

Conceptual Approach to Economic Efficiency Assessment of Finance Management System of Joint Stock Companies

Juscu Nicolae Cristian
Free International University of Moldova
alexcri74@yahoo.com

Abstract

The analysis of the concept of "economic efficiency assessment of finance management system of joint stock companies", as well as the analysis of the known assessment methods on the characteristic of financial activity have shown that the versatility of the issue being analyzed do not allow scientists to propose an optimal procedure for resolving it.

Key words: finance management efficiency, financial analysis, assessment methods, management system.

J.E.L. classification: G15

1. Introduction

On the one hand, the existence of a wide range of assessment methods regarding the economic efficiency of finance management system of joint stock companies denotes the fact that each of these methods provide a certain degree of implementation efficiency, and on the other hand, the high number of methods shows the fact that it lacks a systematic non-contradictory unique analysis. Although the basis of company financial analysis at present is represented by a set of standard vertical and horizontal coefficients and it is obvious that the methods for the assessment of the economic efficiency of finance management system of joint stock companies do not lack technical and systematic drawbacks, they also have a limited practical use.

Besides that, we want to emphasize the fact that the above mentioned methods do not offer an analysis of the sources of efficiency of finance management of joint stock companies. In order to eliminate this significant drawback, we propose an

improvement of the approach regarding the assessment of the efficiency of company finance management.

Many experts noticed the duality of the sources of the efficiency of joint stock company finance management. Reasoning upon the management efficiency at a theoretical level it was demonstrated that the particularity of company management consists of the fact that the achievement of management objectives is done both within the management system (the management subject) and within the managed object. This complex interaction of objectives within the management-production system requires examining the outcome of the activities of the two sub-systems – the ruler and the ruled. Each of these sub-systems has its own resources and one should take into account their efficient usage.

Speaking about the domain of finance, Stancu I. asserts that "The financial statement of an organization depends on the available resources, the financial structure, solvency, cash and the management's ability to adjust to the changes of the internal and external environment" [2]. Poloz A. [1] agrees with him: "The financial statement is provided both by objective characteristics of the field of activity and by the efficient organization of production, management and other components".

P. Cumz and M. Watson mention an obvious correlation between the management system of the company and its assessment by the participants on the securities market. "Therefore, in the US and Britain investors are willing to pay 18% more for the shares of companies that offer an efficient corporative management than for the shares of companies whose financial indices are similar, but the company management practice is less perfect. In Italy, a similar amount was 22%, in Indonesia – 27%".

In our opinion, regarding the assessment of the economic efficiency of finance management system of joint stock companies, there are two basic elements to be emphasized:

- 1) the assessment of the company's financial potential, seen as an opportunity to reach a certain level of the company's financial status;
- 2) the assessment of financial management efficiency.

2. Analysis of data

The traditional methods for complex assessment of efficiency of financial management of joint stock companies analyzed in the previous subchapter – ignore the existence of these two assessments as separate components. Therefore, they cannot determine if the change in the overall efficiency of the company financial management is conditioned by the efficiency increase in its financial service functionality. At the same time, in similar circumstances, such as the knowledge and abilities of financial managers, as well as their constituting the usage system of company financial management instruments and techniques, they determine the level of efficiency in the financial management system of joint stock companies.

Let us analyze the following function:

$$O^{(\phi)} = \mu_F + \mu_{FM} - u(\mu_F, \mu_{FM}) \quad (2.1)$$

Source: developed by the author

The financial potential in a certain sector of economy, from the perspective of a company in this sector, can be assessed according to the formula:

$$\mu_F = \mu(x_1, x_2, \dots, x_N) \quad (2.2)$$

Source: developed by the author

where x_1, x_2, \dots, x_N – values of the financial statement of other companies in the analyzed sector, calculated by the same method as parameter $I^{(\phi)}$, and $\mu(x_1, x_2, \dots, x_N)$ – the function that allows these calculations (for example, the weighted average function).

Parameter μ_F , calculated by this formula, may have both positive and negative values, depending on the significance of the assessment of the financial statement of the company in the analyzed sector.

The deviation of the actual assessment of the company financial statement from the financial potential depends on the efficiency of the corporate financial management and on the scale effect.

Parameter $u(\mu_F, \mu_{FM})$ within the formula (2.1) represents the value of the efficiency of corporate financial management of the company being examined. Recognizing the zero value as the state of absolute inefficiency, we will consider that $u(\mu_F, \mu_{FM})$ has only positive values.

The $u(\mu_F, \mu_{FM})$ function represents a correction component, that reflects in formula (2.1) the scale effect of the relations between the parameters of the financial potential of the company and of the efficiency of financial management, and is determined using the formula:

$$u(\mu_F, \mu_{FM}) = \sqrt{\frac{|\mu_F|}{\mu_{FM}}} \quad (2.3)$$

Source: developed by the author

If the economic sector is profitable enough or unprofitable (meaning that the value of the financial potential is high and corresponds to the absolute value), then the contribution of efficient management in modifying the financial statement of the company will not be essential. The same is also applicable for the case when, irrespective of the extent of the financial potential of the company, the weight of financial management efficiency is extremely low. And, on the contrary, the high efficiency of financial management allows a relatively easy management of the changes that occur in the financial system of the company.

The fulfillment of the conditions necessary for (2.3) formula is not difficult to verify, by analyzing the limits of the function $u(\mu_F, \mu_{FM})$.

Thus, if the efficiency of financial management is not high enough to overcome the scale effect, the actual financial statement of the company is more serious than its financial potential.

The function (2.1) has a number of specific properties. Thus, a extremely high or extremely low value of the financial statement of the company corresponds to some extremely high or extremely low value of the efficiency of financial potential and financial management of the company. In

this case, any increase of the financial management efficiency, in similar conditions, leads to the increase of the assessment of financial statement of the company. At the same time, the addition of the financial statement of the company towards the financial management efficiency, is subordinate to "returned value law", meaning to keep the financial potential of the company to a certain level, increasing the efficiency of financial management in the same extent, every time will lead to a slower increase of the financial status value.

The execution of these particularities is not difficult to verify at the limits analysis of the function $I^{(\phi)}$ and by analyzing the first and second derivates.

Thus, the function (2.1) represents a mathematical expression of the main relations between the financial status of the company, the efficiency of financial management and financial potential of the company in a sector of the economy.

Calculation regarding the financial statement of the company and its financial potency are more widespread in the practice of finance management, then efficiency calculations of financial management. Thus we will transform formula (2.1), by expressing μ_{FM} through $I^{(\phi)}$ and μ_F :

$$\left(\sqrt{\mu_{FM}}\right) + \left(\mu_F - I^{(\phi)}\right) \cdot \sqrt{\mu_F} - \sqrt{|\mu_F|} = 0. \quad (2.4)$$

Source: developed by the author

According to the Cardano decision, the actual radical of this cubic equation will be type:

$$\sqrt{\mu_{FM}} = \sqrt[3]{\frac{\sqrt{|\mu_F|}}{2} + \sqrt{\frac{(\mu_F - I^{(\phi)})^3}{27} + \frac{|\mu_F|}{4}}} + \sqrt[3]{\frac{\sqrt{|\mu_F|}}{2} - \sqrt{\frac{(\mu_F - I^{(\phi)})^3}{27} + \frac{|\mu_F|}{4}}},$$

$$\mu_{FM} = \left[\sqrt[3]{\frac{\sqrt{|\mu_F|}}{2} + \sqrt{\frac{(\mu_F - I^{(\phi)})^3}{27} + \frac{|\mu_F|}{4}}} + \sqrt[3]{\frac{\sqrt{|\mu_F|}}{2} - \sqrt{\frac{(\mu_F - I^{(\phi)})^3}{27} + \frac{|\mu_F|}{4}}} \right]^2 \quad (2.5)$$

Source: developed based on the Cardano decision

However, if the value μ_F is below 0, then:

$$\frac{(\mu_F - I^{(F)})^3}{27} + \frac{|\mu_F|}{4} < 0 \quad (2.6)$$

Source: developed by the author

and μ_{FM} will be expressed by a complex number. By correspondence, we will determine the final formula for the calculation of μ_{FM} as follows:

$$\mu_{FM} = \begin{cases} +\infty, & \text{pentru } Q \text{ complex} \\ \left[\sqrt[3]{\frac{\sqrt{|\mu_F|}}{2} + Q} + \sqrt[3]{\frac{\sqrt{|\mu_F|}}{2} - Q} \right]^2 \end{cases}$$

$$\text{unde } Q = \sqrt{\frac{(\mu_F - I^{(\phi)})^3}{27} + \frac{|\mu_F|}{4}} \quad (2.7)$$

Source: developed by the author

Here, parameter Q represents the excess indicator of the actual financial statement of the company in comparison to its financial potential. If this excess is high then the marker is of + sign and it means that "the efficiency of financial management is fairly high".

The assessment of the efficiency of finance management system of joint stock companies proposed by (2.1) and the assessment of the efficiency of financial management (2.7), represents a common position towards the assessment of the efficiency of financial management of joint stock companies.

The assessment of efficiency by (2.1) formula excludes the identification of the efficiency of financial management system of joint stock companies as a whole and of the efficiency of financial management of organizations, which represents a key moment, determining the practical importance of this approach. This approach to the assessment of the economic efficiency of the financial management system of joint stock companies offers the possibility to identify the negative tendencies in financial management in advance. When the traditional assessment methods indicate an

increase of the management efficiency as a whole, this approach shows a possible negative dynamic of financial management.

3. Conclusions

In Romanian and international practice, the interest in assessing the efficiency of financial management of joint stock companies is manifested mainly by the contracting companies and financial managers who promote anti-crisis management. This is due to the fact that today, worldwide, bankruptcy cases, bankruptcy scandals as well as damages resulted because of bankruptcy reached an unprecedented level. Thus, the study undergone by specialists of World Bank indicated that in developed countries, officially during the first decade of the 21st century, an average of 1% out of the total companies reached bankruptcy, annually.

The need for an adequate assessment of corporate financial management is present in Romanian practice as well, because the financial statement of Romanian companies in the economic environment today, continues to be characterized as undergoing a crisis. According to official statistics, more than 56% of the autochthonous enterprises tend towards insolvency.

The complex analysis of the assessment basis of economic efficiency of financial management of joint stock companies should be conducted following two directions. The first direction is the analysis of approaches which will allow us to understand the essence of one of the most assessed characteristics of financial management of joint stock companies – management efficiency. The second direction is the analysis of the assessment of efficiency as a specific type of activity, after the quantitative assessment of this characteristic.

In many cases, the integral coefficient is proposed as main indicator for the assessment of the economic efficiency of corporate structures and which is made of individual components of the chosen indicator system. However, in our opinion, this eliminates the main difference of the narrow interpretations of efficiency.

The process of assessment methods regarding the economic efficiency of finance management system of joint stock companies

as a particular activity implies both technical difficulty and fundamental problems. The fundamental problems, which determine the development of approaches to the assessment of this characteristic of financial activity, refer to the following:

- 1) principle measurability of efficiency;
- 2) degradation of performance indicators;
- 3) extrapolation argument.

The issue of principle measurability or non-measurability of such characteristics as efficiency, is closely related to the capacities of human reason, the ability to formalize and measure different categories. The category apparatus allows the formation of structures included in the efficiency of company management, for example social and psychological costs, as well as of the performance of comparison and choice while lacking some clear criteria. But the evaluation of efficiency in such a broad interpretation, as well as the attempts to formalize the human reasoning process is extremely difficult.

Any assessment indicator regarding the efficiency is convenient to be applied only in the case when it allows the comparison of two objects from the point of view of their efficiency. Verifying any efficiency indicator is made by determining its capacity to destroy the efficiency levels (high level, low level).

For this it is necessary to observe a certain variation of this indicator, premeditated for a certain group of the researched objects. If the value of the selected indicator does not vary sufficiently from an object to the category of another object, then this indicator is not useful to undergo an assessment.

Nevertheless, the appropriate assessment of economic efficiency of financial management of joint stock companies does not seem to be unachievable. It can be achieved with a relative precision. Because the negative action of the fundamental factors, that influence the assessment of efficiency, cannot be eliminated, this influence has to be reduced to minimum, by developing some concrete methods for the assessment of the efficiency of financial management of joint stock companies.

Our interpretation, which considers the efficiency of financial management of joint stock companies as being the capacity of a company to reach and maintain a certain financial level by using the resources available for a certain period of time, allows us to equate the efficiency assessment

methods with assessment methods regarding the financial statement of a company. At the same time, various categories of methods, normally defined as "company bankruptcy forecast methods" should also be analyzed, because, in our opinion, these methods can also be included in the category of corporate financial statement assessment methods.

There were chosen as the objects of analysis both well known methods and new studies proposed by specialists for the assessment of the financial status of the company. A condition for constituting the methods for assessment of the economic efficiency of financial management of joint stock companies is represented by its complexity. Therefore, the category of methods analyzed can be reduced to the complex methods used for the assessment of the financial statement of a company, meaning those methods which characterize at least two of the four fundamental aspects of the financial statement of a company (profitability, turnover, cash, stability). Most of the methods of the complex analysis regarding the assessment of the financial statement represent formal methods, based on certain numeric algorithms. Then, all the formal methods used for the assessment of financial management efficiency of joint stock companies are made up according to one of these two aspects. According to the first aspect, the elements of the indicator system which forms the basis of assessment methods, contribute to the formation of an integral coefficient, and its values are used to perform the necessary assessments. Such methods (defined as integral methods) are the most widespread in practice.

In order to obtain an optimal variant of the comparative data analysis of the methods, we believe that calculations should be performed based on the data encompassing a group of companies; this group should comprise both companies on the verge of bankruptcy and companies that operate normally. Thus, if we consider the bankruptcy situation as a maximum inefficiency situation of financial management of joint stock companies, then

these calculations may indicate the applicability of these methods in assessing the efficiency of corporate financial efficiency. Nevertheless, the absence of statistic data regarding companies in Romania already under bankruptcy does not allow us to put this method in the autochthonous practice.

Methods based on assessment by rating may generally be considered satisfactory, while statistic, expert and cluster methods present unsatisfactory results in assessing financial management of joint stock companies.

Many experts note the duality of sources of financial management efficiency of joint stock companies. Reflecting upon the management efficiency at a theoretical level it was demonstrated that the particularities of company management consist of the fact that the achievement of the management objectives is done both within the management system (the management subject) as well as within the managed object.

This complex interaction of objectives within the management-production system requires examining the outcome of the activities of the two sub-systems – the ruler and the ruled. Each of these sub-systems has its own resources and one should take into account their efficient usage.

The assessment of the efficiency of finance management system of joint stock companies proposed by (2.1) and the assessment of the efficiency of financial management (2.7), represents a common position towards the assessment of the efficiency of financial management of joint stock companies.

4. References

- [1] Poloz A. Corporate Finance in Joint Stock Companies in the Republic of Moldova. „Economic” Magazine, no.1, ASEM, Chişinău 2005 p. 25-29.
- [2] Stancu, I., Finances, Economic Publishing House, Bucharest, 1998, p. 410.