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ACCOUNTING AND ANALYTICAL SUPPORT FOR ASSESSING THE LEVEL OF ECONOMIC SECURITY OF THE ENTERPRISE

Abstract. The article investigates the theoretical, methodological and applied aspects of accounting and analytical support for assessing the state and level of economic security of the enterprise. It is hypothesized that the economic security of the enterprise is a capacious, complex concept. In general, it can be defined as the absence of various dangers and threats, or the ability to prevent them, protect their interests and prevent losses below the critical limit. In the context of this, the main purpose of enterprise management is a timely assessment of the state and level of economic security and making informed management decisions to improve it. This requires the availability of adequate and relevant information, which is formed in the accounting and analytical system of the enterprise. The components of accounting and analytical information as a basis of accounting and analytical system of economic security of the enterprise are systematized. The directions and tasks of the analyst's activity on financial and economic security of the enterprise are singled out. It is substantiated that diagnostics is a tool for assessing the state and level of economic security of the enterprise. The directions, types and kinds of diagnostics from the point of view of an estimation of a condition and level of economic safety of the enterprise are considered. On the example of the largest in the south-eastern part of Europe, the manufacturer and supplier of steel electric welding pipes PJSC «Interpipe Novomoskovsk Pipe Plant» calculated and interpreted the indicators for each component of economic security. Based on the results of calculations, the level of economic security of the researched enterprise is determined and the influence of separate components on its value is estimated for the purpose of acceptance of administrative decisions and application of the preventive measures directed on increase of level of economic safety of the enterprise.

Keywords: security, economic security of the enterprise, components of economic security of the enterprise, accounting and analytical support, indicators of economic security of the enterprise.

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ОБЛІКОВО-АНАЛІТИЧНЕ ЗАБЕЗПЕЧЕННЯ ОЦІНЮВАННЯ РІВНЯ ЕКОНОМІЧНОЇ БЕЗПЕКИ ПІДПРИЄМСТВА

Анотація. Досліджено теоретичні, методологічні та прикладні аспекти обліковоаналітичного забезпечення оцінювання стану та рівня економічної безпеки підприємства. Висунуто гіпотезу, що економічна безпека підприємства є комплексним і складним поняттям. У загальному варіанті її можна визначити як відсутність різного роду небезпек і загроз або наявність можливостей щодо їх попередження, захисту своїх інтересів і недопущення втрат нижче від граничної межі. У контексті зазначеного основною метою менеджменту підприємства є своєчасна оцінка стану і рівня економічної безпеки та ухвалення виважених управлінських рішень щодо його поліпшення. Визначено, що зазначене потребує наявності адекватної та релевантної інформації, яка формується в обліково-аналітичній системі підприємства. Систематизовано загальні важливі складові обліково-аналітичної інформації як основи обліково-аналітичної системи економічної безпеки підприємства. Виокремлено актуальні напрями і завдання діяльності аналітика з питань фінансово-економічної безпеки підприємства. Обгрунтовано, що діагностика є дієвим і важливими інструментом оцінювання стану та рівня економічної безпеки підприємства. Розглянуто напрями, види і форми діагностики щодо оцінювання стану та рівня економічної безпеки підприємства. На прикладі найбільшого в південно-східній частині Європи вітчизняного виробника і постачальника сталевих електрозварювальних труб ПАТ «Інтерпайп Новомосковський трубний завод» здійснено обчислення та інтерпретацію показників для кожної складової економічної безпеки. За результатами розрахунків визначено рівень економічної безпеки досліджуваного підприємства та оцінено вплив окремих компонентів на її рівень з метою ухвалення управлінських рішень і застосування превентивних заходів, спрямованих на підвищення рівня економічної безпека підприємства.

Ключові слова: безпека, економічна безпека підприємства, складові економічної безпеки підприємства, обліково-аналітичне забезпечення, показники економічної безпеки підприємства.

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Introduction. The basis of economic security of the national economy is the sustainable development of individual businesses, the successful operation of which largely depends on the formation of budgets at various levels and the possibility of implementing social programs that provide decent living standards. The most important condition for maintaining economic security is the timely detection of threats associated with the loss of economic entity's position in the market, and the choice of those areas of its development that ensure sustainable positioning in commodity markets and determine the specialization of its development. It is important to form such an information system that will allow you to choose the main characteristics and indicators of enterprise development, to objectively characterize its financial condition, financial stability and ability to develop. The formation of an information system based on reliable and reliable accounting information that allows you to quickly control production processes, identify negative trends and follow promising areas of development, becomes a crucial condition for economic security of the enterprise.

An important condition for maintaining the appropriate level of economic security of the business entity is the timely detection of threats by means and tools of the accounting and analytical system of the enterprise. One of the elements of the information system, which allows you to quickly monitor financial and economic processes, identify negative trends and develop ways to minimize them, is modeling the level of economic security, its components and assessing the impact of this level on the results of the enterprise. The process of building an effective system of economic security of the enterprise is impossible without powerful tools from the management staff, which determines the legality and effectiveness of the facts of financial and economic activities of the enterprise.

Analysis of research and problem statement. Despite the existence of a number of studies on individual components of economic security of enterprises, carried out by such scientists as: M. Yermoshenko, O. Kyrychenko, H. Kozachenko, V. Krutov, O. Liashenko, I. Migus, G. Minaev, Ye. O. Oleynikov, L. Shemaeva, V. Franchuk, no significant developments regarding accounting and analytical support were made. The study of certain aspects of the use of accounting and analytical data in maintaining the safe operation of business entities is devoted to the scientific developments of I. Belousova, M. Bondar, S. Galuzina, V. Evdokimova, Ye. Lapchenka, T. Momot, V. Palia, M. Pushkar, G. Savitskaya, M. Chumachenka, A. Sheremeta, S. Khmelova, C. Horngren, R. Anthony and others.

Unsolved aspect of the problem. Systematization and application of certain methods of assessing the level and state of economic security of enterprises in a particular industry remain open, and therefore are of scientific interest.

The purpose of the article. The purpose of the article is to review the system of accounting and analytical management of economic security of the enterprise, diagnostics of the security of the enterprise and the development of practical recommendations for its improvement.

Research results. Economic security of the enterprise is a capacious, complex concept. In general, it can be defined as the absence of various dangers and threats, or the ability to prevent them, protect their interests and prevent losses below the critical limit. In the context of this, the main purpose of enterprise management is a timely assessment of the state and level of economic security and making informed management decisions to improve it. This requires the availability of adequate and relevant information, which is formed in the accounting and analytical system of the enterprise. Given the difficult conditions of doing business, caused by rapid change and increasing aggressiveness of the external environment, the basis for improving the process of managing economic security of enterprises is information support and accounting system, which is associated with the need for reliable information about the real security situation, threats and risks, ie on an objective assessment of the quality of the economic security system. The central place in the information support of economic security of the enterprise is given to accounting and analytical information.

Accounting and analytical information in the system of economic security of the enterprise is based on accounting (accounting) information, which includes operational data, as well as

statistical information, which along with accounting data is used for analysis. The content of the category «accounting and analytical information» is disclosed mainly through the content of the concepts «operational accounting», «accounting», «analysis of financial and economic activities». The Law of Ukraine «On Accounting and Financial Reporting in Ukraine» [10] stipulates that accounting information is an information system that operates in accordance with certain rules, provides information to various categories of users in the necessary for them aspect.

From the definition of accounting, the purpose of building this system is not clearly formalized, ie accounting as a system built according to certain principles, is, in fact, an end in itself. We characterize the economic nature of these categories and their purpose in the process of preparation of accounting and analytical information in the form of a structural and logical scheme presented on the *Fig. 1*.

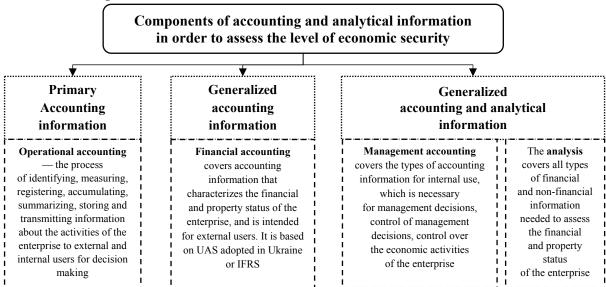


Fig. 1. The main components of accounting and analytical information in the system of economic security of the enterprise

Source: by the authors.

Operational accounting is used to monitor the most important business transactions in order to manage them at the time of their implementation. In particular, to control the implementation of contracts for the supply of inventory, settlements with debtors, production and sale of products, etc. A distinctive feature of operational accounting is the efficiency of obtaining information, which is important for the system of economic security.

Accounting records and accumulates comprehensive synthetic (generalized) accounting information about the activities of the entity and its departments for a certain period. According to the National regulations (standards) of accounting, the accounting information represents the information on a condition, structure and movement of property of the organization and sources of its origin, economic processes and results of financial and industrial and economic activity of the organization [8].

Financial accounting data reflects retrospective information about events and transactions that have already taken place, ie that cannot be influenced or changed.

Relevant is the future (forecast) information that can be changed under the influence of certain management decisions. This is the information provided by *management (internal) accounting*. In addition, management accounting data are closed not only to external users of the formation, but also to the staff of the enterprise, which is not directly related to the solution of a particular problem, which significantly increases its confidentiality. The influence of management accounting on the formation of accounting and analytical information in ensuring economic security, when it comes to strategic management accounting, which combines external and internal information and budgeting principles and allows you to analyze the activities of the enterprise taking into account its current and long-term development and security goals [1].

Based on the opinion of some domestic authors, who note that economic security should be understood as the ability of the enterprise to carry out its business activities efficiently and stably by using a set of interconnected diagnostic and control measures of a financial nature to optimize the use of enterprise resources and external environment [11]. All these features of diagnostics are clearly shown in the system of economic security of the enterprises. In this case, the diagnostics of economic security of the enterprise is understood as a system of targeted analysis conducted by an analyst on economic security, aimed at solving the following tasks:

- 1) adaptation and development of methods and techniques of diagnostics in accordance with the requirements of economic security;
- 2) identification and formalization of a set of external and internal threats that affect the state of economic security of the enterprise;
- 3) the establishment of limit values (indicators) of individual indicators that determine the state of economic security of the enterprise;
- 4) formation of methodical approaches to complex diagnostics of a condition of economic safety of the enterprise.

In general, the classification of types and kinds of diagnostics in the system of economic security is given on the *Fig. 2*.

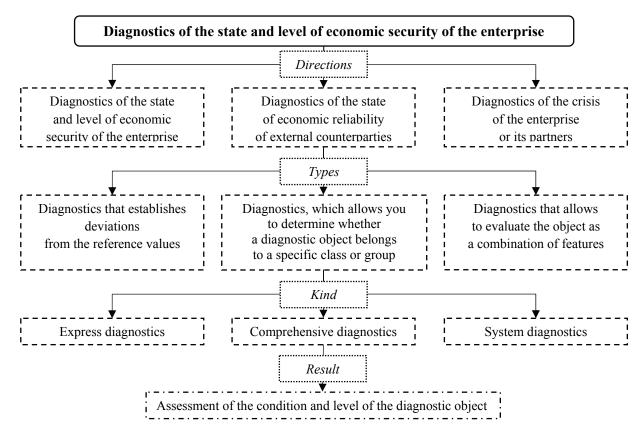


Fig. 2. Classification of directions, types and kinds of diagnostics of economic safety of the enterprise

Source: based on [5].

In the context of assessing and diagnosing the state of an economic enterprise, we propose to identify seven basic functional components in the system of economic security of enterprises, taking into account the specifics of their economic activities and each of the components to give some weight in total:

- financial (0.35);
- personnel (0.2):
- technical and technological (0.2);
- power (0.05);

- information (0.05);
- resource (0.1);
- political and legal (0.05).

Each individual component of the economic security of the enterprise is represented by a tactical and strategic assessment of a number of indicators.

Note that the constructed system of indicators for assessing the state of economic security is not exhaustive, and therefore, depending on the specifics of the researched enterprise can be supplemented.

We will diagnose the state of economic security on the basis of the algorithm proposed above on the example of the largest in the south-eastern part of Europe manufacturer and supplier of steel electric welding pipes PJSC «Interpipe Novomoskovsk Pipe Plant».

Assessment and diagnostics of the financial component of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant»:

The financial component as an internal functional component of economic security is considered the main one, because under market conditions, finance is the «engine» of any economic system. The financial and economic condition of the enterprise (organization) is characterized by the degree of its profitability and turnover of capital, financial stability and dynamics of the structure of sources of financing, the ability to pay off debt. Proper assessment of the financial results of activities and financial and economic condition of the enterprise (organization) in modern business conditions is absolutely necessary for its management and owners, as well as for investors, partners, creditors, government agencies. The financial and economic condition of the enterprise (organization) is of interest to its competitors, but in another aspect – negative; they are interested in weakening the position of competitors in the market. The weakening of the financial component of economic security is evidenced by:

- reducing the liquidity of the enterprise;
- increase in accounts payable and receivable;
- reduction of financial stability, etc.

The dynamics of indicators that characterize the financial component of economic security of the enterprise is shown in Table 1.

Table 1
Indicators that characterize the financial component of the economic security
of the enterprise PJSC «Interpipe Novomoskovsk Pipe Plant»

| Indicator | Limit value | | Years | Security level | |
|---|-------------|--------|--------|----------------|------------|
| indicator | Limit value | 2017 | 2018 | 2019 | assessment |
| | > 0.6 | | | | high |
| Coefficient of autonomy | 0.4—0.6 | | | | sufficient |
| | < 0.4 | 0.2885 | 0.3341 | 0.2939 | low |
| Coverage ratio | > 1.5 | | | | high |
| | 1.0—1.5 | 1.1013 | 1.3150 | 1.2151 | sufficient |
| | < 1.0 | | | | low |
| Asset turnover ratio | > 2 | | | | high |
| | 1—2 | 1.0812 | | | sufficient |
| | <1 | | 0.7608 | 0.6410 | low |
| Profitability of products (goods, works, services), % | > 20 | | | | high |
| | 10—20 | 13.93 | 17.50 | 10.62 | sufficient |
| | < 10 | | | | low |

Source: calculations according to the company's reporting.

Thus, the coefficient of autonomy of PJSC «Interpipe Novomoskovsk Pipe Plant» during the study period had values corresponding to a low level of safety. The same can be said about the asset turnover ratio during 2018—2019. At the same time, the coverage ratios and profitability of products had values that corresponded to a sufficient level of security of the enterprise. In general, we observe alarming signals about the state of the financial component of economic security of the enterprise.

Assessment and diagnostics of the personnel component of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant»:

The appropriate level of economic security largely depends on the intelligence and professionalism of personnel working in the enterprise. Negatively affect this component:

- dismissal of leading highly qualified workers, which leads to a weakening of intellectual potential;
- reducing the share of engineering and technical workers and scientists in the total number of employees;
 - reduction of inventive and innovative activity;
 - reduction of the educational level of employees.

The composition of personnel directly affects the level of economic security in the enterprise. Negative impact on the personnel component has:

- 1) internal threats:
- non-compliance of employees' qualifications with the requirements for them;
- insufficient qualification of employees;
- weak organization of personnel management system;
- weak organization of the education system;
- errors in the planning of personnel resources;
- reducing the number of innovation proposals and initiatives;
- employees are focused on solving internal tactical tasks;
- employees are focused on the interests of the unit;
- low-quality checks of candidates for employment.
- 2) external threats:
- conditions of motivation of competitors are better (it is easy in such a schedule to predict the transition of specialists to competitors);
 - guiding competitors to lure;
 - pressure on outside workers;
 - getting employees into different types of dependence;
- inflationary processes (it is impossible not to take into account when calculating wages and forecast its dynamics).

The dynamics of indicators that characterize the personnel component of the economic security of the enterprise is reflected in *Table 2*.

Table 2
Indicators characterizing the personnel component of economic security of the enterprise PJSC «Interpipe Novomoskovsk Pipe Plant»

| Indicator | Limit value | Years | | | Security level |
|--|-------------|-------|-------|-------|----------------|
| Indicator | Limit value | 2017 | 2018 | 2019 | assessment |
| | < 10 | | | | high |
| Staff turnover rate, % | 10-20 | 10.16 | 15.14 | 16.92 | sufficient |
| | > 20 | | | | low |
| | < 5 | 4.19 | | | high |
| Share of lost working time, % | 5—10 | | 8.99 | 9.12 | sufficient |
| | > 10 | | | | low |
| The level of compliance between | high | + | + | + | high |
| the amount of remuneration of the employee's | average | | | | sufficient |
| qualifications and productivity | low | | | | low |
| Maral and navahalagical alimata | favorable | + | + | + | high |
| Moral and psychological climate in the team | stable | | | | sufficient |
| in the team | hostile | | | | low |

Source: calculations according to the company's reporting.

Thus, the turnover rate of PJSC «Interpipe Novomoskovsk Pipe Plant» during the study period had values that correspond to a sufficient level of safety. The same can be said about the share of lost working time in 2018—2019. At the same time, the level of compliance with the amount of wages of the employee's qualifications and productivity and moral and psychological

climate in the team were important, corresponding to a high level of enterprise security. In general, we observe a stable state of the personnel component of economic security of the studied enterprise.

Assessment and diagnostics of the technical and technological component of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant»:

Technical and technological safety of the enterprise consists in the level of conformity of the technologies applied at the enterprise to the best world analogues for cost optimization. The negative effects on this component include:

- actions aimed at undermining the technological potential of the enterprise;
- violation of technological discipline;
- moral aging of the used technologies.

External threats to the weakening of technical and technological security can be considered a lack of foreign and domestic investment. Difficulties in obtaining long-term loans from banks do not allow to replenish working capital of the enterprise and direct them to upgrade the fleet of equipment. All this leads to the use of outdated equipment, technology and a significant threat to technical and technological safety.

Internal threats to technical and technological safety-inefficient organization of the production process, insufficiently skilled workers, a high degree of working capital, and so on.

The dynamics of indicators that characterize the personnel component of the economic security of the enterprise is reflected in *Table 3*.

Table 3
Indicators characterizing the technical and technological component of economic security
of the enterprise PJSC «Interpipe Novomoskovsk Pipe Plant»

| Indicator | Limit value | Years | | | Security level |
|--|-------------|--------|--------|--------|----------------|
| Indicator | | 2017 | 2018 | 2019 | assessment |
| | < 40 | 32.86 | | | high |
| Depreciation rate of fixed assets,% | 40—70 | | 41.36 | 50.14 | sufficient |
| | > 70 | | | | low |
| Production capacity utilization rate,% | > 90 | 94.22 | 95.99 | 96.16 | high |
| | 70—90 | | | | sufficient |
| | < 70 | | | | low |
| Update rate,% | > 10 | | | | high |
| | 5—10 | | | | sufficient |
| | < 5 | 3.13 | 0.18 | 2.86 | low |
| Return on assets, UAH | > 2.0 | 2.8221 | 3.7401 | 4.6019 | high |
| | 1.0-2.0 | | | | sufficient |
| | < 1.0 | | | | low |

Source: calculations according to the company's reporting.

Thus, the rate of renewal of fixed assets of PJSC «Interpipe Novomoskovsk Pipe Plant» during the study period had values that correspond to a low level of security. The average level of safety was characterized by the coefficient of depreciation of fixed assets. At the same time, the capacity utilization rate and return on assets were values that corresponded to the high level of security of the enterprise. In general, we observe a stable state of the technical and technological component of economic security of the studied enterprise.

Assessment and diagnostics of the power component of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant»:

The security of the enterprise is to protect the individual from threats to his life, health and material well-being, as well as to protect the property of the enterprise from criminal encroachment. The power component is to ensure the physical safety of employees of the firm (especially managers) and the preservation of its property. The main negative impacts on this component include physical and moral impacts on specific individuals (especially management and leading professionals) in order to harm their health and reputation, which threatens the normal operation of their enterprise. Negative effects that damage the property of the enterprise, threaten to reduce the value of its assets and loss of economic independence (misinformation, destruction of information).

The causes of these negative phenomena are:

- inability of competing companies to achieve advantages by correct methods of market nature, ie by improving the quality of their products, reducing current production costs (activities), improving market research, etc.;
- criminal motives for criminal legal entities (individuals) to receive income through blackmail, fraud or theft;
- non-commercial motives for encroachment on the life and health of managers and employees of the enterprise (organization), as well as on the property of the company.

The security service should deal with these negative influences. Its duty is to provide physical protection to the management of the enterprise, to organize the access regime, to protect the premises, communication lines and equipment.

The dynamics of indicators that characterize the power component of the economic security of the enterprise is shown in *Table 4*.

Table 4
Indicators characterizing the power component of the economic security of the enterprise
PJSC «Interpipe Novomoskovsk Pipe Plant»

| In Product | T, I | Years | | | Security level |
|-----------------------------------|-------------|--------|--------|--------|----------------|
| Indicator | Limit value | 2017 | 2018 | 2019 | assessment |
| Level of property preservation, % | < 1 | 0.1465 | 0.0366 | 0.0011 | high |
| | 1—3 | | | | sufficient |
| | > 3.0 | | | | low |
| Level of personnel protection | high | + | + | + | high |
| | average | | | | sufficient |
| | low | | | | low |

Source: calculations according to the company's reporting.

Thus, the power safety indicators of PJSC «Interpipe Novomoskovsk Pipe Plant» during the study period were important, which corresponded to a high level of safety. In general, we observe a strong state of the power component of the economic security of the studied enterprise.

Assessment and diagnostics of the information component of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant»:

The information component is the implementation of effective information and analytical support of economic activity of the enterprise. Relevant services perform certain functions, which together characterize the process of creating and protecting the information component of economic security:

- 1) collection of all types of information about the activities of a business entity;
- 2) analysis of the received information with obligatory observance of the generally accepted principles and methods;
 - 3) forecasting trends in scientific and technological, economic and political processes:
- 4) assessment of the level of economic security for all components and in general, development of recommendations for improving this level in a particular business entity;
 - 5) other activities for the development of the information component of economic security.

The dynamics of indicators that characterize the information component of economic security of the enterprise is shown in *Table 5*.

Table 5
Indicators that characterize the information component of the economic security of the enterprise PJSC «Interpipe Novomoskovsk Pipe Plant»

| Indicator | Limit value | | Years | Security level | |
|---|-------------|--------|--------|----------------|------------|
| | | 2017 | 2018 | 2019 | assessment |
| The level of providing employees with information for decision making | high | + | + | + | high |
| | average | | | | sufficient |
| | low | | | | low |
| Level of protection of commercial information | < 1 | 0.1432 | | 0.1298 | high |
| | 1—3 | | 1.1112 | | sufficient |
| | > 3.0 | | | | low |

Source: calculations according to the company's reporting.

Table 6

Thus, the information security indicators of PJSC «Interpipe Novomoskovsk Pipe Plant» during the study period were important, corresponding to a high level of security. In general, we observe a strong state of the information component of the economic security of the studied enterprise.

Assessment and diagnostics of the resource component of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant»:

The resource component of the economic security of the enterprise are the factors that characterize the material support of production with the main types of resources. The dynamics of indicators that characterize the information component of economic security of the enterprise is shown in *Table 6*.

Indicators characterizing the resource component of economic security of the enterprise PJSC «Interpipe Novomoskovsk Pipe Plant»

Years **Security level Indicator** Limit value 2017 2019 2018 assessment > 3.0 high The ratio of inventories of working 0.2—0.4 0.2657 0.3622 0.3417 sufficient capital < 0.2 low > 3.0 high Material efficiency 2,0—3,0 2.1796 2.6655 2.5472 sufficient < 2.0 low

Source: calculations according to the company's reporting.

Thus, the indicators of resource security of PJSC «Interpipe Novomoskovsk Pipe Plant» during the study period had values that corresponded to a sufficient level of security. In general, we observe a sufficient state of the information component of the economic security of the studied enterprise.

Assessment and diagnostics of the political and legal component of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant»:

Political and legal security of the enterprise is protection against excessive tax pressure, unstable legislation, inefficient work of the legal department of the enterprise. It defines the environment in which enterprises operate, as well as the «rules of the game for them».

The legal component is a comprehensive legal support of the enterprise, compliance with applicable law.

The legal danger is:

- insufficient legal protection of the interests of the enterprise in the contractual and other business documentation;
- low qualification of employees of the legal service of the relevant business entity and errors in the selection of staff of this service;
 - violation of the legal rights of the enterprise and its employees;
 - intentional or unintentional disclosure of commercially important information;
 - violation of patent law.

External threats to political and legal security are frequent changes of government, instability of the tax system, excessive state interference in business, and so on. A serious threat to the company's activities is the lack of legal guarantees in case of forcible alienation of property, blocking of company accounts, etc. The internal regulatory and legal threats of the enterprise include harmful, ill-considered rules of procedure, job descriptions, instructions, orders, decisions of the workforce. The enterprise is also threatened by the lack of a legal framework that would allow security services to work in a civilized manner, to eliminate inconsistencies in the activities of private security companies with government agencies.

The dynamics of indicators that characterize the information component of economic security of the enterprise is shown in *Table 7*.

Indicators characterizing the resource component of economic security of the enterprise PJSC «Interpipe Novomoskovsk Pipe Plant»

| Indicator | I imit walus | | Years | Security level | |
|---|--------------|------|-------|----------------|------------|
| | Limit value | 2017 | 2018 | 2019 | assessment |
| The level of compliance with labor legislation at the enterprise | high | + | + | + | high |
| | average | | | | sufficient |
| | low | | | | low |
| Possibility to establish control over the enterprise by third parties | low | | | | high |
| | average | + | + | + | sufficient |
| | high | | | | low |

Source: calculations according to the company's reporting.

Thus, the indicators of political and legal security of PJSC «Interpipe Novomoskovsk Pipe Plant» during the study period were important, corresponding to high and sufficient levels of security. In general, we observe a sufficient state of the political and legal component of economic security of the studied enterprise.

Taking into account the partial coefficients, we determine the state of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant» (*Fig. 3*).

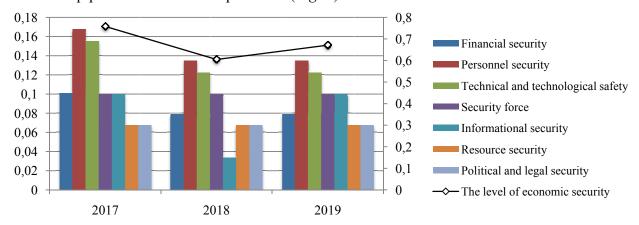


Fig. 3. Dynamics of integrated assessment of components of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant» and its general level

Source: calculated and constructed according to Tables 2—8.

Thus, the level of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant» was characterized as high in 2017 (> 0.7 according to the integrated assessment) and sufficient in 2018—2019 (from 0.35 to 0.7 according to the integrated assessment), with this coefficient decreases in the dynamics, which is a negative phenomenon.

The model of assessing the level of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant» is presented, which, in contrast to the existing ones, allows to determine the integrated indicator, which, taking into account the safety of each individual indicator and functional component, provides tactical and strategic assessment decisions in the field of economic security management of a particular enterprise on the basis of accounting and analytical information.

Conclusions. The core element of economic security in the context of research is the information component, which involves collecting information about external and internal factors in order to form a strategy and tactics to counter threats to the enterprise and its sustainable development. However, the experience of using information as a factor in ensuring economic security has shown inconsistency in obtaining and summarizing data by economic security professionals and, consequently, their low adaptability to economic security needs, which increases information risks in making decisions about sustainable operation and development.

The model of assessing the level of economic security of PJSC «Interpipe Novomoskovsk Pipe Plant» is presented, which, in contrast to the existing ones, allows to determine the integrated

indicator, which, taking into account the safety of each individual indicator and functional component, provides tactical and strategic assessment decisions in the field of economic security management of a particular enterprise on the basis of accounting and analytical information.

Література

- 1. Белоусова І. А. Управлінський облік інформаційна складова економічної безпеки підприємства : монографія. Київ : Дорадо-Друк, 2010. 432 с.
- Бондар М. І. Обліково-аналітична інформація в управлінні підприємницькою діяльністю. Економічний аналіз. 2010. Вип. 6. С. 13—16.
- 3. Герасимович І. А. Обліково-аналітичне забезпечення управління фінансовими ризиками і резервами підприємства. Фінанси, облік і аудит. 2017. Вип. 2 (30). С. 202—215.
- 4. Гнилицька Л. В. Обліково-аналітичне забезпечення економічної безпеки підприємства : монографія. Київ : КНЕУ, 2017. 305 с
- 5. Гнилицька Л. В., Чалий І. Г., Гордієнко Н. І. Обліково-аналітичне забезпечення стратегічного управління фінансовоекономічною безпекою суб'єктів господарювання будівельної галузі та житлово-комунального комплексу України : монографія. Харків : Фактор, 2012. 536 с.
- 6. Інтерпайп «Новомосковський трубний завод» : офіційний сайт. URL : https://www.nmpp.interpipe.biz (дата звернення: 10.07.2020).
- 7. Копитко М. І. Комплексне забезпечення економічної безпеки підприємств : монографія. Київ : ВНЗ «Університет економіки та права «КРОК», 2017. 508 с.
- 8. Kraievskyi V., Skoryk M., Bohdan S., Hmyrya V. Coherence of accounting systems: transcendence of content and immunity of purpose. *Bulletin of the National academy of sciences of the Republic of Kazakhstan*. 2020. № 384. P. 176—184.
- 9. Лубенець І. О. Концептуальні підходи до формування системи економічної безпеки підприємства. *Вісник ЖДТУ*. *Економічні науки*. 2012. Вип. 4 (62). С. 25—30.
- 10. Про бухгалтерський облік та фінансову звітність в Україні : Закон України 16.07.1999 № 996-XIV. *Відомості Верховної Ради України*. 1999. № 40. URL : https://zakon.rada.gov.ua/laws/show/996-14 (дата звернення: 10.07.2020).
- 11. Tytenko L. Economic security as an element of strategic management system: accounting and analytical aspect. *Baltic Journal of Economic Studies*. 2018. № 3. P. 309—318.

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References

- 1. Belousova, I. A. (2010). *Upravlinskyi oblik informatsiina skladova ekonomichnoi bezpeky pidpryiemstva [Management accounting information component of economic security of the enterprise]*. Kyiv: Dorado-Print [in Ukrainian].
- 2. Bondar, M. I. (2010). Oblikovo-analitychna informatsiia v upravlinni pidpryiemnytskoiu diialnistiu [Accounting and analytical information in the management of entrepreneurial activity]. *Ekonomichnyi analiz Economic analysis*, 6, 13—16 [in Ukrainian].
- 3. Herasymovych, I. A. (2017). Oblikovo-analitychne zabezpechennia upravlinnia finansovymy ryzykamy i rezervamy pidpryiemstva [Accounting and analytical management of financial risks and reserves of the enterprise]. Finansy, oblik i audit—Finance, accounting and auditing, 2, 202—215 [in Ukrainian].
- 4. Hnylytska, L. V. (2012). Oblikovo-analitychne zabezpechennia ekonomichnoi bezpeky pidpryiemstva [Accounting and analytical support of economic security of the enterprise]. Kyiv: KNEU [in Ukrainian].
- 5. Hnylytska, L. V., Chalyi, I. H., & Hordiienko, N. I. (2012). Oblikovo-analitychne zabezpechennia stratehichnoho upravlinnia finansovo-ekonomichnoiu bezpekoiu subiektiv hospodariuvannia budivelnoi haluzi ta zhytlovo-komunalnoho kompleksu Ukrainy [Accounting and analytical support of strategic management of financial and economic security of economic entities of the construction industry and housing and communal services of Ukraine]. Kharkiv: Factor [in Ukrainian].
- 6. Interpaip «Novomoskovskyi trubnyi zavod». (n. d.). Ofitsiinyi sait [Official site]. Retrieved July 10, 2020, from https://nmpp.interpipe.biz.
- 7. Kopytko, M. I. (2017). Kompleksne zabezpechennia ekonomichnoi bezpeky pidpryiemstv [Complex support of economic security of enterprises]. Kyiv: VNZ «Universytet ekonomiky ta prava "KROK"» [in Ukrainian].
- 8. Kraievskyi, V., Skoryk, M., Bohdan, S., & Hmyrya, V. (2020). Coherence of accounting systems: transcendence of content and immunity of purpose. *Bulletin of the National academy of sciences of the Republic of Kazakhstan, 384*, 176—184. https://doi.org/10.32014/10.32014/2020.2518-1467.57.
- 9. Lubenets, I. O. (2012). Kontseptualni pidkhody do formuvannia systemy ekonomichnoi bezpeky pidpryiemstva [Conceptual approaches to the formation of the system of economic security of the enterprise]. *Visnyk ZhDTU. Ekonomichni nauky Bulletin of ZhSTU. Economic sciences*, 4 (62), 25—30 [in Ukrainian].
- 10. Verkhovna Rada Ukrainy. (1999). Pro bukhhalterskyi oblik ta finansovu zvitnist v Ukraini: Zakon Ukrainy 16.07.1999 № 996-XIV. *Vidomosti Verkhovnoi Rady Ukrainy Bulletin of the Verkhovna Rada of Ukraine, 40.* Retrieved July 10, 2020, from https://zakon.rada.gov.ua/laws/show/996-14 [in Ukrainian].
- 11. Tytenko, L. (2018). Economic security as an element of strategic management system: accounting and analytical aspect. *Baltic Journal of Economic Studies*, 3. 309—318. https://doi.org/10.30525/2256-0742/2018-4-3-309-318.

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