The Calculation of Economic and Financial Indicators Based on the Balance Sheet of Economic Entities in Romania

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Abstract   *This paper aims at a better understanding of the way in which the balance sheet analysis is carried out, both in static and dynamic terms. Static analysis is based on the calculation of weights in which each item is expressed as a percentage of the total assets and liabilities and the dynamic analysis is based on the calculation of indices in which the assets and liabilities in the balance sheet are expressed in the form of percentage changes from the same position of a base year as 100% (for fixed base indices) or successively over the previous period (for chain-based indices). The analysis is based on a system of relevant indicators, the interpretation of which can be concluded with regard to the future evolution of economic entities in Romania. The study was based on the structure rates analysed at an economic entity in Hunedoara County, whose object of activity is the wholesale trade of dairy products and edible fats.*

Key words   financial analysis, economic entities, resource management, economic-financial indicators, management indicators, structure rates

1. Introduction

The issues relating to the balance sheet were debated for the first time in Italy - considered the country of accounting. In Romania, the first Romanian author who managed to formulate the scientific principles of accounting and its social functions was Spiridon Iacobescu. He addressed the issue of the balance sheet and the accounting standard. Constantin G. Demetrescu was another Romanian author with a rich scientific activity who published approximately 150 books and accounting studies and defined the balance sheet as „a statement drawn up in accounting form, after a certain plan, comprising the asset and the liability of an enterprise, as well as the results achieved by a certain date." Professor I. Evian first used the term „unitary balance sheet", comprising both the balance sheet application unit and the structural unity of enterprises.

If, at the beginning, the balance sheet represented a simple periodic conclusion of the accounting calculations and registers, which was subsequently preceded by stocktaking, the balance sheet was given the role of an advanced capital settlement instrument by the owners, serving to confront the existing wealth with that reflected by the bookkeeping with the occasion of the balance sheet. The balance sheet, as an accounting synthesis document, is the main source of information for all third parties interested in the activity of an entity.

The information provided by it uses not only the reporting of mandatory situations required by public bodies but also a financial analysis of the company's activity. Financial analysis plays a decisive role in determining the strategy to be followed and helps to identify the unsatisfactory activity of an entity. The financial analysis plays a decisive role in determining the strategy to be followed and helps identify the unsatisfactory activity of an economic entity. The economic analysis of an activity involves examining it in particular in terms of the ratio between the efforts made (social labour costs) and the useful effects (outputs) that have been obtained.

The financial analysis aims at highlighting the ways to achieve the long-term and short-term financial balance and the cash accumulation steps, to make the entity more profitable. Analysis of the financial position can also be done with the help of rates as it allows comparative surveys to be performed over time and the objective assessment of an entity's performance status.

The rate-based financial analysis allows the assessment of the performance of an economic entity by comparing the determined rates based on balance sheet and profit and loss accounts and comparing them with the reference values.

The definition of a rate can be synthesized as follows: „a rate is a ratio established between two sizes for which the comparison is significant. The order of terms of the report is not certain. In principle, it is fixed in such a way that the size of the value of the report expresses an improvement in the situation and vice versa, the diminution of its value will mean a deterioration of this situation. It is a relationship between two characteristic sizes extracted from the accounting data. The rates are expressed by number, percentage or duration" (Brezeanu, 2008).

The method of rate analysis has emerged in the financial analysis for more than 20 years and it has the advantage that allows to the financial analyst to track the progress of the enterprise and present its image to the users (Baltes *et. al,* 2003).

Therefore, having good rates at the end of the exercise does not necessarily imply a favourable future for the entity. The rate analysis method should be used with caution, often providing only a piece of information needed for a financial decision. Rarely, an isolated rate is significant in it and is not sufficient to characterize the entity. Only a dynamically watched rate battery for several years and compared to similar or standardized entities may enrich the information needed for financial decisions.

The views on the structure of a battery of rates vary according to the specialized body that develops them, but they generally concern: the activity and yield, margins and profitability, investment and financing; financial structure and risks (Gherghina and Duca, 2010).

The fundamental objective of the rate method for the best knowledge and a real evaluation of its performance and difficulties, its proper use, requires the observance of several requirements, such as: ensuring the comparability of the elements of the report by evaluating them in the same units; the use of significant and consistent sizes between which direct relationships must exist; comparing rates in time and space or with standard values (Răscolean *et al.*, 2012). Based on this diagnosis, a new strategy for maintaining and developing a competitive environment takes place. In general, the purpose of the financial analysis is to provide financial information to those directly interested, inside and outside the entity.

2. Theoretical Foundations and Literature Review

Operation and sustainable development of economic entities necessarily implies conducting an economic and financial analysis of results and performance, obtaining the highest possible results and meeting current needs without compromising or neglecting future opportunities. A good knowledge of financial management requires knowledge of the state of the economic entity and the timely discovery of different causes, effects, problems that generate expected or undesirable changes in the economic and financial activity of the entity.

In an approach to IFRS interpretations by renowned authors, profitability indicators generally mean „an indication of how profit margins of a company are associated with sales, average capital and average equity" (Greuning, 2005).

In the opinion of Işfănescu *et al*. (1996), the analysis - as a general method of research means „the decomposition of an object or a phenomenon into its component parts in its simple elements".

The financial analysis emerged from practical needs at the end of the nineteenth century, when bankers asked for information to assess and appreciate the guarantees of companies wishing to make a loan. At first, this information concerned a brief analysis of solvency and some financial equilibrium, but with the development and diversification of economic entities as well as the growing role of financial institutions in the economy, the complexity of financial analysis has increased.

The financial analysis consists of a set of tools and methods that allow the assessment of the financial status and performance of an economic entity. An operational and efficient instrument of financial analysis is the rate method (Dobrota, 2010).

In the system of asset structure rates, the most significant as informative value and also more frequently recommended by the literature are: asset rate, inventory rate, debt ratio, availability rate. All this reflect aspects of the entity's economic patrimony, sector ownership, nature of activity, and even aspects of its financial policy.

In spite of its technical simplicity, the rate method provides for the financial statements of economic entities, particularly in the case of comparative analysis over time (e.g. current and prior period expenses) and space (costs of organizational links within a firm, the costs of similar companies in the country and abroad) of mixed comparisons based on the combination of information in time and space and specific comparisons (Hoanţă, 2010).

3. Methodology of research

This research is correlational and applicable. The realization of this study presupposed the observance of certain principles and rules specific to the research methodology, such as the review of the specialized literature, the use of information sources. The research methods taken into account highlight the data collection method, the analogous (comparative) method, the typological method, the deductive method, the qualitative method, the external (non-participatory) observation and the internal (participative) observation. Positive-constructive research involves a process of circular knowledge, in which the statements expressed at the theoretical level are accepted only by their practical reflection and demonstration.

4. Financial structure rates

Structural rates - constitute an operational and effective tool for financial analysis (Man and Ciurea, 2017). They are established as a ratio between an asset or liability item and the balance sheet total, as well as a ratio between the different asset and liability components respectively.

The analysis of structural ratios seeks to reflect the relationships between the patrimonial elements and the mutations that occur within the entity's uses and resources (Ionescu, 2016).

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 analyses in time and space. The structure ratios are: of the asset and the liability.

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A good knowledge of financial management requires knowledge of the state of the economic entity and the timely discovery of different causes, effects, problems that generate expected or undesirable changes in the economic and financial activity of the entity (Muntean and Solomon, 2015). All this reflects predominantly aspects of the economic entity's economic patrimony and the nature of the activity Răscolean, 2012).

In the following, we present an analysis of an economic entity during the first 11 months of 2017, using a system of indicators that are relevant and interpretable and can draw firm conclusions that can predict the future evolution of the entity, on the basis of the simplified balance sheet, table 1.

*Table 1.*The future evolution of the entity, on the basis of the simplified balance sheet

The element's name	No.	Sold at:	
		The beginning of 2017	The first 11 months of 2017
A. FIXED ASSETS			
Intangible Assets	01		880
Tangible Fixed Assets	02	1.973	33.174
Financial Assets	03		12.345
Fixed Assets - total	04	1.973	46.399
B. CURRENT ASSETS			
Stock	05	566.188	679.034
Debt	06	760	132.421
House and Bank Accounts	07	169.252	382.955
Current Assets – total	08	736.199	1.194.441
Debts: sums which must be paid within a period of up to one year	09	**312.767**	**659.235**
Net current assets/net current debts	10	**423.432**	**588.693**
Total Assets minus current debts	11	**425.404**	**581.574**
CAPITAL and RESERVES			
Capital	12	220	220
Paid subscribed capital	13	220	220
RESERVES	14	5.693	5.693
Profit or loss carried forward SOLD C	15	165.149	280.545
Profit or loss of the financial exercise			
SOLD C	16	254.343	295.117
Equity - total	17	405.604	581.574
Capitals - total	18	405.604	581.574

Asset structure rates values are shown in Table 2.

Table 2. Asset structure rates

Indicators	Calculation	Level at 01.01.2017	Level at 30.11.2017	Indices
a) Fixed Assets Rate	Rai= Fixed Assets/Total Activities X 100	0,27	3,73	1281,48%
a1) Tangible Fixed Assets Rate	Raic= Tangible Fixed Assets/Total Activities X 100	100	71,5	71,5%
a2) Intangible Assets Rate	Rain = Intangible assets/Total Activities x 100	-	1,9	-
a3) Financial Assets Rate	Rif = Financial Assests/Total Activities x 100	-	26,6	-
b) Current Assets Rate	Rac= current Assets/Total Activities x 100	99,73	96,26	96,52%
b1) Availabilities and Pecuniary Means Rate	Rdmb = Avaibilities and pecuniary Means/Total Activities x 100	22,99	32,06	139,45%
b2) Debt Rate	Rc = debt/Toal activities x 100	0,11	11,09	10081,82%
b3) Stock Rate	Rs = stock/total activities x 100	76,9	56,85	73,93%

At both times analysed, fixed assets have an insignificant share of total assets, due to the fact that the entity operates in leased premises. Even if the trend is slightly increasing, i.e. about 3.5%, the size of the fixed asset rate demonstrates that the entity is in a weakly-fitting industry. This indicator depends on the strategic options of each, the development policy. In the event of a crisis involving the conversion of assets

into available assets, the economic entity would have the ability to withstand and adapt to new market demands.

The analysed entity holds an extremely high share of current assets in total assets, over 95% in both periods. There is a slight decrease in the current assets ratio from 99.73% at the beginning of 2017 to 96.26% at the end of the year by increasing the share of fixed assets from 0.27% to 3.73% according to the activity marketing and distribution of the entity.

The fixed assets rate increased at the end of 2017, as compared to the beginning of 2017, as a result of investments made with the development of distribution activity, requiring the purchase of vehicles for the sale of goods as widely as possible. Even though the share of tangible assets in total fixed assets declined (in favour of financial assets) at the end of the year compared to the beginning of 2017, 28.5% of tangible assets increased in absolute value by 28.365 lei. Due to the specificity of the entity's activity, the intangible asset rate is not relevant in the analysis of the patrimonial structure, as the entity surveyed carried out a research activity only in the second half of 2017 when the indicator was 1.9%.

Financial investment policy is closely related to the size of the entity. The rate of financial assets calculated for the end of 2017 is 26.6% of the total net assets, but it has a weight of approximately 1% in the total assets, which indicates that the economic entity being analysed is not interested in financial placements nor do they trade securities of other entities in the capital market.

The share of current assets depends on the sector of activity and the duration of the production cycle (by the share of stocks), the duration of the payment period agreed with the customers (by the weight of the receivables) and reflects the essence of the treasury (by the weight of the liquidities). Current assets hold a high share, more than half of them being made up of commodity stocks.

These values are specific to distribution companies. The structure of current assets reflects a reduction in the stock weight from 76.9% to 56.85% in favour of the increase in receivables from 0.11% to 11.09% and cash availability from 22.99% to 32.06%, which reflects the releases of circulating assets while increasing the collection time of the client receivables. The tendency to reduce the end-of-year stock rate as compared to the beginning of 2017 is the result of higher turnover dynamics (ICA = 138.1%) compared to inventory dynamics (ISt = 119.93%). Table 2 shows the liability structure rates.

Table 3. The Liability Structure Rates

Indicators	Calculation	Level at 01.01.2017	Level at 31.12.2017	Indices
a) Financial Stability Rate	Rcp = Institution Equity/Liability Total x 100	57,63	46,87	81,33%
b) Global Autonomy Rate	Ragl = Institution Equity/Liability Total x 100	57,63	46,87	81,33%
c) Autonomy Financial Rate at Term	Rafrt = Personal Capital/Liability Total x 100	100	100	100%
d) Short-term Debt Rate	Rdts = Short-term Debt/ Liability Total x 100	42,37	53,13	125,4%
e) Global indebtedness rate	Rdg = Toatl Debts/Liability Total x 100	42,37	53,13	125,4%

From the analysis of the data presented in Table 3, the following conclusions can be drawn:

- the financial stability rate recorded a decline at the beginning of 2017 as compared to the end of the year, from 57.63% to 46.87%, reaching below the minimum admissible level (50%), a situation that is not necessarily negative, because this rate is much higher than the fixed asset rate, which means that the entity under review has sufficient permanent resources to finance the activity;
- the rate of global financial autonomy over the year has exceeded the minimum acceptable value (33%), which indicates that the economic entity has guarantees to get credit. This indicator took the same values as the financial stability rate in both analysed periods as the entity did not resort to medium and long-term loans;
- As you can see, equity has the same value as permanent capital, at both times in the diagnosis, which reflects that the entity has a very good financial term. The value of the indicator is 100% throughout the year. It can also be mentioned that the level of equity increased by 36.71% as a result of profit growth;

- The global debt rate, which has the same values as the short-term debt rate, increased by 10.76% in the short term, negatively affecting the entity's leverage, but its value was below the maximum admissible value (66%). It should be noted that the entity under review did not refer to medium and long-term loans reflecting a situation of financial independence.

6. Discussions and conclusions

From the analysed facts it can be concluded that the activity of the economic entity has to generate positive effects, which lead to sustaining the principle of continuity of activity. It is therefore, necessary to have a financial balance, throughout its functioning, between its resources and needs. We consider that it would be beneficial for the analysed economic entity to consider the following aspects: conducting marketing researches for the development of the activity, i.e. the opening of new work points; increasing turnover by contracting new partners; financial investments in other profitable companies; effective use of surplus resulting from entering new markets and maintaining the existing ones; increasing money availability and placing it as cheaply as possible.

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