Modern Information Technologies in the System of Financial
and Economic Security of the Enterprise

The article presents the interpretation of financial and economic security and characterized the approaches to its assessment at the enterprise. The publication proves that using computer information systems at the enterprise is needed to strengthen its information security, as an integral component of financial security, in order to avoid unauthorized access to confidential information resources. Since in the modern information space entities increasingly use modern ERP-systems to automate not only the accounting and analytical process, but also all economic activity. The establishment of information security in such conditions requires special attention.

Thus, to effectively ensure financial and economic security at the enterprise, it is necessary to develop and successfully implement an appropriate mechanism, which should include: instruments, methods and levers for the formation of the financial security of the enterprise and an information-analytical component of such security functioning on the basis of modern information technologies.

**Key words:** the modern information technologies, financial and economic security, information system of the enterprise, information security.

Formulation of Scientific Problem and its Significance. Financial security of the enterprise is one of the components of the economic security in the enterprise. And this component plays a significant role in making managerial decisions at the enterprise. After correctly evaluating all possible risks, an enterprise can avoid negative consequences of further activities or adopted strategy. That is why in recent years the issues of assessing the financial security of the enterprise are increasing interest in the adoption of fundamentally new management decisions and approaches to management. Considering the management of the financial and economic security of an enterprise of any level, it is necessary to proceed from its ability to withstand dangers and threats in order to achieve its goals and strategies.

Analysis Research this Issue. The management problem of the financial and economic security in the enterprise is most fully disclosed at the works of such scientists as: A. I. Baranovskii, I. A. Blank, K. S. Goryacheva [1], S. V. Kavun, A. V. Kuznetsova. Kozachenko, V. S. Ponomarenko. The essence and components of the economic security system of the enterprise were investigated by N. V. Vashchenko [2], L. I. Donets [2], V. E. Dukhov, M. I. Kamlyk [5], P. I. Orlov [4], L. M. Sumets, M. B. Tumar, L. M. Khudoliy [5], V. I. Yarochkin and others.

In scientific research, issues related to the essence of assessing the financial security of an enterprise using modern information technologies have not yet been reflected.
Purpose and Tasks of the Article. Therefore, it is important to justify the main approaches to assessing financial and economic security with the use of modern information technologies in order to develop and make successful managerial decisions on the formation of a secure financial condition of the enterprise, which is the purpose of the publication.

Presentation the Main Material and Substantiation the Results of the Research. Until now, scientists have no unambiguous interpretation of the notion of financial and economic security, and there is no unambiguous opinion about the notion of economic security. For example, V. L. Ortynsky interprets the economic security of an enterprise as the protection of its potential (industrial, organizational, technical, financial, economic, social) from the negative impact of external and internal factors, direct or indirect economic threats, and the subject's ability to reproduce [3]. The majority of researchers identify the essence of financial security as a component of economic security at all levels, including at the enterprise level. As you know, between economic and financial activities of economic entities there is a close relationship: some categories, on the one hand, are economic in nature, and on the other – financial. Thus, profit is a direct result of the economic activity of the enterprise and at the same time it is the financial result, the financial resource of the enterprise, the enterprise can consciously spend on its development, on the development and motivation of staff, on creating comfortable conditions for work and leisure, for expanding business and diversification. Therefore, the notion of financial and economic security of the enterprise entered into the scientific revolution, which emphasizes the interdependence of the economic and financial activity of the enterprise and the determining role of finance in the economic sphere of any economic entity.

The essence of financial security is the availability of its financial condition, which is characterized by: the balance and quality of financial instruments, technologies and services; resistance to threats; the ability of the enterprise to ensure the implementation of financial interests, as well as the mission and objectives, with sufficient amounts of financial resources; focus on effective and sustainable development [2]. Therefore, the financial security mechanism of an enterprise allows:

1) ensure financial stability, solvency, liquidity and sufficient financial independence of the enterprise in the long-term period;
2) ensure optimal attraction and effective use of financial resources of the enterprise;
3) identify external and internal dangers and threats to the financial condition of the enterprise and develop measures for their timely elimination;
4) independently develop and implement a financial strategy;
5) ensure sufficient financial independence of the enterprise;
6) provide sufficient flexibility in making financial decisions;
7) ensure the security of the financial interests of the enterprise owners.

Based on the results of the existing studies analysis, in the present realities two approaches to assessing the financial and economic security of an enterprise can be singled out, namely:

1) indicator approach;
2) resource-functional approach.

Indicator approach is based on the definition of indicators, that is, the threshold values of indicators that characterize the solvency and financial stability of the enterprise, corresponding to a certain level of its financial security. The value of private indicators is set on the level:

– average industry values of these indicators;
– indicators characterizing the activities of enterprises that occupy a leading position in the industry;
– normative values of indicators in accordance with legislative documents;
– the ideal values of indicators that need to be achieved in accordance with the strategy of enterprise development and the like.

Resource-functional approach is based on the need to ensure the basic functional objectives of economic security, which include:

– ensuring high efficiency of the enterprise, its financial stability and independence;
– ensuring the technological independence of the enterprise and achieving high competitive ability of its technological potential;
– ensuring high efficiency of management at all levels of enterprise management;
– high level of qualification of the personnel of the enterprise and its intellectual potential;
– ensuring the safety of the personnel of the enterprise of its capital, property and commercial interests.

The algorithm for assessing the state of economic security of an enterprise when applying a resource – functional approach consists of a set of systemic steps:

1) the definition of a list of threats for each functional component of the economic security of the enterprise;
2) assessing the feasibility of implementation and cost of activities related to prejudice losses;
3) assessing the effectiveness of implementing measures to prevent losses;
4) the definition of partial functional criteria for the level of individual components of the economic security of the enterprise;
5) determining the causes and perpetrators of the insufficient effectiveness of the measures taken to prevent losses for each functional component;
6) establishing the significance of the impact of particular functional criteria in the overall criteria of economic security of the enterprise;
7) determination of the aggregate criterion of economic security of the enterprise;
8) development of measures to eliminate the negative impact of existing threats and prevent them in the future for each component of the economic security of the enterprise;
9) evaluation of the cost of proposed measures and identification of responsible persons for their implementation.

However, special attention needs to be given to the process of ensuring the enterprise information security. In the context of research on this subject, it should be noted that directly accounting and analytical information in the accounting system is a model of the economic activity of the enterprise, and financial reporting can be considered as a visual representation of this model.

Computer information systems of enterprises (CISE) can be considered as models of the management system of a certain object (enterprise, division, business process), and ERP (Enterprise Resource Planning) are considered models (standards) of such CISE.

Using CISE in an enterprise becomes necessary to strengthen its information security in order to avoid unauthorized access to confidential information resources. Since in the modern information space, economic entities increasingly use ERP systems to automate not only the accounting and analytical process, but also all economic activity, the establishment of information security in such conditions requires special attention.

The ERP is based on the principle of creating a single repository containing all business information accumulated by the organization in the course of conducting business operations, including financial information, data related to production, personnel management, or any other information. This eliminates the need to transfer data from the subsystem to the subsystem. In addition, any part of the information of the enterprise becomes available simultaneously for all employees who have the appropriate authority.

The concept of ERP has become quite popular in the manufacturing sector, as resource planning has allowed to reduce the time of production, to reduce the level of inventory and to improve feedback from the consumer while reducing the administrative apparatus. ERP-systems ensure the performance of all the listed accounting and control functions, not only for homogeneous and locally deployed industries, but also for multi-sectoral enterprises and corporations that have branches and divisions in many cities and countries.

ERP systems distinguish the following main features:

a) universality; These systems have all the necessary means to organize an integral process of management and production planning, regardless of its size, the nature of the products, and geographic location;
b) support for different types of production.

In addition, the functionality of the ERP system can be enhanced by other specialized software products. This is due to the fact that specialized programs can perform functions that are not available in the ERP system; first of all, functions related to multidimensional analysis and multiparameter modeling. At the same time, it is necessary to create interfaces that would allow specialized products and ERP – information exchange systems with each other without violating the conditions for ensuring the information security of the enterprise.

It is important that the modern approach to the development of accounting and analysis software begins with the study of the business processes of the enterprise. Accordingly, first conceptual and logical models
of business processes are built, which can be quite diverse, and only then mathematical models of accounting variables and the order of formation of their values (accounts, subaccounts, analytical accounts) are developed for them. Thus, in modern ERP systems, the mechanism of formation of information security of the enterprise at all stages of processing of economic information is much better debated, but in our opinion, in the future such a mechanism will require improvement in order to avoid unauthorized or unfair access to internal information resources of the business structure.

Conclusions and Perspectives of Further Research. Thus, it can be concluded that the development of methods for managing the system of financial and economic security of an enterprise based on the use of modern information technologies, determining its main indicators and instruments of support, creating a strategy of financial and economic security and meeting all the requirements of this strategy will allow the enterprise to avoid damage from negative impact on its safety in various aspects of financial and economic activities, as well as provide control balancing revenues and expenses.

Summing up, we note that to ensure the successful operation of any enterprise, in order to avoid external and internal threats to functioning, it is necessary to ensure its financial and economic security. To effectively ensure financial security in the enterprise, it is necessary to develop and successfully implement an appropriate mechanism that should include: instruments, methods and levers for the formation of the financial security of the enterprise and an information and analytical component of such security that would function on the basis of modern information technologies.

References

Джерела та література
УДК 37.015.6

Олеся Тощка – кандидат економічних наук, доцент кафедри менеджменту Східноєвропейського національного університету імені Лесі Українки

АВС-аналіз бакалаврських освітніх програм Східноєвропейського національного університету імені Лесі Українки

У статті проаналізовано 70 бакалаврських освітніх програм Східноєвропейського національного університету імені Лесі Українки. Для дослідження застосовано АВС-метод, який розглядає початкову множину об’єктів на три підмножини залежно від їх питомої ваги в загальному значенні показника: A – близько 75–80 %; В – близько 10–15 %; С – близько 5–10 %. Оригінальна характеристика дослідження полягає в тому, що АВС-аналіз використано щодо такого об’єкта, як університет. Побудовано таблицю з показниками кількості зарахованих студентів першого курсу денної форми навчання для здобуття освітнього ступеня бакалавра у вищому навчальному закладі. Визначено групи A, B, C освітніх програм університету за показником доходу від плати за навчання студентів першого курсу. На основі отриманих результатів сформовано рейтинг 15 факультетів. Для дослідження використано дані за 2017 р. Отримані результати засвідчили, що 37,14 % освітніх програм приносять 79,82 % доходу від навчання першокурсників денної форми навчання. Найбільш популярні серед студентів-платників три факультети (іноземної філології, юридичний, міжнародних відносин), які приносять університету кожен понад 10 % доходу від усіх першокурсників денної форми навчання. Результати дослідження можуть бути застосовані під час планування університетської пропорційної роботи серед учнів випускних класів шкіл і студентів професійних навчальних закладів, рекламних витрат. Подальше дослідження можна провести на основі даних про магістрські програми.

Ключові слова: АВС-аналіз, СНУ імені Лесі Українки, бакалавр, освітня програма, плата за навчання, факультет, рейтинг.

Постановка наукової проблеми та її значення. Одним із популярних аналітичних методів, що використовуються в різноманітних дослідженнях і, зокрема, логістиці, є АВС-аналіз, за допомогою якого визначають ступінь розподілу конкретної характеристики між окремими елементами якої-

© Тощка О., 2017