FINANCIAL ANALYSIS – FROM OPTION TO NECESSITY IN THE EU. COMPANY DIAGNOSIS USING FINANCIAL EQUILIBRIUM INDICATORS.

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Abstract

If before the global financial crisis, companies did not pay much importance to financial analysis and diagnostic assessment, after 2008-2009 they were put in front of another reality, the economic pragmatism, where real and applied knowledge of the situation and the financial position plays a crucial role in medium and long term business plans for any company.

This article aims to present an analysis of financial balance indicators, integrated into a broader economic context where the current most pressing concern is economic prudencesafe investments and financial predictability. Basically, analyzing indicators of financial balance within diagnosis analysis in the company can help avoid the financial decline of the enterprise, can optimise the financial and human capital and can reveal the self-financing capacity and the need for external financing in a financial market still skeptical about providing loans to companies.

Keywords: *financial analysis, diagnosis, equilibrium indicators, working capital, net treasury, performance rates*

JEL Classification: *G30, G31, G32*

1. Introduction

From our perspective an economic recovery attempt from the entity only when it is on the verge of collapse is not sufficient but, on the contrary, periodic evaluation and diagnosis are the key to a really strong financial positioning for any company, and development of diagnostic and evaluation aggregate models of the company by structuring the determination and modeling of several financial indicators contribute to providing solutions for improving the financial standing for companies which are heading or are already in difficulty, thus avoiding recourse to insolvency, which often ends in their bankruptcy. An important component of economic and financial analysis is the analysis based on indicators calculated as percentage reports either between two balance sheet items or groups, between two indicators of the income statement, a balance sheet and a profit and loss account indicator or between a balance sheet and a cash flow indicator.

2. Working capital - financial balance indicator

An important component of short-term balance of the economic entity is the working capital.

Based on the different opinions that we encountered in the specialty literature we also believe that the working capital is a measure commonly used for short-term liquidity, and can be defined as the excess of current assets compared to current liabilities. Working capital deficit occurs when the current liabilities exceed current assets, and thus produce a short-term imbalance. If the current assets exceed current liabilities there is a surplus of working capital.

We also believe that the working capital is an important indicator for evaluating liquid assets, which gives creditors assurance. On the other hand the working capital is also an important indicator for measuring the liquidity reserve available in preventing unforeseen situations that affect a company's cash flows input and output. The importance of working capital is for creditors, investors, etc. and other users is that it is a measure of liquidity and solvency, and determines other companies to expand the definition of a current asset or liability.

The financial balance of the economic entity results from the confrontation of large groups of the balance sheet: the working capital fund (WCF) with the working capital requirement (WCR), resulting in the net treasury (T). This equilibrium is determined in accordance with the views of presenting the balance sheet as follows: Financial optics and functional optics. Based on the balance sheet which classifies accounts according to the performance criteria, financial equilibrium involves financing assets which have a life span over a year from resources with a maturity in more than a year, and financing assets under a year using resources with a maturity under a year.

A first form of balance results from confrunting the long-term liabilities (permanent capital) with the permanent requirement (fixed asset), as derived from the upper part of the financial balance sheet:

$$FWC = Permanent\ capital\ (equity + medium\ and\ long\ term\ debt) + Provisions + Investment\ subsidies - Constant\ requirement\ (net\ assets) \quad (1)$$

This method emphasizes the long-term financial equilibrium, the working capital representing part of the permanent capital remaining after funding assets that an economic entity devotes for funding current assets. In our opinion, this is the part of capital with a weak degree of chargeability , serving the financing of assets with a sufficiently high degree of liquidity. The method insists on the origin of the working capital and allows understanding its variation causes, its growth being driven by the increase of permanent capital (issuance of new shares, bonds, new long term loans) and the reduction of net assets (securities sales, divestment, property assignment). With the increase in working capital, the *safety margin* of the economic entity increases, which shows that the most significant part of current assets is financed by permanent capital. Decreasing the level of working capital is determined by the decrease of permanent capital (repayments of long-term loans or bonds) and increased net assets (investments). A stationary working capital reflects the economic stagnation of the entity, which may be temporary or lasting, with various causes related to equity and debt compared to the fixed assets situation. The lower part of the financial balance sheet financial allows the determination of working capital as the difference:

$$FWC = (Current\ Assets + Accruals\ and\ prepaid\ expenses) - (Current\ liabilities + deferred\ income) \quad (2)$$

The method emphasizes the affectation and the purpose of working capital which is financed by current assets, in this hypostasis, the financial working capital shows the surplus of current net assets unfunded from temporary liabilities, emphasizing the potentially liquidity excess as a safety margin regarding the company's solvency. In other words, in the calculation of working capital there are taken into consideration two sizes: current assets and current liabilities. The balance sheet list allows rapid determination of the working capital in two ways:

$$a) FWC = Total\ assets - Current\ liabilities - Fixed\ assets = FA \quad (3)$$

b) FWC = Net current assets / Net current liabilities = E

Theoretically, the working capital must be positive, which does not mean that, in some cases, there can not be a negative working capital without compromising the proper functioning of the economic entity. A positive working capital (permanent capital> net assets) is a MOS for the economic entity regarding its daily operations, enabling it to provide a minimum level of current assets strictly necessary for its operations (minimum stocks, minimal house fund), current assets being higher than short-term debt (net current assets> liabilities under one year).

A negative working capital is a warning for the company, that it will be devoid of sufficient permanent equity to ensure financing for its assets (permanent capital <net assets) or has current assets at an inferior level compared to the debts maturing on short-term, which it will not be able to pay (net current assets <debts under one year). This situation occurs more frequently in the retail sector, where stock rotation speed is very fast (under a month) and where there are major supplier credits.

Inside the permanent capital, the share of borrowed capital must not be excessive in relation to the equity (not to exceed 50%), which requires determining its own working capital (OWC) and foreign working capital (FoWCs):

$$OWC = Equity + Reserves + subsidies\ for\ investments - net\ current\ assets \quad (4)$$

$$FoWCs = liabilities\ with\ a\ maturity\ over\ one\ year - net\ current\ assets$$

The own working capital fund reveals the influence of the financing structure on its constitution mode, *i.e.* the extent to which financial balance is achieved through equity, which is reflected by the degree of financial autonomy of the economic entity. The working capital loan (foreign) reflects the degree of long-term debt to finance short term needs.

3. Working capital requirement analysis

Working capital requirements signifies the entity's financial needs arising from the execution of repetitive operations that compose the current operating cycle (purchases, sales, payment of wages), whose total must be covered at least partially by stable resources (net working capital). This is money that should run in a company to ensure its operations (after financing assets), and implies expenses which will be recovered from customers paying the invoices.

Working capital requirement is determined as the difference between cyclical needs (current assets less the current availability) and cyclic resources (debts under one year less current bank loans):

$$WCR = cyclical\ needs - cyclical\ resources \quad (5)$$

in which: (6)

Cyclical needs = Temporary needs (Current assets - Cash and bank accounts) + Accruals and prepaid expenses

Cyclical Resources = Temporary resources = (debts payable within a period of 1 year - current bank loans) + deferred income (7)

Resulting that the structure of the working capital requirement comprises, on the one hand, in stocks (raw materials and finished goods) whose value incorporates manufactoring costs and, on the other hand, receivables from which debts are substracted (expolitation and non-operating debts) which correspond to the gap between collections and payments.

WCR = (Receivables + Inventories + Accruals and prepaid expenses) - (short term liabilities - current bank loans + deferred income) *(8)*

4. Analysis of the net treasury of enterprises

Net treasury (NT) results from the equality between balance sheet assets and liabilities in tabular presentation, meaning Assets = Liabilities or Usage = Resources, equality which leads to the confrontation of the working capital (WC) and working capital requirement (WCR).

From this equation results the financial balance of the economic entity, which is a result of operations that affect all balance sheet items and which emerges from horizontally reading the balance sheet presented in tabular form, which may be determined in two ways:

a) Based on the upper part of the financial balance sheet:

(9)

$$NT = \text{WC} - \text{WCR}$$

b) Based on the lower part of the financial balance sheet:

(10)

NT = Cash and bank accounts - short term bank loans or
NT = Active Treasury – Passive Treasury

Active Treasury includes current availabilities emitted by the functioning of the economic entity, plus investments redeemable at any time (investment securities).

Passive Treasury is represented by current bank loans, credit balances with banks and expected effects (off balance sheet).

Given that there may be situations reflecting financial imbalances, it is necessary to address the causes that can produce them, starting from the positive or negative value of the treasury.

The net treasury (positive or negative) results both from operations affecting permanent capital and fixed assets and from operations regarding current assets and short-term accounts payable. Increase in net treasury can be achieved by increasing the working capital and decreasing the working capital requirement,also by increasing availabilities and reducing current bank loans.

Negative net treasury value is the consequence of inequality between working capital and working capital requirement (resource) that can justify the following cases:

a) WCF> 0 and WCR> 0, when WCR is partly financed by permanent capital (WCF> 0) and partialy from current bank loans higher than availabilities, which requires current bank risk analysis.

b) WCF <0 and WCR> 0, when bank loans cover a part of assets (WCF <0), WCR and availabilities (lower treasury credits), which requires reconsideration of the financing structure;

c) WCF <0 and WCR <0, when permanent resources cover only a part of the fixed assets (WCF <0), the rest being covered by current liabilities (suppliers, customer advances) and current bank loans, which require review of the funding structure, the risk of external financial dependence by a relatively high financial leverage being higher.

In analyzing the financial balance sheet based on the various models it is found that regardless of the form of presentation, we obtain the same values on indicators of the financial balance, which confirms the correctness and convergence of reasoning and principles underlying rational economic calculation approach governing financial analysis .

5. Analysis of the financial position of the company

Information about liquidity and solvency are required to estimate an economic entity's ability to honor its outstanding debts.

According to *paragraph 16* of the General Framework for preparation and presentation of financial statements elaborated by the *International Accounting Standards (IAS)* liquidity "refers to the availabilities of cash in the near future after taking into account financial obligations for this period" and solvency "refers to the availabilities of cash for a longer period in which they are to honor outstanding financial commitments."

5.1 Company liquidity analysis

The overall liquidity (revolving fund, working capital, current assets, respectively net current liabilities) reflects the ability of available current assets (stocks, invoices not collected, short-term investments, expenses in advance) to

turn into cash on hand, covering the outstanding debts of the economic entity. The relative form, calculated as the *ratio of general liquidity (RGL):* *(11)*

$$RGL = \frac{Currentassets\ (CA)}{Currentliabilities\ (CL)}\ x100 \begin{cases} > 100 \Rightarrow \text{excedentary debt coverage} \\ = 100 \Rightarrow complete \text{ debt coverage} \\ < 100 \Rightarrow partial \text{ debt coverage} \end{cases}$$

It is estimated that the entity has a favorable liquidity if the liquidity ratio is between 200% and 250%. According to other specialists, liquidity ratio should be above 150%. In Anglo-Saxon literature it is estimated that the general liquidity ratio must be at least 200%.

Intermediate or fast liquidity (Acid Ratio, Quick Ratio) highlights the ability of current assets (other than inventories) to participate in outstanding debt financing. The relative form, calculated as a percentage ratio between the remaining current assets (after deduction of stocks) and outstanding debts, i.e.:

(12)

$$ILR = \frac{Current\ assets(CA) - Stocks(S)}{Current\ liabilities(CL)}\ x100 \begin{cases} > 100 \Rightarrow \text{int}ermediary \text{ excedentary coverage} \\ = 100 \Rightarrow \text{intermediary complete coverage} \\ < 100 \Rightarrow \text{int}ermediary \text{ partial coverage} \end{cases}$$

It is considered favorable the indicator value between 50% and 100%. However, other authors consider that the optimal level of this indicator should be 100%.

Effective liquidity (immediate) measures the extent to which cash and cash equivalents cover payments due. Effective Liquidity is calculated as a percentage ratio between cash and cash equivalents and short-term debt*, i.e.*:

(13)

$$ELR = \frac{Cash\ equivalents(CE)}{Current\ liabilities(CL)} \times 100 \begin{cases} > 100, \text{excedentary coverage} \\ = 100, \text{complete coverage} \\ < 100, \text{partial coverage} \end{cases}$$

Liquidity is favorable if the indicator is close to 100%.

5.2. Companies aggregate solvency analysis

Maintaining solvency is conditioned by synchronizing the receipts of funds regarding the currency conversion of assets that have reached maturity with the rhythm of mandatory payments concerning the liquidation of outstanding debts, in this regard a first evaluation of solvency is realised by comparing asset liquidation and capital chargeability, respectively the total assets with total debts:

1) Net asset value (NAV): *(14)*

$$NAV = Total\ assets - Total\ debts$$

In assessing solvency there are used capital structure ratios characterizing indebtedness and financial autonomy of the economic entity.

2) Economic solvency ratio (ESR): *(15)*

$$ESR = \frac{Equity}{Total\ equity}$$

This ratio indicates the proportion of total equity capital and must have a minimum value in the range of 0.3-0.5, values above 0.5 reflect a normal situation.

3) General solvency ratio (GSR): *(16)*

$$GSR = \frac{Total\ assets}{Total\ debts}$$

Creditors are interested in a high valuae of this ratio, their guarantee being the company's toatl asset.

General solvency ration can be calculated as follows:

(17)

$$GSR = \frac{Equity}{Long - term\ liabilities}\ GSR = \frac{Self - financing\ capacity}{Short - term\ liabilities}$$

Assessment of solvency can be achieved indirectly through leverage ratios, debt capacity and repayment capacity:

(18)

4)Total debt ration:

$$DR = \frac{Total\ debts}{Equity}$$

5)Long-term debt ratio: *(19)*

$$LtDR = \frac{Debts > l\ year}{Equity}$$

These rates express the financial leverage, respectively the long-term dependence on creditors, plus inflation.

The long term borrowing rate is an indicator of risk that increases proportionally with its value and the variability of benefits, with sizes varying from one sector to another.

6) Debt capacity (DC): *(20)*

$$DC = \frac{Equity}{Permanent\ capital}$$

This ratio indicates the proportion of equity in permanent capital, depends on the financial structure and shows possibilities of increased leverage for values> 0.5.

7) Reimbursement capacity: *(21)*

$$Rc = \frac{Turnover}{Total\ debts}$$

The rate express the company's ability to repay all debts and completes the leverage ratio, the minimum acceptable value being of 0.25.

8)Financial expenses ratio: *(22)*

$$Fer = \frac{Financial\ expenses}{Operating\ result}$$

The ratio expresses solvency indirectly, through the share of financial expenses in the exploitation result, and must be as small as possible to avoid the risk of non-payment.

Another version for this rate is obtained by the ratio: *(23)*

$$Fer = \frac{Financial\ expenses}{Turnover}$$

The rate should not exceed 0.03; otherwise the company is vulnerable and at risk of insolvency.

In assessing the financial health of the economic entity one should be aware not only of solvency, but its liquidity, meaning that for this to be in a satisfactory situation it is not sufficient for it to be able to pay its debts (to be solvable) but must be able to pay at the agreed repayment date. Thus the company may be solvent having a higher total asset than debts (net positive situation), but may not have sufficient liquidity to meet deadlines, which requires the separate analysis of its liquidity.

6. Firm-level performance rates

Rates are useful tools of analysis that summarizes a large amount of data into a form more easily understood, interpreted and compared. They highlight at the same time, certain limitations that must be considered for each case. When comparing rates from different periods, one should consider the conditions under which the economic entity operates and the impact on the financial statements of certain changes such as changing economic conditions, the production process of the various production lines or the geographical markets served .

The research undertaken aimed seven categories of financial ratios that we consider relevant and which we present below.

1. Economic rate of return (ERR) highlights the contribution of patrimonial elements in obtaining the final results of the entity. *(24)*

$$ERR = \frac{GRE}{BA} x100$$

Where:

GRE - represents the gross result;

BA- balance sheet assets.

The indicator highlights the contribution of patrimonial elements in obtaining results.

2. Return on assets (ROA) is determined as the ratio between net profit and the value of assets of the economic entity. The indicator measures the profitability of the entire capital invested in the firm. In Anglo-American economic literature, the indicator is also called the rate of return on total assets.

(25)

$$ROA = \frac{NRE}{BA} x100$$

According to other American analysts, the indicator is calculated as a percentage ratio between the operating result (OR) and total assets recognized in the financial position of the economic entity (BA):

(26)

$$ROA = \frac{OR}{BA} x100$$

In this case the indicator measures the effectiveness of the entity's assets used in the economic operating activities.

This is an important rate for companies that are in the situations to decide whether or not to initiate a new project. The basis for this rate is whether a company will start a new project investors expect to gain from this project, ROA is the earnings that investors would receive. In other words, if ROA is above the interest rate at which it borrows, then the project should be accepted, otherwise it should be refused.

3. Assets profit rate is calculated as a percentage ratio between operating income (earnings before interest and taxes or operating profit - Earning Before Interest and Taxes- EBIT) and the total asset value.

(27)

$$BEP = \frac{EBIT}{BA} x100$$

The indicator highlights the earning power of the economic entity from the use of total business resources at its disposal.

4. *Overall rate of return* is determined as a percentage ratio between the net result for the year and its total expenses.

(28)

$$ORR = \frac{NRE}{T\exp} x100$$

5. Exploitation rate of return indicates the contribution of assets in obtaining the results from operating activities.

(29)

$$ExplRR = \frac{ExplR}{BA} x\ 100$$

where:

ExplRR – represents the exploitation rate of return;

ExplR – represents the exploitation result.

Comparing operating profit to sales, the operating profit margin indicates how efficient is the company's management in generating income from core business operations. A high level of profit from operations (operational) may indicate that the entity has effective control over costs and that sales are growing faster than operating costs. Operating profit also offers investors the opportunity to make comparisons between different companies profit margin. Operating profit measures in fact the business's ability to generate cash , and many experts consider this profit as a more reliable measure of performance. Since the operating profit margin takes into account not only the cost of materials and labor but administration and distribution expenses, margins will have a lower value than the gross profit margin.

6. Return on equity (ROE) highlights the efficiency of capital invested in a business.

(30)

$$ROE = \frac{GRE}{E} x\ 100$$

where:

E- represents equity;

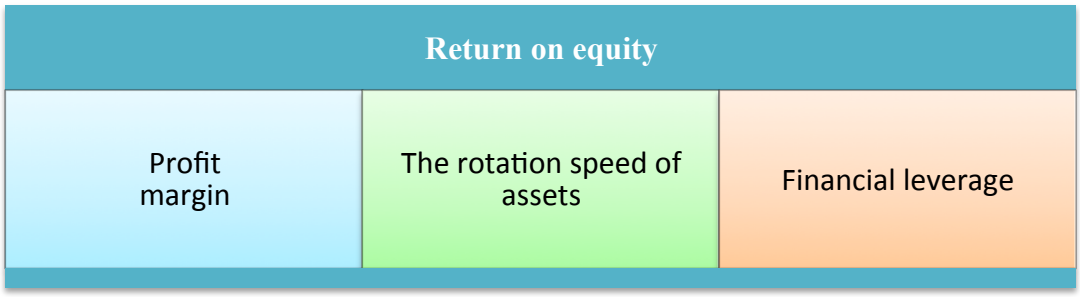
ROE- represents the return on equity rate.

Return on equity can be highlighted based on the indicator "Return on equity" which is calculated as a ratio between net profit and equity:

(31)

$$ROE = \frac{NRE}{E} x\ 100$$

Figure 1-Factors that influence return on equity



In order to highlight the contribution of capital invested in fixed assets, in obtaining financial profit, the model presented above may be elaborated as follows: *(32)*

$$ROE = \frac{IA}{E} x \frac{NT}{IA} x \frac{NRE}{NT} x100 = GF\ x\ FAT\ x\ PMS$$

In which:

- GF - is the share of investment in share capital;
- FAT - (Fixed-Assets Turnover);
- PMS - (Profit on Margin Sales).

From the analysis of the indicator these conclusions can be formulated:

✓ if the investment in fixed assets financed by share capital increases, the financial profitability of the company increases;

✓ if the the number of rotations of the assets is higher than the previous financial year, then there is an increase in the financial return;

✓ if profitability in net sales is increasing compared to the previous period, then there will be an increase in the rate of financial return.

7. The rate of return signifies income contribution to strengthening the cash flow of entities.

(33)

$$RR = \frac{NRE}{T} x100$$

unde:

RR - represents the rate of return;

NRE - represents the net result of the exercise.

T - represents the turnover.

This rate is also called net profit margin indicating the relative effectiveness of the economic entity after deducting all expenses and income taxes. Comparing for a company the gross margin and net margin we get an indication of uninvolved cost in production and indirect costs such as administrative, financial and marketing.

7. Conclusions

Diagnosis is undoubtedly the starting point in designing, creating and implementing strategic and tactical solutions to improve the economic and financial viability and management of the company. Hence the need for a thorough knowledge both theoretically and methodologically, of this management tool, indispensable to individual and group managers. Diagnostic analysis is often characterized in the specialty literature as an evaluation, a "anamnesis" of the "patient" -company, but viewed through the lens of a symbiosis between diagnostic and financial analysis, it becomes an indispensable tool, for any company, not only for improving the management level and human resources but also for financially ensuring the financial stability and predictability of any given company.

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