



# Development of Control System of Financial and Economic Results of an Enterprise

**Victoria Borisovna Frolova<sup>1</sup>, Olga Vladimirovna Dmitrieva<sup>2</sup>, Vladimir Aleksandrovich Biryukov<sup>2</sup>, Galina Mikhailovna Avramenko<sup>2</sup>, Konstantin Anatolievich Lebedev<sup>3</sup>**

<sup>1</sup>*Financial University under the Government of the Russian Federation, Leningradsky Av., 49, Moscow, 125993, Russia*

<sup>2</sup>*Moscow Polytechnic University, Bolshaya Semenovskaya St., 38, Moscow, 107023, Russia*

<sup>3</sup>*Institute for Tourism and Hospitality, Kronstadt Blvd., 32A, Moscow, 125438, Russia*

*\*Corresponding author E-mail: frolova.v.b@bk.ru*

## Abstract

The paper presents the proposals for the development of control system of financial and economic results of an enterprise. It was proved that teamwork, corporate culture and high competence of the participants create the necessary conditions for the formation of new thinking and highly professional action. It was found that a company should create the atmosphere of creativity and necessary change including the removal of barriers to the team interaction, the improvement of teamwork vertically, horizontally and throughout the management structure. It was determined that models and methods as elements of the result management system are the main and formative components of the financial and economic results control system of enterprises itself since the functioning of the entire system and each of its elements depends on the choice of specific management models and methods or their combination.

**Keywords:** *development, system, management, financial and economic results, enterprise, decision, efficiency, activity, technology, method.*

## 1. Introduction

In the current economic conditions, obtaining the financial and economic results is one of the key financial sources of the stable production process, expanded reproduction, investment and innovation development of an enterprise. Control of these results of the enterprise's activities is a complex of measures for determination and implementation of managerial decisions aimed at providing highly effective management of relevant economic components taking into account the modern economic conditions. Highly professional and science-based management of the financial and economic results of enterprises is the key factor in ensuring the economically effective development of the national economy in general. Management of financial and economic results of enterprises is an urgent research topic in the scientific community. The studies concerning the development of a control system of the financial and economic results of enterprises are presented in the works by V.D. Borovskikh [1], I.O. Botkin [2], E.S. Dzhevitzkaya [3], L.V. Lapaeva [4], I.M. Rozhkov [5], N.K. Shvetsova [6], etc.

Despite the existence of the considerable amount of theoretical and methodological material devoted to the issues of management of financial and economic performance of enterprises, there are still a number of unsolved urgent problems. Among them are the imperfection of the results control system and its components, limited methodological support for estimation of the effectiveness of the financial and economic results management, low level of training of top-managers and support staff in Russia which manifests primarily in non-professionalism and rejection of innovative management methods and technologies.

## 2. Methods

The following methods serve as the theoretical and methodological basis of the article: the method of scientific generalization (for determining the essence and components of financial and economic results and their management system), the historical and systematic approaches (for analyzing the world experience in managing financial and economic results), the deduction, induction, classification, comparison, scientific abstraction, systematic and complex analysis methods (for improving control system of financial and economic results of enterprises), the methods of economic and mathematical modeling, as well as the methods of statistics (for optimizing the estimation of the effectiveness of financial and economic results management of business entities) [7, 8, 9].

The information base of the research are legislative and regulatory acts, statistical materials of state and local government, scientific publications by Russian and foreign authors concerning the problems of development of the financial and economic results control system.

The authors of the study aim to substantiate the prospects for the development of control system of financial and economic results, as well as the strategy for managing the economic processes of an enterprise. In addition, they set a task of developing techniques for estimation of factors affecting the process of managing financial and economic results of an enterprise, identifying and formulating the main trends in the development of enterprises in different socio-economic conditions.

### 3. Results

Management of financial and economic results determines the efficiency level of the entire enterprise. Therefore, the issues of improving the control system of financial and economic results are always relevant and require detailed study. The development of the control system of financial and economic results in the current conditions of market economy, high level of competition, as well as other features of production, require efficient use of all available resources and professional managerial decisions on the part of economic entities.

Construction of an improved system of managing the financial and economic performance of enterprises requires the application of the latest principles and methods in order to increase the system's effectiveness. Therefore, in the authors' opinion, optimization should be carried out at each stage of control of financial and economic results and for each element of the system using both the acquired experience and own scientific vision of the solution to the set goals.

Thus, it is reasonable to optimize and develop the financial and economic performance management system of an enterprise using the Six Sigma concept whose main task is to improve the management of enterprises. This concept was developed by Motorola Inc. at the end of the XX century as a way to eliminate shortcomings in management and reduce costs. Later, having shown its high level of efficiency, Motorola Inc. has developed the concept into one of the most powerful modern corporate management methods.

Nowadays, the Six Sigma concept includes a powerful set of methods, tools and other important components serving for the realization of its mission – optimization of management, no matter what form it takes since the system can be applied almost universally. In the development of the control system in the context of optimizing the management of financial and economic results, the Six Sigma concept was chosen with the aim of improving the activities of enterprises because the conducted analysis demonstrates the low quality of results management of enterprises in general which manifests in the predominance of negative values of financial and economic results and negative trends in the industry development.

In addition, it should be noted that some enterprises manufacture socially important products including those targeted at the vulnerable segments of the population. Therefore, the elimination of damage and profit-making cannot occur solely through the price increase (it can and should be used but only as an auxiliary tool and at a very moderate pace because the constantly increasing level of expenditure inflation requires an appropriate response) but with the use of the innovative Six Sigma method.

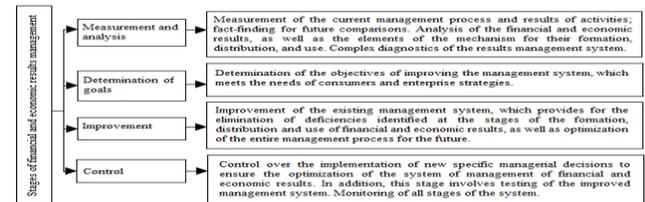
The Six Sigma method is a system for the enterprise management adjustment aimed at reducing all types of defects and losses by gradually implementing projects to eliminate the causes of deficiencies based on the quantitative study of processes. In general, the Six Sigma concept of management improving has a powerful toolset for use in different socio-economic and production-economic sectors of every country's economy.

Starting the development of the financial and economic results management system, one needs need to improve the management of results itself, i.e. its stages, because only in the course of an activity or judging by its results it is possible to identify the shortcomings of the existing system, as well as to plan the necessary changes for their elimination.

So, for improving and developing the system of managing the financial and economic performance of an enterprise according to the Six Sigma corporate management concept, as well as for forming the stages of financial and economic results management, we suggest using one of the Six Sigma methods, namely, DMAIC (define, measure, analyze, improve, control), which will satisfy both conditions of its development, i.e. optimization of the results

control system, and management since they are complementary and integral corporate management processes.

In addition, it should be noted that the Six Sigma management concept is only the basis for further development of the results control system, a particular management model will take into account the features of the studied complex as a whole and will support the improvement and development of the management system. Adaptation of the management system according to the Six Sigma concept makes this process more scientifically grounded, because one of the mandatory elements of this system is a quantitative study of the management process and determination of the main parameters that have the greatest impact on the effective indicator and the elimination of management faults (Figure 1).



**Fig. 1:** Stages of management of financial and economic results of an enterprise

The improved sequence of control stages, according to the Six Sigma concept, is presented at the first stage by the combination of the second and third stages, which, in the authors' opinion, allows analyzing both the current management process and the cause-and-effect relations of the formation, distribution, and use of the results. The sequence of the next two stages remains practically unchanged. Regarding the fourth stage, the authors consider it necessary to have its presence at each stage of optimization of the financial and economic results management system since it ensures the quality and efficiency of the planned measures.

The Six Sigma concept should include the following sequence:

1. The effectiveness evaluation of financial and economic results control of the enterprise activities using the matrix method. Moreover, according to the indicators' values, it is necessary to determine which factors, elements in the system of financial and economic results formation require changes in order to achieve the objectives of managing the results of the enterprise.
2. Measurement involves the study of the enterprise's position in the market, the determination of modern features of business operation: market share, dynamics of financial and economic results, the possible impact of political and economic instability in the country, history of development.
3. Study of the financial and economic results management system using the Six Sigma concept which entails the estimation of the quality of the given management by calculating the effectiveness of this kind of activity since the process is considered to be most effective if the gap between the mathematical expectation of the process and the limit value is equal to six root-mean-square deviations.
4. Based on the results of previous detailed studies of the state and quality of financial and economic management, it is necessary to identify and justify results management strategy with the purpose of improving the quality of the company's activities taking into account both the Six Sigma concept and other specific features of managing the financial and economic results of the business entity.

In addition, continuing the implementation of the stages of the optimization of the management of financial and economic results, it is necessary to highlight the objectives of the results management system improvement, which should include: achievement of the purpose of the enterprise activity, growth of financial and economic results, adaptation of the management system to modern economic conditions, maximum satisfaction of

the interests of the product consumers, owners of the business entity, its staff, and state.

Apart from the ultimate general goal – to improve management, the concept of Six Sigma involves the following ones: the growth of competitiveness and profitability of the enterprise, increasing the level of customer satisfaction, achievement of the long-term objectives of the enterprise, the growth of the quality of management to the level of six sigmas. In addition, the improvement of the results management system should provide for individual, specific objectives in a way that eliminates shortcomings and prevents them from repeating in the future, i.e. specify exactly which parameters and elements need to be changed and how.

#### 4. Discussion

The reliability of the presented approaches to the development of the financial and economic results management system of an enterprise is confirmed by the fact that they allow optimizing the key elements of the results management system based on the data obtained after a comprehensive assessment [10, 11, 12].

Improvement of the management system according to the Six Sigma concept also involves following its main provisions, one of which is the elimination of negative aspects of management and their avoidance in the future. The first step to adapting the existing results management system to the requirements of Six Sigma is the consideration of the elements of the control system specifically in the context of the optimization concept.

The components of the enterprise performance management system in the context of Six Sigma reflect the specifics of the application of this methodology at enterprises in terms of improvement of business processes, namely, the management of financial and economic results – identifying, analyzing and eliminating the faults of the economic process under study.

The purpose of managing and optimizing the financial and economic performance of enterprises in accordance with the adapted Six Sigma system can be characterized as the improvement of the whole studied business process by eliminating activity faults, as well as using the available toolset of methods and principles of the chosen optimization system. During the analysis of the current state of effectiveness of financial and economic results management, shortcomings in various structural elements of the management system of a business entity can be identified. Therefore, management objectives should simultaneously take into account both the elimination of these deficiencies and, in general, the optimization of the entire system.

#### 5. Conclusions

To sum up, the authors can note that the goal of management should meet the goals set after the estimation of effectiveness of management of financial and economic results taking into account the current socio-economic and political conditions. The management subjects should be divided into competencies and roles performed in the process of the method implementation for improving business processes.

The roles and functions of management personnel should ensure the implementation of the stages of improving the management of the enterprise financial and economic results. Practice shows that teamwork, corporate culture and high competence of participants create the necessary conditions for the formation of new thinking and highly professional action. It should be noted that the positive effect of using the proposed recommendations is possible only in the case of a well-coordinated interaction of the entire staff of the business entity.

In addition, the management subjects should have the following characteristics and meet the following conditions: increased capacity for risk, i.e. determination, development and implementation of high-risk projects in modern conditions and

market environment which hasn't been fully explored, which allows enterprises to gain or increase their market share. At the same time, managers of the enterprise should react to failures appropriately: use the experience and continue the development of the organization; to be active means not to react to events but to try and prevent them.

Thus, a company should create the atmosphere of creativity and necessary change including the removal of barriers to team interaction, the improvement of teamwork vertically, horizontally and throughout the management structure, the optimization of cooperation with suppliers, consumers, and other counterparties, the existence of personal connections of managers with representatives of public authorities, foreign and domestic owners or managers of economic entities.

The given list of additional characteristics of a company's managers, in the authors' opinion, is an essential condition for achieving maximum indicators of financial and economic results control in the current specific conditions of the Russian economy since the achievement of the desired results is possible only by using all methods systematically and in the same direction.

Optimizing the objects of management of financial and economic results, one should note that the existing concepts of their classification, in the authors' opinion, fully characterize the category, so it is suggested for this process to be carried out with determining their key features: the priority of influence on objects, the cause-effect relationship, and the priority of regulation.

The study shows that the models and methods as elements of the result management system are the main and formative component of the financial and economic performance control system of enterprises itself since the functioning of the entire system and each of its elements depends on the choice of specific management models and methods or their combination.

#### References

- [1] V.D. Borovskikh, K.V. Nekrasov *Otsenka effektivnosti upravleniya na predpriyatii v sovremennykh usloviyakh* [Evaluation of effectiveness of management at the enterprise in modern conditions], Youth and Science 6 (2016) 70.
- [2] I.O. Botkin, A.N. Pytkin, A.I. Khisamova, *Metodicheskoye obespecheniye otsenki finansovogo potentsiala predpriyatiya* [Methodical support of estimation of financial potential of the enterprise], Finance and management 4 (2016) 36-51.
- [3] E.S. Dzhevitskaya, *Povysheniye finansovo-ekonomicheskoy bezopasnosti predpriyatiya na osnove upravleniya yego delovoy aktivnost'yu* [Increase of financial and economic security of the enterprise on the basis of management of its business activity], Management of economic systems: online academic periodical 11(93) (2006) 22.
- [4] L.V. Lapaeva, P.A. Lapaev, *Metodicheskiye osnovy innovatsionnogo razvitiya predpriyatiya* [Methodical base of innovative development of the enterprise], Intellect. Innovations. Investments 6 (2016) 36-41.
- [5] I.M. Rozhkov, A.A. Boykov, I.A. Larionova, et al., *Vybor strategiy upravleniya oborotnymi sredstvami predpriyatiya s tsel'yu povysheniya otnositel'noy dobavlennoy stoimosti proizvodimoy im produktii* [Choice of strategies for managing current assets of the enterprise in order to increase the relative added value of its products], Economics in Industry 2 (2015) 83-91.
- [6] N.K. Shvetsova, *Razvitiye metodiki analiza finansovoy ustoychivosti predpriyatiya* [Development of methods for analyzing the financial sustainability of the enterprise], Modern problems of science and education 4 (2014) 409.
- [7] I.L. Cherkasov, M.I. Seredina, O.I. Mishurova, et al., The effect of international tourism on the development of global social-economic processes, *Journal of Environmental Management and Tourism* 8 66(22) (2017) 1166-1170.
- [8] R.V. Kolupaev, O.M. Fadeeva, A.I. Ardashev, et al., Improving methodical approaches to estimating financial safety of the enterprise, *Espacios* 38(29) (2017) 23-40.
- [9] N.A. Zavalko, O.V. Panina, V.A. Kovalev, et al., Improving financial control over the government system, *Espacios* 38(29) (2017) 15-22.

- [10] A.A. Fedulin, L.V. Zgonnik, O.Ye. Lebedeva, et al., Methodological approaches to the assessment of historical and cultural resources in tourist destinations, *Journal of Environmental Management and Tourism* 8 66(22) (2017) 1198-1204.
- [11] V.V. Karpov, V.A. Kovalev, A.A. Korableva, et al., Methodical framework of forming territorial innovation clusters based on import substitution mechanism, *Espacios* 38(58) (2017) 11.
- [12] T.A. Saadulaeva, O.E. Lebedeva, G.V. Pinkovskaya, et al., Statistical approaches to the assessment of qualitative parameters of services market, *International Journal of Pure and Applied Mathematics* 119(16) (2018) 3839-3843.