

**II International Scientific Conference GCPMED 2019
"Global Challenges and Prospects of the Modern Economic Development"****EVALUATION OF THE FINANCIAL SECURITY OF THE
COMPETITIVE ENVIRONMENT OF THE FIRM**

V. P. Fomin (a), V. A. Manyaeva (b), N. A. Igoshina (c)*

*Corresponding author

(a) Samara State University of Economics, 443090, Soviet Army street 141, Samara, Russia, fominvp@mail.ru

(b) Samara State University of Economics, 443090, Soviet Army street 141, Samara, Russia, manyaeva58@mail.ru

(c) Samara State University of Economics, 443090, Soviet Army street 141, Samara, Russia, bume63@mail.ru

Abstract

The justification of the optimistic forecast of the financial success of a particular company for the near future depends on at least two conditions. First of all, the company should be close to leadership in the competitive environment. Another important condition is the presence of progressive trends in the internal improvement of the company's business. Actual assessment of the location of the company in a competitive environment is achieved based on a quantitative interpretation of these two conditions. Each of these conditions is characterized by a set of relevant parameters (indicators) that reflect the most significant aspects of the phenomena being evaluated. The task is to generalize several values of diverse indicators (often with different units of measurement) into a single integral assessment. The degree of detail of the integrated assessment depends on many reasons, including the nature of the tasks, financial and informational capabilities. Increasing the level of detail of such an assessment gives it greater practical significance from different points of view. This allows timely detection of both hidden threats and the beginning of a favorable set of circumstances for successful business revitalization. Monitoring the economic security of the company using the algorithm of such an assessment increases the validity of timely management decisions. During this monitoring, trends in the dynamics of the location of the company in the competitive environment and its internal development are revealed. A comparison of the intensity of these two trends gives an additional characteristic of the economic security of the company.

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1. Introduction

Any business with necessity pays attention to ensuring its economic security. As a rule, this refers to direct counteraction to the main types of external and internal threats (Gaponenko, Bespalko, & Vlaskov, 2007; Glumov & Kiselitsa, 2013; Ianioglo, 2017). For example, security alarms are installed, inventories and counter checks are carried out, reserve funds are created and other similar events are carried out. However, it is very difficult to predict and evaluate the impending specific danger in detail. Therefore, measures of a "general strengthening" nature are advisable, which indirectly ensure the economic security of the business. An important preventive measure that indirectly supports economic security is the permanent assessment of the location of a firm in a competitive market environment. The role of such an assessment in the system of managerial decision-making will increase significantly if it characterizes the rating position of the analyzed firm at a particular point in time, as well as in dynamics and in relation to the internal processes of this firm.

2. Problem Statement

There were the works of Russian and foreign scientists studied the tools of rating analysis: Buzan, Wæver, and de Wilde (1998), Kaplan and Norton (2004, 2008), Tatarovskaya (2017) and others. Economic security is a complex phenomenon (Arbuzov, 2016). It is comparable to other single-order categories, for example, physical security. At the same time, components are highlighted in economic security, for example, financial security, which plays a key role, since the financial side is the essence of any business (Karzayeva & Babanskaya, 2016; Naumova & Tyugin, 2018; Shatalov & Mychka, 2017). This explains the paramount importance of financial indicators for assessing the competitive location of a particular firm in the surrounding business space. Accordingly, this position determines the level of financial security of the firm at the micro level of the economy. In this case, macroeconomic factors are not taken into account because of their qualitatively different content. It should be noted that the sources of macroeconomic factors, as a rule, are formed at the microeconomic level of conflicts of financial interests. Abstracting from macroeconomic factors is conditional in order to develop methodological support for managing the financial security of individual firms. The justification for this approach is the following consideration. Macroeconomic stability is largely determined by the balance of financial relations at the micro level of the economy.

3. Research Questions

The financial security management methodology of individual firms requires a preliminary solution to the problem of obtaining assessments with the undeniable qualities of objectivity, independence and equidistance from serving anyone's interests other than Truth. The mechanical solution to this problem involves the use of a huge number of various relevant parameters. Hypothetically, such a solution is achievable on the basis of computer technology capable of processing large amounts of data. However, the individual key indicators themselves are speculative constructs; therefore, they do not guarantee the absolute objectivity of the estimates. Each reasonable interested user imagines that he will perceive the surrounding reality in the prevalence of uncertainty over certainty.

Therefore, it is better to be satisfied with the recognition of the acceptable probability of the estimates obtained than to strive for their obviously unattainable exhaustion. It seems that the approach to assessing a specific economic situation that takes into account several key indicators in accordance with the set assessment goals and current circumstances will be of practical importance. The general goal is, as a rule, to objectively determine the degree of reliability of the economic situation of the firm. This involves a comprehensive study, the results of which are the result of the analysis of all the most important aspects of the business. For analytical purposes, it is often required to evaluate any specific detail of the economic condition of the firm, for example, the financial component. The results of this thematically limited analysis can be directly used to justify the next management decisions only under the condition of insignificant influence of factors related to other thematic aspects of the firm.

4. Purpose of the Study

The practical value of evaluative characteristics increases when they acquire quantitative certainty. This certainty for particular indicators is based on predefined units of measurement and on determining the number of units in a given phenomenon. For example, such a particular indicator as sales volume in value terms is quite simply determined. However, it is difficult to find a specific unit of measurement for the quantitative assessment of any complex phenomenon. Undoubtedly, it is convenient and rational to assess the situation on the basis of a small number of indicators (ideally one). Theoretically, an indirect integral unified quantitative assessment of such a complex phenomenon as, for example, the financial situation of a firm is allowed. In this case, an indirect combination of several key quantitative characteristics with their descriptive generalization based on, for example, rating methods is appropriate. Current requirements for the content of integrated reporting (GRI) reflect the most likely sources of threats to the firm, namely from a financial, industrial, social and environmental perspective.

5. Research Methods

It seems that, *ceteris paribus*, financial problems are the most relevant at present. Therefore, in the integrated assessment of financial security, priority is given to financial indicators, which are complemented by indicators of other aspects of the firm, depending on the tasks (Manyeva, Piskunov, & Fomin, 2016). For example, an assessment of a company's competitive positioning is based on two main financial indicators: the current assets turnover ratio (CATR) and the average profitability of their turnover (RWCT).

These two main indicators are complemented by one environmental indicator (percentage of exceeding the background level of greenhouse gas – EBLG) and one social indicator (percentage of staff turnover - POST). Evaluation criteria of these indicators are that an increase in the numerical value of the first two strengthens financial security, and the last two – reduces its level.

An indirect quantitative assessment of the level of economic security is formed on the basis of a generalization of three aspects of the results of the firm. First of all, the rating of this firm among other firms that are similar in geographical and product characteristics is taken into account. Secondly, the dynamics of such a rating for previous periods of time is estimated by the degree of stability,

progressiveness or decline. Thirdly, the dynamics of the internal development of the enterprise is evaluated. The first two aspects of assessing the level of economic security are disclosed based on the above four indicators. The third or internal aspect of this assessment takes into account the individual characteristics of a given firm, for example, by indicators: sales volume, profitability of sales and margin of financial strength (percentage excess of actual sales over break-even point).

6. Findings

6.1. Research of the external and internal environment to assess the financial security of the company

The level of financial security of the construction company “XZ” of the Samara region is evaluated among similar seven regional firms. For the purposes of commercial confidentiality, instead of the name of the firms, their symbols are given (table 01). The ranking of construction firms is carried out on the basis of the percentage distance method, when the best value of a particular indicator is taken as a standard with a zero percentage distance. The distance from the worst value of the indicator to the standard is taken as 100%. The percentage distance to the standard for other indicators is determined in proportion to their difference with the reference value (table 02).

Table 01. Source data for rating

Indicators	Unit rev.	Construction firms							
		AB	DE	GH	LM	NO	QR	TV	XZ
1. CATR	number	3,4	2,7	4.1	2,8	3,9	4,2	3,7	3,6
2. RWCT	%	15	16	12	19	14	10	13	14
3. EBLG	%	3,4	2,7	1,8	1,3	2.1	3,2	4,1	2.4
4. POST	%	6,3	5,7	8,2	12,3	10,6	5,8	4,6	7,3

Table 02. Determination of the competitive location of the company (%)

Indicators	Construction firms							
	AB	DE	GH	LM	NO	QR	TV	XZ
1. Distance to the standard:								
1.1 CATR	53	100	7	93	20	0	33	40
1.2. RWCT	44	33	77	0	56	100	67	56
1.3. EBLG	76	51	18	0	29	67	100	39
1.4. POST	22	14	47	100	77	16	0	35
2. The sum of the distances	195	198	149	193	182	183	200	170
3. Company rank	6	7	1	5	3	4	8	2
4. The remoteness of the company	46	49	0	44	33	34	51	21
5. Ranks	1	2	3	4	5	6	7	8
5. Firms	GH	XZ	NO	QR	LM	AB	DE	TV
5. Distance scale	0	41	65	67	87	90	95	100

6.2. Using rating analysis tools in assessing a company's financial security

According to the results of the rating analysis, XZ was in second place, which is an indirect evidence of high financial security. Among the eight firms analyzed, there is a clear leader GH, which is 41% removed from the second-rated company by a set of estimated indicators. In turn, the second company in the ranking is 24% removed from the third. Two firms with average successes (NO and QR) and four outsiders (LM, AB, DE, TV) are observed.

Confirmation of a strong financial position in a competitive environment for XZ could be its stable leadership position in previous periods of time. For a long time XZ took alternately the first and second places together with the company GH. However, GH is currently significantly ahead.

Another confirmation of the confident financial position in the competitive environment for XZ was the results of an analysis of the dynamics of internal development in the aggregate of priority indicators for this company. A similar analysis of the internal dynamics of the development of the company was carried out by the totality of indicators used to rank the group of construction firms.

The results of the analysis of the dynamics of development for the totality of indicators of external and internal priorities are graphically presented. On the vertical axis of the graph displays the rating of the equal fractional sub-period of the analyzed time period. The horizontal axis displays the number of the next sub-period. A broken line connects the intersection points of the actual values of the quantities in question. The broken line configuration allows, as a rule, to make a fairly confident assumption about the nature of the trend.

However, to compare the qualitative certainty of several trends, a mathematical apparatus of correlation and regression analysis will be required. Using mathematical techniques, linear graphs are constructed according to the dependence formula: $y = a + bx$. The function "y" means the rating characteristic of the equal fractional sub-period, the argument "x" is the number of the equal fractional sub-period. Coefficient "b" shows the degree of development of the function when changing the argument, and the free term of the formula "a" is the starting point for the development of the characteristic in the totality of the selected indicators.

The trends revealed in this way allow us to compare the degree of development of signs based on the slope angles of trend straight lines to the axis of the sub-periods of time. The slope of the straight line on the graph in degrees is calculated from the tangent of this angle. The tangent value is determined by the ratio of the quantity "y" to the quantity "x". In other words: $\text{tga} = (a + bx) / x$.

7. Conclusion

A comparison of the slope angles of the revealed trends showed that the internal trend has a steeper rise angle than the trend that was formed by the totality of recognized successes in the external environment. Therefore, the management of XZ needs to pay more attention to ensure that the internal success of the company becomes the basis of its financial security in an external competitive environment.

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