EVALUATING BANKRUPTCY RISK THROUGH A FINANCIAL AND ACCOUNTING DIAGNOSIS - CASE STUDY AT SC TEHNOFAVORIT SA BONŢIDA

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Abstract

In global economy as well as in the Romanian economy, labeled as competitive, the risk is there that the existence and viability of a business' present and future results might be put under the threat of unpredictable events. Assessing and evaluating the financial state of health of a company through a financial-accounting diagnosis requires assessing the risks going along with the company activity, some of which may point out its fragility or vulnerability, and others may prefigure bankruptcy or insolvency that may threat its survival and continuity. The target of analysing the entity's economic activity is to check out and demonstrate that the level of the operational risk is determined by costs achieved and their structure, fixed and variable. Financial risk is analysed as profit sensibility, the risk level being determined by financial costs.

Key words: financial-accounting diagnosis, operational risk, financial risk, economic profitability

The notion of risk is related to that of uncertainty and it expresses a state of insecurity concerning the future. The relation between the two is important from a practical point of view, especially in the decision-making process of SC Tehnofavorit SA having as object of activity "Manufacture of machines and equipment for agriculture and forest operations".

The risk may be analysed and assessed by managing and controlling factors that may generate it, and also by adapting in time and with the least cost to the variation of economic and social environment conditions.

As any other profitable activity, the activity of the studied entity involves the use of capital and is submitted to profitability-related risks.

The financial-accounting diagnosis focuses on both profitability as a whole, by studying the operation performance as recorded by the Profit and Loss Accounts, and the impact of the financing resources on capital profitability as related to the methods used, by the financial performance.

Operational profitability along with operational risk influences the rate of financial profitability and the corresponding financial risk, as well as total risk and bankruptcy.

Operational risk, also called economic risk, is related to the structure of operational costs (fixed and variable) and depends directly on the ratio of fixed costs within total costs.

Financial risk is indicated by the presence in the Profit and Loss Balance of financial costs paying off borrowed capitals via credit interests.

MATERIAL AND METHOD

The source of information in this writing is the studied company database, especially the parts of annual financial Situations: short version of the Balance and Profit and Loss Accounts for 2008-2010.

The activity object of the company is the production and manufacture of machines and equipment for agriculture and forest industry, respectively.

The method of assessment used is that of comparative analyses along time, the analysis of the company's creditworthiness in order to avoid bankruptcy, by analysing operational risk, financial risk and the scoring pre-assessment method of bankruptcy risk – Altman's model.

RESULTS AND DISCUSSIONS

1. Operational risk assessment

The analysis of operational risk is performed starting from gross operating income. Profitability threshold of lei 3,884,483 in 2008, and of lei 2,972,613 lei in 2010 respectively, has allowed an operating profit of lei 489,085 in 2008, and of lei 406,908 in 2010, respectively (table 1).

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In the event of a relatively linear evolution of activity volume in terms of financial year, operation profitability threshold is reached on day 123 of year 2008, and day 133 of year 2010, respectively, with a delay of ten days as compared to 2008 and a delay of 26 days as compared to 2009. The company has 237 days in 2008, 201 days in 2009 and 227 days in 2010 to go in order to obtain income and record a profit.

Table 1

Operational risk

No.	Indicator (lei)	Symbol	Year 2008	Year 2009	Year 2010
1	Operating income	Ve	11502320	7960024	8160500
2	Operating costs	Che	11013235	7653282	7779592
3	Operating profit	Pe=Ve-Che	489085	306742	406908
4	Total variable costs	Cv	10780166	7410304	7541783
5	Total fixed costs	Cf	233069	242978	237809
6	Variable cost margin	Mcv=Ve-Cv	722154	549720	618717
7	Variable cost margin rate	Rmcv =Mcv/Ve	0.06	0.07	0.08
8	Operational profitability threshold	Vepr=Cf/rmcv	3884483	3471114	2972613
9	Position indicator: -absolute (Ipoz); -relative (Ipoz%).	 Ipoz=Ve – Vepr Ipoz%=Ipoy-Vepr	 7617837 196.11	 4488910 129.33	 5187887 174.53
10	Moment of reaching profitability threshold	Pm = (Vepr-Ve)x T	123.29	159.18	132.96
Source: authors' previous work					

Elasticity coefficient has a relatively low rate, hence operating income modified by 1% results in a variation of the result in the same direction that is by 1.51% in 2008 and by 1.57% in 2010.

In dynamics, a decrease of profitability threshold happens every year as a result of variable cost margin rate increase, and fixed cost decrease as well. The necessity arises that operating income should reach the amount of lei 2,972,613 in 2010 for the company to be able to fully cover operating costs (figure 1).

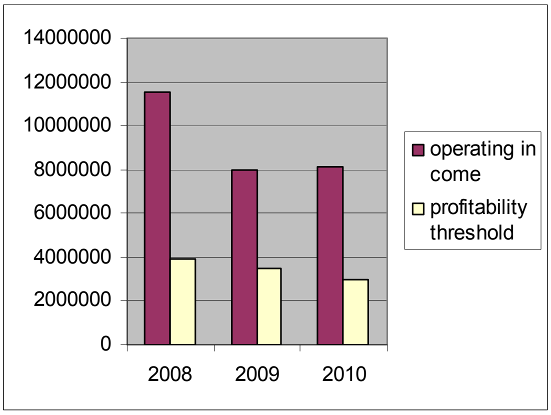

Figure 1 **Operational Risk Dynamics**

Table 2

Operational risk

No.	Indicator (lei)	Symbol	Year 2008	Year 2009	Year 2010
1	Gross income	Vt	11555426	7978316	8328047
2	Operating costs	Che	11013235	7653282	7779592
3	Total variable costs	Cv	10780166	7410304	7541783
4	Interest costs	Cd	62875	86812	45773
5	Total fixed costs	Cf	233069	242918	237809
6	Variable cost margin	Mcv=Vt-Cv	775260	568012	786264
7	Variable cost margin rate	Rmcv=Mcv/Vt	0,0671	0,0712	0,0945
8	Operational profitability threshold	Vtpr=(Cf+Cd)/rmcv	4410492	4631882	3000868
9	Position indicator: -absolute -relative	 Ipoz=Vt-Vtpr Ipoz%=Ipoz/Vtpr	 7144934 162.00	 3346434 72.25	 5327179 177.53
10	Moment of reaching profitability threshold	Pm=(Vtpr/Ve) x T	137.41	209.02	129.74
Source: authors' previous work					

2. Financial risk assessment

For year 2008 financial profitability threshold was reached on day 137, therefore a safety margin of 223 days is left for the company to obtain a profit. Position indicator reflects a global reminder risk, which may also be caused by the financial risk induced by the need to cover interest-generated costs (table 2).

Profitability of corporal tangible assets generate an economic profitability rate of 46.32% for year 2008 and of 28.36% for year 2010, therefore after interest-generated costs are paid out of operating income generated by the use of assets financed by means of debts, there is a surplus of lei 2.21left for year 2008, and for year 2010 a surplus of lei 1.49 for each lei 100 of contracted debts.

3. Altman's Z-Score Function

The value of Z-Score function, superior to the minimum limit of 2.675, situates the company in a good financial situation, without any risk of bankruptcy (table 3).

Table 3

Operational risk

No.	Names of variables (rates)	Year 2008	Year 2009	Year 2010
1	R1=Current assets/ Total assets	0.8049	0.7908	0.8077
2	R2=Reinvested profit / Total assets	0.1518	0.0470	0.0304
3	R3=Operating results/ Total assets	0.0904	0.0594	0.0751
4	R4=Own assets/Total debt	0.7951	0.8542	0.9237
5	R5=Turnover/Total assets	1.9977	1.4877	1.4282
6	Z-Score Function	3.9497	3.2098	3.2409
Source: authors' previous work				

CONCLUSIONS

The company assessed in this case study should periodically elaborate a Budget of income and costs and within it to detail the indicators characterizing operating and financial risks. It is thereby easier to identify the rate of exposure should these risks become real.

The main related risks are connected to the output capacity of the company, the demand of manufactured products on the market and accessible financing sources.

Programming the activity in terms of economic and financial indicators, mainly profitability threshold and the intention to achieve it, allows operation losses to be identified, and even if the bookkeeping situation records an operating profit, it is made from stock variation and, maybe, income resulting from transfer of assets.

Even if reflecting an increased potential on economic profitability, the elasticity coefficient also represents a high operational risk.

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