

STRUCTURAL RELATIONS OF FINANCIAL STATEMENTS AND THE INSTRUMENTS OF FINANCIAL MANAGEMENT

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Abstract:

The present paper aims to highlight the dynamic nature of the balance sheet as a component of annual financial statements and the informational support offered by the indicators calculated for financial analysis. In the first part of the paper there are presented some theoretical issues about the current context of the use of financial statements as a useful tool in the process of decision making and the forms and the parts of such situations. The balance sheet represents a model of the firm's capital, a fact for which its mathematical modeling by identifying structural relations with respect to fixed assets, current assets, net current assets, capital and reserves demonstrates on the one hand the dynamic nature of the value changes in successive discharge periods and on the other hand it highlights the financial balance.

Key words: annual financial, balance sheet, assets

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Introduction

The development of accounting in the 20th century, led to the creation of a single set of accounting standards in preparing financial statements, in order to make possible a uniform understanding of the information provided in these documents.

Financial statements are a useful tool in the process of decision making because they can embrace the following major aspects: they are a means of knowledge, control and analysis of economic and financial activities made by investors, shareholders, creditors, trade unions etc.; the information they contain presents indicators from two consecutive fiscal years and it provides an analysis of evolution; they represent a mobilizing factor for improving the book keeping so as to ensure their development in time and manner prescribed by the legal framework.

Regardless of the form of the balance sheet adopted – tabular, list, simple or elaborated – it aims to present a true and fair record of the assets, liabilities, financial position, profits and losses of the entity. The purpose of preparation of consolidated statements regarding the assets, the balance sheet shall be observed even in accounting systems different from the Anglo-Saxon one, for example the American system, where there are several components of the financial statement, namely the condition of assets, debts, net assets, profits or losses, the situation of capital variations, of contributions and withdrawals made by shareholders.

Being a model of capital, the balance sheet highlights the two components, the economic means and the economic resources – between which there must be a perfect balance. The analysis of the structure of these items has materialized in the long run in different concepts accepted by the scientific community which allow the mathematical modeling of balance: the legal approach, the economic approach and the financial approach.

Regardless of the chosen approach, the balance sheet gives synthetic expression to information on assets management and it characterizes the functional and structural

equilibrium between economic means and financing sources. It can be drawn up based on the presentation of assets, liabilities and capital reserves according to the last balance sheet of synthetic accounts after registering all the documents that record financial and accounting operations for the current fiscal year and based on the end balances of the previous accounting period shown in the last balance sheet.

Viewed from the point of view of the modeling theory, the balance sheet is a structural model of capital and at the same time a model of equilibrium, its expression is a static one, and the mathematical tool makes use of linear relationships. However, the changes in value of assets are transferred from a balance sheet to another; due to this fact it has a dynamic character.

2. Methodology. The structural relations of the balance sheet

From mathematical point of view, the structural relations of balance sheets can be expressed as follows:

- a) *fixed assets* comprise the economic values of investments with utility and liquidity period longer than a year, determined by the set of elements $AI(t) = \{AI_n(t), AI_c(t), AI_f(t)\}$, where the set $AI(t), 0 \leq i \leq 3$ include intangible, tangible and financial assets, while

$$AI(t) = \sum_{i=1}^3 AI_i(t) \quad (1)$$

In its turn each $AI(t)$ group represents set consisting of several subsets, depending on the number of posts for each category of assets:

$$AI(t) = \sum_{k=1}^5 AI_n(t) + \sum_{k=1}^4 AI_c(t) + \sum_{k=1}^6 AI_f(t) \quad (2)$$

- b) *current assets* representing cash and other assets that are expected to be converted into cash within a maximum period of one year, are determined by the set of elements $AC(t) = \{AC_s(t), AC_c(t), AC_{its}(t), AC_{cb}(t)\}$, where the elements of the set $AC_i(t), 0 \leq i \leq 4$, are stocks, claims, short-term investments, and cash register and bank accounts.

$$AC(t) = \sum_{i=1}^4 AC_i(t) \quad (3)$$

Starting from the structure of the current assets, each $AC_i(t)$ group represents a set consisting of several subsets, depending on the number of posts related to the type of current assets calculated as follows:

$$AC(t) = \sum_{k=1}^4 AC_s(t) + \sum_{k=1}^5 AC_c(t) + \sum_{k=1}^2 AC_{its} + AC_{cb} \quad (4)$$

- c) *net current assets* also known as the net working capital means efficiency and short-term financial stability of a company and the positive value of this indicator suggests that it has the ability to pay short-term debts with the help of current assets; it is calculated as follows:

$$ACN(t) = AC(t) - \sum_{k=1}^8 D_{<1an} \quad (5)$$

From this relationship, one can identify the 8 types of short-term liabilities (loans from the bond issue, liabilities to credit institutions, fore-payment received from customers, commercial debts, trade effects payable, amounts owed to affiliated entities and to those with participating interests, tax and other debts to the social insurance

budget) that may occur within a company and the set of elements $D_{i \leq 7}(t)$ can be written, where $0 \leq i \leq 7$ is:

$$D_{\leq 7}(t) = \{D_{io}(t), D_b(t), D_a(t), D_{dc}(t), D_{ec}(t), D_{sde}(t), D_{ad}(t)\}$$

- d) *total assets minus current liabilities* represent the difference between the sum of fixed assets and current assets reduced by the amount of short-term debts:

$$AMD(t) = \left[(AI(t) + AC(t)) - \sum_{k=1}^8 D_{\leq 7}(t) \right] = ACN(t) + AI(t) \quad (6)$$

- e) Capital also known as internal liability represents the right of the shareholders upon assets after paying all debts. The total of capital is made up of the following elements:

$$CR(t) = \{C(t), PC(t), RR(t), R(t), P_{rep}(t), P_{ef}(t)\}$$

where the elements of the set $CR_i(t)$, $0 \leq i \leq 6$ are: the capital, the bonuses related to capital, revaluation reserves, reserves, profits or losses and the the profit or the loss of the financial year.

$$CR(t) = C(t) + PC(t) + RR(t) + R(t) + P_{rep}(t) + P_{ef}(t) \quad (7)$$

Starting from these calculated items, one can write the basic equation that is the foundation of the balance sheet:

$$CR(t) = \left[(AI(t) + AC(t)) - \left(\sum_{k=1}^8 D_{\leq 7}(t) + \sum_{k=1}^8 D_{> 7}(t) \right) \right] \quad (8)$$

A more simplified form is:

$$CR(t) = A(t) - D(t) \quad (9)$$

The dynamic nature of the balance sheet is given by the representation of the value of the property at the end of two consecutive fiscal years, which allows a comparison over time of patrimonial elements or of the indicators represented in this synthesis document:

$$\Delta CR = CR_{n-1} - CR_n$$

$$\Delta A = A_{n-1} - A_n \quad (10)$$

$$\Delta D = D_{n-1} - D_n$$

where: n - current fiscal year;

n-1 – the previous fiscal year.

Conclusions

As a direct consequence of globalization and of the development of the information society, the implementation of harmonized accounting regulations with directives of the European Union and International Accounting Standards is a necessity in a complex economic environment of the activities of economic agents. The study of the theoretical and conceptual framework of financial statements starts from considering, on the one hand, the reference approaches summarized in specialized literature, and on the other hand, from the mathematical modeling of the balance sheet and of the profit and loss account, which made me draw the following conclusions regarding this chapter:

- ❖ Preparation of annual and quarterly financial statements which represents not only the indispensable premise for evaluating performance and financial developments of economic agents, financial decisions because their role is not a passive one, but rather an active one that provides substance to financial management coordinates;

- ❖ More often viewed as a tool of financial management, financial statements are not only a theoretical support but also a practical one that can highlight a number of features of the financial equilibrium of the economic entity which confers a synthetic characteristic of the information regarding assets management;
- ❖ The changes in value of assets are transferred from one balance sheet to another, and this confers the dynamic character from the perspective of mathematical modeling and a static vision reflecting the equilibrium of the capital.

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