ASSESSING FINANCIAL EQUILIBRIUM OF THE ROMANIAN COMPANIES TRADED AT BUCHAREST STOCK EXCHANGE

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Abstract: This paper presents a model of financial equilibrium analysis. The model is based on relation between net working capital, necessary of working capital and net treasury of the firm. Based on the Pearson correlation coefficient and rank Spearman correlation coefficient, we have determined the intensity of the connection between the stability level, which is an expression of long term equilibrium, and different financial indicators yearly adjusted. Its applicability on Romanian companies traded at Bucharest Stock Exchange is limited by the insufficient amount of information. The list of indicators related to stability should be completed with some more indicators, such as the added value, the expenses profitableness, the financial result and so on.

It is well-known that the life of an enterprise represents a succession of circumstances which drives to situations more or less difficult. Some of them are prevented and avoided even before they occur, others the most serious, are sometimes hard to endure and become fatal for the enterprise. To maintain of a good financial situation, to continue the activity in conditions of efficiency and efficacy, to reach the goals established, the enterprise and her managers must continually adapt the way of administration in the aim to compensate the changes that the socio-economical environment has on the activity of the enterprise. The neglect of this changes and the absence of proper administration measure compromise the maintaining of a good financial situation.

The problem of financial equilibrium is often associated with financial stability. An enterprise is financial stable if it has a good financial situation.

A way to measure stability is based on the opinion that stability is considered the situation in which there is a consistency between the amount and the structure of allowances in time as it follows [1]:

Long term resources finance long term utilizations
Short term resources finance short term utilizations
and
Long term resources don't finance short term utilizations
Short term resources don't finance long term utilizations

The first assertion is known as the rule of minimal financial equilibrium according to which the utilities established must be financed from long term resources. This rule is considered being "a rule of common sense and caution", and requires the resources, used to finance the assets, to remain available to the enterprise on a period of time that

equals at least the assets. The difference between the capital and the assets is the working capital

The second assertion represents the current equilibrium which must exist between the temporary needs and the temporary resources of financing the needs. The difference between temporary needs (exclusive the working capital) and the temporary resources (exclusive banker credits) represents the needed capital. [3]

The relation between net working capital and necessary of working capital like financial equilibrium indicators determined short term equilibrium with indicator named net treasury.

$$FR - NFR = TN \qquad (1)$$

In accordance with this relation the enterprise can be classified in 6 cases which are granted a score by importance of the case, the score between 0 and 1 is granted to an unstable enterprise, the score 1 is for the most stable enterprise.

Table 1

Enterprises scores depending on the existing relationship between the financial equilibrium indicators

Category	Equilibrium indicators			Score (pj)
1	FR +	NFR -	TN +	1
2	FR +	NFR +	TN +	0,8
3	FR +	NFR +	TN -	0,6
4	FR -	NFR -	TN+	0,4
5	FR -	NFR -	TN -	0,2
6	FR -	NFR +	TN -	0

1. The enterprises in the first case are both in long term and in short term equilibrium. This enterprises are the most financial stable, and they are characterized by the existence of a certain finance self sustenance on short term, the financing of their activity is done from permanent capital and the non-financial temporary sources, without taking credits, and there is a favorable discrepancy between the stocks and debts liquidation and the collectible of the running debts, meaning the acceleration of rotation of the circulating assets, to fast the incomes and to relax the payments, actually there is no financial need, that will lead to a net positive treasury.

2. The companies that are on the second case are characterized by the fact that during their activities they make investments to increase the capital needed for exploitation cycle, the short term debts are not sufficient to cover the running activity, so these are in lack of balance on short term. This lack of balance on short term, after analyzing the causes, can suggest two aspects [2]:

- a normal situation in the case that the supplementary need of financing the running activity is due to some changes in the fabrication technology or to extension of exploitation cycle, and based on these it is also justified the increase of the elements on stocks or the increase of assets on deduction. Also, the increase of the volume of exploitation activity due some offer adjustments regarding a favorable request on the market of specific products can generate on short term a supplementary financing need for current assets, without being the expression of a grave financial lack of balance.

- a negative situation, in the case there is a slowing of the stocks rotation (decrease of products request, incorrect establish of stocks level, production re-orientation, technological reorganization, etc.), slowing the incomes and in general, negative

administration of the report between debts and duties that means that the company does not draw sufficient non-financial resources to cover current needs.

On long term, permanent capital covers fix assets, those companies have a safe reserve that assure them their daily functioning, so they are on long term balance, and because the net working capital is bigger than the need of working capital their treasury is positive.

3. The companies that are in the third case, although they are on long term balance, they compare with a negative gap between stocks and debts liquidation and collectible exploitation debts, due to the slowing of the incomes and the acceleration of the payments, accruing a negative treasury. Although the situation illustrates a certain limitation of the company financial independence, this should not be interpreted as a state of insolvency. The companies should act to recover the debts, to accelerate the stocks rotation speed and possibly to revival the expiration of temporary resources, that will lead to decrease the need of net working capital and implicit of the treasury deficit. In the case when the normal unrolling of the exploitation cycle allows to justify the using of partially financing the current assets based on short term bank credits, the company financial bonito does not seem to be regarded on negative treasury. This situation is confirmed by reality with the financial statistics, that shows that in the most of the economic fields companies have negative treasuries situations but this does not influence their financial health.

By exception, the net negative net working capital can be registered for those companies who, through their activity, liquidate and renewal very fast their stocks, such as an gross and en detail commercial enterprise, or those companies that use advances and guaranties, such as electric companies, gas companies, companies that on the other hand, benefit many facilities regarding payments to their suppliers (they have no access to the supplier credit).

4. The companies that are in this case are confronted with the acceleration of stocks rotation and exploitation debts that will lead to diminishing or even missing the lack of net working capital, these companies are on short term equilibrium. On long term, these companies are in a lack of balance, being unable to cover fix assets from permanent capitals, so they do not have net working capital, and are forced to take long term loans. The net positive treasury comes from urging incomes and relaxing the payments.

5. For the companies that are on the fifth case, although working capital and necessary of working capital are negative like in the case of the companies mentioned above, these are in lack of balance on long term and in equilibrium on short term, the net negative treasury results from slowing the incomes and accelerating the payments. Same time, because the company on this case are characterized by a big need of financing resources for permanent activity, the situation can be the expression of a backed investment policy. The financial lack of balance shown on long term can have an economical justification, founded into the intention of increasing the technical and production base. A certain volume of permanent activity that can not be covered from permanent sources is partially financed based on temporary sources (situation that trespass the general principles of financial balance) and the supplementary not covered need of financing of fix assets is founded in treasury, it becomes negative.

6. The companies that are on the sixth case are both in lack of balance on long term because they can not cover fix assets from permanent capitals and on short term because standing debts are not sufficient to finance current assets, there is unfavorable gap between the stock and debts liquidation and collectible of exploitation debts, by

slowing incomes and accelerating payments that will lead to net negative treasury.

Due to rearranging the categories, meaning those situations in which an enterprise it's reallocated to another category during the assessed period, a scaling procedure is needed in order to determine the enterprise stability degree for the entire period as shown above:

$$G_1 i = \frac{\sum_{j=1}^{5} p_{ij}}{6} \qquad (2)$$

where: Gi is the stability level of the i enterprise over the whole assessed period
- pij is the score awarded to the i enterprise in the j year

This coefficient is adjusted (mathematically normalized) by the following formula:

$$G_{1i}^* = \frac{Gi - \min(G1:G48)}{Max\ (G1:G48) - \min(G1:G48)} \qquad (3)$$

The adjusted stability level acquires values between 0 and 1 as it follows:

Table 2

The adjusted stability level

The stability level	Gi*
very good stability	0,9-1
good stability	0,8-0,9
average stability +	0,7-0,8
average stability	0,6-0,7
average stability -	0,5-0,6
low stability +	0,4-0,5
low stability	0,3-0,4
low stability -	0,2-0,3
weak stability	0,1-0,2
very weak stability	0-0,1

Our research is based on the results of 48 enterprises quoted at Bucharest Stock Exchange as they were published into a data base created by Reuters – Reuters-*3000XTRA* Agency (2007). The financial papers of the mentioned enterprise had been drawn up according to International Accounting Standards.

The companies classification based on the stability rate is shown in the annex of the paper.

Subsequently, based on the Pearson correlation coefficient and rank Spearman correlation coefficient, we have determined the intensity of the connection between the stability level and different financial indicators yearly adjusted.

Table 3

The interpretation of the intensity of the results obtained

Coefficients Spearman and Pearson	Intensity
0,8 - 1	High
0,7-0,8	Medium/ High
0,5 - 0,7	Medium
0 - 0,5	Reduced

Table 4

**The results obtained for the correlations between the stability
and the financial indicators**

Indicator	Type of correlation	The correlation coefficient used	The value of the coefficient	Intensity	Anticipated intensiy
Lc	Linear	Pearson	0,640013	Medium	High
Li	Non Linear	Spearman	0,563070	Medium	High
Sp	Non Linear	Spearman	0,480515	Reduced	High
EBIT/DT	Non Linear	Spearman	0,431665	Reduced	High
Cpr/TP	Linear	Pearson	0,932246	High	High
Cpr/DT	Non Linear	Spearman	0,468519	Reduced	High
DT/TP	Linear	Pearson	0,932247	High	High
DT/Cp	Linear	Pearson	0,979420	High	High
Cpr/Cprm	Linear	Pearson	0,914407	High	High
CA	Non Linear	Spearman	0,093574	Reduced	Reduced
Net result	Linear	Pearson	0,879455	High	High
EBIT	Linear	Pearson	0,731020	Medium/High	High
EBITDA(EBE)	Non Linear	Spearman	0,445777	Reduced	Medium
CAF	Non Linear	Spearman	0,452128	Reduced	High
EBIT/CA	Linear	Pearson	0,882878	High	High
EBITDA/CA	Linear	Pearson	0,905311	High	High
Gross profit/CA	Linear	Pearson	0,739844	Medium/High	High
PN/CA	Linear	Pearson	0,921146	High	High
ROE	Linear	Pearson	0,911120	High	Reduced/Medium
ROA	Linear	Pearson	0,894122	High	Reduced/Medium
365 x AT/CA	Linear	Pearson	0,770764	Medium/High	Reduced/Medium
365 x Ai/CA	Linear	Pearson	0,799249	Medium/High	Reduced/Medium
St x 365/COS	Linear	Pearson	0,908212	High	Reduced/Medium
St x 365/CA	Linear	Pearson	0,901054	High	High
Cr com x 365/CA	Linear	Pearson	0,789118	Medium/High	Reduced/Medium
Dcom x 365/CA	Non Linear	Spearman	0,158272	Reduced	High
Dcom x 365/COS	Non Linear	Spearman	0,238222	Reduced	High
R tangible assts	Linear	Pearson	0,736049	Medium/High	Reduced/Medium
Raimob	Linear	Pearson	0,764416	Medium/High	Reduced/Medium
R stocks	Linear	Pearson	0,352914	Reduced	Reduced/Medium
R debts	Non Linear	Spearman	0,257707	Reduced	Reduced/Medium
R cscb	Linear	Pearson	0,558834	Medium	Medium
R current assets	Linear	Pearson	0,564809	Medium	Medium
Cash-flow	Linear	Pearson	0,937068	High	High

From the data of the table we notice the conclusions:
a) Indicators to which the obtained intensity was under the expectations

- the liquidity and solvability installment;

- the financial autonomy installment;

-the gross surplus from exploitations, the auto financing capacity;

- the rotation speed of the commercial debts;

b) the indicators to which obtained intensity was over the expectations:

- financial and economic profitableness;

- the rotation speed of the total assets and the immobilized assets and claims

- the installment of the intangible assets and the installment of the immobilized assets;

- the rotation speed of the stocks.

Its applicability on Romanian companies traded at Bucharest Stock Exchange is limited by the insufficient amount of information. The list of indicators related to stability should be completed with some more indicators, such as the added value, the expenses profitableness, the financial result and so on. But we consider that this methodology can be successfully applied for different activity fields.

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