

Evaluating the Effectiveness of Internal Corporate Controls in Coal Mines Illustrated By the Example of JSC "SUEK-Kuzbass"

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Abstract. The article gives reasons for the need to develop the mechanism and tools of performance evaluation based on the implementation of specific management functions, as well as the integrated evaluation of the effectiveness of internal corporate controls. It presents the approbation of the proposed assessment methodology on the example of JSC "SUEK-Kuzbass". The monitoring role as one of the functions of management is constantly increasing in the market economy. The participation of Russian companies in the international economy requires the organisation of internal company control. Moreover, with the enacting of the Law "On Accounting» № 402-FZ, for the majority of economic agents the organising of internal control became mandatory. Thus, the internal control means the process carried out by the Board of Directors and other staff of the organisation aimed at providing reasonable assurance that the objectives of the organisation such as ensuring the effectiveness and efficiency of operations, reliability of financial reporting and compliance with the legislation in force will be achieved.

1 Introduction

The effective functioning of economic entities, including holding companies, largely depends on the well-organised internal corporate control, as it is designed to not only identify the shortcomings and violations, but also to prevent them, and to promote their timely elimination [1-3]. In order to finally evaluate the results of the functioning of the organised internal control it is necessary to develop an evaluation mechanism [4, 5].

Thus, the relevance of the research topic is determined by the need to improve the efficiency of the company through development and use of models and algorithms for the organisation of internal corporate monitoring and evaluation of its effectiveness due to the special role of control in the management of the corporate activities.

The internal corporate control presents a set of interrelated elements representing the target, objects and subjects of individual business processes, information technology, risks,

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regulatory procedures and evaluation tools to quickly identify the causes of deviations from established standards and implement corrective actions to address them to ensure effective achievement of the objectives by the corporation management [6]. According to this definition, the mechanisms were developed both for organisation as well as for assessment of the effectiveness of internal corporate controls.

2 Results and discussion

The model of implementation of internal corporate control includes the mechanism of organisation of internal corporate controls and the mechanism of assessment of the effectiveness of internal corporate controls. The mechanism of the organisation of internal corporate control involves determination of significant risks and business processes that are inherent to coal mining operations [7]; choice of risk assessment criteria by the level of risk impact, its probability and occurrence rate; development of risk maps for business processes and types of evaluation criteria; formation of risks matrix of business processes for risk assessment and operational risk management; the development of the matrix of control procedures for the main business processes in order to minimize risks and losses due to their occurrence.

In turn, the mechanism of assessment of internal corporate control consists of two components. First, it is the evaluation of the effectiveness of internal corporate controls by specific control functions: a) the effectiveness and efficiency of operations, b) compliance of the activity with the current legislation, the performance of the legislative basis including compliance with IFRS and the reliability of reporting, c) optimization of the management costs. This mechanism is shown as the scheme (Fig. 1).

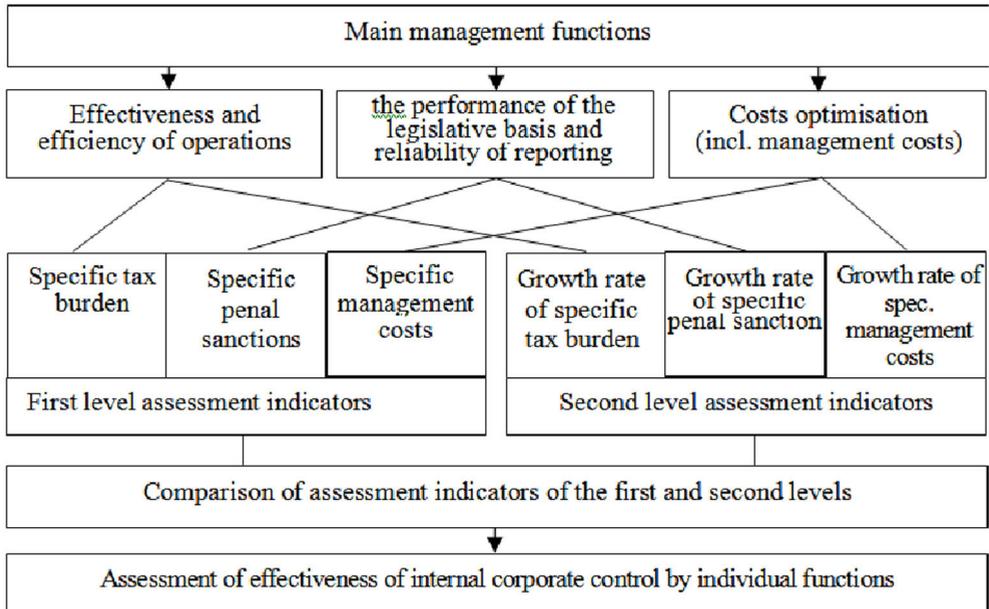


Figure 1. Mechanism of assessment of efficiency of internal corporate control by individual functions of control

Secondly, an integrated assessment of the effectiveness by the basic management functions through scoring method. This mechanism is shown in the scheme form (Fig. 2).

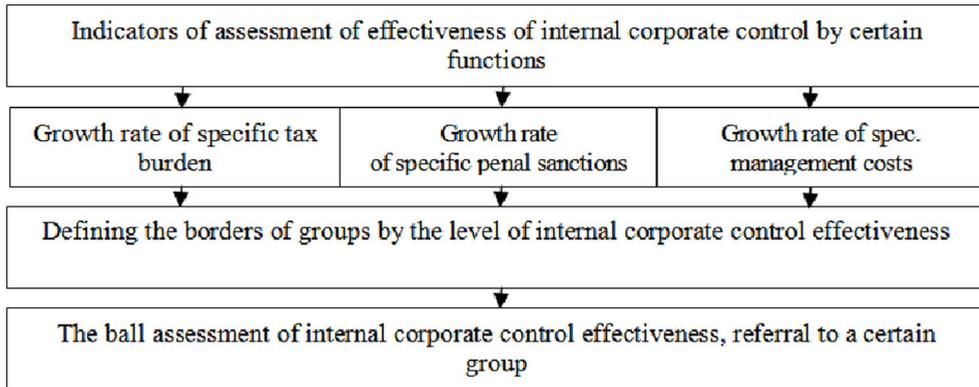


Figure 2. Mechanism of integral assessment of effectiveness of the internal corporate control

Assessment of the effectiveness of internal corporate controls by individual control functions at the beginning is carried out by the indicators of the first level (i.e. specific values that characterize the size of the tax revenue, penalties and administrative costs per ruble of sales), and then by the indicators of the second level (i.e. growth rates of specific values). The average values were used for the "threshold" values of the indicators. The "threshold" values of indicators are the basis for characterizing the deviations of actual indicators from the "threshold" ones and the calculation of the range of indicators' changes at the integrated (comprehensive) assessment [8].

In 2015, the new competencies of the organization and evaluation of the effectiveness of internal corporate controls proposed by the authors were implemented at JSC "SUEK-Kuzbass". Hence, the analysis of the indicators was carried out on the example of JSC "SUEK-Kuzbass".

Table 1. The analysis of first level indicators of JSC "SUEK-Kuzbass" (kop. / RUB.)

Indicators	Threshold value	Including by years				
		2012	2013	2014	2015	2016
1. Specific tax accruals	1.58	1.7	1.7	1.5	1.4	1.3
2. Specific penal sanctions	0.0685	0.081	0.061	0.062	0.060	0.057
3. Specific management costs	1.34	1.2	1.3	1.4	1.5	1.6

The analysis of the first-level indicator values suggests minor deviations by the years, this means that for a comprehensive assessment of the effectiveness of internal corporate controls it is required to use not only the specific indicators. Based on this, at the second level of assessment there were growth rates used, which gave a clearer picture of trends in the indicators' changes.

Table 2. The analysis of second level indicators of JSC "SUEK-Kuzbass"

Indicators	Threshold value	Including by years				
		2012/2011	2013/2012	2014/2013	2015/2014	2016/2015
1. Rate of changes in specific tax accruals	-3.05 %	6.25	0	-11.77	-6.67	-7.75
2. Rate of changes in specific penal sanctions	-5.27 %	5.19	-24.69	1.64	-3.23	-5.12
3. Rate of changes in specific management costs	+3.87 %	-7.69	8.33	7.69	7.14	5.67

The analysis of the rate of changes in the indicators suggests that with the minor deviations of specific indicators the growth rates provide a clearer description of the trends

which allow us to judge how effective are the solutions of individual management tasks. The positive values of the indicator's growth rate suggest that adjustment of internal corporate controls activities is required in the performance of the given control function, while the negative values prove the effective implementation [9, 10]. In order to obtain a comprehensive assessment, the state of the indicators of the first and the second levels was compared. The methods of comparing the state of indicators of the first and second levels of performance assessment involves the following features: on the first level - corresponds to the "threshold" value (a), the value does not correspond to the range (b); on the second level - improvement of the indicators (1), the values are sustainable (2), deterioration of the indicators (3). Assessment of the indicators by this method led to the conclusion that in 2015 they all still do not meet the "threshold" value, but there is an improvement in the indicators characterizing the effectiveness of internal corporate control of the organization in connection with the introduction of new approaches to its organization and evaluation [11, 12].

The evaluation of the effectiveness based on the record of individual management and control functions allows us to characterize the success of performing the individual functions of management, this is necessary for adjustment and coordination of the functioning of the business-processes, though, unfortunately, this does not provide an integrated assessment of the effectiveness of the entire internal corporate control [13]. Hence, the integrated evaluation mechanism was developed. The proposed method uses the evaluation of the results based on the scoring, its distinguishing feature is the introduction of rating that reflects a comprehensive account of quantitative, qualitative and probabilistic indices. Also, it is possible to revise the rating of each constituent element of internal corporate controls, depending on the priority of the control task at the given stage of development of the enterprise (the mechanism of an integrated assessment of the effectiveness of internal corporate controls is shown in Fig. 2). The integral indicator of the effectiveness of internal corporate controls is computed by summing the points for each indicator. The total score is 100. The rating parameters, upper and lower criteria, as well as the conditions of decreasing the criterion were determined empirically on the basis of previously defined "threshold" values and evaluation in scores which in turn were established based of trial calculations and priority tasks at the given stage of coal mines development. The essence of this technique lies in the fact that any analyzed parameter can be assigned to a certain class depending on the "obtained" number of points, based on the actual values.

The first group (maximum 100 points) characterizes high effectiveness of the existing internal corporate control that does not require correction. The second group (85 points) suggests that the organization of internal corporate control is quite effective, and requires a slight adjustment by the individual functions, downside risks to the company are negligible. The third group (60 points) characterizes the boundary condition of the enterprise, the risk of inefficient management increases, a significant adjustment to the individual areas of the internal corporate controls is required. The fourth group (25 points) represents a high level of risk and inefficiency of management, it is required to adjust all the components of internal corporate controls, to implement their radical restructuring, since this organization is ineffective. The last group shows lack of internal corporate controls (or the need to revise the established evaluation criteria in the event of changes in the situation in the company or the economy).

Based on the data presented in Table 3, we see a tendency of increasing the effectiveness of internal corporate controls since 2015 after the beginning of the introduction of new concepts. Adjustments are required in certain areas of control related to the optimization of management costs (though there is some improvement). In general,

from 2015 the internal control in the company can be characterized as quite efficient, because it refers to the second class of efficiency.

Table 3. The integral assessment of internal corporate control effectiveness at JSC "SUEK-Kuzbass"

Indicators	Threshold values	Including by years				
		2012/ 2011	2013/ 2012	2014/ 2013	2015/ 2014	2016/ 2015
1. Rate of changes in specific tax accruals	-3,05 %	6,25	0	-11,77	-6,67	-7,75
2. Rate of changes in specific penal sanctions	-5,27 %	5,19	-24,69	1,64	-3,23	-5,12
3. Rate of changes in specific management costs	+3,87 %	-7,69	8,33	7,69	7,14	5,67
Integral assessment, points	100	25	50	55	75	85

Thus, evaluation of the internal corporate controls effectiveness in using the proposed mechanism and certain instruments, will allow us to realize the main purpose of internal corporate that is improving the efficiency of the company performance [14].

The above tools are recommended for use in combination with the developed control procedures and the elements of the organization of internal corporate controls in the coal-mining companies, and they allow us to improve the organization of internal corporate controls and increase their efficiency.

We propose to characterize the effect of the implementation of internal corporate controls as obtaining an additional income from the effective functioning of internal corporate controls. Its value is made of the additional profit (loss) from changes in the value of the indicators used to assess the effectiveness: profit (loss) from changes in the size of the specific tax burden; profit (loss) from changes in the size of specific penalties; profit (loss) from changes in the size of the specific management costs [15].

Thus, by reducing the value of the specific tax burden and the specific penalties, but with the growth of specific management costs associated with the increase in the costs of implementing the new provisions of internal corporate controls in 2015, JSC "SUEK-Kuzbass" received additional profit of 1,443 thousand rubles, including due to reducing the size of the specific tax burden – 72,194 thousand rubles; due to reducing the size of the specific penalty – 1,467 thousand rubles.

3 Conclusion

The analysis of the problems of internal corporate controls development has shown that internal control is required for businesses in order to effectively manage business units performance, which determines the need for the development of theoretical, methodological and practical grounds not only for organization of control but also for evaluation of its effectiveness.

Based on the above, the mechanism and tools were developed for evaluation of the functioning of internal corporate control by individual tasks and its integrated assessment. They allow us to quickly adjust the functioning of internal corporate controls based on the assessment of the tasks execution by specific functions and to make management decisions on elimination of identified performance shortcomings. Also, the mechanism and tools were proposed for integrated evaluation of the effectiveness of internal corporate controls by taking into account implementation of individual management functions that allow us to give a general assessment of the effectiveness of internal corporate control, the effect of the introduction of internal corporate controls was defined.

Thus, evaluation of the effectiveness of internal corporate controls provides for presence of certain instruments, the use of which will allow us to realize the main purpose of internal corporate control that is improving the effectiveness of the enterprise performance.

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