Evaluation of Existing Methods for Determination the Economic Efficiency of Management and Control of Joint Stock Companies' Finance

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Abstract

Content analysis of the concept of "effective" management of joint stock companies' finance" and examination of major issues related to the process evaluation of that characteristic of the company's financial activity, allows us to formulate requirements (conditions) for specific methods of assessing the economic efficiency finance management of joint stock companies.

Key words: economic efficiency, economic indicators, methods of assessment, management system.
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1. Foreword

Principled conditions to any method of assessing the economic efficiency of financial management of joint stock company are related to its complexity (coverage of various aspects of finance companies) and minimize the negative influence of fundamental factors influencing the assessment of efficiency.

Elaboration methods usually reduces to the conditions of selecting items efficiency indicator system and identify relationships between them.

Generally, experts believe that the systems of indicators necessary for evaluation of their efficiency and integral coefficients must be designed based on these systems and meet the following conditions:

- optimal number of indicators;
- content;
- stability.

Provided the optimal number of indicators include requirements for volume and their sufficiency. On the one hand, the system chosen by indicators should fully characterize the subject choose by evaluation - economic efficiency of financial management of joint stock company. On the other hand, the number of indicators organized in the system should not be too large because otherwise natural boundaries of assimilation of information will be depleted and so the information will be lost.

2. Analysis of data

The possibility of extrapolation is characteristic for most integration methods which are based on statistical methods. Conclusions based on the results of the financial statement made by these methods, often refers to a certain future horizon. For example, according to the methods no. 2, 4, 5, depending on calculations of entirely coefficient towards value criteria to determine whether the probability of bankruptcy of the company will be high or low in the next few years.

The main object of criticism integral methods based on statistical methods is their instability. Management science specialists stated that established methods using multiple discriminant analysis are unstable in time and space. Comparison of the data received from several countries shows that the share link Z and threshold interval [Zb Z2] are very different not only from country to country but from year to year within a country.

Integral methods based on statistical methods are not protected from possible manipulation of indicators that are used in

these methods. If the situation remains relatively stable (i.e. criteria values do not vary greatly from one period to another), degradation indicators in these models, it is very probable. On the other hand, as already indicated, destabilizing the situation in the economy leads to degradation method.

Moreover, some scholars have questioned the methodological arguments of the method of E. Altman, and other analog methods: regression methods of E. Altman cannot make a reliable estimate of the financial position of various companies, firms because of the restricted of their application.

These methods are appropriate and applicable only to those companies whose financial indicators were included in all statistical methods for calculating the coefficients.

The second group of methods is the methods based on full type rating.

In the classical approach, benchmarking rating is a distance between the financial situation of analysis companies and the reference financial situation. So, the lower the appreciation by rating, the more effective is the company's financial management. But in some ways based on ratings, established norms of indicators and integrated indicator calculated based on them, is the basis of a simple comparisons without making an analogy with the calculation interval.

Making analogies with intervals, shows that conditions on the content are made within these methods.

Since the methods based on assessment ratings operates with benchmarking, which takes values from a standard interval (0.1), then stability of methods is preserved in time.

Even significant changes in the external economic environment (for example, a situation of economic crisis in the country) appear, does not distort financial management effectiveness evaluations of joint stock company within the selected group of companies. Both evaluations until and after the crisis based on the rating assessment methods, characterize the comparative position of companies on a sample of companies (for example, branch or region) in terms of efficiency of financial management of joint stock companies.

Accordingly, the issue of stability in the space industry or stability for this type of methods does not arise at all. Evaluation of the efficiency of this method is always done in a particular sample of companies and comparing the results received under this sample, with the sample results received from other companies, is only possible if a unification of these two samples is done.

Assessment methods based on the ratings are less prone to degradation indicators. It is not possible to determine exactly how much needs to be distorted indicators of a company as evaluating the effectiveness of its financial management to meet the conditions provided, taking into account the fact that this evaluation is determined based on the multiple values of the indicators of other companies included in the analysis.

Solving the optimal number of indicators using methods of evaluation by rating is not performed by applying the algorithm, as in methods based on statistical methods. Therefore, some methods contain a greater number of indicators (20 indicators each). However this problem can be easily solved by using special methods in the screening stage of indicators. For example, a variant of solving this problem would be the analysis of coefficients components using a statistical method.

This method allows you to select from a full set of indicators those whose correlation is relatively low. As a result, their number is reduced without losing significant information about the studied phenomenon.

If as evaluation indicators are chosen static characteristics of a company's financial situation, then inside the group of analysis methods there are not sufficient foundation for extrapolation the assessing efficiency, because these predictions also requires making assumptions about changes in financial position of other companies in the sample. However, if instead of static characteristics will use the dynamic ones (e.g. growth rate indicators) in this case will be also analyzed the key indicators trends of other companies in the sample evaluated, and the extrapolation will be more motivated.

This assessment is an effective tool for measuring the company competitiveness growth in its field of activity.

However, the algorithm itself to develop the methods based on the evaluation rating has many methodological shortcomings.

The main objection is that not all the indicators used to assess various aspects of the financial situation of the company satisfy the conditions "the more the better" or "the less the better."

Thus, for example, a high value of the coefficient of liquidity may indicate the inefficiency of financial management of the company because of the excessive amount of financial resources that are not involved in creating added value. But, according to the rating assessment method, maximum liquidity coefficient is chosen as the standard.

In addition, it is theoretically possible a situation when, after the results of the election standard values will be obtained a standard conventional company whose existence is essentially impossible. In other words, will not be able to develop such a balance sheet and profit and loss report, that all indicators of method to receive the standard values.

This specific approach to comparative analysis of financial indicators will be unreasonable in terms of economics.

Expert methods of evaluating the effectiveness of financial management of joint stock companies are used to determine the weighting coefficients, whose calculation indicators are part of the integral coefficients. Expert evaluation methods can be also used to identify criteria for the indicators values often used in cluster methods.

In our opinion, using the expert methods of integral type, methodological is without perspective, which results from the specific of groups of experts.

As mentioned in the literature, "experts can usually compare objects or projects in general, but cannot identify the contribution of different factors" [1]. Thus, the reliability and validity of information on the effectiveness of financial management limited liability companies is questionable.

Integral coefficient of expert methods can not be interpreted otherwise than only by qualitative indicators of the financial situation of the company, but shown from the broad definition of "economic interpretation" the conditions about the content are fulfilled. The condition on the optimal number of indicators can be done using statistical methods mentioned above.

Expert evaluation method stability is not ensured. Building expert methods of evaluating the effectiveness involves the establishing of specific tasks for an expert group (for example, setting the parameters of time, region, sector affiliation). We cannot take into account the results received from using this method for the formulation of other tasks. If formulated tasks are generally, then the argument for applying this method is questioned because of the narrow qualifications of the experts, since the evaluated field is very vast.

Similar arguments can be presented as a critical reasoning to argument the extrapolation within expert evaluation methods.

The most acute problem in expert evaluation methods is the degradation of indicators. You can already make mistakes at the stage of training the weights in the formula of full coefficient.

The last two groups of integral type methods is a new current in financial analysis and are the base of non-trivial mathematical theories.

Application of fuzzy sets methods in financial management results from statistical methods and expert criticism. For the scientific establishment of efficiency assessment methods based on statistical methods is necessary to have a statistical homogeneity in the studied group of companies. Application of expert methods is not possible because of the human thought specificity: experts find it difficult to make numerical estimates, while the distribution of the assessed objects can be measured relatively easily.

These two problems in fuzzy sets methods are eliminated by introducing the concepts of "quasi-homogeneous" and "quasi-statistics" and transition to operations with fuzzy classifiers. This allows the formulation of expert assessments, by expressing their qualitative rather than quantitative ("good", "less significant", etc.).

Establishment method based on fuzzy sets method is the following algorithm:

1) it forms a system of indicators, to form a hierarchy of indicators-factors of the company's financial situation;
2) it is developing the histograms of indicators values selected for the companies part of analyzed group;

3) it is determines the linguistic classification parameters of the indicators values. The optimum would be split into five classes of stock level indicators - 'very low', 'low', 'medium', 'high' and 'very high';
4) moving up from the histogram of indicators values to fuzzy classifiers indicated by the linguistic classification;
5) in accordance with the rules determined by the operations with fuzzy sets, is recognized the quality level of the values of some indicators and the assessment of the financial condition of the company as a whole.

Histogram analysis, as the hierarchy of indicators used, ensures the necessary condition on the optimal number of indicators. Developing the factorial model of the financial situation of the company, and the obtaining the qualitative characteristics, ensure the necessary conditions on the content integrated indicator. Methods based on fuzzy sets methods are prone to degradation indicators due to a complicated mathematical tool, which underlies their.

The possibility of extrapolation inside this method cannot be considered fully substantiated. However, in choosing forecasts interval while the main basic parameters of macroeconomic environment are considered relatively stable, the analyzed companies retain their quasi-homogeneity.

The fact that full evaluation of the effectiveness of financial management of joint stock companies inside this method is not based on quantitative characteristics, but of quality, ensuring the stability of these methods over time. The situation regarding the spatial and inter-sectoral stability is similar to the rating assessment methods: each of these methods applies only to companies from a single branch and / or region included in the quasi-statistical.

Integrated assessment method was developed to perform a comprehensive assessment of quality based on the selection of optimal alternatives as Pareto principle, the proposed system of axioms. The basis of this method is the concept of assessing the difficulty of achieving that goal, if is known the quality and quality conditions of necessary resources to achieve this objective. Characteristic of this method to evaluate the effectiveness of financial management of joint stock companies as an objective serves the absolute financial stability of the company and quality of resources and conditions that are treated as normal quality and affordable financial statements comply with the indices.

It can be said that this method, to some extent, resembles the rating valuation methods - especially in terms of standardization of indicators based on data values companies included in the analysis - proceeding from this that all the advantages of the rating assessment methods are inherent on this method. Meanwhile, in this method, the term "company-standard" is not present, which leads to removal of shortcomings in evaluation methods by rating the above mentioned.

The second type of formal methods is cluster method (method no. 1). These methods meet two conditions - the content indicators (clusters are used to the quality) and the existence of an optimal number of indicators (to be done by using statistical methods). The other conditions are not met or complied smaller. Here, the main factor is the method by which it determines the criteria by which a company is assigned to a cluster or another.

If the ranges of values of indicators were determined based on statistical surveys of selecting the company, then cluster methods are assigned the same critical objections as for statistical methods[2]. If criterial values were determined by means of experts, than such cluster methods fall under the critical expert evaluation methods. Finally, the next group of methods determined by us is informal methods. In our opinion, they practically do not provide reliable information on the economic efficiency of financial management of the analyzed company.

They are similar to expert evaluation methods, with one difference - they do not operate with financial indicators. In this method does not consider by experts weighting coefficients or criterial values of indicators, but the financial situation of the company as a whole. In the absence of objective data from company reports, informal methods do not allow us to judge about the stability or validity of extrapolating results. Lack of information can lead to

distortions in reporting results in the interest of evaluating the effectiveness of company.

Thus, informal methods are heuristic procedures. They can simplify and / or narrow your search alternatives of finance management decisions. Their use is possible at different stages of financial analysis, but cannot substitute the formal methods based on accounting information.

3. Conclusions

In conclusion, the analysis of whole type of formal methods is presented in Table1.1.

Table 1.1. Evaluation of formal methods for determining the economic efficiency of financial management of joint stock company

Conditions for the establishment of methods	Methods for assessing the efficiency					
	Integrals					Cluster
	Statistics data	of Rating	Expert	fuzzy type	Assessment of difficulties	
Minimizing the influence of degradation indicators	■	±±	—	+	+	-
Extrapolation argument	+	±	—	±	±	—
Optimal number of indicators	+	±	±	±	±	±
Content indicators	+	+	+	+	+	+
Stability method	—	+	—	+	+	—

Source: prepared by author

„+" – conditions are fully realized,
„±" – conditions is achieved with some limits,
„-"conditions is not achieved.

The conditions relating to minimize the influence of degradation indicators, efficiency arguments extrapolation parameters, the optimal number of indicators, their content and methods for assessing the stability of financial management efficiency of the company stock, are best observed by fuzzy methods. These conditions are also reflected in the methods based on assessment difficulties. Methods based on the evaluation by ratings, can be considered generally satisfactory and statistical methods, expert and cluster shows unsatisfactory results in the evaluation of financial management of company stock.

4. References

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