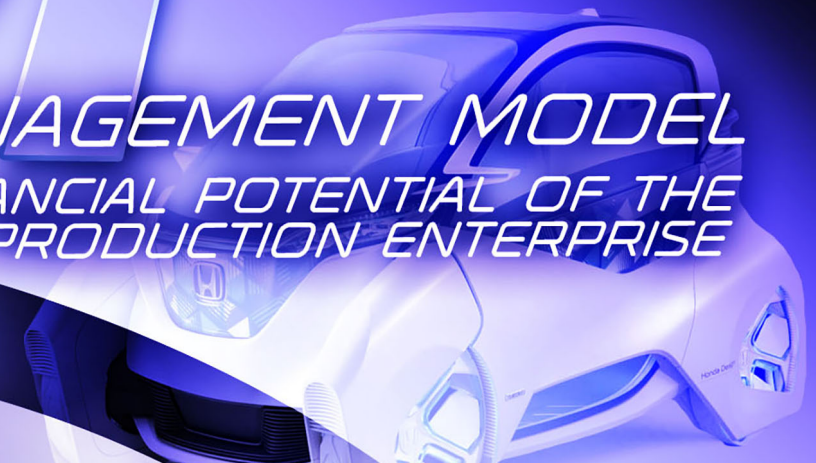
Монографія

# MANAGEMENT MODEL OF FINANCIAL POTENTIAL OF THE PRODUCTION ENTERPRISE



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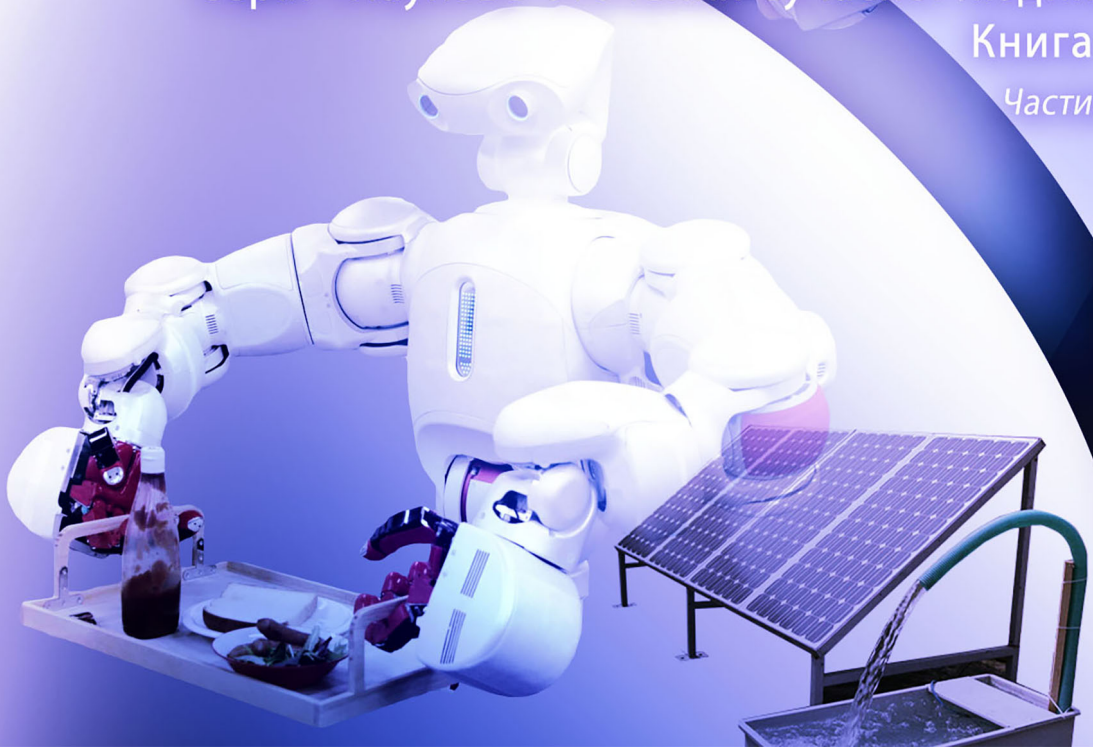

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# MANAGEMENT MODEL OF FINANCIAL POTENTIAL OF THE PRODUCTION ENTERPRISE

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Монографія містить наукові дослідження авторів. Може бути корисна для керівників, інженерів, юристів, економістів та інших працівників підприємств і організацій, а також викладачів, здобувачів, аспірантів, магістрантів і студентів вищих навчальних закладів.

The monograph contains scientific studies of authors. It may be useful for managers, engineers, lawyers, economists and others employees of enterprises and organizations, as well as teachers, applicants, graduate students, undergraduates and students of higher educational institutions.

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# Content

# CHAPTER I.
# HISTORICAL GENESIS AND THE SCIENTIFIC PROBLEM OF THE "FINANCIAL POTENTIAL OF PRODUCTION ENTERPRISE" CATEGORY

**Introduction.**

The financial situation of domestic production enterprises in the new economic conditions is rather problematic. This is due to low liquidity, financial stability, business activity, and inability to generate sufficient income. The situation is complicated by the influence of the changing market environment, increasing the cost of resources, and increasing competition. These difficulties make it possible to conclude that the current methods, principles, and management approaches, especially in the finance field unable to achieve sustainable development and financial growth, thus creating a need for their reorientation.

Therefore, it seems expedient to focus attention on tendencies and regularities of functioning of modern financial management. Namely, management is characterized by:

- introduction into the practice of management of system approach based on research of management objects due to the application of "potential theory" and formation of such concept as "financial potential of the enterprise";

- development in this area of a qualitatively new model of management formed by the multiple existing concepts of financial management and approaches to their realization.

The study of the economic category "Financial potential of the production enterprise" (or - FPPE) should begin with studying its historical genesis and scientific problems as the basis: understanding the essence of the concept; determination of the prerequisites for the appearance, and development of the voucher; substantiation of the correctness of the interpretation of the concept. Such needs are conditioned there that although the evolution of the organization and principles of financial management led to the emergence in 1990 of a new economic category of the financial potential received further development in a significant number of scientific works (O. Mizin, P. Fomin, M. Starovoytova, D. Androshchuk, W. Agaitsov, A. Mordvintsev, P. Fomin,

L. Shakhovskaya, N. Atkina) until now their theoretical inaccuracy and contradictory character in the interpretation of the essence of the financial potential are available. Thus, the issues concerning the financial potential of the production enterprise require further study. The need to highlight modern scientific issues makes it necessary to analyze such economic terms as "potential", "economic potential", and "potential of the enterprise" basis of the concept of FPPE.

## 1.1. Inaccuracy and contradictory character "financial potential of the production enterprise" essence interpreting

Despite a large number of scientific sources, the content analysis reveals their theoretical inaccuracy and contradictory character in the financial potential essence interpretation. The above situation fully reveals itself in the systematization of the current background of the essence of the financial potential of the production enterprise (Table 1).

**Table 1**
**Systematization interpretation of the financial potential of the production enterprises**

| The author of the definition | Contents of the author's definition | Summary of contents |
|---|---|---|
| Kuntsevich V. [1, p. 123-130], Krasnokutskaya N. [2, p. 11] | Ability to optimize the financial system to attract and allocate financial resources.<br>The ability of the financial service to provide the main links of the chain "sales-production-procurement" with financial resources on the principle of the most effective distribution of them | Approach 1. The financial system's capacity to allocate financial resources effectively |
| Jevodkimov F., Misina O. [3, p. 52] | Relations arising at the enterprise concerning the achievement of the most important financial result on the condition:<br>- the availability of own capital sufficient for the fulfillment of liquidity conditions, and financial stability;<br>- opportunities to attract capital in the amount necessary for the realization of effective investment projects;<br>- profitability of own capital;<br>- an effective system of financial management that ensures transparency of a current and future financial situation | |
| Fomin P., Starovoytova M. [4] | Potential financial indicators of production (profitability, liquidity, solvency), potential investment opportunities | Approach 2. Potential financial indicators and investment opportunities |
| Bandurin A., Larytskyy V. [5. p. 61-62] | Investment attractiveness and creditworthiness | |

| The author of the definition | Contents of the author's definition | Summary of contents |
|---|---|---|
| Zimin N., Solopova V. [6, p. 305- 322], | Financial condition of the enterprise | Approach 3. Financial condition of the enterprise |
| Britchenko I. [7 p. 3 – 36], | The volume of the company's own, loan and attracted financial resources, which it can manage for the realization of current and prospective expenses | Approach 4. Volume of financial resources |
| Temnov D. [8] | Dynamic component, since the aggregate of determining factors and their values changes as a result of enterprise adaptation and changing environment of its potential | Approach 5. The system that implements the adaptation of the enterprise to the changing environment |

The study logic (Table 1) shows five approaches existence to the essence of financial potential. The existence of ambiguous interpretation of essence defines modern scientific problem on this issue (Figure 1).

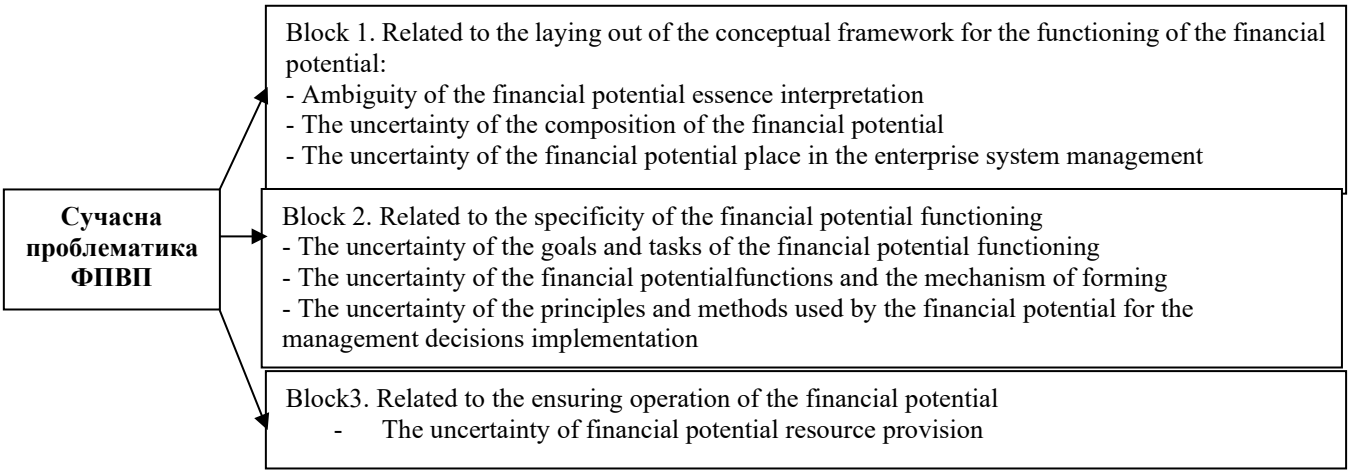


**Figure 1. Modern problems of the financial potential of the production enterprise**

Source: Developed based on [2; 7; 8]

The issues concerning the financial potential of the production enterprise require further study. The need to highlight modern scientific issues makes it necessary to analyze such economic terms as "potential", "economic potential", "potential of the enterprise", which are the basis of the financial potential concept.

According to the definition of the Great Economic Dictionary "potential" as an economic category – are available opportunities, resources, reserves, means that can

be used to achieve or implement any [9]. Thus, the potential is not only the capabilities of the enterprise, resources, reserves, but also the means used to achieve a certain goal.

In the scientific literature, there are different approaches to the definition of the concept of "economic potential". In particular, V. Kovalyov interprets economic potential as an enterprise's ability to achieve its goal by using material, labor, and financial resources [10, p. 273].

At the same time, a formal description of economic potential is based on accounting reports certain models of the enterprise represent. "Given the fact that the enterprise is considered as an open economic system, from a purulent point of view the category of the economic potential of the enterprise can be considered as a closely related category of the potential of the enterprise" [11, p. 126]. The most common interpretation of the essence of the potential of the enterprise is presented as:

a combination of market opportunities (ability to provide a stable market position, ability to use the opportunities of the external environment), competence (abilities, skills, experience), internal resources (information, technological, personnel, organizational, financial) [12, p. 127];

a combination of natural conditions and resources, opportunities, reserves, and values that can be used to achieve certain goals [2, p. 7];

resource potential of the production system (these are resources: technical, technological, organizational structures, marketing, personnel, financial, research and development and information, organizational culture, indicators of general space) and production capacity, competitiveness in the domestic and external market, innovative opportunities, ability to adapt and self-organization and several other characteristics of external and internal environments [13, p. 7].

These interpretations are based on enterprise resources, on the one hand, and the goals and means defined by the enterprise used for their achievement, on the other.

Specification category "potential of the enterprise" is possible in the course of the etymological analysis of its basic category "potential". Thus, analysis of the basic provisions of the theory of potential K. Gausa, whose application since the beginning of the 20th century has led to the formation of the category "potential", its further

expansion in physics, mathematics, chemistry, and the formation of qualitatively new terms (magnetic potential, electrical potential, chemical potential, physical potential, mathematical potential), allows allocating certain characteristics of the investigated category (Table 2).

**Table 2**

**The analysis of the main failures of the potential theory**

| Value | Scientific definition | Potential characteristics |
|---|---|---|
| Magnetic potential | The value that characterizes the magnetic field | Characterizes certain system properties |
| Electrical potential | The calar value that characterizes energy field | May be measured in some way |
| Chemical potential | Thermodynamic function that characterizes the state of a certain component in a certain composition and certain external conditions | It is a dynamic value depends on certain external conditions<br>Can be a component of a higher-level system |
| Physical potential | A wide range of power fields in this point | It is a multi-linked element that constitutes an integral entity |
| Mathematical potential | A combination of elements that, when combined into a system, get potential energy (force) | Is a dynamic system aimed at achieving a certain force. Under the force we understand certain possibilities of the system |

Source: developed based on [2; 10-13].

Thus, the potential of the enterprise can be considered as a complex combination of interconnected elements uniting into a system, to receive opportunities. The following components are present in the structure of the potential of the enterprise: 1) resources (technological, personnel, information, organizational, financial); 2) competencies (experience, abilities, skills), target component; 3) means used to achieve goals; 4) opportunities for targeted development.

Application of the conclusions made by us concerning the production enterprises provides an opportunity to link the economic category "potential of the enterprise" with the category " management system of the production enterprise" and to consider them as a combination of interrelated elements, oriented on achievement of the goals of the enterprise in the conditions of the changing external environment ensure its purposeful functioning, giving it flexibility, stability, and adaptability [14, p. 66-72].

## 1.2. Structural model of the financial potential of the production enterprise

The enterprise potential includes opportunities for purposeful development, which is not a structural part of the system of management of the production enterprise [14, p. 66-72]. The given conclusions allow us to state that the concept "potential of the production enterprise" is wider than the "system of management of the production enterprise" on the component "possibility of the enterprise to purposeful development".

The defined etymology of "potential" provides an opportunity for structural analysis of its components, which is a necessary condition for the solution of the modern problem of FPPE.

Research of scientific works [8; 14, p. 66-72; 15] demonstrates the necessity to consider the potential of the production enterprise depending on two characteristics:

- functional sub-systems of management: financial potential; production potential; marketing potential; personnel potential;
- innovative potential; management structures: target subsystem; sub-system of provision; management subsystem; functional sub-system;
- sub-system of scientific substantiation; opportunities of the enterprise for purposeful development; external environment.

The structural scheme of the potential allows to cover all aspects of production and economic activity of the production enterprise [8; 14, p. 66-72; 15] (Figure 2).

As we see from Figure 2 by the system approach, the potential of the production enterprise consists of the external environment, internal structure and enterprise capabilities to purposeful development.

The potential of the enterprise to target development should be identified as a separate unit determined by the state of the internal structure and external environment of the potential of the production enterprise.

Designing the external environment of the potential of the production enterprise is expedient to carry out in a cut of three blocks [16, p. 130]: "input of potential", i.e. external revenues receive the potential of the production enterprise to ensure its functioning (loans, investments, personnel, raw materials, materials, latest

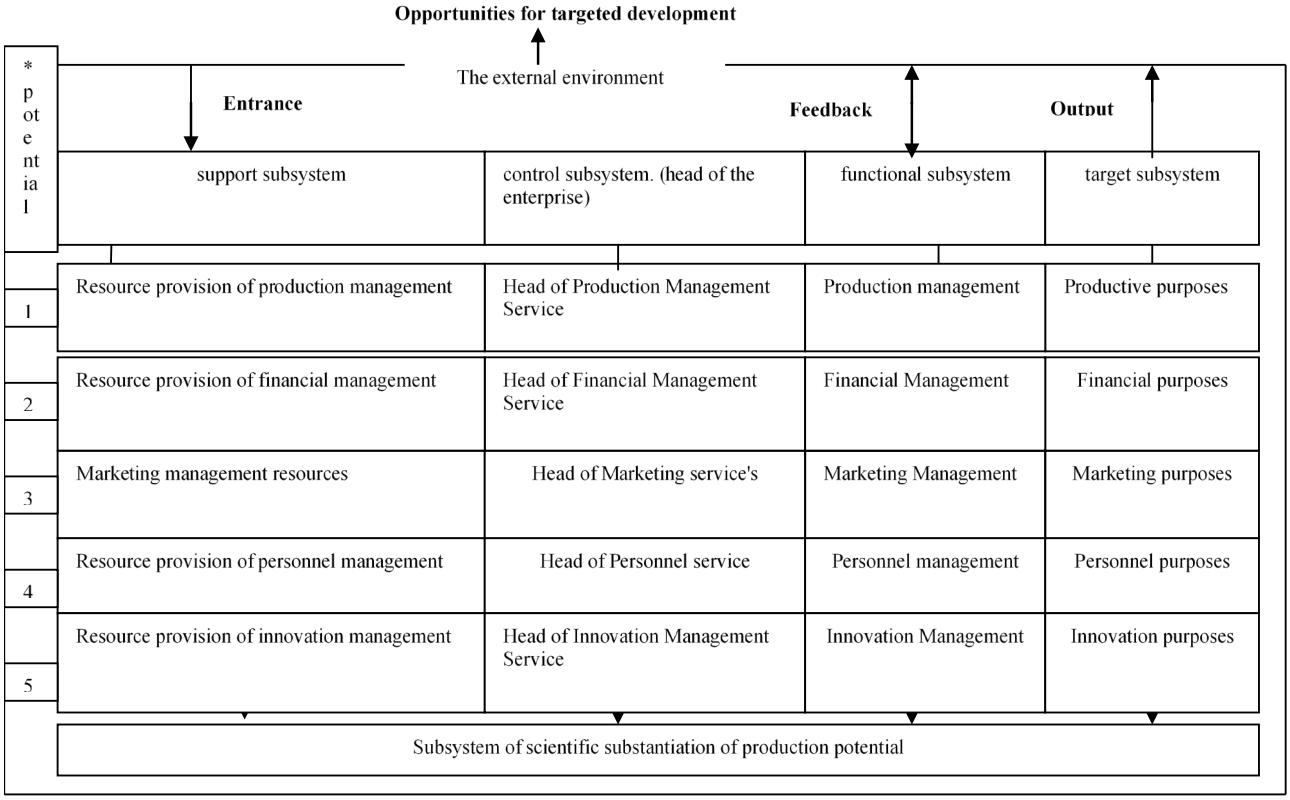


**Figure 2. Structural model of the potential of the production enterprise**

Note:
* (1) production potential; (2) financial potential; (3) marketing potential; (4) human resources potential; (5) innovation potential.
Source: developed based on [8; 14, p. 66-72; 15-16]

technologies, documents); "output of potential" or developed and operating strategy of the production enterprise; "feedback" or a combination of "input" and "output" of potential and is used to control the change of output.

The process of designing the internal structure of the production enterprise potential is expedient to carry out from five sub-systems:

- support sub-systems [15, p. 139-189], depending on the type of potential, may contain: information about the internal and external environment and its flows; production capacities and their peculiarities, equipment, materials, employees (qualification, demography, their ability to adapt to changes in the goals of the enterprise, their aspiration to knowledge and improvement), intellectual capital, personnel flows; structural subdivisions providing passage of the managing influence and organizational flows; own and loan capital and its flows; management technologies and technological means providing movement of resources and being carriers of

information about them; resource movement channels and links between them;

- target sub-system - enterprise goals system on functional sub-systems (marketing, production management, financial management, etc.);

- the managing sub-system is the direct manager who, as a management entity, should organize the functioning of the management system, ensure the development and implementation of management decisions;

- functional sub-system, which is functional management, with the allocation of certain types of management work, which should include [16]: 1) financial management (system of principles, methods, means and forms of monetary relations organization); 2) production management (system of principles, methods, means and forms of production management aimed at increasing its efficiency and profitability); 3) marketing management (system of principles, methods, means and forms of establishment, strengthening and maintenance of mutually beneficial exchanges with target markets for profit, increase of sales volumes, increase of market share etc.); 4) personnel management (complex, purposeful influence on teams and individual employees, provision of optimal conditions for creative, initiative work for achievement of goals of the organization); 5) information management (management tasks complex at all stages of the life cycle of the enterprise, covering all actions and operations connected with information in all its forms and states, and with the enterprise as a whole on the basis of this information);

- sub-systems of scientific substantiation. The system of management of the enterprise as a social and economic system requires substantiation of laws, laws, principles, functions, and methods of management [17, p. 160; 15-16]. Substantiation of functions and methods of management duplicate elements of other sub-systems of the potential of the production enterprise. Therefore it is expedient to consider the sub-system of substantiation of the system of enterprise management (and thus the potential of the enterprise as a category contains this concept) by-laws, laws, and principles of management.

Results of analysis of theoretical research [2; 3; 4; 8; 18] allow to allocate of approximate component composition of the potential of production enterprise: 1)

production potential; 2) financial potential; 3) marketing potential; 4) personnel potential; 5) innovative potential.

## 1.3. The potential place in the system of production enterprise management. The financial potential of the production enterprise understanding approach.

The lower level sub-system always equal to the system as a whole. Thus, the construction of the structural model of the production enterprise potential allows to determine the place of each of its sub-systems in the system of the production enterprise management, in the scope of special spheres of activity (Table 3):

**Table 3**

**The place of potential in the system of of the production enterprise management**

| Element names | The place of the element in the potential of the production enterprise | Special sphere of activity |
|---|---|---|
| Production potential | Production management system | Production |
| Innovative potential | Innovation management system | Innovation |
| Human resources potential | Personnel management system | Personnel |
| Financial potential | System of financial management of the enterprise | Finance |
| Marketing potential | Marketing management system | Sales of goods |

Source: formed based on [18-19]

The structure of the potential of the production enterprise allows:

- Characteristics of financial potential as a formalized model of the financial management system of a production enterprise, extended by the extent of its capabilities to targeted financial development;

- Analysis of the correctness of modern approaches to the financial potential essence determination.

The achievement of consensus in understanding its complexity is of great importance in the decision of the modern problems of financial potential and is impossible without analysis of the correctness of modern approaches to its definition.

C. Kuntsevich and N. Krasnokutska's [1; 2] financial potential approach problem contains contradictory provisions concerning its contents. The financial potential content cannot be limited only to the efficient allocation and formation of financial

resources. Financial potential can be oriented on other financial goals achievement (maximization of capital value, investment attractiveness, high creditworthiness of the enterprise).

In P. Fomin's financial potential approach problem broader concept, since potential performance and potential investment opportunities are separate characteristics of the financial management system [4].

In the N. Zimin financial potential approach problem is the narrow characteristic of its essence [6]. The study's logic suggests that financial potential is a broader concept since the "financial state of the enterprise" content interpretation allows to present it as a feature of the enterprise's ability to activities finance determined by the active and passive articles of the balance sheet, as well as their ratio.

- The I. Brutchenkob financial potential approach problem is that financial resources are part of its resources but not the guarantor of any goals [7]. Thus, the financial potential structure summarizes the financial management system of the enterprise and the extent of its possibilities for targeted financial development. The financial potential internal structure integrated sub-systems: 1) manager; 2) functional; 3) scientific substantiation; 4) provision; 5) target.
- D. Temnova's financial potential approach problem is that its essence cannot be limited to self-organization functions [8]. The enterprise's adaptation changing environment is one function of the financial potential self-organization functions. Financial potential is an inherent process of self-organization realized through four main functions: 1) adaptation; 2) integration; 3) long-term development; 4) goal achievement.
- Taking into account the above-mentioned, we note the inconsistency of the current financial potential etiology approaches and the need to develop an alternative definition.
- The production enterprise potential as an economic category interpretation gives grounds to talk about it as a formal model of the financial management system extended by the enterprise's capabilities to targeted financial development.
- The given financial potential definition allows us to imagine its structure as a

combination: the enterprise's ability to target development; factors of the external environment; the internal structure elements (namely: 1) sub-system of scientific substantiation; 2) target sub-system; 3) providing sub-system; 4) control sub-system; 5) functional sub-system).

Thus, financial potential realizes financial management as the process of forming and using financial resources for enterprise financing activity the necessary. The provisions set out allow the state:

1. There is a discrepancy between the essence of modern approaches to the financial potential definition as an economic category of its etymological significance.

2. The discrepancy between the essence of the approaches of the financial potential etiology as an economic category forms a broad sector of problematic issues: 1) ambiguity of the interpretation of the financial potential composition; 2) ambiguity of interpretation of financial potential functions; 3) the uncertainty of the financial potential place in the enterprise management system; 4) ambiguity of interpretation of principles and mechanism of financial potential functioning; 3) the uncertainty of the financial potential resource provision.

To solve the financial potential modern problem it is possible to recommend:

1. Consider financial potential as a formal model of the financial management system, expanded by the size of the enterprise’s capacity to target financial development.

2. Allocate the financial potential place and elements in the enterprise management system depending on the statement that it includes the management system of the production enterprise, but cannot be separated from it.

## Conclusions

As the results of the study of the historical genesis of the economic category "Financial potential of the production enterprise" show, there are many interpretations of its essence in the scientific literature, such as: "the financial system's capabilities to effectively distribute financial resources"; "potential financial indicators and investment opportunities"; "financial condition of the enterprise"; "volume of financial resources; "the system that implements the adaptation of the enterprise to the changing environment".

The analysis of these approaches reveals their inconsistency with the etymological meaning of the basic category "potential".

Consideration of the economic category "Financial potential of the production enterprise" in unity with its ethical value allows defining its essence as "a formal model of the system of financial management, extended by the size of the enterprise's capabilities to purposeful financial development".

The financial potential structure is presented as a combination: 1) the enterprise's ability to target financial development; 2) the factors of the external environment; 2) the elements of internal structure (namely: sub-system of scientific substantiation; target sub-system; providing sub-system; control sub-system; functional sub-system). The proposed structure of financial potential forms a qualitatively new synthesized property – the ability to the management paradigm implement.

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# CHAPTER II.
# DESIGN OF THE STRUCTURE OF THE FINANCIAL POTENTIAL OF THE PRODUCTION ENTERPRISE

## Introduction

It is important to note that the formed approach to the essence of the economic category "Financial potential of the production enterprise" defines its structure as a combination of: 1) internal structure (target subsystem; sub-system of provision; functional subsystem; management subsystem; sub-system of scientific substantiation); 2) external environment (factors that influence the forms and results of financial activity and formed in the financial relations process between the enterprise and the counterparties on financial operations; macro factors that influence the forms and results of financial activity of the enterprise in the long term period); 3) the enterprise's ability to target financial development.

The study of the structure of the financial potential of the production enterprise should be aimed at revealing the possibility of the existence of synthesized property – the ability to form a certain managerial paradigm.

## 2.1. Scientific basis of the financial potential of the production enterprise formation

The definition and description of its structure are of great importance in the further research of modern problems financial potential of the production enterprise (or — FPPE). This task requires the search for consensus in the formation of the financial potential of the production enterprise structure through the conceptual design method as the most effective in the investigation of the internal structure of complex systems [1-2].

The possibility of application of the concept design method is objectively conditioned by the presence of all properties of the complex system [1-2], [3]: 1)

unpredictable behavior; elementary; 2) non-linear relations; 3) positive and negative feedback relationships between elements; 4) stability of the state; 5) existence history.

These provisions make it necessary to lay out general principles of conceptual design according to scientific literature can be specified within the such structure (Figure 1).

| | | |
|---|---|---|
| Essence of conceptual design | → | multiaspect, integral description of the system by synthesis of different conceptual schemes with the following connection between the parts of the synthesized whole |
| The result | → | structural project of the system |
| The basic idea | → | designing the system as implementation of theoretical and system classes |
| Conceptual means | → | subsystems (theoretical and system final classes), which are images (idealizations) of the object description |
| A means of knowledge | → | constructive theory of systems |

Methods of system research

| Methods | The essence of the method |
|---|---|
| axiomatization | Allocation of the simplest judgments concerning the FPPE structure, which do not need proof (axiom) |
| concretization | Definition and direct description of the FPPE structure |

**Figure 1. General principles of conceptual design of the financial potential of the production enterprise ***

Source: developed based on [1-2; 4]

Thus, conceptual design forms a scientific approach to the formation of the financial potential structure using as a means of knowledge the constructive theory of systems specified in the system approach to the process of research – the project. The above provisions create the necessity to conduct a critical evaluation concept of "project" and analyze its existing definitions.

Conceptual design forms a scientific approach to financial potential structure formation, using as a means of knowledge the constructive theory of systems specified in the system approach to the process of research – the project.

The above provisions create the necessity to conduct the evaluation of the concept of "project" and analyze its existing definitions.

Despite the simplicity and widespread concept, there is no single interpretation [3, 4]: V. Dale explains the content of the term as "the opinion of the research object "; S. Ozhegov, N. Shvedova under the "Project" understand "the plan of object creation of research includes description and drawing"; D. Ushakov the content of the term limits the scope of the general scheme of the object of research.

The most objective is the definition by C. Ozhegova and N. Shvedova [3, 4] reveals the essence of the project, indicating that it is a plan of the object of research that summarizes its drawing and description.

It is necessary to emphasize that the financial potential draft structure is a complex concept that covers drawing (or scheme) of its structure and description. The above provisions form the need to construct the financial potential structural scheme main elements according to the ethical value, are highlighted: 1) the enterprise's ability to target financial development; 2) the external environment ("input", "output" of the system, feedback); 3) internal structure (scientific substantiation subsystem; target subsystem; functional subsystem; control subsystem; support subsystem). The efficiency of the proposed structure of financial potential is evidenced by the appearance of a qualitatively new synthesized property – the ability to implement the management paradigm. The FPPE structure is as follows (Figure2).

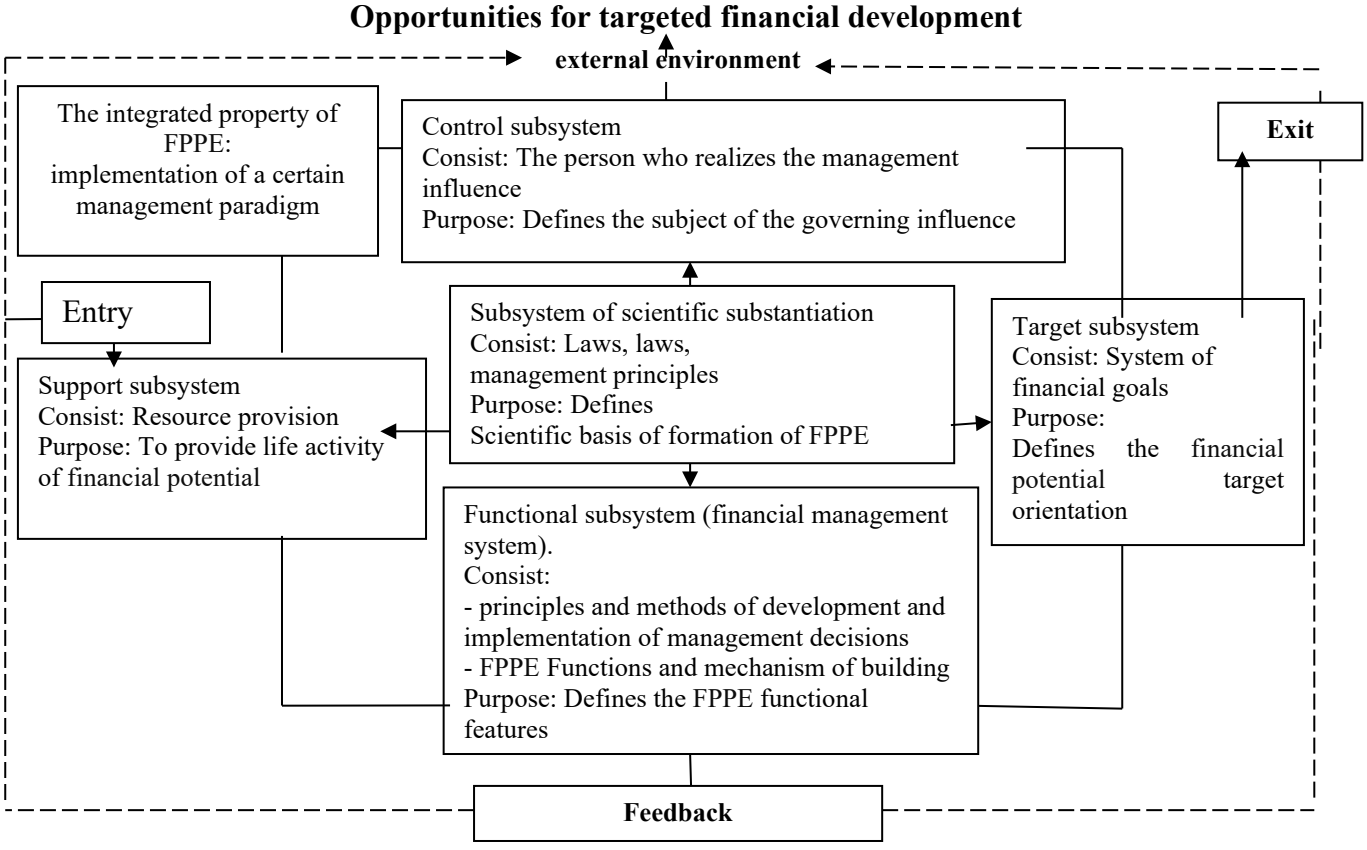


**Figure 2. Block Diagram of of financial potential of the production enterprise structure**

Source: developed based on [3], [6-7]).

Within the framework of the block-diagram, it is possible to characterize all the financial potential sub-systems. The enterprise's potential for targeted development is summarized in the following areas: 1) aggressive financial growth; 2) limited financial growth; 3) anti-crisis economy of resources (or maintenance of the won positions); 4) financial contraction.

The sub-system of scientific substantiation is the basic in the financial potential structure scheme since it defines scientific bases of its formation, which can be justified research of action of general laws, laws and principles in financial potential management area [8] (Figure 3).

**The operation of the laws of management in the financial potential area**

The role of the category: Establishes the FPPE mandatory features as a socio-economic system

| | |
|---|---|
| Synergy | The capabilities of financial potential to realize goals are more than the sum of capabilities of its sub-systems |
| Diversity | The diversity of the managing sub-system of the financial potential should correspond to the diversity of its functional sub-system |
| Priority over a part | The financial potential and its sub-systems do not exist separately |
| Systems of needs | Creation of a system of interests and needs is the basis of the financial potential mechanism |
| Self-preservation | FPPE and its sub-system seek to preserve themselves as a single whole |

**Action of the control laws in the financial potential area**

The role of the category: Establishment of obligatory requirements to the **FPPE** as a social and economic system

| | |
|---|---|
| Optimal centralization | Sets the hierarchy level that corresponds to the nature of the existence and functioning of the financial potential |
| Formation | The form of the financial potential should be determined by its connections |
| Proportional and composition | Maintaining the proportion in the financial potential structure as a whole system formation of its sub-systems under any changes allow to realize the system of financial goals as much as possible |
| Ontogenesis | consideration of opportunities to targeted financial development in the implementation of financial management |
| Information | The creation of an effective communication system determines the financial potential effectiveness |
| iteration | A large number of elements and connections within the financial potential form a variety of relationships and dependencies between them and point to the imbalanced options of financial management |

**The principles of management within the financial potential framework are in effect**

The role of the category: Establishment of rules, norms and practical recommendations on the most effective formation of financial potential

| | |
|---|---|
| Form | systems; tolerance; constructiveness; hierarchy; universality |
| Setting goals | priority of goals; goal tree; strategic planning; target orientation |
| Interaction and interaction | line and function; division and specialization; optimal number of legs; feedback; efficiency and flexibility; distribution and cooperation |
| Leadership and management | unity of financial strategy and tactics; monitoring; training of personnel; ethics; complexes; priorities of rights, duties and responsibilities; democratization |
| Meaningfulness | main link; necessity and sufficiency; form and content unity |
| Achieve the objectives | first step; resource management; accumulation and use of experience; monitoring and stimulation |

**Figure 3. Scientific basis of of financial potential of the production enterprise formation**

Source: developed based on [6-7; 9, p. 34].

The following scientific bases of formation of FPPE determine:

- General norms of separate management phenomena, relations, processes within the financial potential framework;

- Fundamental truths, the observance of which will ensure the effective development of financial potential.

As modern scientific researches show [10-11], the financial potential will not be able to function effectively in the absence of clearly defined financial performance targets due to their ability to determine: 1) the direction of financial development; 2) the priorities of activity; 3) the nature of interaction with the external environment. In this regard, advisable to study the peculiarities of building a financial potential target subsystem. The form and formation of the target system of the financial potential are based on the main objective of financial management –` market value maximization [12, p. 13].

The process of realization of the main goal of the FPPE is directed at the realization of such sub-goals [17, p. 14]:

- formation of financial resources in the amount that corresponds to the task of development of the enterprise in the future period;

- efficient distribution and use of available financial resources in terms of the basic directions of the enterprise activity;

- optimization of cash flow; maximization of enterprise profit; minimization of financial risk level;

- ensuring the constant financial balance of the enterprise in the process of its development;

- providing opportunities for rapid capital reinvestment while changing internal and external conditions of economic activity.

A defined goal system describes the financial potential target orientation.

The financial potential sub-system shall deal with the resource provision (information, organizational, personnel, financial and technological) that guarantees its ability to function, develop and implement the communication function of all sub-systems [11-12].

The managing subsystem (the head of the financial service or the financial directorate) implements the management influence within the financial service of the enterprise.

The functional sub-system of financial potential is a system of financial management [6-7], [9, p. 343-346] and according to the opinion of I. Blank [12, p. 11], a system of principles and methods of development and realization of management decisions related to formation, disinterring, use of financial resources of the enterprise, and organization of the circulation of its money.

From scientific sources, it follows that the sub-system contents can be opened using: principles and methods of development and realization of management financial decisions; functions, and mechanism of financial potential construction [12, p. 11].

By the scientific literature on financial management, a system of principles of development and implementation of the financial decisions in management can be identified [12, p. 11-13]:

1) integration with the overall system of production enterprise potential. Direct connection of financial management with production, innovation, personnel, and information management determines the necessity of integration of FPPE into the general system of potential;

2) complex nature of management decision formation. FPPE includes a comprehensive management system and therefore ensures the development of interrelated management decisions, each of which influences the overall efficiency of financial activity; high dynamics of management. Realization of the principle is necessary for connection with the high dynamics of the environment under which the FPPE exists;

3) the diversity of approaches of separate management decisions development. Implementation of important management financial decisions requires consideration of all possible alternatives;

4) development strategy focus. All projects of management financial decisions should be rejected if they contradict the company's strategy.

The financial potential formation basis of the above principles will ensure stable

financial growth in the long term [17, p. 11].

According to the modern management theory, under the methods of development and realization of management financial decisions it is necessary to understand a combination of mental and practical operations, which are used in the process of financial management for: 1) identification of the problem, determination of the purpose; 2) accumulation of necessary information; 3) selection and development of the optimal solution and organization of its implementation [9, p. 122]. The importance of the category indicates the necessity to introduce a list of methods of development and realization of management financial decisions and research of modern experience of their application. This task can be solved by means of analysis of scientific works [12; 9; 6-7]. The results of the analysis are summarized in Table 1.

**Table 1**
**Analysis of methods of development and realization of management decisions and modern practice of their application**

| Groups of methods | General description of methods groups | Practical problems of application of methods of development and realization of management decisions |
|---|---|---|
| Economic | Financial analysis systems | 1. Absence of developed system of financial regulations at production enterprises and effective system of FPPE evaluation.<br>2. Orientation of most production enterprises to short-term goals. There are cases of absence of a system of strategic financial planning or its existence in the form of strategic vision of the future.<br>3. Controversial methodological literature on analysis, control and planning. |
| | Financial planning systems | |
| | Control Systems (controlling) | |
| Organizational and administrative | Organizational | 1. Constant increase of the management apparatus for the fulfillment and realization of numerous individual tasks.<br>2. Formation of large streams of information, which causes difficulties in timely analysis of their content and processing, high risk of erroneous decisions. |
| | Administrative | |
| | Disciplinary | Limitation or complete loss of the independence of rank-and-file performers. |
| Social and psychological | Incentives (economic incentives for personnel, etc.), persuasion (moral incentives) | The frequent use of sanctions and force at manufacturing facilities leads to the loss of the employee's working initiative and attempts to shift personal responsibility to other employees. |

Source: developed based on [12, p. 32-68], [9, p. 154-155]).

The list of methods of development and implementation of management decisions within the FPPE framework is rather wide, but there are some problems in their application.

This makes it necessary to improve of elements of the FPPE control method.

## 2.2. Improvement of elements of the financial potential of the production enterprise control method

The financial potential of the production enterprise implements the main purpose and task of the target subsystem with the help of functions, which are specified depending on the peculiarities of management of certain aspects of the financial activity of the enterprise [12, p. 16-17], [9, p. 133]. According to the financial potential contents its functions are advisable to divide into two groups:

- financial potential functions as a functional system (their composition is characteristic for any type of management, taking into account its specificity);
- financial potential functions as a special area of management of the enterprise (their composition is determined by a specific object of financial management).

Scientific works are devoted to the research of control systems, allowing the allocation of such a list of FPPE functions as a functional system [12, p. 133]:

1) development of the financial strategy of the enterprise: formation of long-term goals, target indicators of financial activity, and priority tasks for the nearest future;

2) creation of organizational structures that ensure the adoption and implementation of management decisions in all aspects of the financial activity of the enterprise;

3) formation of information systems that justify alternative variants of management decisions: identification of information needs of employees performing financial management; formation of internal and external sources of information;

4) analysis of various aspects of financial activity: carrying out of the express-analysis and in-depth analysis of individual financial operations, results of financial activity, summarized results of the enterprise activity in general (in terms of separate directions);

5) planning of the financial activity of the enterprise in its main directions;

6) development of a system of stimulation of realization of managerial financial decisions: formation of a system of protection for the fulfillment of target financial indicators, financial standards, and planned tasks;

7) effective control over the implementation of management financial decisions: determination of the system of indicators to be monitored; prompt response to the results of control.

Yu. Batryn, P. Fomin notes that FPPE implements financial management, the essence of which synthesizes the content of the second group of FPPE functions as a special sphere of enterprise management [3]. Thus, the defined group of functions in their most aggregated form are [12, p. 19-20], [3]:

1) asset management: identification of assets needs, determination of their total amount; optimization of assets composition from the point of view of their efficiency; provision of liquidity of certain types of assets; acceleration of assets circulation cycle; selection of effective forms and sources of asset formation;

2) capital management: determination of capital needs for the financing of enterprise assets; optimization of capital structure from a position of efficiency of use; development of measures to convert capital into effective asset types;

3) investment management: formation of investment activities of the enterprise; assessment of investment attractiveness of projects and financial instruments, selection of the most effective ones; formation of investment programs and portfolio of financial investments;

4) cash flow management: formation of incoming and outgoing cash flows of the enterprise, their synchronization by volume and time according to certain future periods; efficient use of the balance of temporarily free money;

5) financial risk management: identification of the main financial risks, their assessment by the amount of possible financial losses; minimization of financial risks;

6) anti-crisis management: monitoring of the financial situation with the purpose of timely diagnosis of symptoms of the financial crisis; determination of the scale of the enterprise crisis; determination of forms and methods of use of internal mechanisms of the anti-crisis management of the enterprise;

7) other functions: providing business relations with the tax service, statistical agencies, antimonopoly committee, securities, stock market commission, and other state bodies; interaction with market infrastructure institutions (banks, stock

exchanges, investment funds, insurance companies, audit firms, consulting companies).

Financial potential form as a certain mechanism consisting of five systems [12, p. 21]: 1) financial levers (price, interest, profit, amortization, net cash flow, dividends, penya); 2) financial methods (economic-statistical methods, economic-mathematical methods, methods of cost discount); 3) financial instruments (payment, credit, deposit, insurance); 4) systems of regulation of financial activity of the enterprise (state normative-legal regulation of financial activity; market mechanism of regulation of financial activity; internal mechanism of regulation of certain aspects of financial activity); 5) systems of external support of financial activity (state and other forms of financing; enterprise lending; leasing and insurance). Analysis of the allocated systems in the area of domestic wood-processing and other enterprises of Ukraine allowed to reveal a wide range of external and internal problems of financial potential (Table 2).

**Table 2**
**Main external and internal problems in managing the financial potential of Ukrainian production enterprises**

| Mechanism systems | List of problems |
|---|---|
| System of regulation of financial activity of the enterprise | (P) imperfect tax legislation (high taxes, frequent changes in tax legislation) |
| | (P) Limited access to credit resources in national and foreign markets. Absence of stable currency quotation and national currency unit |
| | (A) Low level of regulation of management decisions on the financial activity of enterprises. Lack of practice in the development of financial strategy, financial policy, and system of internal regulations |
| System of external support of financial activity of the enterprise | (P) Lack of state funding |
| | (P) High interest, the high penalty for late payments by credit institutions |
| | (P) High cost of leasing. Distrust in the insurance market |
| System of financial levers | (A) lack of stable levers.<br>(A) Unjustified overpricing of raw materials.<br>(A) There are cases of net cash flow |
| System of financial methods | (A) the uncertainty of the basic methods and methods of substantiation and control of managerial decisions in different spheres of financial activity |
| System of financial instruments | (P) lack of reliability of contractual obligations, which provide the mechanism of implementation of certain management decisions of the enterprise |

Notes:
1.(A) – the internal environment of financial potential ;
2. (H) – the external environment of financial potential .
Source: developed based on [12, p. 21-22])

These tables make it necessary to pay attention to the imperfect sub-system of the provision of domestic production enterprises and the problem external environment of

the financial potential.

According to the results of the survey of the employees of financial services of domestic enterprises, there is no single opinion concerning the structure of the external environment of the FPPE. Therefore, in the design framework of the financial potential of production enterprises, the environmental characteristics should be understood, under which the external financial environment or the system of factors influencing the enterprise, the forms, and the results of its financial activity should be understood [12, p. 111]. Systematization of the experience of domestic enterprises and scientific literature allowed to allocate structure of the external environment of financial potential of production enterprises [12, p. 111-115; 13; 14]:

- the external financial environment of direct influence - characterizes the system of factors influencing the forms and results of financial activity, formed in the process of financial relations of the enterprise with contractors on financial operations. This system of factors can be influenced by the company in the process of direct communication (suppliers of raw materials, materials, and semi-finished products; all competitors of suppliers; buyers of finished products; creditors of the enterprise providing different forms of financial credit; institutional and individual investors; insurers, financial intermediaries; competitors of the enterprise, contact audiences (controlling bodies, consumer rights protection society, trade unions);

- external financial environment of indirect influence – characterizes the system of macro-factors influencing the enterprise, forms, and results of financial activity of the enterprise in the long-term period, direct control over which is impossible. This group of factors should include: 1) economic (pace of economic dynamics; ratio of parameters of consumption and accumulation of national income; rate of inflation; system of taxation of legal entities and individuals; dynamics of currency rates and the accounting rate of the national bank); 2) political and legal factors (forms and methods of state regulation of the financial market, financial activity of the enterprise, money circulation in the country; policy of state support of certain branches and spheres of activity; state policy of preparation of highly qualified specialists; policy of attraction and protection of foreign investments; legal aspects of regulation of procedures of

financial rehabilitation and bankruptcy of enterprises; standards of financial reporting of enterprises); 3) social factors (educational and cultural level of working population; level of training of specialists in the sphere of financial activity; attitude of population to market reforms); 4) technological factors (innovations in the field of technical means of management; innovations in the sphere of financial technologies and instruments); 5) other environmental factors.

Analysis and scientific sources on the given issue allow us to distinguish the following peculiarities of the external environment of the financial potential of production enterprises [3; 13; 14; 15]: 1) ecological and technological factors powerful influence; 2) economic factors have a powerful influence; 3) legal factors have a powerful influence.

## Conclusions

The results of the financial potential of production enterprises structure design allow us to state:

- The definition and description of the financial potential of production enterprises structure can be best accomplished through conceptual design approaching the formation of its structure consciously;

- The main components of the financial potential of production enterprises can be attributed to: 1) the enterprise's ability to target financial development; 2) the external environment and internal structure in the structure of sub-systems (scientific substantiation, target, sub-systems of provision, functional, managing). The effectiveness of the developed design of the financial potential of the production enterprises structure is confirmed by the formation of a qualitatively new property – the ability to implement a managerial paradigm;

- The obtained results of the financial potential design allow reaching a consensus in defining the functions and mechanism of its formation, its goals, and tasks, financial potential principles and methods used for the realization of management decisions;

- The initial analysis of financial potential elements reveals the existence of problems in its structure and testifies to the scalability of the sub-system of provision.

The above provisions give grounds to define the scope of further research in the framework of improvement of the financial potential modern scientific paradigm.

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# CHAPTER III.
# MODERN MANAGEMENT PARADIGM (MODEL) OF THE FINANCIAL POTENTIAL OF THE PRODUCTION ENTERPRISE

## Introduction

The financial potential of the production enterprise definition as a system of financial management determines the application of the system approach as a methodology of its research. The essence of the system approach is to realize the requirements of the general theory of systems, according to which each object in the process of its research is considered as a large and complex system and as an element of a larger system.This allows the notion of "system" to be highlighted as the basic deflation of the system approach. Under the system means: a combination of internal connected components, directed at the ultimate goal; integrity consisting of interconnected elements, each of which makes its contribution to the whole characteristic; a lot of interconnected elements, which are in relations and connections and make a whole formation.

The given deflation of the system allows to assert that separate elements in the process of their synthesis create a combination with qualitatively new properties. The high-quality new property of financial potential of the production enterprise it receives in the process of organic combination of his subsystem, is the ability to implement management.

## 3.1. Identification and research of management paradigm (models) category content

The necessity of a dialectical knowledge of the given property requires revealing the content of the category of management.

Governance is a real impact on the activities of people, which encourages them to realize their goals and includes the following elements: 1) goals; 2) organizational

moment; 2) regulation of behavior and activities of the participants of the management influence; 3) information exchange determined by the interaction between the object and the subject in the management process [1, p. 22-24].

The content of the category of management is transferred through a certain management paradigm, under which one should understand the well-known concept forms a model of the management process adopted in a specific socio-economic system. FPPE is a system that implements financial management (namely, the process of achievement of financial goals of the enterprise), so it is expedient to characterize the financial potential of the production enterprise management paradigm as a common concept forms a model of the financial management process [2, p. 63-66; 3-4].

According to scientific works [4; 2, p. 63-66; 3], identification and research of the management paradigm are expedient to carry out with the help of the following institutes: 1) management concepts (a method of understanding the process of management realization); 2) concepts (systems of understanding and categories laconically reflecting the content and essential features of the concept); 3) concept implementation tools (a set of influencing instruments that ensure the formation of goals and their realization). The above-mentioned provisions allow for exploring the state of the financial potential of the production enterprise's modern management paradigm (Table 1).

**Table 1**
**State of the financial potential of the modern management paradigm**

| Institutes of paradigms | Concepts | | | | | |
|---|---|---|---|---|---|---|
| | concept of financial efficiency management | concept of value management | concept of strategic financial management | concept of financial change management | concept of target financial management | concept of process management |
| Approximate list of concepts | Purpose, corrective measures, actions, process | Cost, cost factor, result, benefit | Vision, mission, strategy, values, budget, plan, business process | Changes, change priorities, change categories, scenarios, scale, process, project | Model, goal, goal tree, communication, corrective actions, corrective actions | Business process, main process, additional process, management process, etc. |
| Implementation tools | Balanced scoreboard, display, Ernest & Young, RroMES, QPM, The Quantum Measurement of achievements, Hewlett-Packard | | | | | Balanced Scoreboard, display, Ernest & Young, RroMES, QPM, The Quantum Measurement of achievements, Hewlett-Packard |

Source: developed based on [3-4; 2, p. 63-66; 3])

The data are given in Table 1 the absence of a unified approach to the formation of the modern administrative paradigm is revealed and the objective necessity of finding a consensus on its main institutions is stipulated.

Modern management practice is based on the application of different sets of tools for the realization of concepts of financial management [6; 5] (responsibility matrix, budgets, Plans, etc.), contain traditional financial-oriented analysis tools, among which the most famous are: 1) Cash Flow (model of cash balances in cash and company accounts in progress); 2) Cash flow return on investment (CFROI); 3) EVA (additional value); 4) TSR (total equity profitability); 5) RONA (net asset profitability).

However, in modern conditions, such an approach has been severely criticized by domestic and foreign scientists [6; 7-9], and a negative assessment was confirmed by a series of global studies conducted by Price Waterhouse-Coopers [3-4; 6, p. 103-117].

This trend in economic thinking has forced us to apply it to the study of new complex instruments (tools) of management paradigm implementation.

The choice of the instruments of realization of the concept was made by the analysis of the following scientific publications [7-9], M. May [6], M. Brown [10, p. 31-47].

The analysis we conducted revealed the existence of six basic approaches to the definition of the tools of the management paradigm realization [11, p. 1-4], [12, p. 13], [13, p. 16-300]. Thus, modern approaches to the tools of the management concept realization of are systematized in Table 2.

Consensus on the definition of instruments is achieved through a critical analysis of approaches, based on the evaluation criteria proposed by M. Braun [10, p. 15-21], N. Ozve, K. Petri, J. Royay, C. Roy [13, p. 10-52], R. Kaplan, D. Norton [14, p. 6-63] (table 2): 1) K1 (allocation of the most important indicators); 2) K2 (formation of a single target orientation); 3) K3 (use of instruments of perspective, current and operational financial planning); 4) K4 (observance of the balance of interests); 5) K5 (the ability of the analysis system to assess achievement of goals); 6) K6 (a generalization of separate indicators within several general groups); 7) K7 (flexible analysis system, ability to change indicators when changing strategy and conditions of

external environment); 8) K8 (use of tools of previous, current control).

**Table 2**
**Modern approaches to the tools of the management concept realization**

| Specification of instruments | Approach disadvantages |
|---|---|
| The Tableau de Bord tool, which has the following properties, must be used to implement the concept:<br>- summarizes strategic and operational indicators;<br>- provides vertical communication and responsibility at all organizational levels;<br>- uses target and functional categories of indicators. Target indicators are determined based on the strategy formed by the company management. Functional indicators are determined based on the target and meet the following requirements: control; predictive nature; cause-effect dependence on target indicators. Each indicator of the model reflects the state of a certain part of the business that needs to be managed | hard binding to the organizational structure; lack of ability to change goals quickly; absence of clear grouping of indicators |
| For the realization of the concept it is necessary to use the tools of a balanced scorecard, which has the following properties:<br>- balances the goals of the enterprise;<br>- forms a balanced set of interrelated indicators;<br>- links indicators in monetary terms with operational measures of the following aspects of the enterprise activity: clients, business processes, personnel, and finance;<br>- provides information in the following ways: directions to be improved;<br>- - expectations of shareholders; measures to implement the strategy of the enterprise | There is no experience of application in Ukraine |
| To implement the concept, Ernst & Young has the following features:<br>- translate the main goals into a balanced set of integrated indicators;<br>– imprisonment of indicators in value output with operational dimensions of such aspects of the enterprise activity as clients, business processes, innovations, and financial results;<br>- sets different goals at different levels that are not balanced among themselves;<br>sets individual critical success factors and corresponding indicators for each level of the enterprise which is not balanced | does not ensure balance of goals |
| To implement the concept, ProMES (Labor Production Improvement and Measurement System) tools must be used, which have the following properties:<br>- based on the principles of: generalization of goals; assessment of the level of achievement of goals; generalization of information about past results of activity and development of management decisions;<br>- uses two categories of indicators: target and functional formed at two levels: higher (for the enterprise as a whole); lower (for each employee of the enterprise);<br>the organization unit and its employees are evaluated comprehensively. | unclear formulation of evaluation criteria |
| The Quantum Performance Measurement tool, which has the following properties, must be used to implement the concept:<br>- uses three target groups of indicators, which are formed based on production strategy: quality of goods and services; quality of processes on the production of goods and services; costs, which characterize the degree of economic quality;<br>provides information on organizational structure, internal processes, and employees at three levels: organizational; business process level; individual process level; creates nine measuring points. | - narrow specialization (evaluation of production activity only); hard binding to the organizational structure |
| The Hewlett-Packard tool, which is based on mutual evaluation of the services provided by one service department, should be used for the realization of the concept with the help of 6 stages: Description of processes between subdivisions of the enterprise; Process Change Settings tasks; Evaluation of the development of subdivisions and enterprise; Setting internal standards; Development of client evaluation forms; Constant evaluation and improvement of current processes at the enterprise with the help of:<br>6.1. classification of clients for groups: head of the department; controller; operative manager; head of loss formation center; top manager;<br>6.2. review of the results of the survey and development of measures to improve performance indicators for the following functional activity chains: planning; client orientation; process improvement; process management; employee satisfaction | - insufficient consideration of long-term goals of the enterprise;<br>-- not taking into account current budget policy in the structure of the model |

Source: developed on the basis [10; 13; 14, p. 6-63]

The critical analysis was carried out based on a comparison of the standard total number of estimated points with the actual number of estimated points received as a result of the evaluation [10; 13; 14]. Full compliance with each evaluation criterion can be assessed in one point, partial compliance in two points, and complete inconsistency in three points. The accepted scale of the estimation of the instruments of realization of the concept allows the normative total number of estimated points to estimate in 8 points (that is, the model fully corresponds to all 8 estimation criteria K1-K8).

The more you deviate from the actual number of estimated points obtained as a result of the evaluation from the normative, the less effective the tools for the evaluation of the concept. We have developed the following algorithm for the calculation of the actual number of estimated points received as evaluation result:

$$F\sum A\ (1) = AEB\ 1 + AEB\ 2 + \ldots + AEB\ 8, \qquad (1);$$

where: AEB1, AEB 2..., AEB 8 – actual evaluation points according to criteria K1-K8; $\Phi\sum A$ - the actual number of estimated points received as evaluation result.

The proposed evaluation method of the tools of realization of the concept allows concluding their general effectiveness. The results of the assessment are summarized in Table 3.

**Table 3**
**Evaluation of effectiveness of the instruments of implementation of program-target financial management**

| Inestrymentriy | $\Phi\sum A$ | $_{I}\sum A$ | Deviation | Efficiency |
|---|---|---|---|---|
| «Hewlett-Packard» | 16 | 8 | +8 (significant deviation) | inefficient |
| QPM (Quantum Performance Measurement) | 17 | 8 | +9 (significant deviation) | inefficient |
| ProMES (Labor Production Improvement and Measurement System) | 20 | 8 | +12 (significant deviation) | inefficient |
| Ernest&Young | 16 | 8 | +8 (значне відхилення) | inefficient |
| On-board display | 12 | 8 | +4 (незначне відхилення) | not effective |
| Balanced Scorecard | 8 | 8 | 0 (немає відхилення) | efficient |

Note
$I\sum A$ - the standard total number of estimated points

Based on the data obtained, one can say that the consensus on the application of the concept implementation tools is to apply a balanced scorecard (or - BS).

Today, BS has found practical application in such well-known international and

foreign companies as [13, p. 90-139]: 1) Oriflame Cosmetics (distribution of aromatic and cosmetic products); 2) Herox, Ericsson Enterprise (production of products for network operators and providers); 3) Metro Cash&carry (retail trade); 4) Ricoh Co. Ltd (production and sale of information products); 5) Nordea (banking services via the Internet); 6) Volvo Cars Corporation (car production); 7) Scandinavian Airlines System (aviation-related activities); 8) Lund heart and Lung cent (medical services); 9) Magnitogorsk Iron and Steel Works (metallurgy); 10) JAL Information Technology Co. Ltd (development, installation, maintenance of computer systems); 11) Heblet-Packard Services (production of modern devices and peripherals), etc. The Balanced Scorecard has not yet found practical application in domestic enterprises.

## 3.2. General description of modern management paradigm financial potential of the production enterprise

The search for consensus on the institutions of the financial potential management paradigm was carried out by us by building a model of its formation (Figure 1). The model is formed taking into account the following provisions:

1) as noted by A. Pilipenko, S. Pilipenko, I. Otenko [2, p. 106] the activity of the production enterprise today is multi-valued. Therefore, the formation of a consensus on the management paradigm of the financial potential of the production enterprise is achieved through an analysis of the existing group of concepts for the ability to take into account the multidimensional nature of the financial activity.

According to the essence of the above concepts, only the theory of target financial management can take into account the multi-valued character of the financial activity of production enterprises;

2) as the scientific literature shows, management is oriented on the achievement of the whole set of goals and tasks faced by the enterprise [2, p. 106-108]. But the analysis of the concept of target management reveals the existence of several areas, of which not all can ensure the achievement of the whole set of goals and objectives [15].

| Selection of the concept of financial management implementation | | | | | | |
|---|---|---|---|---|---|---|
| Selection options | Concepts | | | | | |
| | Management of financial efficiency | Cost management | Strategic financial management | Management of financial changes | Process management | Target financial management |
| Taking into account the multidimensional nature of the activity | Partial | Partial | Partial | Partial | missing | Full |
| Result of application | Saving financial resources | Maximize value for shareholders | Achieving long-term financial goals | Radical re-thinking and re-designing of FPPE | Improvement of financial activity processes | Achievement of the whole set of goals and objectives |
| Можливість застосування | No | No | No | No | No | **Yes** |

Definition of the instruments of realization of the concept

| Instrumentarium | BC | on-board scoreboard | Ernest& Young | Pro MES | QPM | Hewlett-Packard |
|---|---|---|---|---|---|---|
| The possibility of using | **Yes** | No | No | No | No | No |

| Simple | Regulations | Program-target |
|---|---|---|
| No | No | Yes |

Визначення основних концептів

| Concepts that characterize the tools of realization of the concept | Concepts that characterize the concept |
|---|---|

Groups of instruments

| System of collecting and analyzing information on results |
|---|
| System of determination, decomposition and goals balancing |
| Infrastructure of responsibility |
| Система контрольних показників |

**Figure 1. General description of the financial potential of the production enterprise modern management paradigm**

Source: developed by the author

So [15]: 1) regulatory is the management in which the manager develops the ultimate goal and limits on parameters and resources, but without specifying the mechanism of implementation of this goal; 2) simple - it is management, in which the manager develops terms and end goals, without specifying the mechanism of its achievement; 3) program-target is the management, in which the manager develops the purpose and mechanism of its realization, the timing, and the status of the intermediate values of the process. We have concluded from the given definitions that simple and regular target management gives space for initiative decisions, but does not guarantee the achievement of the goal. The program-target direction will best ensure the realization of the multi-assessment nature of the activity of the production enterprise.

The obtained results allow asserting that the most optimal is the formation of the management paradigm of the financial potential as the concept of program-target

financial management, a balanced system of indicators as the tool of its realization, and concepts that characterize them.

The analysis of scientific literature reveals the absence of a statutory definition of BC leads to the incorrect use of this concept. In this connection, the development of a single approach to the essence of the BS, and the definition of its main elements become important within the framework of the research of the modern management paradigm of the financial potential of the production enterprise. There are the following approaches to the Balanced Scorecard essence:

- ".. evaluation system, strategic management system, information dissemination tool" [8, p. 310]. Thus, Balanced Scorecard uses the tool "system of collecting and analyzing information about results";

- ".. this is the format of the description of the organization's activity using a certain set of indicators …" [13, p. 16] or "tool… which emphasizes the need to analyze critical success factors or results needed to achieve the organization's strategy and sets indicators of key performance indicators…" [16, p. 26-27]. In this way, Balanced Scorecard uses the tool "system of control indicators";

- "system of interrelated financial and non-financial indicators reflecting achievement of strategic goals of the enterprise in different aspects of the business at all its levels" [18, p. 45-46] or "a system that combines an evaluation characteristic of the activities of enterprises and participants interested in the process of cost creation with financial prospects of short-term projects and long-term activities in competitive conditions" [19, p. 59]. Definition allows to allocate "decomposition and balancing of goals" as an Balanced Scorecard instrument;

- "allows the worker to set specific goals and indicators to which they will seek to help his department achieve its goals, to establish a potential incentive reward and to list the measures necessary to achieve success" [9, p. 206] or "… the Balanced Scorecard aims the workers to determine the causal relationship between the strategic goals of the organization and the objectives of all its structural tasks and functional services, showing what results should be achieved by managers of different levels and individual executives to become a real result…. [17, p. 393]. The definition allows for

the allocation of "infrastructure of responsibility" as Balanced Scorecard instruments.

Thus, the Balanced Scorecard is an instrument that transforms the system of goals into specific objectives and performance indicators, using specific instruments. It is possible to allocate the following groups: 1) systems of collecting and analyzing information about results; 2) systems of defining, decomposition, and balancing of goals; 3) systems of control indicators and infrastructure of responsibility. The selected groups should be considered as instruments of implementation of program-target management or a system means of ensuring the formation and realization of goals [11, p. 83].

The given provisions allow for the formulation of the definition of the Balanced Scorecard as a tool for the realization of the program-target financial management allowing the enterprise to form the financial strategy and to realize it in real actions with the help of the system of instruments. Figure 2 identifies the main groups of Balanced Scorecard instruments and determines the objective necessity of their detailed description.

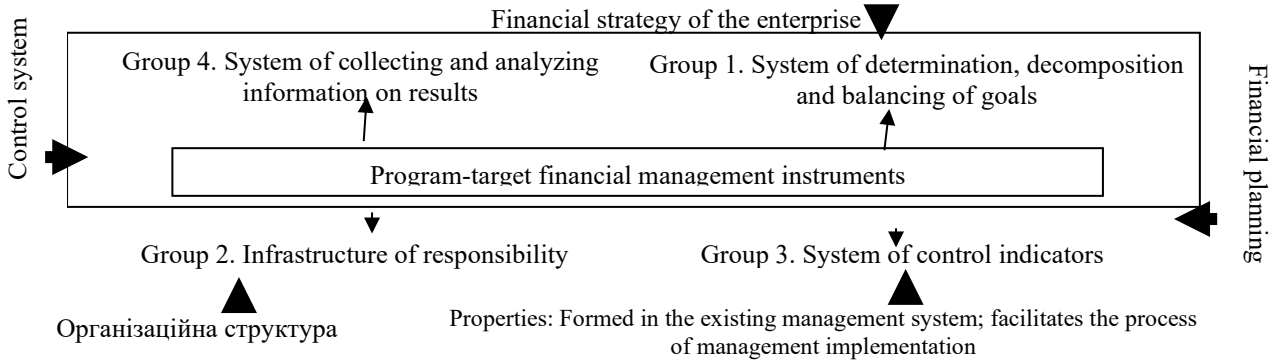


**Figure 2. The Balanced Scorecard as a tool for the implementation of the program-target financial management**

Source: developed based on [6-9].

Analysis of scientific works [7-9; 10, p. 31-47], allowed to form such a detailed structure of the instruments of implementation of program-target financial management (Table 4).

**Table 4**
**The detailed structure of the instruments of implementation of program-target financial management**

| Groups of instruments | Complex instruments | Private instruments |
|---|---|---|
| 1. System of determination, decomposition and balancing of goals | Goals-means | Subsystem composition: strategic card; complex of measures; cause-effect relations |
| | Goals-criteria | Subsystem composition: cascading; benchmarking |
| | - | Relationships of significant factors |
| | - | The structure of time periods |
| 2. Infrastructure of responsibility | Organizational structure of the performers | System composition: jfficial instructions; regulations on organizational units; information dictionary of the BC |
| 3. System of control indicators | System of evaluation indicators | System composition: system of performance standards; performance indicators |
| 4. System of collecting and analyzing information on results | Information structure | System composition: Information flows; database structures; data on enterprise activity in historical aspect; composition and content of basic documents; information technologies; means of automation |

Source: developed based on [1, p. 57-58; 13, p. 141; 14, p. 6-63]

According to the received data, the following instruments can be identified as part of the instruments of implementation of the program-target financial management:

"goals-means" is a comprehensive tool that implements the transition from the desired state to a specific program of work ensures the achievement of the goal [1, p. 57-58]. Research of the system of instruments "Goals-means" allowed to allocate its components: 1) strategic card - a tool for visualizing the strategy, which provides information on the main causal links between its elements [13, p. 141], [16, p. 24]; 2) a set of measures is a tool for determining the directions and types of activities to be carried out by the financial service [1, p. 62]; 2) cause-effect relationships – a tool for identifying problems and ways to overcome them [172, p. 59].

"Goals criteria" is a comprehensive tool that forms a balanced hierarchical system of goals [1, p. 62]. The study of the defined instrument system revealed the existence of the following components:

- Cascading - "…process of developing balanced systems for each level of the organization. These systems are presented by the system of indicators for the highest level of the organization, based on the definition of strategic goals and indicators departments and groups of lower levels will use to establish their contribution to the achievement of the company's overall goals". Based on the definition of cascading creates a wooden, multi-level structure of goals, indicators, standards by values of

which it is possible to determine the degree of achievement of the end goal" [9];

- benchmarking – "…a tool used to set process, cost and performance parameters and compare them with similar indicators of other similar organizations to define "best practices and best achievements" for continuous improvement of processes" [6, p. 193].

The correlation of significant factors is a graphical representation of indicators and relationships between indicators characterize the impact of the growth of the initial indicator on the possibility of achieving the final goal [1, p. 64-65].

The structure of periods is a tool for determining the planned period [1]. Accordingly, the mandatory condition for the establishment of a Balanced Scorecard is the choice of planning horizon necessary to realize the opportunities to see the results of the chosen financial strategy.

The organizational structure of the performers is a complex instrument of delegating authority and forming the organizational structure of management [4].

There are the following components of this instrument: job descriptions; regulations on organizational units, and the Balanced Scorecard information dictionary.

The information structure is a comprehensive tool that provides the financial manager with information to choose a financial alternative based on the available data set [9, p. 31-33; 1, p. 72-75; 21].

The defined tool allows to development of new management alternatives and choosing the most of them. The analysis of scientific literature defines this structure [6, p. 90; 20]: 1) information flows; 2) database structures (a combination of data organized according to the concept that describes the characteristics of these data and the relationships between their elements); 3) data on the activity of the enterprise in the historical aspect; 4) composition and content of the documents; 5) information technologies; 6) means of automation. The characteristic of the concept of program-target financial management and Balanced Scorecard as a tool of its realization gives the possibility to allocate the basic concepts (Table 5).

**Table 5.**
**List of concepts of the financial potential of the production enterprise management paradigm**

| The concept is described by the tools of realization of the concept | Concept description |
|---|---|
| Balanced Scorecard | system goals |
| Strategic card* | project |
| Cause-effect connections | standard |
| A set of measures | financial strategy |
| Cascading** | - |
| Benchmarking *** | |
| Organizational structure of the performers | - |
| Information structure | - |

Note:

*A strategic map is a chart that documents strategic goals that the organization or management team has pursued. This is an element of the documentation related to the Balanced Scorecard [13, p. 141].

**A cascading process of strategy, and company goals from the highest level to the lowest. The cascading process involves the sequential transfer of the formed tree of strategic goals and activities (horizontally and vertically) [13, p. 141]. The result is a goal map.

***Benmarking is the process of finding a standard, cost-effective competitor to compare with its own and adopt its successful methods of work [13, p. 141], [14, p. 6-63].

Source: developed by the authors

The list provided is not exhaustive, as a general list of concepts is formed based on the Balanced Scorecard needs and the concept of target management. As necessary, the list can be expanded, taking into account the needs of a particular enterprise.

The results of the study of the financial potential of the production enterprise management paradigm allow us to state: 1) there is a need to form a consensus on the institutions of the financial potential of the production enterprise management paradigm (namely concepts; instruments of concept realization; concepts); 2) reaching consensus is possible by considering the financial potential of the production enterprise management paradigm as a three institutions system (namely, the concept of program-target financial management; the Balanced Scorecard as instruments of its implementation and characterize).

The obtained results allow choosing the object of further research resource provision as a sub-system provides the ability to function and develop the financial potential of the production enterprise within the framework of the modern management paradigm.

## Conclusions

A thorough analysis of management experience reveals the application of different approaches to the essence and content of the institutions of the financial potential of the production enterprise management paradigm. The following concepts have been identified: 1) financial performance management; 2) value management; 3) strategic financial management; 4) financial change management; 5) target financial management; 6) process management. The activity of the production enterprise is multi-valued, so the formation of a consensus on the financial potential of the production enterprise management paradigm is achieved by analyzing the existing group of concepts that account for the multi-dimensional nature of the financial activity. According to the essence of the above concept, only the theory of program-target financial management can take into account the modern multi-dimensional character of the financial activity of production enterprises.

The most used tools in foreign management practice are found: Balanced Scorecard, “On-board scoreboard”, Ernest&Young, “System of Improvement and Measurement of Labor Production”, “Quantum measuring of achievements”, "Hewlett-Packard". The determination of the most advanced instruments was achieved by the critical analysis of approaches, based on the assessment criteria of M. Braun, Nilsa Ozwe, K Petri, and others. The results of the assessment made it possible to conclude that BS is the most effective instrument.

It concluded that the most appropriate is the formation of the financial potential of the production enterprise management paradigm based on the concept of program-target financial management, Balanced Scorecard as instruments of its realization and concepts.

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# CHAPTER IV.
# DESIGNING OF RESOURCE PROVISION OF THE FINANCIAL POTENTIAL OF THE PRODUCTION ENTERPRISE

## Introduction

Within the framework of the financial potential of the production enterprise management paradigm, the design of its resource provision is of particular importance. Analysis of scientific literature on management issues [1; 2; 3] revealed low theoretical development of the issue defined as: 1) the absence of the formed concept of resource provision; 2) absence of consensus on the structure of financial potential of the production enterprise resource provision; 3) absence of a sufficient number of scientific works on the given issue. Thus, it is expedient to develop an approach to understanding the essence of the concept of "resource provision".

Some scientists [2, p. 345; 3; 4, p. 328] note that the resource provision of production enterprise management is a system that solves the problem of its timely provision of necessary resources of a certain quality and quantity.

Some studies indicate that resource provision is a sub-system of F financial potential of the production enterprise supply that supports its integrity, economy, and rational interaction of functional, managing, and target sub-system [5, p. 7].

According to the provisions [2, 4], resource provision solves the issue of continuous, purposeful, timely provision of resources of the necessary quality and quantity for the preparation of operational management decisions within the financial potential of the production enterprise framework.

The issue of resource provision in the work of management specialists is considered based on classification and detailed resource types description [6; 7] used during financial management.

However, this simplification does not contribute to a deep and complete understanding of this question [8, p. 35].

Therefore, more thorough research in this area is appropriate.

## 4.1. The essence of resource provision of the financial potential of the production enterprise

It is possible to allocate a group of scientists who consider resource provision in a wider sense, separate its different types, depending on the functional link of management [5; 4; 9-10] or note that detailed consideration and study require those types of resource provision, which [8, p. 35]:

1) are formed in the process of financial activity of the enterprise;

2) influence the speed, quality, and effectiveness of the implementation of the financial potential of the production enterprise functions in the overall production enterprise potential;

3) have the possibility to adjust the form of the presentation and the degree of detail.

According to the above-mentioned provisions, we have allocated the following types of financial potential of the production enterprise resources: information, technological, personnel, organizational, and financial. The findings were confirmed in the works [11].

Logical generalization of the properties of each type of resource provision allows considering it as a complex resource system, resource flows, communicative environment, resource movement channels, technologies, media, and resource transmitters. It is quite logical to need a deeper and more comprehensive study of the FPPE resources. The latter is not only a sub-system of provision but also a system and requires special methods of study and improvement.

The above provisions allow asserting that the financial potential of the production enterprise resource provision of the sum of five sub-systems of provision: Information, technology, personnel, organizational, and financial. Each of the above-mentioned sub-systems can also be represented as a combination of system, communicative and technological components (Figure 1). Thus, the structure of resource provision is a complex resource system (resources and their flows), communicative environment (channels of resource movement and connections between them), technical means

(media and information transmitters).

The aggregate economic resources that define the list, necessity, and sufficiency of the elements of the resource provision for financial potential of the production enterprise effective functioning are the basis of the aggregate. The construction of the financial potential of the production enterprise resource supply scheme allowed us to reach a consensus on its structure and facilitates the detailed consideration of the resource system as resources and resource flow combination.

In the scientific literature, the qualitative characteristic of resource flows is connected with "economic resources".

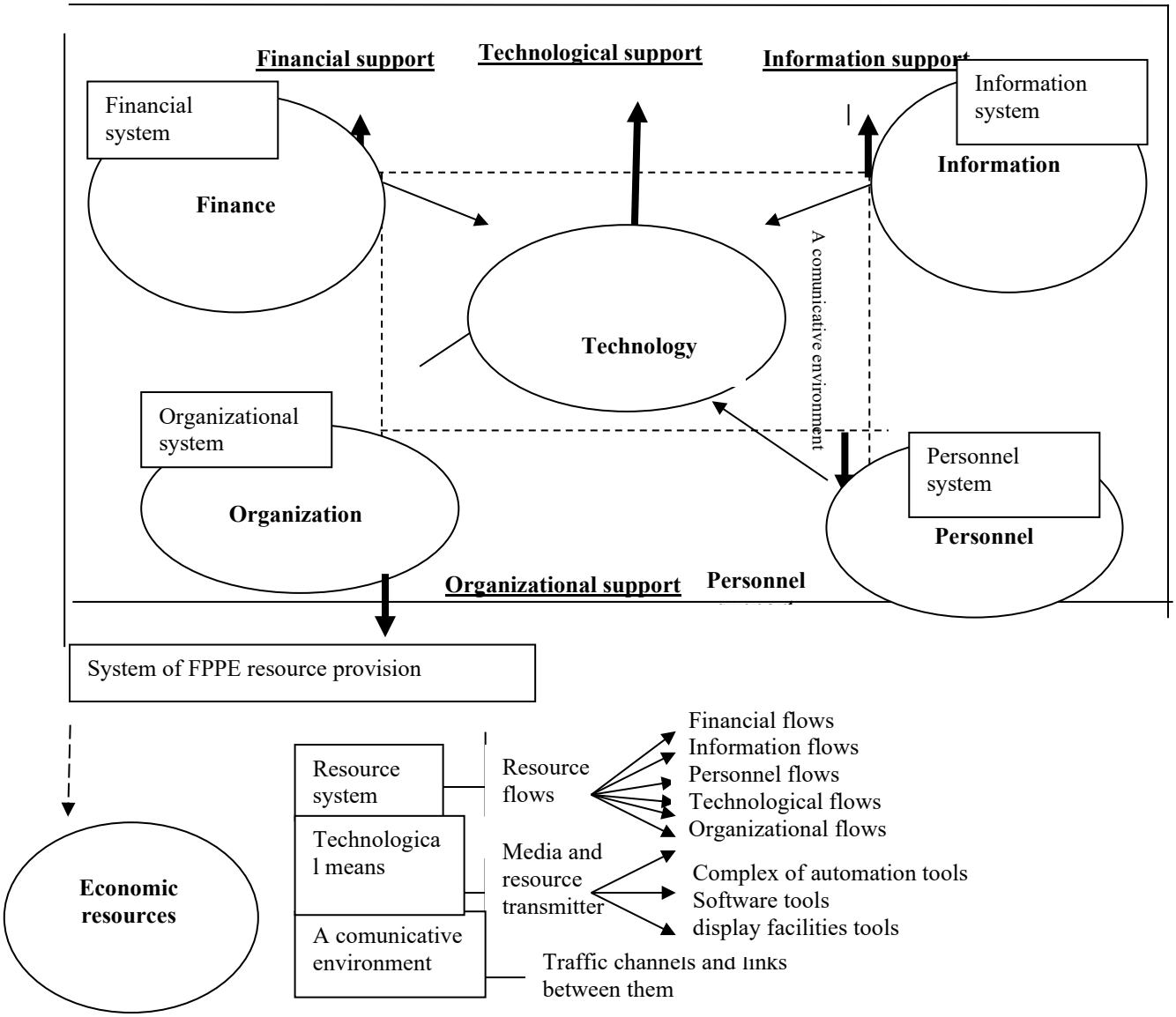


**Figure 1. The system of resource provision of financial potential of the production enterprise***

Sourse: developed on the basis of [1; 3; 5-6; 8]).

Thus, the content of the term "economic resources" is revealed as [6]: 1) material objects and mental character values, subject to industrial, physical, intellectual, and spiritual processing or used to create benefit for society; 2) sources and means of the production process and extended reproduction (namely land, labor, entrepreneurial abilities, scientific and technical progress, forms and methods of production organization, financial, information resources, material resources and raw materials, human work).

Thus, economic resources are constantly being "moving", received, processed, or transferred, forming resource flows financial potential of the production enterprise come and ensure its existence and development [8, p. 30]. The resource flows number depends on the complexity links between them, so they need mandatory classification [8, p. 30]: 1) according to the formation environment according to the enterprise: internal and external; 2) on organizational regulation: formal and informal; 3) by the frequency of receipt: systematic and random; 4) by the form of receipt: systematized and unsystematic; 5) according to the source of the formation of structural subdivisions of the financial service. This classification considers only the financial potential of the production enterprise resource flows basic types (received, formed, spent). However, resource flows are best studied in terms of [8]: 1) forming environment: internal and external; 2) functional features of financial management process; 3) interrelations between subsystems of resource flows.

Thus, studying the financial potential of the production enterprise resource flows requires a detailed consideration of the economic resources or the composition of the resources that form them (financial, personnel, organizational, information, technological) and their flows.

Information resources are a combination of information about the internal and external environment of the enterprise [8, p. 31]. According to research [8, p. 30], information as a component of the economic resources of the enterprise is constantly moving to cause the existence of information flows. Information flows are a combination of messages circulating in the financial potential of the production enterprise between its internal and external environment (Figure 2). These messages

are necessary for financial management [12, p. 4].

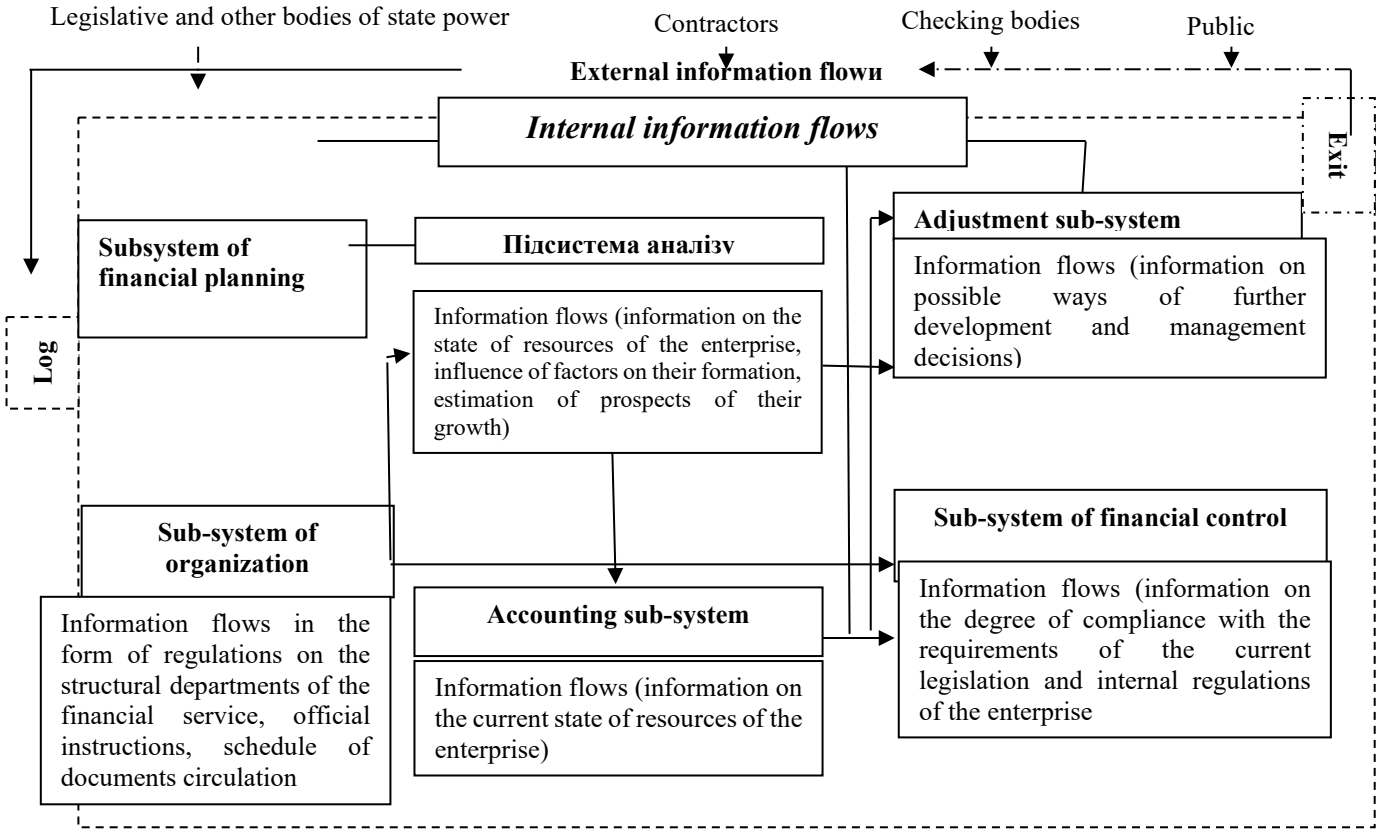


**Figure 2. Financial potential of the production enterprise information flows**

Source: developed on the basis of [8, p. 31-32]

Organizational resources are coordinated, interconnected, organized combinations of organizational forms, structures, processes, and methods of production system for the realization of strategy and tactics of development [13, p. 6]. Thus, the movement of organizational resources is carried out using a flow of management, a flow that forms a purposeful influence on the FPPE for set goals achievement [3].

Personnel resources of the enterprise are a combination of personnel already working at the given enterprise or having real opportunities to become its employees, proceeding from their characteristics and requirements [14, p. 9]. Based on the essence of the given kind of resources, the personnel flows of the production enterprise can be described as [14, p. 9]: 1) the flow of personnel resources; 2) the flow of personnel resources to work (for posts in specific departments); 3) the free staff resources flow.

Financial resources are money owned by the enterprise and intended to carry out current and extended reproduction expenses, fulfill financial obligations and stimulate employees economically [3]. Based on the essence of financial resources, their flows are directed movements connected with information, personnel, organizational and technological flows within and outside the financial potential of the production enterprise resource subsystem.

Technological resources are a combination of information and management technologies, competitive ideas, and scientific developments [4, p. 125].

The essence of management technologies (according to existing scientific sources) can be described as a form of realization of management activity (management process), providing procedures and separate operations details [15, p. 315].

## 4.2. Degree of detail in the management technology of financial potential of the production enterprise

The degree of detail of management technology and the content of solves determined [16]. The choice of the degree of detail of management technology, within the framework of the dissertation research, can be made with the help of the following structure (Figure 3). Thus, within the framework of this dissertation research, we will solve new problems of management of the financial potential of the production enterprise, for which it is expedient to establish the methodical sequence of problem-solving stages [16]. The formation of the methodological sequence of the stages of problem-solving should be carried out taking into account the adopted variants of technological processes realization, that is, the accepted managerial paradigm.

Information technologies mean: computer equipment, software, communications, mode of communication between the user and the computer [2, c. 297]. Thus, the financial potential of the production enterprise technological software generalize: software, management technique, technical software (interface equipment, working substations, equipment of input and output of information, network equipment),

communications, mode of communication of the user with the computer.

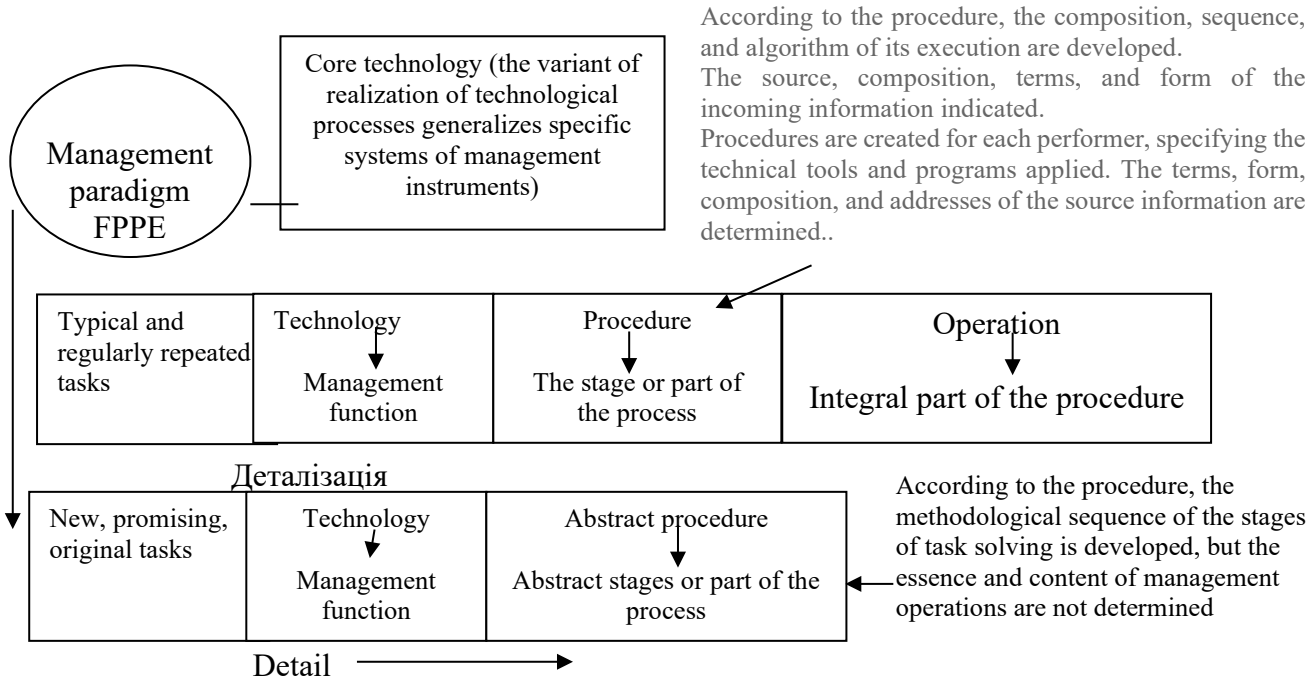


**Figure 3. Determination of the level of detail of management technology within the financial potential of the production enterprise framework**

Source: developed based on [16]

The above-mentioned components of technological software provide the possibility of allocation of technological flows as a combination of circulating between: 1) the financial potential of the production enterprise**;** 2) the external environment of information; 3) management technologies. The circulating prosses expressed in information messages (software and technical software create an environment where information is formed and stored; users of technical software form communications, providing information messages movement; the management methodology of the financial potential of the production enterprise organizes the formation of information) [2, p. 291-316].

Circulation of information messages, directed by the technological subsystem, creates a communication environment with the appropriate channels of information movement and participants of the communication process (users) – persons who make decisions and receive information in a convenient form for perception [90, p. 86]. Users can be organized according to interest in the results of the company's activity.

Accordingly [31, p. 186]:

- internal users: employees of the enterprise (interest of financial and perspective character), financial managers of all levels, ordinary employees of the financial service (interest of professional character); owners (interest of financial character);

- external users: trade unions of entrepreneurs, trade unions, creditors, suppliers, buyers (interest of credit and perspective character); lawyers, press, information agencies, stock exchange, financial consultants, audit firms, competitors (indirect interest); state and legislative bodies (fiscal interest); investors, shareholders (financial interest).

Operations on information transformation are realized in the financial potential of the production enterprise technological environment from the moment of its receipt to the moment of customer-user transfer.

Thus, the improvement of technological support can optimize the work of the financial potential sub-systems and is a tool that forms an information exchange. The main purpose and purpose of resource flows is the optimization of the work of the production enterprise achieved by their improvement on many features, among which the optimum of their organization is of great importance [8, p. 33]. The paper proves that the concept of "optimal organization of resource flows" requires a certain range of conditions, such as speed of transfer and reception; intensity; completeness; responsibility; economics; predictability.

Research on the state of the resource system of financial potential production enterprises allowed us to define its problem, namely [4, p. 85-135], [8, p. 33]:

- problems of organization of resource flow related to the existence in the practice of cases management: absence of division of powers within the financial service; duplication of resource flows in financial service units and impossibility of their sudden transformation if necessary;

- problems of resource movement related to the existence in the practice of cases management: use of temporary regulations of resource exchange (creates a possibility of conflict of interests of financial service units); lack of resources on priority financial projects; unsettled sequence of their receipt, transfer, formation, and

processing; violation of the procedure of resource storage;

- problems of responsibility for the movement of resources – the most effective is a group and not an individual system of responsibility for the observance of terms, target use of resources, and the order of their provision.

Systematization of problems was carried out in scientific research of resource systems of trade enterprises of Ukraine [8, p. 33]. The study proved possible to optimize the state of the resource system of production enterprises of Ukraine based on the provision of the following conditions:

- timeliness, completeness, and quality of resource movement;

- regulation of the resource exchange between structural subdivisions and officials of the enterprise;

- taking into account all variants of receiving, transfer, formation, processing, and storage of resources;

- personal responsibility of officials for violations of terms, unauthorized use of resources, distortion of content, and the procedure of their granting.

Therefore, compliance with the above conditions is achieved by improving the technological support by the financial potential of the production enterprise modern management paradigm, in particular, BS implementation as a tool capable to provide the necessary resource subsystem optimization [4].

Optimization of the resource system at the application of the Balanced Scorecard is caused by such features [4, p. 384-419]:

– the FPPE management methodology envisages the orientation of analytical, planning, and control systems of financial management to the single goal realization;

– the information security system, which early warns managers about deviation from the specified action program, synthesizes resource flows on the most promising areas of activity, eliminates the risk of delay, and lack of resource security to the requirements of management, and informs every employee about objects of personal responsibility;

– the software of the information system is maximally adapted to the needs of financial management, and by technological characteristics ahead of the existing

variants of information systems;

– the system of organizational support provides for the formation of network organizational structures of financial management, capable to provide: an effective division of works and cooperation in the financial service.

The conclusions are confirmed by the comparison of the Microsoft Balanced Scorecard Framework (VSF) with modern information systems used by domestic production enterprises (Table 1): 1) Production resource planning system (MRP II); 2) enterprise resource planning system (ERP); 3) planning and management system (MRS); 4) supply chain management system (SCM).

**Table 1**
**Analysis of modern information systems of the enterprise**

| Main characteristics | Variants of information systems | | | | |
|---|---|---|---|---|---|
| | BSF | MPC | SCM | ERP | MRP II |
| Technology of communication management and interaction between employees, subdivisions | + | + | + | + | + |
| Technology of external environment management | + | + | + | + | |
| Technology of providing accounting functions, monitoring and planning | + | + | + | + | + |
| Technology of output of all indicators of activity in real time mode | + | - | - | - | - |
| Technology of operative warning about the management decisions made and their results | + | - | + | - | + |
| Technology of assistance in management decisions and program work (consultative) | + | + | - | + | - |
| Technology of regulation of access to the database | + | - | - | - | - |
| Suitability to the FPPE requirements | + | + | - | + | + |

Source: developed based on [2, p. 298-323, 17-19]

The need for a detailed study of the structure of the resource provider is determined by the qualities of its separate sub-systems. As research of scientific literature on management issues has shown [4; 8, p. 29-40], [2, p. 69-313]:

- personnel and financial support have the same structure for all production enterprises;

- organizational and informational support change their structure and personal characteristics depending on the received technological support;

- technological support is variable (methodical support is determined by the adopted tool of realization of the management paradigm, forming different orders of

actions on the realization of financial management).

The above provisions make it necessary to turn to detailed structuring of such elements of FPPE resource provision, as (Figure 4): information support; organizational support.

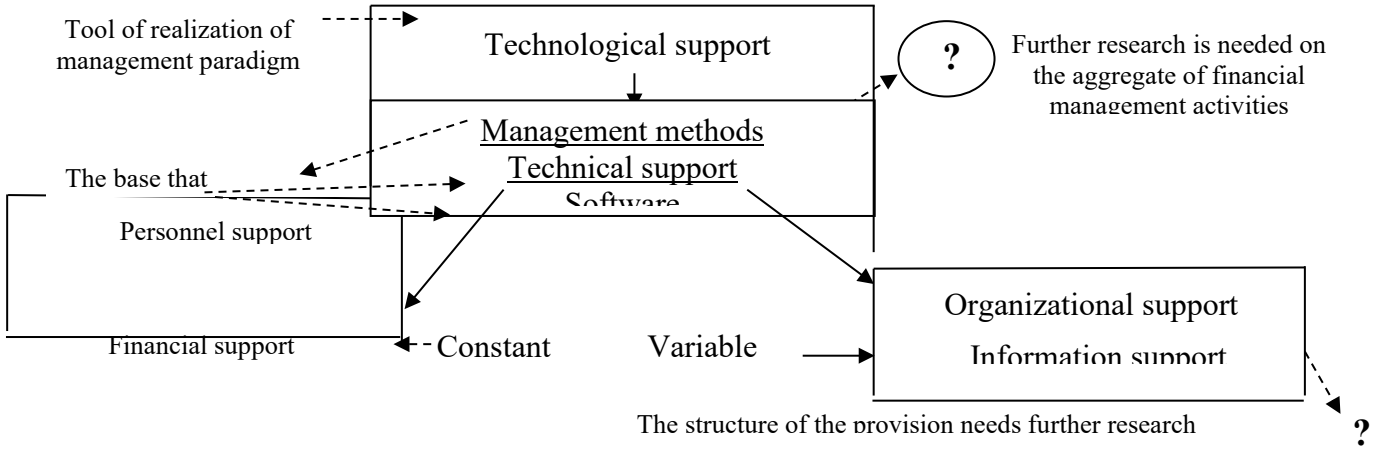


**Figure 4. Identification of elements of the resource support system that require detailed study**

Sourse: developed by the author

The design of resource provision of the financial potential of production enterprises allowed us to make the following conclusions:

- resource provision is a functional system that solves the issue of continuous, purposeful, timely allocation of resources in the necessary quality and quantity for analysis, planning, and preparation of operational management decisions within the FPPE framework;

- the structure of resource provision is a complex resource system (financial resources, information resources, organizational resources, personnel resources, technological resources, and streams of all given resources), communicative environment (channels of resource movement and connections between them), technical means (media and information transmitters). Technological resources and their flows create a communicative environment;

- the optimization of the state of the resource system of production enterprises of Ukraine is achieved through the optimization of technological support by the financial potential of the production enterprise modern management paradigm, in particular, the Balanced Scorecard implementation.

The results determined the need for structuring: 1) information support of financial potential of the production enterprise; 2) organizational support of financial potential of the production enterprise; 3) elements of the financial potential of the production enterprise management methodology.

## Conclusions

Resource provision is a functional system that solves the issue of continuous, purposeful, timely allocation of resources in the necessary quality and quantity for analysis, planning, and preparation of operational management decisions within the financial potential of the production enterprise framework. The structure of resource provision is a complex resource system (financial resources, information resources, organizational resources, personnel resources, technological resources, and their flows), communicative environment (channels of resource movement and connections between them), and technical means (media and information transmitters). Technological resources and their flows create a communicative environment.

Analysis of the financial potential of the production enterprise resource support subsystem of domestic production enterprises reveals the need for improvement. This is due to general problems in the organization of resource flow, regulation of resource exchange, and responsibility for resource flow. This situation is connected with the imperfect organizational support of the financial potential of the production enterprise. It has been established that the types of organizational structures of financial management used by domestic enterprises complicate the process of goal coordination, create difficulties in carrying out control functions, synthesize significant costs for coordination of communication of all levels of management, create risks of legislative conflicts and duplication of management functions in each sub-section, etc. The dominant use of control centers in the functional structure of the financial service leads to the narrow specialization of personnel of domestic enterprises and a decrease in its efficiency in the conditions of complex, diverse, and hostile environments. The identified problems significantly increase the lack of managerial technologies.

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# CHAPTER V.
# STRUCTURING OF INFORMATION AND ORGANIZATIONAL RESOURCES OF THE FINANCIAL POTENTIAL OF THE PRODUCTION ENTERPRISE

## Introduction.

The financial potential of the production enterprise (or - FPPE) resource supply project makes it necessary to apply to the structural research of its information and organizational resources used in the implementation of the management paradigm. The BS use as an implementation tool of targeted management creates the need for structural research of the resources outlined in the perspective of their specific needs. That is the need to form a structure capable of ensuring the realization of the tasks of the BS and the BS functions.

Differences in the understanding of "information resources" and "organizational resources" define the different range of requirements of the financial potential of the production enterprise in information and organizational resources form the different structure of their structure.

The specificity of the needs of information and organizational resources of financial potential of the production enterprise allows the state: 1) information resources of the financial potential of the production enterprise, in a structured form, it is expedient to investigate as a synthesis of internal, external, and reference resources; 2) organizational resources of the financial potential of the production enterprise, in a structured form, it is expedient to investigate as a synthesis of functional and hierarchical resources. Thus, it is expedient to structure the information resources of financial potential of the production enterprise in the following ways: external and internal information resources; reference information resources.

## 5.1. The financial potential of the production enterprise information and organizational resources needs

The study of the composition of the external financial environment of the enterprise provides an opportunity to satisfy the needs of information resources for the financial potential of the production enterprise by forming its external component and allocating in its internal structure the main groups of information (Table 1).

**Table 1**
**Composition of external information resources of financial potential of the production enterprise**

| External information resources | Source of formation |
|---|---|
| Group 1. Information on counteragents and competitors: banks and credit unions; leasing companies and insurance companies; investment companies and funds; suppliers of products; buyers of products (target; target); competitors | public disclosure of corporate reporting, corresponding ratings with main results of activity, paid business-references of information companies |
| Group 2. Financial market indicators: Stock market indicators; credit market indicators; currency market indicators | periodic publications, stock data, currency exchange data, electronic sources of information |
| Group 3. Indicators of the country's overall economic development: indicators of macroeconomic development; indicators of sectoral development | publications of state statistics. |
| Group 4. Regulatory indicators: from the financial activity of enterprises; from the functioning of certain segments of the financial market | legislative acts adopted by the public administration bodies |

Source: Developed based on [1, p. 24-25]

The systematic data allows us to assert that the requirements for information resources of financial potential of the production enterprise are satisfied:

1. Information on the impact of the external financial environment on the enterprise functioning in making strategically important decisions in the financial management sphere. This defines the need for indicators of economic development in the two blocks of information [1, p. 25]:

- macroeconomic development (growth rate of domestic gross product and national income; the money emission volume; monetary incomes of the population; deposits of the population in banks; index of inflation; accounting rate of the central bank);

- branch development (volume of produced or sold products; total value of assets; the amount of own capital of enterprises; the amount of gross profit of enterprises;

profit tax rates, value-added and excise duty; index of prices for industry products).

2. Information on the financial market situation when making management decisions on portfolio formation and credit attraction.

Accordingly, the market situation should be considered in the three blocks [1, p. 25]:

- stock market situation: main stock instruments of the stock market and stock market; quotation prices of supply/demand of stock instruments; a generalized index of stock market price dynamics;

- conditions of the credit market: credit rates of commercial banks, differentiated according to the terms of the financial loan; leasing rate according to the types of assets being leased; deposit rates of commercial banks, differentiated on contributions (to requirements or urgent);

- the currency market situation: the official exchange rate, which the enterprise operates in the process of foreign economic activity.

3. Informing on the activity of contractors and competitors for making operational management decisions on the formation and use of financial resources (at the formation of this group it is expedient to take into account the leading contractors and main competitors of the enterprise) [1, p. 25].

4. Information on preparation of financial decisions related to peculiarities of state regulation of financial activity of enterprises, implemented using a regulatory group of indicators [1, p. 25].

The financial potential of the production enterprise information resources is satisfied by internal information resources, the structure of which is shown in table 2.

The systematic data allows us to assert that the requirements for information resources of financial potential of the production enterprise are satisfied [1, p. 28]:

1) informing users about the financial management efficiency: investors and creditors (in the formation of a portfolio of investments and attraction of loans), financial managers (in conducting general analysis of financial activity). This makes it necessary to use indicators of financial statements, features of which are [2]: a) providing an aggregated view of the efficiency of financial management;

**Table 2**
**Composition of internal information resources of financial potential of the production enterprise**

| Internal information resources | Source of formation |
|---|---|
| Group 1. Indicators of financial reporting | Balance, Report on financial results; Report on cash flow; Report on own capital |
| Group 2. Indicators of management accounting | Indicators describing the state of financial, personnel, information and organizational resources of FPPE (in regional terms, by structural subdivisions, by spheres of financial activity) |
| Group 3. Normative-planning documentation | system of internal standards regulating financial development of the enterprise; system of financial indicators of the enterprise; system of indicators determining the coordination of key goals, criteria, priorities of the enterprise activity and level of use of existing advantages |
| Group 4. Organizational and management documentation | documents describing the division of duties at the enterprise and its subdivisions |

Source: developed based on [1, p. 29], [2]

b) information indicators generalization; c) low frequency of development; d) use of cost indicators. The specified features make it impossible to use financial reporting as a single source of information when making managerial decisions in the sphere of financial activity;

2) the management is informed about the enterprise activity, receiving conclusions and assessments for planning, control, operational and prospective financial management, which makes it necessary to have indicators of management accounting. The advantages of this group of indicators (financial and non-financial indicators, high frequency of development, the possibility of structuring by subdivisions and types of activity, taking into account the rate of inflation) allow to apply it as an element of financial potential of internal information resources. Management accounting is built individually at each enterprise depending on the needs of management, with the formation of indicators in the range of certain groups. In this case, the formation of indicators is advisable to carry out in the cut-off of the BS components;

3) Information on the process of strategic, current, and operational control within the FPPE framework. It is advisable to carry out this with the help of the normative-plan indicators formed by such blocks [1, p. 31]:

- a system of internal standards for regulation of the financial development of the

enterprise (norms of enterprise assets, norms of equity and capital structure, norms of financial resources consumption, etc.);

- a system of financial development targets (indicators of financial plans);

- A system of indicators that reflects key goals, criteria, and priorities of the FPPE development;

4) informing the employees of the financial service about their functions, duties, and responsibilities for financial management realization turns an unorganized group of people into an effective and purposeful system. Such information is realized by organizational-management documentation as a means of establishing management relations [2, p. 69]: a) organizational documents on the division of functions, and competence; b) documents on the description of works. The functions of the financial service divisions are determined by the development and approval of several official provisions which have legal force within the enterprise most common documents of this group are the regulations on the financial service and the official instructions. However, when balanced scorecard uses there is the possibility to use the information dictionary.

In addition to the defined groups of information resources, a significant role in meeting the needs is given to reference information resources. The peculiarity of the group is the combination of the structure of external and internal information components (Table 3).

**Table 3.**
**Composition of reference balanced scorecard information resources financial potential of the production enterprise**

| Reference information resources | Source of formation |
|---|---|
| Group 1. General information on balanced scorecard | Training manuals on balanced scorecard, key terms used, reports on its implementation at other enterprises, records of seminars and press conferences on the given issue |
| Group 2. Practical recommendations on balanced scorecard development and implementation | Examples of balanced scorecard development and implementation at other enterprises, recommendations of consultants on its development and implementation |
| Group 3. Information on the balanced scorecard state of development and implementation at the enterprise | Reports on BS implementation in the subdivisions of the enterprise, at the enterprise as a whole; system of target orientations of the enterprise; balanced scorecard developed on hierarchical levels; feedback and comments of employees |

Sourse: developed by the author

The systematic data allows us to assert that the structure of internal information resources is determined by the needs:

-Training of personnel on the theory of the particle board and peculiarities of work with it, which requires general information on the issues of particle board;

- Development and implementation of the balanced scorecard form an objective necessity in the set of practical recommendations on the identified issues;

- Informing about the balanced scorecard state of development and implementation at the enterprise, realized through the feedback of the person responsible for implementation with employees of subdivisions (where balanced scorecard are implemented or developed).

According to the allocated financial potential of the production enterprise needs in organizational resources, their structure should be investigated as a synthesis of hierarchical and functional components. The following essence of organizational resources structure elements has been allocated:

- under the hierarchical structure they understand the allocation of different levels of management;

- under a functional structure understand the division of functions of management and types of activity of structural subdivisions.

The translation of the above-mentioned provisions into the formal process of the study of the structure of the organizational resources of the financial potential of the production enterprise allowed to determine the following sequence:

1) formation of the scheme of the organizational structure of financial management (OSFM), the definition of its characteristics;

2) development of the structure of subdivisions, identification of the main connections between them, and the order of management actions.

We will consider the process of designing organizational resources in the section of each of the allocated blocks. Under the category of organizational structure of financial management (or – OSFM) understand [4, p. 284-286]:

- a subsystem of the organizational structure of the management determines the subordination of tasks, positions, powers, and responsibilities, based on which the

financial service carries out its management activity;

- the system of relations and relations arising in the process of activity of the financial service between existing and created chains, and subdivisions according to the chosen strategy of development.

Under the above provisions, the organizational structure of financial management should understand the structure that performs the unifying role and provides the financial service with integrity qualities. The above-mentioned condition requires structural analysis of hierarchy shown in the establishment of strict, unambiguous, vertically-oriented dependence of elements organizational structure of financial management determines their powers, subordinates, and the possibility of interaction [4, p. 286]. The organization of the financial service of the enterprise depends on the volume of its financial activity, so: 1) a small volume of it allows the enterprise to refuse the financial service, and its functions to perform by the owner of the enterprise; 2) the average volume of its volume is most often caused by the fact that the functions of the financial service are based on accounting; 3) significant volumes of financial work require a functioning financial service represented by a separate organizational structure.

There is a dependence of the organizational structure of financial management type on the systematization of external changes within the framework of management responses at each level of the financial service [4, p. 280-300]. These changes include [4, p. 280-300]: 1) the individual integration of the time between changes exceeds the planning horizon and requires the financial service response creates implemented through temporary changes in organizational units (projects); 2) discrete, characterized by the existence of a time interval between uncorrelated external changes and the possibilities of the financial service to shift attention from one phenomenon to another. In this case, management uses a working group whose participants, having solved one task, concentrate on another; 3) systematically interrelated, have no time frame, and are imposed on one another, forming the need to create a permanent subdivision.

The above provisions explain the existence of different types of the organizational structure of enterprises' financial management so it is expedient to study their typology

according to the objective of the dissertation research it is expedient to conduct on the example of domestic wood-processing enterprises. As research objects of the organizational structure of financial management typology, enterprises with active financial services are selected and located in different regions of Ukraine. The results of the study are given in Table 4.

**Table 4.**
**Analysis of organizational structure of financial management types at domestic wood-processing enterprises**

| enterprises | organizational structure of financial management * | enterprises | organizational structure of financial management |
|---|---|---|---|
| CJSC "Putilsky lisokombinat" | 1 | JTI International Company | 1 |
| CJSC " Kharkivderev " | 3 | JSC "SPC-Galicia". | 2 |
| JSC " AVERS" | 1 | LLC Karpatnaftokhim | 1 |
| JSC " Nadvirnians'kyi lisokombinat" | 1 | Glencore Agriculture | 1 |
| JSC Ukrainska zaliznytsia | 3 | Sandora | 1 |
| Philip Morris | 1 | JSC "Motor Sich" | 1 |
| Interpipe | 1 | DTEK Naftogaz | 1 |
| DTEK Energy | 1 | LLC «Mykolaiv alumina refinery plant» | 1 |
| Kernel | 1 | JSC "DNIPROSPETSSTAL" | 1 |
| CJSC "Furniture-Trade | 2 | Carlsberg | 1 |
| CJSC " Precarpathian furniture factory" | 1 | Imperial Tobacco | 3 |
| Roshen | 4 | Ostchem | 1 |
| Cargill | 2 | Procter & Gamble | 1 |
| OJSC "Nikopol Ferroalloy Plant" | 1 | PJSC "DNEPRAZOT" | 1 |
| JSC "Naftokhimik Prykarpattya". | 1 | Coca-Cola HBC Ukraine | 4 |

Note:
* 1 - linear-functional organizational structure of financial management; 2 – division organizational structure of financial management; 3 – project organizational structure of financial management; 4 – matrix organizational structure of financial management.

The results of the study show that along with single cases of application of matric and design adaptive organizational structure of financial management types, there is a wide spread of linear-functional and division non-adaptive types. You can highlight these features of non-adaptive organizational structure of financial management functionality, centralization, hierarchy, stability; detailed division of labor, specialization of activity, consolidation of duties in standard organizational documents; central mechanism of control with application of all forms and methods [4, p. 286-

287].

To non-adaptive organizational structure of financial management received distribution in domestic wood-processing enterprises:

- Linear-functional structure are widely spread due to their small size. This creates conditions for the combination of unity and functional division of duties, and rights of employees of the financial service, with the possibility of parallel management of linear and functional services [4, p. 286-287];

- organizational structure of financial management offices do not have a wide range of use since the possibility of their implementation is only possible at large enterprises with a need for intensive financial service. This is connected with the formation of organizational structure of financial management of this type on the combination of centralized financial management in the upper hierarchical levels of the financial service and decentralized activity of its separate subdivisions [4, p. 294].

The lack of widespread adaptive organizational structure of financial management connected with the orientation of the majority of domestic production enterprises to the bureaucratic regulation of financial service activity, the detailed division of labor by types of work, and comprehensive declaration of levels of management impossible within the limits of the organizational structure defined types [4, p. 287].

Therefore, significant problems create the orientation of adaptive OSFU on the principle of double subordination of the executors (subordination of the head of the financial service and the head on implementation of the temporary program) and high dynamics structure (changes when a new project or program of action is created). Decentralization, flexibility, universality, the timing of the works, creation of them "under the purpose" and orientation on identification and solution of problems, use of administrative and social-psychological methods of coordination and control are fundamentally new for modern management experience [4, p. 287].

Since there are cases of application of all the listed organizational structures of financial management, there is a need to analyze their positive features and disadvantages that complicate the management process within its framework (Table 5).

**Table 5.**
**Systematization of positive features and disadvantages most used organizational structures of financial management**

| OSFU | Positive features | Negative features |
|---|---|---|
| 1 | - providing high professional specialization of employees;<br>- an accurate determination of the place of decision-making and necessary resources;<br>- structuring facilitation, formalization, and programming of financial management processes; | - the complicated process of horizontal coordination of goals;<br>- low responsiveness to changes and long-term adoption<br>- managerial decisions;<br>- inefficient construction of communications, difficulties in carrying out control; |
| 2 | - great independence of managers of financial services of divisions;<br>- organization of policy relations on the linear principle;<br>- strong coordination tools;<br>- quick reaction to changes; | - high coordination costs;<br>- cooperation benefits loss (need to centralize the performance of certain functions);<br>- duplication of department management functions; |
| 3 | - dynamic and flexible structure;<br>- rapid response to changes in financial strategy;<br>- optimal use of resources and orientation to innovations;<br>- reduction of the operational load on the head; | - constant regulation of tasks of competence of project managers;<br>- major loss of time for coordination;<br>- the risk of policy conflicts;<br>- high management costs;<br>- the complication of the information network; |
| 4 | - bending structure;<br>- horizontal integration and coordination of functional areas;<br>- rapid strategic response;<br>- optimal use of resources | - institutions and project managers conflicts;<br>- dissatisfaction of managers with terms of performance of projects tasks |

Note:
* 1 - linear-functional organizational structures of financial management; 2 – division organizational structures of financial management; 3 – project organizational structures of financial management; 4 – matrix organizational structures of financial management.
Source: Developed based on [4]

According to the analysis results, the following organizational structures of financial management types contain the considerable number of disadvantages that complicate the process of financial management and determine the need for their significant optimization.

According to scientific sources on the balanced scorecard issues in addition to a modern management paradigm in the area of organizational resources of the financial

potential of the production, enterprise causes the emergence of certain transformations that optimize the organizational structures of financial management [4, p. 286 - 300], [5, p. 239; 6, p. 5]. It is expedient to specify such transformations using their definition and content characteristics.

The main transformations of organizational resources caused by the implementation of the balanced scorecard should be considered [4, p. 286 - 300], [6, p. 161]:

1) transformation of non-adaptive organizational structures of financial management into adaptive, according to Paul R. Niven is carried out as a result formation of a complex of external and internal factors influencing their content. The internal factors of the organizational structures of financial management transformation are: a) the formation of strategically oriented activity of the financial service; b) the formation of new rules and rules of organizational behavior; c) the creation of new communicative relations. The external factors of organizational structures transformation are updating of information acquisition and processing facilities; d) the creation of a new mechanism of action coordination, planning, and control; e) introduction of approach to management problems; f) new management methods formation;

2) formation of integration and differentiation processes in organizational structures of financial management and its subsystems. This includes: a) distribution of work in the financial service and between its parts in such a way that each of them has a certain completion within one subdivision; b) the creation of a such level of cooperation ensures the achievement of strategic goals within the limits of requirements of the external financial environment; c) ensuring the balance of interests between individual parts of the financial service.

The above transformations form OSFM's new network, in which there is no pronounced hierarchy of management and woodworking relationships [7]:

1) The components of such a system are diamond-shaped structures characterized by: a) the horizontal and vertical links between its elements; b) the presence of inter-level interaction (subordination of one employee or department to several heads of

bodies located at different levels of hierarchy).

2) Network organizations have some limitations [2]: a) expansion of the form and the borders of their internal capabilities; b) the appearance of modifications that contradict the internal logic of formation.

However, network organizational structures of financial management can effectively control the internal logic of the system.

The Balanced Scorecard implementation formulates the features of network organizational structures of financial management characterized as the most effective [6, p. 161-263]: a) flexible structure (mobility, ability to adapt to changes); b) adequate organizational culture and commitment of individuals (creation of a new social contract oriented toward results and work process); c) the aspiration to diversification, ensuring equality of roles and functions, orientation on innovation, risk, and constant transformation; d) the financial management role as a support system of financial activity.

## 5.2. Main features of network organizational structures of financial management

Accordingly, it is possible to distinguish the types of network structures in which different types of organizational structures of financial management can be transformed (Table 6) [2].

**Table 6.**
**Main features of network organizational structures of financial management**

| Networks | Typology of primary organizational structures of financial management | Peculiarities of the organization |
|---|---|---|
| Constant | Linear-functional | creation of market-oriented links with limited flow of information from top to bottom |
| Internal | Matrix, project | joint responsibility for financial resources on a value chain and use of market mechanisms |
| Dynamic | Divisional | independent subdivisions of the financial service along the value chain form temporary unification |

Sourse: formed based on [2; 8]

Thus, at the balanced scorecard implementation, organizational structures of financial management are carried out with effective optimization of all structures used by production enterprises.

The organizational resources of the financial potential of the production enterprise can be considered in the organizational structures of financial management realized through the construction of management centers formalized as [3, p. 63-70]:

1) centers of responsibility – structural subdivisions with a fully controlled part of financial activity: cost center (controls expenses); income center (controls expenses and profits of the enterprise); income center (controls revenues); investment center (controls investment activity);

2) financial accounting centers – structural subdivisions carry out basic and additional types of activity with direct influence on incomes and expenses: profit-center (provides profit); cost center (does not directly create profit); venture center (provides activity with a perspective increase of profit);

3) management centers – structural subdivisions with separate functions of financial management: operation center (work with contractors); investment center (investment management); financial analysis center (activity analysis); financial market center (work with the financial market); financial control center (coordination of all types of activity); financial and credit planning center (financial planning).

Among domestic production, enterprises are the most practical application of management centers for the organizational structures of financial management functional structures construction. Accordingly, the current organizational structures of financial management have problems related to the narrow specialization of personnel, and the low efficiency of its operation in the conditions of a complex, diverse and expensive external environment.

Accordingly, the most effective form of management action is responsibility centers, whose structure [3, p. 88]:

- creates fully diversified financial links that are the best for organizational structures of financial management integrated with balanced scorecard;

- fully takes into account the indicators of sustainability, complexity, diversity,

and the hostility of the environment.

Formation of the financial potential of the production enterprise organizational resources cannot be realized without proper organizational work (drawing up a list of certain managerial actions of the enterprise), therefore within the framework of the research, it is necessary to specify them. Appropriate management actions should be taken [3, p. 69; 9]:1) the division of duties is realized by establishing general and individual operating modes, issuing job descriptions, rules, and regulations on the organization of financial management; 2) organizational inspection is found in diagnostics of organizational structure and acceptance of managerial decisions, instruction, instructions, and explanations to instructions, regulations, orders, etc.; 3) the document circulation is a subsidiary and provides external links of the financial service and relations between its structural subdivisions; 4) the publication of management acts provides the legal form of the expression of managerial actions of the employees using orders and orders.

Thus, the organizational and information resources of the financial potential of the production enterprise are formed as a result of [10]: 1) a combination of external, internal, and reference resources of the balanced scorecard; 2) a combination of hierarchical and functional components.

External information resources of the financial potential of the production enterprise summarize information on [10; 11]: 1) competitors; 2) contractors; 3) the situation of the financial market, the general economic development of the country; 4) regulatory indicators.

The internal information resources of the financial potential of the production enterprise summarize the indicators [10; 11]:1) financial statements; 2) management accounting; 3) normative-planning documentation; 4) organizational and executive documentation.

Reference resources summarize: information on the balanced scorecard issues; practical recommendations on the balanced scorecard development and implementation; information on the balanced scorecard state development and implementation at the enterprise.

The organic combination of the defined groups of organizational resources best meets the balanced scorecard needs: 1) the hierarchical component of organizational resources is realized through different types of organizational structures of financial management at domestic enterprises. Each of the above types has disadvantages that synthesize the need for their optimization. The balanced scorecard in financial potential organizational resources area forms transformations that organizational structures of financial management optimize; 2) the functional component of organizational resources is realized through the different management centers' construction (the most effective are responsibility centers). Their structure creates financial links that are most suitable for organizational structures of financial management with a balanced scorecard integrated and takes into account the complexity, diversity, and hostility of the external financial environment.

We shall consider the formation of centers of responsibility on a Sandora example. The enterprise financial service consists of the commercial department (the division selling the products), the department of procurement (the division is responsible for compliance with the standards of production costs), the financial department, the accounting department, the planning and analytical service (subdivisions responsible for fixing and agreeing on the indicators of budgets formed by production shops, the commercial department and the department of procurement, monitoring of budget execution); general directorate (responsible for financial results from the current activity, current profit (losses), the efficiency of investment activity). The company also operates a production department, which is not part of the financial service but is responsible for compliance with production cost standards.

Given the responsibility structure and structural units and managers' duties possible structure of responsibility centers are as follows [10; 11; 12-13]: 1) income center (commercial department). The effectiveness of the income center is determined by the enterprise’s income maximization within the resources allocated for this purpose; 2) cost center (purchasing department, production department). Efficiency is determined by the use of established limits in material resources production; 3) income and investment center (directorate general). Efficiency is determined by profit and

profitable investment activity; 4) functional center (finance directorate, accounting, planning, and analytical service) is a possible function of cross-cutting management of key performance indicators of the income center, cost center, income, and investment center. The center can carry out internal monitoring (coordination of activity indicators, budget items formed by different responsibility centers, monitoring of their implementation); 5) balanced scorecard center. The effectiveness of the center by the positive result of balanced scorecard use was determined. The allocation of this center can be carried out through the introduction of new staff units, the number of which depends on the size of the financial service. The following posts will be sufficient for this enterprise: the balanced scorecard controller (control of the correctness of the balanced scorecard application); the internal consultant (consultation on the balanced scorecard). These positions can be created by combining positions, as the attraction of additional staff will lead to increased management costs.

**Conclusion**

The structure of the centers of responsibility allows concluding that:

- it is possible responsibility centers formation at large and medium-sized enterprises with active financial service;

- the main criterion for the transfer of a structural subdivision of the financial service to the responsibility center is the duties and powers of structural units and financial managers. It is unacceptable to hold structural units and financial managers responsible for those indicators which are not controlled by them;

- it is incorrect to allocate the managers identical powers for different responsibility centers (in this case it becomes impossible to be responsible for the indicators allocated as control objects);

- the financial service's initial structure and proposed structure of centers responsibility do not necessarily have to coincide (inconsistency should lead to reorganization of the financial service);

- in the responsibility centers forming process, their multi-level hierarchy of responsibility can be formed (if the enterprise has branches with operating financial services or produces several types of products);

- the responsibility centers' creation does not staff increase result of the financial service and in management, costs increase.

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# CHAPTER VI.
# STRUCTURING THE ELEMENTS OF THE MANAGEMENT METHODS OF THE FINANCIAL POTENTIAL OF THE PRODUCTION ENTERPRISE

## Introduction

Research of modern models of implementation of program target financial management, revealing their advantages and disadvantages, comparison of positive and negative features, allowed to offer balanced scorecard as the basis of formation of elements of the method of the financial potential of production enterprise management. According to the above, the managing method such potential for production enterprises will be considered by us as a combination of actions to streamline the development and integration of the balanced set of financial and non-financial indicators into the financial service. In this connection important to form a description of such actions in terms of the:

- the object of the basic algorithms of the analysis methodology;
- the object of the basic algorithms of preliminary estimation of potential;
- the choice of estimation model (in particular, the development and introduction of balanced indicators in the financial service).

The described description will help you to systematically study such actions.

## 6.1. Design of methodological resources of the financial potential of production enterprise

Understanding the methodology as a combination of actions on implementation of specific methods according to a certain algorithm for the achievement of the set goals allowed us to consider the method of management of the financial potential of the production enterprise as an action to streamline the balanced scorecard development and integration process into the financial management system. The management method of the financial potential of the production enterprise is structured

in the following way:

- analysis methods (preliminary estimation of potential);
- elements of the methods of financial planning and control (development and cascading Balanced Scorecard).

The allocation of the methodical resources of the financial potential of the production enterprise should be carried out according to the algorithm shown in fig.1.

We will consider the contents of each stage of the algorithm of the object-making of elements of the financial potential of the production enterprise control method. The first stage involves defining the peculiarities of the process of the preliminary study of the state and the main results of the financial potential of the production enterprise (or - FPPE) functioning due to the:

- influence of the external financial environment;
- financial, personnel, organizational, and technological resources.

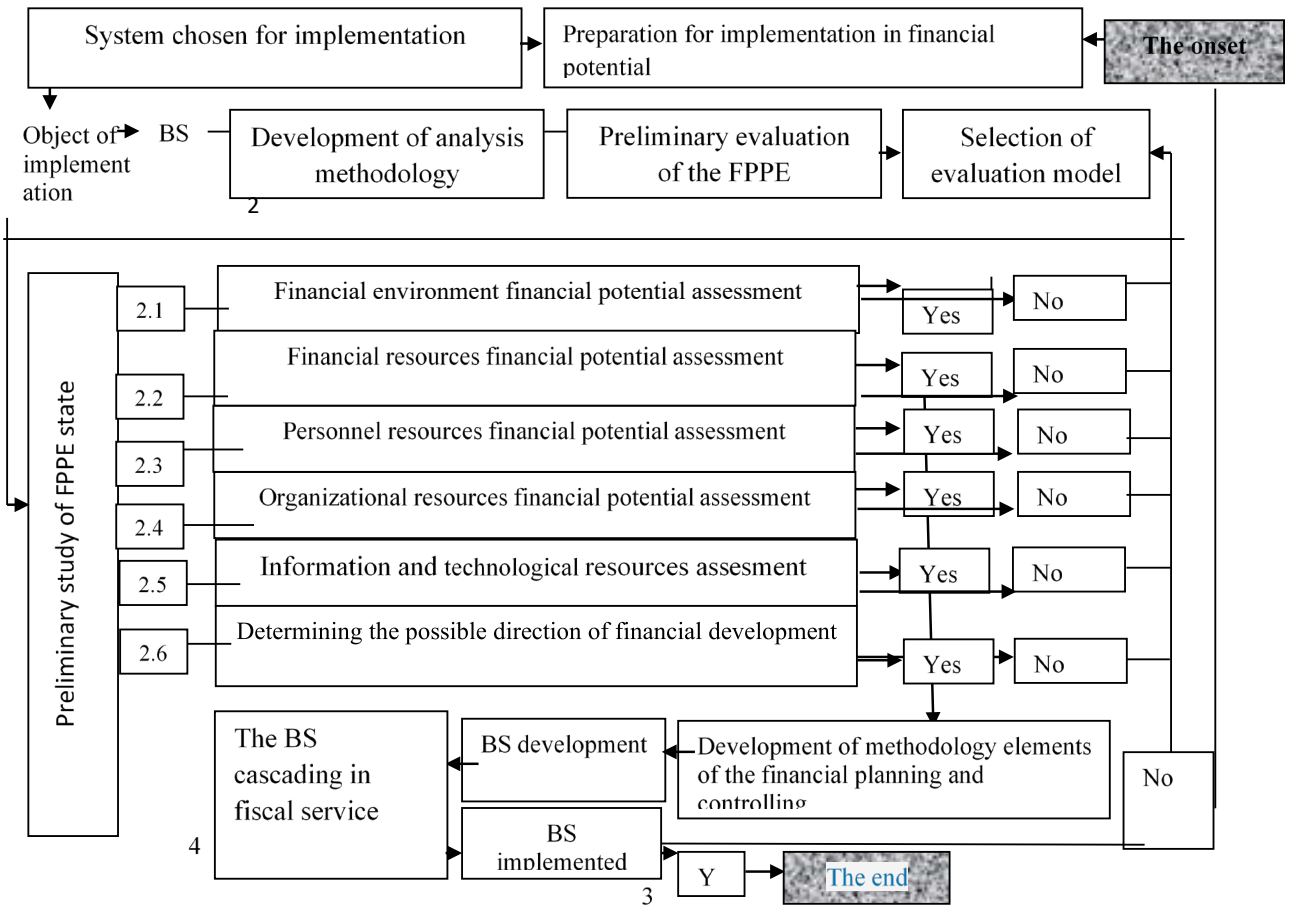


**Figure. 1. Algorithm of financial potential of the production enterprise control method designing**

Source: formed based on [1-2; 3]

Let's look at the content of each stage of the algorithm in more detail.

The first stage involves defining the peculiarities of the process of the preliminary study of the state and the main results of the financial potential of the production enterprise functioning due to the influence of: a) the external financial environment; b) financial, personnel; c) its organizational and technological resources.

The potential inability of the existing analysis models to take into account the defined components [4] makes it necessary to develop an alternative balanced scorecard assessment model.

The research of the balanced scorecard structural idea, which is the conceptual basis for further development of the methodical resources of management, reveals four components existence (finance, clients, internal business processes, training, and development), taken into account in the financial potential of the production enterprise preliminary evaluation, along with this noticeable absence of their scientific substantiation and aiming at overall enterprise strategy management.

This creates significant problems with the application of the term "business process", concerning the interpretation of which scientists today do not have a single approach [5, p. 9-10]. The term "business process" implies the application of a process approach to financial management, the experience of the practical application of which is minimal.

The inexpediency of using the term "business process" in the balanced scorecard structural idea is connected with the inaccuracy of the process approach [5, p. 27-59]: a) construction of the hierarchy of business processes leads to the formation of two management systems at one enterprise (process management systems along with existing administrative-functional); b) the creation of a process model is labor-intensive, difficult, and expensive (the description should be subject to all financial activity of the enterprise, not separate operations and standard documents since managers need real regulations, not abstraction); c) application of the approach requires additional involvement of management staff (which leads to increased management costs); d) existing procedures for the selection of business processes are imperfect.

The allocation of intra-network, inter-functional and secondary business

processes leads to: a) problems in management, the worsening process of coordination of management decisions; b) the appearance of a system of regulations, which is too standardized and not suitable for each other; c) loss of part of functions and works of subdivisions; d) the emergence of conflicts of interest in the struggle for resources.

The allocation of major (which add value), additional (outstanding), and managerial business processes is rather problematic and inappropriate for enterprises of up to 100 people. It is impossible to consider managerial business processes separate from the basic activity (this leads to a break in the management cycle). It is impossible to assess the results and effectiveness of managerial business processesю

Incorrect is the use of the component "clients". Without applying the influence on the financial strategy of the factor of direct influence of "clients", we consider it expedient to account for other factors of the external financial environment (both direct and indirect influence), if they are strategically important.

These shortcomings determine the need for optimization of the balanced scorecard structural idea and account for the influence on ensuring the viability of the financial potential of the production enterprise and their scientific substantiation. It is necessary allocation the: a) the component "external financial environment" instead of the existing "clients" allow taking account of the influence of the external environment; b) of the components "financial resources of the enterprise", "personnel resources of the financial service", "organizational resources of the financial service", "technological resources of the financial service" instead of "finance", "training and development", "business processes". This allows account for the influence of the financial potential of the production enterprise's internal environment and achieves specificity in balanced scorecard components allocation; c) of the financial strategy of the enterprise as the balancing basis.

The following provisions allow the presentation of the optimized balanced scorecard structural idea of financial potential of the enterprises (figure 2).

Construction of an evaluation model of the financial potential of the enterprise (according to the defined scheme in figure 2) requires segmentation of its strong and weak places.

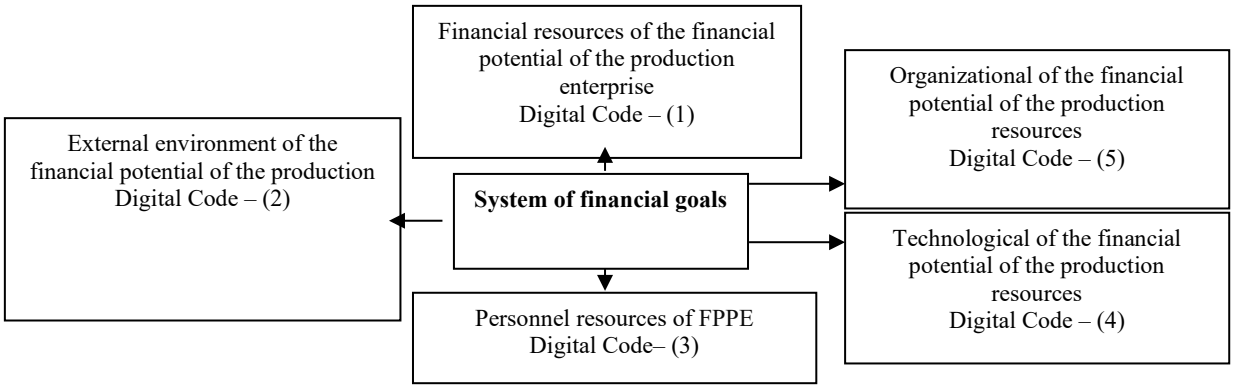


**Figure 2. Optimized structural idea of balanced scorecard for financial potential of the enterprise**

Source: formed based on [1-3]).

## 6.2. Process of segmentation of strong and weak places of the financial potential of the enterprise

Process of segmentation requires description of modern tools of classification of strong and weak places of financial potential of the enterprise (Table 1). A system of quantitative and qualitative criteria is also introduced to complete the assessment, as without their assistance it is difficult for the financial manager to assess the state of the financial potential of the production enterprise on the identified problems.

**Table 1**
**Process of segmentation of strong and weak places of financial potential of the enterprise**

| № | Segmentation object | Description of segmentation process |
|---|---|---|
| 1. | the external environment segmentation | The external environment indirect influence factors segmentation by the available opportunities and threats:<br>- Grouping of factors by the PEST-analysis system*;<br>- Grouping of factors SWOT- analysis system**. Determining their level of positive influence on the negative impact on strategic financial development in terms of: A (weak); B (medium); C (strong) |
| | | The external environment direct influences factors segmentation:<br>- Grouping of entities of financial relations with the enterprise and highlighting factors influencing the effectiveness of these relations in the strategic period;<br>- Grouping of factors by SWOT analysis system**. Determination of their level of positive influence on the negative impact on strategic financial development in terms of: A (weak); B (medium); C (strong) |

Continuation of the Table 1

| | | |
|---|---|---|
| 2 | the internal environment segmentation | The internal environment factors segmentation:<br>- Grouping of factors by the components (1,3,4,5) and evaluation parameters;<br>- Point estimation of factors in the system from 0 to 5 points;<br>- Ranking of factors by their influence on the overall risk of financial activity according to the SNW-analysis system (where the marks are used: S2 (minimal), S1 (small), N (average), W1 (high), W2 (maximum); W3 (crit)). |

Note:
* the PEST analysis (sometimes called step) is a marketing tool designed to identify political (P), economic (E), social (S), and technological (T) aspects of the external environment that affect the business of the company.
** the SWOT analysis is one of the most widely used analytical methods that allow to assess of the strengths and weaknesses of the company fully, as well as the opportunities and threats that affect it.
Source: formed based on [6, p. 118], [3]

The segmentation of problem places is carried out in the proposed technology according to the principle of estimation of balanced scorecard components in the five blocks influence formation of the financial strategy of the enterprise:

1) covers traditional financial indicators that characterize the state of financial resources. The assessment of financial resources of the enterprise is carried out main directions:

- liquidity and solvency. Liquidity and solvency are the leading characteristics of financial resources in the short term. Consolidated indicators of liquidity and solvency of the enterprise are shown in Table 2.

**Table 2**

**Consolidated indicators of liquidity and solvency of the enterprise**

| QUADRANT 1 | QUADRANT 2 | QUADRANT 3 |
|---|---|---|
| **S 2. Minimal**<br>ratio of absolute liquidity $\geq 0{,}2$<br>Minimal risk allows to be sure in timely return of current obligations | **S 1 Small**<br>ratio of absolute liquidity $\approx 0{,}19$<br>Low risk of the timely return of current obligations | **N A**verage<br>ratio of absolute liquidity $\approx \mathbf{0,15}$<br>The average risk of not returning current obligations, but their timely payment is doubtful |
| **QUADRANT 4** | **QUADRANT 5** | **QUADRANT 6** |
| **W3 C**ritical ratio of absolute liquidity $\approx 0$<br>The critical risk is not to pay for current liabilities by mobilizing liquidity assets | **W2 Maximum** ratio of absolute liquidity $\approx 0{,}05$<br>The maximum risk is not to pay for current liabilities by mobilizing liquidity assets | **W1** High<br>ratio of absolute liquidity $\approx 0{,}1$<br>High risk not to pay for current liabilities, mobilizing liquidity assets |
| **QUADRANT 1** | **QUADRANT 2** | **QUADRANT 3** |
| **S 2. Minimal**<br>I$\boldsymbol{mmediate\ liquidity} \geq \mathbf{1}$<br>Minimal risk allows to be sure in timely payment of current obligations on condition of timely settlements with the debtor | **S 1. Small**<br>I$\boldsymbol{mmediate\ liquidity} \approx 0{,}9$<br>Small risk of timely repayment of current obligations on condition of timely settlements with the debtor | **N A**verage<br>I$\boldsymbol{mmediate\ liquidity}$ тл $\approx 0{,}8$<br>Average risk of non-payment of current obligations on condition of timely settlements with the debtor (possible delay of payments) |

Continuation of the Table 2

| QUADRANT 4 | QUADRANT 5 | QUADRANT 6 |
|---|---|---|
| **W3 C**ritical<br>I***mmediate liquidity*** $\leq 0{,}5$<br>Critical risk of non-payment of current obligations on condition of timely settlements with the debtor | **W2 Maximum**<br>I***mmediate liquidity*** $\approx 0{,}7$<br>The maximum risk is not to pay current obligations provided that settlements with the debtor are carried out in a timely manner | **W1** High<br>I***mmediate liquidity*** $\approx 0{,}7$<br>High risk of not paying current obligations on condition of timely settlements with the debtor |
| **QUADRANT 1** | **QUADRANT 2** | **QUADRANT 3** |
| **S 2. Minimal**<br>Current liquidity $\geq 2$<br>Minimal risk of non-payment of current obligations | **S 1. Small**<br>Current liquidity $= \{1{,}9 - 1{,}7\}$<br>Low risk of non-payment of current obligations | **N A**verage Current liquidity $= \{1{,}6 - 1{,}4\}$<br>Average risk of non-payment of current obligations (possible delay of payments) |
| **QUADRANT 4** | **QUADRANT 5** | **QUADRANT 6** |
| **W3 C**ritical<br>$K\_nл = \{1{,}0 - 0\}$<br>Critical risk not to pay current obligations | **W2 Maximum**<br>$K\_nл = \{1{,}1 - 1{,}05\}$<br>Maximum risk not to pay current obligations | **W1** High $K\_nл = \{1{,}3 - 1{,}1\}$<br>High risk of not paying current obligations |

Source: formed based on [6, p. 118; 7, p. 26]

The term "liquid" characterizes the smooth transformation of the property into means of payment, the shorter the time required for the transformation of a particular type of asset, the higher its liquidity. Solvency reflects the possibility of an enterprise being responsible for its obligations at a specific time (if the enterprise is unable to be responsible for its obligations, it is insolvent and can be recognized as bankrupt in court). In practice, the liquidity and solvency degree of a particular enterprise can be determined based on conformity of "quantitative guarantee of liquidity and solvency", which is established based on analysis of the system of financial factors (absolute, fast, current liquidity), normative values of financial factors and scales of risk gradation;

- financial stability. Financial sustainability is a key feature of long-term financial resources. Consolidated indicators of financial stability indicators of the enterprise shown in Table 3. If the enterprise is financially stable, it can withstand unexpected changes in market conditions and not bankrupt. The higher the indicators of financial stability, the greater the advantages over other enterprises in the same sector of the economy in obtaining loans and attracting investments has a specific enterprise. In practice, the financial stability of a particular enterprise can be determined based on the conformity of a "quantitative guarantee of financial stability", which is established based on the analysis of the system of financial factors (autonomy, flexibility, financial

**Table 3**

**Consolidated indicators of financial stability indicators of the enterprise**

| QUADRANT 1-4 | QUADRANT 2-5 | QUADRANT 3-6 |
|---|---|---|
| **S 2.** Minimal $Autonomy\ ratio \geq 0{,}6$ Minimal dependence on external sources of financing (high share of own capital, advanced in activity) | **S 1** Small $Autonomy\ ratio = \{0{,}59 - 0{,}54\}$ Small dependence on external sources, financing (may require minor external financing) | Average **N** $Autonomy\ ratio = \{0{,}53 - 0{,}43\}$ Average dependence on external sources of financing (lack of share of own capital, advanced in activity). |
| **W3.** Critical $Autonomy\ ratio < 0{,}4$ Critical dependence on external sources of financing (less than 40% of own capital in advance) | **W2.** Maximu $Autonomy\ ratio = 0{,}4$ Maximum dependence on external sources of financing (40% of own capital is in advance) | **W1** High $Autonomy\ ratioa = \{0{,}42 - 0{,}41\}$ High dependence on external sources of financing (42%-41% of own capital in advance) |
| **S 2.** Minimal external current funding $\geq \mathbf{0,5}$ Minimal dependence on external current financing (more than 50% of working assets are provided by their own and equal funds) | **S 1** Small external current funding $\approx 0{,}4$ Low dependence on external current financing (60% of working assets are secured by short-term loans) | **N** Average external current funding $\approx 0{,}3$ Average dependence on external current financing (70% of working assets are secured by short-term loans) |
| **W3.** Critical external current funding $\approx 0$ Critical dependence on external current financing (100% of working assets are secured by short-term loans) | **W2.** Maximu external current funding $\approx 0{,}1$ Maximum dependence on external current financing (90% of working assets are secured by short-term loans) | **W1.** High external current funding $\approx 0{,}2$ High dependence on external current financing (80% of working assets are secured by short-term loans) |
| **S 2.** Minimal financial dependence ratio $\leq 0{,}4$ Minimal dependence on attracted funds (own capital is 40% higher than long-term liabilities) | **S 1** Small financial dependence ratio $\approx \{0{,}5\}$ Small dependence on the attracted funds (own capital is 50% lower than long-term liabilities) | **N** Average financial dependence ratio $\approx \{0{,}6 - 0{,}7\}$ Average dependence on the attracted funds (own capital is 20%-0% higher than long-term liabilities) |
| **W3.** Critical financial dependence ratio $\geq 1$ Critical dependence on attracted funds (long-term liabilities larger or equal to own capital) | **W2.** Maximu financial dependence ratio $\approx \{0{,}9\}$ Maximum dependence on attracted funds (own capital exceeds long-term liabilities by 10%) | **W1.** High financial dependence ratio $\approx 0{,}8$ High dependence on attracted funds (own capital exceeds long-term liabilities by 20%) |
| **S2.** Minimal maneuverability ratio $\approx \{0{,}5\_ma\_ewe\}$ Minimum financial dependence (50% of own capital capitalized) | **S 1** Small maneuverability ratio $\approx \{0{,}4 - 0{,}3\}$ Low financial dependence (40%-70% of own capital capitalized) | **N** Average maneuverability ratio $\approx 0{,}2$ Average financial dependence (80% of own capital capitalized) |
| **W3.** Critical maneuverability ratio $\approx \{0{,}05 - 0\}$ Critical financial dependence (99,5%-100% of own capital capitalized) | **W2.** Maximu maneuverability ratio $\approx \{0{,}14 - 0{,}1\}$ Maximum financial dependence (96%-99% of own capital capitalized) | **W1** High maneuverability ratio $\approx 0{,}19 - 0{,}15$ High financial dependence (81-85% of own capital capitalized) |

Source: formed based on [6, p. 118; 7, p. 26]

dependence, maintenance of own working capital) and normative values of financial factors;

- business activity. The amount of financial resources of the enterprise in the conditions of the market economy is conditioned by its business activity, which depends on the breadth of the markets of the products, its business reputation, the degree of implementation of the plan according to the basic indicators of economic

activity, the level of efficiency of use of financial resources and the sustainability of economic growth. The business activity of the enterprise in the financial aspect is shown, first of all, in terms of turnover of its funds (assets, reserves, receivables, and accounts payable) and period of withdrawal of funds from circulation. It is advisable to set the appropriate regulatory values for each of the indicators. Consolidated indicators of business activity of the enterprise shown in Table 4;

**Table 4**
**Consolidated indicators of business activity of the enterprise**

| QUADRANT 1-4 | QUADRANT 2-5 | QUADRANT 3-6 |
|---|---|---|
| **S 2. Minimum** ***t***urnover of assets $\geq \mathbf{1}$ Maximum speed of turnover of total capital | **S 1 Small turnover of assets** $\approx \{\mathbf{0,9-0,6}\}$ High speed of turnover of total capital | **N** Average **turnover of assets** $\approx \{\mathbf{0,5}\}$ Average speed of turnover of total capital |
| **QUADRANT 1-4** | **QUADRANT 2-5** | **QUADRANT 3-6** |
| **W3.** Crisis ***t***urnover of assets $\geq \{0{,}19\}$ The crisis speed of the turnover of the total capital | **W2. Maximum *t***urnover of assets $\approx \{\mathbf{0,3-0,2}\}$ Minimum speed of capital turnover | **W1 High** $\approx 0{,}4$ Low speed of turnover of total capital |
| **S 2. Minimum** $stock\ turnover \geq 11$ Maximum demand for finished products, the average shelf life of which is up to 1 month | **S 1 Small** $\boldsymbol{stock\ turnover} \approx \{\mathbf{10-6}\}$ High demand for finished products, average shelf life of which is from 1-2 months | **N Середній** $\boldsymbol{stock\ turnover} \approx \{\mathbf{5-4}\}$ Average demand for products with average shelf life of 2-3 months) |
| **W3. Crisis** $stock\ turnover < 1$ Crisis demand for finished products, the average shelf life of which is more than a year | **W2. Maximum** $stock\ turnover \approx \{2{,}5-1\}$ Minimum demand for products, average shelf life of which is from 4 months to 1 year | **W1 Високий** $stock\ turnover \approx 3$ Small demand for finished products the average shelf life of which is 3-4 months |
| **S 2. Minimum** turnover of receivables $\geq \mathbf{7}$ Minimum risk (maximum effective commodity credit, with payment receipt during 51 days, the enterprise will be able to timely repay commercial credit and get discount at the price ( approximately 4-5%) | **S 1 Small** turnover of receivables $\approx \{\mathbf{6,9-5,5}\}$ Small risk (high efficiency commodity credit, with payment receipt within 52 - 65 days, the enterprise will be able to pay in time with creditors and get a discount in prices (approximately 2-3%)) | **N** Averag turnover of receivables $\approx \{\mathbf{5,4-5}\}$ Average risk (average efficiency commodity credit, with repayment of payments within 66-72 days. The company will be able to pay its creditors in time, although it will not get a discount price) |
| **W3. Crisis** $turnover\ of\ receivables \leq 1{,}9$ Critical risk (crisis commodity credit, with repayment of payments not earlier than in 6 months, in order to pay with creditors the enterprise should take a long-term credit) | **W2. Maximum** $turnover\ of\ receivables \approx \{2{,}9-2\}$ Maximum risk (minimum efficiency goods credit with payments receipt within 91-180 days, in order to pay with creditors, the enterprise should take short-term credit) | **W1. High** $turnover\ of\ receivables \approx \{4{,}9-3\}$ High risk (low efficiency commodity credit, with payments received within 73-90 days, the enterprise will be able to pay off with creditors with violation of payment terms and payment of a penalty) |
| **S 2. Minimum** ratio payables to receivables $\geq 0{,}49$ | **S 1 Small** ratio payables to receivables $\approx \{0{,}7-0{,}5\}$ | **N Averag** ratio payables to receivables $\approx \{0{,}9-0{,}8\}$ |

Continuation of the Table 4

| | | |
|---|---|---|
| Minimal risk (maximum effective commercial credit). The enterprise gets the maximum reserve of free money | Low risk (commercial loan of high efficiency). The enterprise receives a small reserve of free money | Average risk (commercial credit of medium efficiency). Lack of gap between payables and receivables, enterprises do not receive reserves of free money |
| **W3. Crisis** (ratio payables to receivables $\geq 2$ Critical risk (crisis commercial credit, negative gap between payables and receivables | **W2. Maximum.** ratio payables to receivables $\approx \{\mathbf{1,9-1}\}$ Maximum risk (commercial credit of minimal efficiency, negative gap between payables and receivables)) | **W1 High** ratio payables to receivables $\approx \mathbf{1}$ High risk (commercial credit of low efficiency) |
| **S 2. Minimum** financial cycle duration $\geq -\mathbf{33}$ Minimal risk. Financial cycle of maximum efficiency. The enterprise has temporary free money, which can be used more than a month, which creates additional benefits | **S 1 Small** financial cycle duration $\approx -\{\mathbf{32-1}\}$ Low risk. High efficiency financial cycle. The enterprise has temporary free money, which can be used from 1 to 32 days, which creates additional benefits | **N Averag** financial cycle duration $\approx \mathbf{0}$ Average risk. Financial cycle of average efficiency. The company does not feel the need for funds to finance working assets |
| **W3. Критичний** financial cycle duration $\approx \{\geq 64\}$ Critical risk. Crisis condition of the financial cycle. The company feels a major need for borrowing funds to finance its working assets | **W2. Максимальний** financial cycle duration $\approx \{33-63\}$ Maximum risk. Financial cycle of minimal efficiency. Within 1-2 months, the company has a need for funds to finance working assets, which must be filled from its own and borrowed funds | **W1 Високий** financial cycle duration $\approx \{\mathbf{1-32}\}$ High risk. Financial cycle of low efficiency. Within 1-32 days the company feels a need for funds to finance working assets, which should be filled from its own sources (possible loan attraction) |

Source: formed based on [6, p. 118; 7, p. 26]

- profitability. The state of financial resources from short-term and long-term perspectives is influenced by their ability to generate profit. In this connection, when analyzing financial resources it is expedient to consider such aspects as profitability - a high-quality and quantitative indicator of the efficiency of enterprise activity. The most informative indicators of this group are the profitability of own capital, the profitability of products, the profitability of activity, and the profitability of invested capital. To effectively assess each of the indicators, quantitative evaluation criteria (standards) must be established. Consolidated indicators of the profitability of the enterprise are shown in Table 5.

**Table 5**

**Consolidated indicators of profitability of the enterprise**

| QUADRANT 1-4 | QUADRANT 2-5 | QUADRANT 3-6 |
|---|---|---|
| **S 2. Minimum** $Return\ on\ equity \geq 31$ Enterprises in zone of minimal risk (profitability of all assets invested in the enterprise 50%) | **S 1 Small** Return on equity$\approx \{30-25\}$ Small-risk enterprises (profitability of all assets invested in the enterprise 49%-30%) | **Medium** Return on equity$\approx \{24-20\}$ Enterprises of the medium-risk zone (profitability of all assets invested in the enterprise 42%-20%) |

Continuation of the Table 5

| | | |
|---|---|---|
| **W3.** Critical $Return\ on\ equity \leq 0$ Enterprises in critical risk zone (all funds invested in the enterprise do not ensure the receipt of profit) | **W2. Maximum** Return on equity≈ $\{9-0{,}01\}$ Enterprises of the zone of maximum risk | **W1 High** Return on equity≈ $\{19-10\}$ Enterprises of high risk zone (profitability of all funds invested in the enterprise 19%-10%) |
| **S 2. Minimum** $product\ profitability \geq 31$ Enterprises of the zone of minimal risk (profitability of the main activity more than 50%) | **S 1 Small** product profitability≈ $\{30-25\}$ Enterprises of the low risk zone (profitability of the main activity more than 49-30%) | **N Medium** $product\ profitability$п ≈ $\{24-20\}$ Enterprises of the medium-risk zone (profitability of the main activity more than 29-20%) |
| **W3. Critical** $product\ profitability \leq 0$ Enterprises of the critical risk zone (the main activity of the loss) | **W2. Maximum** $product\ profitability \approx \{9-0{,}01\}$ Enterprises of the zone of maximum risk (basic activity of low profit) | **W1 High** $product\ profitability \approx \{19-10\}$ Enterprises of high risk zone (profitability of main activity less than 20%) |
| **S 2. Minimum** $return\ on\ invested \geq 31$ Enterprises of the zone of minimal risk (long-term investments yield more than 50%) | **S 1 Small** $return\ on\ invested \approx \{30-25\}$ Small-risk enterprises (long-term investments yield 49-30%) | **N Medium** $return\ on\ invested \approx \{24-20\}$ Enterprises of the medium-risk zone (long-term investments yield 29-20%) |
| **W3.** Critical $return\ on\ invested \leq 0$ Enterprises of the critical risk zone (long-term investments not profitable) | **W2. Maximum** return on invested≈ $\{9-0{,}01\}$ Enterprises of the zone of maximum risk (long-term investments are low profit) | **W1 High** return on invested≈ $\{19-10\}$ Enterprises of high-risk zone (long-term investments yield less than 20%) |

Source: formed based on [6, p. 118; 7, p. 26]

- probability of bankruptcy of the enterprise. The analysis of indicators (models) characterizing the probability of bankruptcy of the enterprise shown in Table 6.

**Table 6.**
**The analysis of indicators (models) characterizing the probability of bankruptcy of the enterprise**

| The name of the model tool | Accuracy of the forecast | Calculation algorithm | Conditional marks |
|---|---|---|---|
| 1. Two-factor Altman model | for 1 year- 50% for 2 years - 30% from 3 to 5 years - up to 20% | Z = -0.3877 - 1.0736 KCL +0.0579 KFD . | KCL - ratio of the current liquidity<br>KFD – ratio of the financial dependence |
| 2. five-factor Altman model | for 1 year- 90% for 2 years - 70% from 3 to 5 years - up to 50% | z=0,717X1+0,847 X2+3,107X3+0,42 X4+0,998X5<br>z=1,2X1+1,4X2+3, 3X3+0,6X4+X5 | X1- ratio of working assets to the sum of all assets of the enterprise;<br>X2- level of capital profitability;<br>X3- level of asset profitability;<br>X4- ratio of equity and loan capital;<br>X5- turnover of assets |
| 3. The Taffer model | for 1 year - 80% for 2 years - 60% from 3 to 5 years - up to 40% | z=C0+C1X1+C2X 2+C3X3+… | X1- income for tax payments (53%);<br>X2 - current assets (13%);<br>X3- current liabilities (18%)<br>X4 - lack of loans (16%);<br>C0…C3..- factors, percentages |

Continuation of the Table 6

| | | | |
|---|---|---|---|
| 4.R- model | for 1 year - 90%<br>for 2 years - 70%<br>from 3 to 5 years - up to 50% | z=0,38k1+k2+0,054k3+0,63k4 | k1- working capital/assets<br>k2- net profit/own capital<br>k3- proceeds from realization /assets<br>k4 – net profit / integral expenses |
| 6. The six-factor model Zaytseva | | K= 0,25X1+0,1X2+0,2Kc+0,25Kyp+0,1Kфр+0,1Кзаг | X1 – ratio of net loss to equity;<br>X2 – ratio of receivables and accounts payable;<br>X3 – the ratio of short-term liabilities and the most liquid assets;<br>X4 - ratio of net loss to sales volume;<br>X5 - ratio of own and loan capital;<br>X6 – asset load ratio |
| 7. Makarenko model | Z1=1,0Kcl+3,33Ka+5,71Kos public catering<br>Z2=1,0Kcl+2,5Kal+2,86 Ksmr +2,0Kip+3,33Kp<br>industry | | K a – autonomy ratio<br>Kos. – coefficient of profitability of own stocks<br>Kcl.- ratio of the current liquidity ;<br>Kal- absolute liquidity ratio ;<br>Ksmr. – self-capital maneuvering ratio;<br>Kip - share of industrial property<br>Kp.– profitability ratio of products |

Source: formed based on [6, p. 118; 7, p. 26]

The table gives the conclusion that the most accurate is the Makarenko model. That is why an important indicator of the state of financial resources is the probability of bankruptcy of the enterprise in the next 3-5 years, which can be determined based on the data of the Makarenko model most suitable for use in Ukraine (Table 7).

**Table 7**

**Indicator of the probability of bankruptcy of the enterprise Makarenko model uses**

| QUADRANT 1-4 | QUADRANT 2-5 | QUADRANT 3-6 |
|---|---|---|
| **S 2. Minimal** $Z \geq 5{,}01$ Minimal risk of bankruptcy | **S 1** Small $Z = \{5{,}0 - 4{,}59\}$ Small risk of bankruptcy | **N Medium** $Z = \{4{,}58 - 4{,}16\}$ Average risk of bankruptcy |
| **W3.** Critical $Z \leq 2{,}25$ Critical risk of bankruptcy | **W2. Maximum** $Z = \{3{,}20 - 2{,}26\}$ Maximum risk of bankruptcy | **W1 High risk of bankruptcy** $Z = \{4{,}15 - 3{,}21\}$ High risk of bankruptcy |

Source: formed based on [6, p. 118; 7, p. 26]

It is obvious that the analysis of the main indicators in the defined directions has been carried out providing an opportunity to select the most informative;

2) covers the system of conditions and factors influencing FPPE;

3) covers indicators that characterize personnel resources – the driving force of transforming financial strategy into reality. According to the survey, financial managers characterize the identified element of the BS as "an important asset, which

is the least understandable and least suitable for evaluation" [8, p. 119-133]. To solve the identified problems, it is expedient to apply the provisions of R. Kaplan, and D. Norton, regarding the division of the component into three interrelated assessment groups: human capital, human capital training, and best staff deduction. The allocation of evaluation groups "Human Capital", "Training of Human Capital", and "Preservation of the best personnel" will allow for providing a reasonable choice of evaluation indicators [8, p. 119-133].

In the group, "*Human capital"* important is the indicator of *"Skills and skills necessary for the realization of the financial strategy"* (NVrfs) depending on the activity sphere of the enterprise and the position held. The calculation algorithm of the indicator is as follows [8, p. 119-133]:

$$\text{NVrfs} = \frac{\text{PKE}\ (\overline{\text{AP}}) + \ M\mathit{SE}(\overline{\text{AP}}) + \text{BSF}(\overline{\text{AP}})}{3} \rightarrow \overline{\text{ОБ}} \rightarrow \text{quadrant MC (1…6)}, \qquad (1);$$

where:

- PKE - "profile knowledge of employees" - knowledge of financial and tax accounting, policies of active sales, financial analysis, financial planning, etc.;
- M*SE* - "methodical skills of employees" - ability to think abstract, ability to read balance, analytical inquisitiveness, ability to study, ability to changes adapt quickly; ability to form and realize financial strategy; ability to conduct negotiations;
- BSF - "behavioral skills of employees" - tolerance, respect, purposefulness, non-conflict, non-disclosure of commercial secrets; logical thinking;
- quadrant MC (1…6) – Quadrant of the matrix system of the preliminary evaluation of FPPE determined by the value of the average point $\overline{AP}$.

Each PKE, M*SE*, and BSF compliance is estimated at 0,28 estimated points. The maximum complete is such correspondence, at which the employee gathers 5 points. The fewer criteria the employee's knowledge and skills match, the more likely it is to be mistaken on the job and the more difficult it is to implement the duties assigned to him. The overall compliance of the financial service employees with the above criteria is assessed using an average rating point, the value of which may vary from 0 to 5.

*In the group "Training of human capital"* it is expedient to use the indicator of the opportunity to study" (MH):

$$\text{MH} = \frac{\text{X1}(AP)+\ldots+\text{X6}(AP)}{6} \rightarrow \overline{AP} \rightarrow \text{quadrant MC (1…6)}, \quad (2);$$

where: $AP$ – the result of expert evaluation of the parameter by scale from 0 to 5 points; X – parameters of the quality of the indicator: Leave for training for each enterprise (X1); training for each enterprise (X2); professional and material terms growth (X3); internship abroad for each enterprise (X4); experience exchange (X5); business training and seminars (X6); quadrant MC (1…6) – the quadrant of the matrix system of the preliminary evaluation of financial potential determined by the value $\overline{AP}$.

According to the results of the survey of 170 employees of financial services at 40 domestic enterprises, the main factors that can keep the best personnel in the workplace are:

- "psychological climate in the collective";
- "social package of the enterprise";
- "opportunities for an increase of wages and career growth";
- "satisfaction of wages".

The indicator *"psychological climate in the collective"* (PCC) characterizes the ability of employees to cooperate effectively. Algorithm of calculation of the indicator [9; 10]:

$$\text{PCC} = \frac{\text{X1}(AP)+\ldots+\text{X5}(AP)}{5} \rightarrow \overline{AP} \rightarrow \text{quadrant MC (1…6)} \quad (3);$$

where: AP – the result of expert evaluation of the parameter by scale from 0 to 5 points; quadrant MC (1…6) – quadrant of the matrix system of the preliminary evaluation financial potential of the determined by the key value; X – quality parameters: the ability of the collective to cooperate (X1); the quality of the collective members (X2); the level of stress (X3); the relations in the collective (X4); Conflict of the collective (X5).

The evaluation of each parameter should be carried out according to the data of

several employees (which will ensure the highest accuracy of the results) chosen by the random sampling method. The results of the evaluation of the parameter should be summarized by the method of calculating the average score.

The social package of enterprise (SPE) indicator characterizes the benefits and social protection that a specific enterprise provides to its employees. The calculation algorithm of the indicator is as follows:

$$\text{SPE} = \frac{\text{X1}(AP)+\ldots+\text{X6}(AP)}{6} \rightarrow \overline{AP} \rightarrow \text{quadrant MC (1…6)}, \quad (4);$$

where: AP – the result of expert evaluation of the parameter by the scale from 0 to 5 points; quadrant MS (1…6) – quadrant of the matrix system of the preliminary financial potential evaluation of value determined; X - parameters of the quality of the indicator: vacation, which is reimbursed (X1); compensation of sick persons (X2); preferential vouchers (X3); Housing area at the expense of the enterprise (X4); organization of New Year and other holidays, giving gifts to families of employees (X5); free or preferential treatment of employees and members of their families in health-improving institutions (X6).

The indicator *"Opportunities for salary increase and career growth"* (MPL\K) is determined by the rate of development and the possibilities of the enterprise to maximize profit (subject to personnel policy aimed at salary increase and career growth).

The indicator *"Salary satisfaction"* (SS) - is measured based on a relative score, since the application of monetary dimension gives contradictory results (due to different wishes of employees regarding the level of wages) therefore the possibility of salary satisfies modern needs (parameters): in food products, household chemistry; clothes; other subjects (household appliances, household interior items); rest, savings. The results of the evaluation are summarized by the method of calculating the average score and assigning the corresponding quadrant in the matrix system of the preliminary evaluation. The algorithm of the calculation of "salary satisfaction" (SS) is as follows:

$$\text{SS} = \frac{\text{X1}(AP)+\ldots+\text{X6}(AP)}{6} \rightarrow \overline{AP} \rightarrow \text{quadrant MC (1…6)} \quad (5);$$

where: $AP$- the result of expert evaluation of the parameter by the scale from 0 to 5 points; quadrant MS (1…6) – quadrant of the matrix system of preliminary evaluation of the financial potential determined by the value of the key; X1 - parameters of satisfaction of needs: in food products (X1); household chemistry (X2); clothes (X3); other subjects (X4) (household appliances, household interior items); rest (X5), savings (X6).

For the accuracy of the results, the parameters are estimated according to the data of several randomly selected employees:

4) includes indicators that characterize management and information technologies that determine the ability to implement a financial strategy and turn data into information. Analysis of scientific works [1-3] allows to allocate of the following groups of indicators for the estimation of technological resources:

*1. The Group "Technology of Management" summarizes the indicators:*

"Merger of control technology elements" - measures the effectiveness of control technology elements (merger is an external characteristic of control technology desirable to decrease), is determined by the interdependency of functions according to the data, measured by "the connection degree" (SP). There are 6 association types: by data (SP=1); by sample (SP=3); by management (SP=4); by external references (SP=5); by external area (SP=7); by content (SP=9). The defined merge types can be evaluated using an estimated score, which is determined by a scale from 0 to 5 (in the case of several levels of consolidation, the efficiency of the elements is determined by the output of the average score and available SP. Thus, the calculation algorithm of SP is as follows:

$$\mathrm{SP} = \frac{f1(AP)+\ldots+fn(AP)}{n} \rightarrow \overline{AP} \rightarrow \mathrm{MC} \begin{matrix} \frac{SP=1\rightarrow\overline{\mathrm{AP}}=5}{\mathrm{quadrant1}} ; \frac{SP=5\rightarrow\overline{\mathrm{AP}}=2}{\mathrm{quadrant6}} \\ \frac{SP=3\rightarrow\overline{\mathrm{AP}}=4}{\mathrm{quadrant2}} ; \frac{SP=7\rightarrow\overline{\mathrm{AP}}=1}{\mathrm{quadrant\ 5}} \\ \frac{SP=4\rightarrow\overline{\mathrm{AP}}=3}{\mathrm{quadrant3}} ; \frac{SP=9\rightarrow\overline{\mathrm{AP}}=0}{\mathrm{quadrant4}} \end{matrix} \quad (6);$$

where: MC - matrix system of preliminary financial potential evaluation; $f1(\mathrm{AP})\ldots fn(\mathrm{AP})$ - the estimation of interdependency of functions in the architecture of management technology; $n$ - number of mutually dependent management functions

in management technology architecture.

*"Communication of control technology elements"* - measures the effectiveness of control technology elements functioning and is determined based on communication criterion determines the internal dependence of the function parts (the higher the connection criterion, the more effective the type of management activity, the realization of which the function is directed). The seven types of communication force for measuring communication used (CF=0): random (CF =0), logical (CF =1), temporary (CF =2) (connection types are the result of incorrect planning of the architecture of the control technology); procedural (CF =5) (connection type is formed as a result of insufficient planning of the architecture of the control technology); Informational and communicative (CF =7-9) (communication types are effective, but problems of excessive or lack of data may arise); functional (one of the most effective types of communication, formed as a result of the most well-planned planning of management architecture). If there are several types of communication available, it is assigned the highest communication strength. The defined types of communication force correspond to the evaluation point (AP) on a scale from 0 to 5. The overall evaluation of the communication strength in the architecture of the control technology is determined by the matrix system of the preliminary evaluation of the financial potential of the production enterprise. Thus, the algorithm for the calculation of AP is as follows:

$$\text{AP} = \frac{f1(AP)+\ldots+fn(AP)}{n} \rightarrow \overline{AP} \rightarrow \text{MC} \begin{matrix} \frac{CF=0\rightarrow\overline{AP}=0}{quadrant4} ; \frac{CF=10\rightarrow\overline{AP}=5}{quadrant1} \\ \frac{CF=1\rightarrow\overline{AP}=1}{quadrant5} ; \frac{CF=(7-9)\rightarrow\overline{AP}=4}{quadrant2} \\ \frac{CF=2\rightarrow\overline{AP}=2}{quadrant6} ; \frac{CF=5\rightarrow\overline{FP}=3}{quadrant3} \end{matrix} \quad (7);$$

where: MC - matrix system of preliminary financial potential evaluation; $f1(\text{AP})\ldots fn(\text{AP})$ - a score of the communication strength of the control function in the architecture of the control technology; $n$ - a number of management functions in the architecture of management technology.

*"Special correspondence"* - according to the generally accepted norms, the construction technology of financial management should correspond to the common

structure and requirements set (specifications) that provide its quality. The specification of the formation of the technology of financial management is a normative set, which in practice may contain additional elements determined by the specifics of the activity of a separate enterprise. The specific conformity of the financial management system should be determined according to the "point system of conformity assessment". The total special correspondence is estimated with the help of the average score and the assignment according to the results of the corresponding quadrant evaluation in the matrix system of the preliminary FPPE evaluation.

*2. The Group "Information Technologies" contains indicators*:

*"Information Security"* – the assessment should be carried out in a three-dimensional way, in terms of objects: basic (1 - legislative, normative-methodical, and scientific base; 2 - structures of subdivisions providing information security; 3 - policies (measures) of information security; 4 - methods and means of information protection); directions (1 - objects, 2 - processes; 3 - communication channels; 4 - technical means; 5 - elements of protection); stages - (1 - determination of information and technical resources that need protection; 2 - determination of potential threats and channels of information flow; 3 - risk assessment for an information system; 4 – determination of requirements to the system of information protection; 5 – choice of means of information protection and their characteristics; 6 – implementation and organization of the use of the worked methods and means of protection; 7 – control of integrity and control of protection system) [11-12]. Each of the identified objects is evaluated using knowledge matrix elements and expert evaluation of the effectiveness of information security elements, which is carried out through an estimation scale from 1 to 5 points. The overall information security is assessed using the average score and the assignment of the corresponding quadrant in the matrix system of the preliminary FPPE evaluation.

*"Software and hardware".* Software effectiveness is determined by: group 1 - software functionality (functionality, correctness, practicality); group 2 - data and technical capabilities (software, reliability, security, ability to interact, mobility, support, high production capacity); group 3 - product recognition, brand name, and

image; group 4 - economic criteria (cost of product ownership: cost of implementation contract, cost of annual support, cost of license extension, cost of modernization project). The effectiveness of the identified elements is assessed by the use of the ball system, by the scale of assessment from 0 to 5 points. A generalized software performance score is made using an average score and the corresponding quadrant in the matrix system of the preliminary evaluation of the FPPE is assigned according to the evaluation results;

Indicators of the financial service's organizational resources determine its ability to work together and develop in the long term. Among the most important groups of the block are: "organizational interaction"; "organizational perfection"; "organizational innovations" [10, p. 416; 13]. The chosen logic of division allows us to prefer the most justified set of estimates.

*3. Group "organizational interaction"*

*Group "organizational interaction"* is characterized by the form of realization of organizational interaction (indicators "channels of communication", "communication climate", "feedback", "satisfaction of information needs"); of organizational interaction type (indicator "horizontal and vertical connections"), mechanism of organizational interaction (indicator "organizational culture") [13]. The indicator "channels of communication" (K communications) is calculated according to the algorithm:

$$\text{K communications} = \frac{\text{X1}(AP)+\ldots+\text{X5}(AP)}{5} \rightarrow \overline{AP} \rightarrow \text{quadrant MC (1…6)} \qquad (8);$$

where:AP – the result of expert evaluation of the parameter on a scale from 0 to 5 points; quadrant MC (1…6) – quadrant of the matrix system of preliminary financial potential evaluation determined by the AP indicator; X - parameters of the quality indicator: technical means of communication provision (X1); level of expenses for technical means of communication (X2); correspondence of channels to the specificity of message and communication purposes (X3); level of technical means of communication possession (X4); quality of written communications (X5).

To ensure accurate results, it is necessary to evaluate a number of communication channels selected by random sampling method. In this case, it is advisable to determine the $\overline{\text{AP}}$ parameter according to the results of the evaluation of each parameter.

Algorithms of calculation of indicator *"communication climate"* (Cc):

$$Cc = \frac{X1(AP)+\ldots+X7(AP)}{7} \rightarrow \overline{AP} \rightarrow \text{quadrant MC } (1\ldots6) \quad (9);$$

where:

- AP – the result of expert evaluation of the parameter on a scale from 0 to 5 points;
- quadrant MC (1…6) – quadrant of the matrix system of preliminary financial potential evaluation determined by the point average (AP) indicator;
- X - quality indicator parameters: awareness of the employee its importance in the organization (X1); work satisfaction (X2); traditions of joint problem solving (X3); level of communicative competence (X4); the practice of mentoring (X5); experience and traditions inheritance (X6); loyalty to the enterprise interests (x7) [13].

The estimation of the quality of the communicative climate is foreseen based on the corresponding quality parameters produced during the research of enterprises with different types of qualities of the specified indicator.

The high-quality perimeter should include: sense of importance in the organization; satisfaction of work; traditions of joint problem solving; high level of communicative competence; the practice of mentoring; continuity of experience and traditions; adherence to the interests of the enterprise. Non-compliance or lack of compliance with certain parameters leads to a reduction of quality and an increase in the risk of enterprise activity according to the parameter "communication climate".

The *"communication climate"* indicator is calculated according to formula 9. The form for data analysis is given in the table 8.

**Table 8.**
**Form for data analysis of ″communication climate" indicator**

| QUADRANT 1-4 | QUADRANT 2-5 | QUADRANT 3-6 |
|---|---|---|
| **S2. Minimal (AP =5)**<br>Sense of importance in the organization.<br>Maximum satisfaction with the work.<br>Common problem-solving traditions.<br>High level of communicative. | **S1. Small (AP = 4)**<br>Sense of importance in the organization.<br>High satisfaction of work.<br>Traditions of joint solution of difficult problems.<br>High level of communicative. | **N. Medium (AP = 3)**<br>The sense of importance in the organization sometimes changes to its absence.<br>Average satisfaction with work. |

Continuation of the Table 8

| | | |
|---|---|---|
| Competence.<br>Mentoring.<br>Heritage of experience and traditions.<br>Commitment to the interests of the enterprise. | Competence.<br>Mentoring.<br>Commitment to the interests of the enterprise. | Traditions of the joint solution, problems.<br>Sufficient level of communicative competence.<br>Commitment to the interests of the enterprise. |
| **W3. Critical (AP = 0)**<br>Redundancy Feeling in organizations.<br>Dissatisfaction with the work.<br>Lack of communicative competence.<br>Lack of mentoring practices, the legacy of experience, and traditions.<br>The atmosphere of hostility in the collective makes it impossible to solve problems together.<br>Non-recognition of the interests of the enterprise. | **W2. Maximum (AP =1)**<br>Redundancy Feeling an organization's.<br>Dissatisfaction with the work.<br>Low level of communicative competence.<br>The negative practice of mentoring, transfer of experience and traditions.<br>The atmosphere of increased tension in the team, causes a great reluctance to jointly solve problems.<br>Indifferent to the interests of the enterprise. | **W1 High (AP = 2)**<br>Redundancy Feeling an organization's.<br>The minimum level of work.<br>Satisfactory level of communicative competence.<br>The atmosphere of slight tension in the team causes some discomfort in the joint solution of problems.<br>Recognition of the interests of the enterprise when they do not go into a split with their own. |

Source: formed based on [13]

It is advisable to calculate parameters according to the data of several employees selected by random sampling method. In this case, it is advisable to average the score determine based on the results of the score for each parameter. Algorithms of calculation of the indicator "feedback" (C):

- $\text{C} = \frac{\text{X1Б}(AP)+\ldots+\text{X4}(AP)}{4} \rightarrow \overline{AP} \rightarrow$ quadrant MC (1…6) (10);

where: AP – the result of expert evaluation of the parameter on a scale from 0 to 5 points; quadrant MC (1…6) – quadrant of the matrix system of the preliminary financial potential of the production enterprise evaluation determined by the point average (AP) indicator; X - the quality of indicator parameters: ability of employees to establish feedback, ask questions, put forward suggestions (X1); openness of managers to questions and suggestions of subordinates (X2); enterprise interest in drawing out the potential of the employee and attraction of him to the management process (X3); possibility to make suggestions on enterprise development (X4) [13]. The form for data analysis of "feedback" is given in the table 9.

*Group p*arameter estimation are made according to the data of several employees selected by random sampling method. Thus, according to the results of the score of each parameter it is expedient to determine the average score.

**Table 9.**
**Form for data analysis of "feedback"**

| QUADRANT 1-4 | QUADRANT 2-5 | QUADRANT 3-6 |
|---|---|---|
| **S2. Minimal (AP =5)**<br>- the high ability of employees to provide feedback, ask questions, and express proposals;<br>- maximum openness of managers to questions and suggestions of subordinates;<br>- maximum interest of the enterprise in the potential of each employee and its involvement in the management process;<br>- the staff can provide proposals on the development of the enterprise. | **S1. Small (AP = 4)**<br>- the ability of employees to provide feedback, ask questions, and express proposals;<br>- the openness of managers to questions and suggestions of subordinates;<br>- the enterprise's interest in the potential of certain employees and their involvement in the management process;<br>- the possibility of providing proposals on the development of the enterprise is available to certain personnel. | **N. Medium (AP = 3)**<br>- the ability of some employees to provide feedback, ask questions, and express proposals;<br>- the openness of certain managers to questions and suggestions of subordinates;<br>- the enterprise's interest in the potential of certain employees and their involvement in the management process. |
| **W3. Critical (AP = 0)**<br>- the inability of employees to provide feedback, ask questions, and express proposals;<br>- the indifference of managers to questions and suggestions of subordinates;<br>- uninterested enterprise in the open potential of the employee;<br>- reluctance to involve employees in the management process. | **W2. Maximum (AP =1)**<br>- the ability of employees to provide feedback, ask questions, and express proposals;<br>- the indifference of managers to questions and suggestions of subordinates;<br>- uninterested enterprise in the open potential of the employee;<br>- reluctance to involve employees in the management process. | **W1 High (AP = 2)**<br>- the ability of employees to provide feedback, ask questions, and express proposals;<br>- the openness of managers to the questions of subordinates;<br>- reluctance to involve employees in the management process. |

Source: formed based on [13]

*Horizontal and vertical links* calculation algorithms (SG\B):

$$SG\backslash B = \frac{\frac{(X1.1+\ldots.+X1.4)}{4}+\frac{(X2.1+X2.2)}{2})}{2} \rightarrow \overline{AP} \rightarrow \text{quadrant MC (1…6)} \qquad (11);$$

where: AP – the result of expert evaluation of the parameter on a scale from 0 to 5 points; quadrant MC (1…6) – quadrant of the matrix system of preliminary FPPE evaluation determined by the point average (AP) indicator; X – the quality of indicator parameters: horizontal connections (X1): rate of information exchange between subdivisions and officials at the same level of management (X1.1); level of coordination of activity of subdivisions and officials (X1.2); coordination and purposefulness of actions of subdivisions and officials at the same level of management (X1.3); efficiency of formation of working groups consisting of employees of different subdivisions to solve management tasks (X1.4); vertical connections (X2): informing of orders and instructions of management (X2.1); information about the goals, values, and principles of the enterprise activity, development prospects, expected results,

standards and criteria of employee evaluation, remuneration and sanctions of the enterprise (X2) [13].

Thus, the quality of communications is measured on the basis of the presence of the following qualitative parameters:

Horizontal links: the quality of information exchange between departments, officials at the same level of management; the level of coordination of departments, officials; coordination and purposefulness of actions of subdivisions and officials at the same level of management; efficiency of forming working groups consisting of employees of different departments to solve management tasks.

Vertical links: informing the public about the orders and orders of the management; information about the goals, values and principles of the enterprise activity, prospects of its development, expected results, standards and criteria of employee evaluation, remuneration and sanctions of the enterprise.

The indicator is calculated according to formula 11. The form for data analysis is given in the table 10

**Table 10.**

**Form for data analysis of horizontal and vertical links**

| QUADRANT 1-4 | QUADRANT 2-5 | QUADRANT 3-6 |
|---|---|---|
| **S2. Minimal** | **S1. Small** | **N. Medium** |
| **horizontal link:** excellent quality of information exchange between departments and officials at the same level; management excellent level of coordination of departments and officials; full coordination and purposefulness of actions of subdivisions and officials, which are at the same level of management; high efficiency in the formation of working groups consisting of employees of different subdivisions for solving management tasks.<br>**vertical link:** instant presentation (in real-time mode) to the known orders and orders of management; information about the goals, values, and principles of the enterprise activity, prospects of its development, expected results, standards and criteria of employee evaluation, rewards and sanctions, enterprises. | **horizontal link:** good quality of information exchange between departments and officials at the same level; good level of management coordination of departments and officials; the coordination, and purposefulness of the main actions of subdivisions and officials, which are at the same level of management.<br>**vertical link:** the process of informing the public about the orders and orders of the management; information about the goals, values, and principles of the enterprise activity, prospects of its development, expected results, standards and criteria of the employees' evaluation, remuneration and sanctions of the enterprise complies with the standard. | **horizontal link:** the satisfactory quality of information exchange between departments and officials at the same level of management; satisfactory level of coordination of departments and officials' activities; the coordination of the actions of departments and officials at the same level of management (there are cases of conflicts of interest quickly resolved).<br>**vertical link:** informing of orders and orders of management; information about the goals, values, and principles of the enterprise activity, prospects of its development, expected results, standards and criteria of employee evaluation, remuneration, and sanctions of the enterprise are carried out in full, but not fast enough. |

Continuation of the Table 10

| W3. Critical | W2. Maximum | W1. Високий |
|---|---|---|
| **horizontal link**: lack of information exchange between departments and officials at the same level of management; lack of coordination of departments and officials; uncoordinated actions of departments and officials at the same level of management; inability to form working groups composed of employees of different departments to solve management tasks.<br>**vertical link**: the process of bringing orders and orders of management to the attention; information on the basic goals, values of the enterprise, prospects of its development, standards, and criteria of evaluation of workers are ineffective (information does not reach consumers). | **horizontal link**: the satisfactory quality of information exchange between departments and officials at the same level of management (which tends to decrease quality gradually);<br>– satisfactory level of coordination of departments and officials' activities;<br>- frequent short-term and long-term conflicts of interest between departments and officials at the same level of management.<br>**vertical link:** the process of bringing orders and orders of management to the attention; information on the basic goals, values of the enterprise, prospects of its development, standards, and criteria of an estimation of employees are ineffective (constant delays, loss, distortion of information). | **horizontal link::** satisfactory quality of information exchange between departments and officials at the same level of management (which tends to decrease quality gradually); satisfactory level of coordination of departments and officials' activities; frequent short-term conflicts of interest between departments and officials at the same level of management.<br>**vertical link:** the process of bringing orders and orders of management to the attention; information on the basic goals, values of the enterprise, prospects of its development, standards, and criteria of an estimation of employees is carried out with delays, there are cases of data distortion). |

Source: formed based on [13]

*The indicator "organizational culture"* (OC) characterizes the effectiveness of the current system of basic preconditions, acquired by the group and their ability to promote external adaptation, internal integration, accepted by new members of the collective. It is advisable to calculate OC according to the algorithm:

$$\text{OC} = \frac{\text{X1}(AP)+\ldots+\text{X6}(AP)}{6} \rightarrow AP \rightarrow \text{quadrant MC (1…6)} \qquad (12);$$

where: AP – the result of expert evaluation of the parameter on a scale from 0 to 5 points;

quadrant MC (1…6) – quadrant of the matrix system of preliminary financial potential evaluation determined by the point average (AP) indicator; X – the quality of indicator parameters: system of values aimed at support of introduction of organizational, technological and other innovations (X1); presence of representation on mission, goals of activity of the enterprise, their support (X2); attitude to management (X3); developed and implemented code of business ethics and obligatory of its execution (X4); existence of traditions in clothes, positive traditions and symbols (X5) [13].

It is advisable to estimate the parameters according to the data of several employees selected by random sampling method. In this case, the results of the score

of each parameter should be used to determine the average score. The form for data analysis is given in the table 11. If the specified criteria are not met, the risk of the company's activity on the parameter increases

**Table 11.**
**Form for data analysis of "organizational culture"**

| QUADRANT 1-4 | QUADRANT 2-5 | QUADRANT 3-6 |
|---|---|---|
| **S2. Minimal (AP=5)**<br>The value system is aimed at generating and supporting innovation.<br>The full vision of the employees regarding the mission, vision, and goals of the enterprise activity and their support.<br>Trust in the leadership. The existence of a code of business ethics developed, implemented, and mandatory for the implementation of the code of business ethics.<br>Dress code, positive traditions, symbols. | **S1. Small (AP =4)**<br>The value system is aimed at supporting innovation.<br>Representation of employees on the mission, vision, and goals of the enterprise activity and their support.<br>Positive attitude to the leadership.<br>The existence of a code of business ethics developed and implemented is obligatory for execution.<br>Dress code, positive traditions, and symbols. | **N. Medium (AP =3)**<br>The value system can support the introduction of innovations on the condition of short explanatory work.<br>Familiarization of employees with the mission, vision, and main goals of the enterprise activity.<br>Neutral attitude to leadership and ability to cooperate with it.<br>The existence of a code of business ethics developed and implemented is obligatory for execution. Positive traditions. |
| **W3. Critical (AP =0)**<br>Conservative attitudes in the system of values of employees, make it impossible to implement organizational, technological, and other innovations.<br>The mission of the enterprise is unknown.<br>Distrust of the leadership.<br>Absence of a code of business ethics. | **W2 Maximum (AP =1)**<br>The system of values is well-known to support the introduction of organizational, technological, and other innovations on the condition of constant explanatory work.<br>Some employees have an idea of the mission of the enterprise.<br>Opposition to the employee and manager and distrust of him.<br>Formal availability of a developed and implemented code of business ethics. | **W1. Високий (AP =2)**<br>The value system is well-equipped to support the introduction of organizational, technological, and other innovations, provided that the explanatory work is long-term.<br>Employees have an idea of the mission of the enterprise.<br>Opposition to the employee and manager and some distrust of him.<br>The existence of a code of business ethics developed and implemented, some provisions of which may not be implemented. Positive traditions. |

Source: formed based on [13]

The indicator "satisfaction of information needs" (Sin) characterizes the satisfaction level of information needs of the top management, heads of departments and employees on the basis of the corresponding quality parameters (produced by results of research of enterprises with different degree of satisfaction of information needs of employees).

The algorithm of indicator calculation of the *"satisfaction of information needs"* is as follows:

$$\text{Sin} = \frac{\frac{(\text{X1.1}(AP)+\ldots.+\text{X1.3}(AP))}{3}+\frac{(\text{X2.1}(AP)+\ldots+\text{X2.4}(AP))}{4})}{2} \rightarrow \overline{AP} \rightarrow \text{quadrant MC (1…6)} \quad (13);$$

where: AP – the result of expert evaluation of the parameter on a scale from 0 to 5

points;

quadrant MC (1…6) – quadrant of the matrix system of preliminary financial potential evaluation determined by the point average (AP) indicator; X - the quality of indicator parameters: for senior management (X1): effectiveness of the preliminary analytical processing of information (X1.1); quality of external and internal information (X1.2); awareness of the state of affairs at the enterprise (X1.3); for heads of departments and employees (X2): awareness of the activity of the enterprise as a whole (X2.1); awareness of the future changes in the working city (X2.2); awareness of the possible remuneration (X2.1); quality of input information, its sufficiency for the realization of functions (X2.4).

The parameters can be evaluated according to several employees selected by random sampling method (this will provide more accurate results). In this case, it is advisable to determine the parameter according to the results of the score of each parameter. The form for data analysis is given in the table 12. Lack of compliance with certain parameters leads to reduction of quality and increase of risk of activity of the enterprise according to the specified parameter.

**Table 12.**
**Form for data analysis of "satisfaction of information needs"**

| QUADRANT 1-4 | | QUADRANT 2-5 | | QUADRANT 3-6 | |
|---|---|---|---|---|---|
| S2. Minimal (AP=5) | | S1. Small (AP =4) | | N. Medium (AP =3) | |
| For top management:<br>- maximum efficiency of preliminary analytical processing of information;<br>- the maximum quality of external and internal information;<br>- maximum information about the state of affairs at the enterprise. | For heads of departments and employees:<br>- complete information about the company's activities in general;<br>- full information about future changes in the working city;<br>- full awareness of the expectations of the leadership and possible rewards;<br>- the maximum quality of the information obtained and its sufficiency for the realization of functions. | For top management:<br>- high efficiency of preliminary analytical processing of information (except for some parameters);<br>- high-quality external information;<br>- average quality of internal information;<br>- complete information about the state of affairs at the enterprise. | For heads of departments and employees:<br>- complete information about the company's activities in general (except for some questions);<br>- high awareness of future changes in the working city;<br>- high awareness about the expectations of the leadership;<br>- the high quality of the information that comes and its sufficiency for the realization of functions. | For top management:<br>- the average efficiency of the preliminary analytical processing of information (some shortcomings do not affect the overall efficiency of work);<br>- average quality of external information (there are unverified data);<br>- average quality of internal information (there are minor errors in data); | For heads of departments and employees:<br>- the information about the enterprise activity is not complete enough (in the data there are inaccuracies);<br>- full awareness of the future major changes in the working city;<br>the information about the expectations of the leadership contains certain distortions;<br>- the average quality of the information obtained (some data need clarification and addition); |

Continuation of the Table12

| | | | | - average information about the state of affairs at the enterprise | - the abundance of information for the realization of functions. |
|---|---|---|---|---|---|
| **W3. Critical (AP =0)** | | **W2 Maximum (AP =1)** | | **W1. Високий (AP =2)** | |
| For top management:<br>- inefficient preliminary analytical processing of information;<br>- the unsatisfactory quality of external and internal information;<br>- wrong or missing information about the state of affairs at the enterprise. | For heads of departments and employees:<br>- erroneous or missing information about the company's activities in general;<br>- erroneous or missing information about future changes in the working city;<br>- erroneous or missing information about the expectations of the management and possible rewards;<br>- the unsatisfactory quality of information comes with the constant need for additional information for the realization of functions. | For top management:<br>– satisfactory performance of the previous analytical processing of information;<br>- the satisfactory quality of external and internal information;<br>- information on the state of affairs at the enterprise is contradictory. | For heads of departments and employees:<br>- awareness of some areas of the company's activity;<br>– information on the future changes in the working city, which is contradictory and controversial;<br>- general information about some expectations of management;<br>- the satisfactory quality of information, which comes with a frequent need for additional information for the realization of functions. | For top management:<br>– satisfactory preliminary analytical processing of information;<br>- the satisfactory quality of external and internal information (often contains erroneous, contradictory, exhaustive data);<br>- information about the state of affairs at the enterprise may contain erroneous information. | For heads of departments and employees:<br>- the information about the activity of the enterprise as a whole is not complete enough;<br>- information about future changes in the working city can provide erroneous information;<br>- information about the expectations of the management and possible rewards may provide incorrect information some data are contradictory;<br>- good quality of information, which comes, and low need for additional information for the realization of functions |

Source: formed based on [13]

The group "organizational perfection" is characterized by the efficiency of consolidation by structural subdivisions and responsible executives of the governing bodies of the basic functions and decision-making procedures, which can be evaluated according to the indicator of the "full cycle of financial management" (FCM).

According to research by six Sigma way consulting company, provides the best idea of FCM efficiency by 7 sigma method. Thus, the complete absence of an error is a indicator that can be achieved only theoretically (provided that all processes of financial management are fully automated). A large number of administrative transactions with a margin of 1 million shows the risk of activity according to the parameter.

$$\text{FCM}=\frac{\text{X1}(\overline{AP})+\ldots+\text{Xн}(\overline{AP})}{n}\rightarrow \text{MC}\quad \begin{matrix}\frac{0-34\ error}{5Points\rightarrow quarter1} & \cdot\cdot & \frac{\approx 230\ error}{4Points\rightarrow quarter2}\\ \frac{\approx 6210\ error}{3Points\rightarrow quarter3} & \cdot\cdot & \frac{\approx 66800\ error}{2Points\rightarrow quarter6}\\ \frac{\approx 308000\ error}{1Points\rightarrow quarter5} & \cdot\cdot & \frac{\approx 690000\ error}{0Points\rightarrow quarter4}\end{matrix} \quad (14);$$

where: X1($\overline{\text{AP}}$) …Xn ($\overline{\text{AP}}$) – average score of operations performed by specific employees; n – number of employees performing operations; MC – matrix system of the financial potential of the production enterprise preliminary evaluation.

Organizational innovation group (reforms that achieve change in values, aspirations, and employee behavior in the simultaneous transformation of processes, strategies, and systems).

According to the research results [1-3] and based on the practical experience of domestic enterprises, the determined intangible asset is estimated using certain informative indicators.

Given the above-mentioned provisions, a matrix system of the financial potential of the production enterprise evaluation is formed, with the help of which the expert can perform estimation and initial segmentation of strong and weak positions of the financial potential of the production enterprise (with the help of special fields for segmentation).

The obtained data allow us to form the financial potential of the production enterprise portrait and visually assess the acute financial problems at the enterprise.

We recommend to determine of the financial potential of the production enterprise portrait by using such formula:

$$\text{FPPE portrait}\ =\frac{(\overline{AP1}+\overline{AP3}+\overline{AP4}+\overline{AP5})}{4}\rightarrow General\ segment \text{ position segment component} \quad (15);$$

where: $\overline{\text{AP1}}$…$\overline{\text{AP5}}$– evaluation point average for each component segment (1, 3,4,5); P –portrait of the financial potential of the production enterprise.

The defined portrait can be effectively summarized by the advanced matrix of complex of the financial potential of the production enterprise segmentation (Table 13).

**Table 13.**
**Matrix of of the financial potential of the production enterprise complex segmentation**

| internal environment | | Internal risk of financial activity | Positions* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Position 1 Extreme | | | Position 2 Extreme | | | Position 3 Intermediate | | | Position 4 Intermediate | | |
| | Strong or neutral | Minimum - 1 | S2 | S | O | S2 | W | T | S2 | S | T | S2 | W | O |
| | | Small - 2 | S1 | S | O | S1 | W | T | S1 | S | T | S1 | W | O |
| | | Middle - 3 | N | S | O | N | W | T | N | S | T | N | W | O |
| | Weak or crisis | High - 4 | W1 | S | O | W1 | W | T | W1 | S | T | W1 | W | O |
| | | Maximum - 5 | W2 | S | O | W2 | W | T | W2 | S | T | W2 | W | O |
| | | Critical - 6 | W3 | S | O | W3 | W | T | W3 | S | T | W3 | W | O |
| | | X | Power and opportunity -1 | | | Weakness and threats - 2 | | | Power and threats - 3 | | | Weakness and opportunities -4 | | |
| | | | External financial environment (external risk) | | | | | | | | | | | |

Note:
* to indicate the degree of internal risk of financial activity the system of marks is used: S 2 (minimum), S 1 (small) N (average), W1 (high);W2 (maximum), W3 (critical). To indicate the state of the environment the system is used: S (strong); W (threatening); T (weak); O (favorable).
Sourse: formed based on [6, p. 120-121, 2, p. 71-173]

According to the summary results based on the matrix of the financial potential, it is possible to determine strategic prospects of further development of the enterprise [6, p. 119].

The company may have opportunities for aggressive growth, limited growth, defensive anti-crisis opportunities to maintain positions, or financial cuts [6, p. 120-121; 2, p. 71-173]: 1) *zone 1* (White zone) – enables the enterprise to carry out aggressive financial growth aimed at ensuring high growth rates by output and sales volumes; 2) *zone 2* (Dark Grey zone) – provides an opportunity to pursue aggressive or limited financial growth, aimed at strengthening the basic financial positions of the enterprise at the expense of external financial factors; 3) *zone 3* (Horizontal lines zone) provides a limited financial growth opportunity aimed at strengthening the core financial position and overcoming external weaknesses or threats due to a strong domestic financial environment; 4) *zone 4* (Vertical lines zone) – depending on the degree of threat, allows the enterprise to focus on limited development or anti-crisis direction on the maintenance of the won positions; 5) *zone 5* (Light Grey zone) - is the most problematic, giving the possibility to choose the exclusively anti-crisis direction

of financial reduction.

The second stage provides for defining peculiarities of the development of elements of the system of plans and planning standards to provide the financial potential of the production enterprise with the necessary resources and increase its efficiency in the future period. The majority of domestic enterprises do not have a developed system of internal planning, therefore this stage should start with the whole formation – the formulation of the key goal of the enterprise and the system of secondary goals. Analysis of scientific literature on the BS issues [2, p. 71-173], [9, p. 105-131] allowed us to highlight the following healing scheme:

1. Key goals: formulation of mission (the main goal of the enterprise – for what it exists for); formulation of vision (pictures of the future enterprise in 5, 10, 50 years); formulation of values (principles of the enterprise, shared by employees); formulation of a key strategy (the general program of action identifies priority problems and resources).

2. Secondary pricing - formulation of financial strategy. The establishment of the BS should begin with key goals formulation (mission, vision, key strategy, and values of the enterprise) and the next transition to the secondary (financial) strategy.

The specified provisions make it necessary to establish consistency in the financial strategy development which can be realized with the help of Figure 3.

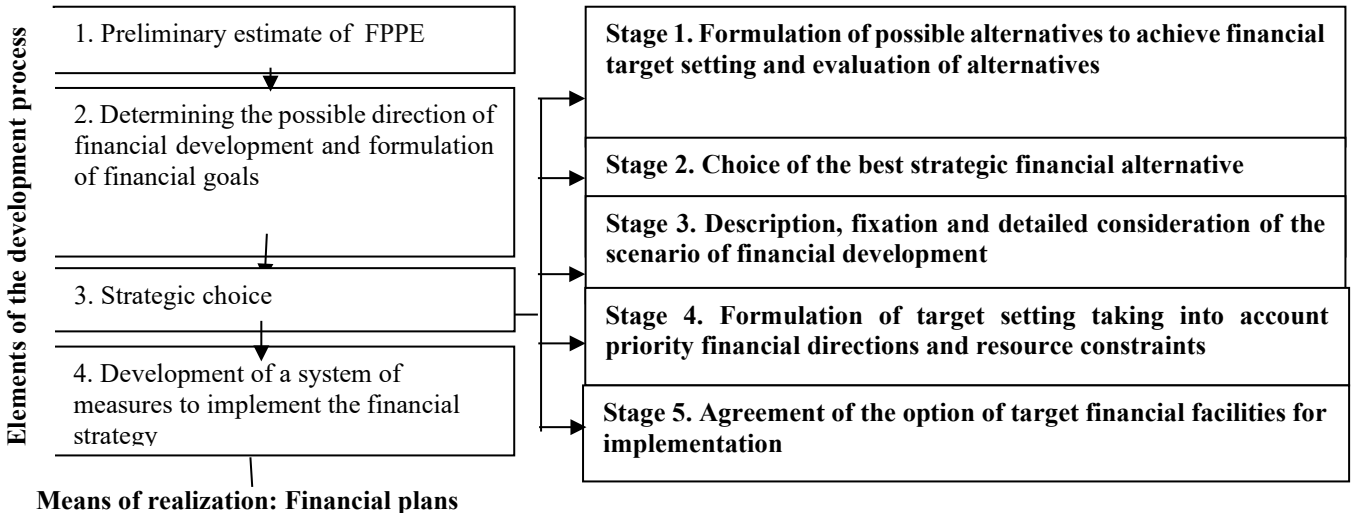


**Figure 3. Scheme of financial strategy development**

Sourse: formed on the basis of [7, p. 93-109], [9]).

Therefore, the choice of a financial strategy and priority directions of financial activity is recommended using a quantitative method of description of strategic alternatives allowing one to choose the most appropriate options from the point of view of priorities of cost [7, p. 93-109]. For the description, fixation, and detailed consideration of the chosen strategic choice scenario, it is expedient to use the differentiation of goals and their presentation in the form of a strategic map, built on the goal tree technology and in the 5 BS components range. The differentiation of goals within the framework of the balanced scorecard components is carried out according to such rules [8, p. 50-173]:

1) setting targets for component 1 characterizes the financial strategy direction. In the hierarchy of goals, this component is the most important, but financial indicators are effective, so goals set to achieve in the 1 component, the enterprise should detail them in other balanced scorecard components. Possible goals for the component are: "increase of the enterprise value "; "increase of the enterprise profit"; "increase of business activity"; etc.;

2) setting targets for component 2 characterizes the economic results of the financial strategy. The objectives of the component should be focused on the maximum use of strong sides of the external environment of direct influence (expansion of the client base, destruction of competitors, search for the most useful suppliers, etc.) and favorable opportunities for the financial environment of indirect influence. Possible goals for the following components: "increase of the number of clients", "search for cheap suppliers of raw materials", "destruction of competitors", "minimization of currency risks";

3) setting targets for component 3, supporting the means of implementation of the chosen financial strategy. Any means to implement the financial strategy are ineffective in the absence of qualified employees. Possible goals are: “keeping valuable personnel”; “mastering the necessary skills and abilities”, etc.;

4) setting targets for component 4 determines the means of implementation of the chosen financial strategy. The components’ goals define the directions of financial management and allow to determine, make and implement strategically expedient

financial decisions. Possible goals for the following components: "drawing up the tax calendar"; "developing the cash plan"; "controlling the rates of credit and deposit interest on the financial market";

5) setting targets for component 5 determine the ability to implement the financial strategy. Any means to implement the financial strategy are impossible without the coordinated work of the financial service. Possible goals are: "development of communication channels", "effective communication climate", "satisfaction of information needs of employees", etc.

The final fixation of the scenario of strategic choice and formation of target settings taking into account the priority directions and limitations on resources of FPPE is expedient to carry out with the help of quantitative fixing of goals of the static map in the system of indicators uses Balanced Scorecard, which architecture shown in Table 14.

**Table 14.**
**Architecture of balanced scorecard of the financial potential of the production enterprise**

| Components | Differentiation and coding of goals | Quantitative expression of goals | | |
|---|---|---|---|---|
| | | The name of the summary indicator | Initial value | Target value |
| | | | | |

Source: formed based on [2, p. 111; 3]

A Balanced Scorecard should focus on the five components of the financial potential of the production enterprise, built hierarchically based on cause-effect relationships.

The quantitative expression of goals is carried out within each component of the static map based on generalizing indicators reflecting the status of selected goals achievement [2, p. 111].

When a balanced scorecard formulates a financial strategy for the financial strategy description, it is recommended that:

- use of actual (initial) values of summary indicators and their target values;

- use of the system of alphabet-digital coding of generalized indicators to facilitate the process of further development.

There are several peculiarities in the process of forming balanced scorecard indicators: 1) balanced scorecard should contain non-financial and financial success indicators (Table 15); 2) contents and list of Balanced Scorecard indicators are determined according to the direction of the company's financial strategy and its individual needs; 3) indicators selected by enterprises should reflect the cause-effect relationships defined in the static map.

**Table 15.**
**Financial and non-financial performance indicators of balanced scorecard of the financial potential of the production enterprise**

| 1 | Financial indicators | Non-financial indicators |
|---|---|---|
| Definition | Indicators oriented on the final results of the period; characterize activity for the last period | Indicators are factors or driving forces of the results displayed in the previous indicators; they assess intermediate processes and actions |
| Example | Market share;<br>Profit from sales;<br>Customer satisfaction | Number of hours spent with clients;<br>Number of customer complaints;<br>Number of destroyed competitors |
| Advantages | Easy to identify and fix | They have a forecast character; they allow the company to adjust its actions on the basis of results |
| Disadvantages | Oriented toward the past. Do not reflect current activity; do not provide forecasting opportunities | There are some difficulties with fixing and calculation; often these are new indicators that have never been used at the enterprise |

Sourse: formed on the basis of [1, p. 112-113]

The process of its cascading within three levels of Balanced Scorecard feature [8]:

- Level 1 cascade (balanced scorecard financial service, which is the basis of the balanced scorecard of its departments);

- Level 2 (balanced scorecard of the Financial Services Department);

- Level 3 cascade (balanced scorecard employee or group of employees based on previous two levels).

The Balanced Scorecard is created and cascaded to form elements that form a regulatory management system that coordinates the links between the analysis and planning system (controlling system) and provides [6, p. 61] concentration of control actions on the most priority directions of the financial potential development; timely detection of deviations of actual results from the predicted; the adoption of operational management decisions aimed at normalizing the identified deviations.

The above provisions on Balanced Scorecard allow us to define it as the basis of the formation of the control system through a number of the following elements: a

system of priorities ranked by the importance of indicators in all areas of control; a system of quality standards targeted strategic standards record the indicators of plans; a monitoring system as a mechanism of constant monitoring of the most important financial potential indicators determining the size of deviations of actual results from the predicted and identifying the reasons for these deviations; a system of algorithms of managers' actions of the financial service on the elimination of deviations. The organic combination of balanced scorecard and the financial potential controlling system allows distinguishing a number of peculiarities of the formation of the above elements:

The system of priorities should be formed by cascade Balanced Scorecard. The use of the strategic card will allow: to rank the systems of indicators without breaking their factor connection and hierarchical comparison; to form an opportunity to explain the reasons for deviations of actual values from the expected quality standards of control.

When creating a priority system, it is advisable to use the following control ranking technology:

1) in the indicators ranking of cascade number 1, it is advisable to provide: 1 importance level – for an indicator that captures the main goal of the financial strategy; 2 importance level – for indicators that record measures to achieve the main goal of the financial strategy, and information indicators of importance level number 1; 3 importance level – for information indicators of cascade 1;

2) in the indicators ranking of cascade number 2 –3, it is advisable to provide: 1 importance level – summary indicator cascade number 1, that are present in balanced scorecard departments and individual employees; 2 importance level – summary indicator cascade number 2 or 3 and information indicators, fixed importance level number 1; 3 importance level – information indicators cascade number 2 or 3;

3) systems of quality standards are formed according to the balanced scorecard target values, as it defines the main directions of the financial service activity. This will allow receiving operative information on the realization of current and strategic goals of the financial service, its departments, individual employees;

4) the monitoring system is formed according to the information dictionary of the balanced scorecard cascade. The special features of the formation of the defined system are preceded by its structuring by elements: information and generalizing indicators; reporting and control periods of the registration of deviations, and explanation of reasons for deviations.

Let us consider the specifics of the formation of certain elements of the monitoring system.

Information indicators are the most complete, as they are formed according to the data of management accounting.

The aggregate indicators reflect the actual results provided in a balanced scorecard by quality control standards. Their characteristics and construction of calculation algorithms are realized with the help of the information dictionary of activity indicators, the basic form of which is shown in Table 16.

**Table 16.**
**Form of balanced scorecard information dictionary**

| | | |
|---|---|---|
| Cell 1. Component / / Name of indicator | Cell 2. Baseline result / quality control standard | Cell 3. Responsible / reporting |
| Cell 4. Goal (1) | Cell 5. Unit of measure | Cell 6. Frequency of control: daily (1); monthly (2); quarterly (3); yearly (4); |
| Cell 7. Опис показника | | |
| Cell 8. $\frac{financial(1)}{non-financial(2)}$ | Cell 9. Polarity of result (high value) Good (1)/bad (2)) | Cell 10. Calculation algorithm |
| Cell 11. Information indicators | Cell 12. Quality of data: $\frac{high(1)}{low\ (2)}$ | Cell 13. Data collection |
| Cell 14. Substantiation of the qualitative standard of control | | |

Sourse: formed based on [1, p 127].

The control information carriers (reports) are standardized and contain data on:

- the actual result of the generalized indicator;
- a qualitative standard of control;
- the size of the deviation of the generalized indicator from the standard;
- reasons for deviations on the aggregate indicator in general and on its components;
- persons responsible for the implementation of the standard (name and post).

In addition to the standard information of the executive control reports, we need

to:

- display of results of achievement of current financial goals, about fulfillment (or non-fulfillment), is indicated by the value of the general indicator, with the purpose of timely prevention of complications in the process of realization of financial strategy of the enterprise;

- an indication of the balanced scorecard component, which has the control indicators and current financial goals, in order to determine the problematic financial potential sub-system to be adjusted.

Using the balanced scorecard architecture as a form of control reports of the performers can take into account requirements to the media of control information (Table 17).

**Table 17.**
**Recommended form of executive control reports of the balanced scorecard component**

| Component | Goal | | quantitative expression of result | | | | | |
|---|---|---|---|---|---|---|---|---|
| | code | achieved / not achieved | The name of the summary indicator | Actual value | Quality control standard | Deviation from quality standard (+;-) | Reasons for deviations | Responsible for the implementation of the quality standard (last name and post) |
| … | | | | | | | | |

Sourse: constructed by the author

The need for response speed can be realized by generating real-time reports or cutting weekly, quarterly, and annual reports. The registration of deviations is carried out in the group [6, p. 66-67]: (+) positive; (-/+) negative, but will assume; (-) negative, critical. For registration criteria of "critical" deviations are established. Explanations of the reasons for the deviations are provided for each Balanced Scorecard component providing an opportunity to identify and consider the indicators observed by the "critical" deviations and the conditions that caused them.

The monitoring system is designed the account for certain peculiarities and can adjust to changing the financial strategy of the enterprise. The existence of a system of monitoring activity indicators makes it necessary to apply algorithms of actions on the

elimination of revealed deviations. According to practical experience and scientific modern developments [6, p. 11-20], three basic algorithms of action are used (Table 18).

**Table 18.**
**Deviation elimination algorithms**

| Algorithm | Principal Action Plan |
|---|---|
| «lack of action» | The form of response is envisaged in case of positive deviations from the quality control standards |
| «eliminate deviations» | The form of response involves searching for reserves to ensure compliance with quality control standards. Reserves are considered in terms of certain aspects of financial activity and certain financial operations. Such reserves should include: introduction of the economic regime; attraction of additional financial, personnel, technological, information, and organizational resources |
| «change of quality control standards» | The form of response is provided if the possibility of normalization of certain aspects of financial activity is limited or absent. In this case, the results of the financial monitoring make proposals for adjusting quality control standards. In critical cases, there may be justified proposals for the termination of certain operations |

Sourse: formed on the basis of [6, p. 11-20; 15; 16, p. 82-99]

The structuring of the management methodology of the financial potential of the production enterprise allowed: the development of the algorithm for designing management methodology elements of the financial potential of the production enterprise; optimize of the structural idea of the balanced scorecard taking into account the financial potential peculiarities; development of a comprehensive approach to the construction of an action system based on the preliminary study of the state and main results of the financial operation; develop a unified approach to the development of elements of plan systems, and plan standards for ensuring the development of the enterprise with the necessary resources and increasing the efficiency of its financial activity on the balanced scorecard basis; form the unified approach to the development of elements of the regulatory management system.

## Conclusion

The proposed method of management of the financial potential of the production enterprise is considered a combination of actions to streamline the development and integration of the Balanced Scorecard into the financial service. In this connection, the actions are structured in the following way: preliminary financial potential of the production enterprise evaluation; development and cascading of the Balanced Scorecard. The process of research established that Balanced Scorecard implementation improves financial planning and controlling systems as management elements of financial potential. In the context of the application of the proposed approach to the financial potential of the production enterprise management, the need to use the optimized Balanced Scorecard structural idea, since the structural idea of R. Kaplan, and D. Norton has shortcomings (problems of application of term "business-processes"; non-consideration strategically factors of the external financial environment, etc.).

At the Balanced Scorecard structural idea optimization has been obtained structure includes as the basis for balancing the enterprise financial strategy and the components: 1) "the external environment of the FPPE" (covers the financial potential of the production enterprise factors influenced); 2) "financial resources of the enterprise" (sums up the money owned by the enterprise and intended for realization of expenses: current; for extended reproduction; financial obligations fulfillment; economic stimulation of employees); 3) "personnel resources of the financial service" (summarizes the financial service personnel and is the driving force of transforming the financial strategy into reality); 4) "organizational resources of the financial service" (summarizes the aggregate of organizational forms, structures, processes, and methods necessary for the realization of the enterprise's financial strategy); 5) "technological resources of the financial service" (summarizes the aggregate of information and management technologies that determine the ability to implement the financial strategy).

Management of the financial potential of the production enterprise must be realized through the model of the management paradigm takes into account the

multidimensional nature of their activity, balances the target system, and establish its direct connection with the results of the financial service of the enterprise in all frames (as regards personnel, technological and organizational resources of the financial service, financial resources of the enterprise, external environment). This approach allows the achievement of high efficiency in the activity of the financial service.

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