The Risk-oriented Management in the Russian Economics: Regarding a Company and a Region

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Abstract

The factors determining management risks are studied in this paper both at levels of a company and the whole region in the Russian economy. Arguments indicating the common risk management of a company and a region are stipulated herein. Their main premise is that as a single company, and the whole region entrepreneurship complex affected by common factors. At the same time the effectiveness of the company risk management provides the result of the management of the whole regional economy development. The necessity of this analytical approach in the risk management as the creation of a risk system, allowing considering the risks relevant to individual enterprises and the whole region is grounded. Conditions for the practical use of the productive and effective universal process of risk accounting and assessment in the financial activity and the management of the region economic development are stipulated. The base risk system of business entities in the region is offered.

Keywords: Risk management; Risk factors; Risk system; Regional risk

Summary

The concept of an effective analytical activity on risk-management of the commercial company and the regional government is determined in the article describing the risk-system concept as an object of this activity. Factors defining a category "risk-system" covering significant components of the external and internal environment at an enterprise and in a region are generated. Conditions for the practice are considered to be the productive and effective universal process of risk accounting and assessment in the financial activity and the management of the region economic development is stipulated herein. The base risk system for regional entrepreneurship infrastructure subjects is generated and will be further submitted to examination inspected for significance by the regression statistics method. The revealed risks components can form a base for working out of the main regional branch indicators and indicators of the industrial enterprise risk-system.

Introduction

In today’s unstable market conditions of the economic development, a balanced approach to the formation of the risk management system of enterprises and regions is considered to be created as a significant area of the economy development. Enterprises and governments of the Russian regions do not pay enough attention to risk management at decision-making in the long-term planning.

Two approaches to the study of business risk complex are known. The first approach is based on a selective analysis of risks considering an impact of all factors. Its disadvantage is ignoring of the complex influence of integral risk forming factors. Defenders of the second approach reveal integrated risk-forming factors for specific risks, thus not allocating a generalized impact of these factors on the associated risks [1]. Because of the disadvantages of both approaches, to move to a comprehensive view at the accounting of management risks seems necessary, basing on the idea "to consider… risks integrated, rather than separately, as it was before" [2]. The authors believe that this transition is possible if the risks jointly considered both at the company and in the region as a whole, which allow to imagine a true situation with the integrated risks of the regional level and to take into account the previous experience of decision-making on measures for the region economic development.

Prevention of economic risks of the company, while ignoring typical risks, including regional, threatening to many companies, becomes ineffective. Regional risks, including economic, ecological and social, important for the company’s prospects, are more effective if explored at the system level, which can be achieved within the regional administration activity [3].

These risks, significant both for the region and for local companies, arise in the implementation of the regional strategy being consequence of the insufficient risk analysis at the early stages of the strategy. The thesis of the region risk management contains perceptions of the risks as threats of failed investments in the region, depending on the regional government’s correct choice of the investor [4], or the foreign investor’s failed project [5]. The risk of the region development is strongly associated with threats to the sustainable development of the leading economy sectors [6] and immediate price and other economic risks of leading industries of the regional economy [7,8]. Much attention in the risk analysis of the region economic development is paid to geopolitical, spatial and political factors [9]. Sustainability of the region development is closely linked to internal political processes and social dialogue [10], with the historical experience of the regional development management [11] and the characteristics of the state administration [12-15]. The region foreign economic relations are also considered as a serious factor in the risk-free management of the economic development [16]. The recognition and proofs of the region innovative development impact on its economic growth are closer to economic aspects with respect to the risk account in the region development management [17].

Methodology

The study aims at revealing the interconnection of general management and risk management, which is important for the implementation of the quality system approach. For this purpose it
is enough to compare the technology of influence assessment on the studied systems, as well as methodologically procedures of the analysis and management of these systems.

First of all, the factors of the company’s finance crisis should be considered. Decline in the national income, inflation, slow payment turnover, unstable tax system, reducing actual income, rising unemployment (macroeconomic factors), reducing internal market, strengthening market monopoly, significant demand reduction, reducing active stock market, national currency volatility, high interest rates of credit resources, unavailability of market information (market factors), political instability, negative demographic tendency, natural disasters and catastrophes, worsening crime situation, ineffective conjuncture development and financial market infrastructure (other factors) should be noted among the external factors. The internal factors include ineffective marketing, inefficient structure of current costs and lack of budgeting system, low levels of use and high depreciation of fixed assets, high insurance and seasonal inventory, insufficient diversification of the production range, inefficient production management (operational factors), inefficient stock portfolio or its absence, high conclude of construction and installation work, significant overexpenditure of investment resources, failed planned income, ineffective investment management (investment factors), ineffective financial strategies, inefficient structure of assets, excessive proportion of debt capital, growth of accounts receivables, inefficient financial management (financial factors).

Interconnection with the risks is identified by the structure of present elements. All defining basic elements are directly related to both the external and the internal environment of the organization functioning. Only reliability and regularity of the incoming information through the integration of information flows connecting the company with the external and internal environment provide an effective risk management process, allow creating an indicators system able to qualitatively improve the investment activity and overall financial state.

Thus, the existing component interconnection makes it possible to apply synergistic methods and procedures in the management models, which will multiply the effectiveness of the risk management system implementation.

As a result of the above, we can formulate the conceptual approach to the business risk formation and identify it as interconnected risk components in complex of influencing factors of the external and internal business environment, controlled from a position of implementation of business process and risk management components. A model of the risk system can be defined as universal for enterprises in various industries and fields of activity, because constituent elements are applicable to any enterprise, regardless of the nature and direction of production and economic relations. The region risk-system is a mandatory element of a strategic analysis of the region socio-economic system, containing tools to reveal the risks relevant to the region socio-economic development, methods of their ranking and modeling of the potential consequences and the methodology methods to form long-term management decisions on lowering of negative impact of regional risks.

The Main Part

The weighty scheme of the risk classification can be determined in the model of the risk. The most significant areas of the risk system (complex risks) which unite influencing factors and form a base of the formed universal model of the risk system can be allocated in this scheme. This classification should be further analyzed from a position of influencing factors, serving for formation of complex risks and an optimization matching model.

The theoretical approach to the risk complexity is a known and clear factor, it is sufficient to consider the parameters of at least one of the most significant risks model - the credit risk and to make sure that there are many of them.

Then the issue of the universal risk model formation should be considered in the broad approaches and influencing factors because the risk management, as well as management of any situation in any structure, requires caution, awareness, precision, and most importantly, strong leadership. Implementing an effective risk management system, it is necessary to clearly define methodological elements, criterial mechanisms of impact on the risks. At the same time, the fewer components include risk portfolio (risks of specific business entity), the easier to manage the risk system, creating mechanisms of the complex targeted optimization. To ground the system to limit the risks to main (five risks of the universal risk system of business entities are identified) that will be used in the model of optimization matching.

Thus, it is necessary to provide a ground for limitation of components of the business risk system to very significant risks under the current crisis (regional investment risk, currency risk, credit risk, risk of financial stability and bankruptcy).

But first, we will test complex of many business risks using the statistical method. The risk-system components are affected as a whole, by a variety of factors, mutually suitable while influencing on the financial state and in general on the entrepreneurship of certain business entity.

Thus, a set of risk system factors can be identified, allowing to trace the components of the complex influence and significant risks: country risk, political risk, investment regional risk (as described in rating agency “Expert” method), foreign currency risk, risk of natural disasters, inflation risk, market risk, industry risk (in particular economy sector), industry risk, bank risk, commercial (trading) risk, interest rate risk, credit risk, capital structure risk, loan default risk, financial stability risk, bankruptcy risk [18], information risk, production risk, portfolio risk (risk of securities transactions).

Significant risks, which include mutually influencing factors, should be selected in the analytical portfolio from all the risks because, as evident in the table, the factors are repeated in the evaluation of their impact on the risk system components that unreasonably increases the level of business uncertainty, when assessing a complex risk, to minimize the number of incoming factors - risks is advisable. An expert approach (one hundred respondents are representatives of major industrial companies in Kirov region assessed business risks by the score scale) was used at selection, forming a base risk system of regional entrepreneurship infrastructure subjects, which will be further submitted to examination inspected for significance by the regression statistics method. Elements of the business risk system (risks, obtaining more than 500 points in the expert evaluation are selected (each expert’s risk score by a 10-point scale)): country risk, currency risk, inflation risk, market risk, industry risk, bank risk insurance risk, commercial risk, credit risk, financial stability, risk of bankruptcy, information risk and portfolio risk.

The risks universal and important for industries should be identified among the risks portfolio elements. For this purpose the regression analysis method was applied. The dependence of business results
(industry production volume) on indicators characterizing the level of each risk included in the analyzed portfolio is analyzed. The sample includes variables in 79 regions of the Russian Federation (the highest risk regions are not included). The regress of dependence variable (industrial production) on the other variables is created with statistical package E-Views. Such factors as insurance, industrial, monetary, credit and bank risks are significant in the constructed regression (20% significance level). However, the analysis of the correlation between the factors indicates the possibility of the multicollinearity in the constructed regression. This means that certain factors are strongly correlated and can be excluded from the analysis (insurance, commercial, information and portfolio risks). Such variables as the industry risk, financial stability, foreign exchange and credit risks become significant after construction of a new regression without excluded variables. The high value of the determination coefficient and the absence of autocorrelation and heteroskedasticity in the residues (confirmed by the visual analysis of residual on Figure 1) demonstrate a good model.

A large number of coefficients remain insignificant in the resulting regression so the Wald test can be used to check a simultaneous equality hypothesis for some insignificant variables. The calculated $p$-value for this hypothesis: it is equal to 0.9676, that is, the simultaneous equality hypothesis for some insignificant variables. The calculated $p$-value for this hypothesis: it is equal to 0.9676, that is, the simultaneous equality hypothesis for some insignificant variables. The calculated $p$-value for this hypothesis: it is equal to 0.9676, that is, the simultaneous equality hypothesis for some insignificant variables. The calculated $p$-value for this hypothesis: it is equal to 0.9676, that is, the simultaneous equality hypothesis for some insignificant variables. The calculated $p$-value for this hypothesis: it is equal to 0.9676, that is, the simultaneous equality hypothesis for some insignificant variables.

All variables in the studied regression are significant, an index of multiple determination is high, heteroscedasticity and autocorrelation are absent in the residues. Thus, the bankruptcy risk, credit, foreign exchange risk, financial stability risk, regional and industrial risks are significant factors in the production. The industrial risk can be excluded if indicators of the enterprise’s risk-system will be analyzed in the future.

A regression analysis of significant risks with multicollinearity delivers.

**Table 1:** Final regression on the risk importance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BANKRUPT</td>
<td>-96.93025</td>
<td>80.2615</td>
<td>-1.199988</td>
<td>0.2654</td>
</tr>
<tr>
<td>CREDIT</td>
<td>1129.418</td>
<td>55.24791</td>
<td>20.4427</td>
<td>0.0001</td>
</tr>
<tr>
<td>CURR</td>
<td>-1197.77</td>
<td>703.849</td>
<td>-1.702434</td>
<td>0.0929</td>
</tr>
<tr>
<td>FS</td>
<td>17.02612</td>
<td>7.509092</td>
<td>2.267401</td>
<td>0.0263</td>
</tr>
<tr>
<td>REGION</td>
<td>529.2141</td>
<td>403.8056</td>
<td>1.310566</td>
<td>0.1941</td>
</tr>
<tr>
<td>IND</td>
<td>3.189668</td>
<td>1.591799</td>
<td>2.003826</td>
<td>0.0488</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.999773</td>
<td>Mean dependent var</td>
<td>123576.7</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.999768</td>
<td>S.D. dependent var</td>
<td>175852.8</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>2737.992</td>
<td>Akaike info criterion</td>
<td>18.74075</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>5.47E+08</td>
<td>Schwarz criterion</td>
<td>18.92071</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-734.2595</td>
<td>Durbin-Watson stat</td>
<td>1.949996</td>
<td></td>
</tr>
</tbody>
</table>

Sample: 179

Included observations: 79

**Figure 1:** Regression analysis of significant risks with multicollinearity deliverance.

**Figure 2:** Visualization of the regression analysis with the identification of significant variables (risks).
a perspective for the region future is offered from two positions: the future improvement of the region economic state or keeping of the conquered positions.

The management of the region economic development suggests various methods of the state regulation. All of them are aimed at achievement of certain purposes, which can be reduced to the desired image of the future state of the economy and society. However, the future image of the economy is not just a thing not available yet, what we want to see, but keeping all the best achieved for now.

In addition, the achievement of the goals will be successful when no obstacles able to stop the development are met on the way. In both cases, the failure to achieve the desired future can be caused by the risk factors.

Accordingly, an economic policy should be considered as the risk-oriented state regulation of the economy, which implies a variety of macroeconomic risks as factors hindering the economy development, as well as factors to overcome which now or in the future becomes an independent task of the state economy regulation, and to clearly ignore which negatively impacts on the effectiveness of the economic development management.

Conclusions

The conducted investigation revealed the common nature of risks of the management of the company and the region, which basic premise is that a common set of factors affects both a company and the whole complex of the region entrepreneurship. Effectiveness of the company’s risk management provides the result of the management of the whole region economy development. The risk system, involving the risk analysis relevant to individual enterprises and the whole region, is recommended for more effective risk management in the coordination of the region economic development. To do this, the region control systems should take into consideration the conditions of practical use of the productive and effective universal process of risk accounting and assessment in the financial activity and the management of the region economic development on the base risk system of business entities.

References