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THE RATING SYSTEMS FOR RISK IDENTIFICATION AT ENTERPRISES

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Abstract

In the article, rating systems of risk assessment and identification and diagnosis of the crisis situation of the enterprise were studied. Each formula has been discussed in detail.

Keywords: risk, identification, assessment, indicators, rating model, financial status, financial independence, business activity indicators.

The conducted observations show that when the economic activity of enterprises is studied financially, analytical scientists are more interested in evaluation based on rating rather than factor evaluation. The reason is that when the financial situation is diagnosed based on the rating, it is not the impact of the crisis or insolvency on the enterprise, but the result of the enterprise's financial decisions for a certain period of time. This is an indication of the extent to which the financial organization of the enterprise is progressing. In the table below, you can see one of the ways to evaluate the enterprise based on the rating (Table 1).

Table 1. Table of distribution of enterprises according to their financial strength[1]

Naming of indicators	*Sum of points*	**Types of financial instability (average state) / amount of points**					
		1	2	3	4	5	6
1	2	3	4	5	6	7	8
Cumulative Solvency ratio*	25-0	>1.0/25	0.9/20	0.8/15	0.7/10	0.6/5	<0.5/0
Quick Liquidity ratio**	20-0	>1.5/20	1.4/16	1.3/12	1.2/8	1.1/4	<1.0/0
Current Liquidity ratio***	18-0	>2.1/18	1.9/15	1.7/12	1.5/9	1.3/6	<1.1/0
Private working capital ratio****	20-0	>0.2/20	0.17/16	0.14/12	0.11/8	0.08/4	<0.06/0
Financial strength ratio*****	17-0	>0.6/17	0.55/14	0.5/11	0.45/8	0.4/5	<0.35/0
Total Points-	100-0	100	81	62	43	24	0

[1] Жарковская, Елена Паловна. Антикризисное управление: учебник / Е.П.Жарковская, Б.Е.Бродский. – 4-е изд., испр. – Москва: Омега-Л. 2007. – 365с.:ил., табл. – (Высшая школа менеджмента).

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Note:

The formulas for calculating the above table are as follows:

Cumulative solvency ratio:

***Ксвт=(А1+0,5А2+0,3А3)/(П1+0,5П2+0,3П3)**

Quick Liquidity Ratio

****Ктл=(А1+А2)/(П1+П2)**

Current liquidity ratio

*****Кжсл=(А1+А2+А3)/(П1+П2)**

Coefficient of provision of private working capital

******Кхам=(П4-А4)/(А1+А2+А3)**

Financial strength coefficient

*******Кмм=(П4+П3)/ Total balance**

As can be seen from the evaluation method based on the rating, the financial status of the organization is determined depending on the number of accumulated points. That is:

1st financially stable and solvent organization (100-85);

Norm 2 is solid but may be a problem with short-term payments (84-70);

The development of financial instability in the 3rd enterprise will prolong the period of payments (69-50);

4. Continued financial instability and insolvency (49-30);

5. The financial situation of the enterprise is in crisis (29-11);

6. bankruptcy of the enterprise or practical cessation of production activities (<10);

The assessment of the activity of industrial enterprises of our Republic using the evaluation method based on this five-position rating shows the level of efficiency of their financial management decisions.

Having studied the fact that different indicators reflect different financial processes, it can be said that based on the financial activity of the enterprise, it is necessary to know how to perform a goal-oriented comprehensive analysis, taking into account the various signs of its financial situation.

This goal is satisfied by several factor models developed in the USA: Altman's Z-calculation, Beaver scale, Du Pont (Du Pont) formula, as well as several well-known Lisa, Tishou, and Taffler models. Unfortunately, these models can only provide an approximate probability of bankruptcy risk.

Despite the imperfection of these models, their results can adequately describe the financial condition of the enterprise using the limited most necessary indicators. We will look at some of them below.

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Model of M.A. Fedotov. Each factor has standard coefficients of analysis according to Western practice. M.A. Fedotov developed this factor model based on the analysis conducted in 15 enterprises.

Z=-0.3877-1.0736*Кжл+0.0579*(Ratio of debt funds to total assets);

If Z<0, the company has solvency. If Z>0, there is a possibility of bankruptcy.

British scientists R.Tafler and G.Tishaw's four-factor Z-calculation models:

$$Z_4=0.53\ X_1+0.13\ X_2+0.18\ X_3+0.16\ X_4 \quad (1)$$

Here: X_1 – profit from sale / short-term liabilities;

X_2 – Current assets / total liabilities;

X_3 – short-term liabilities / total assets;

X_4 – net sales revenue / total assets;

The condition of the Z-score is 0.2

Altman's Z-score-based bankruptcy probability model was tested in 1968 in a study of 33 bankrupt companies in the United States. It was developed by Altman in 1977 with 70% accuracy based on 5 years of experiments.

The Altman formula looks like this:

$$Z_5=1.2К_{об}+1.4К_{н.п}+3.3К_р+0.6К_н+К_{от} \quad (2)$$

$К_{об}$=(Current Assets-Current Liabilities)/Total Assets;

$К_{н.п}$= Retained earnings/total assets;

$К_р$= Profit before tax and interest/Total assets;

$К_н$= Market value of common and preferred stock/Total assets;

$К_{от}$= Sales Volume/Total Assets;

Condition of Z5;	The possibility of bankruptcy
1.8 and below;	Very high
up to 1.81-2.7;	High
from 2.71 to 2.9;	It can be
3 and above	Very low

The lowest position of the index is Z-score = 2.7;

The mentioned model can be applied only to joint-stock companies whose shares are sold on the market and whose shares have a market value.

R.S. Sayfulin and G.G. Kadykov proposed to evaluate the use of numbers to assess the financial status of the enterprise.

R=2Кхкт+0,1Кжл+0,08Кайл.инт.+0,45Кмен.+Кхк.рен (3)

Here:

Кхкт – coefficient of provision with private funds > 0;

Кжл – current liquidity ratio > 2;

Kyle. int. - circulation intensity of fragmented capital, which is characterized by the volume of output corresponding to 1 soum invested in the activity of the enterprise > 2.5;

Кмен. – the management coefficient is defined based on the share of profit from sales in the volume of sales. (Kmen > (n-1)/r, r is the refinancing rate of the central bank);

Кхк.рен. – profitability of private capital, the ratio of balance sheet profit to private capital > 0.2.

All coefficients will be equal to 1 when the minimum standard is reached. It is considered unsatisfactory if it is less than one. The use of the rating models described above in the analysis of enterprises provides great opportunities for preliminary risk assessment.

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