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Risk management of construction

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Abstract. The role of financial risk management in increasing the financial stability of a construction company and reducing the likelihood of losses related to non-core risks is very large. The ability to identify and assess risks, as well as understand how possible adverse events can affect the final financial result, increases the manageability of the company's asset portfolio and the predictability of the financial results of its business activities.

Any company is exposed to business risks. Its incomes may rise or fall depending on changes in the environment, competition, production function, due to the emergence of new technologies, or changes in factors affecting consumer preferences. It should be noted that in Uzbekistan, unfortunately, financial risk management has not yet begun to play that significant role in the field of developing management decisions that it plays in the West. Due to historical circumstances, the development of financial risk management began in our country later than in the West, in fact, like the Uzbek business itself.

An important role is played by the fact that the risk management system cannot simply be copied from a Western standard and imposed on Uzbek companies. There is no doubt that risk management in our country is not just different, but also must be different from risk management in Western companies due to the Uzbek specificity. And this is not only about the liquidity of foreign exchange markets, but also about the needs to design an Uzbek risk management model with the possible use of existing tools and taking into account the experience of Western companies.

The purpose of this article is to develop recommendations on risk management in times of crisis for construction companies.

The results obtained from the research can be implemented in the activities of construction companies and used in educational methods.

1. Introduction

The risk management process of enterprises and organizations is a complex and multi-level procedure, which can be considered from different points of view. In particular, it can be conditionally divided into several stages, allocated following the features of sequential risk management actions. The allocation of the corresponding stages should be considered conditional, because in practice they are often implemented simultaneously, and not sequentially, one after another. For a more complete understanding of the specifics of this procedure, it is necessary to analyze various approaches to the content of the risk management process.



Table 1. The approaches of various authors to the content of the risk management process

The content of the risk management process	Source
<ol style="list-style-type: none"> 1. Risk analysis (identification and risk assessment) 2. The choice of risk exposure methods when comparing their effectiveness 3. Decision-making 4. Impact on risk (reduction, conservation, transfer) 5. Monitoring Results 	Tsapkin A.S. [1]
<ol style="list-style-type: none"> 1. Identification and risk analysis 2. Analysis of alternative risk management techniques 3. Choice of risk management methods 4. Execution of the selected risk management method 5. Monitoring results and improving the risk management system 	Kudryavtsev A.A. [2]
<ol style="list-style-type: none"> 1. Establishment of a risk context; 2. Analysis (identification and risk assessment); 3. Risk ranking and selection; 4. Impact on risk (choice of methods and strategies) 	Doba N.M. [3]
<ol style="list-style-type: none"> 1. Formation of the enterprise risk management concept; 2. Diagnosis of risks; 3. Risk assessment (qualitative and quantitative methods); 4. Development of risk management measures (response to risk); 5. Monitoring and analysis of the results of risk management measures; 6. Development of risky symptoms (i.e., identification of events (phenomena) that inevitably entail the implementation of risk-events). 	Medvedeva A.M. [4]
<ol style="list-style-type: none"> 1. Risk identification 2. Analysis (assessment) of risk 3. Choice of risk management methods 4. Applying the selected method 5. Evaluation of the results 	Polyak G. B. [5]
<ol style="list-style-type: none"> 1. Risk analysis 2. The choice of risk exposure methods in assessing their comparative effectiveness 3. Decision-making 4. Direct impact on risk 5. Control and adjustment of the results of the management process 	Khokhlov N.V. [6]
<ol style="list-style-type: none"> 1. Identification of risk situations 2. Identification (establishment) of the type of risk 3. Risk analysis 4. Risk assessment 5. The choice of method (method) to reduce risk 6. Evaluation of the cost-effectiveness of risk reduction 	Ershov V. F. [7]

1. Identification and analysis of risk;
2. Analysis of alternative risk management methods;
3. The choice of risk management methods;
4. Execution of the selected risk management method;
5. Monitoring results and improving the risk management system

Chernova G.V. [8]

Presented in table 1 is modern approaches to the content of the risk management process contribute to an understanding of the general trend in the development of the risk management mechanism but do not provide an unambiguous answer to questions about the goals and objectives of the risk management functions.

2. Method

Private construction company (PE) "Sulamita", one of the recognized leaders in the construction business in Uzbekistan. To understand the current strategic position of PE "Sulamita" we will conduct a SWOT analysis of the current state of the enterprise. The first stage of the analysis will be the identification of a specific system of factors that determines the strategic position of PE "Sulamita." In table 2 the environmental factors of PE "Sulamita" were evaluated using a 10-point rating system, in the future.

Table 2. Analysis of environmental factors PE "Sulamita" on a 10-point scale

Environmental factors	Expert review	
	2019 year	After 5 years
1. Political factors		
WTO Accession	3	7
The influence of political factors (country, party, etc.): work as directed by the president, minister, etc.	8	8
Protectionism	7	7
Opaque tenders structure	8	6
Corruption	5	5
Subject to decisions of enterprise managers in the opinion of higher management	8	6
2. Economic factors		
The economic downturn, rising unemployment, and declining overall purchasing power	7	6
Rising prices for energy, raw materials, and supplies	9	8
Lack of clear prospects for economic development.	8	6
The danger of economic instability		
Opaque, corrupt market for enterprise products	7	5
High customs duties and tariffs	8	7
The high total tax burden on the enterprise and the possibility of strengthening it	5	4
3. Social factors		
Social trends: rising unemployment, declining living standards, etc.	7	4
Change core values	4	6
Outflow of qualified specialists from Uzbekistan	8	6

Growth in the value of the consumer basket, requiring adequate wage growth	7	6
4. Technological factors		
The possibility of the emergence of innovative technologies that can radically turn production	9	9
Rapid technology development and innovation	9	9
Globalization	8	9
State priorities for the development of energy efficiency and innovation	8	8
The absence in the country of domestic technological equipment of the required class of quality and productivity	4	4
Poor compatibility of expensive imported equipment with the Uzbek infrastructure and operating conditions	5	5
The rapid aging of imported equipment and its short life	5	5

The next step in the SWOT analysis will be the separation of the identified factors into strengths and weaknesses, opportunities, and threats.

Table 3. SWOT- analysis of PE “Sulamita”

STRENGTHS	WEAKNESSES
The professionalism of personnel.	Staff turnover.
Fulfillment of orders on time.	Inadequate market and competitor research.
A wide range of equipment	Weak financial opportunities
Well-known market leader.	
Good geographical location	
The presence of innovative abilities	
The presence of purchasing power in the population	
OPPORTUNITIES	THREATS
Lower inflation	Adverse shifts in exchange rates.
Stability of customs legislation.	Accelerating rising energy prices.
Favorable shifts in exchange rates.	Entering the market of new strong competitors.
The growth of population income.	Changing customer needs and tastes
Expansion of product sales	
Market growth acceleration	

Based on this, we see that strengths are more significant than weaknesses and minor threats. This suggests that the organization has reserves to increase competitiveness.

To assess the competitiveness of the Sulamita PE company, we will take two more participants specializing in providing services to consumers in construction and installation works CJSC Firm “UMIRS” and Company “Setko”. We will use for analysis a standard system of expert assessments - a jackal from 1 to 5, provided “5” - the highest score, high level of development of the parameter, “1” - minimum score, low level of development of the parameter.

We will use the methodology for calculating a comprehensive quality indicator. The results of expert evaluations, weights of all parameters and the calculation of quality indicators in table 4.

Table 4. Evaluation of competitiveness PE "Sulamita"

Evaluation Options	Enterprises			Weight coefficient
	PE «Sulamita»	CJSC Firm «UMIRS»	Company «Setko»	
Quality	5 (0.75)	5 (0.75)	4 (0.6)	0.15
Assortment	5 (0.6)	4 (0.48)	4 (0.48)	0.12
Service level	4 (0.2)	5 (0.25)	4 (0.2)	0.05
Price level	4 (0.44)	3 (0.33)	5 (0.55)	0.11
Terms of payment	4 (0.2)	4 (0.2)	4 (0.2)	0.05
Discount percentage	5 (0.3)	5 (0.3)	5 (0.3)	0.06
Market coverage	4 (0.4)	4 (0.4)	4 (0.4)	0.10
Sales Regions	5 (0.5)	5 (0.5)	5 (0.5)	0.10
Channel intensity	4 (0.32)	4 (0.32)	3 (0.24)	0.08
Advertising channels	4 (0.12)	5 (0.15)	3 (0.09)	0.03
Trade Marketing Budget	3 (0.15)	4 (0.2)	4 (0.2)	0.05
Advertising budget	4 (0.4)	4 (0.4)	3 (0.3)	0.10
Sum of Rating Values	51	52	48	1
Comprehensive Quality Score	4.38	4.28	4.06	
Average product selling price	93	89	95	

Thus, the results of the competitiveness assessment showed an almost equal advantage in the quality of two manufacturers - PE "Sulamita" and CJSC "Firm UMIRS" and over the company "Setko".

3. Results

The analysis and assessment of the competitiveness of the construction organization carried out in this section allowed us to obtain the following results:

- analysis of the external environment showed that to increase its competitiveness, Sulamita PE must maintain the information, raw materials, and transport links with the external environment;
- studying the activities of competitors, we were convinced that the state of emergency "Sulamita" has serious competition in this market. This suggests the need for continuous improvement of the quality management system;
- our SWOT analysis showed that the strengths of Sulamita PE are more significant than weaknesses and minor threats. This suggests that the organization has reserves to increase competitiveness;
- the competitiveness assessment results for the 5-point system showed an almost equal advantage in the quality of two companies - PE "Sulamita" and CJSC "Firm UMIRS" and over "Setko".

Using the available reserves, the organization can improve all the factors affecting the level of risk.

4. Discussion

In the current economic situation, when both the external and internal environment of the company is faced with risks of a wide range, the role of internal audit is becoming more important than ever. The functions of internal audit today are rethought and more actively used as a means of reducing costs, eliminating inefficient business practices, and reducing risk.

Until now, the main focus in the field of corporate governance has been on compliance with legal requirements, i.e. the orientation toward external control prevailed. Recently, however, many large companies have realized the benefits of their initiatives in this area. One of the most important steps towards the establishment of a high-quality corporate governance system is the organization of an effective system of internal control in the framework of groups of interconnected organizations. Unlike an external audit, which primarily serves the interests of external stakeholders, internal audit aims to satisfy the interests of boards of directors (audit committees) and senior management of the company.

Very often, considerations of improvement are limited only to the area in which the audit was conducted. The ability to use the proposed improvements; therefore they are rejected. Sometimes it's better to "show confidence" in the areas, inspect, and allow them to act independently, rather than focusing on the direct contribution of the audit service to solving problems. This will help increase motivation and personal interest in introducing new recommendations.

Thus, an internal audit is a tool that provides support for the company and the constant growth of its effectiveness. Let us dwell on the feasible core work through internal audits.

5. Conclusion

The practical benefits of creating an internal audit team for the Sulamita construction company are as follows:

- the opportunity to prepare for an external audit;
- increasing the efficiency of the enterprise as a whole, by identifying the potential for improvement and its implementation;
- prevention of probable problems during inspections conducted by the tax inspectorate;
- effective control of autonomous divisions of the company.

It is proposed to create an internal audit team of highly qualified company employees. This requires advanced training of four employees of the enterprise in the field of audit. In the company we are considering, it is proposed to undergo retraining and advanced training for four employees to create an internal audit team. We will calculate the economic effect of the proposed event.

The source data are shown in table 5.

Table 5. The source data for calculating the annual economic efficiency for the training and professional development of marketing specialists

Indicators	Conventional Designation	Units of measurement	The value of indicators
1. The number of employees covered by the event	N	People	4
2. Planned real fund of working days per employee	Wd	days	180
3. The cost of working time - before the implementation of the event - after the implementation of the event	Wt1 / Wt2	hour/hour	12 / 11
4. Reducing the cost of working hours after the event	Rwh	minutes	30
5. The average annual salary fund per worker before and after the event	Fs/Asf	\$	3000
6. The annual fund of working hour	Wh	hour	2093

per employee			
7. Costs for the implementation of the event	Eic	\$	1500
8. The normative coefficient of comparative economic efficiency of measures	Ce	%	0.15

The calculation was made as follows:

1. Saving time, an hour. $St = N * Rwh * Wd / 60$

$$St = 4 * 30 * 180 / 60 = 360$$

2. Conditional release of numbers, people. $Cr = St / Wh$

$$Cr = 360 / 2093 = 0.17$$

3. Increasing labor productivity, %. $Lp = [Cr * 100] / [A/a Ne - Cr]$

$$Lp = [0.17 * 100] / [60 - 0.17] = 0.28$$

4. Economy of salary, in \$. $Es = Cr * Afs (9)$

$$Es = 0.17 * 3000 = 510$$

5. Saving social needs, in \$. $Sn = Es * 44 / 100 (10)$

$$Sn = 510 * 44 / 100 = 224$$

6. Economy of net cost, in \$. $N/c = Es + Sn$

$$N/c = 510 + 224 = 734$$

7. Annual economic effect, in \$. $AeE = N/c - Ce * Eic (12)$

$$AeE = 734 - 0.15 * 1500 = 509$$

A/a Ne - average annual number of employees;

Thus, the annual economic effect of this event will be \$ 509.

Such an introduction will strengthen the state of emergency PE “Sulamita” in the market of audit services. The effectiveness of this program is expected at least in a year.

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