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Development of the Elements of the Mechanism Accounting and Analytical Support of Economic Security of Construction **Enterprises**

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Abstract. For effective ensuring economic safety of subjects of construction business it is expedient to consider specifics of their functioning, including features of system of management, organizational structure, system of controlling, the reporting, etc. At the same time, in some cases, the conduct of control procedures, as well as «traditional» security measures does not ensure the economic security of construction enterprises in full, as often information about the facts of economic life is considered without taking into account aspects of their reflection in financial, managerial and tax accounting. The formation of accounting information in financial, managerial and tax accounting involves a large number of unresolved issues on the allocation of threats, including the financial position of the construction company, p. All this requires the development of elements of the mechanism of accounting and analytical provision of economic security of construction enterprises. The article defines and substantiates the criteria for ensuring the economic security of accounting, consisting in the correct application of the principles of financial, managerial and tax accounting, offers new and improved indicators characterizing the point of occurrence of threats to the financial position of the construction company. Recommendations on determination of break-even point which purpose is measurement of sensitivity of the received profit to the arising threats of economic security are resulted. The proposal for the revision of the grouping of costs into variable, constant, quasi-variable, semifixed, with the purpose of improving methods of determining the required breakeven point.

1. Introduction

The world practice shows that an important role in solving the problem of economic security of construction companies plays a useful business information about the different sides of the business, formed on the basis of accounting and analytical data. In modern conditions of the construction business, especially at the international level, significantly increases the role of information technologies and optimization of the accounting data as a source of reliable and objective accounting and analytical information on the financial and economic activities aimed at addressing the problems of economic security.

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The development and optimal functioning of the mechanism of accounting and analytical support of economic security determines the speed of the company's response to the impact of external and internal threats, which is an important factor in improving the economic viability of the business and its efficiency. In the system of economic security there is an acute problem of formation of complete and reliable information adapted to the specific needs arising in the process of profit optimization and management of economic entities management decisions.

2. Relevance of the research of elements of the mechanism of accounting and analytical support of economic security of construction enterprises

The normal functioning of the subject of construction business requires constant monitoring of various indicators characterizing financial stability. However, the calculation of the existing indicators does not take into account the specifics of the construction business associated with the recognition in the financial accounting of income and expenses for each construction contract and construction projects. This requires a different approach to the calculation of existing coefficients and the introduction of new indicators that meet market requirements.

The importance of addressing the problems identified in the conditions of unstable operation of the constituent entities of the construction business leads to an increased interest in the development of information on risk from the facts of economic life in financial, managerial and tax accounting. The use of accounting and analytical information to ensure the economic security of business entities is based on the correct execution of primary documents and interpretation of the facts of economic life, and the development of a unified approach to the concept of "economic security". This is due to the fact that at present there is quite a large range of opinions and concepts to ensure the economic security of business entities, because, as shown in the study of economic literature [1], mainly among the points of view prevails the view of the importance of protection against various kinds of threats within a particular economic entity and its normal functioning in the presence of these threats. In addition, considering the concept of economic security from the point of view of creating reliable accounting and analytical information on the activities of an economic entity, it is important to pay special attention to its functioning in the presence of the legal field that responds to changes in contractual relations, which ensures its economic security [2]. While other authors [3, 4, 5, 6, 7] reflect only the normal functioning of the business entity, provided by the relevant activities, i.e. the issue of the legal field reflecting the current economic situation is not considered. In General, researchers ' views on the study of economic security are diverse [8, 9, 10]. Statement of the problem of development of accounting and analytical support of economic security of construction enterprises

In most cases, the control procedures, as well as the "traditional" measures of the security service do not ensure the economic security of the business entity because, as a rule, all these blocks are considered without the relationship of the points of threats with the facts of economic life to be reflected in the financial, administrative and tax accounting. The procedure for the formation of accounting information in financial, management and tax accounting involves a large number of unresolved issues on the allocation of threats in the performance of various calculations, issued accounting certificates, taking professional accounting judgment in the recognition and reflection of the facts of economic life in the accounts and accounting (financial) statements.

The purpose of the article is to develop theoretical provisions and practical recommendations for improving the order of formation of accounting and analytical information in the system of economic security measures of construction organizations.

3. Theoretical aspects of the definition and development of the main elements of the mechanism of accounting and analytical support of economic security of construction companies

The importance of the points of view and the emphasis identified in them in defining the concept of "economic security" in conjunction with the process of accounting and analytical support of the enterprise information in the presence of threats, determines the need to consider the concept of "threat". This is due to the fact that this concept in the economic literature is interpreted ambiguously and is



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given in different phrases, such as: "threat to economic security", "threat to business security", "threat to enterprise security", and in some cases is identified with the concept of "risk", which leads to an ambiguous understanding of the content of economic security. Having analyzed approaches to the definition of the relationship of the concept of "threat" with the process of formation of accounting and analytical information in the works of Gusev V. S. [11], Yarochkin V. I. [12], Sosnin A. S., Prygunov P. I. [13], as well as examining point of view, Gutman B., Bagwell R. [14], Safronova N. [15], Samsonov K. [16], Strachan-Morris D. [17] on the concept of "risk", we have revealed that there are differences in the concepts of "risk" and "threat".

We believe that the threat is an integral part of the risk, and it should be noted that in the absence of threats, the risk is reduced, and in some cases disappears. The threat is positioned as a risk with negative consequences. Therefore, the main task to ensure the economic security of the business entity is to eliminate the sources of risk with negative consequences, consisting in fraud, deliberate falsification of data [19].

It is necessary to develop a system of indicators that reflect the changes in the parameter of the controlled fact of economic life in financial, administrative and tax accounting in order to manage economic security by making the optimal management decision. This will increase greatly the likelihood of sustainable growth and economic prosperity of the subject [20]. It should be noted that in order to assess the sustainable and stable functioning of the construction organization, it is necessary to determine the limits of the threshold values of indicators that will ensure the economic security of the construction business.

An integral part of economic security is a set of indicators that determine the financial stability of a business entity. These include the well-known technical and economic feasibility indicators, such as profitability, liquidity ratio, efficiency of capital investments, payback period, indicators of net present value of income, maximum cash flows (Cash-flow), etc.

It should be noted that foreign experts as an indicator of economic security recognize and often use security margins or break-even points, as well as the financial strength reserve, which is associated with data generated in management accounting. The calculation of this indicator for the construction contractor has its own specifics, since this type of business is focused on the implementation of projects in the context of concluded contracts and it is advisable to assert not about the economic security of the business entity as a whole, but about the economic security of the construction object. From here, we propose to calculate the break-even point and the financial strength reserve, for a specific construction contract or object according to the following proposed formula:

 $BP = (P \times (FCC + APTE + ATT + ALT + PLC) : (P - VC - API - VATC - PLC)$ (1)

where BP – breakeven point, P – proceeds from the delivery of construction and installation works under the contract/object, FCC – fixed costs on the contract/object, APTE – amount of property tax expenses, ATT – amount of costs to pay the transport tax, ALT – amount of expenses for payment of land tax, PLC – provision for expected losses under a construction contract, VC – variable contract/facility costs, API – amount of expenses for payment of income tax, VATC – value-added tax costs.

The relationship of financial ratios can be seen in the fact that in such calculations as part of the total costs taken into account the totality of the costs of taxes, fees, fines and penalties. At the same time, we offer the amount of property tax, transport and land taxes to include in the permanent tax costs, and income tax and VAT to relate to variable costs.

Calculation of indicators characterizing the effectiveness of accounting and analytical work on tax accounting, as shown by the study, depends on the absence of negative facts [1].

4. Practical aspects of application of proposals for revision of the grouping of costs for variables, constants, conditionally variables, conditionally constant and determination of break-even point of specific objects of research

All recommendations given by us were reflected in the article published in the journal "Management accounting" [21]. In the conditions of economic security threats to construction economic entities pro-



posed justification of allocation of costs and their inclusion in the composition of permanent, variable costs allows us to form information that we recommended to use in the calculation of the indicator, taking into account the relationship of the tax burden and the financial strength of the construction organization. To identify differences in the behavior of costs, data of construction companies were analyzed. In addition, in order to provide information for monitoring compliance with the current requirements and accounting rules, we propose to use the method of calculating the break-even point, in which the amount of profit will be the smallest. So, in our case, we propose to use the method of minimaxi for the surveyed enterprises, which will meet the principle of caution. In order to prepare essential information for effective management and optimal management decisions, we propose to use the average value of the two options (minimaxi and least squares method). In order to apply the method based on accounting records, it is necessary to organize management accounting of fixed, variable, conditionally constant and conditionally variable costs in the accounts of management accounting. It is necessary to calculate the break-even point and the financial strength margin of the contract / object using the formula (1).

The proposed calculation of the break-even point, taking into account taxes and penalties, as well as the amounts of estimated reserves for expected losses, showed a decrease in the financial strength of the economic entity, which means an increase in the threat to the normal functioning of economic entities [1]. Estimated value of the breakeven point before the inclusion of taxes, fees, fines, penalties and amounts valuation allowances for estimated losses in fixed and variable costs of one of the objects of the study was 7718 thousand dollars, and the breakeven point with the inclusion of taxes, fees, fines, penalties and amounts valuation allowances for estimated losses in fixed and variable costs equal 8767 thousand dollars.

5. Concluding Remarks and Research Needs

Thus, the criteria of ensuring economic security of accounting, consisting in the correct application of the principles of financial, management and tax accounting, evaluation of professional judgment as an object of economic security of accounting works, calculation of the coefficients characterizing the economic security of the subject of the construction business are defined and justified.

The calculations made it possible to conclude that different values of variables, fixed, conditionally variable and conditionally constant costs are obtained, which requires a reliable professional judgment in relation to the application of a particular method, depending on the economic situation in which a particular business entity is located. It was found that the composition of fixed and variable costs in the total cost of the business entity will vary depending on the method chosen. At the same time, as you know, the greater the value of the break-even point and closer to the volume of revenue received, the lower the financial stability of the business entity and, consequently, there is a threat to the security of its normal functioning. The calculations for the three surveyed enterprises using different methods (analytical, mini-maxi, least squares, based on records in accounting) in a generalized form are presented in [1].

Accordingly, the calculations on the proposed method showed that the value of the break-even point of the first studied construction organization after taxes, fees, fines, penalties and estimated reserves for the expected losses in fixed and variable costs increased by 1049 thousand dollars. That is, the margin of financial strength of the enterprise decreased by 4%. And for all three studied construction enterprises, the financial strength reserve decreased by 4, 3 and 10%, respectively. This proves the importance of the proposed methodology and justifies the requirements for measures to strengthen the control of timely performance of contractual obligations and minimize tax payments at the research facilities.

6. References

[1] Predeus J V 2017 Accounting and analytical support economic security of subjects of the construction business: dissertation of candidate of Economic Sciences *FSBEI* (Orenburg)



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- [2] Susuki A V 2004 Administrative–legal regulation in the sphere of ensuring economic security: dissertation of candidate the faculty of law *Sciences* (Rostov n/D)
- [3] Mak-Mak V P 1999 Security service of the enterprise (organizational, management and legal aspects of activity). *Peace security* (Moscow)
- [4] Odintsov A A 2008 Economic and information security of the enterprise *Academy* (Moscow)
- [5] Abalkin L I 1998 Economic security of Russia: threats and their reflection *Economic* 12 4–13
- [6] Glaziev S Y 1999 Economic Security: political encyclopedia. Thought (Moscow)
- [7] Copresence N P 2005 Economic security. Academy of economic security of the Ministry of internal Affairs of Russia (Moscow)
- [8] Baryshnikova N A 2018 Determinants of development of the Russian food exports *Eurasian law journal* **3** (118) 446-451
- [9] Nozhkina E B 2018 Sustainable development of digital economy as an element of national security of the Russian Federation of PEC *Economic security and quality* **1** (30) 19-25
- [10] Kurochkin Y S 2001 Economic war. Sib. Univ. ed. (Novosibirsk)
- [11] Gusev S V 2001 Economics and organization of security of business entities of documents ID "Enchanted wanderer" (St. Petersburg)
- [12] Yarochkin V I 1994 Entrepreneur and security Part 1: Unauthorized access to sources of confidential information: monograph *Expert Bureau* (Moscow)
- [13] Sosnin A S 2002 Business security Management *Publishing Europe University* (Kyiv)
- [14] Gutman B, Bagwill R 2012 Internet Security Policy: A Technical Guide. National Institute of Standards and Technology (NIST) (Gaithersburg)
- [15] Safronov N A 2001 Economics of enterprise. Yurist (Moscow)
- [16] Samsonov K 1994 Elements of the concept of economic security Economic 12 14-24
- [17] Strachan-Morris, David 2012 Threat and Risk: What's the Difference? Intelligence and National Security vol 27 2 172-186
- [18] Predeus Y V 2014 Theoretical aspects of organization of accounting in the system of economic security of activity of business entities *Scientific review* **4** 104-112
- [19] Carbonless N S 2010 Economic security of the enterprise The essence of economic security of the enterprise *Journal of Russian entrepreneurship* **4-1** 63-67
- [20] Predeus Y V 2016 Problems of grouping costs into variables and constants in the conditions of occurrence of threats of economic safety of the construction organizations *Management accounting* **3** 27-35



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