

FINANCIAL RISK MANAGEMENT, BASED ON THE BALANCE SHEET AND PROFIT AND LOSS ACCOUNT

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ABSTRACT: *Existing market economy in Romania currently is characterized by a series of reforms carried out in order to create a competitive economy within the EU but also globally. These reforms and dynamic environment where there is a range of factors that can create specific conditions of different types of event risk. Most important is the risk of insolvency. Analysis of these risks can be done through various methods such as: analysis of scores method, using the Connan – Holder model.*

KEY WORDS: *risk; cost analysis; break-even; solvency; insolvency; liquidity rates*

JEL CLASSIFICATION: *G32*

1. INTRODUCTION

The economic risk is the possibility of occurrence of adverse events that may generate losses. A decident can accept the probability of loss in terms of expected income to obtain additional gains wich will compensate for the risk taken. The literature distinguishes between risk and uncertainty. Risk is defined as a situation where not known with certainty the characteristics of an event, but is known alternatives such characteristics and possibilities of their occurrence. Approximate uncertainty implies knowledge of the characteristics pertaining to a particular event, but not the probability of them. Between bankruptcy risk and direct link exists in the sense that, as a draft action entails a higher risk of bankruptcy more likely, and reverse. Diagnosis bankruptcy risk is assessing the ability of the company to honor commitments to third parties.

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Our country's legislation defines insolvency as "the state of the debtor's assets are characterized by insufficient cash funds available to clear debt, liquid and payable: Insolvency is presumed to be manifest when the debtor, after 30 days due, is not paid the debt to one or more creditors, insolvency is imminent also when it is shown that the debtor can not pay the outstanding debt incurred maturity with available cash funds on the due date."

Thus, the creditor entitled to participate in the insolvency is that creditors who filed and who has been admitted wholly or in part, an application to register its claim against the debtor claims tables. Creditor is entitled:

- to participate and vote in the creditors, including a reorganization plan accepted by the syndic judge;
- to be appointed as a member of the committee of creditors;
- to participate in distributions of funds from the debtor's reorganization or liquidation of the debtor;
- to be informed or notified of the procedure and to participate in any other proceedings subject to this law.

The quality of the creditor entitled to participate in insolvency proceedings without personal statements of claim filed, the debtor's employees.

Method based on statistical techniques by which to analyze the financial characteristics discriminatory, or by using the method score rates. This method is one of the tests along with others such as breakeven analysis, analysis of direct expenses or other tests performed with different rates, such as analysis of liquidity risk through rates. Discriminated analysis has been used since the 1930s the first applications in biology and natural sciences. Later, after 1945, has been successfully applied in economic fields such as consumer credit assessment, classification of investments, and since 1960, and financial analysis.

The study is Walter (1959), who proposed a model to estimate the rate per share, the study Smith (1965) which presented an interesting model of calcsificare investments in standard categories using multiple discriminant analysis. Dignostic score is a method that is external risk measurement and interpretation that is subject to the investor, creditor company, but now the system in future work. He relies on the development of value judgments that combines linear group of financial rates vary significantly. All studies able to predict the bankruptcy of the firms are based on the original contribution of Beaver and Altman.

Beaver (1966) made the greatest contribution to the bankruptcy of the enterprise, Univariate analysis. Univariate analysis technique involves using a single financial rates a bankruptcy prediction model. Beaver looked at several separate financial rates and rate selected for each critical point so as to maximize prediction accuracy. Altman (1968) conducted a multivariate analysis of falimetului developing a analiza multiple discrimination, based on combined financial information rates in a single position of the author and his model of analysis popularized bankruptcy model score or Z-score.

Score determination requires the following stages of work: choosing a sample of companies with two groups, a group that includes companies in difficulty go bankrupt or a group of companies without financial problems, comparisons over a

period of time, two groups of companies, based on a set of indicators considered to be significant, progressive selection of indicators made the best discrimination, determining a ranking called indicator score (Z) form:

$$Z = a_1 \times R_1 + a_2 \times R_2 + a_3 \times R_3 + \dots + a_n \times R_n$$

where:

a_i weighting of each installment;

R_i is selected rates to the highest discriminating power.

The score is a linear function of several variables (rates) are characterized by average coefficients determined from observations made in a given period on a sample of firms, according to the values we can estimate the probability that the risk of bankruptcy for each firm.

Most classifications retain four categories of financial rates:

- rates of operational activity and principles assessing income streams generated by the business, liquidity levels, which measures the adequacy of available sources to short-term obligations due on the same period;
- rates on term debt and balance long, which characterizes the company capital structure in order to emphasize the ability to meet long term obligations and investment needs;
- rates of return, which measures the capacity of the income necessary to achieve both development and capital remuneration.

The selected rates are independent in relation to each score to eliminate duplication function of the same influence of the financial and economic phenomenon. Among the most popular models, based on scores method we can, remember: Altman, Springate, Koh, Conan-Holder, Center of the Central Bank of France balance sheets. The most representative models developed in Romania, are model Băiștenu and model Anghel.

E.I. Altman has developed one of the first feature score in 1968, using information obtained from studying a sample of U.S. companies. In this sample included both firms went bankrupt, and companies with good business. In his study included a sample of 66 companies including many 33 in each group and the period considered for analysis was from 1946 to 1965.

The author found a total of 22 potential variables grouped into five categories, the author selected five installments which he has considered to have the highest significance, with reference to: liquidity, profitability, leverage, solvency and activity. Springate model was developed in 1978 by Canadian Professor Gordon Springate, following the author's procedure Altman from 19 financial rates, the most commonly used in the literature.

Model Conan - Holder was developed by two authors which applied to firms with a number of 10-50 employees and has been developed based on research conducted on a sample of 95 small and medium-sized industrial profile, which we have studied during 1970 - 1975, 50% went bankrupt, resulting in a score function with five variables having the following form:

$$Z = 0.22 \times 0.24 \times R1 + R2 + R3 \times 0.16 - 0.87 \times R4 - 0.10 \times R5$$

where:

R1 = gross operating surplus / total debt

R2 = Equity / Total liabilities

R3 = Current Assets - Inventory / total assets

R4 = Financial expenses / turnover

R5 = personnel costs / value added.

Based on this model were set following margins score function:

- if $Z > 0.16$, the company has a very good situation, and bankruptcy risk is $< 10\%$;
- if $0.1 < Z < 0.16$, the company has a good situation and the risk of failure is between 10% and 30% ;
- if $0.04 < Z < 0.1$, the company has a state of alert, and bankruptcy risk is between 30% and 65% ;
- if $-0.05 < Z < 0.04$, the company has a situation of danger and risk of failure is between 65% and 90% ;
- if $Z < -0.05$, the company has a state of failure and bankruptcy risk is $> 90\%$.

Model B - Băileşteanu. From traditional studies (Altman, Argenti, Taffler, Conan and Holder) states that the author believes that the causes of bankruptcy are: the impossibility of paying current obligations, lack of financial resources for repayment of loans, collection of great products delivered late; record loss. Anghel model was developed based on the observation of a number of 20 economic-financial indicators, the sample was composed of 276 companies in 12 sectors of national econo.

2. PROBLEM FORMULATION

The question which arises is, how a company is able to face risk factors that appear on the market the way the company is able to cope with risks, but not least, and how it manages to adapt to market conditions .

The economic and financial analysis system, fitness business analysis to be solvent and defeat the risk of bankruptcy is central. Any failure on payment obligations generate damage and require urgent correction. However, financial stability is an absolute imperative, that can not be missed under any motivation. Undertaking capacity assessment to adjust obligations is assessed within shaded according to specific economic and financial conditions in which he operates. Even if sustainability is not compromised company image may degrade due to periodic disturbances. The permanence of difficulties to pay the obligation is an expression of economic and financial structural fragility.

3. SOLUTIONS / CASE STUDY

To answer the question that was made before we made a case study through which we wanted to highlight the situation of an enterprise / business. Company on

which the case study was conducted, was established in 2000 as state owned enterprise under the name S.C. ABC S.A. and is active in the production and trading of carbon, the execution of repairs. To achieve financial analysis s.c. ABC s.a., to make available summary documents - balance sheet in 2 consecutive years , 2008 and 2009, profit and loss for three consecutive years and for balance - , 2008, 2009.

Risk score calculation method is based on the linear function Z and to calculate the five installments ratios:

R1 = gross surplus of exploitation/ total liabilities = 22 871045 / 56445748 = 0, 40;

R2 - ratio of permanent capital and total assets = 43769387 / 129161219 = 0,33;

R3 - ratio of current assets less inventories and total assets = 25271225 / 129161219 = 0,19;

R4 - the ratio of financial costs and turnover = 2822735 / 105019718 = 0,02;

R5 - ratio of personnel costs and value added = 13610436 / 36776238 = 0,37.

Follows function:

$$Z = 0,24 * 0,40 + 0,22 * 0,33 + 0,16 * 0,19 - 0,87 * 0,02 - 0,10 * 0,37 = 0.14$$

This value signifies a risk of 0.14 obtained between 10 and 30%, as obtained from the value in calculations so this time Z is between 0.1 and 0.16. Same method was established risk score for 2009. Thus from this calculation was obtained for Z a value of 0.12 which means that the risk remains in the range of 10-30%, but we can speculate on the basis that the value obtained is less than the previous year which means that the company is on a good path to recovery.

Table nr.1. The balance sheet

<i>ASSETS</i>	<i>2008</i>	<i>2009</i>
SM-Stable means	56.583.694	77.942.005
Intangible assets on a gross	10.743	10.743
Tangible assets on a gross	56.203.486	77.590.847
Financial assets to gross	285.153	285.153
(+)Accrued expenses	84.312	55.262
OCA=Operating Current assets	71.970.285	55.118.704,58
Stocks gross	46.802.324	44.667.913
Mining claims	25.167.961	10.450.791,58
Customer	25.722.283	10.451.887
(-)Customer creditors	293.828	-176.394
Provisions reviews	-364.329	-1.202.140,42
Advances to employees	98.056	72.268
VAT recoverable	-	1.239.859
VAT not due	5.404	64.697
State Budget	375	615
CAOE = Current assets outside exploitation	103.264	488
Various debtors	103.264	488
TA = Cash Assets	503.976	93.807
Cash and bank accounts	503.976	93.807
TOTAL ASSETS	129.161.219	133.155.004

LIABILITIES	2008	2009
SR = Sustainable Reserves	72.255.476	88.157.186
Equity / Own funds	43.769.387	71.011.949
(+) Income in advance	756.786	588.838
(+) Depreciation and provisions	27.729.303	16.556.399
DS = debt service	36.549.287	22.025.089
Suppliers	34.237.310	19.907.064
(-) Care Providers	-9.999	-904
(+) debts to person. and social assurance	723.802	1.565.804
(+) Other debts and pub instit.	1.598.174	553.125
LOE = Liabilities outside exploitation	20.356.456	22972730
Settlements associations	1.878.000	-
(+) Diverse creditors	17.911.061	22.432.151
(+) Payable dividends	31.981	31.981
(+) Income Taxes	535.414	508.598
TOTAL LIABILITIES	129.161.219	133.155.004,58

One of the most important concepts that characterizes an enterprise is solvency. Solvency is the company's ability to honor maturing obligations resulting either from previous commitments entered into, either current operations or compulsory levies.

Solvency ratios used in financial analysis of risk are:

- *General liquidity ratio:*

$$\text{GLR} = \text{Current assets} / \text{liabilities from exploitation}$$

This ratio compares current assets associated with all potential liquidity, with total outstanding debt in one year. For normal work, general liquidity ratio must be over unit;

- *Partial liquidity rate:*

$$\text{PLR} = (\text{Current Assets} - \text{Stocks}) / \text{debt service.}$$

This rate expresses the company's ability to meet short-term debt on debt and cash. For a good work adequacy of this rate should be 0.8;

- *The rate of immediate liquidity*

$$\text{ILR} = \text{cash money} / \text{debt service}$$

This rate expresses the most liquid interface elements of the asset with short-term obligations. Liquidity ratios are of particular interest to those extending short term credit to the company (Monea, 2009).

Table 2. The profit and loss account

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<i>No</i>	<i>Indicators</i>	<i>31.12.2008</i>	<i>31.12.2009</i>
1	Incomes:	101.891.476	141.136.188
	- Incomes from exploitation	100.346.031	137.632.505
	Production sold	97.739.453	142.903.600
	Merchandise sales	7.280.262	70.276
	Stocks variation	-6.034.191	-7.911.251
	Production imobilized	1.107.642	1.374.325
	Other incomes from exploitation	252.865	1.195.555
	- Financial incomes	1.545.445	3.503.683
2.	Expenses	100.922.713	139.365.043
	- Exploitation expenses	98.099.978	135.161.313
	Expenses with prime material and materials	49.603.746	82.026.437
	Expenses with energy and water	13.957.822	27.760.121
	Expenses with goods	7.256.137	744.047
	Employee expenses	13.610.436	13.511.907
	Other expense with exploitation	13.671.837	11.118.801
	- Financial expenses	2.822.735	4.203.730

Table 3. Table with Liquidity rates calculated

<i>Indicators</i>	<i>Values for 2008</i>	<i>Values for 2009</i>
GLR	1,4497	1,4171
PLR	0,5740	0,3719
ILR	0,0094	0,0022

4. CONCLUSIONS

General liquidity rate (GLR) was not favorable liquidity in a range between 2 and 2.5, indicating that the company encountered difficulties in debt repayment due in the short term through short-term assets. It may be noted, however, a slight increase of RLG in 2009 than in 2008 due to lower short-term debt of the company.

Low liquidity rate (LLR) was not at the recommended level of 0.8 which indicates that the company has experienced difficulties in paying payments due in the short term, but on account of assets readily convertible into cash. Small amounts of debt and cash assets are the main causes. Rates of immediate liquidity (ILR) is well below the optimal value of 0.2 representing a high risk undertaking with regard to cover immediate liabilities.

The final conclusion that can be drawn is that the company has a low risk, or in more technical terms, an acceptable degree of risk that is between 10% and 30%, the risk of problems being generated by the company to pay immediate debts, short-term debt, which causes a short-term credit to contract, these data were supported by values obtained by calculating the rate of liquidity and the conclusion is supported by Z score function values for health status is sustained company and threshold values obtained in

the calculation of liquidity or borrowing rate. The company is solvent - which shows company's ability to pay its monetary obligations as it is placed in a low risk, operations risk acceptable, in fact most companies are in this category.

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