

## **Model for the Analysis of the Company Performance<sup>1</sup>**

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**Abstract.** *The analysis of the performance of a firm (company) has a determinant role in setting the strategy to follow and this is more necessary during the period of economic-financial crisis. In the following items, I have performed the analysis, based on the balance sheet data, for SC DELTA SRL, using a system of indicators that have relevance, and the interpretation of which allows to draw certain conclusions, depending on which the future development can be forecasted. I have tried to use a number of indicators, viewed as a system, which would define, in the end, a model for company performance analysis. The research focused on using the system of indicators on the data from the balance sheet of SC DELTA SRL.*

**Keywords:** patrimony; assets; liabilities; capital; indebtedness rate; balance sheet; working capital; rotation speed; profitability.

**JEL Code:** M41.

**REL Codes:** 14I, 14K.

### 1. Analysis of the patrimonial elements

Based on the data from the balance sheet at December 31<sup>st</sup>, 2009 I have performed the analysis of the balance sheet assets and liabilities following, on the first place, the determination of some rates that characterize the relationships existing between various patrimonial elements.

That way, the structure of assets in the patrimony if the analyzed society can be synthesized as follows:

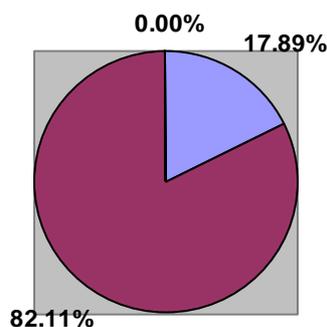
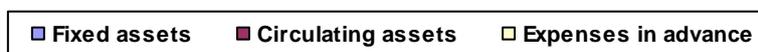
Table 1

**Structure of the assets for SC DELTA SRL**

Name of the item	Value (lei)	Weight (%)
Fixed assets	51,998.6	17.89
Circulating assets	238,496.4	82.11
Expenses in advance	0	0
Total assets	290,495	100

The relationship existing at the level of the analyzed economical entity between the levels of the various categories of assets is represented in the following chart:

**Structure of company assets**



**Figure 1.** Structure of assets for SC DELTA SRL

Also, based on the previously presented patrimonial elements, I have determined the specific rates for each component of the company's assets, as it can be subsequently seen.

*a) Fixed assets rate*

The fixed assets rate reflects the weight of the patrimonial elements that have a permanent character in the patrimony and measures the immobilization degree of the capital items.

$$\text{Fixed assets rate} = \frac{\text{Fixed assets}}{\text{Total assets}} \times 100, \text{ resulting a value of } 17.89\%.$$

From the calculation, it can be observed that the fixed assets hold a relatively reduced weight (17.89%) in the total assets of the company.

The detail of the fixed assets rate will be realized based on intangible, tangible and financial fixed assets, as it follows:

$$\text{Intangible assets rate} = \frac{\text{Intangible assets}}{\text{Total assets}} \times 100$$

By inserting the available data in the calculation formula, it results that the intangible assets rate is 1.41%.

The fixed assets rate for economical agents that act in developing countries is extremely low (under 25% of total assets), but in the case of the analyzed company, its value is 1.41% (almost non-existing).

Tangible assets rate =  $\frac{\text{Tangible assets}}{\text{Total assets}} \times 100$ . The calculated value for the tangible assets rate is 14.81%.

Financial fixed assets rate =  $\frac{\text{Financial fixed assets}}{\text{Total assets}} \times 100$ , calculated based on data from the balance sheet, has a value of 14.81%.

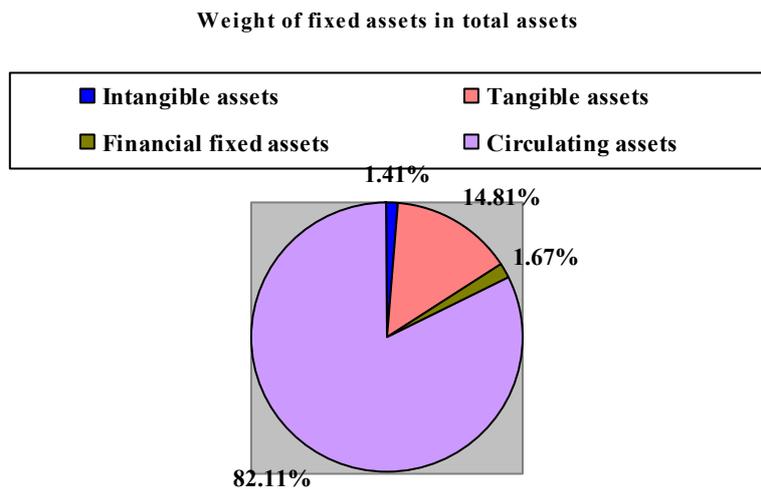
The following table synthesizes the resultant data regarding the structure, in absolute and relative values, of the fixed asset's.

Table 2

Structure of the fixed assets for SC DELTA SRL

Name of the item	Value (mil. lei)	Weight in total assets (%)
Intangible assets	4,081.0	1.41
Tangible assets	43,028.8	14.81
Financial fixed assets	4,887.9	1.68

The calculated data are represented in the following chart, for greater significance:



**Figure 2.** *Weight of fixed assets in total assets*

*b) Circulating assets rate*

This rate has a great significance in the activity of a firm. Thereby, I will apply it at the data from the balance sheet of the analyzed company and I will achieve the following indicators.

Circulating assets rate, given by the following relationship:

$$\text{Circulating assets rate} = \frac{\text{Circulating assets}}{\text{Total assets}} \times 100, \text{ which from calculations will}$$

have the value of 82.11%.

The analyzed company has an extremely high weight of the circulating assets in the total assets (over 80%).

In the case of the circulating assets rate too I will perform its breakdown on the main component items, in order to obtain relative structural measures. I take into consideration the rate (weight) for inventories, commercial receivable accounts, and cash for the analyzed company. The respective rates are calculated based on the formula presented below, the results being synthesized in Table 3.

$$\text{Inventories rate} = \frac{\text{Inventories}}{\text{Total assets}} \times 100$$

The value of the inventories rate is 35,32%.

$$\text{The commercial account receivables rate} = \frac{\text{Customers and assimilated accounts}}{\text{Total assets}} \times 100$$

The calculated value for the commercial account receivables rate is 25.71%.

$$\text{Cash rate} = \frac{\text{Cash and cash equivalents} + \text{Placements value}}{\text{Total assets}} \times 100$$

Following calculations, the cash rate is 21.08%.

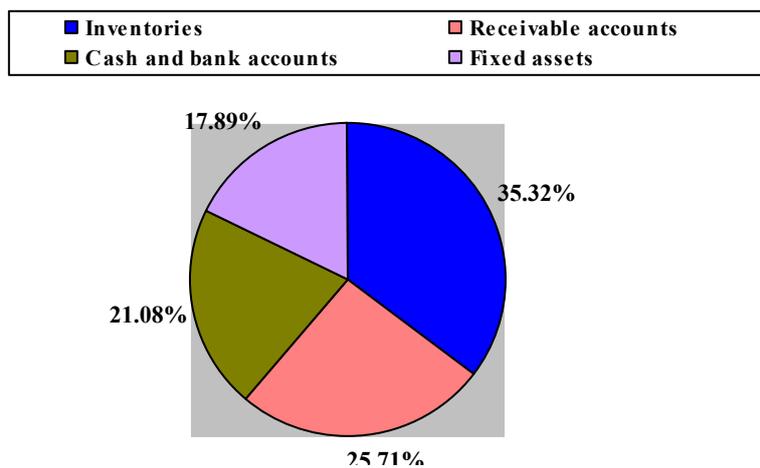
Table 3

**Structure of circulating assets for SC DELTA SRL**

Name of the item	Value (lei)	Weight in total assets (%)
Inventories	102,594	43.02
Receivable accounts	74,695.6	31.32
Short-term investments	0	0
Cash and bank accounts	61,206.8	25.66
Total	238,496.4	100.00

For greater significance, the weight of circulating assets in the total assets of the company is presented in the following chart:

**Weight of circulating assets in total assets**



**Figure 3.** *Weight of circulating assets in total assets*

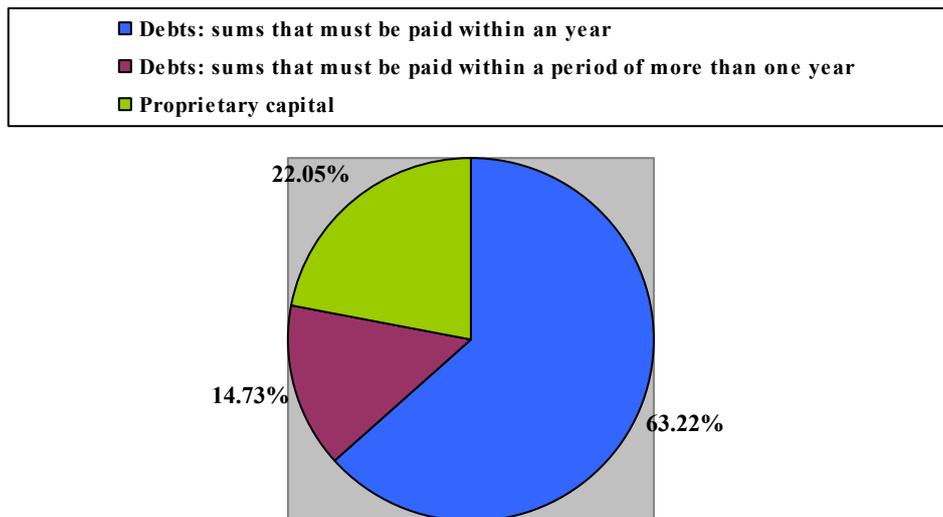
In a similar manner, by using data from the balance sheet, I have calculated the relevant indicators regarding the liabilities.

Thus, the liabilities of the company, presented in the balance sheet for 2009, can be synthesized in the following table and chart. These ones (the table and the chart) are built based on the absolute and relative data included in the company's balance sheet.

Table 4

**Structure of liabilities for SC DELTA SRL**

Name of the item	Value (mil. lei)	Weight (%)
Debts: sums that must be paid within an year	183,669.1	63.22
Debts: sums that must be paid within a period of more than one year	42,777.9	14.73
Proprietary capital	64,048	22.05
Total liabilities	290,495	100

**Structure of company's liabilities****Figure 4.** *Structure of liabilities for SC DELTA SRL*

Following the analysis, based on calculated data (indicators), it can be observed the fact that debts due within one year hold a significant weight (63.22%) in the total liabilities.

For a better characterization of the structure of liabilities for the company, it is recommended the determination of other rates.

## 2. Analysis of the financial structure of capitals for SC DELTA SRL

### a) *Financial stability rate*

Reflects the weight of financing sources that remain at the disposition of the company for a period of more than one year in the total coverage sources for economical means. For that, the financial stability rate was calculated, using the relationship:

$$\begin{aligned} \text{Financial stability rate} &= \frac{\text{Permanent capital}}{\text{Total liabilities}} \times 100 = \\ &= \frac{\text{Own capital} + \text{Debts on medium and long-term}}{\text{Total liabilities}} \times 100 \end{aligned}$$

By using the balance sheet data as input, I have obtained the financial stability rate's value of 36.77%.

### b) *Indebtedness rates*

Presents the weight of debts with a term of chargeability of less than one year in the total liabilities of the company or that of total attracted financing sources, in the total liabilities. By using the calculation relationships on the data of the company's balance sheet, we shall obtain:

$$\text{Short-term debts rate} = \frac{\text{Short-term debts}}{\text{Total liabilities}} \times 100$$

The calculated value of the short-term debts rate is 63.22%.

From previous calculations, it can be observed that short-term debts hold an extremely large share in the total liabilities of the company. Such situation can be considered extremely unfavorable for the company, this being subjected to the risk of occurrence of further difficulties following the concentration of due dates for various debts in a short time interval (less than one year).

- *Global autonomy ratio* presents the weight of proprietary sources in the total of means used for the financing of the activity of an economical agent. In practice, it is recommended that the weight of proprietary financing sources is minimum 33% of the total financing sources used by the enterprise. This indicator is calculated based on the following formula:

$$\text{Global autonomy ratio} = \frac{\text{Own capital}}{\text{Total liabilities}} \times 100$$

The value of the global autonomy ratio is 22.05%.

The value of this indicator (22.05%) is smaller than the recommended value (33%), that rises a first question mark about the future evolution of the analyzed economical agent. This situation is due to the under-sizing of the own capitals of the society, compared with the total value of liabilities, this making appeal mostly to external financing sources for the economic activity, situation leading to the occurrence of supplementary costs, not justified.

- *Total debts rate* reflects the weight of attracted financing sources in the total liabilities of the company, being calculated from the relationship below:

$$\text{Total debts rate} = \frac{\text{Total debts}}{\text{Total liabilities}} \times 100$$

The calculated value for the total debt rate is 77.95%.

The total debt rate records a value that is greater than the recommended optimum level, 67%, an elevated share of the external financing sources attracting the occurrence of significant supplementary costs. The company management has considered that the level of these costs can be supported on the account of optimal use of tangible assets acquired.

- *The general solvability rate* quantifies the risk of payment incapacity for debts the analyzed economical agent is exposed to. The minimum value of the global solvability is considered 1.4 (in the case in which the minimum weight of the own capital in total financing sources is 30%). In case the global solvability ratio is lower than 1, the company faces insolvency.

At the analyzed company, General solvability rate =  $\frac{\text{Total assets}}{\text{Total debts}}$  is 1.58.

- *Financial autonomy rate* expresses the weight of proprietary resources in the long-term financial resources attracted by the commercial entity. By applying the calculation formulas, the result is:

$$\text{Financial autonomy ratio} = \frac{\text{Proprietary capital}}{\text{Permanent capital}} \text{ is } 0.6.$$

$$\text{Financial inventories ratio} = \frac{\text{Permanent working capital}}{\text{Inventories}} \text{ is } 0.53.$$

### 3. Analysis based on the financial balance sheet

Based on the data included in the balance sheet at December 31<sup>st</sup>, 2009, taking into account the liquidity of assets and the chargeability of liability items, for the analyzed society, the financial (patrimonial) balance can be built.

Using the information presented in the financial balance sheet, based on the considered model, I have identified the main indicators for the analysis of

the patrimonial situation: the working capital, the necessary working capital, the net treasury and the net situation.

*a) The working capital*

The working capital represents a safety margin of the enterprise, imposed by the differences existing between the money to be collected and the ones to be paid, and also by the gap that can occur between the term of turning assets into money and the average duration of debts becoming clearable.

With the help of information presented in the superior part of the patrimonial balance sheet, the working capital can be determined as follows:

$$\begin{array}{l} \text{Permanent} \\ \text{working capital} \end{array} = \begin{array}{l} \text{Permanent} \\ \text{capital} \end{array} - \begin{array}{l} \text{Fixed} \\ \text{assets} \end{array} \quad \text{Relationship that becomes}$$

$$\begin{array}{l} \text{Permanent} \\ \text{capital} \end{array} \quad \text{working} = \begin{array}{l} \text{Proprietary} \\ \text{capital} \end{array} + \begin{array}{l} \text{Long-term} \\ \text{debts} \end{array} \quad \text{financial} - \begin{array}{l} \text{Fixed assets} \end{array}$$

The permanent working capital is + 54,827.3 mil. lei

The positive value of the working capital reflects a state of long-term equilibrium for the analyzed economical entity, it has the capacity to support the gap between the term needed to transform assets into cash and the average duration for the chargeability of debts.

To analyze the real patrimonial situation of the society, I have calculated the proprietary working capital, by using the relationship below:

$$\text{Proprietary working capital} = \text{Proprietary capital} - \text{Fixed assets}$$

The proprietary working capital thereby calculated has a value of + 12,049.4 mil. lei

The existence of a positive proprietary working capital demonstrates the fact that the analyzed economical entity is in a state of long-term financial equilibrium, realized on the foundations of proprietary capital.

The value of the working capital can be calculated also with the help of the elements in the second half of the patrimonial balance sheet, respectively based on the balance sheet items with a higher liquidity (circulating assets) and of the ones with lesser chargeability (short/term debts), respectively.

$$\text{Working capital} = \text{Circulating assets} - \text{Short term debts}$$

The calculated working capital records the value of + 54,827.3 mil. lei

The working capital records a positive value, meaning that the society is in a state of short-term equilibrium, having available assets with high liquidity

whose value is superior to the sum necessary to pay all the debts with chargeability within a year.

*b) The necessary working capital*

This indicator reflects the value of short-term assets, regardless the nature of the inventories and receivable accounts that are not financed from short-term attracted sources. I will use the following calculation formulas:

$$\begin{aligned} \text{Necessary working capital} &= \text{Short-term assets} - \text{Short-term liabilities} \\ \text{(NFR)} & \\ \text{that becomes} & \\ \text{NFR} &= \text{Inventories} + \text{Receivable accounts} - \text{Operational debts} \end{aligned}$$

The value of the necessary working capital is – 6,379.5 lei

The necessary working capital records a negative value, meaning that the short-term assets are totally covered by high-chargeable financing sources, and that, furthermore, partially finance the permanent assets (current debts are exclusively operational debts). Such situation is appreciated to be favorable to the company being the direct consequence of the application of a correlation strategy between the periods necessary to transform circulating assets in cash with the terms for paying the debts.

*c) The net treasury*

The net treasury allows the reflection of the correlation between the working capital and the necessary working capital, by identifying the financial situation of the analyzed economical agent, both on long-term and short-term.

In the case of the analyzed society, the net treasury can be determined with the use of the relationship:

$$\text{Net treasury} = \text{Working capital} - \text{Necessary working capital}$$

The net treasury records a positive value (61,206.8 mil. lei) and indicates a status of financial equilibrium at the level of the company. This value of the net treasury is the direct consequence of a financial surplus occurred during the year 2009 and, implicitly, of a profitable activity of the company during the period subjected to financial analysis.

The net situation of the company is important because it reflects its solvability at a given moment and for this the following relationship is used:

$$\text{Net situation} = \text{Total assets} - \text{Total debts} = \text{Proprietary capital}$$

A positive value of the net situation reveals the fact that the analyzed economical entity is sound (the calculated value is 64,048 mil. lei).

*d) Indicators regarding the liquidity and rotation speed*

The financial analysis, performed based in the information included in the balance sheet at the end of 2009, can be extended also by calculating a set of *specific indicators*, regarding the liquidity and rotation speed of the capital through the turnover. In the following topics, by using the calculation relationship, I have obtained the mentioned indicators.

- *The current liquidity* measures the capacity of the economical entity to pay the long-term debts by using short-term assets from the balance sheet.

By using the relationship

$$\text{Current liquidity} = \frac{\text{Current assets}}{\text{Current debts}}, \text{ we obtain a value of 1.29.}$$

The value recorded by the current liquidity represents an alarm signal regarding the capacity of the company to honor its due short-term debts (the optimal value is 1.5-2). In that situation, the company must borrow funds or sell a part of the fixed assets to pay its debts.

- *The immediate liquidity* measures the capacity of the company to pay its short-term debts by using the most liquid assets of the patrimony.

By using the balance sheet data in the relationship

$$\text{Immediate liquidity} = \frac{\text{Current assets} - \text{Inventories}}{\text{Current debts}}, \text{ we obtain the value of the}$$

indicator equal to 0.73.

For this indicator too the sub-unit value (compared with the optimum value 1) represents an unfavorable aspect for the company, respectively the high-liquidity assets are not enough to cover the short-term debts, no matter the real value of the inventories.

- *The on sight liquidity* is calculated with the relationship:

$$\text{On sight liquidity} = \frac{\text{Treasury assets}}{\text{Current debts}}$$

Based on the balance data, the resultant value is 0.33.

This indicator shows that the treasury assets represent only 33% of the total current debts. It has to be taken into account that this liquidity must be more severely controlled, to avoid the creation of difficulties for the company in the relationships with the creditors (those the company owns its current debts).

- *The rotation speed of the debts-customers* allows the valuation of the performances of the economical entities in which regards their relationships with the beneficiaries, having a special importance in the case of credit-selling companies (commercial credit). The duration of a rotation of the debts-customers is calculated as a report between the average balance of the customer

account and the turnover dedicated to the patrimonial item “debtors-customers”, report multiplied by 365 (the calendar days of the year).

By using the data in the relationship  
 Rotation speed of the debts - customers =  $\frac{\text{Customers balance} \times 365}{\text{Turnover}}$ , we obtain a measure equal to 138 days.

- *The rotation speed of the fixed assets* through the turnover evaluates the efficaciousness of the management of the economical entity in which regards the usage of these patrimonial elements in obtaining income. The following relationship is used: Rotation speed of the fixed assets =  $\frac{\text{Turnover}}{\text{Fixed assets}}$ .

The available dataset leads to an indicator equal to 3.79 (times).

The recommended value for this indicator must be above 1, so it is ascertained a favorable situation for the company, taking into account the recorded value of 3.79.

- *The rotation speed of the total assets* is an indicator that reflects the efficiency of use for the assets from the patrimony of a company and is given by the relationship:

$$\text{Rotation speed of the total assets} = \frac{\text{Turnover}}{\text{Total assets}}$$

From calculation, I have obtained the value of 0.68 that reflects an average rotation of the total assets.

e) *Analysis of the company's profitability*

- *The return on equity (ROE)* of the proprietary capital emphasizes the return of the placements made by the company's shareholders through the acquisition of company's shares. The profit, an important financing source for the development of the activity, represents a component of the enterprises' capital, remunerating, in the first place, the participation of shareholders, through dividends. It is calculated with the relationship

$$\text{Return on equity} = \frac{\text{Profit after taxation}}{\text{Proprietary capital}} \times 100 .$$

From calculation, a value of 5.53% results.

The value of this indicator must be above 5%, so it can be stated that the company's activity was effective from the point of view of shareholders' equity capitalization.

- *The profitability rate of the advanced capital* is determined as a report between the current profit of the fiscal year and the advanced capital (fixed and circulating), by using the relationship.

$$\text{Profitability rate of the advanced capital} = \frac{\text{Current result}}{\text{Fixed assets} + \text{Circulating assets}} \times 100,$$

based on which I have achieved a value of 1.43%.

Based on the measure recorded by this indicator in 2009, it can be observed a less-than-sufficient capitalization of the advanced capital within the analyzed period.

- *Commercial margin rate*, given by the relationship  $\text{Commercial margin rate} = \frac{\text{Gross profit}}{\text{Turnover}} \times 100$ , leads to a value of 2.11.

Taking into account the fact that the value recorded by the company is greater than the value recommended for this indicator (>1.8), it can be stated that its activity in 2009 was profitable.

- *Economic profitability*

The economic rate of return is calculated based on EBIT (EBIT = Earnings Before Interests and Taxation), by using the formula:

EBIT = Total income – Total expenses (not including interest-related expenses and the profit taxation)

$$\text{Economic rate of return} = \frac{\text{EBIT} - \text{Profit taxation}}{\text{Economic assets}} \times 100 = \frac{\text{EBIT} - \text{Profit taxation}}{\text{Fixed assets} + \text{Net current assets}} \times 100$$

Also, the following calculation formula can be used:

$$\text{Economic rate of return} = \frac{\text{Net Profit} + \text{Interest}}{\text{Proprietary capital} + \text{Financial debts}} \times 100$$

In 2009, the calculated value of the indicator was 2.78%, reflecting a positive evolution.

In the topics presented above, I have pursued the synthesis of a model of financial analysis for the company's performance (I have exemplified the theoretical aspects by applying them to the concrete study of a company), based on a system of correlated indicators. It results that such analysis model is easily to be applied, the data from the balance sheet and its annexes being sufficient.

Also, I appreciate that the analysis can be deepened or resumed to a smaller pool of indicators, depending on the objective pursued in the management of the company.

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### Note

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<sup>(1)</sup> SC DELTA SRL is conventionally assigned, from confidentiality reasons, the data being obtained from a real company.

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