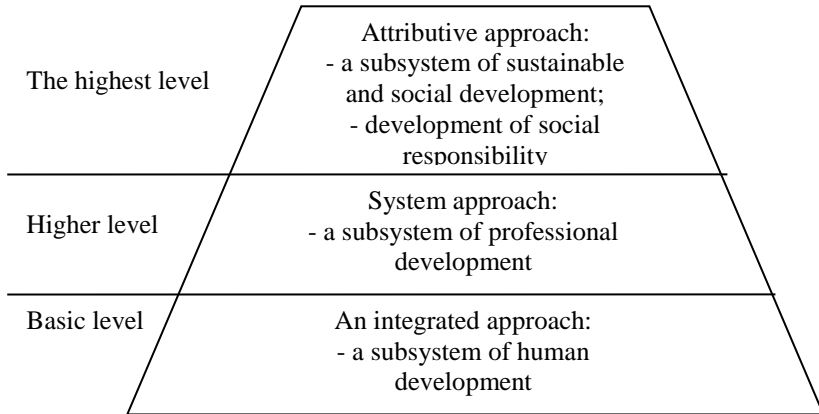
When forming the goals and objectives of personnel development management in the personnel management system, companies must take into account both the world experience of countries with developed economies and their own development strategies. Personnel development processes will change the model of behavior of the staff itself, influencing each of the 6 elements: employees, employees (their colleagues), line management, organization, behavior and initial results.

Approaches to personnel development management vary depending on the level of the attributive structure (figure 2).

In figure 2 it can be seen that the basic level is based on an integrated approach, the highest corresponds to the system,



and the highest corresponds to the attributive approach, which is expressed in the subsystem of professional, human, sustainable (social) development and programs that correspond to them.



*Fig. 2. The structure of the personnel development management system <sup>2</sup>*

Professional development of enterprise personnel is based on human development in the formation of the attributive structure, the main areas of application of which are the formation of skills and technical skills, especially in the initial training of personnel in the education system. On the other hand, professional development of enterprise personnel is the basis for sustainable (and social) development in the formation of attributive structure, the main areas of application of which are socialization and orientation of staff, counseling and employee well-being, diversity of staff policy, cultivation of social responsibility and sustainable development.

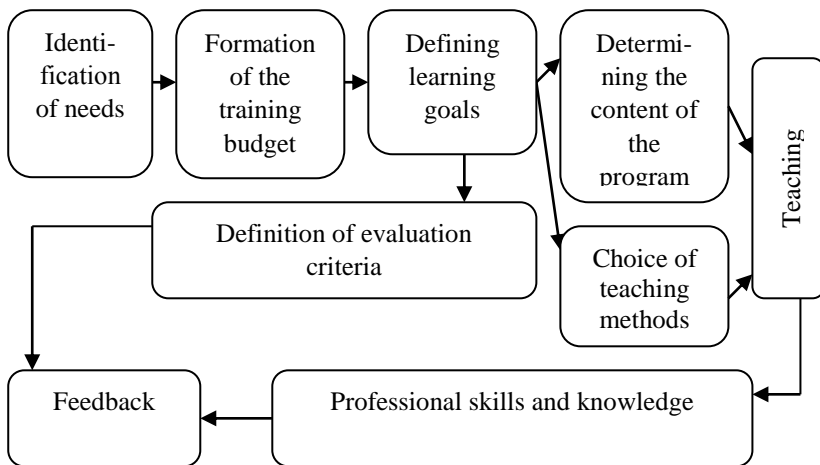
The highest level of the structure is characterized by the general index of global competitiveness. Under the

---

<sup>2</sup> Marra, R. (1997), Personnel management in a social market economy. Moscow: Moscow State University Publishing House. 480 p.

professional development of enterprise staff we understand the development of employees as professionals, ie the development of enterprises for their employees mainly within their professional sphere, which corresponds to the professional development of the individual at the stages of professional adaptation, primary and secondary professionalization, professional skills. The highest level of structure should be characterized by the index of sustainable development, by which the world community understands the path of development, according to which the maximization of human well-being for modern generations does not lead to deterioration and decline in the future.

The organization of the personnel development process can be observed in figure. 3.



*Fig. 3. Organization of the personnel development management process*<sup>3</sup>

<sup>3</sup> Lyubimova, K.O. (2012), “Attributiveness of personnel development management of enterprises”. *Efficient economy*. No 6. URL: [http://nbuv.gov.ua/UJRN/efek\\_2012\\_6\\_30](http://nbuv.gov.ua/UJRN/efek_2012_6_30)

The system of staff training and development is disclosed in the acronym ADDIE<sup>4</sup>.

1. A (Needs Assessment) – identifying training needs and creating a clear picture of who and why should be taught to achieve the strategic aspects of managing the development of the organization's staff;

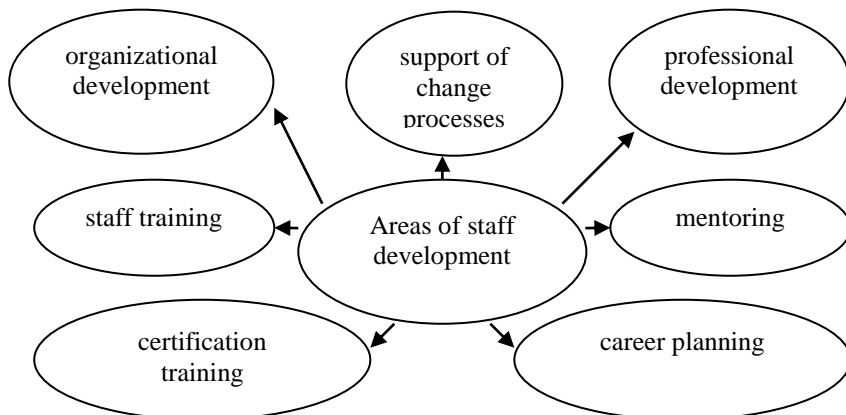
2. D (Program Design) – planning a corporate training program, which determines the timing, budget, categories of staff, methods of training and development;

3. D (Program Development) – development of training programs to solve the problem of training each category of staff;

4. I (Program Implementation) – conducting training according to the planned program.

5. E (Evaluation) – assessment of learning outcomes and development.

Having analyzed the latest trends in the practice of personnel development and theoretical developments in this area, the main approaches to the development of personnel of the enterprise should include the following (figure 4).



*Fig. 4. Areas of staff development*<sup>5</sup>

<sup>4</sup> Yakhontova, E.S. (2013), Strategic personnel management. Moscow. 162 p.

1. Organizational development – the formation of corporate culture, a team of employees who share and profess the values of the organization, as well as the conditions in which development will become a human need, a kind of organizational norm. This type of staff development is quite difficult, because each employee as an individual has its own values and rules of conduct when working in general and with other people in particular. Therefore, the construction of organizational culture of the enterprise should be carried out by senior management in close cooperation with staff.

2. Support of change processes – the area of personnel development related to the preparation of personnel for possible changes in the activities of the organization and to participate in them. Experts identify three goals for supporting change processes:

- change of attitude to work;
- modification of behavior in the right direction for the organization;
- incentives for changes in the structure of the enterprise and personnel management policy.

3. Professional development – an area associated with the preparation of employees to perform new functions, occupying new positions, solving new problems. In large multinational organizations, there are special professional development departments headed by a manager in the rank of director or vice president, which emphasizes their importance to the organization.

4. Mentoring – an area of staff development related to the use of own employees to demonstrate the implementation of various procedures and work to new employees. After the demonstration stage there is a stage of independent activity under the control of the mentor. The employee is then allowed

---

<sup>5</sup> Zbrytska, T.P., Savchenko, G.O., Tatarevska, M.S. (2013). Personnel development management. Odessa: Atlant. 427 p.

to work in a specific workplace in the organization. The purpose of mentoring is to assist employees (trainees) in their professional development. The main tasks of mentoring are:

a) accelerating the process of learning the basic skills of the profession, the development of the ability to independently and efficiently perform the assigned tasks;

b) adaptation to corporate culture, assimilation of traditions and rules of conduct in this unit.

5. In modern organizations, vocational training is a complex continuous process that begins with identifying training needs, which are formed on the basis of the needs of the organization as a whole, as well as the need for employees to perform their current and future production responsibilities.

Studies show that the success of a vocational training program depends 80% on its preparation and only 20% on the desire and abilities of students. Most modern vocational training programs are a combination of different methods of presenting material – lectures, videos, business games, modeling, seminars, trainings, etc. Staff training should be relevant, practical and give the opportunity to receive feedback.

6. Advanced training – training to improve knowledge, skills and abilities in connection with increasing the requirements for the profession or promotion. Further training should be comprehensive in scope, differentiated by individual categories of employees, continuous and focused on promising professions. Staff training can be carried out on their own (corporate university), cooperation with providers of educational services, the purchase of certain training services in the free market.

7. Career planning. The possibility of successful promotion is an effective incentive to get the full return from employees to ensure the success of the enterprise<sup>5</sup>.

Current trends in the world's leading countries are developing in the direction of more efficient, rational use of

labor capital in their enterprises, reducing working hours, the introduction of irregular working hours. Understanding the management of leading companies goes to the fact that it is not the amount of time spent in the company or office determines the efficiency of the employee, but the results he achieves.

In good companies, maximum results are expected, forcing the employee to fill their own working time, and in the best – help to better organize their time for the most productive work.

Global trends in corporate development also confirm that training is possible in the workplace, the responsibility for the results lies more with the employee and his manager. Hence, such modern methods for staff development as coaching, e-learning, buddying, shadowing and secondment were identified.

Coaching is a style of personnel management, the method of which contributes to the mobilization of internal capabilities and potential of human resources, continuous improvement of their professionalism and skills, increasing the level of their competitiveness, ensuring the development of competence that encourages innovative approach in the production process; disclosure of human potential in order to maximize its effectiveness. Coaching does not teach, but helps to learn <sup>6</sup>.

E-learning – a method of distance learning using computer systems. The introduction of E-learning allows staff to gain new knowledge and skills without leaving the main work activity. You can learn both in the workplace and from home using special data for authorization. The result is increased involvement, development of competencies, increased business profitability and a favorable environment in the team. The development of our society is impossible to imagine without the encyclopedia Wikipedia, without blogs,

---

<sup>6</sup>Fomichev, S. K. (2000). Fundamentals of quality management. Kiev: IAPM.196 p.

forums, without the video service YouTube, without Skype, Facebook, Google and others.

Buddying is the support, the help of the subordinate's leadership in order to achieve results through the transfer of educational and developmental information to each other. Buddying is based on providing each other with information and objective and honest feedback when performing tasks related to learning new skills. Buddying is called informal mentoring. When used as a tool for personal development of employees, buddies (literally comrades), acting as a mirror, give each other the opportunity to see themselves from the outside: how a person manifests himself in relation to colleagues, which of his words “work” and which do not.

Shadowing - this method is used mainly to train those who are just going to come to work in the company. Shadowing (“to be a shadow”) is used only by those companies that are willing to accept young people without work experience. For example, a student wants to become an auditor. The company gives him the opportunity to spend a day or two with a working auditor, in other words – to be a shadow employee. Thus, a person witnesses one day of the employee and gets an idea of his chosen job, what knowledge and skills he lacks.

Secondment (business trip) – a temporary transfer of an employee to another department within the organization, and recently – an internship in a completely different company. Employees can be sent to various organizations: large commercial enterprises, government or charitable institutions. As a rule, these business trips are paid, require official permission, are designed for full-time work and last up to 12 months.

The main disadvantages of these methods of staff development are:

–increasing the burden on managers and professionals in the learning process;

–insufficient methodological training, lack of experience and authority of those who teach;

– narrowly professional orientation of education<sup>7</sup>.

Thus, the diversity of approaches to staff development highlights the features, advantages and disadvantages of the most popular methods. However, it should be noted that non-formal learning methods will be effective only if managers at all levels of management and senior management are actively involved, create an atmosphere of trust for free exchange of views, implement leadership programs, team building and creativity.

---

<sup>7</sup> Oliinyk, A.S. etc. (2020), “Competitiveness of personnel as a component of effective activity of the enterprise”. *Economy and state*. No 1, P. 97–101.



## **1.4. THE PROFITABILITY OF OIL CULTURE PRODUCTION AND THE FACTORS THAT CONCERN**

Profit is an indicator that reflects all the qualitative aspects of the operation of the enterprise and the efficiency of management in general. The amount of profit the enterprise receives depends on the dynamics of its income and expenses. Profit is generated at the macro level and is part of the value added created in the process of production, which remains after covering production costs. For any agricultural enterprise, regardless of their organizational form, the main objective is to maximize profits. Its volume and level of profitability are the criteria and the main indicators of efficiency of economic activity of agricultural enterprises.

The size of the profit of the enterprise depends on the established procedure for determining the financial result, the cost of production (goods, works, services), general economic expenses, administrative expenses and marketing expenses. At every stage of revenue generation – gross, from operating activities, from financial activities and net profit – an important point is to increase revenues and reduce costs<sup>1</sup>.

Thus, profit is an important indicator that is a qualitative characteristic of the efficiency of economic activity and the use of all available resources. The mechanism of formation of profit of the enterprise has certain features depending on both the internal factors of the enterprise, which it chooses at its discretion: the type of economic activity of the enterprise, the branch of economy, the form of ownership, the organizational and legal form of management, and from external factors: the general state of the economy, the development of market relationships and more. External factors have a significant impact on the amount of profit received by an enterprise and

---

<sup>1</sup> Lishchishin O. I. Handbook of the economist entrepreneur (terms of market economy). K. 2012. P. 176.

are independent of its activities. Thus, natural and geographical conditions, development of transport and market infrastructure, level of competition, inflationary processes, etc. have a significant impact on economic efficiency. Internal factors include: rhythm of production, material and technical support of the production process, range and quality of production, structure of production, efficiency of use of material, financial and labor resources, marketing and environmental activities, social aspects of the organization of work and rest of staff<sup>2</sup>.

In economic theory, several definitions of the category of profitability are applied: profitability; the ratio of the useful result of the activity in the form of profit to the cost of total expenses for its receipt; comparison of economic results with costs or resources calculated in terms of value; an integral metric summarizing other performance metrics. In any definition, profitability is a relative indicator that will mean the ratio of the sum of the received (expected) result to one of the indicators (Table 1).

Analyzing the cost and profitability of oilseeds, studies have shown that in 2018, the most profitable among these crops was sunflower – 37,4%, but its highest profitability was in 2016 – 61,3%. It is worth noting that 2016 was the most profitable for all oilseeds, so the profitability of soybeans and rapeseed was also the highest this year – 52,0% and 44.9% respectively.

---

<sup>2</sup> Law of Ukraine On Amendments to the Tax Code of Ukraine and certain legislative acts of Ukraine on ensuring the balance of budget revenues in 2018. [Electronic resource] – Access mode: URL: <https://zakon.rada.gov.ua/laws/show/2245-19>

Table 1

## Cost and profitability of oilseeds production

Indicator	2014 y.			2016 y.			2018 y.			2018y. in % to 2014 y.		
	Sunflower	Soybeans	Rapeseed	Sunflower	Soybeans	Rapeseed	Sunflower	Soybeans	Rapeseed	Sunflower	Soybeans	Rapeseed
Full cost per 1 c., UAH	311,8	344,0	324,2	539,3	584,6	630,1	674,6	741,7	799,4	216,4	215,6	246,6
The selling price of 1 c., UAH	390,1	456,8	418,8	869,9	888,6	913,4	927,0	976,1	1043,2	237,6	213,7	249,1
Profit (loss) per 1 c., UAH	78	113	95	331	304	283	252	234	244	322,1	208,0	257,7
Level of profitability (loss), %	25,1	32,8	29,2	61,3	52,0	44,9	37,4	31,6	30,5	X	X	X

In 2018, oilseeds continued to be among the most profitable for farmers. However, there are a number of negative factors. The dominant factor in pressure is the record world oil crop. It is worth mentioning the cancellation of VAT refunds on soybean exports, which forced the Ukrainian farmers market to adapt to new conditions.

The adoption of a law on the introduction of an export duty on sunflower oil in 1999 was a matter of urgency for both the industry and consumers of sunflower oil.

However, the opposite was true: instead of selling raw materials abroad, Ukraine became a serious player, supplying finished products – sunflower oil to foreign markets. The area under cultivation and the volume of sunflower production continue to grow. Increasingly, farmers are relying on domestic raw materials processing, actively modernizing factories. Therefore, despite the effect of export duties, sunflower remains the most profitable crop<sup>3</sup>.

<sup>3</sup> Ryabokon V. P. Management of competitiveness of agro-industrial enterprises. APK economy. 2015. № 7. P. 85–93.

Table 2

Influence of factors on change of mass of profit from sale of production

Indicator	2014y.	2018y.	Deviation (+,-)	2014y.	2018y.	Deviation (+,-)	2014y.	2018y.	Deviation (+,-)
	Sunflower			Soybeans			Rapeseed		
Realized, th. c.	3988	5149	1161	2556	1675	-881	2096	1787	-310
Profit, th. c.	312384	1299110	986726	288098	392632	104533	198366	435654	237288
Total cost l c., UAH	311,75	674,64	362,89	344,04	741,73	397,69	324,18	799,39	475,21
Sales price l c., UAH	390,09	926,96	536,87	456,75	976,12	519,37	418,80	1043,21	624,41
Profit per l c., UAH	78,34	252,32	173,98	112,71	234,39	121,68	94,62	243,82	149,20
Changes of mass of profit, UAH	986726			104533			237288		
Particularly due to:									
Volume of realization	90968			-99293			-29297		
Cost	-1868440			-666191			-849123		
Sales price	2764198			870017			1115708		

Analysis of the dynamics and structure of profits of oilseeds in the enterprises of Vinnytsia region shows that the largest share in the structure of profits during the analyzed period is sunflower. The highest peak of oilseeds yields in 2017 is 2489,0 th. UAH.

To date, one of the pressing problems is the consideration and study of factors that directly affect the magnitude of profits. Any company directs all its efforts to obtain the end result. One of the most important factors influencing profit in

modern conditions are the following: volume and price of sales, cost of production<sup>4</sup>.

The influence of factors on the change in the mass of sunflower profit from the sale of products shows that the biggest impact on the profit of this crop is the selling price, an increase of which 2,4 times allowed the farmers to increase their profit by 2764, 2 th. UAH. In turn, an increase in sales of sunflower seeds by 29,1% made it possible to increase profits by 90.9 th. UAH, and increase the cost by 2,2 times to reduce it by 186,8 th. UAH (Table 2).

Analysis of the flow of factors affecting the profitability of soybeans shows that a decrease in sales by 881 th. c. led to a loss of profit by 99293 UAH, an increase in cost 2,1 times resulted in a decreased profit by 666191,0 UAH., Due to the increase in price sales – profit increased by 870 017 UAH.

Almost a similar situation can be traced to rapeseed, where a decrease in sales by 310 th. c. led to a loss of profit – by 29297 UAH, the cost increase by 2,5 times found its negative impact on the decrease in profit – by 849123,0 UAH, and only by due to the increase in the sale price by 2,5 times the profit increased by 1115708,0 UAH (Table 3).

There is a fairly close relationship between the amount of production costs and the yield, which is directly proportional to.

It is possible to quantify the effect of production costs on the yield of oilseeds by regression analysis.

The equation parameters and their estimates were calculated using statistical analysis methods, namely "Regression" in Microsoft Excel. The probable bounds calculations use the values of the Fisher and Student distribution tables with a probability of  $P = 0,95$ . The results of

---

<sup>4</sup> Kuzminska N. L. Features of functioning of the oil and fat industry of Ukraine. APK economy. 2011. № 12. P. 161–165.

the calculation of the parameters of the equation are given in Table 4 and annexes.

Table 3

Effect of yield capacity on the efficiency of sunflower production in agricultural enterprises of Vinnitsa region, 2018

Indicator	Groups by yield capacity, c./ha					in average
	less than 16	16,1–23	23,1–29	29,1–35	more than 35	
Number of farms in the group	45	60	79	66	43	293
Average area per farm, ha	131	253	422	486	178	321
Sunflower production on average per farm, c.	1938	4533	9613	13163	6691	7704
Yield capacity, c./ha	14,8	21,3	27,0	33,6	44,7	31,2
Production costs per 1 ha, UAH	2578,0	12952,3	17360,4	19993,9	23746,5	17467,0
Total cost of 1 c., UAH	784,6	866,3	803,9	689,3	642,1	674,6
Price of 1 c., UAH	804,5	975,2	943,6	916,3	934,5	927,0
Profit from 1 c. of sales, UAH	20	109	140	227	292	252
Profitability of sunflower, %	2,5	12,6	17,4	32,9	45,5	37,4

The relationship between the values of the function and the independent variables (correlation coefficient) indicates the degree of close relationship between the studied traits. We use the Cheddock table to estimate the degree of relationship<sup>5</sup>.

According to the results of correlation–regression analysis, the coefficients of multiple correlation are: 0,6779 (sunflower seeds), 0,7704 (soybeans) and 0,7519 (rapeseed), which indicates a strong relationship between soybean yield and rapeseed and a significant relationship between the yield of sunflower seeds and production costs per 1 ha of sowing.

<sup>5</sup> Boyko S. M. State of the oil and fat industry of Ukraine, problems and prospects of development. Bulletin of the State Agro–ecological University. Series: Economics. 2016, P. 281–285

Table 4

## Parameters of regression equations and their estimation

Culture	Sunflower	Soybeans	Rapeseed
The value of the Student's t-test (calculated)	15,4093	20,6140	13,2512
Student's t-test value (tabular)	2,03		
Fisher coefficient (calculated)	333,2523	424,9368	175,5940
Fisher coefficient (calculated)	3,14		
Multiple correlation coefficient	0,6779	0,7704	0,7519
Determination factor	0,4595	0,5935	0,5653
<b>Regression equation</b>	<b><math>Y=19,08+1,324 X</math></b>	<b><math>Y=14,31+1,437 X</math></b>	<b><math>Y=15,70+1,384 X</math></b>
The average value of Y	30,7225	23,3514	26,5406
The average value of X	14,3342	12,6711	16,7886
The coefficient of elasticity	0,9037	1,0511	1,2253

According to the Fisher criterion, the equations are statistically significant: the calculated values (333,2523; 424,9368 and 175,5940) exceed the table 3,14.

The significance of the regression coefficients is checked using the Student's t-test. Limits are given in the appendix (t-statistics).

All values of the t-statistics exceed the table value of the Student's t-test, which is 2,03. This confirms the validity of the influence of the selected factors on the result. Therefore, it is possible to proceed with the economic interpretation of the study results.

The regression equations are:

Sunflower seeds  $Y = 19,08 + 1,324 X$ ; Soybean seeds  $Y = 14,31 + 1,437 X$ ;

Rape seeds  $Y = 15,70 + 1,384 X$ .

According to the results of the multiple regression analysis we have the following results.

The value of the coefficient of regression equation determines the coefficient of increase of the variable Y with increasing X i per unit relative to the mean. So, we can draw the following conclusion: with the increase of production costs per 1 ha of sowing by 1 thousand UAH, the yield of sunflower seeds increases by 1,324 c./ha, soybeans – by 1,437 c./ha and rape – by 1,384 c./ha relative to the average values of the sample.

The coefficient of elasticity indicates how much percent the average performance sign (Y) will change when the factor sign (X) changes by 1%.

$$E = f'(x) \cdot \frac{\bar{x}}{\bar{y}}$$

In our case, for a linear equation model we write:

$$E = a_1 \cdot \frac{\bar{x}}{\bar{y}}$$

Therefore, with an increase in production costs per 1 ha of sowing by 1%, the yield of sunflower seeds, soybeans and rapeseed increases by 0,9037 respectively; 1,0511 and 1,2253% relative to the sample mean.

Taking into account the results of modeling the impact of the cost on yield, we calculate the yield increase of the main oilseeds in the enterprises of Vinnytsia region by increasing the costs and their profitability (Table 5).

Table 5

## Return costs in agricultural enterprises

Culture	Increasing costs	Increase in yield capacity, c./ha	Selling price of 1 c., UAH	The cost of crop increase, UAH	Cost return, %
Sunflower	1000 UAH	1,324	926,96	1227,30	122,7
Soybeans		1,437	976,12	1402,68	140,3
Rapeseed		1,384	1043,21	1443,80	144,4



Therefore, the yield of sunflower seeds by increasing costs can increase by 1,324 c./ha. At the selling price of 926,96 UAH/c., the yield increase will be 1227,30 UAH, so the cost return is 122,7%. Similarly, other crops – cost return on soybeans – 140,3% and rapeseed – 144,4%. Table 9 shows the total yield increase and the cost return of oilseeds in the enterprises of Vinnitsa region.

Thus, by increasing the cost of production of oilseeds according to our calculations, the gross collection will increase by 426 th. c. (4,46%), in terms of value the total increase of oilseeds will increase by 558 mln UAH (4,47%), contingent profit – by 132 mln UAH (2,63%).

In a market economy, profit and maximization is the main goal of business and other types of business activity, its main motive. And profit maximization is possible on the basis of high productivity and production efficiency (Table 6).

In terms of profit maximization, it is not only a subjective incentive for the entrepreneur, but also an objectively determined process, because in order to find initiative, creativity and innovation in business activity, production organization, it is necessary to introduce into the production the latest achievements in technology, technology, management. And it requires considerable funds, the source of which is a share of the profit received from business activity. And even if profit is not the sole purpose of the enterprise, it is this factor that predominantly determines the producer's behavior in the agricultural market. Stable profit growth is an indicator of a well-chosen market entry strategy, and on the contrary, unstable profitability indicates that there are gaps in the chosen mechanism of organization, marketing moves or insufficient quality of products<sup>6</sup>.

---

<sup>6</sup> Solomina G. V. Ensuring financial and economic security of entrepreneurship: a textbook. K. Agrosvit . No. 6. 2019. P. 234

Table 6

Estimated yield increase and cost recovery of oilseeds in  
the enterprises of Vinnitsa region

	Area, th. ha	Yield capacity, fact, c./ha	Gross yield, th. c.	Costs, mln UAH	Costs per 1 ha, UAH	Price of 1 c., UAH	Production cost, mln UAH	Contingent profit, mln UAH	Contingent profit per 1 ha, UAH
Fact									
Sunflower	245,9	31,2	7683	4295	17467	926,96	7122	2827	11495
Soybeans	102,7	28,8	2957	1696	16517	976,12	2887	1190	11591
Rapeseed	77,9	30,6	2386	1494	19181	1043,2	2489	995	12773
<b>Total</b>	<b>426,5</b>	<b>30,5</b>	<b>13027</b>	<b>7486</b>			<b>12498</b>	<b>5012</b>	<b>11752</b>
Calculatively in terms of costs increasing									
Sunflower	245,9	32,6	8009	4541	18467	926,96	7424	2883	11723
Soybeans	102,7	30,2	3105	1799	17517	976,12	3031	1232	11994
Rapeseed	77,9	32,0	2494	1572	20181	1043,21	2602	1030	13216
<b>Total</b>	<b>426,5</b>	<b>31,9</b>	<b>13607</b>	<b>7912</b>			<b>13056</b>	<b>5144</b>	12061
Increase									
Sunflower		1,324	326	246	1000		302	56	227
Soybeans		1,437	148	103	1000		144	41	403
Rapeseed		1,384	108	78	1000		112	35	444
<b>Total</b>			<b>581</b>	<b>426</b>	<b>1000</b>		<b>558</b>	<b>132</b>	

In terms of profit maximization, it is not only a subjective incentive for the entrepreneur, but also an objectively determined process, because in order to find initiative, creativity and innovation in business activity, production organization, it is necessary to introduce into the production the latest achievements in technology, technology, management. And it requires considerable funds, the source of which is a share of the profit received from business activity. And even if

profit is not the sole purpose of the enterprise, it is this factor that predominantly determines the producer's behavior in the agricultural market. Stable profit growth is an indicator of a well-chosen market entry strategy, and on the contrary, unstable profitability indicates that there are gaps in the chosen mechanism of organization, marketing moves or insufficient quality of products<sup>7</sup>.

That is why it is necessary for modern agricultural enterprises to create such an economic mechanism of functioning, which will allow to avoid losses, ensure sustainable development, efficient functioning and systematic profit.

The rational use of resources, maximum income generation and high competitiveness can be achieved only in conditions of high-quality innovation and investment development of enterprises.

Therefore, profit is the main generalized indicator in the system of evaluating the efficiency of production, commercial and financial activities of the enterprise. the amount of profit that the company receives, due to the volume of sales, quality and competitiveness in the domestic and foreign markets, the range, cost and inflation processes that accompany the formation of market relations.

---

<sup>7</sup> Solomina G. V. Ensuring financial and economic security of entrepreneurship: a textbook. K. Agrosvit . No. 6. 2019. P. 234

## **1.5. PRIORITIZED DIRECTIONS OF AGRICULTURAL SECTOR OF ECONOMY STATE REGULATION**

Experience of world countries gives evidence of the importance of state regulation of national economy functioning as highly effective system. A state should play a leading role in building and coordinating market processes that take place in all the spheres of economy.

It should be noted that in determining an effective level of state regulation the following issues should be taken into consideration that informative, technological, social economic, political and other spheres of world order are not static their development places certain regulatory and managerial restrictions on state influence measures, thus, separation from doctrinaire approach is a kind of next evolutionary stage of worldwide economy system development. Without taking into account these global trends, building a highly efficient modern economy is impossible<sup>1</sup>. It is necessary to compare the level of state regulation with different international institutions activities, transnational corporations, public organizations etc. In these conditions it is advised to adjust the existing concepts in the social system about the place and role of the state not only in the economy but also in all spheres of society, which meets international standards.

While forming an effective state regulation system of agricultural sector development it should be taken into consideration that state regulation is a reflection and practical realization of agrarian policy, which is conducted by a state, and this directly influences on not only the level of development of agrarian goods producers but also has an impact on rural social sphere. The country food security will

---

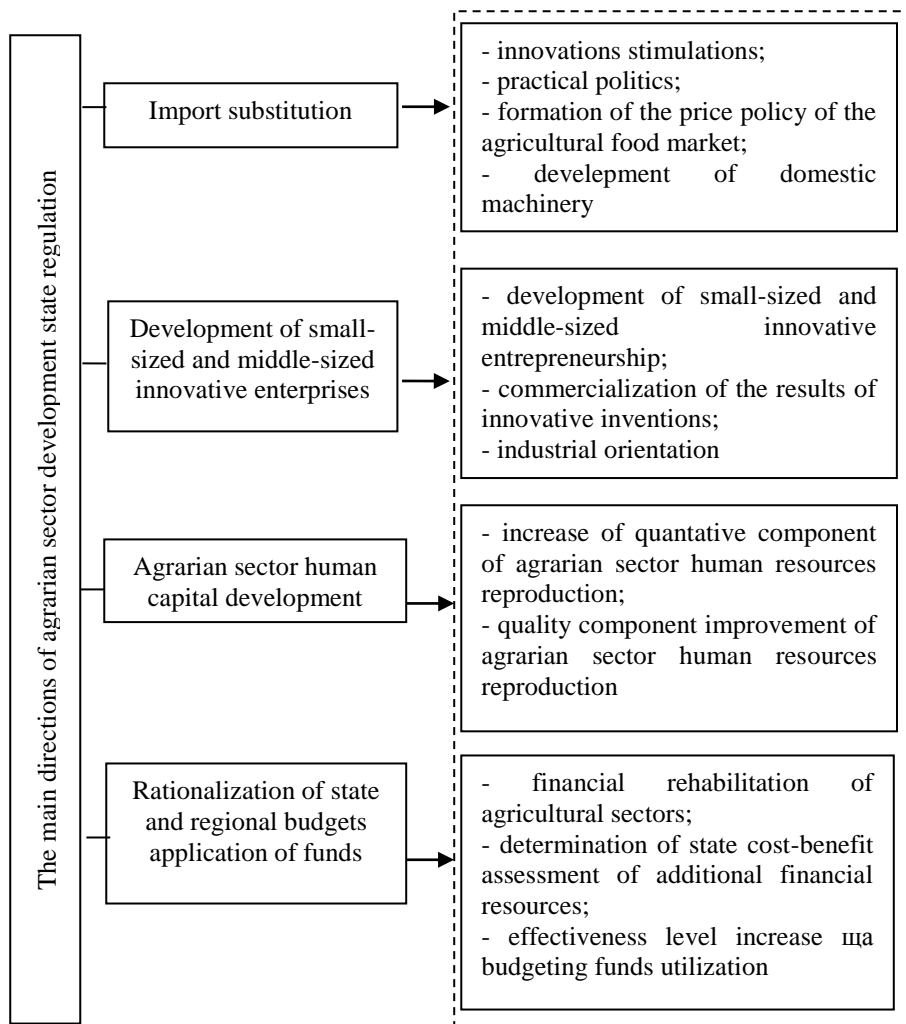
<sup>1</sup> Povazhny O.S. Modern mechanisms of public administration in various spheres and branches of economy : [monograph]. Donetsk : Nord-Press, 2009. 301 p.

directly depend on its quality and effectiveness of measures implementation unforeseen in it.

It is necessary to construct such kind of state regulation system that would be in functional relationship of the expected results from such regulation with activities and also commercial and noncommercial interests of all the participants in the agricultural production.

The most effective tool of state regulation in the modern terms is adoption and realization of state and regional targeted dedicated national programs of agrarian sector development which are the base and insurance of effective and progressive development of region of our interest. Meanwhile it should be noted that a state understanding all the importance of its obligations, would adopt a significant list of programs the main of them would be development of agrarian sector of Ukraine. One of the positive aspects of these programs' implementation should be considered an attempt to overcome accumulated over the past years' problems, which prevent transformation agriculture into highly profitable and highly lucrative sphere of economy.

However, despite certain level of working out the existing strategy of agrarian sector development, there is significant amount of problematic questions that require new concept of its development. Within the scope of this research, considering specified directions and revealed tendencies of agrarian sector development, a proposed by author concept of state regulation forming of sphere development can be found. (Fig. 1).



*Fig. 1. The concept of forming agrarian sector development state regulation system*

*Resource: conducted by the author.*

On our point of view, import substitution should be considered as one of the prioritized directions of agrarian sector development state regulation concepts. Carrying out

comprehensive works in the specified sphere, first of all, will be conducive to reduce the country dependence on foreign food supplies that finally, will relieve the national economy from one of the potential levers of influence (this is too important in the context of ensuring national food and economic security), secondly, implementation a policy of import substitution in agricultural sectors is a basis and guarantee of accelerated growth of all the sectors of agro-industrial complex.

Import substitution should encourage realization of main tasks of the Country Food Security Doctrine<sup>2</sup>, namely:

1. Improving level of domestic agricultural products manufacturers in order to ensure the required and sufficient volume of goods and raw materials production for country food security.

2. Ensuring the physical and economic availability of environmentally friendly food products for the population of the country in sufficient quantities, in accordance with the established rational norms of consumption, as well as their wide range. Meanwhile, import substitution, can have such main performance benchmarks, each of them will be main goal or stage for achieving the next one, based on current internal and external political and economic market conditions and also goals set by the state at a given moment. Besides, each of specified goals during implementation foresees both positive and negative potential consequences for the development of the agricultural sector of the economy.

3. Food imports reduction in absolute terms, regardless of the existing level of development of a particular sector of the agricultural sector.

Thus, from one part, The measures implementation in this direction will help insure domestic producers from certain

---

<sup>2</sup> Sotnyk I., Shaforost Yu. Development of Ukraine's foreign trade with the countries of the European Union. URL: [www.sophus.at.ua](http://www.sophus.at.ua)

risks associated with market availability for imported products; liberation of the domestic food market from foreign competitors, which will provide certain preferences for local agricultural producers, primarily in increasing production.

From the other hand, Entrepreneurs with a limited competitive environment will be discouraged to increase competitive advantages of produced products that, finally, may have negative impact on its quality. In such situation they will be monopolists and that can cause rapid products price rising and also it may lead to lack of some sorts of products caused by temporarily lag between product production development and final product supplies to the market.

4. Exported products volume increase and at the same time imports reduction.

While achieving this goal there will be gradual production increase seen and as the result there will be noticeable domestic producers profitability level increase. Having comprehensive level of state support, the export potential of domestic agrarian sector will improve. At the same time, due to export increase, there will be foreign-currency and gold reserves will increase, which the goods producers would be able to direct to renovation of their capital assets that in return, would also positively influence on stimulating domestic entities to increase their products competitiveness that are produced on the basis of using market influence mechanisms (product quality improvement, price decrease, etc.).<sup>3</sup>

The main negative moment can be considered that the implementation of this goal is aimed on middle and long-term perspective, that in the current conditions of political and economic instability threatens significant risks.

5. Imported industrial products share decrease.

---

<sup>3</sup> Nezdoiminoga O. E. (2017) Development of export of agricultural products in Ukraine. Economy and society. № 13. P. 108–112.



The main positive moment that should be considered is the development of national industrial complex that, in return, gives an impulse to the development of all the agricultural industrial complex sectors, in particular, by increasing the competitiveness of agricultural products, reducing costs, with transition to national industry products, rising prices compared to foreign counterparts. In addition, the implementation of works in this direction, serves to ensure the implementation of a certain social function, namely: rural population employment.

While improving state regulation system taking into account global economic conditions, the economy of Ukraine should move not using the way of catching up development, by another words, follow their leaders, but it should conform the variant of rebuilding a system of functioning various types economic and social institutions. The choice and formation of our own path of development, which would take into account the national peculiarities of our country, in the current political situation, acquires special importance.<sup>4</sup> The national economy requires deep transformations that should base on national science and industry achievements. This task should be considered, considering modern potential of our country.

It should be noted that state policy in the field of import substitution should not be limited only to reduction of imported products volume in absolute terms, but to set a more global goal such as comprehensive development of all sectors of the agricultural sector with a level that ensures food security.

If up to a certain point companies managed to minimize the negative consequences by producing world-class products, purchasing foreign equipment, technologies, patents, know-how, etc., today the implementation of even these half-measures becomes unprofitable. Firstly, due to Western

---

<sup>4</sup> Organizational and economic transformations in agricultural production: coll. materials of the Twelfth Annual Meeting of the All-Ukrainian Congressm scientist agrarian economists. Kyiv, February 25-26, 2010. Kyiv: NSC "IAE", 2010. 618 p.

partners restrictions on key domestic high-technological sectors access to modern technologies that directly affects their efficiency and complicates the ability to conduct production activities at a competitive level; secondly, this is economically more expensive way because of constant change of currency exchange rate that caused a significant change of creating, renewing and modernizing capital assets costs. And as the result, there is products manufactured by Ukrainian producers price increase, which causes products competitiveness decrease not only on the international but also domestic market, and ultimately it has a detrimental effect on the real income of the population, leads to a decrease in its standard of living and welfare.

However, on our point of view, the necessity in situation change where not only goods producers but also national economy as the whole found to be, has long arisen. After all, problems that appear as a result of threatening negative phenomena appearance, have been accumulating and thus it requires a balanced policy of R&D development in the context of ensuring economic and food security of the country.

The urgency of specified changes is driven by current global development trends, primarily rapid progress in many science intensive industries, such as machine building, mechanical engineering, IT technologies, etc. The critical backlog in these directions can be clearly noticed in Ukraine, therefore, without proper attention from the state, without a clear program and concept how to overcome the innovation crisis, the national economy will continue caving on development level in comparison with the developed western and eastern countries, and in the future this will lead to threatening negative consequences.

It should be stated that in the current situation, the state has been given a leading role that is in the following:

1. Form an effective scientific and technical policy.

2. Support of existing state and non-state economic entities that carry out their activities in the field of R&D, the priority of which is technological renewal of production assets of enterprises.

3. Determine the vector of development and as well as priority areas, strategies and mechanisms for the development of science intensive industries.

The analysis shows that the Strategy of Innovative Development of Ukraine for the period up to 2030 does not pay enough attention to the development of small-sized and middle-sized enterprises that carry out scientific, design and production activities in science intensive industries.

On our point of view, the development of small-sized and middle-sized business should be understood as one of the most promising areas, considering their specific activities that are based on well-known principles and benefits of doing business:

- high degree of production specialization and an ability to work under individual orders;
- relatively low initial investments;
- faster adaptation to new market conditions compared with big enterprises.

Indicated main features of business activities are specific for mentioned categories of entrepreneurs, are currently key and very important for the implementation of the policy of innovative development of Ukraine, namely, to achieve the greatest effect in the shortest possible time with lower expenditures from the state budget.

Besides, the growth of small-sized and middle-sized entrepreneurship can be really profitable and beneficial for big enterprises and small corporations when they require ideas and startups created by small and middle-sized innovative enterprises, with their further development and large profits, which is beneficial for both parties. Thus, large enterprises save money and time on product development and initial

promotion, and small and middle-sized enterprises will receive significant financial resources that can be invested in the development and creation of a new innovative product.

Thus, the following positions should be taken into account within the current strategy of innovative development of Ukraine.

1. Initiation to create small-sized and middle-sized innovative enterprises engaged in R&D, as well as the implementation of scientific developments in the production process, therefore, meeting market needs for products of high technical and technological level, based on growth of small-sized and middle-sized enterprises in perspective high technological spheres.

2. Formation of consumer demand for innovative products of domestic production by building a marketing policy aimed at promoting products of domestic science-intensive production.

Today state support of small-sized enterprises is in following aspects:<sup>5</sup>

- the opportunities for the state to subsidize interest rates on loans should be increased and also an opportunity to participate in equity investments financing of socially significant objects would reduce the risks of commercial banks;

- expanding the activities of funds for financial support of entrepreneurship, which accumulate budget funds and finance programs for the development of small innovative enterprises, meet the needs of enterprises in credit resources and provide guarantees for them;

- use of bank insurance mechanism with state participation, which plays a role of insurance company that

---

<sup>5</sup> Kernasyuk Yu. V. (2017) Neural artificial networks as an effective tool for adaptive forecasting in the agricultural sector of the economy. Scientific works of Kirovograd National Technical University. Economic sciences: coll. science. Kropyvnytskyi: CNTU. Is. 32. P. 224–231.

offers banks reinsurance services and as the result this reduces uncertainty and risks during financing small innovative enterprises;

- stimulate growth of micro financial enterprises – credit cooperatives that ensure small-sized enterprises and individual entrepreneurs access to loans and borrowed funds;

- development of nonbanking support infrastructure of small innovative enterprises that includes leasing, factoring companies and venture funds.

However, despite the wide range of support areas provided to domestic innovative small and middle-sized enterprises, there are many barriers to the development of this category of enterprises that is related to the financial side of the issue, improvement of existing mechanisms, methods of financing and support.

The main direction of state regulation is improvement of loans and guarantees system on credits, that is one of the most effective in the list of traditional tools to support innovative enterprises for today.

Situation that can be seen today in bank sector as to loans providing to small innovative enterprises is really tense because the highly demand to attract borrowed funds is satisfied only by 20-25%. In addition, short-term loans predominate in this area as the least risky type of investment for the banking sector, but they do not meet the long-term goals of innovative development in this area and are designed to solve only situational needs.<sup>6</sup>

This problem can be solved on the basis of the development of a state state guarantees system for loans, that will provide greater attractiveness for banks in the process of lending to small businesses; creation of specialized credit institutions that will be engaged in lending to innovative

---

<sup>6</sup> Larina T. F. Modernization of the agricultural sector as a component of economic security of Ukraine: theory and practice. URL: <http://univd.edu.ua/science-issue/issue/765>.

enterprises. But it should be considered that proposed measures are a significant burden on the state budget, so additional analysis is required to compare the economic and social effects of such measures with the amount of money that the state could potentially allocate for their implementation.

Formed modern current market situation in the agricultural sector raises qualitatively new requirements for the production process on an innovative basis, including the implementation of the latest developments in various fields: machinery, technology, management, marketing policy, etc., that requires from the state creation of such level of managerial conditions that would allow enterprises of all categories of entrepreneurship to use the latest scientific benefits.<sup>7</sup>

The strategy of stimulating the innovative development of the agricultural sector foresees the following directions.

1. Development of consultant services system that should base on close cooperation of enterprises with high education institutions of agrarian profile and also between small-sized and middle-sized innovative enterprises. Thus, on the one hand, agricultural enterprises get operational access to the latest domestic scientific achievements related to the improvement of all elements of the production process, and on the other - organizations engaged in R & D, have the opportunity to test their researches in practice with their subsequent commercialization.

2. Stimulation of demand (access) Of enterprises to innovations and also their implementation into production process.

3. Development of a system of making actionable, highly effective management decisions, based on a scientific basis with the main goal - to increase the level of competitiveness of

---

<sup>7</sup> Popova O. L. (2010) Theoretical bases of sustainable development of agrosphere and formation of adequate Ukrainian strategy. Collection of scientific works of NSC "Institute of Agriculture UAAS". Is. 3. P. 18–27.

a business entity. Improvement of managerial decisions making mechanism is seen in the change of enterprise management organizational process principle.

4. Improving innovative activities organization in terms of stimulating development of domestic seed and breeding farms, whose activities are based on the latest scientific achievement in breeding and genetics.

It should be stressed that main state regulation measures should be concentrated in two key directions.

1. In order to raise the rate of the production base there should be foreseen measures to increase the efficiency of their own reproductive capacity of enterprises engaged in innovation and selection activities on the basis of financial leverage, assistance in the purchase of breeding and breeding stock, as well as the latest varieties of crops.

2. Working out new policy for growth of selective and breeding farms that foresees modernization of existing organizational structure of mentioned agrarian sub-sector functioning on the basis of forming closer cooperation relevant Ministry with entrepreneurs that are engaged in such activities. The main aim of that is to increase effectiveness of enterprises support that work with innovative - selective activities and also to promote produced by such enterprises products by means of state mechanisms usage (for example: as one of the conditions is providing agricultural enterprises subsidiaries to purchase products of domestic selection, etc.).

Thus, the formation of a strategy for innovative development of the agricultural sector of Ukraine should be based on the development of a tripartite system of cooperation: research and development institutions-agricultural enterprises-state.

In the terms of formation and development of modern domestic market situation, promotion by Ukraine of exported goods, pressure from the countries, a list of problems was

revealed that in the current situation have become more sensitive. Some aspects of these problems have already been highlighted in this research, in particular the concept has been considered, but it is necessary to dwell on some important positions.

It should be stressed that one of the agricultural sector development concept directions is the rural social sphere improvement that in nowadays should be among the priorities of state regulation, because in the current complicated for the country conditions, the social obligations taken by the country should be completed. It is exactly the level of development of the social sphere that largely determines the stability of the political situation within the country, which is extremely important.

The need for rural population human capital growth should be one of the primary areas of state regulation not only within the concept of agricultural sector development, but also a priority in planning the overall concept of the country's development in the near future. First of all, it can be explained by the fact that during social and economic country development planning a state should adhere to the principle of social justice, which provides for equality in the living conditions for people from different social groups. It should be noted that this principle is not completely kept. Secondly, it should be stressed that from the level of agrarian sector human capital growth definitely depends the general level of development of the agricultural sector at both the state and regional levels<sup>8</sup>.

The development of agrarian sector human capital, on our point of view, should be ensured by improvement of the system of its reproduction in quantitative and qualitative aspects.

---

<sup>8</sup> Chukhno A. A. (2008) Scientific and technological development as an object of study of evolutionary economic theory. *Economy of Ukraine*. 1. P. 12–22.



As to quantitative component of human capital reproduction all the efforts should be focused on correcting the demographic situation in rural areas in the following directions:

- reduction of rural population mortality level, first of all excessive mortality of men of working age, on the basis of implementation of the following measures: carrying out at all levels (state, regional, local) the policy promoting a healthy way of life; improving the quality and level of availability of medical services, etc.;

- creation in the rural areas new jobs as well as optimization of the employment structure through the integrated development of the agricultural-industrial complex;

- to increase level of salaries in the agrarian sector to the level of an average salary for region's economy.

Along with improving the demographic situation, focus on improving the human capital reproduction quality in the agricultural sector that foresees the following directions:

- to improve the quality and accessibility of general education services for the rural population by opening modern secondary schools with a high level of equipment, with all the necessary infrastructure or proper modernization of existing institutions, and also to hire highly qualified pedagogical staff to for working in rural areas;

- to improve qualification level of employees, working in agriculture sphere, that, in return, will ensure an opportunity of seamless implementation of scientific and technical achievements;

- rural labor prestige increase as a base of employees motivation growth to reproductive work;

- to creatr a favorable social climate in the countryside, optimal for integrated personal development, based on the development of social infrastructure that can stimulate the education of young people of high spiritual and social values, as well as policies aimed at reducing crime;

- development of social and engineering infrastructure;
- salaries level increase and also amount of labor pensions increase;
- support for socially vulnerable groups, etc.

Outlined state regulation concept provisions of agricultural sector innovative development are, somehow, the basis for overcoming the lag in the level of economic development of Ukraine in comparison with the developed countries of the world. However, it should be recognized that this concept realization requires significant number of subsidies both form national budget and regional budgets. In this situation special attention should be paid to the state regulation regarding financial rehabilitation of agricultural sector by means of agrarian product producers support system improvement on the basis of rational usage of budget funds on all levels.

Setting a list of tasks that must be done in the context of providing support to the agricultural sector is not as obvious as traditionally thought. Many of the scientific researches analyzed consider insufficient level of financial assistance from the state budget as an indisputable factor regulating the agricultural sector development, as well as overcoming the crisis, and the main way to correct the situation is to multiply budget allocations at various levels. It should be reckoned that such conclusions have base and have been confirmed by the analytical research of agricultural sector of Ukraine and developed western countries and it has identified significant difference in amount of allocated financial flows that are calculated using volume of agricultural output or unit of cultivated area.

In addition to increasing the financial resources amount from the budgets of different levels, it would be appropriate to attract mechanisms of state regulation aimed at financial rehabilitation of the agricultural sector:

1. Create investments policy that will be based on the principles of providing certain preferences to potential domestic and foreign investors by insuring risks on a preferential basis.

2. Stimulate financial stability of enterprises improving loan policy, to increase interest rate subsidies on investment loans, as well as simplifying the borrowing mechanism.

3. Improve the mechanism of budget subsidies for entities based on the simplification of the algorithm for obtaining budget allocations in order to increase their availability for small and middle-sized agricultural producers.

On our point of view, special attention should be paid to such positions as: economic feasibility of the state allocation of additional financial resources, and also increase of the level of their usage effectiveness. The outlined directions are considered as main priorities within qualitatively new, socially oriented, concept of innovative development of agricultural sector.

The determination of economic feasibility of required level of agricultural sector financial support allocating means the following algorithm: <sup>9</sup>:

- to determine concrete limitations during planning the amount of financial allocations from the budget,

- taking into account the determination of the maximum amount of money available for allocation from the budgets of different levels;

- analysis of external and internal conditions of the agricultural products market;

- forecast of expected effect depending on provided by the state policy of agrarian sector support. Besides, the it is required to determine minimum amount of financial resources that are allocated to the needs of the agricultural sector, the

---

<sup>9</sup> Kuchukov R. (2002) State support of agriculture in countries with developed market economies. Economist. P. 91–94.

amount of which will not greatly affect the final performance of industries;

- to choose the mechanism of agricultural producers support with taking into account the specifics of agricultural sectors, within which it is necessary to make a detailed calculation of the dependence of the results of economic activity of rural producers with a consistent increase in funding from minimum to maximum possible budget funds;

- to estimate the level of economic effectiveness for agricultural sectors from provided additional state subsidies. Within this stage it is necessary to take into account the specifics of operation, as well as the principles of organization of the production process in the agricultural sector, it means that it should clearly defined for what purposes the funds will be allocated - production or non-production;

- estimation of budget effectiveness from carried-out actions calculated potentially received to budgets financial resources against budgets of different levels to its allocated volume of financing.

To increase level of effectiveness of funds utilization allocated from the budgets of various levels it is necessary to complete the following complex of measures <sup>10</sup>:

1. to identify the potential threats and risks that may be faced by entrepreneurs during state adopted programs realization, to determine mechanism of protection in case of such situations appearance that will be designed to neutralize any possible negative effect.

2. To ensure required volume of provided state support that would be enough for profitability of agricultural enterprises that is necessary for the implementation of expanded reproduction, according to the innovative scientific

---

<sup>10</sup> Vasilieva L. M. (2011) State regulation of the agricultural sector of Ukraine in terms of system modernization: conceptual theoretical provisions and directions of further development: monograph. Donetsk: Yugo-Vostok LLC. 392 p.

principles of the organization, using the products of domestic science-intensive industries.

3. Effective control of budget funds expenditure by implementing targeted focuses, that should be achieved as the result of these funds spending.

Thus, improving state role in agrarian policy should be considered as the main directions of its development on new qualitative basis. All means of state influence on agricultural sphere should be coordinated with society interests and agricultural goods producers' interests. Only by this way it is possible to ensure competitiveness, economical use of resources that will correspond functioning norms and all subjects interaction, increase attractiveness for investors.

## **SECTION 2.**

### **FINANCIAL AND INVESTMENT SUPPORT OF THE AGRICULTURAL SECTOR ACTIVITY AS A NECESSARY PREREQUISITE FOR ITS STABILITY**

#### **2.1. THEORETICAL PRINCIPLES OF CAPITAL OPENING IN INTERPRETATION ECONOMIC SCIENTISTS OF THE XVI - XIX CENTURY**

The study of the essence of capital as an economic category takes place in the process of its formation and use at both macro and microeconomic level. A special place belongs to the multifaceted category of "capital" in the studies of economists for several centuries, which laid the foundation of scientific heritage. To date, the development and tenets of economic scholars on the category of "capital" have not lost their relevance in the field of financial science <sup>1</sup>. But at the current stage of transformational changes, both in the world and in our country, in particular, it is necessary to deepen the comprehensive study of the assets of the world economic thought, financial theory, medicine and practice in the process of capital reproduction.

The theoretical basis for understanding the problems of capital reproduction is laid down in the works of famous foreign economists A. Turgot (1961), F. Quesnay (1963), W. Petty (1940), K. Marx (1930), J. Mill (1826), D. Ricardo (1955), A. Smith (2001) and other researchers.

Different aspects of capital accumulation are revealed in the works of domestic scientists and contemporary foreign researchers: V. Balitska (2008), N. Davydenko (2018), S.

---

<sup>1</sup> Lemishko O. O. (2019). Vidtvorennia kapitalu v ahranomu sektori ekonomiky: problemy rozrobky i realizatsii finansovoi polityky: monohrafiia. [Capital reproduction in the agricultural sector of the economy: problems of financial policy development and implementation] K.: NUBiP Ukrainy. 779 p. (in Ukrainian)

Kwasha (2018), V. Chebotaryov (2019), Thi Phuong Vy Le, Nguyet Phan Thi Bich (2018) Raurich X. (2012) and other scholars. In their research, attention is paid mainly to the capital structure of enterprises of different activity spheres, the problem of capital formation of agricultural producers, the formation of credit and financial policy in the context of modern reforms. Many previous developments have high efficiency and feasibility, but do not adequately cover the evolution of the process of capital reproduction and its economic nature.

The purpose of our research is to determine the economic nature of capital and its process of reproduction, to consider theoretical approaches to the formation of the conceptual apparatus of capital as an economic category and its accumulation, analyzing the scientific approaches of representatives of different schools of economic scholars.

The gradual development of commodity-money relations is the foundation of early capitalism. It was during the new economic changes of the late Middle Ages that the school of economics, which for the most part merely explained economic phenomena and had a religious basis, rose to a new level of analysis of reality and to receive new interpretations of the micro and macro processes of social development. And it is at this time that the abstract concept of "capital" is filled with specifics, completeness, and objective analysis of economic phenomena. That is, the historical process of adequate perception of the category of "capital" began, the formation of its functional elements, changes in its forms and proportions at the empirical level. It was the development of trade and merchant capital that took place on the territory of the decay of feudalism and the emergence of capitalism, which contributed to the emergence of a new economic school - the school of mercantilism. Mercantilism («mercante» - merchant) - in its most complete form - represents the economic thought of the

late Middle Ages and originated in Western Europe in the fifteenth century, but became widespread in the seventeenth century. In that historic period, Genoa, Venice and Florence in Italy, Bremen, Hamburg in Germany, Lviv and Kiev in Ukraine became important centers of economy, trade and culture. It is the unprecedented development of trade and the emergence of the world market that prompts the formation of national economies on a market basis, and the initial accumulation of capital is carried out with the active support of the state. Significant revival of foreign trade in Western Europe, the flowering of commercial capital, which subordinated small producers and, very importantly, penetrated the sphere of production itself, contributed to the transition to a capitalist mode of production. Mercantilism explained its essence in the theoretical dimension on the basis of the generalization of the experience of the initial accumulation of capital. Historically, a real base has been laid for the flourishing and enrichment of this scientific school. Over time, the purely theoretical school of mercantilism laid the foundation for the practical acceleration of the process of capital formation. Although "... in the study of money as a specific form of capital, the concept of "capital "was not directly used by mercantilists ..., they understood that in order to multiply wealth, money should be involved in the production process, that is, take a production form and then turn into a freight »<sup>2</sup>. Therefore, the specific formula of monetary (merchant) capital of mercantilists had the following interpretation: money should generate money, accumulation of money in the form of gold, silver, jewelry generates wealth; The prerequisite for obtaining wealth is production (which must be constantly encouraged and stimulated), and the source of wealth and profit is the sphere of circulation, trade (where

---

<sup>2</sup> Balitska V. (2007). Capital Enterprises Ukraine: Trends, priorities. K. : Instytut ekonomiky ta prohnouzuvannia NAN Ukrainy. 10. P. 10. (in Ukr.).



goods are sold at a higher price). That is, a necessary condition for capital formation is not only the accumulation of money, but also their in circulation, which causes an increase in money capital. At the macro-level, the mercantilists considered foreign trade as the main source of accumulation of national wealth. Following the principles of protectionism, mercantilists promoted at the state level the promotion of the sale of national goods abroad to create an active balance of foreign trade. In the history of economic thought distinguish between "early" or "monetary" mercantilism (which corresponds to the theory of monetary balance) and "advanced" or "late" mercantilism (which corresponds to the theory of trade balance).

The growth of capitalist forms of economy and the expansion of foreign trade prompted a process during which in the second half of the fourteenth century the system of monetary mercantilism is replaced by the system of mercantilism of the manufactory. Late mercantilism put in the first place the task of attracting money to the country (based on a balanced trade balance), which contributes to the accumulation of national wealth. That is, the increase of money capital in the country should occur due to trading operations, in which the monetary value of purchases should be less than the amount of sales of their goods. Both early and late mercantilists promoted state interference in the economic life of the country as a prerequisite for ensuring a monetary and trade balance.

Gradually, thanks to practical merchant relations, theoretical ideas and views of mercantilism penetrate into all economically developed countries of that time, as well as into Ukraine. Historically, mercantilism in our country was initiated by the prominent statesman, Hetman of Ukraine Bohdan Khmelnytsky (1595-1657). Contributing to the formation of the internal market and the separation of trade into a separate industry, B. Khmelnytsky simultaneously implemented a policy

of protectionism and strengthened trade relations with other countries, comprehensively stimulated the development of trade<sup>3</sup>. Hetman's prudent strategic policy was based on active state intervention in economic life and aimed at long-term political and economic relations with other states, including the conclusion of long-term trade agreements. In addition, foreign merchants received hetman universals on the protection of persons, goods and property, which comprehensively encouraged their activities. The financial policy of a prominent statesman was also very moderate and far-sighted: first, the hetman issued a universal forbidding to demand any tribute from the Kyiv burghers, allowed the merchant to erect new commercial and industrial premises, and, on preferential terms, to use urban and commercial buildings, structures; second, by managing customs tariffs, exempting gold, silver and precious stones from import duties, but imposing them on high export duties not only strengthened trade relations at the border, but also increased the additional product of the state and the rate of its accumulation; thirdly, during the reign of B. Khmelnytskyi, the reformation and improvement of rent relations took place, namely the replacement of working rent with natural and monetary ones. It is this policy of a prominent statesman that facilitated the process of active accumulation of original capital, the development of productive forces and the revival of social life in Ukraine.

Consequently, mercantilism (especially its late form) can be considered the first line of economic science, which not only theoretically comprehensively covered the sources of the initial accumulation of capital, but also tried to practically solve the problem of accelerating this process. It was the mercantilists, who left more than 200,000 works, who were the

---

<sup>3</sup> Lemishko O. O. (2019). Vidtvorennia kapitalu v ahrarynomu sektori ekonomiky: problemy rozrobky i realizatsii finansovoi polityky: monohrafiia. [Capital reproduction in the agricultural sector of the economy: problems of financial policy development and implementation] K.: NUBiP Ukrainy. P. 28. (in Ukrainian)

first to try to find out the levers, tools and mechanism for implementing the financial policy of functioning of monetary capital. As a school of science, mercantilism emerged in the new economic conditions associated with the development of commodity-money relations and became a sound basis for the growth of economic thinking in the capitalist era. And the first sprout of this economic thinking that originated in the bosom of mercantilism was the classic economic school.

The founder of classical political economy, its "father" is considered the English economist William Petty (1623-1687). In his early writings, the scientist, like the mercantilists, attached importance to the accumulation of money. Thus, in his treatise on taxes and fees, which refers to the sources and structure of such a financial lever as taxes, W. Petty, emphasizes that the possibility of tax revenues is limited by the population and the amount of money; also, the scientist defines such a financial category as rent and interprets it as a product of labor and its magnitude as the difference between the cost of agricultural products and the cost of production<sup>4</sup>. It is believed that the very interpretation of rent relations in agriculture is a theoretical property of W. Petty. Labor and land in W. Petty's theory of value are of exceptional importance and are placed alongside<sup>5</sup>. He was one of the first to seek to find value proportions between these economic categories, which served as a solid basis for further studies of economic theory, including the accumulation and reproduction of capital in agriculture. But W. Petty's greatest merit was the following: having a considerable mathematical knowledge, the scientist became one of the founders of the introduction of economic and statistical methods for the study of economic processes; W. Petty was the first to establish a purely scientific basis for

---

<sup>4</sup> Petty W. (1997). Treatise on taxes and fees; Verbum sarianti is a wise word; Miscellaneous about the money M.: «Os-89» (in Russ).

<sup>5</sup> Petty W. (1940). Economic and statistical work. M.: Sotsekhiz (in Russ.).

cognition of capital as an economic category, and in a new way, to clarify the relationship of property relations with industrial relations <sup>6</sup>.

Having analyzed the theoretical principles of capital formation, on the basis of the presented material we propose to determine the criteria for quantitative assessment of the components of capital:

$$\sum_k \rightarrow \max,$$

Where  $\sum k$  – the volume of capital.

In the process of capital formation we distinguish the following components - gold, money, commodity:

$$N_k = f(G; M; C),$$

where -  $N_k$  - the function of capital formation, where G is gold, M - money, C - commodity.

Substituting the aforementioned components on the volume of their revenues, we obtain an equation that has the following form:

$$y_x = a_1G + a_2M + a_3C;$$

Parameters a (1-3) are the amounts of proceeds from trading operations, and G, M, C are the values of the components of capital.

Using the above parameters, we tried to analyze the process of capital formation according to the views of the mercantilists. Using this approach, we will further analyze the views of scholars of different economics schools on the economic category of "capital" and theoretical and methodological understanding of the process of its reproduction.

---

<sup>6</sup> Petty W., (1662) The Economic Writings of Sir William Petty, vol. 1

The first stage in the development of the classical school of political economy completes the school of physiocrats. Physiocracy (from gr. physis - nature, kratos - power) means the power of nature. Physiocrats have based their teaching on the study of the principles of economic relations in society with the free action of the natural order, arguing that only granting the full freedom of action of natural laws can carry out the common public good. The prominent representative of the school of physiocrats was François Quesnay (1694-1774), who developed the methodological foundations of the theoretical system of physiocracy, covering: the theory of "natural order", the theory of pure product, the theory of capital, the theory of the cycle of wealth (social reproduction). Using W. Petty's scientific methods in the study of economic sciences, F. Quesnay proclaimed the idea of "natural order", the basis of which he considered property rights. The basis of Quesnay's economic doctrine, like physiocrats as a whole, is the doctrine (concept) of pure product. According to Quesnay, a "pure product" is created only in agriculture (since only nature is capable of increasing consumption values in agriculture) and is an excess of agricultural output over production costs. The following approach to F. Quesnay's pure product concerned the economic category of "capital": the scientist noted that the value of a pure product is well defined and depends on the cost of production, that is, the cost of raw materials, materials and wages; the cost of raw materials is the cost of capital, and therefore, a pure product is not a gift of nature, but the result of additional labor of the farmer. Of great merit to F. Quesnay, who paid considerable attention to the material composition of agricultural capital, is the first attempt in the history of economic thought to differentiate between the components of capital, namely: annual expenses (seeds, livelihoods of workers), or "annual advances", and the costs of several years (agricultural implements, livestock) - "initial advances". The

foregoing demarcation of F. Quesnay depends on the method of transferring the cost of the finished product to different parts of capital: "the annual advances" are fully included in the production costs and "the initial advances" are partially included. The progress of F. Quesnay scientific doctrine was that, unlike the mercantilists, he viewed capital in a rejuvenated form; that is, capital, in his opinion, is not money, but the means of production that can be purchased for money <sup>7</sup>. Thus, François Quesnay approached the structuring of capital from the point of view of its reproduction and for the first time laid the theoretical basis for determining the components of capital: initial advances, such as having a long circulation period and are fully included in the costs of production (ed. - fixed capital), and annual advances with an annual turnover period and are partially included (working capital). The description of the process of reproduction and circulation of all social product F. Quesnay gave in the famous "Economic Table." Macroeconomic models are used in their studies by modern economists in the study of mechanisms, instruments and levers of influence of financial policy on the reproduction of capital <sup>8</sup>, <sup>9</sup>, <sup>10</sup>, <sup>11</sup>, <sup>12</sup>, <sup>13</sup>, <sup>14</sup>, <sup>15</sup>, <sup>16</sup>, <sup>17</sup>, <sup>18</sup>. F. Quesnay laid the foundations of

<sup>7</sup> Kene F. (1963). Selected economic works M.: Izd-vo sots.-ekon. lit. (in Russ.).

<sup>8</sup> Balitska V. (2008). Organizational-functional mechanism of influence on capital formation of enterprises. Investments: practice and experience (Investysty: praktyka ta dosvid). P.13–19.

<sup>9</sup> Balitska V. (2007). General parameters of cash flows of Ukrainian enterprises. Formation of market relations in Ukraine (Formuvannia rynkovykh vidnosyn v Ukraini). 7. P. 121–126 (in Ukr.).

<sup>10</sup> Chebotarov V. (2019). Establishing a Business in Ukraine – the Initial Regulatory Organizational and Legal Aspects for Polish Entrepreneurs. Comparative Economic Research 1, 75-86. <https://doi.org/10.2478/cer-2019-0005>

<sup>11</sup> Chebotarov V. (2018). A Comparative Cross-Cultural Analysis of the Profile of A Modern Ukrainian Manager: the Imperatives of the Future in the Context of Internationalization. Comparative Economic Research 3, 63-74. <https://doi.org/10.2478/cer-2018-0019>

<sup>12</sup> Hsu, Wen Chung; Wang, Chengqi; Clegg, Jeremy (2015) The Effects of Outward Foreign Direct Investment on Fixed-Capital Formation at Home: The Roles of Host Location and Industry Characteristics (Global economic review) 44. 3. 353-368.

<sup>13</sup> Kvasha S., Davydenko N, Pasichnyk Y, Viatkina T., Wasilewska N. (2018) GDP modelling: assessment of methodologies and peculiarities of its usage in Ukraine (Problems and Perspectives in Management) 16. 4. 186-200 (in Ukr.). doi: [http://dx.doi.org/10.21511/ppm.16\(4\).2018.16](http://dx.doi.org/10.21511/ppm.16(4).2018.16)

the theory of social reproduction, creating, in fact, the first macroeconomic model.

It was F. Quesnay who for the first time in the history of political economy proposed and used the concept of "reproduction" as a constant repetition of the process of production and marketing, and also initiated the economic treatment of the full cycle of capital in its value and nature. The main criterion for capital was the turnover of costs, which are paid in advance and returned to the manufacturer. Another important scientific achievement of the scientist is the use of the concept of "capitalization" in the analysis of the reproduction of capital and its value, in the economic table. Introducing the category of "capital" in economics and fixing the scope of production, F. Quesnay in his research treats the category of "capital" as a value that brings new value - the percentage of capital, while separating the categories of "capital" and "income" <sup>19</sup>. But, as a percentage of F. Quesnay's capital, he mistakenly saw not the net income of the capitalist - farmer, but the reimbursement of expenses, the reserve fund from which depreciation was reimbursed. Only physiocrat Anne Robert Jacques Turgot (1727-1781), who, unlike F. Quesnay (who considered capital in a natural form) tried to explain the effect of interest on capital and defined it as "accumulated value". Anne Robert Jacques Turgot interprets

---

<sup>14</sup> Lemishko, O. O. (2015). Statistical estimation of the functional dependence of GDP growth rate and capital components. Actual problems of the economy (Aktualni problemy ekonomiky). 12. 377-389 (in Ukr.).

<sup>15</sup> Lemishko, O. O. (2016/2). The Effect of Financial Policies on the Effectiveness of Agricultural Production. Actual problems of the economy (Aktualni problemy ekonomiky). 12. 411- 424 (in Ukr.).

<sup>16</sup> Raurich, X.; Sala, Hector; Sorolla, Valeri (2012) Factor shares, the price markup, and the elasticity of substitution between capital and labor (Journal of masroeconomics) 34.1.81-198

<sup>17</sup> Shevchenko N. Yu. (2015). Theoretical and methodical aspects of taxation of foreign economic operations with production of agro-industrial production. Scientific Bulletin of NUBiP of Ukraine (Naukovi visnyk NUBiP Ukrainy). 222. 287-290 (in Ukr.).

<sup>18</sup> Thi Phuong Vy Le, Nguyet Phan Thi Bich (2018) Capital Structure Analysis of a Small Enterprise (International Journal of Multidisciplinary) 1.

<sup>19</sup> Kene F. (1963). Selected economic works M.: Izd-vo sots.-ekon. lit. P. 226. (in Russ.).

the initial accumulation of capital as a result of prudence and the argument that capital contributes to the increase of a "pure product" and that the capitalist, by advancing capital, risks losing it; without moving capital, no production is possible<sup>20</sup>. Anne Robert Jacques Turgot was not only a prominent scientist but also a statesman. Developing one of the first theories of progress, introduced into the economic policy the principles of teaching physiocrats, developed a number of reforms, which included the introduction of progressive financial instruments at the macro level, namely, the replacement of duties by monetary charges, the prohibition of taxes on bread and others.

Considering the methodological aspects of physiocratism, it can be argued that the undisputed merit of physiocrats was the attempt of macroeconomic analysis of social reproduction, that is, to represent the economy in the form of a dynamic, constantly repeating process.

Developing one of the first theories of progress, A. Turgot introduced the principles of teaching physiocrats into economic policy, developed a series of reforms that included the introduction of progressive financial instruments at the macro level, namely, the replacement of duties by monetary charges, the ban on taxes on grain trade and others.

F. Quesnay ingenious "Economic Table" was the first attempt in history to apply the macroeconomic model of capital and aggregate movement in a natural and monetary form between different sectors of the economy represented by three classes of society. The representatives of this scientific school for the first time investigated at the micro and macro levels the process of capital formation, identified the components of capital and substantiated their basic characteristics, which became the starting point of processing the process of circulation of the whole social product; using mathematical calculations to determine the basic proportions of the sale of

---

<sup>20</sup> Turgot A. (1961). Selected economic works. M., Sotsekhiz, P. 78; 98; 175 (in Russ.).



this public product, combining numerous acts of exchange and movement of money and goods, and, most importantly, dividing the categories of "capital" and "income", analyzed the value and process of social reproduction of capital. Of scientific importance is the scientific discovery of the school of physiocrats, which has proved that the process of circulation and reproduction of capital takes place continuously only if certain proportions of economic development are observed.

On the basis of the school of physiocracy we propose to determine the criteria for quantitative evaluation of the components of capital:

$$\sum_{k1} \rightarrow \max,$$

Where  $\sum k1$  – the volume of capital.

In the process of capital formation we distinguish the following its constituent elements - land, means of production:

$$N_k 1 = f_1(L; MP; ),$$

Where -  $N_k 1$  – the function of capital formation, where L is the land, MP - means of production.

Substituting the above components into their volumes, we obtain an equation that looks like this:

$$y_x 1 = a_1 L + a_2 MP;$$

Parameters  $a_1$  (1-3) are the volumes of land, the number of assets, and L, MP are the values of the components of capital.

Further development of economic thought, concerning the elaboration of the essential characteristics of capital, is related to the name of the eminent Scottish scholar Adam Smith (1723-1790). The main merit of A. Smith, as a representative of economists of the manufacturing period, was the beginning of the labor theory of value and the systematic

presentation of political economy, as well as the further development of the theory of capital. Determining capital as the main driver of economic progress, A. Smith studies the essential characteristics of capital from two positions: according to labor theory of value, capital was defined as the value of profit based on exploitation of wage labor, and capital - as inventories of means of production, or stocks that intended for further production. Another scientific achievement of the scientist is the doctrine of the methods of application and accumulation of capital, to which A. Smith attaches exceptional importance. Even exploring the impact of natural conditions on an "economic man" who strives for family well-being, thereby generating social well-being, A. Smith argues that under these conditions he seeks to increase capital stock. On the basis of A. Smith's scientific considerations, one of the central tenets of the doctrine of capital is crossed out: thrift is the main factor of capital accumulation; retaining a large part of the income, "refraining" from their "direct consumption", the owner of the enterprise sends them to expand production, thereby giving employment to additional members of society, contributing to the growth of the state's wealth and enrichment of the nation <sup>21</sup>. Considering the full-fledged process of extended reproduction, A. Smith recognized the accumulation of capital as a major condition and a powerful tool for the growth of the nation's wealth.

The follower of the theoretical heritage of A. Smith, the representative of classical political economy - David Ricardo (1772 - 1823), most thoroughly and critically analyzed the basic tenets of the theory of capital. In his seminal scholarly work, *The Beginnings of Political Economy and Taxation* (1817), D. Ricardo treated capital as part of the wealth of a country used in production, consisting of food, clothing, tools,

---

<sup>21</sup> Smith A. (2001). *The welfare of nations. Studies on the nature and causes of the welfare of nations.* / transl. from engl. K. : Port-Royal., 612 (in Ukr.).

raw materials, machines, everything needed to set in motion. According to the scientist, the determining condition for the reproduction of capital is the production process, that is, capital can be considered part of the wealth spent for the purpose of future production<sup>22</sup>. A significant scientific achievement of D. Ricardo is the justification of the category of capital as a major factor in the development of productive forces of society.

D. Ricardo had a long-standing creative friendship with the famous English economist James Mill (1773-1836). In his work, *Elements of Political Economy*, Mill noted that capital is a source of value, creates value, and profit is a product of the circulation of capital<sup>23</sup>. James Mill made a significant contribution to the development of economic science, but his son, John Stuart Mill (1806-1873), became his best creation. The scientific work of J. Mill "Fundamentals of political economy and some aspects of their application to social philosophy" (1848) became theoretical and methodological property of economic science in the first half of the XIX century. Mill has an important role to play in the public reproduction of Mill in the section entitled "Basic Laws on Capital." After a complete analysis of the category of "capital", he formulates several theorems of capital. The first theorem declares the dependence of economic development on the availability of capital: temporarily uninvested capital impedes development, and additionally attracts creating of additional jobs and provides them with wages; the second theorem states that capital is generated by savings, they are converted to capital in the process of production consumption; The third theorem is that deferred future consumption is

---

<sup>22</sup> Ricardo D. (1955). The beginnings of political economy and taxation. Soch. T.I. M.: Gospolitizdat (Hospolytyzdat) 360 (in Russ.).

<sup>23</sup> Mill J. (1826). Publisher printed for Baldwin, Cradock, and Joy *Elements of political economy*, by James Mill, esq. Third edition, revised and corrected. - London : printed for Baldwin, Cradock, and Joy, (London : C. Baldwin, printer, New Bridge-street). VIII, 304. 4°. Segn.: a4 B-U8.]

ensured by productive industrial consumption and will occur on an expanded basis only due to industrial consumption; the fourth theorem states that capital is the money spent on organizing and maintaining productive labor<sup>24, 25, 26, 27</sup>.

Jean Baptiste Say (1767-1832), the French scientist-economist harmoniously combined the role of capital with other factors of production. In his numerous works, the most significant of which are "A Treatise on political economy, or a simple account of the way in which wealth is formed, distributed, and consumed," and "A complete course of practical political economy," in six volumes, he substantiated the theory of three factors of production, which is rightfully considered the most versatile version of the classical factor theory of value. According to this theory, three main factors of production, labor, capital and land, form the value of goods and determine the income of owners of these factors: the wages of wage workers (carriers of labor), profits of entrepreneurs (owners of capital), rent of landowners. Theoretical approaches to the essence of capital reproduction, according to J.-B. Say, are based on identifying the characteristics of land and capital productivity: the potential of land is manifested only in conjunction with labor and capital; capital is generated in the process of accumulation, due to the involvement in the production of more created products than was consumed in the

---

<sup>24</sup> Mill J. (2004). Principles of political economy with applications to social philosophy / edited and abridged by Stephen Nathanson p. cm. Includes bibliographical references and index. 1. Economics. 2. Economics—Philosophy. 3. Social sciences—Philosophy. 4. Mill, John Stuart, 1806–1873. I. Title: Principles of political economy with applications to social philosophy. II. Nathanson, Stephen, 1943– HB161 .J75 330.15'3–dc22

<sup>25</sup> Mill St. (1900). Principles of Political Economy. L., 208.

<sup>26</sup> Mill St. (1873). Principles of Political Economy with Some Applications to Social Philosophy. L., P. 291.

<sup>27</sup> Myll Dzh. S. (1980). Fundamentals of political economy and some aspects of their application to social philosophy: in 3 t. M.: Progress (Prohress), 1450 (in Russ.).

process of their production, and is a "powerful engine" of economic processes of landowners<sup>28</sup>.

On the basis of the classical school of economics we determine the criteria for quantitative assessment of the components of capital:

$$\sum_{k2} \rightarrow \max,$$

Where  $\sum k2$  – the volume of capital.

In the process of capital formation we distinguish the following its constituent elements - land, value of means of production, inventories, savings:

$$N_k 2 = f 2(L; CPM; S; S; ),$$

Where -  $N_k 2$  – the function of capital formation, where L – land, CPM – cost of production means, S-stocks, S-savings.

Substituting the above components into their volumes, we obtain an equation that looks like this:

$$y_x 2 = a_1 3 + a_2 3 + a_3 3;$$

Parameters  $a$  (1-3) are the volumes of land, etc., and C, C, C are the values of the components of capital.

Thus, J.-B. Say, J. S. Mill, D. Ricardo, A. Smith, A.R.J. Turgot, F. Quesnay and other research theorists have formed a strong foundation for the emergence, formation and further development of the theory of capital, identified the main factors of production, among which capital played a leading role, determined its cost characteristics, and laid the scientific

---

<sup>28</sup> Say J.-B. (2000). Treatise on political economy. Economic Harmony. M.: Delo, 232 (in Russ.)

ground for determining the empirical level of the capital reproduction process.

However, the most significant, rich in content, depth of generalization and logical rigor of argumentation is the fundamental work of "Capital" by Karl Henry Marx (1818-1883), to which he devoted more than fifteen years of his life. In the first volume, *The Process of Capital Production* (1867), K. Marx argued that the prerequisite for the existence of capital was to create certain socio-economic conditions. Defining capital as a value that grows, K. Marx derives the basic tenets necessary for its existence, the main of which are the following: private ownership, the concentration of this property in the capitalist and the absence of own means of production in the worker creates a decisive right (right to dictate) to the process of production and distribution by the capitalist; the combination of labor with the means of production, which comes from the free will of the capitalist, leads to the fact that labor becomes a part of the capital used, there is a formal and real subjugation of labor of capital. The accumulation of capital, K. Marx links with the continuity of the production process (reproduction) and the increase in value added. At the same time, unlike his predecessors, scientists, K. Marx argues that capital brings profit (self-rising) only in combination with labor that creates additional value, that is, value in excess of the cost of labor itself. It is important to conclude that money emerges from the commodity form and become the first form of manifestation of capital, but money is not identified with capital, but plays the role of mediator in the process of equivalent exchange and grow in the process of circulation <sup>29</sup>.

The following theoretical inheritance of Marx, which is covered in second volume of "Capital" - "The process of capital turnover, changed the character of economic thinking

---

<sup>29</sup> Marks K. (1988). *Capital. Criticism of political economy*. T. 1. M.: Publishing house of political literature (Izdatelstvo politicheskoi literatury), 891 (in Russ.).

about capital; its essence consists in studying the peculiarities of the cycle of capital. Marx calls the sequential change of forms from monetary through commodity and productive again to commodity and monetary the cycle of capital, that is, the cycle of capital is the process of its continuous movement, the sequential passage of three stages, at each of which there is a change in the functional form of capital: the transformation of monetary capital into productive, productive - into commodity, commodity - again into monetary capital<sup>30</sup>. The unity of these three forms is the basis and determining factor for the existence of capital, the process of its reproduction. We believe that the study of the peculiarities of the cycle of capital holds a special place in K. Marx's teachings and embodies the scientific tenets of previous directions and schools of economic thought, regarding the role of capital in expanded reproduction.

The third volume of «Capital» by K. Marx, «The process of capitalist production, taken as a whole», deals with the characteristics of variable and constant capital. K. Marx argued that value added creates variable capital, and the mass of profit depends on the size of both variable and constant capital, that is, on the quantitative and qualitative characteristics of the advanced capital, its organic structure<sup>31</sup>.

Summarizing all the above, we conclude that K. Marx has comprehensively, consistently, logically defined the social significance of the process of capital reproduction as the basis of economic relations.

On the basis of the school of Marxism we determine the criteria for quantitative assessment of the components of capital:

---

<sup>30</sup> Marks K. (1988). Capital. Criticism of political economy. T. 1. M.: Publishing house of political literature (Izdatelstvo politicheskoi literatury), 891 (in Russ.).

<sup>31</sup> Marks K. (1930). Kapital. The process of capitalist production in general. Volume III Ch. II. Kn. III. Translation from German.: D. Rabinovych, S. Trykoza ta V. Shcherbanenko. Kharkiv: DVU, 284 (in Ukr.).

$$\sum_{k3} \rightarrow \max,$$

Where  $\sum k3$  – the volume of capital.

In the process of capital formation we distinguish the following its constituent elements - M - money, C – commodity, M` - money with additional value:

$$N_k 3 = f 3(M; C; M`),$$

where -  $N_k 3$  – the function of capital investment, where M is money, C – commodity, M` - money with additional value.

Substituting the above components into their volumes, we obtain an equation that looks like this:

$$y_x 3 = a_1 3 + a_2 3 + a_3 3;$$

Parameters a (1-3) are the amounts of revenues, etc., and M, C, M` are the values of the components of capital.

In the process of generalization of theoretical and methodological principles of capital formation, a scheme has been developed that reflects at various stages of development of economic and financial thought the relationship of components of capital formation and factors of influence on them in order to establish the basics of initial capital accumulation (Fig. 1). It is established that the initial accumulation of capital depends on the clear interaction of all elements of the capital structure, on the complex and effective interaction of endogenous and exogenous factors, and the systematization of the relevant factors allows to adapt it to the peculiarities of economic development of the state <sup>32</sup>.

---

<sup>32</sup> Lemishko O. O. (2019). Vidtvorennia kapitalu v ahromomu sektori ekonomiky: problemy rozrobky i realizatsii finansovoi polityky: monohrafiia. [Capital reproduction in the agricultural sector of the economy: problems of financial policy development and implementation] K.: NUBiP Ukrainy. 779. (in Ukrainian).



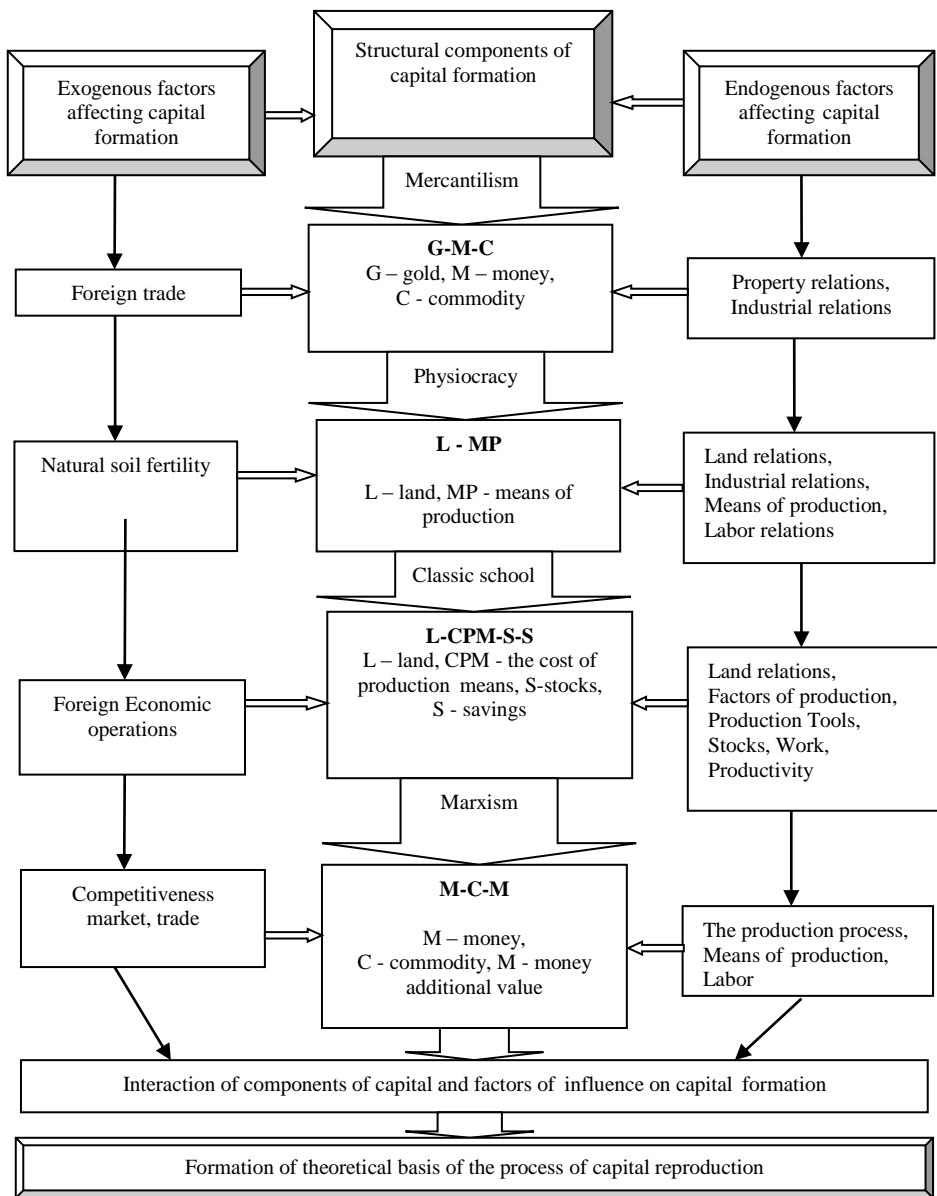


Fig. 1. Formation of theoretical foundations of the process of capital reproduction in terms of macroeconomic schools of the XVI - XIX centuries.

Source: by the author.

The evolution of the conditions and fundamentals of capital formation indicates a constant search for its optimality. In the last third of the nineteenth century there is a transition of the economy to a monopolistic stage of development, which leads to the formation of new realities of development of capitalism, namely, more complex forms of management and relations between producer and consumer, an increase in the intensity of the process of market expansion beyond national borders, as well as qualitative changes in the nature and structure of processes of capital formation. Significant contribution in this historical aspect, in the further development of theoretical approaches to the formation of a new paradigm to substantiate the nature and basic characteristics of capital made by representatives of the neoclassical economic school, namely its new trend - marginalization and so on.

Thus, the modern theoretical and economic essence of capital has deep historical roots. If we consider the process of formation of the essence of capital in chronological order, the first sprouts of this phenomenon originated in ancient times, and the first economic the economic category of "capital" is considered mercantilism, which was associated with the era of trade capital domination. generalization of experience of functioning of initial capital and solved practical questions of acceleration of this process. It is to the mercantilists that they initiated the elements of economic analysis to investigate particular economic problems, including those related to capital, and their practical recommendations were actively used by statesmen of the time. But science, which made a significant contribution to the theory of capital, based on economic laws and covered all spheres of human economic activity has become a classic political economy. It is the economists of this school who have proved that the reproduction of capital occurs in the process of accumulation, production and circulation, as a result of past labor, through the involvement in production of

more created products than was consumed in the process of their production. Recognizing capital as a powerful engine for human use, prominent classical school leaders have given capital a major role in the major factors of production. Thus, the radical changes in economic science, initiated by the aforementioned scientific schools, did not become global, but the eminent scholars-economists of mercantilism and classical political economy changed the direction of economic theory and laid the ground for further study of the most complex issues of reproduction of capital, its diversity. K. Marx's economic doctrine gave its sprouts on a ground well prepared by all the previous economics schools. He not only justified a new scientific interpretation of the theory of capital, explored the specific features of the process of capital circulation and changes in its forms, the influence of various factors on the speed of change of these forms of capital and its growth, but also comprehensively, consistently, logically defined the social importance of capital as the basis of economic relations.

## **2.2. THEORETICAL PRINCIPLES OF THE STATE FINANCIAL CONTROL ON THE USE OF BUDGETARY EXPENDITURE**

An integral part of the control system in the management of the national economy, on the one hand, on the other - the system of financial management, the organizational form of the financial mechanism is financial control. Set of actions and operations to check the financial and related issues of the economic entities to apply specific forms and methods of its organization.

Effective use of budgetary funds and the successful implementation of planned budget programs in real life depends on the concerted actions of the entities that ensure its implementation. Because they are the key to the purposeful and rational use of budgetary resources and an effective means of preventing and stopping offenses at the stage of execution of the state budget by expenditures. The purpose of financial control is, first of all, the need to mobilize the financial resources of all areas of the financial system and to comply with accounting and reporting procedures.

The contents of financial control are reflected in the following provisions:

- Verification of the fulfillment of financial obligations by all economic entities before the relevant branches of government in accordance with economic legislation;
- Verification of the use of budget funds by state and municipal enterprises;
- Check of taxes and fees in all units of the budget system;
- checking the spectrum of financial transactions of enterprises;
- identifying and eliminating the consequences of financial irregularities and abuses;

- the application of forms of liability for violations of financial law.

In the Table 1 discusses various views on the interpretation of the essence of public financial control.

Table 1  
The essence of “state financial control”

<i>Authors</i>	<i>Definition of “public financial control”</i>
<i>1</i>	<i>2</i>
N.A. Buck	Financial control is a form of implementation of the control function of finance, which determines the content, purpose and objectives of financial control. The main purpose of financial control is to facilitate the successful implementation of the financial policies of economic entities, as well as to ensure the full and timely formation and efficient use of financial resources in all spheres and units of the national economy to achieve maximum economic result with minimal cost. <sup>1</sup>
L. Ovsyannikov	It is the realization of the law of the state by legal means to protect its financial interests and financial interests of its citizens through a system of legislative, organizational, administrative and law enforcement measures. <sup>2</sup>
L.V. Hutsalenko	This is a type of financial control, carried out by the relevant bodies of state financial control, is to establish the actual state of affairs regarding compliance with the requirements of the current legislation in the subject to control. <sup>3</sup>
Ye.V. Kalyuha	It is based on the use of the control function of finances and is one of the manifestations of its importance in extended reproduction. <sup>4</sup>

<sup>1</sup>Bak N.A. Finance: Educ. manual / N.A. Bak. – Chernivtsi: Chernivtsi Nat. Univ., 2012. 352 p.

<sup>2</sup> Ovsyannikov L. Law on state financial control: nevertheless, presidential control is needed // Presidential control, 1998. – № 9. – P. 5.

<sup>3</sup> Hutsalenko L.V. State financial control: textbook. tool. / L.V. Hutsalenko, V.A. Deriy, M.M. Kotsupatrii – K.: Center for Educational Literature, 2009. – 424 p.

<sup>4</sup> Kalyuha Ye.V. Financial and economic control in the management system: a monograph. K.: Elga, Nika-Center – 2002. – 360 p.

Continuation of the Table 1

H.V. Dmytrenko	Regulated by the financial and legal norms of the activity of state authorities and local self-government and non-governmental organizations in ensuring the legality, financial discipline, expediency and effectiveness in mobilizing, distributing and using financial resources in order to protect the financial interests of the state, local self-government, economic entities and citizens. <sup>5</sup>
-------------------	---

Thus, analyzing the opinions of various scientists, public financial control is a set of control actions of state bodies to ensure compliance with the norms and requirements of the legislation at the expense of the realization of state funds by all subjects of the state and to take appropriate measures to misuse or misuse them. However, “public financial control” and “budgetary control” are completely different concepts, since “budgetary control” is a narrower concept, since public financial control includes the following types of control: tax, customs, currency control, control of money and public debt, banking and insurance control, control over professional stock market participants, and control over the country's pricing system and economic concentration (antitrust control).

The basis for the effective exercise of financial control is the set of basic principles for its implementation, as laid down in the Lima Declaration of Guiding Principles of Control (adopted by the IX Congress of the International Organization of Supreme Audit Institutions in October 1977): independence of control as an integral attribute of democracy and mandatory controls; legislative consolidation of the independence of the control bodies; determining the need for ex-ante control and monitoring of actual results; External and internal control as a prerequisite for the existence of control; publicity and openness

---

<sup>5</sup> Dmytrenko H.V. Organization and implementation of state control in Ukraine (financial and economic aspects): author. diss. Ph.D in Economics of sciences from the state. spec. 25.00.02 - Mechanisms of Public Administration / Nat. Acad. state. ref. under the President of Ukraine. Kiev, 2011. – P. 36

of control bodies with the mandatory requirement of the protection of commercial and other secrets protected by law.<sup>6</sup>

When it comes to state financial control, it fully reveals its essence through such functions as: information (information obtained as a result of its implementation should be the basis for making appropriate management decisions and taking appropriate response measures in accordance with state-established norms ), preventive (detection of conditions that contribute to the violation of norms and standards established by laws and regulations; the occurrence of mismanagement, shortages, thefts and abuses; the establishment of persons, guilty them in financial violations and holding them accountable) and mobilizing (eliminating the consequences of committed financial violations by the entities, the conditions that contributed to them, and developing organizational and legal measures to prevent financial violations in other public entities).<sup>7</sup>

Thus, the functions of financial control reveal the totality of economic relationships between control entities (state authorities, legal entities and individuals) regarding the implementation of control measures in terms of ensuring the functioning of economic entities and the efficient use of budgetary funds.

The primary purpose of public financial control is to ensure the legality, efficiency, financial discipline and rationality of the formation, distribution, ownership, use and disposal of state-owned assets. The main tasks of the state financial control are: to detect violations of the principles of legality, efficiency, expediency and economy in the formation and use of state financial and material resources, deviations

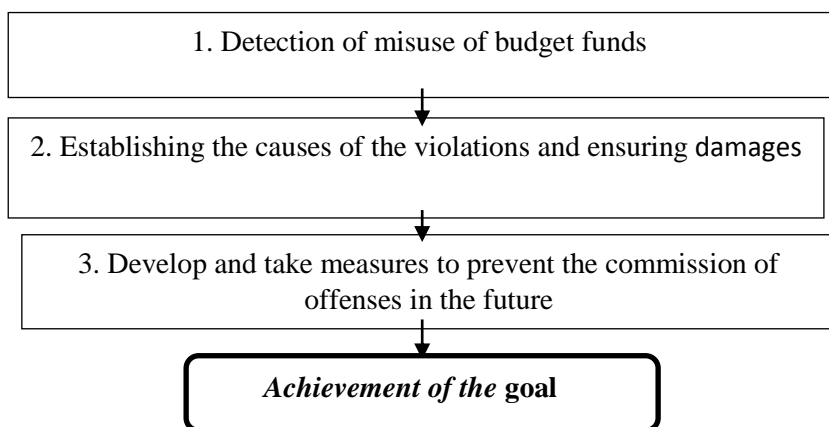
---

<sup>6</sup> Lima Declaration of Principles of Public Finance Audit. Guidelines for the audit of public finances. K.: View. Under with assistance from the UNDP Governance Program, 2003. – P. 23-27

<sup>7</sup> Mizina A.V. State Financial Control in Ukraine: essence, functions, tasks, principles // Actual Problems of Domestic Jurisprudence, 2018. – № 2 (1). – P.101-103

from the adopted norms, standards at an early stage; establishing the causes of violations, identifying the perpetrators and ensuring compensation for their damage; development and implementation of measures for prevention of the established violation in the future.<sup>8</sup>

The above tasks are closely intertwined, and failure to complete one of the tasks weakens the entire system of public financial control as it misses the stages of its implementation (Fig. 1).



*Fig. 1. Scheme of achievement of the purpose of the state financial control*

*Source: compiled by the autor*

If the concept of public financial use in the sphere of budgetary resources is disclosed, the tasks will be modified, namely:

1) ensuring the drafting, review and approval of the budget law, decisions on local budgets by determining the appropriateness, reliability, rationality in the formation, allocation and spending of budget funds, compliance with

---

<sup>8</sup> Maksimova V.F. Organization of Public Financial Control: A Textbook. –Odessa: ONEU, 2012. – 276 p.



budget legislation in the formation and use of budget funds at each stage of the budget process and at all levels of budgets;

2) check the stability and effectiveness of the organization of budgetary activity at the state and local levels through the fulfillment of budgetary powers by the participants of the budgetary process and decision-making and preventive measures to create conditions for compliance with budgetary legislation and prevent the commission of budgetary offenses;

3) possibility of timely and expedient adjustment of budget decisions made by the main body of state financial control in the budget process and the public;

4) identification of budgetary offenses, taking measures to terminate and prosecute the perpetrators and recover damages that the state has as a result of the damage caused, both by controlling and controlled entities.<sup>9</sup>

Of course, the budgetary control system will have the following components:

- the object of budgetary control is the monetary relations arising from the creation of a centralized fund of funds of the state (budget) and its use for extended reproduction;

- subjects of control are holders of control functions defined by the current legislation. These include controlling entities - legal or natural persons authorized by the budget legislation, to control compliance with this legislation, and controlled entities - legal (natural) persons, to whom the control activities are directed;

- We consider monetary relations to be the subject of budgetary control related to the creation, distribution and use of budgetary resources from a formal, quantitative and qualitative perspective.<sup>10</sup>

---

<sup>9</sup> Hrygoriev D. Concepts and features of budgetary control in Ukraine /D. Hrygoriev // Entrepreneurship, Economy and Law. – Kyiv: LLC "Guarantee", 2018. – № 2. – P.124-130

<sup>10</sup> Koronevsky V.K. Basic principles of formation of the consolidated budget of Ukraine / V.K. Koronevsky // Finance of Ukraine. – 2006. – №8. – P. 5-10

Public financial control holds a special place in the system. It has a narrower scope of action and should extend: first, to the sphere of formation of the revenue part of the budget; secondly, the spending of the state budget.

That is, public financial control is intended to ensure control over the targeted and effective use of funds from the state budget and state property. In this regard, the state financial control extends to the ministries and agencies responsible for forming the revenue part of the state budget, as well as to the ministries and agencies using the state budget funds; in addition, to enterprises, organizations, banks, which have been granted budgetary funds on a non-refundable and rotary basis, as well as the activities of those legal entities having any financial privileges (customs, export-import, etc.).

Considering the essence and place of the state financial control, it should be noted that in the process of its implementation it is necessary to cover the activity at the level of enterprises, organizations, banks, joint stock companies, etc., that is - the level of economic entities. At this level, public financial control acquires the trait of financial and economic control, that is, it extends not only to purely financial activities, but in certain cases also to economic ones, in order to determine the correctness of tax calculations, production efficiency and budgetary efficiency. The subject of financial control in this connection is a complex of economic processes and monetary relations in the sphere of material production and non-productive sphere. In its financial control, in this sense, two aspects of its implementation are put forward: first, ensuring the preservation of cash and material assets, the reliability of accounting and reporting data, compliance with state financial discipline; secondly, an objective assessment of the activity of enterprises, the identification of reserves of production intensification and improvement of economic efficiency. Mainly it is carried out by checking the correctness of tax calculations,

the execution of budget-financed state orders by enterprises: when granting subsidies, subsidies, credits, and also tax benefits to private entrepreneurs, enterprises. Therefore, the object of financial control is not only the fiscal sphere and the budget process, but also the whole process of financial and economic activity of the subjects of market relations.

Therefore, the essence of state financial control is revealed through the totality of actions of public authorities, namely the mechanism for exercising control over the receipt of financial resources to the country, their further purposeful use and taking measures for violations of this mechanism (Fig. 2).

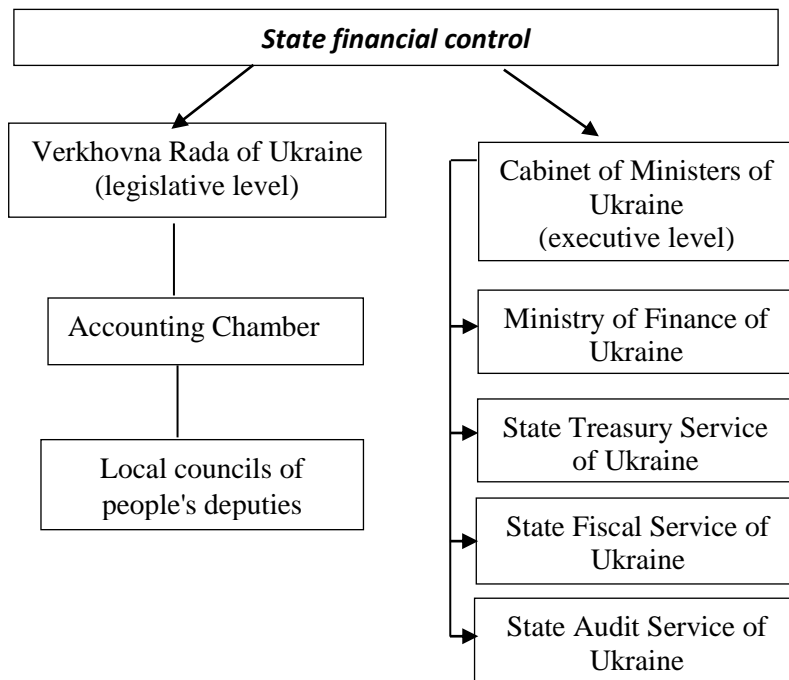
The effectiveness of the control over the execution of the state budget depends crucially on the division of powers between the subjects of its implementation and the correctness of its organization. The complexity of the relations that are formed and realized in the process of spending budgetary funds, determines the large number of entities with powers in the sphere of control over the implementation of state.

The function of exercising state financial control is distributed between many legislative and executive state bodies of Ukraine, but the scope of its implementation differs.

The Verkhovna Rada of Ukraine, in accordance with Art. 85 of the Constitution of Ukraine, exercise financial control in approving the State Budget and amending it, in its implementation, in deciding on the report on its implementation.<sup>11</sup>

---

<sup>11</sup> The Constitution of Ukraine of June 28, 1996 № 254к / 96-VR / The Verkhovna Rada of Ukraine Information 1996. [Electronic resource]. –Access mode: <https://zakon.rada.gov.ua/laws/show/254к/96-вр>



*Fig. 2. The mechanism of state financial control in the budget of Ukraine*

*Source: compiled by the autor*

Also important is parliamentary control over the use by Ukraine of loans received from foreign states, banks and international financial organizations and not provided by the State Budget of Ukraine. The Verkhovna Rada of Ukraine also exercises financial control through its committees and temporary ad hoc commissions. They are responsible for working with draft laws, preparing and preliminary consideration of issues related to the powers of the Verkhovna Rada of Ukraine. Naturally, specialized committees of the Verkhovna Rada of Ukraine - the Committee on Budget and the Committee on Finance and Banking - have a major burden in the exercise of financial control.

The Verkhovna Rada's powers include monitoring the observance of budget legislation at every stage of the budget process, and committees of the Verkhovna Rada participate in preparing for consideration by the Verkhovna Rada the draft law on the state budget of Ukraine in so far as it is within the competence of the Committees. The powers of the Verkhovna Rada include monitoring the compliance with budget legislation at every stage of the budget process.

The Verkhovna Rada Committees participate in the preparation of the draft Law on the State Budget of Ukraine for consideration by the Verkhovna Rada, prepare and pre-consider the issues of control over implementation and the report on the implementation of the budget of Ukraine in the part that is within the competence of the committees. The Verkhovna Rada's powers to monitor compliance with budget legislation include:

- 1) hearing reports on the state of implementation of the budget of Ukraine, including listening to reports of budget spending units on the use of funds of the budget of Ukraine;
- 2) control over the use of state budget reserve funds.<sup>12</sup>

Control over the spending of public funds, compliance with the rules of the financial legislation, the implementation of financial policy by the executive authorities is vested in a specialized independent body - the Accounting Chamber of the Verkhovna Rada of Ukraine. It, on behalf of the Verkhovna Rada of Ukraine, exercises external financial control over the controlled objects, functionally and organizationally independent of any third party influence, which is a guarantee of the fulfillment of the tasks assigned to it. Coordination activities of the Accounting Chamber are carried out through the Coordination Council, which is a structural unit of the

---

<sup>12</sup> Budget Code of Ukraine. [Electronic resource]. – Access mode: <http://zakon2.rada.gov.ua/laws/show/2456-17>

Accounting Chamber. The main functions of the Accounting Chamber include:

- control over revenues and expenditures of the State Budget of Ukraine;
- determining the efficiency of use of the State Budget of Ukraine funds by state executive bodies of all levels, budgetary and other institutions (including institutions located abroad);
- operational control over the implementation of the State Budget of Ukraine in the current year;
- complex audit and thematic checks of separate sections and articles of the State Budget of Ukraine, extrabudgetary funds;
- control of the effectiveness of management actions on public funds, regardless of whether they are reflected in the State Budget of Ukraine for the corresponding year or not;
- control of financial and economic activities of state-owned enterprises and enterprises where there is a significant or overwhelming share of state property;
- control over the efficiency of the National Bank of Ukraine;
- control of the state debt of Ukraine with the development of appropriate proposals for its reduction;
- examination of draft laws, including the draft law of Ukraine on the State Budget of Ukraine for the respective year, current laws of Ukraine, resolutions of the Verkhovna Rada of Ukraine, resolutions and decrees of the Cabinet of Ministers of Ukraine, international treaties of Ukraine, programs and documents the content of which relates to the sphere of financial matters;
- analysis of irregularities and deviations in the budget process, preparation of proposals for elimination of violations, improvement of budgetary, financial, tax and customs legislation, raising the level of revenues to budgets of all levels and improving the state of payment discipline;

- methodological and normative support of the activity of state financial control bodies, verification and analysis of the results of their activity, provision of assistance on the content of control;
- coordination of interaction between the entities of state financial control and direct interaction with law enforcement agencies;
- development of standards for carrying out control-audit measures and expert-analytical activities and their unification;
- creation and maintenance of a single electronic information base of state financial control;
- cooperation with foreign control bodies and international organizations, concluding relevant agreements with them;
- the provision of advisory services to public financial control bodies on matters within their competence.

The Cabinet of Ministers of Ukraine performs important functions in financial control. The financial control of the Government is exercised by the Ministry of Finance of Ukraine (State Treasury Service of Ukraine), the State Fiscal Service of Ukraine and the State Audit Service of Ukraine. Each of these financial control bodies has its own functional responsibilities and tasks. The Cabinet of Ministers of Ukraine, being the supreme body of executive power, manages public finances on a daily basis and simultaneously exercises overall financial control, develops and implements nationwide programs of economic, scientific, technical, social and cultural development of the country; develops a draft law on the State Budget of Ukraine and ensures its implementation after approval, submits to the Verkhovna Rada a report on the implementation of the state budget; carries out and coordinates the work of ministries and other executive bodies; ensures the implementation of financial, price, investment and tax policies.

One of the most important tasks of the Ministry of Finance is the development of the draft state budget and projected

indicators of the consolidated budget of Ukraine. The Ministry of Finance has the responsibility to ensure that the state budget is executed in the prescribed manner and to monitor compliance with the rules for drawing up a report on its implementation. The Ministry of Finance is obliged to ensure and control the concentration of financial resources in the priority areas of socio-economic development of Ukraine, efficient use of budgetary funds, introduction of uniform methodological accounting and reporting principles, informing the public about the economic and fiscal goals of the state. The main tasks of the Ministry of Finance also include improvement of methods of financial and budgetary planning, financing, reporting and control system for spending of budgetary funds.

The Ministry of Finance has such a special control service as the State Treasury Service of Ukraine. The State Treasury, as a body of financial control, controls the organization of the implementation of the State Budget of Ukraine and the receipt and use of state funds; and funds of institutions and organizations maintained at the expense of the State Budget of Ukraine. In addition, the State Treasury keeps records of cash execution of the State Budget of Ukraine, reports on the state of implementation of the State Budget of Ukraine, etc. The powers of the Treasury's bodies to monitor compliance with budget legislation include the following:

- accounting of revenues and expenditures of the state and local budgets, drawing up and submission of budgetary funds of financial and budgetary reports to managers and recipients of budgetary funds;
- budgetary authority when budgeting;
- the compliance of the budget spending units' estimates with the budgetary targets;
- the appropriateness of budget commitments taken by the spending units to the corresponding budget appropriations, the



passport of the budget program (in case of application of the target method in the budget process);

- compliance of payments with budget commitments and corresponding budget allocations;

- adherence to the rules on transactions with budget funds in foreign currency;

- adherence to the procedure of lotteries using electronic systems for accepting payment for lottery in real time;

- adherence to the requirements of the legislation of the procurement sector by the managers and recipients of budgetary funds, other clients in terms of availability, compliance and correctness of the processing of documents.<sup>13</sup>

The State Fiscal Service of Ukraine is the central executive body, whose activities are directed and coordinated by the Cabinet of Ministers of Ukraine through the Minister of Finance. The State Fiscal Service, in accordance with its tasks, controls the timeliness of taxpayers' filing and the single contribution provided by law, the timeliness, reliability, completeness of accrual and payment of taxes and fees, single contribution, customs and other payments.

In the area of control over public finances, the State Fiscal Service controls the receipt of taxes and duties, customs and other payments to the budgets and state trust funds. In addition, SFS structures receive from the bodies, which exercise state financial control, audit materials and other information in case of detection of violations of the law.<sup>14</sup>

The next body of control is the State Audit Office, which is the central body of executive power, whose activity is directed and coordinated by the Cabinet of Ministers of Ukraine and

---

<sup>13</sup> Marchenko L. Yu. Financial control in the bodies of the State Treasury Service of Ukraine / L. Yu. Marchenko // Theory and Practice of Public Administration. 2018. Vip.1. P. 112-117

<sup>14</sup> Ivaskevich Kh.I. System of Public Financial Control Bodies of Budget Institutions in Ukraine // Economy and Society, 2017. – Vol.11. [Electronic resource]. – Access mode: <http://economyand.society.in.ua>

which ensures the formation and implementation of state policy in the sphere of state financial control.<sup>15</sup>

Using different forms, types and methods, the State Audit Office oversees:

- purposeful, efficient use and preservation of state financial resources, fixed assets and other assets;
- achieving budget savings and efficiency in the activities of budget spending units;
- purposeful use and timely repayment of loans (loans) obtained under state (local) guarantees;
- the accuracy of determining the need for budgetary funds when drawing up the planned budgetary indicators and the appropriateness of budgetary commitments made by budget spending units to the corresponding budgetary appropriations, passports of the budget program (in case of application of the target method in the budget process);
- the compliance of long-term commitments of the energy service with the budget funds approved by the managers, approved in accordance with the established procedure to the conditions for the purchase of the energy service;
- Compliance with the legislation at all stages of the budget process regarding state and local budgets;
- compliance with public procurement law;
- accounting, as well as preparation of financial and budgetary statements, passports of budget programs and reports on their implementation (in case of application of the target method in the budget process), estimates and other documents used in the process of budget execution;
- the state and reliability of accounting and financial reporting;
- performing functions of management of state property objects;

---

<sup>15</sup> Regulations on the Audit Service of Ukraine. [Electronic resource]. – Access mode: <https://zakon.rada.gov.ua/laws/show/43-2016>

- state of internal control and internal audit of budget spending units, state of internal control in other supervised institutions;

- elimination of identified shortcomings and violations.<sup>16</sup>

Consequently, a large number of public authorities exercise state financial control, but not all may be allocated in the area of budgetary funds, since their functions are very different from their sphere of activity. If the subject matter is to fill the budget with revenue and to use it appropriately, it is the area of the Treasury, the Accounting Chamber and the Fiscal Service. If the subject is audits, identification of causes of violations and their further avoidance, then this is the area of the Audit Service and the Accounting Chamber.

---

<sup>16</sup> Tabenska Yu.V. State Audit Service of Ukraine as the Central Authority of State Financial Control / Yu.V. Tabenska // Black Sea Economic Studies, 2017. Vip. 22. P. 187-190

## **2.3. RISK MANAGEMENT IN FUNCTIONAL ECONOMIC FINANCIAL SECURITY SYSTEMS**

The current state of modernization of the national economy, which is judged by the criteria of implementation of Ukraine with the European Union under the Association Agreement in 2014, is characterized by a high dynamic of changes, which are determined by two dominant processes: first, changes in the external environment (under the influence of economization factors, economic factors, which determine the multivariate interaction and interdependence of enterprises as economic entities), and secondly, the formation of a mature consistent market economy of the economy European practice of financial and economic mechanism of functioning entities.

Both of these processes are characterized by the presence of numerous risk factors that can adversely affect the success of achieving the identified priority goals and the effectiveness of financial and economic activity of enterprises and the national economy as a whole.

### **1. The economic nature of risk and its elimination in economic systems**

The term "risk" comes from the Latin "resecum", which means an imperceptible obstacle to the movement of a ship at sea - an underwater rock that could lead to catastrophe. The main content of risk in the economy is the likelihood of loss of expected economic (financial) utility, or - the occurrence of losses due to the occurrence of a random (unexpected) event.<sup>1</sup>

For agar production, risks can arise in the areas of natural anomalies that give rise to unacceptable economic conditions (hail, drought, downpour, mass animal slaughter, etc.). In general, risk as a phenomenon (phenomenon) is an integral part of entrepreneurship, since entrepreneurship is an area where

---

<sup>1</sup> Vitlinsky V. V. Riskology in Economics and Entrepreneurship: monogr. / V. V. Vitlinsky, GI Velikoivanivan - K.: KNEU, 2004. - 480 p.

the initiative, the innovation of the entrepreneur are a conscious action – a driving factor in achieving economic success, including taking into account the risk factors, when conscious, bold, delusional, a management decision can be advantageous.

In general, the economic and financial consequences of risk have three forms of manifestation: negative (losses, losses, losses); zero (neutral) - in the absence of both losses and profits); positive (profit, benefit, gain).<sup>2</sup>

Uncertainty - a state of ignorance and misunderstanding of what is happening is a kind of danger about which nothing is known and therefore cannot be assessed, measured, and therefore predicted. However, when the risks of uncertainty become conscious, they become clear, they can be studied and evaluated. It is known that there is a directly proportional relationship between the amount of profit received in the financial and economic activity of enterprises and the level of riskiness of management decisions. It is that the higher the expected profit, the greater the level of risk of its receipt.

Therefore, risk is an integral part of profit and loss generation processes, as it is inevitable in financial and economic activities. Riskiness is a condition that can create (or increase or decrease) the possibility of loss.

The inevitability of risk is caused by the small number and variety of factors that give rise to it. By nature, the whole set of factors (risk factors) that determine specific economic and financial risks can be divided into two groups - objective and subjective, that is, those that are caused by objective (independent of the will of the people), or subjective (that is, consciously meaningful) decisions.

In the general sense, the risk factor in a functional financial and economic system is management decision making under conditions of uncertainty. That is, in the absence of

---

<sup>2</sup> Lukyanova V. V., Risk assessment and stability of the economic system / V. V. Lukyanova // Bulletin of the Khmelnytsky National University: economic sciences. 2014. № 3 (3). P. 33-38.

sufficiently complete reliable economic information about the course of real events and phenomena. This makes it impossible to reliably predict and forecast in the future period of development of processes in the economy, finance, politics and other spheres of activity that have a direct impact on financial and economic activity and its effectiveness.

This can lead to wrong management decisions, which can cause significant unjustified losses of the economy, and reduce its efficiency. Therefore, “risks” is a conscious possibility of financial and economic danger: the occurrence of unforeseen losses of expected profit, property, money, acquired image, etc., caused by accidental changes in the conditions of financial and economic activity, unfavorable for business circumstances.

The risk phenomenon is that the real prediction of it allows to get some benefit in financial and economic activities in carrying out the purposeful organizational-management actions or preventive (preventive) anti-risk measures, which can reduce, or completely neutralize the negative impact of the identified risk factors. It is impossible to completely eliminate the manifestation of risk factors in financial and economic activity, since this activity is by its nature creative, which implies a manifestation of initiative and activity in ensuring its competitiveness. And this, as is well known, requires the abandonment of old routine actions and the introduction of innovations into their practice. That is, who does not take risks in his practice, does not introduce new, more advanced techniques and methods of management, he cannot count on success, as it can be bypassed by more determined and predictable competitors.

Thus, risks in the areas of financial and economic activity represent certain deviations from the assessment of the real state of various situations in the choice of practical solutions for future development. And these deviations can affect the future, both positively and negatively.

In the first case, there is a likelihood of making additional profit (as a kind of reward for the courage to apply a particular innovation), and in the second – the risk of loss from wrong decisions. Therefore, for the effective functioning of financial and economic systems it is important to really evaluate the available options for making management decisions in terms of possible risks, identify and summarize their own and others' experience, learn the principles and methods of analysis, evaluation and management of risk factors that are the subject of risk management.

In general, the problem of risk loss and risk management income is one of the key concepts in financial and economic activity. Risk management is a system of measures for identifying, assessing, preventing and neutralizing (as a conscious protection against harmful risks), which is an integral part of the strategy and tactics of management operations, considering managed (subjective) and unmanaged (objective) risks. factors.

Thus, risk management as a functional component of the overall organizational and management, should timely monitor and evaluate the occurrence of risk factors in individual financial and economic processes, identify the causes of their occurrence in order to prevent possible losses and achieve as a result of strengthening financial and economic systems. all their functional levels - national, regional, local (centers of united territorial communities) and individual enterprises - subjects of large-scale business.

The formation of an effective risk management network at all levels of functional financial and economic systems can be based on measures to anticipate their emergence and an effective methodology for their assessment.

According to the possibilities of prediction risks are divided into predicted and unpredicted.

*The projected risks* are based on the nature of the economic development: the overall trend in the dynamics of production of products and services, dependent on key factors: changes in supply and demand; changes in prices and competitiveness; changes in terms of lending and investment attraction; changes in pay and taxation systems; changes caused by modernization, intensification, innovation of the processes of activity of a particular economic system, etc. In general, projected risks are largely manifested in the subjective activity of the economic and financial mechanism and affect the parameters of appropriate planning.

*The unforeseen risks* are determined by factors that lead to complete unpredictability of manifestation: changes in legislation; climate change of economic conditions; changes caused by emergencies and the like. For functional economic systems, unforeseen risks are manifest in the realm of objective factors.

Measuring the consequences of the manifestation of risks (in their quantitative and qualitative terms) is greatly hampered by the nature of the accounting information required for reliable calculations. However, despite the nature of the uncertainty of the risks in the functional activity of economic systems and the real reality of both their manifestation and the presence of its positive or negative consequences, necessitates their fixation in at least aspects of the degree of probability of the occurrence of certain types of risks, and therefore – the degree of risk individual spheres and operations to optimize them for the specified feature.

The qualitative determination of risks consists in the identification of their types, areas of manifestation and the degree of periodic frequency. It allows to determine the risk factors that cause the emergence of risks, to evaluate not only the degree of probability, but also the magnitude of the manifestation of danger, as well as to compare their positive



and negative consequences according to specific criteria of evaluation – economic, political, social, etc., and thus to influence them-management for the interests of economic relations.

The quantitative determination of risks is the cost estimation of the magnitude of their manifestation in the functional activity of economic systems, both from the point of view of positive and negative consequences.

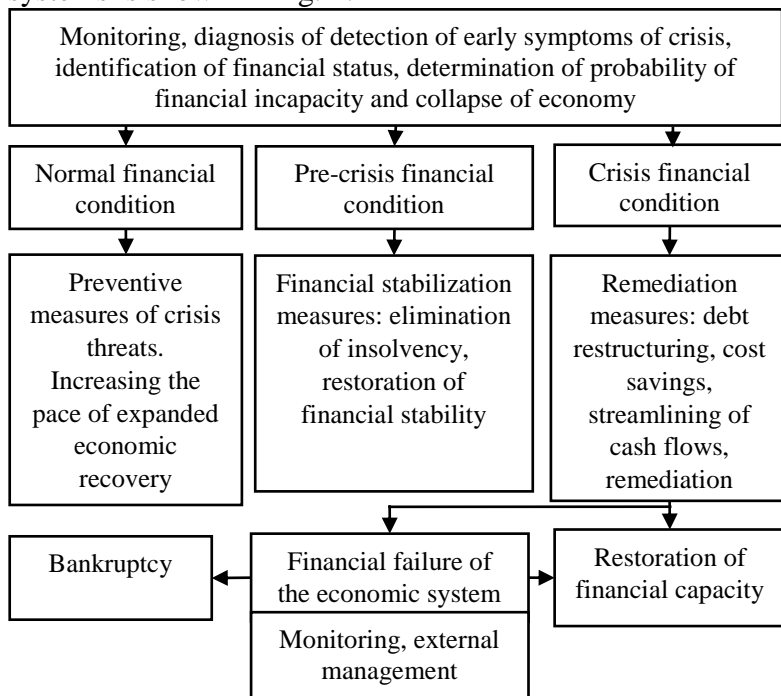
Predicted risks are offset by the use of preventive measures: carrying out anti-flooding and fire-fighting measures; carrying out periodic measures of technical supervision of means of production; timely activities in animal husbandry against mass diseases and livestock deaths, and in crop production - weed control (herbicides) and antifungal and other plant protection products; introduction of drought-resistant and highly productive varieties of field crops, more adapted to the conditions of agricultural production, etc.

Most of the foreseeable risks in the practical activity of functional financial and economic systems are offset by anti-risk assets, which are an integral part of production technologies.

Unforeseen risks in accordance with their appearance are optimized in their manifestation by balancing their consequences (losses-benefits, losses-income) to the maximum possible extent. The share of unforeseen risks, which by their nature are chronic-potential, is offset by the means of insurance.

The high level of risk in its manifestation at each level of financial and economic systems first slows down and subsequently makes it impossible to develop due to their loss of functional safety. That is, the risky mode of functioning of financial and economic systems is already a clear symptom of their decline: crisis, degradation, destruction (bankruptcy).

The purpose of anti-risk and crisis management in a crisis financial condition of the economic system is, as a maximum, to return to the pre-crisis state, and at least to stay in crisis without preventing collapse (bankruptcy). This can be achieved by slowing down the processes of deteriorating financial condition, reducing the level of riskiness and significantly increasing the level of financial capacity of the economic system. A block diagram of the application of anti-risk and anti-crisis measures to achieve financial security of economic systems is shown in Fig. 1.



*Fig. 1. Structural diagram of the system of risk management mechanisms in achieving financial security of economic systems\**

Note. \* Compiled by the author

Shown in Fig. 1 certifies that the elimination of the negative impact of harmful risks on the functional performance

of economic systems by means of purposeful risk management is possible, provided that a stable level of financial security is achieved and permanently maintained.

In view of this, the main objective of risk management at all levels of financial and economic systems is to achieve a sound financial security. In general, the degree of financial security is manifested in three categories: normal, pre-crisis and crisis.

*Normal financial condition* is characterized by the fact that it does not violate the imperative effect of the objective economic laws of extended economic reproduction, effective performance indicators are within the normal parameters. Under these conditions, the risk management of the financial and economic system mainly carries out preventive and preventive measures to ensure the safe functioning of the system by implementing the necessary anti-crisis operations to further stabilize the financial state.

*The pre-crisis financial condition* of the economic system is characterized by the loss of its financial stability. This is reflected in a shortage of funds to finance the functional processes of this system, which violates its immanence. In such circumstances, the need for decisive risk management measures to reduce the negative consequences and unjustified costs and to restore the financial soundness and financial capacity of the system is significantly increased. These activities are based on classic operations: optimization of revenue-expenditure, activation of the reproduction process by means of regulatory policy, implementation of innovative investment projects, modernization of the system, etc.

The pre-crisis financial and economic system is characterized by a kind of "frontier" position, the way out of which depends on the implementation of one of the two opposite strategies. The first of these is to curtail its functional activities, to deplete its existing life support potential, and to

fall into crisis. The second strategy is to reform the functional regime of the financial and economic system globally, eliminate the effects of risk factors and return to normal financial position and economic stability.

*Crisis financial condition* of the economic system is characterized by the fact that it significantly loses financial stability, runs into long-term insolvency, low liquidity of assets, and the process of economic reproduction becomes narrower. In this case, the indicative indicators of financial and economic status record a negative value.

The stable level of financial security of economic systems is conditioned by a sufficient level of generation of the necessary resources to support the proper rate of socio-economic development with their solvency and business activity. That is, the functional financial security of economic systems is the aggregate of their production resources, their qualitatively-progressive state and production relations, in which the realization of social, collective and individual interests is achieved. By their very nature, the financial security of economic systems is intended to prevent a crisis in a timely manner, which is conditioned by objective and subjective risk factors in their current activities.

The main functional tasks of financial security of economic systems include the following:

- ensuring financial stability and technological independence, and on their basis - high competitiveness of functional potential;
- achievement of optimal organizational structure of management of functional activity of management and high level of qualification of staff and its intellectual potential;
- comprehensive legal adequacy in the system of social and industrial relations, including in the fields of occupational safety and ecology;

- protection of the information field (economic secrecy) and obtaining the proper level of information support for progressive innovations for improving economic activity, etc.

The multi-level economic systems in the country determine the diversity of risks in their functioning from global, macroeconomic at the national level to microeconomic at the level of an individual enterprise in the field of its business. Undoubtedly, the task of counteracting the negative impact on the respective economic systems also causes differences in the content of risk management and measures to shape their financial security.

## **2. Formation of functional financial macroeconomic security**

For almost the entire period of state sovereignty, Ukraine's economy is in a state of stress due to both global and macroeconomic risks. At present, according to the World Bank's level of development, Ukraine is in the group "Countries with below average income". These are 47 countries that have the same problems: trade deficit, low level of attracting foreign investments, large number of expatriate migrants abroad.

And in the early 90-ies of the twentieth century. In terms of economic development, Ukraine could be among the most developed countries in the world. It was expected that after the collapse of the Soviet Union and the acquisition of state sovereignty by Ukraine and the transition from a pre-existing administrative-command (and essentially dictatorial-despotic) to a democratic market economy, the country would significantly accelerate the pace of socio-economic development on the path of civilizational progress the Eastern European leader state.

In reality, this chance was lost. When the Soviet Union collapsed and Ukraine gained state sovereignty, a number of union republics and countries of the socialist camp (which, like

Ukraine, escaped the suffocating "brotherly" embrace of Russia), namely: Estonia, Latvia, Lithuania, Belarus, Poland, Czech Republic, Slovakia, Hungary and others, taking the path of market transformations have made significant progress in their development, Ukraine has had a negative result: the national economy has entered a deep crisis, the financial system - an unprecedented level of hyperinflation, the budget system - a chronic deficit state and state debt; GDP production fell to 40% compared to 1990 (by the way - not restored to this day), and the Ukrainian people became the poorest in Europe.

It is quite clear that the mentioned force majeure of the macroeconomic state of Ukraine was determined not only by two global financial crises (1998 and 2008-2010), which occurred during the period analyzed, and not only by problems of transformation of the Ukrainian economy (in the first half of 1990 -x), followed by the war as a result of the annexation of Crimea and Russia's military aggression in the Donbass (since 2014 and to this day), and, above all, the country's false macroeconomic policy, inadequate challenges and threats that generated current risks.

More specifically, it will be noted that there were no anti-crisis and anti-risk state policies in the period of market transformation of the national economy. Moreover, this policy is still absent. After all, since the acquisition of state sovereignty in Ukraine, there was no, and now there is no basic basis for it - an official strategy of socio-economic development of society, adequate to the Constitution of the state and the legal foundations of civilization progress. In this regard, the emergence of public institutions in Ukraine is characterized by considerable chaos rather than ideological orientation. In the absence of a concentrated national political elite (and this absence is confirmed by the fact that over 250 political parties are officially registered in Ukraine, which may participate in the election of the President and the Verkhovna

Rada on the basis of their own programs, which are not generally based on the national development strategy, which in fact does not exist and is not being implemented despite projects being developed repeatedly) leadership is formed on populist principles. At the same time, every political power that comes to power is primarily charged with existing problems.

In the presence of the strategy of socio-economic development of the society, the elections of the authorities should take place on the basis of competition of model programs of practical solution of the phased tasks of the said strategy for the period of his term in power, and the President, in the presence of the appropriate institutional rules, which he would not have, would operate in the projected corridor of state security and national interests. As the guarantor of the Constitution, the President of Ukraine should be responsible for the development of a strategy of socio-economic development and civilizational progress of society for a certain period of time as a leader recognized by the people, as well as for the continuity of the policy of its implementation by successive governments.

It should be, but so far it is not in the reality, which constantly creates new challenges and risks. It is also advisable to identify and more fully identify those risks that have not been neutralized in a timely manner and have led Ukraine to significant transformation costs. In our view, we should pay attention to the following aspects: some features of the formation of a market system of relations, in particular, the role function of competition, were ignored.

It is common knowledge that in Soviet times, industrial enterprises were built without calculating their functioning under specific conditions. They were originally formed and functioned as clearly specialized. This was their power to operate in the context of centralized pricing, logistical supply and marketing of products, and in this connection they were

connected to a single integrated system not only at the regional or republican levels, but also throughout the state. The criterion for evaluating the efficiency of all enterprises of the system at the industry level was generally the level of fulfillment of the planned task of production interconnection and overall result, not profit.

The privatization of industrial enterprises, carried out on the basis of a voucher system, due to various frauds was in favor of the state apparatus. After all, the state apparatus at that time remained flesh from Soviet flesh. In the 1990s, the Red Directorate also survived and multiplied its weight by dividing industrial enterprises by agreement with one another, or by shelling out individuals, by buying vouchers from their workers at a price sufficient to form a controlling stake.

Due to the fact that industrial enterprises, all without exception, were relatively highly specialized, their new owners became monopolists in certain areas of commodity production and introduced monopoly prices for their products, focusing production mainly on exports, and revenue - in offshore zones. Thus, a domestic monopoly arose, which, based on its own interests, created, through powerful lobbying, control over political processes, exercised through the financing of "manual" politicians and their parties and the media - newspapers and TV channels.

The large number of industrial enterprises in the conditions of market economy without the practice of market management and marketing after the market transformation proved to be unviable. Only those who exported products obtained without deep processing with significant value added, ie industrial raw materials, mainly metal and metal, survived. Machine-building (especially in the previously powerful defense-industrial complex) and especially of agricultural purpose (where the production of combines, high-quality



tractors and production of only primitive tools - plows, harrows, etc.) have declined.

The production of light industry products for the domestic market - textile, garment, footwear - significantly declined, and a large number of enterprises suspended their activities - went bankrupt.

In the agro-industrial sector of the national economy, in the process of market transformation, the existing system of large-commodity multi-sector enterprises (collective and state farms), which were financially and economically independent, was liquidated. State-owned farms also had considerable financial support from the state (the availability of bank loans, their write-offs, etc.) as state-owned enterprises, as opposed to collective-farms, which were based on collective cooperation. They were the local centers of socio-economic development of the agro-sphere: they carried out at their own expense the construction of engineering and social infrastructure of local centers (roads, electricity and gas networks, construction of schools, houses of culture, kindergartens, dispensaries, hospitals, etc.). Of course - within the limits of financial capacity, depending on the level of productivity and government purchase prices for agricultural products.

The lands of collective farms and state farms, which were nationally owned, transferred for use by agricultural enterprises, as well as the means of material and technical base, were split between the workers. This was motivated by the fact that on this basis mass formation of farms, a typical form of agricultural producers, widespread in the market management system, would begin.

Experience has shown that this decision, as in the case of industrial enterprises, was wrong and as in industry, it was designed to transform agricultural production into a raw material appendage for developed countries of the world. That is, in this case too, the threat to the country was carefully

hidden in the propaganda rhetoric - the loss of real development of Ukraine's competitiveness on the world market in the future.

The recommended model proposed the introduction of farming commodity production, which originated in the time of feudalism in the XVIII century. The farmer and his family used to produce initially solely on the basis of manual labor and the use of live horse and oxen traction. Subsequently, the transition to mechanized technology with the use of low-power tractors and primitive technology.

Historically, there have already been two attempts at mass farming in Ukraine. The first in Stolypin's reform: the destruction of serf noble "nests" and the release of serfs with their transformation into the working class of young capitalism. However, at the same time as during the period of the reforms of the 1990s. The advantage of large-scale production was lost and the prospect of its development on a technical and technological basis, which unfolded at the beginning of the twentieth century, and of course, the innovation was greatly enhanced at its end. Everyone knows what ended Stolypin's reform. The second attempt to farm the agriculture in Ukraine came after the Lenin idea of transferring the plants to the workers and the land to the peasants, which led to the emergence of kulak (farming) and then its consistent elimination with the formation of collective farms.

Thus, the very idea of mass farming became obsolete in the early twentieth century. and is losing its importance under the pressure of scientific and technological progress both in Europe and in the US and other countries with a significant agricultural sector. Only the romantic halo of farming remains, first of all, as a symbol of private production on earth. And in reality, farm economies go bankrupt every year in large numbers. In the leading countries of the world, farms now exist on subsidies, without which they are doomed to bankruptcy.

Those farms that are based on the production of labor-intensive products are kept afloat.

In general, farming as a form of agrarian economy is relevant for countries with a small amount of land per capita. Thus, in total, 38 countries currently have less than 0.03 hectares per capita in the world. arable land (an average of 0.024 hectares) and 24 countries ranging from 0.03 to 0.06 hectares. (an average of 0.043 ha.) with 238 and 533 million inhabitants respectively. These are industrialized countries, where GDP per dollar is 6 times higher than in Ukraine. In addition to these 62 countries in the world with the highest land scarcity, there are significantly richer countries that buy in other countries the most scarce life-sustaining resource - agricultural land.

Also, if Ukraine introduces a land turnover market with the condition of its sale, it can create a real-high risk of Ukraine losing its land, because it will be sold very quickly and at a much higher price than it could pay for the domestic farmer to create it. loss-making (as in Europe without subsidies) own production.

Now let us consider how in reality the market transformation of the agro-industrial complex of Ukraine took place after the acquisition of state sovereignty through the prism of its riskiness. After all, the authors of the idea of soldering land and property of collective farms and state farms could not help but know that mass farming (on a small relative to the total area of agricultural land by the farming sector) is really impossible. Therefore, the law originally provided for the right of owners of land units to lease their land for rent. Whom? Of course, as with the objects of industry - representatives of the administrative-party apparatus of the agrarian sector, their closest and foremost persons, ensuring their access to credit.

Thus, in a relatively short period of time, a layer of land tenants of agricultural commodity production was formed in Ukraine, which went without export (ie as raw material) for export, and a considerable part of profits settled (as in the industry sector) in offshore zones. The land bank at the disposal of individual tenants grew rapidly, reaching in some cases up to 200 thousand hectares. and more, which contributed to the formation in the Ukrainian society of a layer of latifundists.

Thus, due to privatization in the industry and in the agro-complex of Ukraine, the goal was achieved: functioning of enterprises on the basis of market relations. However, it should be noted that both of these industries are uncompetitive. Industry due to the loss of systemic integrity, conservatism of the product range, which significantly reduced the price on the world market, slowing down the transition to higher technological structures and so on. In addition, a significant drop in output is a negative factor.

In the agricultural sector, on the contrary. Major agricultural holdings are leading here, field crops have grown significantly, advanced technologies have been introduced (which has virtually reduced the need for workers and deprived rural residents of their work), Ukraine has become the world leader in the export of grain, sunflower oil, and chicken. But in spite of all this, it remains uncompetitive in the world market by financial categories: the level of productivity in Ukraine of the agrarian sector of the national economy in comparison with European countries is quite low. Thus, the total volume of value added per hectare in 2018 amounted to USD 440 in Ukraine, USD 1100 in Poland, USD 1700 in Germany and USD 2450 in France. Such a significant difference is due to the fact that agricultural production is concentrated on low value-added products.

It should be noted that the privatization process in Ukraine was carried out ignoring the recommendations of domestic scientists and it has now become clear that Ukraine has not been able to compete in either the industrial or agrarian fields for developed countries and is part of a group of developing countries.

In macroeconomic terms, this is recorded by a negative balance of trade of the country, which is a "symptom" of the need for foreign loans, and therefore - a certain dependence on the lender. After all, in the presence of creditors, each of them forms its own additional (except for guarantees of debt repayment) conditions. In other words, external credit to the borrowing country is not only a significant financial but also, to some extent, a political risk of dependency.

The second significant risk of macroeconomic importance arising in the market-transformation process and the formation of democratic relations is the oligopolization of the functional system of society. In addition, monopolists in the industry and latifundists in the agro-sphere (which constitute the domestic oligopoly) have a significant impact on the course of macroeconomic processes to their advantage, namely, oligopoly now generates large-scale corruption, tax evasion, force, shadow economy that was intercepted by the people. After all, it is known that as a result of privatization, the urban population received only their own property, and rural - land plots, because the "ownership" of land shares was defective: from the triad of the essence of "ownership" (own, dispose and use) the property fell out.

The dynamics of the main indicators of functional macroeconomic security of Ukraine are shown in Table 1.

Table 1

**Importance of macroeconomic security  
parameters of Ukraine (billion UAH) \***

Indicators		2015y	2016y	2017y	2018y	2019y	2015. to 2019
1.	Gross domestic product	1979,5	2383,1	2982,9	3558,7	3974,6	2,01
	% to previous year	90,2	102,4	102,5	103,3	103,2	1,14
2.	Total capital investment	273,1	359,2	448,5	578,7	584,5	2,14
	To GDP, %	13,8	15,0	15,0	16,3	14,7	1,07
3.	Consolidated budget revenues	652,0	782,8	1016,8	1184,3	1289,8	1,98
	To GDP, %	32,9	32,8	34,1	33,3	32,5	0,99
4.	Consolidated budget expenditures	679,9	835,6	1056,8	1250,2	1370,1	2,02
	To GDP, %	34,4	35,0	35,4	35,1	34,5	1,00
5.	Export	1018,8	1146,8	1392,0	1639,1	1546,9	1,52
	To GDP, %	51,5	48,1	46,7	46,1	38,9	0,76
6.	Import	930,0	1138,2	1461,8	1743,0	1594,6	1,71
	To GDP, %	47,0	47,8	49,0	49,0	40,1	0,85
7.	Exchange rate UAH. to USD	21,8	25,6	26,6	27,7	23,7	1,09

Note. \* Compiled by the author using<sup>3456</sup>

As can be seen from the table. 1 data, a considerable number of macroeconomic parameters of financial security of Ukraine does not meet the optimum value, which indicates a rather high level of danger for the country. The main reason for

<sup>3</sup> National Bank of Ukraine [Electronic resource] // Access mode: [www.bank.gov.ua](http://www.bank.gov.ua)

<sup>4</sup> Ministry of Finance of Ukraine [Electronic resource] // Access mode: [www.minfin.gov.ua](http://www.minfin.gov.ua)

<sup>5</sup> Summary of Insurance Companies [Electronic resource] // Access mode: [www.forinsurer.com](http://www.forinsurer.com)

<sup>6</sup> State Statistics Service of Ukraine [Electronic resource] // Access mode: [www.ukstat.gov.ua](http://www.ukstat.gov.ua)

this situation is the insufficient rate of GDP generation to meet the current needs of the economy and society.

Given these and other risk factors, it is advisable to pay attention to the main challenges and risks that need to be neutralized in order to strengthen the country's economic and financial security by the risk management system at the macroeconomic level, as a basis for sustainable socio-economic development of society. In content, according to the official Sustainable Development Concept, this process is defined as “the harmonization of productive forces, ensuring that the needs of all members of society are met, provided that the integrity of the natural environment is constantly restored, and that opportunities for balance between its potential and those of all generations are created”.

Functional financial security is one of the essential components of a country's economic security. In general, in our opinion, this is the degree of sufficiency of financial support for the process of economic expanded reproduction for the proper sustainable development of society, carried out by targeted means of budgetary, monetary, credit, banking fiscal, insurance and settlement systems on the basis of balance and resistance to external and internal threats and risks.

To identify the level of financial security, a system of indicators is used, the individual parameters of which are normalized by the optimal and critical value.

Note that in countries with high GDP growth (within 7-10% per year) the possibility of allocating funds to the accumulation fund (for the implementation of the investment and innovation component of the economy) is created at the level of 27-35% of GDP. In Ukraine, this level is 15-17%. Therefore, it is logical that the actual rate of GDP growth in Ukraine is insufficient and the volume of industrial production is constantly declining.

It is known that the new government in Ukraine has declared the task to provide GDP growth by 40% - that is, on average annually by 8%. This is possible if at least another 10% of GDP is added to the accumulation fund against the current level, ie within the range of UAH 13-15 billion. Not at the expense of attracting additional loans, because the amount of public debt in Ukraine has long exceeded the critical value, but at the expense of GDP growth. This requires improvement of the budgetary financial mechanism in the regulatory sphere of distributive relations in order to increase the priority of increasing the volume of the accumulation fund as a basis for financing investment and innovation activity - economic development. At the same time, the share of other, less critical budget expenditures should be reduced, with the risk of their poor use being eliminated.

In general, budgetary risk refers to “the set of probable adverse (undesirable consequences of the implementation of the adopted decisions that can lead to losses in efficiency in the formation, distribution and use of state and local centralized funds of monetary resources”<sup>7, 8</sup>.

Anti-risk in the budget process is an alternative formation and use of cash flows in the budget system of the country aimed at maximizing a positive result within the available financial resource. That is, it is necessary (in our case - to maximize GDP generation) to optimize the expenditure side of the budget, provided that the level of financing of the less important (from the standpoint of the accepted target) expenditures is reduced, which creates the risk of underfunding of the priority goal. And this creates a conflict of interest.

Let's take a closer look at this situation.

---

<sup>7</sup> Baranovsky O. I. Financial security in Ukraine (valuation methodology and mechanism) / O I Baranovsky. K. : KNTEU, 2014. - 740 p.

<sup>8</sup> Demyanenko I. V. Financial management: a lecture course / I V Demyanenko, T A Govorushko. - K. : RICH NAIL. - 196 p.



In reality, the financial sources for the investment-innovation process of boosting GDP generation in Ukraine (in absolute terms) are:

- own funds of business and population;
- capital investments from the budget;
- loans from domestic banks;
- loans from foreign banks;
- foreign direct investment.

What measures can contribute to increasing the financial viability of these sources? First of all, to increase substantially the income of the first two sources - the wages of workers and the profits of enterprises, which are the leading factors of investment. And also, to intensify the activity of the banking system in providing loans to start-ups in expanding the financial capacity to carry out investment activities in order to increase the productivity of the respective economic systems - to create GDP.

What can serve as a model for solving these problems? General trend, testing by other states. In the area of workers' income, firstly, wages and salaries in EU countries (with which Ukraine seeks to associate and which already have a significant number of Ukrainian migrant workers). Second, the level of payroll taxation (fiscal aspect of the budget). And thirdly, the deduction from the wages of employees in the pension system and social funds. It is clear that according to the first factor the salary should be increased (to the competitive level of the EU), the second factor - to differentiate the tax pressure depending on relative values: remuneration - from the multiplicity of its magnitude with the subsistence minimum, and profits - with a certain direction of using net income (to finance enhanced playback or consumption).

The above means that fiscal risk management (as an integral part of public financial policy, systematically reflected in the budget - the government's work program) must refine

fiscal policy to support the pace of production and GDP generation, using two options: or reducing tax pressure (leaving more resources in the real economy), or increase public investment funding (again, by distributing taxes centrally for business).

The country's banking system should also be more clearly geared not only to revenue generation but, above all, to its core function - to lend to the development of the real sector of the economy. In particular, it is necessary to eliminate the risk of insolvency of the banking system due to the fact that it has one of the highest levels of non-performing loans in the world (49% of total loans), as well as a disproportionate share of state-owned banks in its structure - 54% of total assets (which creates a marked contrast of participation in the generation of GDP by the private and public sectors of the economy).

A significant risk factor for the banking system of Ukraine is the current level of dollarization of loans and deposits. Despite the fact that according to the NBU, the share of foreign currency loans and deposits has now decreased (compared to the peak in 2015 by 10 percentage points), but it is now at more than 40%. Riskily threatening is also the overvaluation of the NBU: if the discount rate is now more than twice higher than consumer inflation, this creates a stable dynamic of declining industrial degeneration.

It should also be noted that the high and long-lasting public debt and the harmful effects of mobilizing financial resources to repay it are a risky threat to the national economy. According to the NBU, from mid-2019 to the end of 2021, Ukraine has to pay more than \$ 20 billion. In order to repay external debt as a source of long-term potential risks to financial stability and the main brake on the development of the national economy, the domestic borrowing through the issue of open government bonds (OVDP) was forced. With a

focus on their discount rate. The rate was in the corridor of 15-18% pa, which is quite high. As a result, over 40% of T-bills were purchased by banks, which used almost their full credit, which led to stagnant lending to the real sector: banks have no reason to do so, as T-bills are an ideal alternative for profitability and risk, and the real economy lost credit support.

In our view, it is advisable to take the following measures in the activity of the country's banking system with the aim of significantly high risk for the real economy:

- reduce the yield of government bonds in comparison with the interest rate on loans to the real economy;

- replace the credit risk provisioning system with a hedge system. Only such a measure can predictably attract a significant portion of the \$ 100 billion currently held and withdrawn from deposits;

- Introduce a 15% dividend tax instead of the bank's current income tax;

- to overcome, at the end, tax evasion of the hidden cash flows of large and very large oligopolistic enterprises of Ukraine, which, according to the IMF, amount to up to 43% of GDP in the country.

In addition to the above-mentioned aspects of budget risk management, in order to improve the financial security of the state, the regime of decisive reduction of inefficient budget expenditures is equally important.

First of all, in this area of budgetary risk management, it is necessary to pay attention to a significant reduction in the cost of maintaining, in our opinion, an excessive army of civil servants. After all, it is known that during the period of state sovereignty of Ukraine the population of Ukraine decreased by more than 10 million people (and this is quite a solid state for this factor!) With the decrease in production output (besides - self-government in the sphere of management) the army of officials did not decrease, and has grown significantly!

It should also be noted that public sector enterprises, if not inefficient, are unprofitable. Even the state-monopoly production of alcohol became unprofitable.

It is also doubtful not only the expediency of the existing number of officials (as well as the deputies of the Verkhovna Rada), but also the system of remuneration for their "labor". It would be advisable to link the level of remuneration of officials to the average in their field of care (at a premium of 50% for responsibility and up to 50% for the magnitude of competences) with an annual adjustment with actual changes in reality.

In the area of economic spending of budgetary funds, it is also advisable to use the global experience of countries with democratic governance.

### **3. Risk management in the financial system sustainability of business entities**

In the system of market relations, the main focus of economic activity is shifting to a certain link - entrepreneurship. Entrepreneurship acts as the basic structural-forming element of the economy, and the stability of the functioning of the economic system of the state is based on the strength of this basic basis - enterprises as economic entities.

Currently, the unstable macroeconomic situation and socio-economic situation in Ukraine are unfavorable for the sustainable development of most enterprises (except oligarchic ones), since their activities are under constant pressure of risk factors (economic crises, lack of sufficient investment capital to accumulate the flow of economy, good supply and marketing and a number of other problems, which are cyclically alternating with a slight increase in the volume of production of goods and services. Under these conditions, some enterprises more or less successfully adapt to the requirements of the dominant factors of real reality and relatively successfully pass the traditional stages of growth for

the life cycle, while others - having exhausted the possibility of accelerating the risk factor (tendencies of stagnation, depression, crisis, default), etc. bankruptcy.

That is, for a business entity, the risk is practically systemic: since a market business is focused on maximizing profits, this unambiguously increases its riskiness, because the greater the chance of profit, the greater the risk - as a value expression of a probable event that leads to gain or loss. In this regard, the problem of effective risk management at the level of an individual enterprise is not only multifaceted, but also practically permanent, which requires the need for economic and financial diagnostics of the current state of the enterprise, the feasibility of financial rehabilitation to prevent bankruptcy.

The analysis of the world experience of bankruptcy prevention of the enterprise shows different approaches to the assessment of the degree of bankruptcy. In general, the following scientific approaches have been identified to determine the assessment of the likelihood of bankruptcy:

a) assessment of the operating activity of the enterprise on the indicators of wealth, profitability, business activity (E. Altman, M. Vinakor, R. Smith, G. Springer, etc.);

b) evaluation of the success of enterprises in two areas of activity - financial and investment by indicators of financial stability and the degree of liquidity of their total capital (V. Beaver, G. Kadikov, S. Mervin, R. Saifulin, R. Taffler, M. Fedotova, P. Fitzpatrick et al.);

c) evaluation of the success of the enterprise in all three areas - operational, investment and financial, which are of independent importance (O. Tereshchenko, J. Argeni, P. Bongini, V. Kovalev, T. Skown, G. Ferry, N. Hine, G. Hull, J. Chandler, et al.

Regular bankruptcy risk management in the system of risk management aims at taking preventive measures Ensuring stable productive functioning with timely identification and

elimination of risks of economic activity. All this relates to the risk management mission of the enterprise, which is based on a deep and comprehensive systematic comprehensive analysis of external and internal risk factors and their impact on the activity of the enterprise. That is, the organic components of enterprise risk management are the following components: diagnostics of financial condition; evaluation of business prospects; highlighting urgent problems of increasing production, efficient financing and investing in sustainable development; conducting system internal audit. All these, as well as other activities, are integral parts of general organizational and production management.

Of particular importance among these components of the overall organizational and production management of the enterprise belongs to the diagnosis of the financial condition of the enterprise, which is based on methods of economic and financial analysis, forecasting crisis phenomena, the degree of probability of bankruptcy, and most importantly - reveals the possible price of its prevention.

Successful diagnostics of the financial condition of enterprises and identification of the causes that cause their financial failure can be achieved by successive steps such as:

- identification and assessment of the impact of external and internal economic environment on the occurrence of financial failure of the enterprise (identification of dominant relationships, fixing sources of real risk (objective and subjective and crisis manifestations);

- defining a system of indicators and indicators of measuring financial failure, considering the characteristics of the enterprise (organizational, sectoral and other);

- identification of signs and degree of financial failure of the enterprise, analysis, assessment of the level of business risk and indicative values of the determining parameters of financial and economic activity of the enterprise;

- calculation of the level of financial insolvency of the enterprise, forecasting the degree of probability and expediency of preventing bankruptcy;
- application of a comprehensive enterprise methodology, including possible scenarios for its prevention or overcoming;
- development of a detailed plan of measures to restore the financial capacity of the enterprise, the calculation of the cost of its implementation and the argumentation of the feasibility of restoring the financial capacity of the enterprise.

At each stage of financial insolvency diagnostics, indicators will be specific to the overall situation as an argument for the need for regulatory change.

In particular, at the first stage of diagnostics of financial failure of an enterprise from the position of external and internal risk factors, it is possible to detect their origin not only from wrong management decisions (or evasion from favorable opportunities), but also cases of mutual compensation of negative consequences with positive ones, which contributed to partial compensation, or compensation. to strengthen the effect of one factor by another, which in itself is an important basis in making financial decisions.

An important aspect of revealing the real financial status of an enterprise is the information on which managerial decisions are made that form a specific financial result. Therefore, at the third stage of diagnostics of the financial state of the enterprise, the financial statements are evaluated in order to identify the symptoms and the degree of manifestation of financial failure. There are two types, the primary manifestations of which are based on the data of the first two forms of accounting (losses, decreases in assets, increase in debt), and the second, the detection of which requires analysis of the financial statements (the status of payments to counterparties, penalties, etc.).

It is important to make a decision in the fourth stage of this process to determine the financial insolvency method and to predict the probability of bankruptcy, which are several and which can produce different results. Each of these techniques is based on the use of specific indicators of the evaluation of the enterprise. In this connection, the most reliable conclusion about the actual state of financial failure of the enterprise will be the result obtained from the comprehensive use of methods of diagnosis and assessment of the financial condition of the enterprise.

To estimate the final tendencies of changes in the consequences of financial and economic activity of the enterprise, a special matrix of financial equilibrium of the qualitative certainty of the effectiveness of the risk-management system in the enterprise is used (Fig. 2).

Effectiveness of risk management in the enterprise	Dynamics of different results activity of the enterprise		
	Negative (braking)	Neutral (optimization)	Positive (acceleration)
Negative	A <b>1</b>	4	6
Neutral	7	<b>2</b>	5
Positive	9	8	<b>3</b> B

*Fig. 2. The matrix of financial equilibrium, conditioned by the efficiency of enterprise risk management \**

Note. \* Created by the author.

In Fig. 2 shows a matrix that includes nine quadrants that reflect the direction of change in the dynamics of the financial performance of an entity's business, depending on the action (or inaction) of risk management.

Given the quadrants 1, 2, 3 of the financial equilibrium matrix determine the position of equilibrium, quadrants 4, 5, 6 characterize the success situation, which is manifested in increasing the liquidity of the enterprise resources. The change in the assessment of the financial activity of an enterprise from



A to B (from negative to positive) goes through the quadrants of the matrix with zero result of economic activity (ie, the equilibrium quadrant). Above the diagonal AB is a zone of success characterized by the formation of liquid resources. The result in these quadrants is greater than zero. Under the diagonal AB is the area of financial resources scarcity, ie the area of spending. The result of financial and economic activity in the quadrants of this zone is within zero.

Each situation of the financial condition of the company, as shown in Fig. 2 matrix (equilibrium-success-deficit) can be caused by different ratios of results of risk management and in general financial and economic activity. The construction of the financial equilibrium matrix of an economy can be carried out on the basis of accounting data (standard # 4 "Statement of Cash Flows").

Analysis of risks that lead to the occurrence of financial insolvency for an enterprise requires the use of a system of specialized knowledge of the peculiarities of economic phenomena and processes of the phenomenon of "risk" due to its uncertainty and conflict in the field of obtaining the quality and quantity of information necessary for making risk management decisions<sup>910</sup>

That is why in the process of identification and assessment of the level of financial risks it is advisable to take into account the following aspects of their manifestation: the degree of importance of the influence of different risk factors on the planned project decisions; admissible accuracy of estimation of risky operations; the potential additional costs of the intended contract; estimation of the value of undetermined (hidden) adverse factors; the possibility of an additional

---

<sup>9</sup> Davidenko N. M. Financial management: a textbook / N. M. Davidenko. - K.: "Zadruga" LLC. 2012. - 516 p.

<sup>10</sup> Kramarenko G. O. Financial Management. 2nd ed.: textbook / GO Kramarenko, AE Chorna. - K.: Center for Educational Literature. - 2009. - 520 p.

financial problem related to the assessment of the level of financial risks.

The high degree of riskiness of market business, which causes the loss of financial capacity of a large number of enterprises and the likelihood of threatening their economic security (bankruptcy), led to the search for reliable methods of countering these threats. Most of these methods are focused on internal financial diagnostics.

Internal financial diagnostics of crisis management is a system of scientific knowledge and a set of practical measures for analyzing the financial condition and degree of financial stability of an enterprise, identifying negative symptoms of its functioning, the ability of existing financial potential, developing a plan of measures that will avoid or minimize the risk of crisis at the enterprise. Deviations from the optimal financial plan, the duration of deviations, the degree of their manifestation, determinancy and the manifestation of the main typical features characteristic of specific deviations are revealed in the course of implementation of the specified diagnostics.

Methods of carrying out internal diagnostics of the financial state of enterprises, aimed at identifying the causes and justification of measures of anti-risk and anti-crisis nature, have the expression of discrete models and are based on the use of certain indicative financial coefficients (which characterize certain functional parameters of the financial system of the enterprise) and differ in the number of their structure factors.

According to literary sources, such models of anti-crisis and anti-risk diagnostics of the financial status of enterprises are now widely known.

1. Two-factor model (USA). Includes the ratio of current liquidity and the proportion of borrowings in the liabilities of the enterprise.

2. The three-factor model of J. Lego (Canada). Includes the following proportions: share capital to the total amount of available assets; the amount of profit (before tax) to the total amount of assets; amounts of working capital for the two previous periods to the total assets of the enterprise for the two previous periods;

3. Four-factor models:

a) R. Tuffler Model - G. Tishow, 1977 (United Kingdom). Includes the following proportions: the amount of profit from the sale of products and services to the value of short-term liabilities; the amount of short-term liabilities to the amount of assets; the amount of revenue from the sale of products and services to the amount of assets.

b) J. Liss Model, 1972 (United Kingdom). Includes the following proportions: working capital to assets; the amount of profit from the sale of products and services to the amount of assets; the amount of equity to the amount of capital raised.

c) Gordon-L.V. Spritzentz model, 1978 (Canada). It includes the following proportions: the amounts of current assets and short-term liabilities to the balance sheet; the amount of profit (before tax) on short-term liabilities; the amount of proceeds from the sale of products and services to the balance sheet.

4. Five-factor models:

a) Model E. Altman, 1968 (USA). Includes the following proposals: amounts of own current assets to the total amount of available assets; amounts of retained earnings to total assets; the amount of profit (before tax and interest) to the total assets. In 1983, two additional indicators were added: the amount of market value of capital to the amount of capital raised and the amount of proceeds from the sale of products and services to the total amount of assets.

b) Model RS Saifulin - GG Kadikov (Russia). Includes the following proportions-ratios: the ratio of the security of

own funds; current liquidity ratio; turnover of advanced capital; management coefficient; return on equity.

c) Model by J. Depolyan (France). It includes the following proportions: amounts of receivables and cash in the amount of short-term accounts payable; amount of equity to borrowed; amounts of equity to non-current assets; the cost of selling to the average stock of goods; receivables turnover ratio.

d) Model of GV Savitskaya (Belarus). Includes the following proportions: the amount of the working capital share to the total current assets; working capital amount to the total fixed capital; total capital turnover ratio; rate of return on available assets; financial independence ratio.

5. A six-factor model of OO Tereshchenko, 2003 (Ukraine). Includes the following financial ratios: coverage ratio; the ratio of turnover included in the production of capital; profitability ratio of sales of products and services; rate of return on available assets; loan turnover ratio.

6. The seven-factor model of NM Vnukovo and NI Zinchenko, 2006 (Ukraine). Includes the following financial ratios: asset mobility; stock coverage; restoration of fixed assets; financial leverage; absolute liquidity; sums of the share of circulating production funds; payables turnover ratio.

7. The nine-factor model of J. Fulmer, 1984 (USA). Includes the following ratios: the amount of retained earnings to the balance sheet amount; the amount of proceeds from the sale of products and services to the amount of the balance; amount of profit (before tax) to the amount of equity; the amount of net income and depreciation and amortization to the amount of financial liabilities; amounts of long-term liabilities to the balance sheet amount; amounts of short-term liabilities to the balance sheet amount; amounts of tangible assets to the ratio of the national currency to the US dollar; amounts of current assets and short-term financial liabilities to the total

amount of financial liabilities; profit (before tax) and interest payable before interest.

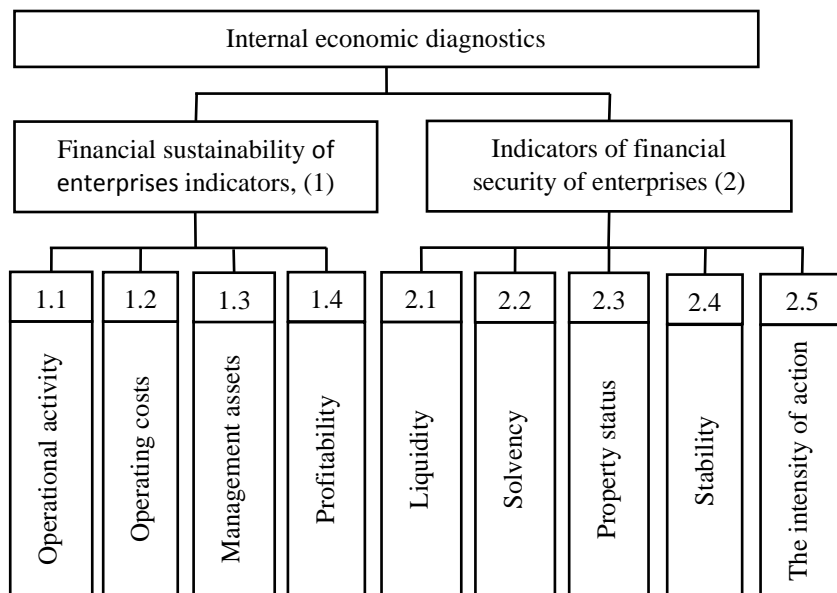
Testing of foreign methods of carrying out financial diagnostics of the enterprises with the purpose of working out of the anti-crisis and anti-risk regime of operation showed that these methods do not quite fit the conditions of the Ukrainian economy.

First, they are oriented to the conditions of economy with stable market canons of regulation of financial and economic relations, which is not quite inherent in Ukraine; secondly, the presence of a large sector of the shadow economy in Ukraine and a high degree of corruptive component of economic relations (which violates the reliability of official accounting and financial reporting), then under these conditions the methods used to assess the financial soundness of Ukrainian enterprises financial ratios also record an unreliable result. This requires a more grounded approach both to the selection of indicative indicators and to the limits of their normative parameters.

It is known that by types of entrepreneurial activity there are production, commercial and financial risks and all of them negatively affect the financial results, which threatens the loss of capital. Thus, any business risks are financial in nature. Practice shows that the more diverse the combination of areas of activity of the enterprise, the greater the likelihood of a positive result and less risk. This pattern is based on the economic feasibility of diversifying production. Also, practice shows that excessive diversification of production leads to capital dissipation and may lead to a lack of financial support for some areas or all of the enterprise as a whole. When forming a portfolio of production lines (or financial instruments), it is important to choose those components that are influenced by different factors, that is, which have a low correlation coefficient. Methodological approaches to

determining the level of risk from a combination of different directions is given by portfolio theory.

Domestic experience of internal diagnostics of risks of financial and economic activity of enterprises is based on the application of mainly two groups of indicators: indicators of economic activity and financial support of the enterprise. In terms of content, each set of indicators should include separate blocks that determine the most relevant aspects of financial and economic activity shown in Fig. 3.



*Fig. 3. Mechanism of internal diagnostics of enterprises\**

Note. \* Generalized by author.

According to Fig. 3 the whole set of indicators necessary for internal diagnostics of financial risks of the enterprise (which is first divided into two groups of indicators - business activity and financial support of the enterprise) is divided into separate blocks of specific indicators: in the first group there are four, and in the fifth group. In turn, each block may include several specific indicators individually selected by the

enterprise, considering their own characteristics. In addition, it is advisable to consider the indicators in the dynamics to track the trends of the enterprise.

Indicators of economic activity of enterprises should provide quantitative and qualitative characteristics of the reproduction process of the enterprise. It is advisable to include in the individual blocks of this group indicators that show the success of operating activities in the formation of income and profit as the sole source of capital growth of the enterprise, cost optimization, business activity and a group of indicators that characterizes the efficiency of processes and use of enterprise resources such as financial, material, labor etc. Thus, the indicators of this group will allow to control the risk of loss of profitability and the generation of the crisis of profitability.

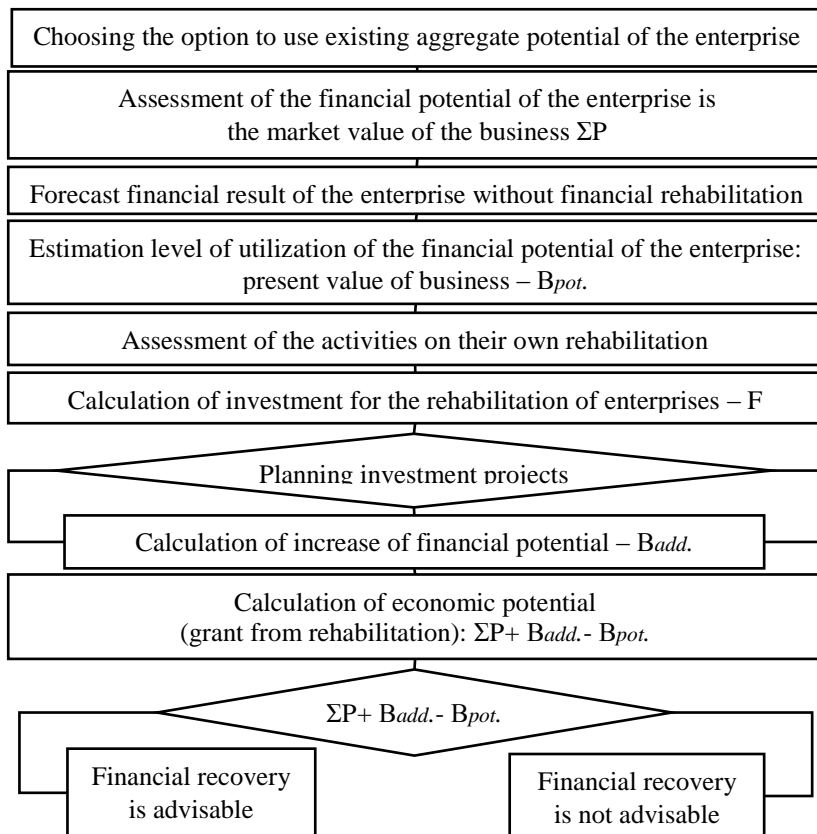
The first group may include the following indicators:

- block 1.1: growth in gross sales, gross profit, operating profit, net profit;
- block 1.2: the value of costs per hryvnia sold products, administrative and sales costs per hryvnia sold products, etc.;
- block 1.3: asset turnover, inventory turnover, receivables turnover, receivables turnover, payables turnover, payables duration, total capital turnover;
- block 1.4: the level of profitability of sales, return on equity, profitability of production, profitability of products, return on assets, level of productivity of labor, material return, financial return and others.

It is advisable to include the following indicators in individual blocks of the second group:

- block 2.1: the amount of absolute, instant and current liquidity, indicators of loss and recovery of solvency;
- block 2.2: volume of equity, loan, total capital, optimality of capital structure, financial stability;
- block 2.3: the amount of fixed capital and their quality, the volume and composition of real investments;

- block 2.4: the size and optimality of the working capital structure, availability of working capital, indicators of strategy and tactics of financing the property;
- block 2.5: availability of internal reserves, financial investments and application of methods of neutralization of financial losses.



*Fig. 4. Algorithm expediency of sanitation enterprise\**

Note. \* Compiled by the author.

Based on the results of the analysis, conclusions are drawn regarding the current financial condition of the enterprise and defining recommendations on the directions of



improving the activity of the enterprise and the feasibility of conducting its financial rehabilitation (rehabilitation), which is carried out on the basis of the algorithm shown in Fig. 4.

In the process of determining the feasibility of financial rehabilitation of the enterprise (in case of identifying the risk of its functioning), it must be proved that the amount of costs necessary to eliminate the crisis (risk) condition and restore economic security (with the amount of additional targeted investments of financial resources) does not exceed the value of those resources, which do not stand out (fall into inactivity) in the production process, that is, to determine the value of the return on financial recovery (financial rehabilitation).

Thus, the use of internal diagnostics of the financial capacity of the enterprise allows to obtain complex information, the use of which provides a justification for management decisions on the implementation of targeted anti-crisis projects to strengthen the functional mechanism of enterprises. At the same time, the system of diagnostics of the current financial risks of the enterprise makes it possible to timely adjust the directions of economic and financial analysis, internal audit, methods and criteria of assessment of success at all stages in accordance with the appearance of external risks and threats to the financial capacity of the enterprise.

## **2.4. DEBT BURDEN OF THE FINANCIAL SYSTEM OF UKRAINE AND COUNTRIES THE EUROZONE**

The tendency to increase the debt burden of the financial system of Ukraine has been traced over the past few years. It is determined by the high foreign exchange risk of external debt, the unstable situation with the refinancing of debts of previous years, as well as the pressure of debt payments on public finances. Unfortunately, domestic methodological provisions and recommendations that were supposed to suspend the increase of the debt burden of the financial system of Ukraine through effective forecasting, analysis and assessment of changes in the financial market conditions did not ensure active management of the market share of budget debt at an acceptable level. In the context of the crisis, the European Union member states demonstrated their willingness to support financial institutions - banks, insurance and investment companies that were in a state of bankruptcy, through the injection of budgetary funds. The modernization of their debt burden policy, which strengthened the financial system and economic growth, should become the main reference point for Ukraine to adjust the debt service cost ratio to the permissible level of risk of revaluation pressure on the national currency, the level of the balance of payments, and internal price competitiveness.

The current stage in the development of global economics is characterized by a significant increase in public debt in many countries of the world. Specialists of international organizations, in particular the IMF<sup>1</sup>, considering the debt policy of the state in a set of actions, believe that it is implemented through a set of measures and is aimed at rational and effective mobilization, distribution, use and return of

---

<sup>1</sup>World economic Outlook. (2012). Coping with high debt and slugging growth. URL: <https://www.imf.org/external/pubs/ft/weo/2012/02/pdf/text.pdf>.

borrowed financial resources by the state. The ultimate goal of debt policy is to reduce the debt burden that will not be excessive in keeping the permissible level of currency interest rates, that is, it will be considered financially secured by the external and guaranteed state debt and will not interfere with the growth of the balance of payments, as well as intra-price competitiveness.

The theoretical and methodological approach of identifying the relationship between economic growth and the debt burden of the financial system is the so-called «Laffer debt curve»<sup>2</sup>, which allows to estimate the level of relative increase in the volume of borrowing to GDP growth rates. So, increasing government debt and increasing debt burden enlarges the risks of the financial system. Lenders in the financial markets react to this fact by increasing borrowing rates, which causes an increase in public debt servicing costs compared with the rate of GDP growth. This leads to the formation of a so-called debt overhang, when the cost of attracting additional financial resources for the borrowing state significantly increases compared to the rate of its economic development. Further borrowing leads to the rollout of the debt spiral (that is, to serve the debt, it is necessary to lend again at an increasingly unfavorable conditions), which forces to build a debt pyramid<sup>3</sup>.

IMF experts evaluate the model of the debt burden of the financial system ( $b_t$ ) in the form of an empirical ratio in the long run. At the same time, measures for attracting, accounting, servicing and repaying public debt should be coordinated. They

---

<sup>2</sup>Laffer, A. (1979). The Economics of the Tax Revolt. New York: Harcourt, Brace.

<sup>3</sup>IMF Country Report for Ukraine. Second review under the extended fund facility and requests for waivers of non-observance of performance criteria, rephrasing of access and financing assurances review-press release; staff report; and statement by the executive director for Ukraine, №16/319. URL: <https://www.imf.org/external/pubs/ft/scr/2016/cr16319.pdf>.

timely co-ordinate the changes in the rates of growth of real GDP from the growth rate of inflation and budget surplus<sup>4</sup>:

$$b_t = \frac{1 + i_t}{(1 + \pi_t) \cdot (1 + g_t)} \cdot b_{t-1} + d_t + e_t, \quad (1)$$

where,  $b_t$  is the level of debt burden of the financial system to GDP;  $i_t$  is the interest rate on which the debt is paid;  $\pi_t$  is a inflation rate;  $g_t$  is a growth rate of real GDP;  $d_t$  is a growth rate of the primary deficit in relation to GDP;  $e_t$  is an additional random variable that takes into account the estimated accounting adjustments of the primary deficit.

The functionality of this model results in the government decision to create a non-standard situation – the simultaneous presence of rather high inflation and relatively low nominal interest rates for commercial loans and government borrowings. This is accompanied by a small but continuous economic growth, which gradually leads to a balanced budget<sup>5</sup>.

Within the framework of the all-European approach (fiscal consolidation policies), the Eurozone member States developed a series of «fiscal rules of a new generation»<sup>6, 7</sup>, which were implemented according to target indicators (structural deficit, budget expenditures, debt burden of the financial system), and their algorithm of calculation was introduced at the legislative level. Thus, the general and individual fiscal rules for rating the pressure of debt burden of the financial system of the Eurozone member States are aimed at bringing the indicator in a range not exceeding 60% of GDP.

<sup>4</sup>World economic Outlook. (2012). Coping with high debt and slugging growth. URL: <https://www.imf.org/external/pubs/ft/weo/2012/02/pdf/text.pdf>.

<sup>5</sup>Trusova, N., Kalchenko, S., Tsap, V. & Ternovsky, V. (2017). Restrictions of Financing the Budget Deficit of Ukraine, *International Journal of Economic Research*, 14(14), 353-364. URL: <http://serialsjournals.com/serialjournalmanager/pdf/1510316241.pdf>. p. 355.

<sup>6</sup>Numerical fiscal rules in the EU Member States. URL: [http://ec.europa.eu/economy\\_finance/db\\_indicators/fiscal\\_governance/fiscal\\_rules/index\\_en.htm](http://ec.europa.eu/economy_finance/db_indicators/fiscal_governance/fiscal_rules/index_en.htm)

<sup>7</sup>Kilponen, J., Laakkonen, H. & Vilmunen, J. (2015). Sovereign risk, European crisis-resolution policies, and bond spreads, *International Journal of Central Banking*, 11, 285–323. URL: <https://EconPapers.repec.org/RePEc:ijc:ijcjou:y:2015:q:2:a:8>. p. 286

If the range is exceeded, countries must develop individual measures to reach the threshold level of this indicator, through annual adjustments of certain segments of public finances.

Within the «Laffer debt curve» model, the dependence of GDP changes on the level of debt burden of the financial system for the countries that form the economic core of the Eurozone (Germany, France, Spain, the Netherlands, and Austria) is developed. These countries monitor the level of the indicator. This dependence is developed also for the new EU member States (Estonia, Latvia, Romania, Bulgaria, Lithuania, Slovenia, Czech Republic, Slovakia, Poland, Hungary), which have a different level of safe debt burden.

In the study of such countries we used the IMF data statistics<sup>8</sup> with the time period of 2012-2017. The value of the critical debt burden of the financial system of a particular country, above which the effect of the «debt overhang» occurs, is the zero point of economic development that appears when the increase of the indicator value of the dependence of GDP on the debt burden of the financial system takes place. The curve is represented by a quadratic equation  $y = ax^2 + bx + c$ , the maximum of the curve corresponds to the value  $x_{\max} = -\frac{b}{2a}$ .

The calculations for the economies of the countries show that for France this value is 83.8% of GDP, Germany – 74.9%, Spain - 78.2%, Netherlands – 61.2%, Austria – 82.3%. The average value of the critical debt burden for a given group of «old» EU member States can be estimated at 76.1% of GDP. The dynamics of the debt burden of the financial system for the group of new member states in comparison with the «old» EU member States has the following range: in Estonia – 9.7% of GDP, Latvia – 37.8%, Romania – 40.4%, Bulgaria – 26.9%,

---

<sup>8</sup>The IMF databases. URL: <http://www.imf.org/data/imf-finances>.

Lithuania – 37.7%, Slovenia – 82.9%, Czech Republic – 41.6%, Slovakia – 54.0%, Poland – 48.8%, Hungary – up to 79.6% of GDP. That is, in the two countries of this group (Hungary and Slovenia), the value of the debt burden of the financial system significantly exceeded the threshold of 60%, while in countries such as Poland and Slovakia, this threshold was closer.

Within the framework of the «Laffer debt curve» model, the new Eurozone member States, during 2012-2017, had a significant relationship of «GDP – debt burden of the financial system». At the same time, the maximum of this curve for Bulgaria is at the level of 22.3% of GDP, Latvia – 21.0%, Estonia – 10.6%, Romania – 52.8%, the Czech Republic – 38.1%, Poland – 51.5 %, Hungary – 73.0% of GDP. The average value of this indicator for this group of countries is 38.5% of GDP.

According to the forecasts of international financial organizations, in particular of the World Bank, by 2018 the economic growth of the global economy will slow down to 2.9% versus 3.5% in 2017<sup>9</sup>. As a result of such forecasts, the crisis situation in Ukraine, which is in a state of reorientation from one market to another, may deepen further, due to a decline in demand for commodities, a reduction in foreign exchange flows and a reduction in exports. The calculations of the critical debt burden of the financial system of Ukraine within the framework of the «Laffer debt curve» model have shown that during 2008-2017 the average maximum allowable pressure of the debt burden for the Ukrainian economy, above which the situation of the «debt overhang» may occur, is 51.2%.

Thus, in the structure of the currency debt in 2014 the volume of state and state-guaranteed debt amounted to 61.7%, in

---

<sup>9</sup>The World Bank (2017). The rate of decline in the global economy to 2.9% in 2018. URL: <http://iee.org.ua/ru/prognoz/5101/>.

2015 – 70.2%, in 2016 – 69.7%, in 2017 – 71.1%. Such a trend contributes to the growth of currency costs for servicing debt and increases the threat of reduction in currency supply on the domestic financial market.

A dangerous challenge to financial security during 2014-2017 was a growing debt burden on the state budget due to increased payments for debt. So, if in 2014 their total volume amounted to UAH 183.86 billion, then in 2017 – UAH 242.9 billion (including UAH 168.7 billion in domestic debt and UAH 74.2 billion in external debt). In the structure of aggregate debt payments, there is a tendency of increasing the cost of repayment of public debt. Their total amount in 2014 was UAH 109.20 billion, in 2015 – UAH 251.60 billion, in 2016 – UAH 111.4 billion, in 2017 – UAH 129.56 billion.

The projected payments for state debt in 2018 are estimated at UAH 305.9 billion, of which UAH 193.36 billion are the payment of internal debt and UAH 112.54 billion are the payment of external one.

The growth of aggregate debt payments in the medium term is particularly critical for Ukraine, which can largely provoke a state insolvency crisis (on the condition of uncertainty about further IMF lending and slowdown of economic growth). According to the forecast for 2019, their total volume will exceed UAH 339 billion, in 2020 – UAH 341 billion.

Payments of Ukraine for debt obligations during 2018-2022 are estimated at USD 64.2 billion, including USD 35.5 billion for domestic and USD 28.7 billion for external debt. In 2018, Ukraine debt payments will be USD 10.9 billion, in 2019 – USD 11.6 billion, in 2020 – USD 13.7 billion, in 2021 – USD 14.1 billion, in 2022 – USD 13.9 billion. In order to reduce the debt burden of Ukraine financial system in the third quarter of 2017, the exchange of bonds of domestic government loans that were owned by the NBU on new

government bonds was carried out. The total volume of the bonds portfolio owned by the NBU in 2017 amounted to UAH 360.6 billion, of which bonds with a nominal value of UAH 219.6 billion were specified for refinancing. Approximately UAH 145.2 billion of the general government bonds portfolio are converted into long-term bonds in the national currency of different maturity with anchoring of profitability to the level of inflation and about UAH 74.4 billion into long-term bonds in the national currency of different maturity with fixed interest rates. The redemption of the bonds will be carried out in equal parts (approximately UAH 12 billion annually) until 2047<sup>10</sup>.

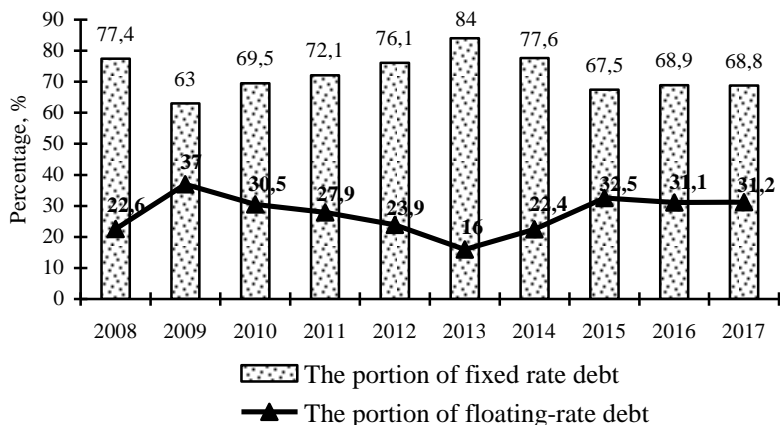
It should be emphasized that the presence of simultaneously fixed and floating rate bonds will ensure the diversification of interest rate risk. But the tendency to hold interest risk as an indicator of increasing the value of debt in national and foreign currency with a fixed and floating rate will be maintained. The dynamics of interest rate risk in the debt sector (Fig. 1) showed an increase in the share of floating rate financial instruments, the volatility of which in the financial market is increasing.

Under the influence of political and economic upheavals in 2009 their level was 37.0%, in 2010 – 30.5%. During 2016-2017, the share of floating-rate debt was kept at the level of 31.1-31.2%, due to IMF loans. The use of significant volumes of floating rate implies the need to choose weighed approaches to the type of debt instruments that reflects the level of risk of growth in future maintenance costs.

---

<sup>10</sup>NBU and the Ministry of Finance of Ukraine made on the exchange of bonds of domestic government loans portfolio owned by the NBU (2017). URL: <https://www.minfin.gov.ua/news/view/natsionalnyi-bank-ta-ministerstvo-finansiv-zdiisnyly-reprofilinh-ovdp-z-portfelii-nbu?category=novini-ta-media>.





*Fig. 1. Dynamics of interest rate risk in the debt area of Ukraine 2008-2017*

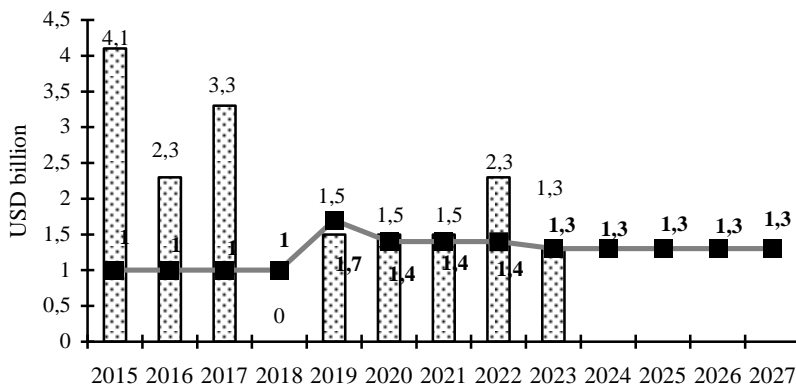
Source: calculated by the author according to the Ministry of Finance of Ukraine databases <sup>11</sup>

The probability of increasing the debt burden in the medium term as a result of the realization of potential risks and debt restructuring is completed with virtually all external debt obligations, in particular: 20% of the principal debt of USD 3.6 billion was cancelled and a portion of the debt of USD 15 billion was restructured (the exchange of current series for 9 new ones of Eurobonds was carried out) with the postponement of maturity dates from 2015-2023 to 2019-2027. This allowed reducing the burden of debt payments in the most difficult period for public finances (Fig. 2).

The increase in the value of restructured financial instruments for debt operations to 7.75% and their attachment to GDP growth rates instead of write-offs of USD 3.6 billion will oblige the state to pay lenders 15% or 40% of nominal GDP growth over 20 years. According to UIF estimates, in the years of 2022-2027 additional payments for restructured bonds,

<sup>11</sup>Databases the Ministry of Finance of Ukraine on the general and guaranteed debt (2017). URL: <http://195.78.68.18/minfin/control/uk/publish>.

with annual growth of real GDP by 4.0-4.5%, will amount to USD 2.5 billion in compensation payments to creditors. But this will pose an additional threat to the financial system of the country as a whole<sup>12</sup>.



▨ According to the schedule of repayment before the debt transaction

—■— According to the schedule of repayment after conducting a debt transaction

*Fig. 2. Comparative assessment of government debt repayment before and after debt transaction of 2017, bln.USD*

Source: calculated by the author according to<sup>13</sup>

The restructuring of external and guaranteed State debt with a moratorium on individual debt payments is a compulsory step for Ukraine to control the critical pressure on the debt burden of the economy.

Harmonization of the development of the financial system of Ukraine and adjustment of debt indicators to the

<sup>12</sup> Ukraine's default risks become critical (2017). URL: [https://uifuture.org/uk/post/ekonomika-ukrainy-riski-defolta-ukrainy-stanovatsa-kriticeskimi\\_448](https://uifuture.org/uk/post/ekonomika-ukrainy-riski-defolta-ukrainy-stanovatsa-kriticeskimi_448).

<sup>13</sup> Databases the Ministry of Finance of Ukraine on the general and guaranteed debt (2017). URL: <http://195.78.68.18/minfin/control/uk/publish>.

limit boundaries should be ensured on the conditions of increasing the effectiveness of such measures:

the implementation of medium-term debt management of the financial system for 2018-2020 in accordance with the Strategy of Public Finances Management for 2017-2021 (approved by the Resolution of the Cabinet of Ministers of Ukraine dated May 24, 2017 № 415-R);

the establishment of restrictions on foreign currency borrowings in the domestic financial market, as well as the general level of external debt not exceeding 50% in order to reduce currency risk;

interest rate risk bias in the formation of the medium-term debt burden of the financial system and the development of an additional scenario for responding to rising costs of servicing debt at an increase in floating rate loans;

improvement of legislative regulation in relation to consolidating the level of debt burden of the financial system with GDP – 40%.

The directions of effective borrowing and distribution of financial resources at the level of formation of a stable financial system should be as follows:

legislative provision of fiscal rules for optimizing state borrowing through maintaining the balance in emission activities and collecting taxes at increasing debt and increasing the cost of its servicing;

provision of measures on the formation of price guidelines for the placement of domestic government debt securities in national currency;

provision of legislative support for the issuance of long-term (at least for 20-30 year old) government securities (for example, Argentina has successfully placed 100 year old Eurobonds with a yield of 7.5% per annum among private investors);

providing monitoring and evaluation of fiscal risks associated with contingent liabilities and a period of reduction of the general and guaranteed state debt to a safe limit – 60%;

reduction of expenditures to cover the amount of state-guaranteed credit granted to small and medium-sized enterprises to a value not exceeding the equivalent of EUR 2.5 million (similar restrictions exist in the Eurozone member States);

enhancement of protective mechanisms in providing state guarantees in compliance with the Public Finance Management Strategy for 2017-2021.

Accelerating the pace of reforming the financial system and implementing measures to improve the government debt burden will ensure further economic growth and a high level of social security in the country.

## **2.5. INVESTMENT ATTRACTIVITY: FEATURES IN THE AGRARIAN ECONOMY SECTOR**

The agrarian sector is the defining branch of the economy of any country. At first, it may be unprofitable and unattractive for investment, but its development depends on the development of the entire economy. At this stage, the issue of attracting investment in agriculture is a key issue for the Ukrainian economy.

According to the legislation of Ukraine, investments are all kinds of property and intellectual values that are invested in objects of entrepreneurial and other activities, as a result of which profit (income) and or social and environmental effect is achieved.<sup>1</sup>

In the broader interpretation, investments are investments for the purpose of further increase. Investments have a financial and economic definition.

1. The financial definition of investments is all types of assets (funds) invested in economic activities for the purpose of earning income.

2. Economic definition of investment - expenditure on the creation, expansion, reconstruction and technical re-equipment of fixed capital, as well as related changes in working capital, since changes in inventories are largely dependent on the movement of capital expenditures.

In the agricultural sector of the economy, the state of investment activity is insufficient, there is no common understanding of the essence of the concept of investment attractiveness, its relationship with the financial condition of the enterprise and its financial stability is not fully investigated.

There are many definitions of the definition of “investment attractiveness” (Table 1).

---

<sup>1</sup> About investment activity. Law of Ukraine of September 18, 1991. [Electronic resource]. – Access mode: <http://zakon4.rada.gov.ua>

Table 1

## Definition of the term “investment attractiveness of the enterprise” in the economic literature

<i>Author (source)</i>	<i>Understanding the concept</i>
<i>1</i>	<i>2</i>
«Methods of integral evaluation of investment attractiveness of enterprises and organizations»	The level of satisfaction of the financial, production, organizational and other requirements or interests of the investor in relation to a particular enterprise, which can be determined or evaluated by the values of the relevant indicators, including integrated valuation. <sup>2</sup>
Blank I.O.	Analysis of the investment attractiveness of an enterprise on the basis of financial indicators such as: financial stability, profitability, liquidity of assets and asset turnover. <sup>3</sup>
Bocharov V.V.	Achieving minimal risk when investing in securities of only those companies that are stable and will generate high profits. <sup>4</sup>
Dovbnya S.B.	A set of characteristics of financial stability and economic efficiency of the enterprise. <sup>5</sup>
Dontsov S.S.	Reliability of profit when investing in enterprise securities. <sup>6</sup>
Kozachenko H.V.	A set of objective and subjective conditions that promote or impede the investment process. <sup>7</sup>

<sup>2</sup>The methodology of integral assessment of investment attractiveness of enterprises and organizations, approved by the Agency's Bankruptcy Prevention Order of Enterprises and Organizations dated 23.02.1998, № 22. [Electronic resource] – Access mode: <http://zakon5.rada.gov.ua/laws/show/z0214-98>.

<sup>3</sup> Blank I.O. Investment management: a textbook. / I.O. Blank. – K.: KNEU, 2009. – 398 p.

<sup>4</sup> Bocharov V.V. Modern financial management. – M.: Nizhny Novgorod; Voronezh: Peter, 2006. – 464 p.

<sup>5</sup> Dovbnya S.B. Methodical bases of formation of investment attractiveness of the enterprise / S.B. Dovbnya // Ek. herald of nat. mines un-tu. – K., 2007. – №4. – P. 43-50.

<sup>6</sup> Dontsov S.S. Evaluation of the investment attractiveness of an enterprise through the analysis of the reliability of its securities / S.S. Dontsov // Financial Management. – 2010. – № 3. – P. 46–51

<sup>7</sup> Kozachenko H.V. Enterprise Investment Management: Tutorial. tool. / H.V/ Kozachenko, O.M. Antipov, O.M. Lyashenko – K.: Libra, 2004. – 368 p.

Continuation of the Table 1

Petukhova O.M.	This is its integral characteristic as an object of future investment from the perspective of development prospects (dynamics of sales volumes, product competitiveness), resource and asset efficiency, their liquidity, solvency, financial stability, as well as the value of a number of informal indicators. <sup>8</sup>
----------------	--

As can be seen from Table 1, the interpretation of investment attractiveness is provided by the “Methodology of Integral Evaluation of Investment Attractiveness of Enterprises and Organizations”, and it has become a basic one for many scientists.

This position is not correct enough, because attractiveness as a characteristic of the enterprise cannot be identified with the level of satisfaction of the needs of investors, since the investor may be interested only in the property complex of the enterprise, thus destroying its production, technological and personnel potential.

The country's investment attractiveness can be influenced by both positive and negative factors (Table 2).

The main reasons that stimulate investment in agriculture are: a steady increase in agricultural demand, lower risks than expected at the start of hostilities, the impact of reforms, the ability to diversify commodity markets, high levels of investment attractiveness and sales. agricultural and processing products. A positive factor is the increase in investments in agricultural machinery and equipment. This is due to the expansion of the acreage and the desire to upgrade the existing equipment fleet. Crop production remains the engine of the agricultural sector and a key export product. Overall, Ukraine

<sup>8</sup> Petukhova OM Investing [text] tool. / O.M. Petukhov. – K .: Center for Educational Literature, 2014. – 336 p.

has the potential to become the breadbasket of the world and become one of the key players in global food security.

Table 2  
Factors affecting the investment attractiveness of Ukraine <sup>9</sup>

<i>The positive factor</i>	<i>The negative factor</i>
Good geopolitical location (the country has access to the Black Sea basin; located at the crossroads of Europe - Asia, North - South transport routes)	Imperfection of infrastructure and underdevelopment of institutional market infrastructure. Absence in our country of a well-established system for monitoring the demand, supply and use of foreign investments.
High level of natural resources (by the number of explored reserves of manganese ores Ukraine - the second in the world and the first - among the CIS countries; reserves of coal, iron ore, secondary kaolins, potassium salts, clay raw materials the country is provided for 100-200 years)	Political instability and high levels of corruption in public authorities, frequent change of governments, promises of a sharp change in political course.
Cheap skilled labor (average monthly wage in Ukraine is much lower than in foreign countries)	The imperfection of the legal environment The unpredictability and opacity of public policy. This factor is able to significantly complicate the long-term planning of the company/

Today, one of the main problems of the Ukrainian economy is the low return on investment and their inefficient distribution. When analyzing foreign investments by type of economic activity, we will note that the largest part of FDI comes from the developed spheres of economic activity. Moreover, despite the significant reduction of direct investments due to the complication of social, political and

<sup>9</sup> Dovbnaya S.B. Methodical bases of formation of investment attractiveness of the enterprise / S.B. Dovbnaya // Ek. herald of nat. mines un-tu. – K., 2007. – № 4. – P. 43-50



economic situation, in the country their concentration by types of economic activity remains almost unchanged.

We analyze the volume of foreign direct investment in the agricultural sector from the countries of the world to find out the contribution of each of them to the total amount of investment (Table 3).

Table 3

The volume of foreign direct investment of individual countries in the agricultural sector as of 01.01.2018<sup>10</sup>

Country	Total investment, millions of dollars	Including in agriculture, forestry and fisheries, millions of dollars.	Share of investment in agriculture in total, %	Country share in agricultural investment, %
Cyprus	8930,9	145,1	1,6	28,6
Virgin Islands	1358,2	85,4	6,2	16,9
Germany	1682,9	82,8	4,9	16,3
United Kingdom	1946,4	35,2	1,8	6,9
Denmark	153,6	56,1	36,5	11,1
Poland	571,4	31,5	5,5	6,2
France	723,4	28,3	3,9	5,6
USA	517,4	19,6	3,7	3,9
Netherlands	6395,3	14,4	0,2	2,8
Switzerland	1515,9	4,2	0,3	0,8
Russian Federation	797,5	3,9	0,4	0,8
Total	25833,7	506,5	1,9	100

According to Table 3, the largest share of foreign investments in the agricultural sector of the Ukrainian economy comes from Cyprus - about 28.6% of total investments. But if we analyze the share of investments in the agricultural sector of

<sup>10</sup> State Statistics Service of Ukraine [Electronic resource]. – Access mode: <http://www.ukrstat.gov.ua/>.

a particular country to the total amount of investments from that country, Denmark is in the lead. Almost a third of Danish investments are directed into the agricultural sector of the Ukrainian economy. Also important investors are the Virgin Islands, Germany and the United Kingdom.

So, now we can determine how the attraction of foreign investment on the development of the agricultural sector of the Ukrainian economy:

1) along with the inflow of funds, new advanced technologies, certain innovations in production and management that local businesses can take as an example to innovate in their businesses are also attracted. Most Ukrainian producers study the foreign experience of their counterparts to improve the efficiency of their own economic activities, which entails an influx of funds into the national economy. It also increases the efficiency of resources that are known to be exhaustive;

2) by attracting foreign investment, the competitiveness of national products is increased. It is known that Ukrainian agricultural products are generally not competitive on the international market. This is influenced by factors such as: outdated equipment that can not improve productivity; outdated production technology, which makes it not as good as in Europe; low level of interest and motivation of employees, etc. Attraction of investments will allow to solve the given problem, which helps to increase the competitiveness of products and to create a positive investment image of Ukraine;

3) the creation of foreign enterprises will lead to increased competition in local markets, which in turn will encourage national producers to work more effectively to be competitive;

4) attracting foreign investment contributes to productivity growth as foreign companies invest more capital per unit of labor, which is directly related to its increase. The

economic development of agrarian enterprises and the productivity of the agrarian sector of the Ukrainian economy as a whole depend on the availability of investments, their adequacy to the need for development and efficiency of use

5) foreign direct investment directly influences the formation of investment funds of the host country. It is possible that foreign investment will be able to become an additional source of replenishment of national capital, which will contribute to the expansion of capital resources of the host country;

6) the entry of foreign firms into the national market leads to the replacement or displacement of less efficient national companies, which leads to a redistribution of domestic resources between more and less profitable companies and contributes to an increase in the average level of labor productivity and average per capita income in the host country;

7) attracting foreign investment will increase the revenue side of the budget through tax payments and increase the growth rate of the economy as a whole;

8) creation of new jobs for the population of the country;

9) attraction of foreign investments and cooperation with foreign investors will enhance the integration of Ukraine into the world economy.<sup>11</sup>

However, any economic events have not only a positive effect, but sometimes a negative one. Consider the following threats:

- inflow of foreign investments can lead to increased dependence of the national economy on foreign capital;

- weakening the competitive position of local businesses, which may lose their profits and curtail business;

- the creation of new businesses can worsen the environmental situation in the country;

---

<sup>11</sup>Agribusiness Today [Electronic resource]. – Access mode: <http://www.agro-business.com.ua/ekonomichnyi-gektar/6269-agroinvestytsiui-u-stalyi-rozvytok.html>.

- foreign investors can use Ukraine only as a raw material appendage. By exporting the necessary resources, they will produce the finished product abroad and then import it as an import. This will worsen the economic situation in the country and reduce its share in the value added structure, which generally leads to a deterioration of the national welfare of the population;

- possible monopolization of the market. It is clear that a foreign company will have an advanced position in the market and will be able to capture a larger segment of it due to the high competitiveness of its products. This is a negative process as it leads to a fall in the output of other entities. It is well known that effective functioning of the market is possible only in the presence of free competition;

- when attracting foreign investment, conflicts may arise between the repatriating country and the foreign investor.

The main advantages of investing in agriculture are the following:

- agriculture is an industry that provides national interests, which is why the state is supporting and encouraging investments in this field;

- quality and natural foods are in increasing demand - no one wants to eat cheap Chinese “plastic” tomatoes;

- the value of products (on an international scale) is steadily increasing every year - the population is growing, and the area of fertile land - on the contrary;

- agricultural products are in full-year demand;

- competition in the agricultural sector is relatively low.

Along with the advantages, there are a number of disadvantages (Table 4):

Table 4

Advantages and disadvantages of investments in the agricultural sector

	Pluses (+)	Minuses (-)
	Tax benefits and partial compensation for material costs	Long payback period for investments
	Favorable loan terms	Ineffective insurance mechanisms
	Prices for agricultural products are constantly rising	Low productivity growth
	The value of land is constantly increasing	Profits depend on climatic and seasonal factors

- inflation and devaluation of the ruble significantly reduce the return on investment in the agricultural sector;
- between the formation of the starting price and the receipt of real revenue for the goods is too big time gap;
- low productivity growth in the agricultural sector;
- there are no effective insurance mechanisms, and the risks are high;
- there are no established mechanisms for selling products;
- the dependence of profits on seasonal factors - one lean year, and the result of many months of work of tens and hundreds of people will be nullified.

The agro-industrial complex of the country has all the necessary prerequisites for widespread attraction of both domestic and foreign investments, but there are a number of reasons that impede the flow of investments in the agricultural sector.<sup>12</sup>

The current state of agricultural production and trends in attracting investment for its development indicate the need to revise investment policy in the agricultural sector. Its tasks

<sup>12</sup> Skrypyuk H.O. Investing: training tool. / H.O. Skrypyuk – 2-nd edition, remaking. and ext. - K.: «Comprint»TSP, 2018. – 350 p.

should take into account the features of agricultural production and, accordingly, be aimed at reproducing the fertility of the land, ensuring the proper functioning of biological organisms, ensuring the food security of the country, as well as social protection and ensuring the normal living conditions of the rural population. Taking into account the factors of specificity of investment activity in agriculture, in our opinion, it will help to achieve efficient operation of the industry, rational use of investment resources, creation of a favorable investment climate. Appropriate tools need to be developed for the implementation of investment policy, which are additional areas of research.

In order to intensify investment activity in agriculture, increase investment attractiveness and attract investment in the period 2018-2025, it is advisable to implement measures to:

- stimulating the investment activity of producers at the expense of own and borrowed funds and facilitating the attraction of foreign investment;

- supporting the return on investment in the purchase of new equipment, breeding animals and the construction of livestock facilities;

- development of animal husbandry, variety testing, various research, educational, scientific, advisory, agro-consulting and other budgetary institutions and institutions;

- intensification of organizational and other measures for attracting foreign investment resources by agricultural enterprises and removing obstacles in their activities, respecting national interests, facilitating the attraction of large national agribusiness investment resources to international stock, credit and other financial markets;

- granting rural areas depression the status of priority areas by adopting appropriate legislation and establishing investor benefits;

- measures to obtain international assistance and compensation for perpetrators of the reconstruction of Donbass agriculture and other regions affected by military events;

- support for investment projects of agricultural cooperatives and small businesses in rural areas organized on the basis of self-financing;

- facilitating the implementation of investment projects in the production of certified organic and balanced agricultural and food products;

- enhancing the role of financial leasing in providing agricultural businesses with technical equipment, equipment and breeding of cattle.

The main goals and indicators of investment support for agricultural development in the strategic perspective should be:

- achieving the necessary level of agricultural development in investment resources, which requires confirmation of capital investments in 2020 at the expense of all sources of financing in 2016 prices at the level of 63 and 2025 - 79 billion UAH, as well as ensuring the average annual growth rate of investment in 2018-2025 by 7%;

- increase of investment opportunities of producers and achievement of an optimal balance between own and attracted sources of financing investments in accordance with 2:1;

- creating an effective mechanism to support small-scale agribusiness investments that would meet the needs of private and agricultural enterprises in attracting investment finance by 65% and 100% in 2025;

- expanding rural road financing as one of the key factors for increasing the investment attractiveness of agriculture by financing the construction, repair and installation of covered roads in volumes of at least 1/3 of the roads.

Budget support for agricultural production and market measures in EU countries is 4-5 times higher than the corresponding indicators of Ukraine. Now and in the near

future there is not enough opportunity to formulate a national agricultural policy by analogy with developed countries, but this task must be resolved in the future. The problem of investment support for agricultural development must be solved on the basis of an active agricultural policy, the strategic objectives of which are to increase the investment activity of producers at the expense of their own and borrowed funds, giving them, first of all, small-scale, budget support, as well as the application of a system of other measures.

Thus, analysis of the current investment situation in the agricultural sector of Ukraine shows that the investment climate in the country does not satisfy the interests of investors, both foreign and domestic. The investment attractiveness of the agricultural sector is low. There is an urgent need to modernize the investment management of enterprises in order to improve their condition and raise capital in the investment process. Ukraine must be proactive in pursuing a real investment policy that will ensure a continuous process of rebuilding in the country's economy through the modernization of its assets. In order to restore agriculture, it is necessary to attract investments and increase their efficiency. This will improve the economic situation in the country, that is, increase the volume and quality of products marketed, increase the profitability of agricultural producers, increase the number of jobs and improve working conditions.



## **2.6. ASSESS THE IMPACT OF CORPORATE GOVERNANCE ON FINANCIAL CAPACITY OF THE ENTERPRISE**

In the conditions of modern challenges, joint-stock companies require a systematic approach to managing the effectiveness and efficiency of their activities, providing for the selection of appropriate criteria, the development of a mechanism for their evaluation, methods of analysis and the creation of a valid system for managing the finances of enterprises of the corporate type. These are the questions that have not been resolved in the studies of scientists in this field of economic science and in the concepts and methodological developments of the relevant government administrations of the economy.

The efficiency of corporate governance becomes a decisive factor in the successful work of companies in the conditions of modern challenges. For many companies, financial institutions, stock exchanges, and governments, this market demand is now crucial<sup>1</sup>.

The theoretical foundations of the formation and maintenance of financial solvency of enterprises on the basis of corporate governance are actively investigated in the world and domestic scientific literature, in particular in the works of A. Arefyeva, A. Berle, Yu. Blagovov, A. Williamson, D. Volkova, K. Goryacheva, L. Gritzyn, I. Dyakonov, D. Leonova, T. The Evtushevsky, G. Nazarova, N. Ryazanova, K. Murphy, MINZA, SHINAZ, etc.

Without looking, the diversity and depth of the research, most of them are devoted to the development and formation of financial instruments and subsystems of financial wealth of

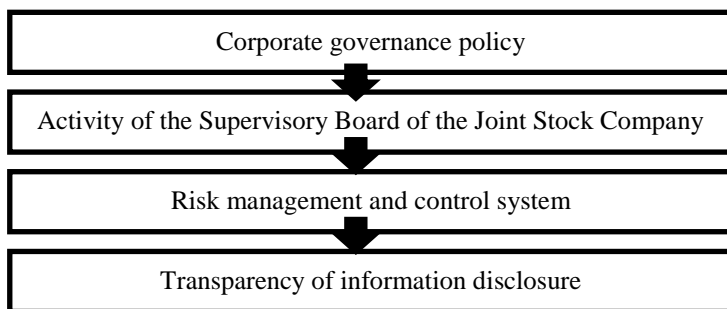
---

<sup>1</sup> Davidenko NM Features of Corporate Governance of Ukrainian Joint Stock Companies. Scientific Bulletin of Volyn National University. Lesya Ukrainka. Lutsk. 2009. №3. P. 345-349.

enterprises. That is why further research is required on the development of the mechanism of financial viability of enterprises taking into account the basic components and principles of corporate governance; determination of the level of financial viability of enterprises formed under the influence of the current system of corporate governance.

Effective corporate governance is necessary not only to increase the profitability of an individual corporation, but also it can stimulate investment processes in the country and ensure economic growth. It is impossible to name a single model of corporate governance that can be adapted to all countries and corporations.

A comprehensive assessment of corporate governance effectiveness requires a methodology that combines elements of economic evaluation criteria. Therefore, we use the method of assessing the level of corporate governance of the enterprise, consists of a set of questions, answers to which are a reflection of such factors (fig. 1)<sup>2</sup>.



*Fig. 1. Comprehensive model of assessment of quality of corporate management of the enterprise\**

*\*Written by the author*

---

<sup>2</sup> Ryazanova NS Theoretical Aspects of Corporate Finance: New Approaches. Securities market of Ukraine. 2013. № 1-2. P. 3-10.

Final quantitative assessment of the level of corporate governance to a certain extent by a complex model of performance and maturity of the enterprise management system. This allows you to understand at what level of maturity the enterprise is, and how this affects the value of the company as a whole.

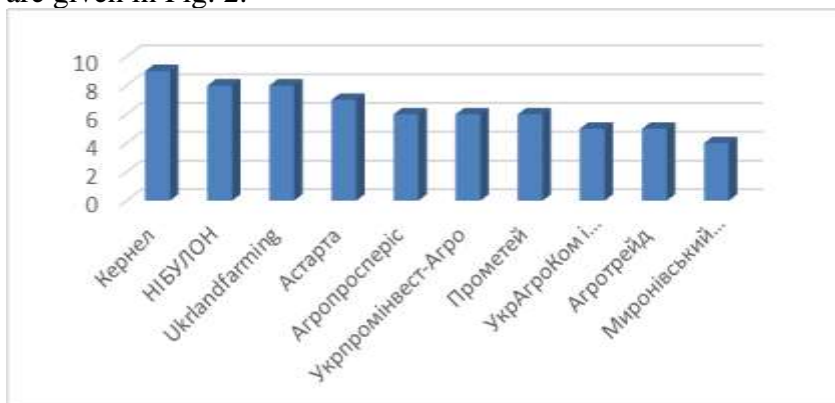
In Ukraine, data on the market price of sold companies, especially in small and medium-sized businesses, which are owned by private investors, are usually closed. The information obtained from the Internet and other media about the value of the company, which was sold in the open market, requires confirmation, since practice shows that business owners usually overestimate their business and therefore the price of the offer is often overestimated several times. However, there are cases when companies remain undervalued. The reasons for such price discrepancies may be the lack of information about the current state of the market, the limited time during which to sell the business. The company's valuation includes not only asset valuation, but also an assessment of the value of debt and the effectiveness of the company's core activities. The solution of these problems in assessing companies can be a comprehensive quantitative assessment of the quality of corporate management of the enterprise, since it is based not on one method of calculating the value of assets, but on a set of questions that assess the work of the enterprise from different sides.

To conduct the most qualitative analysis of this issue, we carried out a direct survey of representatives of top management of ten agro-industrial corporations of Ukraine. As a result, we have received information to assess the level of corporate governance through a 17-point assessment scale with answers to yes or no. These criteria for evaluating corporate

governance are available from a link in the list of used sources<sup>3</sup>.

Public information from the agrarian sector of Ukraine's economy was also used for this study. In this sector, the ten largest and most successful agrarian enterprises of Ukraine were identified in terms of net sales revenue for 2013-2017. After the rating was drawn up, corporate governance was assessed using an affordable method without attracting private information.

According to the results of the research in the agrarian sector of the economy of Ukraine, the results should be given, are given in Fig. 2.



*Fig. 2. The results of corporate management evaluation of the agro-industrial sector of Ukraine for the 17-point scale in the period 2013-2017\**

*\* Written by the author*

According to the results obtained, it can be argued that in the supply sector of agrarian products of Ukraine at the level of corporate governance there are a number of shortcomings, precisely because of them the maximum estimate was 9 out of 17 possible points.

<sup>3</sup> Methodology for calculating corporate governance rating Standard & Poor's URL: <http://www.standardandpoors.ru>. (accessed: 05/19/2019).

The subsequent study was an assessment of the financial viability of enterprises.

Two enterprises were selected for analysis. In particular, it is a representative of the best and with a poor assessment of the quality and effectiveness of corporate governance. Consequently, such enterprises were included in the list of research: ZAO "Poltava Oliinoekstrakciiny plant - Kernel Group" and CHAO "MHP".

The study was carried out on such relative indicators: The ratio of current liquidity ( $R_{CL}$ ); Quick Ratio ( $R_{QR}$ ); Absolute Liquidity Ratio ( $R_{ALR}$ ); the coefficient of maneuverability of working capital ( $R_{MWC}$ ); the coefficient of defensive interval ( $R_{DI}$ ); the coefficient of security of realization of working capital ( $R_{SRWC}$ ); long-term financial security ratio of the first degree ( $D_1$ ); second degree long-term financial security ratio ( $D_2$ )<sup>4</sup>.

Після проведеного аналітичного дослідження за вище зазначеними показниками, маємо такі результати (табл. 1).

According to Table 1, the current liquidity ratio is within the normal range (above 100%) in the "Kernel Group" as opposed to MHP. This shows that the working capital of the MHP enterprise is negative and part of the long-term assets are financed for short-term capital. The rate of rapid liquidity in both enterprises is within the norm (above 0.5), which shows the ability of enterprises to repay current liabilities at the expense of current assets minus reserves.

---

<sup>4</sup> A. Basilinskaya Financial Analysis. Kyiv: TsUL. 2009. P. 85-97

Table 1

**Financial Soundness Indicators PrAT " Poltava  
Oliinoekstrakciiniy plant - Kernel Group " and PAT "MHP"**

PrAT " Poltava Oliinoekstrakciiniy plant - Kernel Group "						
Year	R_CL	R_QL	R_AL	R_MWC	R_DI	K_SRW C
2015	7,79	62,01	0,05	0,008	983,16	0,14
2016	11,69	23,68	0,01	0,0009	4171,4	0,77
2017	5,46	10,06	0,004	0,0009	7408,8	0,6
PAT "MHP"						
2015	0,65	0,96	0,03	-0,09	503,94	-0,83
2016	0,55	1,25	0,04	-0,1	318,46	-0,94
2017	0,49	1,56	0,03	-0,06	384,2	-0,69

In truth "Kernel Group" this indicator is several times higher than MHP. The ratio of absolute liquidity does not reach the permissible limit (0.2-0.5) in both enterprises, gives the possibility to assert that instantly with the current obligations of the enterprise will cope only by a maximum of 5% and this indicator rapidly falls. The indicator of the maneuverability of working capital showed that he was more maneuverable in the "Cairns Group The coefficient of the protected period showed that the "Kernel Group" can survive several times more days for the MHP in the case of force majeure. The indicator of the security of the realization of working capital showed that "Cairns Group" has a more stable security, unlike MHP, which has a negative value of this indicator.

Further, a study of financial viability in terms of long-term solvency indicators was carried out (Table 2).

Table 2

Long-term financial viability of PrAT " Poltava  
Oliinoekstrakciiniy plant - Kernel Group " and PAT "MHP"

Enterprise	Year	D_1	D_2
PrAT " Poltava Oliinoekstrakciiniy plant - Kernel Group "	2015	0,02	1,12
	2016	0,50	1,85
	2017	0,56	1,88
PAT "MHP"	2015	-1,58	0,05
	2016	-0,33	0,45
	2017	-0,23	0,54

The value of the long-term financial security coefficient of the first degree showed that "Kernel Group" gradually reaches the normative value of this indicator (0.5-0.7), while in MHP this indicator is negative and gradually tends to 0. The ratio of long-term financial support of the second stage is also within the norm (above 1) in the leading agrarian enterprise of Ukraine, but also MHP does not stand still and moves rapidly toward the normative value of the indicator. In all, in both cases, we observe a rather low value of all the above indicators after 2014 and a gradual return to the normative values during 2015-2017

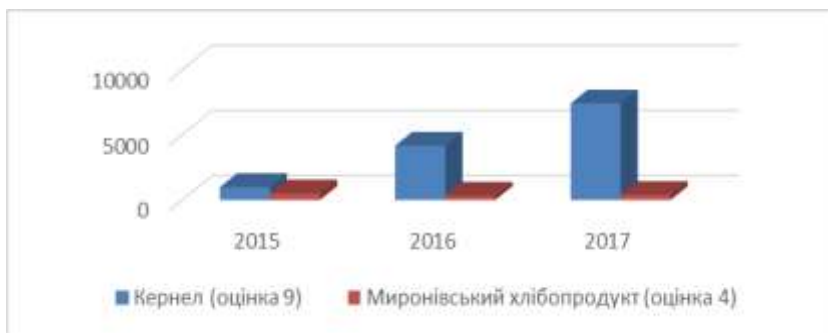
The next step for the analysis was comparison of the quality and effectiveness of corporate governance with the relative indicators of financial viability of the above-mentioned enterprises (Fig. 3-5).



*Fig. 3. Comparison of  $R_{CL}$  and 17-point corporate governance scale\**

*\* Written by the author*

In general, all the indicators of one enterprise prevail over the others, which indicates the clear and qualitative work of corporate governance in Prats "Poltava Oliinoekstrakciiniy plant – Kernel Group" and not enough in PAT "MHP".



*Fig. 4. Point comparison  $R_{DI}$  and 17-point corporate governance scale \**

*Written by the author*





*Fig. 5. Point comparison  $D_2$  and 17- point corporate governance scale*

*\* Written by the author*

The comparative characteristics of the indicators that most clearly highlight the importance of the work of corporate management were shown above.

That is, we have defined relative indicators of financial solvency for 2015-2017, which have shown corresponding shortcomings in the structure of incomes and equity of agrarian enterprises. It also indicates a rather low level of management of the above-mentioned enterprises, which led to the search for methods for assessing management directly and determining the relationship between corporate management and financial solvency indicators.

The results of the evaluation of the corporate governance of the enterprises under investigation suggest that there are a number of problems caused by such factors as the absence of a corporate Secretary in the enterprise, the absence of a corporate governance charter, the absence of committees of an supervisory board and the absence of independent directors in enterprises. This shows a lack of understanding of the company's managers about the modern effective model of

corporate management and the constant influence on its activities, and reduces the effectiveness of the company's managers. And the low level of efficiency of managers, in turn, contributes to the general decrease in the financial results of the enterprise.

This trend can be corrected only by one way: The gradual introduction of all criteria in the enterprise, that is, the formation of committees of the supervisory board. It is also important to avoid permanent influence on the work of directors (managers) and to give them greater opportunities to manage the company and to introduce the position of corporate Secretary in the enterprise, since it is a key official facilitating coordination of the work of all management bodies of the joint stock company, exchange of information between these bodies and shareholders, Preparing corporate documents projects, solves other legal and organizational issues related to corporate governance in JSC.

In general, after comparing the measure of corporate governance effectiveness with the relative financial viability of the enterprises under investigation, we can argue that corporate governance is likely to affect the overall financial viability of the enterprises.

## **2.7. OPTIMAZATION OF THE COMPANY'S LIQUIDITY LEVEL IN CORPORATE FINANCE MANAGEMENT SYSTEM**

The study of the corporate financial management system includes an understanding of the essence and place of finance in the structure of the functioning of economic units, because as the main element of the formation and using of financial resources, finance covers the entire aspect of relations in the corporation <sup>1</sup>.

The finance of the corporation covers the system of monetary relations, one of the participants of which is the company itself. These include relations of the Corporation with the state, shareholders, creditors, leasing, insurance funds, buyers of products and suppliers, its employees, relations between separate divisions and branches of the company.

In our opinion, modern corporations require a systematic approach to managing performance and efficiency of their activities, which in turn requires the choice of appropriate criteria, the development of a mechanism for their evaluation, methods of analysis and the creation of an effective system for the management of the finances of the latter.

In the current conditions of challenges, the problems of assessing the effectiveness of corporate governance become the priority, combines the versatility of a complex system of corporate governance and is used for assessing, diagnosing and monitoring the state of corporate governance of companies.

In the works devoted to the study of the evaluation of corporate governance of the joint-stock company, the authors focus mainly on one of the directions, which is due to the lack of a comprehensive analysis of these processes. In particular,

---

<sup>1</sup> Davydenko N.M. Financial support of the corporate sector of the Ukrainian economy. Scientific Bulletin of NAU. 2008. Issue 120. P. 153-157

there are a number of publications (S.V. Bocharov<sup>2</sup>, T.A. Pasechnik<sup>3</sup>, S. Rumyantsev<sup>4</sup>), which considers the effectiveness of corporate governance.

In particular, T.A. Pasechnik<sup>3</sup> to evaluate the effectiveness of the functioning of joint-stock companies proposes to use the indicators of the proceeds from the sale of products by the main means, the proceeds from the sale of products by the number of employees, the profitability of sales, the profitability of assets, the profitability of equity capital and the coefficient of autonomy.

S.V Bogachev<sup>2</sup> examining the effectiveness of corporate governance, offers comparisons of actual performance of enterprises, refer to different forms of ownership in comparable conditions of activity. In his view, the following economic indicators should be analyzed: Output, number of employees and level of wages.

Despite the significant challenges of corporate finance management, the constantly emerging new problems and unresolved earlier require further research to build a safe and effective system of corporate finance management with the aim of creating and developing a domestic model of corporate governance, which ensured high standards of financial solvency of the company.

The corporate sector is the leading economic sector in any developed country where market principles of economic life are actively used. In the US, for example, corporations generate nearly 90% of GDP. In Ukraine, there is currently a decrease in the number of joint-stock companies wishing to enter the securities market, and most Ukrainian companies do

---

<sup>2</sup> Bogachev S.V. Joint-stock industrial enterprises: The first results of the activity. Regional economy. 2002. №2 P. 109-115

<sup>3</sup> Pasechnik T.A. Concentration of share capital in Ukrainian industry. Finance of Ukraine. 2004. №3. P. 128-134

<sup>4</sup> Rumyantsev S.A. Ukrainian model of corporate governance : Formation and development/S.A.Rumyantsev.- M.:Knowledge,2003. 149 p.

not plan to attract investments through the stock market (as of April 1, 2018 there were 2128 PJSC and 5097 Chao). However, in the US, about 70% of the shares of enterprises are sold and bought in open trading on the stock exchange, and in Ukraine, in order to acquire shares, regardless of the profitability of the JSC, it is necessary to consult shareholders personally. To achieve the goal of the study, we used the financial statements of Trigon Agri for 2007-2017. However, the problem was that in the agricultural sector is not mandatory for quarterly reporting companies. Therefore, only annual data were used for regression analysis, which could lead to a certain deficiency in the model, in particular, an inaccurate image of the liquidity index, since the established value of this indicator during the year is almost impossible to achieve.

The Trigon Agri Group specializes in crop production and agribusiness in Ukraine, Russia and Estonia. In Ukraine, the company processes 46,000 hectares of land in the Kharkov, Kirovograd and Mykolayiv regions. In addition to traditional wheat, maize, sunflower and rape, since 2016 a group of companies has grown peas and flax.

Most business transactions between enterprises require payment for purchased goods, works, services, if not on the terms of prepayment, immediately after the transfer of the goods or rendering the service to the buyer. Therefore, the low level of liquidity will not allow the company to ensure the continuity of production processes and will not allow timely payments on its obligations.

The total balance liquidity indicator shows the ratio of the sum of all payment funds to the sum of all payment obligations, taking into account their liquidity. This indicator allows to compare company balances for different periods,

balances of different companies and to determine the most liquid balances<sup>5</sup>.

The total liquidity of Trigon Agri was defined as the ratio of working assets to current liabilities and security, according to the company's balance sheet. The input data for calculation of the ratio of total liquidity is given in Table 1.

Table 1

Input for calculation of the ratio of total liquidity of  
Trigon Agri

Year	Current assets (thousands of Euros))	Current liabilities and security (thousands of Euros)
2006	6008	1500
2007	44520	2732
2008	84987	12026
2009	53802,0	15506
2010	35941	11965
2011	74416	16337
2012	46134	31767
2013	29630	19632
2014	29799	61879
2015	32082	27622
2016	21124	13941
2017	20093	13794
2018	19889	13418

*Source: Developed by the author on the basis of<sup>6</sup>*

It worth noting that for 2008-2009, the information was indicated in US dollars. Therefore, we turned to the exchange rate archives and calculate the final data in euros. According to the data obtained, the ratio of the company's total liquidity and the evaluation of corporate governance over this period was calculated. The results obtained are shown in the table 2.

<sup>5</sup> Davydenko N.M Diagnosis of the financial condition of agroholdings. The Bulletin of the Khmelniysky National University. Economic sciences.2017.№5. page 203-208

<sup>6</sup> Smida: website. URL: <https://smida.gov.ua/db> (accessed: 12.10.2019)

Table 2

## Estimates of corporate governance and the general liquidity ratio of Trigon Agri

year (x1)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CG (x2)	6	9	8	6	6	6	6	6	5	5	6	6	9
Average liq. (y)	4,01	16,30	7,07	3,47	3,00	4,56	1,45	1,51	0,48	1,16	1,52	1,46	1,48

Source: Developed by the author on the basis of<sup>7</sup>

We build a simple linear regression with two independent variables (year and estimate) and one dependent variable (the coefficient of total liquidity). The model was built using Microsoft Excel 2016, namely data analysis package (Table 3)

Table 3

## Regression statistics by model

Regression statistics	
Multiple R	0,851137479
R -square	0,724435007
Normalized R - Square	0,669322009
Standard error	2,420991577
Observation	13

Source: Developed by the author on the basis of<sup>7</sup>

First of all, we pay attention to the coefficient of determination R-square, which shows the degree of approximation. According to the table 3 the coefficient has a value of  $\sim 0.72$ , which indicates a high degree of approximation, that is, the model well describes the phenomenon under study (72%). The R correlation coefficient can be between -1 and 1. In this case, this value is close to one, which shows a close direct relationship between the total

<sup>7</sup> Smida: website. URL: <https://smida.gov.ua/db> (accessed: 12.10.2019)

liquidity and the impact factors. To evaluate the validity of the correlation coefficient, calculate the ratio of the coefficient to its average error. If it is equal to or greater than 3, the correlation coefficient is considered reliable, that is, the connection between the investigated characteristics is proved. From the table 3 we also see that this indicator is significantly higher than 3, so it can be argued that the correlation coefficient is reliable. Let's switch to the dispersion analysis of the model (Table 4).

Table 4

## Analysis of variance model

Indicator	df	SS	MS	F	Relevance of F
Regression	2	154,08556	77,04278	13,14454	0,001588987
balance	10	58,61200217	5,8612		
sum	12	212,6975622			

Source: Developed by the author on the basis of<sup>8</sup>

In Table 4 we pay attention, first of all, to the Fisher criterion, which shows or weights the whole model. According to the table, we can reject the null hypothesis about the expediency of applying this model. Since the value of this indicator is less than 0.05, we can say that this model is weicher. Next, let's go to the model coefficients that will form the regression equations.

Table 5

## Model factors

Indicator	Ratio	Standard error	t - statistics	P - value
Y - intersection	1193,557057	366,3997185	3,257527222	0,00861009
variable $x_1$	- 0,597145591	0,181824054	- 3,284194684	0,008230378
variable $x_2$	1,7875444	0,532358466	3,357783362	0,007269406

Source: Developed by the author on the basis of<sup>8</sup>

<sup>8</sup> Smida: website. URL: <https://smida.gov.ua/db> (accessed: 12.10.2019)



From Table 5 we see that the P-value before variable  $x_1$  is less than 0.05, which indicates that there is no probability of zero value of this coefficient. This variable has been set to years, so only data  $X_2$  (corporate governance assessment) should be taken into account after this statement.

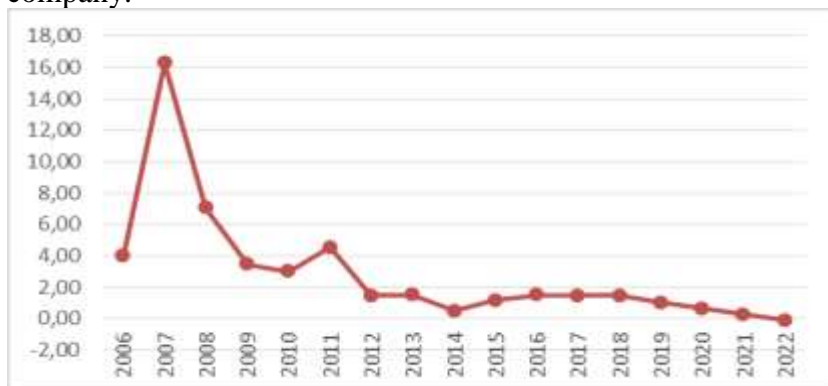
Despite all these factors, we can make an equation of regression:

$$y = 1193,557057 + 1,7875444x_2$$

The next step will be to predict the measure of overall financial viability, if the above-mentioned independent variables are known beyond the trend.

We depict graphically dynamics of liquidity of agrarian enterprise Trigon Agri (fig. 1).

According to the data, it is clear that in 2019 - 2022 one should not expect an increase in the liquidity of the enterprise, moreover - according to the predicted data, the indicator of total liquidity in 2022 can reach a negative value and will call into question the liquidity and solvency of the agrarian company.



*Fig. 1. The forecast of the indicator of total liquidity of Trigon Agri*

*Source: Developed by the author on the basis of<sup>9</sup>*

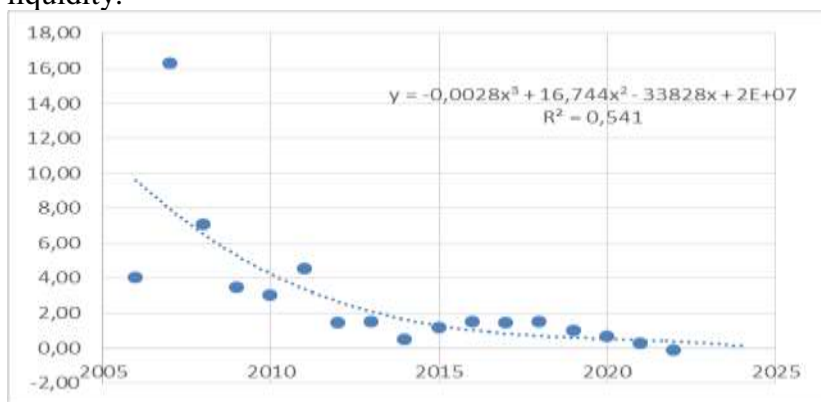
<sup>9</sup> Smida: website. URL: <https://smida.gov.ua/db> (accessed: 12.10.2019)

It is likely that this is due to poor corporate management efficiency and, as a consequence, needs to improve the quality of work. It should also be noted that because of the low level of corporate governance, Trigon Agri is on the 36th position with 45 in the top-agricultural enterprises of Ukraine.

Next, we will build a trend line for a more remote forecast, taking into account the data shown in Figure 1 using the corresponding function in Microsoft Excel 2016. The data of the conducted study are shown in Fig. 2.

According to Fig. 2 we can see a more optimistic scenario of events with respect to the state of the indicator of total liquidity, which is 54% probability should stabilize in 2024.

In order to ensure the efficient operation of enterprises, the proper level of solvency must be maintained at all times. It is believed that the degree of solvency of enterprises is expressed through the liquidity of their balance sheet. It is established that the most informative is the indicator of total liquidity.



*Fig. 2. Trend forecast of total liquidity of Trigon Agri for the 2023-2026*

*Source: Developed by the author on the basis of<sup>10</sup>*

<sup>10</sup> Smida: website. URL: <https://smida.gov.ua/db> (accessed: 12.10.2019)

The problem of Trigon Agri's lack of liquidity is directly related to inefficient corporate governance. Financial managers of the company to improve the level of liquidity it is expedient: To increase their own funds while reducing short-term accounts payable. This is due to the repayment of a part of short-term accounts payable, for example, by placing the company's securities; to streamline the basic documentation, since the objects of control in the process of managing the liquidity of the company are the balances of assets and liabilities, the input and output financial flows, are correlated with the timing of occurrence. This data is distributed across different business units, business areas, presented in different formats, with different degrees of completeness and correctness, and in our case, and in different countries. For Trigon Agri, it is necessary to finance working assets from long-term sources, improve the company's liquidity.

### **SECTION 3.**

## **ANALYTICAL PROCEDURES AND ACCOUNTING POLICY OF AGRICULTURAL ENTERPRISES**

### **3.1. ORGANIZATIONAL AND METHODOLOGICAL ASPECTS OF THE AUDIT PLANNING OF FINANCIAL STATEMENT**

Auditing is a special type of business activity, which involves the auditor expressing an independent opinion on the reliability of the entity's financial statements. In this case, the auditor is responsible for the results of the audit not only to the customer but also to society, which includes government agencies, investors, buyers and customers, the public. An important factor influencing the audit is the assessment of the risk associated with verifying the accuracy and objectivity of the information reflected in the client's financial statements. To reduce audit risk to an acceptably low level, the auditor is required to perform adequate audit planning, which means developing an overall task strategy, audit plan and audit program.

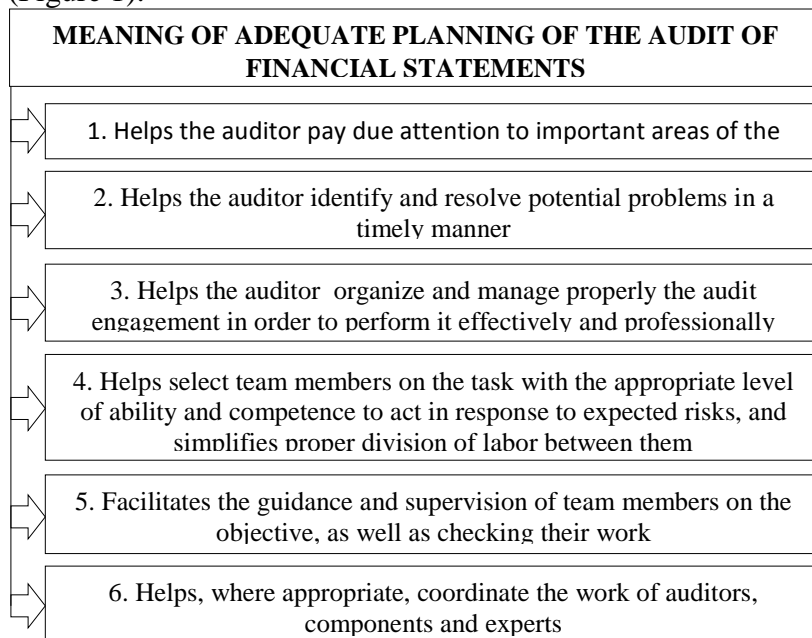
The purpose of the study is to substantiate organizational and methodological aspects of the audit planning of financial statements in the context of the development of International Financial Reporting Standards (hereinafter - ISA).

When planning the audit of financial statements, auditors must comply with ISA 300, "Planning the Audit of Financial Statements," which states that planning is the definition of the overall audit strategy for the task and development of the audit plan<sup>1</sup>.

---

<sup>1</sup> International standards for quality control, auditing, inspection, other assurance and related services: publications of 2016-2017, Section 1. Translated from English. K.: International Federation of Accountants; Audit Chamber of Ukraine, 2017, P. 292.

ISA 300 states that adequate planning of audit work helps to perform an audit of financial statements on such aspects (Figure 1).



*Fig. 1. The meaning of adequate planning of the audit of financial statements*

*Source: compiled by the author based on [1, p. 292]*

The purpose of planning audit activities is to achieve the objectives of the audit. Planning can be current (applies to only one audit) and long-term (long-term) if the audit agreement is concluded for a period of more than one year.

Prior to signing the audit agreement, the auditor must perform the following actions:

- perform procedures in accordance with the requirements of ISA 220 "Quality Control of the Audit of Financial Statements" regarding the continuation of relations with the client and the specific task of the audit;

- assess compliance with relevant ethical requirements, including independence, in accordance with the requirements of ISA 220 "Quality Control of the Audit of Financial Statements";

- determine the understanding of the terms of reference in accordance with the requirements of ISA 210 "Reconciliation of Terms of Reference for the Audit".

In general, the auditor performs a preliminary assessment of the audit risk and decides whether to conduct the audit.

After concluding the audit agreement, the auditor must begin the process of planning the future audit, the objectives of which are:

1) determining the scope of the audit, types and number of audit tests and procedures;

2) general acquaintance with the business of the client's enterprise;

3) preliminary assessment of the reliability of the internal control system and effectiveness of the accounting system;

4) determining the magnitude of audit risk and the values of its individual components;

5) a choice of the approach to the audit;

6) an estimate of the total costs of the inspection;

7) achieving mutual understanding with the management of the enterprise on all important issues before the inspection;

8) determination of the main directions of inspection and audit evidence;

9) outlining the timing of the audit and its individual stages;

10) appointment of a group of auditors and preliminary coordination of the work of its individual members.

Thus, audit planning is one of the most important stages of the audit, which involves the development of the overall strategy and the detailed approach to the expected nature, timing and scope of audit procedures. However, a clear

procedure for planning an audit is not defined in any of the regulations, so auditors need to determine independently the consistent procedure for conducting the audit through the creation of an appropriate internal standard<sup>2</sup>.

Planning of the audit of financial statements can be divided into the following stages:

Stage I: preliminary audit planning (preparatory stage): gathering information about the audited business entity; evaluation of the received information;

Stage II: development of the overall audit strategy; development and execution of the audit plan;

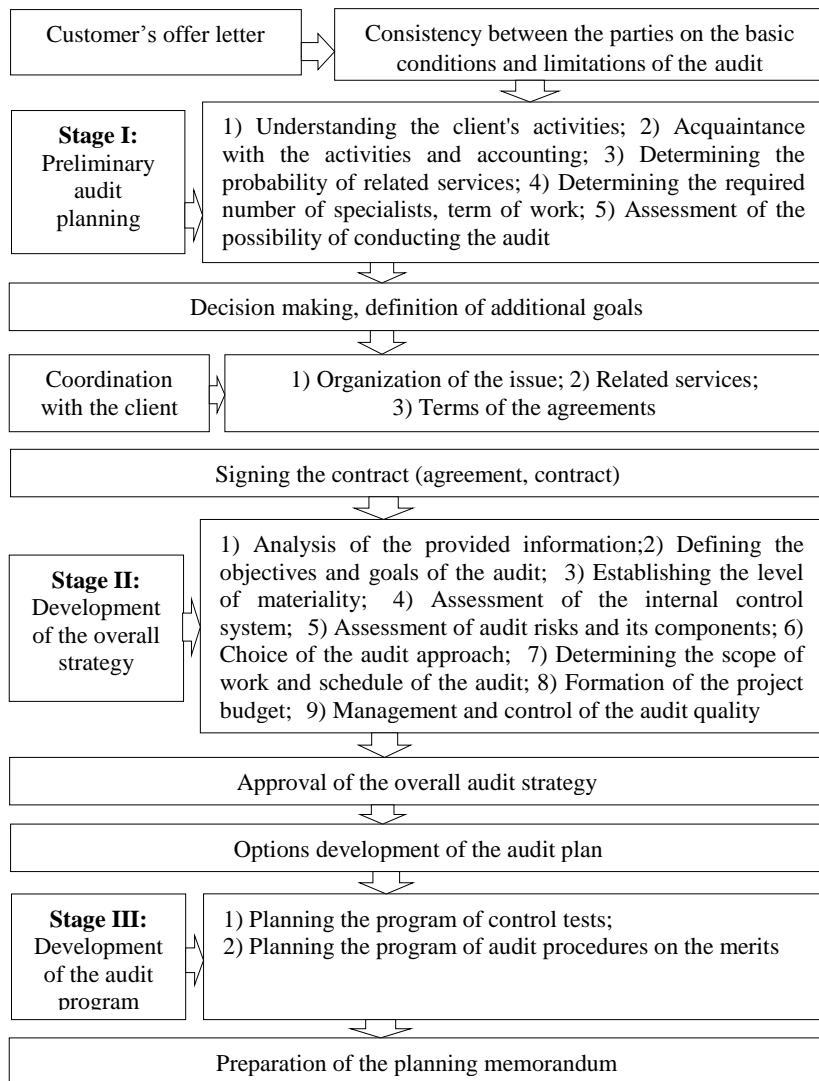
Stage III: preparation and production of the audit program.

The planning process, which includes the relevant steps, is shown in Fig. 2.

The information received for planning is systematized, from it the constant audit files containing the information which is not subject to constant changes and current audit files that contain information about the business transactions of the period under review are formed.

---

<sup>2</sup> Korinko M.D. Audit procedures at the preparatory stage of planning Scientific notes of the National University "Ostroh Academy". Series: Economics.2011. Ed. 18. P. 151-158. URL: [http://nbuv.gov.ua/UJRN/Nznuoa\\_2011\\_18\\_23](http://nbuv.gov.ua/UJRN/Nznuoa_2011_18_23)



*Fig. 2. Typical scheme for planning the audit of financial statements*<sup>3</sup>

<sup>3</sup> Nykonovych M., Redko K. Audit: textbook. Edited by Ye. Mnykh. Kyiv: Kyiv National University of Economy and Trade, 2014. P. 201



At the first stage of audit planning, the necessary information about the client, its environment, including information about the preliminary audit is collected.

When planning the audit, it is necessary to evaluate the internal control system in terms of the scope and purpose of the internal audit. By producing documents, the auditor notes the features of the internal control system, draws attention to the most significant changes in the activities of the company, events since the last audit. Stage I logically ends with the creation of a operation document, which summarizes all the assessments and conclusions of the auditor, as well as provides recommendations for drawing up a plan for conducting audit procedures on the merits.

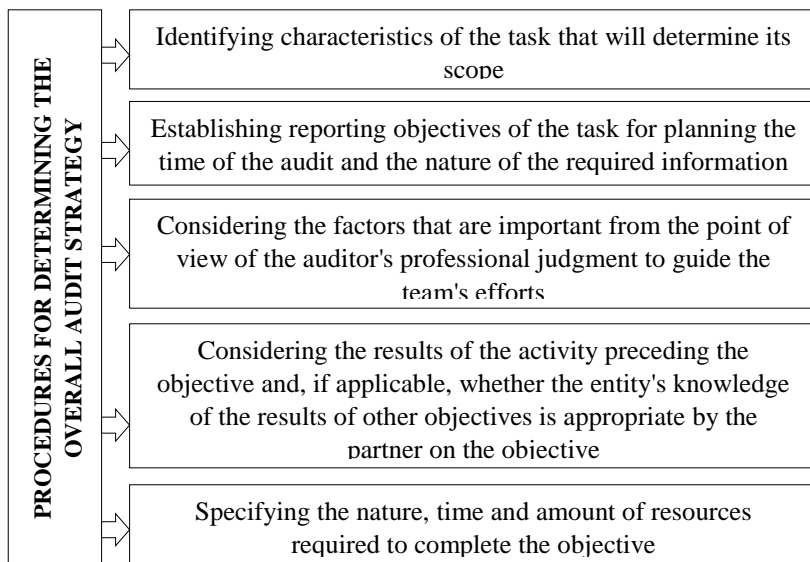
Stage II of audit planning is the stage of developing the overall audit strategy in accordance with ISA 300 “Planning the Audit of Financial Statements”. At this stage, the auditor needs to develop and document the overall audit strategy that addresses the key decisions needed to plan properly the audit and communicate important matters to the members of the engagement team.

Having concluded the agreement, the audit company proceeds to the development of the overall audit strategy (the overall audit plan), the plan and the program of the audit of financial statements of the enterprise. The auditor should determine the overall audit strategy that would establish the scope, timing and direction of the audit, and guide the development of the audit plan. In determining the overall audit strategy, the auditor should perform the following procedures (Figure 3).

In accordance with ISA 300 “Planning the Audit of Financial Statements”, the auditor should include in the audit documentation:

- 1) overall audit strategy;
- 2) audit plan;

3) any significant changes made during the performance of the audit engagement to the overall audit strategy and plan, as well as the reasons for these changes.



*Fig. 3. Procedures for determining the overall audit strategy*

*Source: compiled by the author based on [1, p. 293]*

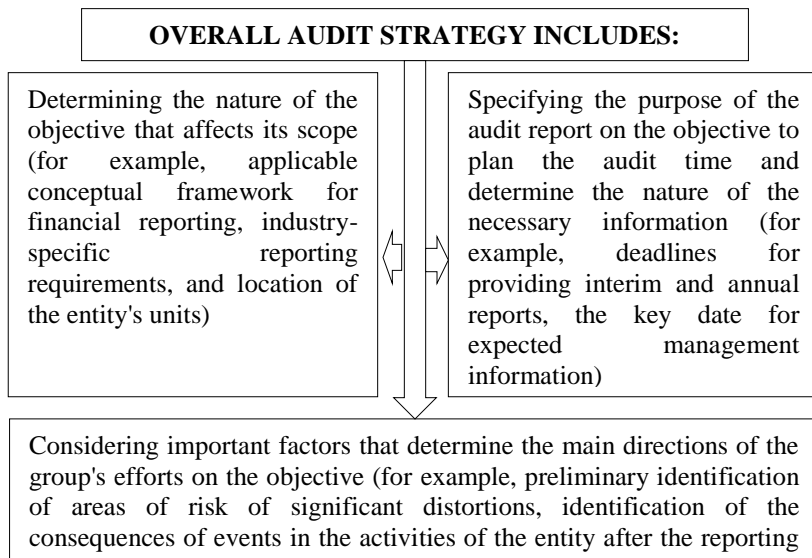
The overall audit strategy sets the scope, time, direction of the audit. A detailed description of the content of the overall strategy is shown in Fig. 4.

The process of determining the overall audit strategy helps the auditor to address (subject to the completion of risk assessment procedures) the issues such as:

1) resources required for specific areas of the audit, such as the use of high-risk members of the audit team with relevant experience or the involvement of experts on complex issues;

2) amount of resources required to cover specific areas of the audit, for example, the number of members of the audit

team assigned to monitor the inventory process in important locations, amount of verification of the work of other auditors in the case of a group audit or the budget of the audit time in hours, which must be allocated to cover high-risk areas;



*Fig. 4. Content of the overall audit strategy*

Source: [4, p. 112]

3) time of use of such resources, for example at the intermediate stage of the audit or on key closing dates of the period;

4) management, leadership and supervision of such resources, for example, the schedule of briefings and group meetings based on the results of work, review of the results of work by the partner and the objective manager (in particular, on the territory of the business entity or outside it), as well as the quality control of the task [1, p. 296].

<sup>4</sup> Petrenko S., Paltsun I. Audit: theory and practice of using international standards: tutorial, 2nd edition Lviv: "Magnolia 2006", 2013. 520 p.

ISA 300 provides examples of important issues that should be taken into consideration when determining the overall audit strategy [1, p. 301-303]. It is desirable to formulate the following matters within the sections of the audit strategy:

Section 1. Characteristics of the objective.

Section 2. Objectives of the report, audit time and nature of information communication.

Section 3. Significant factors of the activity preceding the objective and knowledge gained from other objectives.

Section 4. Nature, time and amount of resources.

Many of the issues covered in the audit strategy will also affect the detailed audit plan.

Once the overall audit strategy has been defined, the audit plan needs to be developed to address various issues identified in the overall audit strategy, taking into consideration the need to achieve audit objectives through the effective use of the auditor's resources. Definition of the overall strategy and the detailed audit plan is not necessarily a separate or sequential process; rather, they are closely interrelated, as changes in one can lead to corresponding changes in the other.

The auditor should develop the audit plan describing:

1) nature, timing and extent of the planned risk assessment procedures, as defined in ISA 315 (revised), "Identification and Assessment of Risks of Material Misstatement through the Understanding of the Entity and its Environment";

2) nature, timing and extent of planned follow-up audit procedures at the assertion level, as defined in ISA 330, "The Auditor's Response to Assessing Risks";

3) other planned audit procedures to be performed to comply with ISA requirements during the engagement.

During the audit, the auditor should update and amend the overall audit strategy and plan if required during the audit

period. The auditor should plan the nature, timing, and extent of the management and oversight of team members on the engagement, as well as review their performance.

The nature and scope of planning activities depend on the size and complexity of the entity, previous experience of working with such an entity with key members of the engagement team and changes in the conditions that occur during the audit engagement.

The auditor may decide to discuss planning elements with the entity's management to facilitate the performance and management of the audit engagement, (for example, to coordinate the performance of some scheduled audit procedures with the work of the entity's personnel). Although such discussions occur frequently, development of the overall strategy and audit plan remains the responsibility of the auditor. Discussing issues that are part of the overall audit strategy or plan requires care to ensure that the effectiveness of the audit is not compromised. For example, discussing the nature and timing of detailed audit procedures with the management may jeopardize the effectiveness of the audit, making such procedures too predictable [1, p. 295].

During the plan development, auditors and audit companies have the right to determine forms and methods of the audit on the basis of applicable law, norms and standards, terms of the contract with the client, professional knowledge and experience. The scope and quality of planning work depends on the qualifications of the auditor and its practical experience, organizational form, size and type of enterprise, type of audit, the auditor's perception of the state of affairs at the enterprise.

The overall audit plan should account for the following points:

- terms and conditions of the audit agreement;
- content of the audit report, deadline for its submission;

- system and forms of financial accounting;
- financial statements used for the audit;
- audit executors;
- duration of the audit;
- time and cost budget;
- impact on the audit of the Laws of Ukraine "On the audit of financial statements and auditing activities", "On accounting and financial reporting in Ukraine", Chart of Accounts and Instructions for its application, Regulations (standards) of accounting and other regulations and legislation;
- assessment of risks of significant distortion;
- identification of the most important stages and objectives of the audit;
- level of confidence in the system of financial accounting and internal control;
- work of internal auditors and scale of their involvement;
- involvement of experts;
- nature and scope of audit evidence;
- conditions that require special attention (possibility of error, deception, etc.) [<sup>5</sup>, p. 232].

The audit plan must include the following information:

- name of the enterprise being inspected;
- audit period;
- number of man-hours to check;
- name of the head of the audit;
- magnitude of the planned audit risk;
- planned materiality,
- planned types of work (with a sufficient level of detail);
- period of works performance (i.e. specific terms of their implementation are defined);
- executors;
- notes (if required).

---

<sup>5</sup> Audit: textbook [O.A. Petryk, V.O. Zotov, B.V. Kudrytsky and others]; under general edition of Professor Petryk K.: KNEU, 2015. 498 p.

The plan must be signed by the head of the audit and certified by the head of the audit company.

Since audit planning is a continuous, interactive process that continues throughout the audit engagement, both the overall strategy and the audit plan need to be adjusted and changed as needed. This is because the auditor may obtain information as a result of performing audit procedures that will be significantly different from the information available at the time of planning the audit procedures. Reasons for significant changes to the overall audit strategy and audit plan should be documented.

In order to prepare the audit report, the auditor makes interim conclusions on each section of the audit plan, because they are the basis for the formation of an objective opinion of the auditor on the reliability of financial statements.

In most cases, the audit company creates a standard overall audit plan, which will be supplemented and adjusted to the specifics of a particular client's enterprise.

**Conclusion.** Therefore, proper planning is important not only to determine the cost of the audit and the auditor's expected income, but also to assess the real possibility of providing audit services to the client while ensuring an acceptable level of audit risk, which can be taken by the auditor without violating principles of professional ethics and its business reputation. All these indicators must be taken into consideration both when drawing up the overall plan and the program of a specific audit, and when planning the work of audit companies.

### **3.2. ENTERPRISE ACCOUNTING POLICY: THE ESSENCE, IMPORTANCE AND ITS FORMATION FEATURES**

Recently, new concepts, which are common in foreign practice, have started to be used in domestic accounting practice. These concepts include accounting policies of a company. Theoretical aspects of accounting policy formation, its implementation key points in an enterprise activity were studied by many scientists, including Belukha M. T., Butinets F. F., Holov S. V., Derii V. A., Kuzhelnyi M.V., Mossakovskiy V. B., Pushkar M. S., Suk L. K., Stepanova T. H., Chyzhevskaya L. V. and others. However, a number of issues that are still unresolved and have arisen recently in the context of changing economic conditions. This is due to the relevance of the topic of the study.

The purpose of the study is to summarise the essence of accounting policies and recommendations on how to formulate effective accounting policies in the current context.

The term ‘accounting policy’ was officially used in international practice since 1973 when it appeared in the International Accounting Standard (IAS) 1 ‘Accounting policies disclosures; and 5 ‘Disclosure in financial reports’. Since 1997 the new IAS 1 ‘Financial reports submission’, which contains disclosure requirements in accounting policies, has come into force. Practical guidance on the application of the standards is also given in IAS 8 ‘Accounting policies, changes in accounting estimates and errors’ and the Conceptual framework for international standards.

In our country, the term ‘accounting policy’ has come into use since the late 1980s as a translation of the term used in international standards, and since 1999 it has been officially introduced by the Law of Ukraine ‘On Accounting and Financial Reporting in Ukraine’. The amendments to this law



in 2017 also influenced the interpretation of the term 'accounting policy'- a set of principles, methods and procedures used by an enterprise for accounting, preparation and presentation of financial reports <sup>1</sup>.

In domestic science there are different points of view on defining the concept of 'accounting policy', its purpose and components. M. T. Belukha believes that this is a way of carrying out the accounting procedure<sup>2</sup>, F. F. Butynets believes that this is a system of methods and techniques of accounting organisation and keeping in a specific enterprise, implemented by the relevant domestic legislation for a fixed term<sup>3</sup>, S. V. Holov believes that this is a set of principles, methods and procedures used by an enterprise to prepare financial reports<sup>4</sup>. According to Kuter M. I. accounting policy is the choice of specific methods by an enterprise, the choice of forms, techniques of accounting and organisation of accounting based on the established rules and particularities of work (organisational, technological), the number of accounting personnel and their skills, the level of accounting department <sup>5</sup> technical equipment. As there are different approaches to understanding the essence of accounting policy, the studies on the subject are incomplete.

Accounting policy is an important tool for accounting and financial accounts. An efficient combination of possible accounting policies enables an enterprise to carry out business effectively. The reasons for the emergence of accounting policies in the conditions of market economy, according to

---

<sup>1</sup> Закон України «Про бухгалтерський облік і фінансову звітність в Україні» від 16.07.1999 р. №996-XIV. Режим доступу: <http://www.zakon.rada.gov.ua/go/996-14>

<sup>2</sup> Білуха М.Т. Курс аудиту/ М.Т.Білуха. – К.: Вища школа.-Знання, 1998. – 574 с.

<sup>3</sup> Бухгалтерський облік: облікова політика і план рахунків. Стандарти і кореспонденція рахунків, звітність/ Ф.Ф.Бутинець, Н.М.Малюга. Навч.посібник. – Житомир: ПП «Рута», 2001. – 512 с.

<sup>4</sup> Голов С. Бухгалтерський облік за міжнародними стандартами/ С.Голов, В.Костюченко. – К.:Екаутинг,2000. – 376 с.

<sup>5</sup> Теория бухгалтерского учета / Под ред.Кутера М.И. – М.: Финансы и статистика, 2002. – с. 543.

Kiliar O. R., include alternative options for accounting and its organisation, provided by legislative documents, expansion of activities, organisational and legal forms of economic entities, changing the role of an accountant in the economic life of an enterprise from a simple record keeper of business operations to its active participant<sup>6</sup>.

It is necessary to form an order on accounting policy because of the following factors: it is impossible for an enterprise to work normally without an internal order which includes accounting; the impact of accounting policies on an enterprises' performance is very significant and requires the decision of a manager's choice of the methodology and organisation of the accounting process<sup>7</sup>.

National Accounting Standard (NAS) 1 'General requirements on financial reports'<sup>8</sup> cites the definition of this term, identical to the Law of Ukraine 'On Accounting and Financial Reporting in Ukraine'; In Ukraine, in addition to the above documents, the regulatory issues of accounting policy are also regulated by an order of the Ministry of Finance of Ukraine 'On Approving Methodological Recommendations on Accounting Policies of an Enterprise and Amending Some Orders of the Ministry of Finance of Ukraine'<sup>9</sup>.

Compared to domestic legislation, IAS 8 (5) provides the following definition: 'accounting policies are specific principles, basics, arrangements, rules and practices that an

---

<sup>6</sup> Кіляр О.Р. Конспект лекції з дисципліни «Облікова політика підприємства». – Тернопіль:ТНТУ ім.І.Пулюя, 2016. – с. 5.

<sup>7</sup> Щирба М.П. Облікова політика в системі управлінського обліку: монографія. – Тернопіль: Економічна думка, 2011. – с. 205.

<sup>8</sup> Національне положення (стандарт) бухгалтерського обліку 1 «Загальні вимоги до фінансової звітності», затверджене наказом Міністерства фінансів України від 07.02.2013 р. № 73. Режим доступу: <http://www.buhgalter911.com/Res/NPSBO/NPSBO1.aspx>

<sup>9</sup>Наказ Міністерства фінансів України «Про затвердження Методичних рекомендацій щодо облікової політики підприємства та внесення змін до деяких наказів Міністерства фінансів України» від 27.06.2013р.№ 635. Режим доступу: [http://www.www.minfin.gov.ua/control/uk/publish/article?art\\_id=382876&cat\\_id=293537](http://www.www.minfin.gov.ua/control/uk/publish/article?art_id=382876&cat_id=293537)

entity applies in preparing and presenting financial reports'<sup>10</sup>. Therefore, the accounting policy of a company consists of separate accounting policies for each accounting subject. As this definition not only mentions principles, rules and practices (methods and procedures), but also the basics and conventions, without explaining their content, we can conclude that none of the definitions gives a specific list of issues pertaining to the field of accounting policy. Therefore, when the standards do not state that a particular issue pertains to accounting policy, an appropriate decision will be subject to professional judgment of an enterprise administration.

Defining accounting policy is a difficult and time-consuming process. It requires integrated knowledge of all the processes that take place in an enterprise, knowledge of the its environment regarding the prospects for the industry development and competitors, enterprise development strategies and more.

One of the first suggestions for documenting the accounting policies of the company was made by Schneidman L. Z.<sup>11</sup>. An accounting policy order is one of the numerous documents that dictates accounting rules to an accountant. Despite the fact that it is made at the enterprise, its importance and binding nature make it as significant as regulatory acts. Accounting standards often give the right to choose an order, accounting estimates, accounting method, etc., and therefore an economic entity must determine what procedures, accounting methods, indications it will use, enshrine them in the accounting policy order and continue to strictly follow it. An enterprise should not only evaluate the convenience and acceptability, but also ensure that the acts (operations) in financial reports are as accurate as possible, since the reliability

---

<sup>10</sup> МСБО 8 «Облікові політики, зміни в облікових оцінках та помилки». - Режим доступу: [http://www.zakon4.rada.gov.ua/laws/show/929\\_020](http://www.zakon4.rada.gov.ua/laws/show/929_020)

<sup>11</sup> Шнейдман Л.З. Учетна политика: формирование и реализация// Бухгалтерский учет. – 1995. - №9. – с. 9

of reporting indicators, in particular those that characterise the financial and property status of an enterprise, its results, will depend on the accounting methods and procedures selected.

It is worth noting that according to paragraph 3 of Accounting Standard 6, the order not only reflects the elements of accounting policy, but also accounting estimates, that a company uses to allocate expenses and income between reporting periods<sup>12</sup>. Therefore, changes in an order do not always imply changes in accounting policy. They may affect exclusively accounting estimates. The concepts above need to be distinguished because they are subject to different amendment rules and consequences of amendments. If it is impossible to do so, in accordance with paragraph 14 of Accounting Standard, it is considered as a change in accounting estimates.

Note that in many cases, the formation of accounting policies comes down to accounting policies drafting, which is, in fact, the last element in accounting policies formation. This work should be preceded by accounting procedures definition that meet the particular features of the production process and the needs of an owner.

In the process of accounting policy formation, the degree of an enterprise freedom is determined by the state accounting regulation. It sets out a list of techniques and procedures, among which there are acceptable alternatives. Therefore, accounting policies should only reflect those accounting provisions that have a few acceptable options of higher-level regulations.

In today's context, accounting policies should be aimed at revealing the creative abilities of entrepreneurs in improving

---

<sup>12</sup> Положення (стандарт) бухгалтерського обліку 6 "Виправлення помилок і зміни у фінансових звітах", затверджене наказом Міністерства фінансів України 28.05.99р. № 137. Режим доступу: <http://www.zakon.rada.gov.ua/laws/show/z0392-99>

management efficiency, the introduction of new technologies to meet their own needs and fulfil obligations to the state.

The lack of scientifically sound recommendations, sufficient experience of enterprises in the new economic environment, the formation of accounting policies for accounting purposes only require advanced training of accountants. From our point of view, these are the main reasons that hinder the implementation of accounting policy opportunities in business. To overcome them, it is necessary to take into account the systematic approach to accounting policies formation and follow the principles of its formation, which correspond to the general scientific principles of economic accounting organisation and production systems management.

Many factors must be taken into account in the development of accounting policies, including the scope and the type of activity of an enterprise, the legal form of an entity, the management structure, the scope of business activity, accounting personnel skills, computer equipment availability, etc. This will allow for optimal and effective accounting policies. Properly developed accounting policies will allow you to choose the best option for accounting, and, as a consequence, to ensure the effectiveness of management decisions.

Sectoral features of enterprises determine the choice and foundation of accounting policies elements, including an accounts work blueprint, a list of primary documents, expenditure in cost price formation, cost accounting and cost of production calculation method, estimates of work-in-progress, base of overheads distribution, etc.

According to the law, a company determines accounting policies independently. Lenin V. S., Glyvenko V. V.<sup>13</sup>,

---

<sup>13</sup> Лень В.С., Гливенко В.В. Бухгалтерський облік в Україні: основи теорії та практика: навчальний посібник. – К.: Центр навчальної літератури, 2004. – с. 491

Rybakova O.V.<sup>14</sup> note that there are several types of accounting policies, in particular: accounting policies for financial accounting, taxation, management, strategic accounting. For example, while developing accounting policies for financial accounting purposes, one must take into account the requirements of legislative acts and normative documents regarding the choice of options for financial accounting at the enterprise and displaying information in financial reports; for taxation one must take into account a list of taxes, registers of tax settlements, responsible persons; for management accounting one must take into account a cost accounting option (using accounts of all classes except class 8 accounts; using accounts of all classes except class 9 accounts); for cost accounting system (full and partial costs (“direct costing”)); for the method of cost accounting and cost of products calculation (job-order costing, process costing, standard costing); list of cost and responsibility centres; list of cost objects, costing objects and cost-accounting units; list and composition of items of cost of production calculation; list and composition of variable and fixed overhead costs; base of overhead costs distribution (work hours, salary; level of activity; direct costs, etc.); estimates of work-in-progress (at planned (standard) production cost; at planned direct costs; at cost of raw materials and semi-finished products); consolidated cost of production accounting; the actual cost of production, the method of income accounting (based on the principle of accrual and compliance), the work plan of cost accounts, income and financial results; a list of plans and budgets; the order of formation and the list of prices; a list of management accounting registers; the composition and forms of internal reporting, the frequency of their completion and submission by responsible persons, etc.

---

<sup>14</sup> Рыбакова О.В. Бухгалтерский управленческий учет и управленческое планирование. – М.: Финансы и статистика, 2005. – с. 24

Petruk O. M. and Baranovska T. V. point out that the accounting policy of an enterprise for the purposes of financial accounting depends on the accounting policy of the state, whereas management accounting depends on the organisational and technological features of its activities and management needs<sup>15</sup>.

Developing accounting policies in an enterprise is a complex and responsible process, because, on the one hand, it must take into account the requirements of different users of accounting information, as well as legislation and regulations on accounting regulation, and on the other hand, it has a direct impact on the accounting system quality, on the volume of information resources and validity of management decisions made by accounting information users.

Sometimes legislative and regulatory acts do not contain recommendations on the rules of accounting for an object or economic facts. In this case, an enterprise while developing accounting policies independently, develops an appropriate option, taking into account the principles of accounting, requirements of the current legislation and regulations. The following options are available:

- 1) Developing policies similarly with such transactions implies that an enterprise follows the requirements that apply to accounting for such transactions and the general principles of the accounting system. Similarity of operations is established on the basis of professional judgment;
- 2) Developing policies on the basis of the general definitions and criteria described in accounting law;

---

<sup>15</sup> Петрук О.М., Барановська Т.В. Облікова політика в системі регулювання бухгалтерським обліком // Проблеми теорії та методології бухгалтерського обліку, контролю і аналізу. Міжнародний збірник наукових праць. Серія: Бухгалтерський облік, контроль і аналіз. – 2005. – Випуск 3. – с. 141

3) Developing policies on the basis of generally accepted practice (is acceptable only if the industry practice does not contradict the spirit and logic of accounting regulations)<sup>16</sup>.

Piatov M. L. notes that the rules of the current accounting regulation can be divided into single- and multi-option<sup>17</sup> ones. Thus, single-option rules provide for a single order of reflection in the accounting of economic facts, which is obligatory for all enterprises, and multi-option rules allow an accountant to choose one of the options provided by law, which would fully take into account the peculiarities of an enterprise. Accounting policies should only reflect those accounting provisions that have multiple legally permitted options for the use, and do not include single-option legislative requirements in accounting policies.

All selected accounting options should be applied by all structural units of an enterprise, including those that are allocated to a separate balance sheet, regardless of their location.

Our research shows that the vast majority of domestic agricultural enterprises do not form an accounting policy for management accounting purposes as an organizational and regulatory document. Certain elements of such a policy are a part of a single accounting policy of an enterprise. Pushkar M. S. notes that accounting policy is a regulation (a set of rules) according to which the accounting department performs financial and management accounting<sup>18</sup>.

The problem of the correctness, completeness and reliability of the information presented arose with financial reports. It is worth noting that the principle of full coverage is

---

<sup>16</sup> Бухгалтерский учет: Учебник / А.С.Бакаев, П.С.Безруких, Н.Д.Врублевский и др.; Под ред.П.С.Безруких. – 5-е изд., перераб.и доп. – М.: Бухгалтерский учет, 2004. – с. 75

<sup>17</sup> Пятов М.Л. Правовые основы бухгалтерского учета: практическое руководство/ М.Л.Пятов. – М.: Эксмо, 2006. – с. 29

<sup>18</sup> Пушкар М.С. Облікова політика і звітність. Навч.посібник. – Тернопіль: Карт-бланш, 2004. – с. 5



realized through materiality. Information is known to be material if its absence or misstatement in the financial reports could affect the economic decisions of users.

While developing the accounting policy of a company it is necessary to establish a materiality threshold. In the Ukrainian legislation the materiality in the list of principles is not mentioned. As one of the qualitative characteristics of financial reports, relevance is affected by materiality. Therefore, materiality is a qualitative characteristic that influences the economic decisions of financial reports users.

The Ministry of Finance of Ukraine developed recommendations on the use of materiality and gave its definition: 'Materiality is one of accounting information characteristics that determine its ability to influence the decisions of financial reports users'<sup>19</sup>.

Each entity determines the materiality threshold on its own, taking into account the recommendations of the Ministry of Finance of Ukraine and reflects in the Accounting Policy Order. In our opinion, the materiality threshold for individual business transactions and accounting items is an integral element of accounting policies that may vary for each enterprise depending on its scope of activities. In many Ukrainian enterprises, the materiality threshold is not reflected in the Accounting Policy Order, or a certain amount (for example, UAH 500) is indicated, which is contrary to the national law, since a specific materiality threshold is recommended for each entity and it is not universal for all objects.

Thus, in accounting policies development, a company independently decides what information is significant, and specifies the materiality threshold for certain objects of

---

<sup>19</sup> Про суттєвість у бухгалтерському обліку і звітності. Лист Міністерства фінансів України від 29.07.2003р. №04230-04108// Бухгалтерський облік і аудит. – 2003. №8. с. 59

accounting and certain facts of economic activity in the Accounting Policy Order.

A well-developed accounting policy in modern conditions is an important component of the overall mechanism for managing an enterprise's economic activity. Accounting policy should be carefully considered, taking into account the features of an enterprise. According to accounting practitioners, the process of accounting policies drafting is quite time-consuming, that is why in most enterprises it is rather pro forma and certain items of regulations are duplicated. Some businesses do not have an accounting policy order at all. The lack of legislative regulation and lack of practical experience in this area might be the reason for that.

In order to develop the accounting policy of an enterprise, it is necessary to streamline the system of internal regulations of an enterprise, which enshrines the accounting methods chosen by it, accounting apparatus work organization options, accounting process technology, etc. Accounting policy is the foundation of the accounting process at an enterprise and is mandatory for the employees of an enterprise management apparatus.

The formation of accounting policies for each enterprise will help improve the accounting system, improve its economic and legal framework, which will ultimately ensure the appropriate effectiveness of economic decisions and an enterprise business activity as a whole and its structural units in particular.

### **3.3. ANALYTIC ACCOUNTING OF PAYROLL EXPENSES IN CROP PRODUCTION**

An important prerequisite for the efficient payroll analytic accounting at agricultural undertakings is the economically feasible pools of payroll expenses by articles and elements and their implementation in the accounting process with a computer-held accounting procedure. According to the Law of Ukraine “On accounting and financial reporting in Ukraine”<sup>1</sup> the enterprise has independence to choose the accounting procedure as a determined system of policy analysis, the procedure and method for recording and summarizing information in compliance with the unified principles established by law, and taking into account the peculiarities of its activities and information processing technology.

The computer-held accounting procedure is a set of interconnected registers formed in a single system that combines chronological and systematized records, provides an opportunity for external and internal users to obtain the necessary information for making management decisions. However, the analysis of the current computer-held accounting procedure of employees’ payroll at agricultural undertakings indicates that the content of the accounting registers does not fully correspond to its purpose and requires further improvement in terms of detailing the business insights.

A significant contribution to the study of theoretical and methodological aspects of the payroll job accounting was made by such national scholars as F. F. Butynets, Ye. V. Kaliuha, O. V. Pokataieva, N. V. Potryvaieva, V. V. Sopko, L. K. Suk, P. L. Suk, L. V. Chyzhevskaya and others. At the same time, the

---

<sup>1</sup> Verkhovna Rada of Ukraine. (1999, July 16). Law of Ukraine № 996–XIV (with changes and additions from 2020, March 30). On accounting and financial reporting in Ukraine. Available: <http://zakon3.rada.gov.ua/laws/show/996-14>.

issue of organizing analytic accounting of payroll expenses in the crop production self-cost generating remains a topical scientific subject.

Costing in crop production is characterized by two features: a long production cycle and the seasonal nature of production. Due to the seasonal production variability, there is a need for additional labor attraction. A monitoring study of the regular and seasonal employees' ratio has showed that the latter make up 24% of the total number of agricultural undertakings in Ukraine, including in the Kyiv region – up to 20%. This is due to the seasonal production variability in some businesses, especially in agriculture, which causes uneven use of labor resources in the course of year. According to the Decree of the Cabinet of Ministers of Ukraine «On approval of a List of seasonal jobs and seasonal industries»<sup>2</sup> a similar situation with the production seasonality is observed in other sectors of the economy. In particular, in the glebous, forest and processing industries, sanatorium-and-spa establishments and recreation facilities, the transport industry and the road sector, etc. In this regard, for the payroll payment analysis and control, it is proposed to allocate the following substantive pay items such as “Regular employees’ payroll expenses” and “Seasonal employees’ payroll expenses”. First, it will allow identifying the sources of payroll expenses through the disclosure of their economic content and managing them effectively. And secondly, it will allow making effective management decisions to ensure the optimal balance of both the quantitative (ratio of regular and seasonal employees) and qualitative (level of proficiency, qualification, good performance) labor mix in

---

<sup>2</sup> Cabinet of Ministers of Ukraine. (1997, March 23). Decree № 278 (with changes and additions from 2019, Nov. 06). On approval of the List of seasonal jobs and seasonal industries. Available: <https://zakon.rada.gov.ua/laws/show/278-97-%D0%BF>.

accordance with the needs of agricultural undertakings in the course of year<sup>3</sup>.

In addition, in our opinion, taking into account the specifics of the business entities in the crop production sector, during agricultural labor, it is necessary to specify the proposed pay items of the payroll expenses concerning regular and seasonal production separately by expenses elements in accordance with the Labor Code of Ukraine<sup>4</sup>. The Law of Ukraine “On Remuneration of Labor” stipulates that payroll expenses include the base wages fund (tariff rates (salaries) and traveling expenses) and extra wage (premiums and supplements to tariff rates and official salaries, bonuses and systematic remunerations) and other incentive and compensatory payments (pecuniary aid and tailor-made welfare payments, year-end bonus)<sup>5</sup>. However, these indicators do not reflect relevant information on the payroll structure, which, first of all, in agriculture makes it difficult to carry out operational control over the payroll expenses analytic accounting. That is why, in order to carry out the payroll expenses analytic accounting when growing crop products, it is necessary to amend the Operating chart of accounts, which is the framework for accounting records maintenance, systematization of information from source documents to the accounts of analytic and synthetic accounting, as well as for

---

<sup>3</sup> Lovinska L., Kaliuha Y., Kryshchyna I., Korytnik L., Umerova A. Report on labour in human resources management system. Atlantis Press. *Advances in Economics, Business and Management Research*. 2020. Vol. 129. Pp. 85–95. DOI: <https://doi.org/10.2991/aebmr.k.200318.011>. Available: <https://www.atlantispress.com/proceedings/isc-sai-20/125937240>.

<sup>4</sup> Verkhovna Rada of Ukraine. (1971, Dec. 10). Law № 322-VIII (with changes and additions from 2020, March 30), The Labour Code of Ukraine. Available: <https://zakon.rada.gov.ua/laws/show/322-08>.

<sup>5</sup> Verkhovna Rada of Ukraine. (1995, Apr. 20). Law № 108/95-VR (with changes and additions from 2020, Jan. 14), About payment of labour. Available: <https://zakon.rada.gov.ua/laws/show/108/95-%D0%B2%D1%80>.

reporting. In accordance with the Operating chart of accounts<sup>6</sup> payment details are summarized on sub-account 661 “Payroll processing”, which is used to implement accounting transactions on accruals and payroll payment, whose components cannot be clearly identified. In our opinion, when developing analytic payroll sub-accounts, it is necessary to separate the main elements of the employees’ payroll expenses, as well as to take into account the business entity type to increase control in business accounting. Therefore, we consider it appropriate to propose the detailed analytic sub-accounts of the second and third orders to sub-account 661 “Payroll processing”, taking into account the specifics of the crop production sector (Table 1).

Table 1

Analytic accounting of payroll expenses when building up  
current biological assets of crop production

Sub-account	Analytic accounting
1	2
661 «Payroll processing»	<p><b>661.1 “Base wages”</b></p> <p>661.1/o “Regular employees”</p> <p>661.1/c “Seasonal employees”</p> <p><b>661.1.1 “In-kind compensation”</b></p> <p>661.1.1/o “Regular employees”</p> <p>661.1.1/c “Seasonal employees”</p>

<sup>6</sup> Ministry of Finance of Ukraine. (1999, Nov. 30). Order № 291. The Plan accounts of accounting of assets, capital, liabilities and business operations of enterprises and organizations. Available: <https://zakon.rada.gov.ua/laws/show/ru/z1557-11>.

Continuation of the Table 1

1	2
661 «Payroll processing»	<p><b>661.2 “Payment for extra time work”</b>  661.2/o “Regular employees”  661.2/c “Seasonal employees”  <b>661.2.1 “Overtime payment”</b>  661.2.1/o “Regular employees”  661.2.1/c “Seasonal employees”  <b>661.2.2 “Payment for evening-work”</b>  661.2.2/o “Regular employees”  661.2.2/c “Seasonal employees”  <b>661.2.3 “Payment for night-work”</b>  661.2.3/o “Regular employees”  661.2.3/c “Seasonal employees”  <b>661.2.4 “Payment for weekend-work”</b>  661.2.4/o “Regular employees”  661.2.4/c “Seasonal employees”  <b>661.2.5 «Payment for holidays-work»</b>  661.2.5/o “Regular employees”  661.2.5/c “Seasonal employees”</p>
	<p><b>661.3 “Bonus for specific work series”</b>  661.3/o “Regular employees”  661.3/c “Seasonal employees”  <b>661.3.1 “Bonus for work intensity”</b>  661.3.1/o “Regular employees”  661.3.1/c “Seasonal employees”  <b>661.3.2 “Bonus for professional excellence”</b>  661.3.2/o “Regular employees”  661.3.2/c “Seasonal employees”  <b>661.3.3 “Bonus for skill level (for drivers of agricultural vehicles)”</b>  661.3.3/o “Regular employees”  661.3.3/c “Seasonal employees”  <b>661.3.4 “Bonus for overfulfillment of labor efficiency standard”</b>  661.3.4/o “Regular employees”  661.3.4/c “Seasonal employees”  <b>661.3.5 “Bonus for performing seasonal jobs within the established deadlines”</b>  661.3.5/o “Regular employees”  661.3.5/c “Seasonal employees”</p>

Continuation of the Table 1

1	2
661 «Payroll processing»	<p><b>661.4 “Other incentive and compensatory payments”</b>  661.4/o “Regular employees”  661.4/c “Seasonal employees”  <b>661.4.1 “Pecuniary aid”</b>  661.4.1/o “Regular employees”  661.4.1/c “Seasonal employees”  <b>661.4.2 “One-time fees and premiums”</b>  661.4.2/o “Regular employees”  661.4.2/c “Seasonal employees”</p>
	<p><b>661.5 “Payments for non-worked time”</b>  661.5/o “Regular employees”  661.5/c “Seasonal employees”  <b>661.5.1 “Payment of vacation allowance”</b>  661.5.1/o “Regular employees”  661.5.1/c “Seasonal employees”</p>

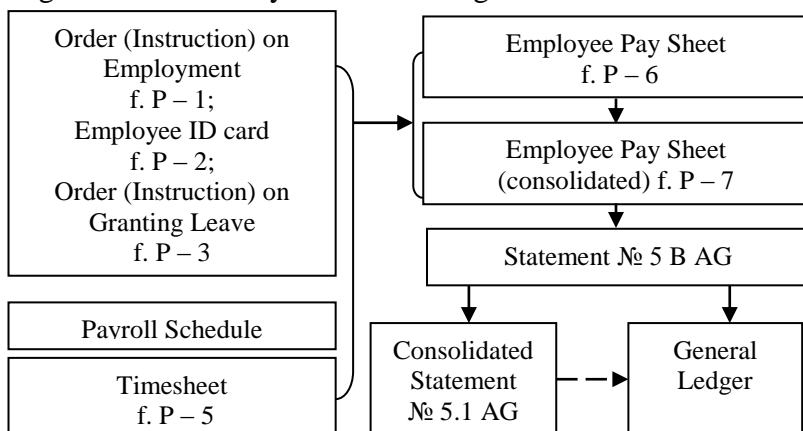
Source: author's development.

According to the study, we believe that the proposed system of analytic sub-accounts concerning employees' payroll processing will make possible to establish the payroll expenses sources, strengthen operational control over the analytic composition of expenses, when growing crop products, formulate the impact of each expense elements on the amount of self-cost and determine the direction of its optimization through the economic content disclosure and the reasonable payroll expenses determination in the production, and not just the amount of the expenses.

In addition, the simultaneous use of several analytic characters in the Operating chart of accounts regarding regular and seasonal employees and the wage-and-salary structure will contribute to both generalizing and detailing of business transactions, empowering the use of accounting information at all levels of cost management, systematizing data in the analytic accounting of payroll expenses in crop production.



In our opinion, it is advisable to conduct analytic accounting of employees' payroll processing according to expenses that should be presented to the corresponding sub-accounts in the Operating chart of accounts. The sequence of accounting records for employees' payroll processing involved in agricultural industry is shown in Figure 1.



*Fig. 1. Accounting procedure of employees' payroll at agricultural undertakings*

*Source: generalized by the author<sup>7</sup>.*

In accounting business transactions are reflected on the basis of source documents, which are grouped according to certain criteria and are reflected in accounting ledgers (statements, General Ledger), which is the basis for the financial, tax and statistical reporting.

Prime records reflect the main indicators of crop production expenses. When conducting accounting, source documents are processed, checked according to its content and form regarding the paper work completeness and correctness,

<sup>7</sup> Ministry of agrarian policy and food of Ukraine. (2009, June 4). Order № 390. On approval of specialized forms of registers of the journal-order form of accounting for agricultural enterprises and Methodical recommendations on their application. Available: <https://zakon.rada.gov.ua/rada/show/v0390555-09>.

arithmetic and logic check when filling in accounting ledgers. It is worth noting that in the computer-held accounting, first, analytical insights and books, ledgers and common-size statements are filled in, and then the information that is generalized according to accounting analytic sub-accounts in the listings, is transferred by extended amounts to the General Ledger. Information on accounting data is accumulated and aggregated for reporting purposes.

Thus, the maintenance of accounting registers is carried out on the basis of source documents in the context of the corresponding accounts defined in the Operating chart of accounts. It is worth noting that the synthetic accounting register for payroll processing is Statement № 5 B AG, from which credit data are transferred to the General Ledger, and the register of analytic accounting – the Consolidated statement of accrual, payroll distribution and deductions by objects of cost accounting № 5.1 AG, from which debit turnovers are processed after registering entries in the General Ledger.

It should be noted that it is advisable to coordinate ordinary accounting accounts with the proposed analytics of sub-account 661 “Payroll Processing” of the second and third orders when maintaining the computer-held accounting registers. Table 2 presents a sample of improving the Statement of accounting information in terms of the system of analytic sub-accounts.

Table 2

## Statement of credit sub-account 661 «Payroll processing»

№	To the debit of an account		From the credit of an account				
	Item	Code number	661.1	661.2.1	661.2.2	...	661.5.1
1	2	3	4	5	6	7	8
1	Grain production	23.1	8400,00		950,00		
2	Potato production	23.2	7500,00		540,00		1230,00
3	Sunflower production	23.3	9000,00		630,00		

Continuation of the Table 2

1	2	3	4	5	6	7	8
4	Sugar beet production	23.4	6700,00				2700,00
Totally			31600,00	0,00	2120,00	...	3930,00

*Source: author's development.*

Summarized information will allow conducting payroll expenses analytic accounting using identical indicators, comparing accounting information with accounting registers and the General Ledger, generating objective accounting and economic information on employee payments. It will make possible to establish the impact of some expense elements on the amount of self-cost in crop production.

In addition, the main advantages of computer-held accounting is the economic transactions grouping by combining synthetic and analytic accounting, systematic and chronological records in one register. And the statement chess structure will optimize the records number without breaking double records, since each fixed figure is simultaneously displayed both in the debit and in the credit of the corresponding sub-accounts.

In addition to statement No. 5 B AG, the Consolidated statement of accrual, payroll distribution and deductions by objects of cost accounting № 5.1 AG is used for payroll analytic accounting at agricultural undertakings. It displays analytic information regarding the conducted business transactions, indicators of timesheet, salary or tariff, and other employee benefits. In our opinion, for the maintenance of the Consolidated statement № 5.1 AG it is necessary to use the payroll expenses classification and reflect them on the analytic sub-accounts specified in the Operating chart of accounts to ensure the information unity, comparison and generalization. The improved Consolidated statement No. 5.1 AG generation scheme is presented in Table 3 on the analytics example of

subaccount 661 “Payroll Processing” of the second and third orders.

Table 3

Consolidated statement of payroll accrual, distribution & deductions to the cost accounting entities

№	Accounting entity	Corresponding account	Payroll calculation - credit-side 66					Totally
			By salaries and tariffs			Payment for evening work	Payment of vacation allowance	
			days	hum.-hours	sum			
1	manufacturing costs	23.1	22	176	8400,00	950,00		9350,00
2	manufacturing costs	23.2	19	152	7500,00	540,00	1230,00	9270,00
3	manufacturing costs	23.3	22	176	9000,00	630,00		9630,00
4	manufacturing costs	23.4	16	128	6700,00		2700,00	9400,00
Totally		–	79	632	31600,00	2120,00	3930,00	37650,00

*Source: author's development.*

These analytic data on sub-account 661 “Payroll processing” are used in accounting, management accounting and are necessary for management, control, analysis and reporting on financial, statistical and tax issues. This analytic statement will increase the control point of accounting, because it will serve as an information basis for monitoring the payroll generation and application of funds. In addition, it will contribute to the need for managing the scheme of payment in general at agricultural undertakings through the payroll accounting disclosure in terms of its types and forms. Therefore, without the proposed detailing of the payroll expenses, it is impossible to determine the difference between their components, develop the reducing expenses mechanism both in general and in terms of employee payment types. Alignment of synthetic and analytic accounting registers will make it easier to control the procedures for checking the entries

correctness and completeness in the Statement No. 5 B AG, Consolidated statement No. 5.1 AG and General Ledger, as well as compiling all reporting forms on their basis.

As a result of the research analysis by scholars and the state of conducting analytic accounting of payroll and its payment at agricultural undertakings in computer-held form, we consider it appropriate to amend the Operating chart of accounts regarding the analytic sub-accounts system for payroll accounting taking into account the specifics of the crop production industry and bring in line the content of the synthetic and analytical accounting registers.

Thus, this proposal won't only ensure the well-functioning accounting system at agricultural undertakings, but will also increase control over the rational use of funds for payroll. Detailing of analytic indicators in accounting registers will allow carrying out both generalization and in-depth analysis of business transactions by their content, which contributes to the payroll expenses effective management.

### **3.4. ANALYTICAL PROCEDURES IN NATIONAL AND INTERNATIONAL AUDIT PRACTICE**

Audit of financial statements is not quite new type of audit services which deals with verification of accounting data and financial statement indicators of legal entities. However, one needs to be cautious while judging on completeness of its methodological support. There are ongoing discussions among both scholars and practitioners on ways to universalize, improve effectiveness and efficiency of analytical procedures which are applied for audit purposes. These issues are reflected in the works of the following Ukrainian scientists: Bondar V., Bondar Y., Gerasimovych A., Gevlych L., Dorosh N., Kamenska T., Korinko M., Panteleeva V., Ostapiuk N., Petryk O., Proskurina N., Pushak I., as well as foreign scientists: Adams R., Arens A., DeFliese P., Jaenicke H., Dodge R., Carmichael J., Loebbecke J., Robertson J. and other scientists. While giving credit to works of scientists, we note that these issues have not lost their research relevance. There is a need for in-depth and comprehensive scientific and practical research of issues which are related to the application of audit procedures in accordance with modern requirements of national practices and foreign experience.

The use of analytical procedures in the audit process is regulated by International Standards on Auditing (ISA) 520 “Analytical Procedures”<sup>1</sup>. The term “analytical procedures” means evaluations of financial information through analysis of plausible relationships among both financial and non-financial data, covering the necessary investigation of identified fluctuations or relationships that are inconsistent with other relevant information or significantly different from expected values. It is necessary to note that there is a certain

---

<sup>1</sup> International Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements, 2016–2107 Edition. URL: <https://www.apu.net.ua/>

contradiction in the methodological essence of analytical procedures described by the professional standard. Definition states it as “...evaluations of financial information”, which relates to data contained in the financial statements. In reality, practicing auditors use information from a wider variety of sources and, most often, analytical procedures include numerous techniques (especially this is proven by the experience of intranational audit firms). They range from ordinary comparisons or reconciliations to quite complex models. Large amounts of data are used during these processes and it is not necessarily only financial data. Non-financial information often becomes the basis for assessing and identifying dependencies. Nevertheless, the ISA 520 has a recommendation to include possible dependencies between financial and non-financial data. So, it can be stated that analytical procedures in audit is a synergetic analysis of relations and trends based on evaluation of financial and non-financial information in order to identify interdependencies among indicators of legal entities, becoming the basis of audit evidence gathering and auditor's report preparation.

Ukrainian scientist Ostapiuk N. notes that modern auditors are increasingly using certain analytical procedures – horizontal, vertical, coefficient, factor and comparative analysis<sup>2</sup>. Our research of the current practices in audit of financial statements of national companies confirms this trend. Indeed, the auditor's review and investigation of financial and economic activities of potential or current client is conducted through horizontal and vertical analysis of the Balance Sheet (Statement of Financial Position) and Income Statement (Statement of Comprehensive Income), analysis of deviations in the structure of assets and liabilities, financial stability, liquidity and solvency, business activity, short-term forecasting

---

<sup>2</sup> Ostapiuk, N.A. (2011), “Methods of estimation of the financial state of the enterprise in the conditions of inflation”, *Visnyk ZhDTU*, vol 1 (55), pp. 127–129.

of bankruptcy probability. Moreover, in most cases, Ukrainian practicing auditors perform such procedures in a “semi-manual” mode using specialized software products or Microsoft Excel spreadsheet application. With this software auditors not only automate calculations but also apply mathematical modelling. The use of mathematical formulas allows to describe the relationships of different parameters of the studied operations or processes (e.g. to conduct factor analysis of profit variances or return on equity ratio change; to study the impact of factors on profitability (for example, using DuPont factor model); create five-factor model of production profitability, calculate and analyse the value of net assets, compare the capital value with revenue, equity and net profit; compare actual data with data from previous periods, plans, norms and standards; conduct comparisons between entities, etc). However, all items in the list are simply various methods of economic analysis. Using such methods in the audit of both domestic and foreign companies is quite important at the initial stage of the audit, especially while studying the business of the client company. A qualified analysis of financial condition of legal entity, clarifying trends and patterns in business systems, studying an algorithm of systemic changes in company’s operational, investment or financial activities, identifying non-standard or illogical indicators – all become a fundamental basis for preparation of the audit strategy (general plan), as well as time limits set up. However, this is not an exhaustive list of analytical audit procedures. In fact, there is a great diversity of audit procedures what caused a practical problem – difficulty of selection, that leads to a limited use of the available range of analytical procedures, especially by beginner auditors. Therefore, we consider appropriate the proposal of scientists Gevlych L. and Pushak I.<sup>3</sup> to incorporate a structured

---

<sup>3</sup> Gevlych L.L., Pushak I.S. Approaches to essence and classification of analytical procedures in audit. “*Ekonomika i Suspilstvo*” 2017, vol 3. pp. 1320–1326



list of analytical procedures and their purposes into the ISA. However, due to the difficult approval procedure of changes to the Standard through international organizations (in particular, the International Auditing and Assurance Standards Board (IAASB)), there is a more acceptable and simple way of improvement – to develop and approve an internal firm's standard for using analytical procedures in auditing. Such internal standard would contain a detailed list of audit procedures as well as features and conditions for their application within specific audit purposes.

Analytical procedures should be considered as one of the methods to obtain an audit evidence. Experienced auditors of Ukrainian and foreign audit companies use them at all stages of the audit process (preliminary, main and final). This was confirmed by 33 of the 36 surveyed representatives of the six largest audit companies in the world (according to research conducted by the Canadian Academic Accounting Association)<sup>4</sup>.

Skilful use of analytical procedures allows auditors to obtain a significant amount of necessary information and to identify problematic aspects with relatively less time and efforts spent than just using detailed testing and verification of documented data. Increasing application of analytical procedures is becoming a typical feature of the audit of financial statements and provision of audit services, which are conducted not only by Ukrainian but also by foreign audit firms. Operations of these firms, taking into account current complex economic realities, are characterized by strict time limits due to the growing desire of customers to reduce audit costs. Along with it the auditors should comply with requirements to provide quality services. To ensure that audit quality is maintained, foreign researchers strongly advice

---

<sup>4</sup> Hirst D.E. Audit Analytical Procedures: A Field Investigation / D.E. Hirst, L. Koonce URL: [http://lib.cufe.edu.cn/upload\\_files/other/4\\_20140522023710\\_9.pdf](http://lib.cufe.edu.cn/upload_files/other/4_20140522023710_9.pdf).

practitioners to integrate as many different types of analytical procedures as possible into their work<sup>4</sup>.

Section of ISA 520 “Analytical Procedures”<sup>5</sup> on standard application indicates that this standard deals with the auditor’s use of analytical procedures as substantive procedures, as well as the auditor's responsibility to perform analytical procedures at the final stage of the audit, during formulating of an auditor’s opinion concerning the clients’ financial statements. It is noted that ISA 315 (revised) “Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and its Environment” provides guidance on the use of analytical procedures in assessing audit risk and its elements. ISA 330 “The Auditor's Procedures in Response to Assessed Risks” includes requirements and recommendations regarding the nature, timing and extent of audit procedures in response to assessed risks. Therefore, to improve practical application of analytical procedures, it is advisable to distinguish between types of analytical procedures for:

1) assessment of the client's business and study of the specific features of its activities (forming the basis for the audit of the client's financial statements or for consulting the client, based on the methods of financial analysis);

2) risk assessment (preliminary analytical risk should be assessed based on understanding the business and expected results). Analytical procedures are used during the risk assessment in order to get a deeper understanding of the legal entity and its environment. Risk may be low or medium in those areas where analytical procedures will be used as substantive procedures, while a high level of risk signals that the use of detailed verification procedures may be required to obtain the necessary audit evidence. For example, calculating inventory turnover before testing their value may indicate that

---

<sup>5</sup> International Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements, 2016–2107 Edition. URL: <https://www.apu.net.ua/>

increased attention to inventory auditing is needed; the existing risk of receivables overstatement will require of auditor to carefully review the sample of primary documentation. Thus, the detection of unusual trends or distortions allows to focus on potential risk areas and reduce it to acceptably low level when preparing conclusion on whether the financial statements are consistent with the audit understanding of the client's business;

3) planning (examples of application of analytical procedures are: analysis of consistency of indicators of various forms of financial reporting (analysis of changes in the structure of assets and liabilities in Balance Sheet, as a rule, should correspond to changes in the structure of income and expenses in Income Statement); absolute values of indicators by reporting items; changes in the structure of values in certain forms of financial reporting; changes in relationships between indicators within one form of reporting; changes in relationships between indicators of different forms of reporting; detection of non-typical changes to determine the overall priorities of the audit; analytical overview in order to identify atypical journal entries which are to be reviewed in detail; special analytical procedures applied to each segment of financial statements in order to obtain audit evidence of the reliability of its indicators; reconciliation of balances on financial statements at the beginning of the current period with balances in the previous period, simply comparing indicators in the financial statements for two periods; reconciliation of data between financial statements, general ledger and accounting records; comparison of balances and turnovers on the accounts in the current and previous periods with detection of significant or unexpected deviations and further analysis of factors which caused such deviations and others). Performing analytical procedures at the planning stage helps auditor with identification of important aspects that will require an in-depth investigation during the audit.

4) substantive checks (if analytical procedures are used as substantive procedures for specific audit areas, they should be described in working papers. In cases when expected results differ from actual ones, the analytical risk assessment, nature, timing and scope of audit procedures should be reviewed and sufficient evidences allowing to form an audit opinion should be obtained. In general, analytical procedures are used as substantive procedures where their application may be more effective or efficient than detailed audit tests<sup>6</sup> Procedures are applied both at the level of the entire financial statements and at the level of individual accounts and operations. Quite often such procedures transition into documentary procedures or data and operations verification with the subsequent analysis of the obtained results.

5) generalization of results (analytical procedures are designed for the final assessment of significant deviations and financial issues as well as for conducting generalized monitoring of financial statement indicators, analysis of events after the reporting date, identification of deviations and their reasons; preparation of the opinion on whether financial statements correspond to auditor's understanding of client's operations).

The above analysis of the theoretical basis of the application of different types of analytical audit procedures and current practices of Ukrainian and foreign companies allows us to conclude that such procedures are conducted at all stages of the audit and it is impossible to make a clear distinction of such procedures between specific stages. It once again confirms the synergetic approach to application of analytical procedures for audit purposes.

A problematic issue in the practice of applying analytical procedures is to determine their sufficiency and the need for

---

<sup>6</sup> International Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements, 2016–2107 Edition. URL: <https://www.apu.net.ua/>

additional in-depth verification, using other methods and techniques of auditing. Obviously, if no unusual fluctuations are detected when applying analytical procedures, it can be assumed that the probability of significant error or deviation is minimal. On its official website, the audit experts of the large US company Weaver recommend to their fellow practitioners to set a limit that will serve as an indicator that in-depth audit procedures is not feasible and “analytical audit”<sup>7</sup> is sufficient. According to their comments, the concept of materiality and the expected level of confidence (which means the established limit of materiality of errors and the level of audit risk) have more influence. However, in our opinion, setting up a threshold for determining whether analytical procedures are enough and making decision regarding the adequacy of their content depends, first of all, on the professional judgment of the auditor. It is quite simple to demonstrate with practical examples of analytical procedures application: comparing the daily sales of the studied period with sales in previous periods, the auditor’s assumptions are that the relationship between receivables and sales should remain approximately the same. This is relevant if there were no changes in the customer base, the client’s policy on receivables management or in the approach to collections. Otherwise, it is necessary to apply detailed verification procedures using such methodological techniques as collecting documentary evidence and (or) performing actual control. Another example is the analysis of the current ratio within several reporting periods by comparing current assets with current liabilities; it should be approximately the same over time. This applies again only if the client did not change the policy on receivables, inventories or accounts payable management. This means that the professional judgment of the auditor in combination with critical thinking on the analysis of existing relationships (sales

---

<sup>7</sup> Weaver and Tidwell, L.L.P web-site. URL: <https://weaver.com/meet-weaver>

- cost of goods sold; sales - receivables; fixed assets - depreciation; financial investments (long-term and short-term) - income from them; purchases - accounts payable; volume of works performed - staff salaries, sales volume - commission, etc.) with reference to the acceptable level of risk and materiality threshold will allow to conclude whether the audit evidence collected through analytical procedures is sufficient and relevant (substantive).

It is worth noting that in their research, foreign scholars confirm the existence of direct relationship between the extent of analytical procedures being applied and experience of auditor – senior auditors tend to use analytical procedures more often than those with less experience<sup>8,9</sup>. Taking into account the research of national audit practice of audit firms and the analysis of foreign audit practice conducted by foreign scholars<sup>10</sup>, we can state that the extent to which auditors apply analytical procedures depends on professional judgment formed on the basis of the auditor's practical experience in accordance with the specifics, size and scope of clients' activity as well as the audit firm itself. Thus, auditors of Big Four companies use analytical procedures more often than auditors from other audit firms. First of all, this is due to the difference in their client base. As a rule, large audit firms for years serve the same big clients, which generally have an effective accounting and internal control systems, so the large datasets are available and application of analytical procedures to the greater extent is more feasible.

In conclusion, it is necessary to specify that application of analytical procedures in the procedural framework of audit

---

<sup>8</sup> Abidin, S. & Baabbad, M.A. 2015. The use of analytical procedures by Yemeni auditors. *Corporate Ownership & Control*, 12(2): 17–25.

<sup>9</sup> Kritzinger, J. A. (2015). The Application Of Analytical Procedures In The Audit Process. University Of Pretoria Faculty Of Economic And Management Sciences.

<sup>10</sup> Samaha, K. & Hegazy, M. 2010. An empirical investigation of the use of ISA 520 “Analytical Procedures” among Big 4 versus non-Big 4 audit firms in Egypt. *Managerial Auditing Journal*, 25(9): 882–911

provides higher validity of the auditor's professional judgment and quality of results of audit services. It is necessary to consider analytical procedures as the way of obtaining the audit evidence, what is influencing the quality of audit process and consistency of audit conclusion. The subsequent research should be aimed at search and extensions of possible ways of analytical procedures automation at a high professional level.

### **3.5. PROVISIONS FOR PAYMENT TO EMPLOYEES: FEATURES OF FORMATION AND USE**

Among the components of the total costs of enterprises, payments to employees take a very important place, representing numerous list of payments, which have their own features reflected in the accounting and reporting. Ensuring the payments of personnel in the company, both mandatory and additional, is one of the competitive advantages of the labor market, as it helps to maintain, increase and motivate qualified employees.

Formation aspects, accounting of provisions, key aspects of the documentary, organizational and methodological support have been reflected in works of following scientists-economists: Zhurakovska I.V., Kamenska T.O., Nashkerskoa G.V. Parkhomchuk E.A., Pilipenko L.M., Tereshchenko V.S., Chudovets V.V. and others. However, there are still many unresolved issues related to inadequate methodology for provisions accounting of wages, salaries and other payments to employees, including with regard to the requirements of international financial reporting standards.

The purpose of the study is to summarize the features of the formation and use of provision for payments to employees and recommendations for their application in the practice of enterprises.

In the economic literature, collateral is often also called reserves. This is usually due to a different translation of the name of the same term «provisions» from IAS 37 «Collateral, Contingent Liabilities and Contingent Assets». These concepts should be distinguished.

Provisions are items that are presented in the financial statements on separate lines as part of liabilities in accordance with the requirements of UAS 11 «Liabilities» or IAS 37. Provisions are contractual items, such as the provision of



doubtful debts, which reduces balance value of current receivables.

In the IFRS system, the issues of formation and evaluation of provisions are regulated more precisely. . Entities are governed by IAS 37 and other IFRSs that govern certain types of collateral. In general, IAS 37 defines provisions similarly to the national definition: a liability with an indefinite term or amount.

Provision for future expenses and payments to employees should be created in order to evenly include in the current expenses of the reporting period payment obligations in accordance with the terms of employment agreements or collective agreements, for which there is no specific date of payment.

Providing additional benefits to the mandatory ones for employees at the initial stage requires costs, but in the long term perspective the benefits can far exceed these costs. Provision is an important tool of enterprise management, which can helps to regulate the value of financial results, production costs, neutralize commercial risks through domestic funds, increase economic security etc<sup>1</sup>.

Creation of provisions is mandatory under certain grounds. Not to create provisions in the UAS system is allowed only to: legal entities - small businesses that keep simplified accounting of income and expenses in accordance with tax legislation and micro-enterprises (paragraph 8, subparagraph 2), paragraph 2 of UAS 25 («Financial report of a small business entity»)<sup>2</sup>.

In the accounting and reporting of employee benefits for enterprises engaged accounting for national standards defined

---

<sup>1</sup> Zhurakovskaya I.V., Chudovets V.V. Improving the methodology for accounting for employee benefits. *Bines Inform.* 2017. № 3. pp. 340–345.

<sup>2</sup> *Ukrainian Accounting Standard 25 “Financial Report of a Small Business Entity Regulation of 25.02.2000.* № 39. URL: <https://zakon.rada.gov.ua/laws/show/z0161-00#Text> (access date 01.04.2020)

by the Regulations (standard) accounting 26 «Employee Benefits»<sup>3</sup>.

The issue of reflection in the accounting and reporting of payments to employees in enterprises which apply international standards is regulated by International Accounting Standard 19 «Payments to employees». Employee benefits – are all forms of compensation provided by the entity in exchange for service rendered by employees<sup>4</sup>.

In accordance with the requirements of IAS 19 «Employee Benefits», it is necessary to take into account not only officially fixed benefits, but also other benefits, based on the law requirements, intra-industry regulations or the normal practice of the enterprise. We shall note that there is no clear definition of the category of «employee benefits» in UAS 26 «Employee benefits». This standard only contains a definition of certain types of payments.

According to L.I. Zhideeva and I.V. Starodub employee benefits are all forms of current and future compensations and additional benefits provided by the entity itself or through a third party to worker and his family members under the law and internal practices in exchange for current, past and future services due to the fact of past or current employment (labor relations)<sup>5</sup>.

According to Yarmolyuk O.F., employees' benefits – are the compensation payments for services of workers that are

---

<sup>3</sup> Ukrainian Accounting Standard 26 "Payments to employees": Regulation of 28.10.2003. № 601. URL: <https://zakon.rada.gov.ua/laws/card/z1025-03> (access date 01.04.2020).

<sup>4</sup> International Accounting Standard IAS 19 Employee Benefits: Regulation of 01.01.2012. URL: [https://mof.gov.ua/storage/files/IAS-19\\_ukr\\_2018.pdf](https://mof.gov.ua/storage/files/IAS-19_ukr_2018.pdf) (access date 01.04.2020).

<sup>5</sup> Zhideeva L.I., Starodub IV Accounting for employee benefits: problems of theory and practice of using PSBO 26 and IAS 19. Economics and Society: Electronic scientific professional publication. Vip. 9. Mukachevo: Mukachevo State University, 2017. p. 1122-1126 URL: [http://www.economyandsociety.in.ua/journal/9\\_ukr/192.pdf](http://www.economyandsociety.in.ua/journal/9_ukr/192.pdf) (access date 10.04.2020).

accumulated as a part of long-term and current liabilities and provisions enterprises<sup>6</sup>.

Due to the different approaches to understanding the nature of employee benefits research, we acknowledge the incompleteness of the subject.

We consider it appropriate to apply the following definition: payments to employees are all forms of compensation payments to employees in exchange for services provided related to the employment relationships.

There are many types of payments to employees. These are long-term and short-term rewards that are incentive or social in nature and are paid upon termination of employment at the enterprise. A significant number of awards are not recurring. These include: annual bonuses, vacation, compensation for unused leave, payment for medical services, education, food, compensation for utility costs, payment (compensation) of interest costs for credit (loan). The accounting methodology for such accruals is not sufficiently regulated.

In accordance with paragraph 14 of IAS 19 «Employee Benefits», the right to pay for absences is divided into cumulative (in case of non-use by the employee, the right to them is transferred to the next period) and non-cumulative. An entity shall estimate the expected value of accrued absence periods as an additional amount that it expects to pay because of an unused entitlement accumulated at the end of the reporting period (paragraph 16).

It is important to evenly distribute non-periodic payments over time in order to avoid cyclical seasonal fluctuations in labor costs or their growth in certain periods.

---

<sup>6</sup> Yarmolyuk O.F. Improving the accounting support for the management of payments to employees of the enterprise. Efficient economy. 2014. URL: <http://www.economy.nayka.com.ua/?op=1&z=2947> (access date 10.04.2020).

Thus, the classification of payments to employees on cumulative or non-cumulative depends on the method of their accounting and the need to form provisions.

In accordance with paragraph 12 of UAS 11 «Liabilities»<sup>7</sup> benefits related to payments to employees are created for the payment of leave to employees, additional pension provision.

IAS 37 «Provisions, Contingent Liabilities and Contingent Assets»<sup>8</sup> contains only the requirements for the formation of collateral, which are listed in International Accounting Standard 19 “Employee Benefits” (provision for overdue benefits, supplementary pension provision).

There is no clear answer in IAS regarding the timing of provisions creation. Estimation of future transactions, in this case future payments, are always approximate. There may be circumstances in the future which will prevent from making a payment, and should be considered today. The main difficulty in assessing provisions is that professional judgment is required to identify these events, assess the probability of an outflow of funds and the amount<sup>9</sup>.

The amount recognized as provision should reflect the best estimate of the costs required to settle the existing liability at the end of the reporting period. The best estimate is the amount that the company would reasonably pay to repay the obligation or would transfer it to a third party.

This assessment is determined on the basis of the judgment of the heads of the enterprise, taking into account: previous experience of such operations; conclusions of

---

<sup>7</sup> Ukrainian Accounting Standard 11 "Liabilities": Regulation of 31.01.2000. № 20. URL: <https://zakon.rada.gov.ua/laws/card/z0085-00> (access date 01.04.2020).

<sup>8</sup> International Accounting Standard IAS 37 Provisions, Contingent Liabilities and Contingent Assets: Provisions of 1 January 2012. URL: [https://zakon.rada.gov.ua/laws/card/929\\_051](https://zakon.rada.gov.ua/laws/card/929_051) (access date 01.04.2020).

<sup>9</sup> Zhurakovskaya I.V., Chudovets VV Improving the methodology for accounting for employee benefits. BinesInform. 2017. № 3. pp. 340–345.

independent experts; additional evidence that results from events after the balance sheet date.

The approach used to account labor costs in accordance with international financial reporting standards is based on the task of uniform distribution of financial results by periods and in the middle of them <sup>10</sup>.

The company determines the amount of funds that will be accounted for monthly expenses. During the period of vacation, the amount of vacation payment will be paid from the created reserve. In Ukraine, the provision for vacation payment is created on a monthly basis and its amount is determined as the product of the employee's actual accrued salary and the interest calculated as the ratio of the annual planned amount for vacation payment to the general salary fund. Moreover, not only the amount of vacations expenses is taken into account, but also the amount of accrual to all social funds that fall on this amount (currently, the single social contribution).

The vacation provision is created not only for annual vacation (basic and additional), but also for additional vacations for employees with children. No provision is created for all other types of vacation.

In accounting, the monthly amount of the provision is included in operating expenses depending on the group of employees. Thus, the accrual of the holiday provision is shown by correspondence on the credit of account 471 «Ensuring the payment of holidays» with the debit of those accounts which reflect the salaries of the employees. During the direct accrual of vacation payment, the amount of vacation is accrued from the created reserve.

Regulations do not specify whether to include in the index calculation payroll amount of vacations. Therefore, there

---

<sup>10</sup> Kamenska T.O. Reflection of labor costs in accordance with IFRS. Accounting, analysis and audit: problems of theory, methodology, organization. 2015. № 1. pp. 89–98. URL: [http://nbuv.gov.ua/UJRN/boaa\\_2015\\_1%2814%29\\_\\_14](http://nbuv.gov.ua/UJRN/boaa_2015_1%2814%29__14) (access date 01.04.2020).

is a variant according to which the amount for vacation in payroll indicator does not take into account, but then actually measure the amount of gross wages for the reporting month should be determined without cost of vacation.

Determine the difference between the estimated amount of the provision at the end of the year and the balance credited 471 «Provision for vacation payments» on the basis of the inventory provision vacation. In case of a positive value of the specified difference, the provision must be added, in case of a negative value, the amount of the provision must be reduced.

The procedure for calculating the provision for the vacation payments in the accounting policy does not need to be specified, as these are mandatory rules. The document about accounting policy should specify, what is the procedure for creating provision payment of vacation and provide mandatory annual inventory of provisions, including the payment of vacation at the end of the year.

The balance of the provision is reviewed at each balance sheet date and, if necessary, adjusted (paragraph 18 of UAS 11). At the same time, the amount of the provisions for vacation is adjusted only once a year in accordance with paragraph 8.2 of Sec. III Regulation № 879 «Regulations on inventory of assets and liabilities»<sup>11</sup>.

If the planned amount of salary and vacation changes during the year, the provision for the following months is calculated based on the new planned amounts. But the previously accrued amount of the reserve is not adjusted.

In the process of annual inventory of provisions, the balance of provision for the payment of vacation as of the end of the reporting year is determined by the calculation based on the number of days of unused annual vacation and average

---

<sup>11</sup> Regulations on inventory of assets and liabilities "": Regulations dated 02.09.2014. № 879. URL: <https://zakon.rada.gov.ua/laws/show/z1365-14#Text> (access date 01.04.2020).

daily wages (paragraph 8.2 of Section III of Regulation № 879).

The amount of the formed provisions should be as close as possible to the amount of actual labor costs. And at the end of the year the provision is adjusted to the actual data of the current year. Discrepancies between the amounts of funds paid for leave should be written off from the provision and at the time of accrual at the end of the year, as a rule, arise only due to unused vacation days.

Post-employment payments are payments to employees (other than redundancies and short-term employee benefits) that are payable after the end of employment.

We shall note that in UAS 26 there is no clear definition of the components of post-employment benefits and other long-term benefits. We consider it appropriate to use the definition of these categories in IAS 19 «Employee Benefits».

The recognition of retirement benefit obligations and one-time retirement benefits is governed by IAS 19 Employee Benefits. Such future benefits are included in long-term payments to employees (paragraph 5). Retirement benefits are end-of-life benefits and retirement benefits are other long-term benefits.

In Ukraine, certain categories of employees in accordance with the requirements of the Resolution of the Cabinet of Ministers № 461<sup>12</sup> depending on working conditions, based on the results of certification of jobs may be granted pensions at the expense of enterprises. If the company has jobs with particularly harmful or difficult working conditions, which are included in the list of harmful works, the company in the future will incur costs for the payment and delivery of preferential pensions to employees involved in such

---

<sup>12</sup> On approval of lists of industries, jobs, professions, positions and indicators, employment in which entitles to an old-age pension on preferential terms: Resolution of the Cabinet of Ministers of 24.06.2016. № 461. URL: <https://zakon.rada.gov.ua/laws/show/461-2016-%D0%BF#Text> (access date 01.04.2020).

types of work. Payments will have to be made from the moment the employee issues a preferential pension until the employee reaches the standard retirement age.

This provision must be created considering the benefits for each employee. According to the forecast unit method, each period of operation is considered as a basis for obtaining the right to an additional unit of payment. That is, the provision is recognized only in the part «earned» by the employee. In addition, considering the long-term nature of such obligation in accordance with the requirements of paragraphs 4 and 16 of UAS 11 «Obligation», its amount is determined taking into account the discount. A separate sub-account 472 «Supplementary pension provision» is provided for accounting of this type of provision.

In accordance with the requirements of paragraph 44.1 of the Tax Code of Ukraine, all costs in accounting must be confirmed by the relevant primary documents. Because determining the present value of liabilities requires complex calculations, the amount of expenses can be confirmed the actuary's report, accounting statement with the relevant calculations, and so on.

It is also advisable to create a provision for the payment of bonuses and material incentives for employees based on the results. And although in paragraph 13 UAS 11 «Liabilities» provision for material incentives is not allocated separately, the composition of the obligations under which the provision is to be created is not limited. Thus, there are grounds for accrual of other types of reserves and provisions. The creation of support for material incentives at the end of the year and its evaluation (calculation) depends largely on the terms of the collective or employment agreement.

In the process of performing labor functions, employees earn on a monthly basis certain bonuses (incentive payments,



rewards, bonuses) based on their annual results. Accordingly, company acquires an obligation to pay employees in the future.

At the end of the year, such provision will turn into a source for payment annual bonuses and a single social contribution that the employer forms in the current reporting period for his future use. Sub-account 477 «Provision of material incentives» is provided for accounting of provisions.

With regard to reserves (provision) for future expenses, the income taxpayer must take into account the differences specified in paragraph 139.1 of the Tax Code of Ukraine<sup>13</sup>.

Tax differences in accordance with paragraph 139.1 of the TCU do not apply to the provision (reserve) of expenses for the payment of vacation to employees, other payments related to wages, and the cost of paying a single social contribution, which is accrued on such payments. However, the Tax Code of Ukraine does not contain a list of payments related to wages, costs for the formation of provisions (reserves), which do not require adjustment of the pre-tax financial result determined by the accounting rules.

Therefore, in accordance with the requirements of IAS 37 «Provisions, Contingent Liabilities and Contingent Assets», the creation of provisions for future costs is mandatory for all entities that apply IFRS. In its accounting policy, the company must establish a list of types of provisions created by it and determine the order of their evaluation.

In the UAS system, the main document governing the accounting for employee benefits is UAS 11 «Liabilities» and in the IFRS system, IAS 37 «Provisions, Contingent Liabilities and Contingent Assets». Also, the rules for the recognition of benefits may contain some profile standards: UAS 26 «Payments to employees».

---

<sup>13</sup> Tax Code of Ukraine: Code, Law of 02.12.2010 № 2755-VI. URL: <https://zakon.rada.gov.ua/laws/show/2755-17> (access date: 10.02.2020).

For certain types of provisions IAS 37 provides several options for evaluation by other companies establishing their own.

To ensure recognition of the need, one should be able to reliably estimate the number of future outflows of resources on the obligation. On the one hand, definition of provisions indicates the uncertainty of the amount of a liability, and on the other hand, in accordance with the requirements of IAS 37, it is necessary to recognize provisions only if it is possible to measure them reliably. Therefore, to recognize provisions reliably, an enterprise needs to clearly define which expenses are required to meet an existing obligation.

The reliability and validity of the accrual of provisions increases the degree of reliability of financial statements and the accrual and payment of income tax.

If payments for previous years are accrued without the creation of provisions (i.e. at the expense of the current period), there will be a distortion of the financial result and the amount of income tax in the direction of overstatement. This can mislead investors, owners, creditors and other users of financial statements, reducing the amount of working capital through early payment of income tax.

Unjustified overstatement of provisions will negatively affect the decisions of management based on enterprise results and underestimate the result before tax, which from a fiscal point of view can be regarded as tax evasion. Thus, a clear method of accounting of provisions is a mechanism to improve the quality of financial reporting and reduce tax risks.

### **3.6. ACCOUNTING POLICY: THE BASIS OF ENTERPRISE STRATEGIC PLANS**

A considerable amount of research has been carried out on the assessment, purpose and necessity of accounting policies at the enterprise. Particular attention is paid to the structure and main stages of accounting policy making. This issue was considered by such scientists as: Prykhodko I.P., Smirnova I.V., Bukalo N.A., Kulyk V.A., Pushkar M.S. etc. However, according to the constant changes taking place in the accounting, financial and economic activities of the enterprise, many issues remain unresolved and need further investigation.

The management unit of the company often reduces the accounting policy only to a document which describes in narrow form the features of accounting in accordance with regulatory legal acts on the methodology of accounting. It is considered in terms of the impact on the preparation of financial statements and the reduction of errors in accounting. However, accounting policy is not considered as an auxiliary resource in the analysis of the non-financial, but the effective side and in reducing the risks in the enterprise. Non-financial accounting in Ukraine is a fairly new subject of study, which is why most businesses do not pay enough attention to its value.

The methodological guidelines for accounting policies of the company No. 635 in the second section of "Forming accounting policies" specify only the main methodological aspects of accounting policies in accordance with the objects of accounting, which determine the list, composition, cost indicators, methodology and their writing.<sup>1</sup>

Accounting policy is a very important and relevant governing document. According to the Law of Ukraine "On

---

<sup>1</sup> Про затвердження Методичних рекомендацій щодо облікової політики підприємства: наказ Міністерства фінансів України № 635 від 27 черв. 2013 р. URL: <https://ips.ligazakon.net/document/mf13052?an=1> (дата звернення: 26.02.2020)

Accounting and Financial Reporting in Ukraine" in Article 8, paragraph 2, "the issue of organization of accounting at the enterprise falls within the competence of its owner (s) or authorized body (official) in accordance with the legislation and constituent documents." And in clause 5 of this article, "the enterprise independently determines in agreement with the owner (owners) or its authorized body (official) in accordance with the constituent documents the accounting policy of the enterprise." That is, in this document, it is possible to invest great opportunities in the vision of its activity, both for the current period and for the future, taking into account all possible consequences for the enterprise.

Generally, in the legislation of Ukraine, accounting policy is defined as the set of principles, methods and procedures used by the enterprise for accounting, preparation and presentation of financial statements.<sup>2</sup> This definition can be supplemented and expanded in accordance with current market requirements and individual needs of the enterprise. Therefore, according to the author, accounting policy is a set of principles, methods and procedures used by enterprises for efficient and effective accounting and financial and economic activities of the enterprise, preparation and submission of financial and non-financial statements, taking into account the risks of accounting and activity of the enterprise as a whole.

The main problem in compiling a decree (regulation or order) about accounting policies is not a sufficiently high level of preparation of a certain circle of persons for its formation (drafting), filling with extensive, meaningful and clear information and involvement of a narrow circle of specialists. In our opinion, the best steps in accounting policy formation

---

<sup>2</sup> Про бухгалтерський облік та фінансову звітність в Україні: Закон України № 996-XIV від 16.07.1999 р. URL: <https://zakon.rada.gov.ua/laws/show/996-14> (дата звернення: 27.02.2020)

were disclosed by Polyvana L.,<sup>3</sup> which expanded them and systematized them in more detail on the basis of N. Bondarchuk's scientific development.<sup>4</sup> (table 1).

Table 1

## Stages of accounting policy formation

Stages	Position of Polyvana L.	Author's position
Organizational stage	Decision making by the owner about the formation of accounting policies, determining the number of responsible persons who develop accounting policies	Purpose of accounting policy goals and objectives, responsibility for accounting policies preparation and monitoring of methodological processes specified in accounting policy document
Preparatory stage	Studying the constituent documents, the organizational structure of the enterprise, determining the subject of accounting policy (accounting objects, for which there are alternative accounting options)	Identification of all accounting policies that have value for managing an enterprise
Formation of methods and procedures	Establishment of methods and procedures of strategic analysis that will be used in the formation of accounting policies of the company (the most likely method - the method of expert assessments)	Application of comparison methods (effectiveness of application of methods and accounting with previous years), estimations, observations

<sup>3</sup> Поливана Л. Організація обліково політиком підприємства. *Науково-практичний журнал «Бухгалтерський облік і аудит»*. № 5. 2015. С. 45 – 53. URL: [file:///C:/Users/D4B8~1/AppData/Local/Temp/boau\\_2015\\_5\\_8.pdf](file:///C:/Users/D4B8~1/AppData/Local/Temp/boau_2015_5_8.pdf) (дата звернення: 28.02.2020)

<sup>4</sup> Бондарчук Н. Теоретичні засади формування облікової політики на сільськогосподарських підприємствах. *Збірник наукових праць «Університетські наукові записки»*. № 4 (40). Хмельницький: ХУУП, 2011. С. 43 – 48. URL: [file:///C:/Users/D4B8~1/AppData/Local/Temp/Unzap\\_2011\\_4\\_67.pdf](file:///C:/Users/D4B8~1/AppData/Local/Temp/Unzap_2011_4_67.pdf) (дата звернення: 28.02.2020)

Continuation of the Table 1

Information support	Acquaintance and analysis of the general legislative framework on accounting and preparation of financial statements, research of specialized regulations on the organization of technical and technological support of the activity of the business entity	Creating an information base for updating and constantly monitoring legislative changes, analyzing the impact of such changes on the need to adjust accounting policies
Impact analysis of factors	Grouping of factors of internal and external environment on the process of accounting policy making, determining the degree of significance of each of them by the value of financial statements of the enterprise	Grouping factors of internal and external environment in the process of accounting policy making, determining the degree of significance of each of them by the value of financial performance indicators
The choice of accounting methods	Creative development of techniques, methods and procedures for alternative accounting policies	Apply accounting methods, methods and techniques to national and international accounting standards and develop new ones for the analysis of non-financial reporting items. Analysis of the effectiveness of new methods
Risk analysis	Identify the most significant risks that may arise from implementing a sound accounting policy and how to address them	Risk identification by groups: negative, zero, positive and choice of risk assessment methods
The final stage	Documentation and approval of accounting policies, issuance of accounting policies by the enterprise	Enactment of the Accounting Policies (Regulations, Orders)

Therefore, drafting an accounting policy requires that each participant has competence in his or her area of activity. Participants can be accounting, financial and economic departments, lawyer, controller (auditor), chief zoo technician, chief agronomist and others, because the accountant does not know technological processes, legal details, etc.

If we take as a basis the methodological guidelines for accounting policies of the company № 635, the ordinance document on accounting policies of the enterprise can identify such objects and contain such information. Here are some of them:

- methods of estimating disposal of stocks;
- the frequency of determining the average cost of a unit of inventory;
- the procedure of accounting and distribution of transport and procurement costs, maintaining a separate subaccount of accounting of transport and procurement costs;
- methods of depreciation of fixed assets, other non-current tangible assets, intangible assets, etc.;
- value attributes of items that are part of low value non-current tangible assets;
- approaches to the revaluation of fixed assets, etc.;
- method of calculating the doubtful debt reserve;
- created provisions for liabilities and charges;
- list and composition of variable and fixed overhead costs, bases of their distribution;
- list of items and warehouse calculation of production cost of goods (works, services);
- quantitative criteria and qualitative attributes of information on business transactions, events and items of financial statements;
- criteria for differentiation of operating real estate and investment real estate;

drawing up a separate balance sheet by branches, representative offices, other separate subdivisions of the enterprise;

frequency and objects of inventory;

determination of the unit of analytical accounting of inventories;

a way to make a cash flow statement and more.<sup>5</sup>

In our opinion, accounting policy should take include all changes that occur not only at the legislative level, but also significantly influence the decision-making and enterprise strategy. So, lately, companies have started paying considerable attention to social and environmental issues, both in terms of their operations and globally. Since 2018, large enterprises of Ukraine and some determined by the law are obliged to submit a management report. This report is a document that discloses information of an economic and financial nature, and its greatest value is social and environmental information. Therefore, such important issues should find the last place in the accounting policy document and carry valuable, significant and reliable information to evaluate its financial and non-financial status (Table 2).

Also, when creating accounting policies, companies do not pay attention to various factors that will affect its performance and management decisions over certain periods. One important factor is risk. With the emergence of non-state ownership, with uncertainty of activity, uncertainty in the accuracy of management decisions, risk has become widespread.

---

<sup>5</sup> Про затвердження Методичних рекомендацій щодо облікової політики підприємства: наказ Міністерства фінансів України № 635 від 27 черв. 2013 р. URL: <https://ips.ligazakon.net/document/mf13052?an=1> (дата звернення: 18.03.2020)



Table 2

**Recommended additional articles on accounting policies  
in accordance with market requirements**

Accounting Policy Articles	Questions for disclosure
Social accounting	Planning for the provision of human resources; the stages and conditions for improving the skills of employees; percentage of staff turnover; labor protection conditions; motivational mechanisms of human capital retention at the enterprise
Environmental accounting	List of emissions generated by the enterprise; references to the retention rates in accordance with the Tax Code of Ukraine; environmental support and cooperation with relevant companies, their list; a list of environmental measures
Strategic accounting	Description of the stages of the adopted strategy at the enterprise for a certain period; determination of strategic accounting expenses; a list of ways of receipt and processing of information; defining a balanced scorecard

The concept of "risk" is devoted to a lot of scientific works, but little about the risk of accounting policy. Marushko N. S. considers the risk of accounting policy or the risk of objective assessment, where it states the necessity of choosing such accounting policy so that the financial statements meet all requirements of each applicable The national provision (standard) of accounting and IFRS and the effectiveness of the entity's choice of accounting policy elements.<sup>6</sup>

Therefore, in order to partially hedge against unforeseen events, an enterprise needs to distinguish the risks that arise in accounting and valuation of the assets and liabilities of the enterprise. If we consider all economic activity, the basis of

---

<sup>6</sup> Марушко Н.С. ризики облікової інформації в системі забезпечення економічної безпеки підприємства. *Науковий вісник Львівського державного університету внутрішніх справ*. № 1. 2014. С. 224 – 234.

economic transactions are the objects of accounting, which are fixed assets, inventories, cash, investments, accounts receivable, biological assets, equity and payables.

Therefore, the main risks can be identified:

internal: lack of marketing and logistical service, low level of internal and external information support, inefficiency of working hours of employees, incompetence in solving important economic, technical and financial issues, risk of loss of controllability, risk of reduction of scientific and innovative potential;

external: political, inflation, currency, credit, natural risks, etc.

Both external and internal risks are of great importance, but the lack of a clear organization of workflow in the enterprise and the ability to make management decisions in emergencies, brings the most losses for the enterprise.

The risks that arise in accounting and accounting policies and their impact on the end result of financial and economic activities of the enterprise are considered in table. 3.

Table 3

Risks arising from accounting and accounting policies

Objects of accounting	Risks arising from accounting and accounting policies
Fixed assets	inaccuracies in determining the estimate (initial cost) of property, plant and equipment; ineffectiveness of the choice of the method of depreciation to the corresponding groups of fixed assets (occurrence of tax differences, inefficiency of replenishment of overlapping, inaccuracy of determining the cost of production); investment (capital investment) in the creation of new fixed assets (renewal and expansion of fixed assets; availability of resource base; creation of sources of investment); write-off of fixed assets; the accuracy of the fixed assets or non-current tangible assets; reflection and revaluation of property, plant and equipment with impact on profit and equity

Continuation of the Table 3

Stocks	conditions of supply of inventories (quality, timely delivery, price, terms of payment, continuity of production, management of material flows); storage conditions (economy); calculation (providing the company with the required number of stocks); production conditions; assortment; markets (consumer analysis)
Cash	lack of clear information on channels of receipt and spending of funds; delay in conducting operations related to cash flow; lack of control over the balance of current account and cash transactions
Receivables	late payment of receivables from debtors; breach of contract; choice of consumers, buyers, markets; reflection on accounting accounts; lack of reserve of doubtful debts; an increase in the percentage of doubtful and bad debts
Financial investments	choice of the enterprise as an object of investment; liquidity risk, inflation and currency risks; the level of business activity in the financial markets
Biological assets	inaccuracy in determining the estimate (initial or fair value) of biological assets, in the valuation of additional biological assets, in the initial recognition of agricultural products, and in determining the financial result from the initial recognition of agricultural products and additional biological assets
Equity	lack of reserve capital; withdrawal of shares; receiving damages; loss of retained earnings
Payables	non-compliance with terms of payment by the enterprise; loss of the authorized capital amount; incorrect conditions of recognition and assessment of obligations; unforeseen obligations; creation and use of procuring

Consequently, accounting policy is a very flexible document in which you can specify all the necessary information about the enterprise in order to insure yourself against unforeseen events and minimize the number of risky transactions.

It would also be appropriate to indicate in the accounting policy document:

payment methods (cash receipts) from debtors;

method of determining the coefficient of doubt not due to the need, as indicated in the methodological recommendations, but compulsory;

a list of procuring, their purpose and stages of use;

identifying problematic social and environmental issues;

a list of all management reports that are created at the enterprise to systematize basic production and financial information;

a list of the main risks inherent in the enterprise and the definition of risk groups according to the objects of accounting: minimum risk group, low risk group, medium risk group and high risk group;

a description of the various approaches, processes, measures that will allow to a certain extent to predict the possibility of occurrence of risky events and reduce the degree of risk to acceptable limits in management activities.

Also, it should be noted that a significant disadvantage of enterprises is that little attention is paid to the structure of accounting policies. At the basis of its preparation are organizational and methodological approaches.

The organizational stage involves:

description of activities;

organizational structure of management and the estimated number of structural units;

volume of activity;

presence of separate units, subsidiaries;

peculiarities of taxation of activity;

qualification level of personnel;

systems and forms of payment with buyers and suppliers;

owner reporting system;

state of the law.<sup>7</sup>

---

<sup>7</sup> Облікова політика підприємства. Журнал «Вісник. Офіційно про податки». № 48 (952). 2017. URL: <http://www.visnuk.com.ua/uk/publication/100006669-oblikova-politika-pidpriyemstva-1> (дата звернення: 23.03.2020)

The methodological stage examines the selected elements of accounting for individual objects in order to organize them.

Therefore, in our opinion, we can add some steps:

analytical stage, where it is necessary to indicate methodical techniques of analysis of financial and economic activity of the enterprise;

strategic stage that would consider the strategic plans of the responsibility centers, changes in the activity of the enterprise.

Therefore, we can conclude that an accounting policy order (regulation) is a document that performs many functions, such as:

1) application of basic rules, methods, techniques and procedures of accounting at the enterprise;

2) the influence of the management of the enterprise on the formation of the necessary information for making management decisions;

3) provision of supervisory authorities with reliable information on accounting at the enterprise in accordance with the requirements of the law;

4) providing internal and external users with information on reliability, investment attractiveness, enterprise strategy and risk reduction procedures;

5) analysis of the implementation of the operational and strategic plans of the enterprise, taking into account adjustments for significant changes in the activity of the enterprise;

6) performs the function of a legal document.

Therefore, accounting policy is a starting document, which is made before the beginning of financial and economic activity in the enterprise or serves as an improvement of methodical technique of conducting, assessing, controlling and analyzing the state of accounting at the enterprise and the results of its activity

## INFORMATION ABOUT THE AUTHORS

**Gudz O.E.**, Doctor of Science, Economics, Professor, State University of Telecommunications, Ukraine (*subdivision 1.1*)

**Prokopenko N.S.**, Doctor of Science, Economics, Professor, European University, Ukraine (*subdivision 1.1*)

**Titenko Z.M.**, Ph.D., National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 1.2*)

**Oliinyk A.S.**, Ph.D., Poltava State Agrarian Academy, Ukraine (*subdivision 1.3*)

**Oliinyk Ye.O.**, Ph.D., Poltava State Agrarian Academy, Ukraine (*subdivision 1.3*)

**Stepasyuk L.M.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 1.4*)

**Nehoda Y.V.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 1.5*)

**Oliinyk L.A.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 1.5*)

**Lemishko O.O.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 2.1*)

**Shevchenko N. Yu.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 2.1*)

**Skrypnyk H.O.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 2.2, 2.5*)

**Buriak A.V.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 2.3*)

**Demianenko I.V.**, Ph.D., Associate Professor, National University of Food Technologies, Ukraine (*subdivision 2.3*)

**Trusova N.V.**, Doctor of Science, Economics, Professor, Dmytro Motornyi Tavria State Agrotechnological University, Ukraine (*subdivision 2.4*)

**Davydenko N.M.**, Doctor of Science, Economics, Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 2.6, 2.7*)

**Gutsalenko L.V.**, Doctor of Science, Economics, Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 3.1*)

**Fabiianska V.Yu.**, Ph.D., Associate Professor, Vinnytsia National Agrarian University, Ukraine (*subdivision 3.1*)

**Derevianko S.I.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 3.2*)

**Kaliuha Ye.V.**, Doctor of Science, Economics, Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 3.3*)

**Umerova H.**, postgraduate student, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 3.3*)

**Kuzyk N.P.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 3.4*)

**Mykytsei T.D.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 3.4*)

**Shevchuk K.V.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 3.5*)

**Hurenko T.O.**, Ph.D., Associate Professor, National University of Life and Environmental Sciences of Ukraine, Ukraine (*subdivision 3.6*)

**Verlag SWG imex GmbH**

**Financial support for the functioning of the agricultural  
sector in modern conditions**

**Collective monograph**

Copyright © 2020 by the authors  
All rights reserved.

**WARNING**

Without limitation, no part of this publication may be reproduced, stored, or introduced in any manner into any system either by mechanical, electronic, handwritten, or other means, without the prior permission of the authors  
Edited by the authors.

**ISBN 978-3-9819288-6-0**