

ANALYSIS MODEL OF THE FINANCIAL BALANCE BASED ON THE ACCOUNTING BALANCE SHEET

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Abstract. *The purpose of this paper is to present a model of financial balance analysis based on the balance sheet. The research is based on the data obtained from SC ETA SRL, name assigned for confidentiality reasons, the data being obtained from a real company.*

In order to survive, any enterprise needs information without which the decisional process through which the enterprise is lead can not take place. In order to obtain this information, it is necessary to analyze the annual financial statements that enable to find its financial position and performance. From this information benefits both the enterprise (as an internal factor) whose financial statements are being analyzed, as well as suppliers, customers, potential investors and any other person who wants to find information about the enterprise (as external factors).

Starting from the financial statements, we have analyzed its financial position for the 2015-2017 periods, highlighting major problems, especially in terms of liquidity.

Key words: *active, passive, balance sheet, financial balance*

INTRODUCTION

In a general manner, the balance evokes the idea of harmony between the various elements of a system, which in the financial field translates into the harmonization of resources with needs. At each economic agent level there is a proper financial equilibrium as part of the overall financial equilibrium.

Financial statements of an enterprise represent the most important means, through which accountancy information is made available to decisional factors. Therefore, companies publish their financial statements as explicitly as possible, so that they can be understood by the interested reader [2, 7, 10].

The primary objective of the financial statements is to provide information on the financial position, financial performance and changes in the financial position of the enterprise for the purpose of using this information by internal and external users in order to substantiate economic decisions [11, 13, 14].

The financial position of the enterprise is defined by the economic resources that the enterprise controls, by the financial structure of assets, liabilities and own capital, the liquidity and solvency of economic values, and by its ability to adapt to the changes of the environment in which develop its activity.

The balance sheet comprises all active items grouped by nature, destination and liquidity and the passive ones, grouped by nature, origin and eligibility.

Financial position is the relationship between the enterprise's assets, duties and own capitals, as they are reported in the balance sheet.

The economic balance represents that type of balance that establishes a strict separation between the financial elements and the elements relevant to the productive or commercial process, carried out by the enterprise [3, 12].

Financial balance represents that type of balance sheet in which the items are ranked according to liquidity (for active positions), meaning eligibility (for passive positions). The balance sheet is based on the liquidity-eligibility criterion and shows the financial balance of the entity [8, 9, 12].

MATERIALS AND METHODS

The research is based on a bibliography consists of various scientific publications, books without claiming to have exhausted the literature on this subject. The working methods used by the authors were the data collection, processing, analyzed, interpreted, synthesized, and graphically represented.

RESEARCH RESULTS

PRESENTATION OF THE ECONOMIC-FINANCIAL SITUATION

The deep knowledge of the evolution of the economic and financial performances of the enterprise, of the process of their formation, the acquisition of a set of analysis methods and techniques, and especially the identification of measures for the normal evolution of economic phenomenon and processes and the reduction of operational and financial risk, economic and financial standing [9, 15].

An analysis focused on bankruptcy or solvency risk studies is most often done by studying the balance sheet (static analysis) and the financing table (flow analysis).

On the basis of the data presented in the balance sheet on December 31, we performed the analysis of the structure of the balance sheet active and passive, aiming, above all, the determination of some rates that characterize the relationships existing between the various patrimonial elements. In this respect, the structure of assets from the patrimony of the analyzed company can be synthesized as follows:

The abbreviated balance sheet of the analyzed company is as follows:

Table 1.

Balance sheet abbreviated			
Indicators from the Balance Sheet	2015	2016	2017
Total fixed assets	2353160	9770422	9876110
Total current assets	5121792	3516090	3284488
Stocks	841720	365038	384,482
House and accounts	640800	593790	1133954
Claims	3639272	2557262	1766,52
TOTAL ACTIVE	7474952	13286512	13160598
Permanent capitals	1033300	1215596	1068266
Own capitals	701800	740334	751662
Long-term debts	331500	475262	316604
Short term debts	6441652	12070916	12092332
TOTAL PASSIVE	7474952	13286512	13160598

From the analysis of balance sheet data results are the following:

- Fixed assets increased from year to year from 2353160 lei in 2015 to 9770422 lei in 2016, fact that denotes the investments made by the company.

- Own capitals increased in 2016 compared to 2015, and then declined.

- Short-term debts have a significant share, being higher than current assets, which shows that the company has some problems with liquidities.

The analysis oriented through performances study is mainly done by studying the profit and loss account, in order to assess the formation of intermediate management balances and to compare them with the business flow or the means used by the enterprise [6, 13].

The analysis indicators also integrate the study of financial performance and financial flows and balances, and allow the measurement of monetary surplus from

operating (operating surplus) or global monetary surplus (self-financing capacity or global cash-flow) [1, 4].

The turnover is one of the major indicators of the profit and loss account in the economic and financial analysis [2, 6, 13].

The turnover is the key indicator on the basis of which is assessed the enterprise's ability to earn revenue from current business operations. It is part of the category of indicators of economic and financial results, contributing to the economic diagnosis and evaluation of the enterprise, to the estimation of the the efficiency of the management practiced [2, 5].

The structure of the profit and loss account is presented in Table 2.

Table 2.

Indicators from the profit and loss account			
Indicators from the Profit and Loss Account	2015	2016	2017
The turnover	2790894	17180172	10349720
Total income	2813686	17395762	10752832
Total expenses	2505766	17178128	10705114
Gross profit	307920	217036	47718
Net profit	257438	173336	11328
Number of employees	7	8	8

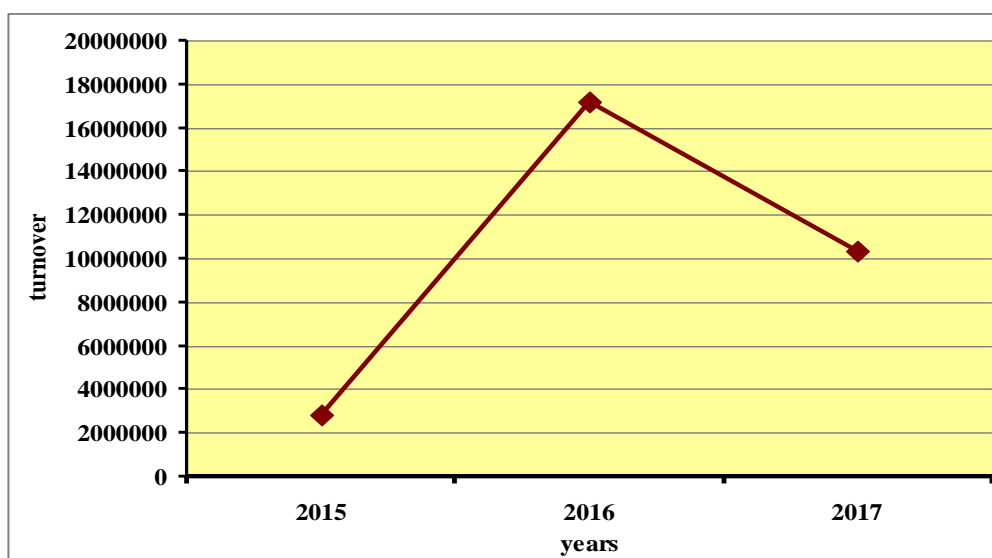


Figure 1. The evolution of turnover between 2015-2017 period

The analysis of the indicators from the profit and loss account highlights the following aspects:

- The turnover has seen a significant increase of 14,389,278 lei in 2016 compared to 2015, a percentage increase of 515%, extremely high. In 2017 the turnover was reduced to 10349720 lei, 40%, due to the decrease of the demand for products made by the analyzed company.
- Gross profit decreased from 307920 lei in 2015, to 217036 lei in 2016 (investments were made), respectively 47718 lei in 2017.
- Net profit had the same downward trend, from 257438 lei in 2015 to 173336 lei in 2016 and 11328 lei in 2017.

Other indicators obtained by the company are presented in Table 3.

Table 3.

Indicators derived from the balance sheet			
Indicators derived from the balance sheet	2015	2016	2017
General solvency ratio = Total Assets / Total Debt	1,10	1,05	1,05
General liquidity rate = Current assets / Current debts	0,79	0,29	0,27
Global indebtedness rate = Total debt / Total assets	0,91	0,94	0,94

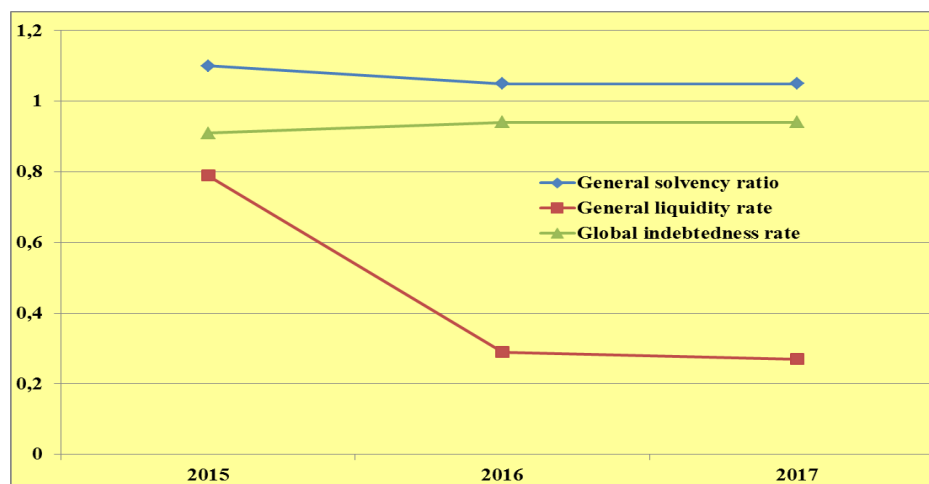


Figure 2. The evolution of indicators derived from the balance sheet

From the analysis of derived indicators we found the following:

- The general solvency ratio has low values, it is barely over-the-top, in the conditions in which the minimum required amount is 1.4 [1, 3, 8].
- The general liquidity ratio is below the level minimum of 1, being situated at 0.79 in 2015, downing to 0.29 in 2016 and 0.27 in 2012, which shows either a small amount of current assets, or very high current debts.
- The global indebtedness rate has a level of 0.91 in 2015, reaching to 0.94 in 2016 and 2012, under normal conditions, the value of the indicator being 0.5-0.7.

THE ANALYSIS OF THE PATRIMONIAL STRUCTURE

The analysis of the patrimonial structure has as object establishing and tracking the evolution of the percent of the various assets (assets and passive). Patrimonial structure rates provide the opportunity to express the balance sheet in percentages and allow the identification of the major features of the balance sheet structure, also offering the possibility of performing comparative analyzes in time and space [5, 7, 12].

The data after which were calculated the rates of the patrimonial structure are taken from the balance sheet of the enterprise SC ETA SRL.

Table 4.

Structure rates of patrimonial asset		
	2016	2017
Fixed asset rate (Far)	73.5%	75.0%
Current assets rate (Car)	26.4%	24.9%
Stock rate (Sr)	2.7%	2.9%
Commercial debt rate (Cdr)	19.2%	13.4%
The rate of cash availability and placements (Rcp)	4.5%	8.6%

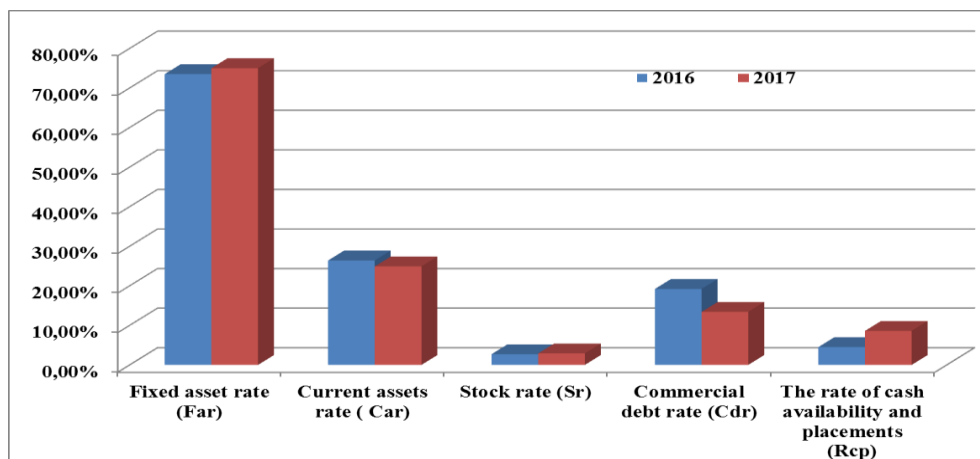


Figure 3. The evolution of structure rates of patrimonial asset

- **Fixed assets rate (Far)** [1, 4, 6, 12, 14]

$$Far = \frac{Fa}{Ta} * 100$$

Where:
Fa=Fixed asset
Ta= Total assets

The fixed assets rate increased with 1.5%, aspect which shows the concern of the renewal of the firm, but considering the fact that the current assets are the ones that bring profit, the increase in the rate is not beneficial.

- **Current assets rate (Car)** [1, 4, 6, 12, 14]

$$Car = \frac{Ca}{Ta} * 100$$

Where:
Ca=Current asset
Ta= Total assets

The current assets rate has fallen with 1.5%, negative aspect, it being the one that brings profit to the enterprise.

As complementary rates we have: [1, 4, 6, 12, 14]

- **Stock rate (Sr)**

$$Sr = \frac{S}{Ta} * 100$$

Where:
S= Stocks
Ta= Total assets

- **Commercial Debt Rate (Cdr)**

$$Cdr = \frac{Td}{Ta} * 100$$

Where:
Td= Total debts
Ta= Total assets

- **The rate of cash availability and placements (Rcp):**

$$Rcp = \frac{Ca + Pt}{Ta} * 100$$

Ca= Cash availability
Pt= Placement titles
Ta= Total assets

The analysis of the balance sheet structure rates allows the study of the financial structure of the enterprise by examining the way how the sources of financing asset are distributed between the own capitals and the external contributions, from where results the financial autonomy (independence) of the enterprise.

The main structure rates of funding sources are: [1, 2, 5, 7]

- **Financial stability rate (Fsr):**

$$Fsr = \frac{\text{Permanent capital}}{\text{Total passive}} * 100$$

Table 4.

Structure rates of funding sources

	2016	2017
Financial stability rate (Rsf)	9.14%	8.11%
Global autonomy rate (Rag)	5.57%	5.71%
Short-term debt rate (Rdts)	90.85%	91.88%
Total debt rate (Rdt)	94.42%	94.28%

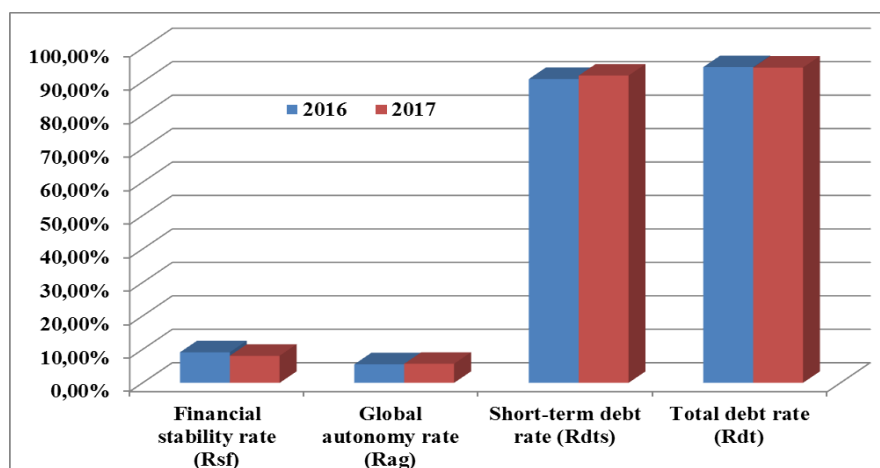


Figure 4. The evolution of structure rates of funding sources

The rate of financial stability decreased from 9.15% to 8.11%, negative aspect because it shows the decrease in the company's permanent capital.

● **Global autonomy rate (Gar):**

$$Gar = \frac{\text{Own capital}}{\text{Total passive}} * 100$$

Global autonomy has grown with 0.16%, from 5.57% to 5.71%, growth due to increase of own capital from 370,167 to 375,831.

● **Short-term debt ratio (Sdts):**

$$Sdts = \frac{\text{Current debts}}{\text{Total passive}} * 100$$

Also, the short-term debt rate increased from 90.85% to 91.88%, negative aspect, because it indicates an increase of current debts, with implications on the need of working capital.

● **Total debt ratio (Tdr):**

$$Tdr = \frac{\text{Total debts}}{\text{Total passive}} * 100$$

This rate stays at about the same high value, showing that the company has total debt problems, meaning on short and long term.

PATRIMONIAL EVALUATION

Because the firm does not have operating grants or provisions, **the net situation (SN) is equal to own capitals (CPR)** [5, 7].

The net situation can be determined on the basis of the relationship:

$$SN = AT - DT \quad \text{AT - total assets; DT - total debts.}$$

The net situation is more restrictive than the own capitals. The calculation relation is as follows:

$$SN = \text{Own capitals} - \text{investment grants} - \text{provisions}$$

$$SN_{2016} = 13286512 - 12546178 = 740333$$

$$SN_{2017} = 13160598 - 12408936 = 751662$$

The net situation increased in 2017 compared to 2016 with 11328 lei, meaning 1.53% as a result of the increase of the assets, which exceeded the debts of the company, positive aspect.

The Net Accounting Asset (ANC) is calculated in two ways: [5, 7, 12, 15]

a) $ANC = \text{Total Assets} - \text{Fictive Assets} - \text{Total debts from passive} - \text{Provisions}$

b) $ANC = \text{Own capital} - \text{Fictive Assets (for example formation expenses)}$

The ANC is equal in this case to the net situation, because intangible assets are not.

CONCLUSIONS

Following the case study at SC "ETA" SRL, we have drawn the following conclusions:

Fixed assets increased from year to year, from 2353160 lei in 2015 to 9876110 lei in 2017, which denotes the investments made by the company.

Own capitals also increased during the analyzed period from 70180 lei in 2015 to 751662 in the year 2017.

Short-term debts have a significant share, being higher than current assets, which shows that the company has some problems with liquidities.

The turnover has registered a significant increase by 17180172 lei in 2016 compared to 2015, an extremely high percentage increase. In the year 2017 the turnover was reduced to 10349720 lei, percentage with 40%, due to the decrease of the demand for products made by the analyzed company.

Gross profit decreased from 47718 lei in 2017, to 217036 lei in 2016 (investments were made) and 307920 lei in 2015.

Net profit had the same downward trend, from 257438 lei in 2015 to 173336 lei in 2016 and 11328 lei in 2017.

The overall solvency rate recorded small values, in the conditions in which the minimum value is 1.4.

The general liquidity rate has registered values below 1, falling to 0.79 in 2015, down with 0.29 in 2016, or 0.27 in 2017, which shows a narrow range of current assets, or very high current debts.

The general indebtedness rate has registered a level of 0.91 in 2015, reaching to 0.94 in 2016 and 2017, under normal conditions, the value of the indicator being 0.5-0.7.

The fixed assets rate increased with 1.5%, which shows the concern of the firm for renewal, but considering the fact that current assets are the ones that bring profit, the increase in the rate is not beneficial.

The current assets rate has fallen with 1.5%, which is negative, it being the one that brings profit to the enterprise.

The rate of financial stability has fallen by about one percentage point, a negative aspect, as it shows the decrease in the company's permanent capital.

Global autonomy rate has grown with 0.16%, from 5.57% to 5.71%, growth due to the increase of own capital from 370,167 to 375,831.

The short-term debt rate increased with one percentage point (from 90.85% to 91.88%), a negative aspect, because reflect the increase of current debts, with implications on the need of working capital.

The net situation also increased in 2017 compared to 2016 with 11328 lei, meaning 1.53% as a result of the increase of the assets, which exceeded the debts of the company, a positive aspect.

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