ISCKMC 2020

International Scientific Congress «KNOWLEDGE, MAN AND CIVILIZATION»

COMPARATIVE ANALYSIS OF METHODS FOR ASSESSING THE FINANCIAL CONDITION OF AN ENTERPRISE

Anastasiya Aleksandrovna Rukosueva (a)*, Daria Sergeevna Shalaeva (a),
Vladislav Viktorovich Kukartsev (a, b), Anna Aleksandrovna Leonteva (b),
Stanislav Vyacheslavovich Apanasenko (a), Veronika Vyacheslavovna Ivanenko (a)

(a) Reshetnev Siberian State University of Science and Technology, 31, Krasnoyarsky Rabochy Av., Krasnoyarsk, 660037, Russian Federation, E-mail: vlad_saa_2000@mail.ru
(b) Siberian Federal University, 79, Svobodny pr., Krasnoyarsk, 660041, Russian Federation, E-mail: vlad_saa_2000@mail.ru

Abstract

This article is devoted to the topic of assessing the financial condition of an enterprise. In the current financial situation, any enterprise can be on the verge of bankruptcy. In this regard, the issues of identifying unfavorable trends in business development, forecasting a crisis situation and bankruptcy are of paramount importance for economic entities, which determines the relevance of the chosen research topic. The paper defines bankruptcy as a financial phenomenon. The study provides recently statistics on the bankruptcy of subjects in the Russian Federation. The paper examines the essence and necessity of financial analysis of the enterprise. The methods of financial analysis of the enterprise are also discussed, namely: vertical, horizontal, trend, coefficient, comparative and factor ones. The work reveals the main problems of existing methods and their advantages in comparison with others. In addition, the study demonstrates the benefits of a comprehensive assessment of the financial condition of an enterprise.

Keywords: Financial condition, enterprise, analysis methods, business development, forecasting a crisis situation

1. Introduction

Many economists predict an increase in the number of bankrupts in Russia at the end of the year due to the coronavirus and the crisis. At the moment, a temporary ban has been introduced on initiating bankruptcy proceedings at the request of creditors in case of debts to budgets or authorities.

The following Russian scientists addressed the problem of assessing the risk of bankruptcy of an organization in their works: S.G. Belyaev, M.G. Delyagin, O.V. Efimova, O.P. Zaitseva, G.P. Ivanov, V.N. Kazakov, V. V. Kovalev, V. I. Koshkin, T. Yu. Morozova, V. F. Paliy, P.C. Saifullin, G. K. Tal, E. A. Utkin, M. A. Fedotova, A. N. Khorin, A. D. Sheremet and others.

2. Problem Statement

The financial condition of an enterprise (FCE) is a complex economic category that reflects the state of capital in the process of its circulation and the ability of a business entity to self-development at a certain point in time. In the process of entrepreneurial activity, there is a continuous process of capital circulation, the structure of funds and sources of their formation, the availability and need for financial resources and, as a consequence, the financial condition of the enterprise, the external manifestation of which is the ability to pay, changes (Bezzubov, 2017).

Currently, there are such programs with which you can constantly monitor the state of the company and make management decisions. But for our purposes they are not suitable, since they are not universal and are not included in the list of programs permitted for the Federal Tax Service of Russia.

3. Research Questions

This article is devoted to the topic of assessing the financial condition of an enterprise. In the current financial situation, any enterprise can be on the verge of bankruptcy. In this regard, the issues of identifying unfavorable trends in business development, forecasting a crisis situation and bankruptcy are of paramount importance for economic entities, which determines the relevance of the chosen research topic. The paper defines bankruptcy as a financial phenomenon. The study provides statistics recently on the bankruptcy of subjects in the Russian Federation. The paper examines the essence and necessity of financial analysis of the enterprise. And also analyzed the methods of financial analysis of the enterprise, namely: vertical, horizontal, trend, coefficient, comparative and factor. The work reveals the main problems of existing methods and their advantages in comparison with others. In addition, the study demonstrates the benefits of a comprehensive assessment of the financial condition of an enterprise.

4. Purpose of the Study

The purpose of this article is to assess the application of different methods of financial analysis to reduce the risk of bankruptcy of legal entities.

5. Research Methods

There are six main methods of financial analysis (Kashirina, 2016):

- Horizontal (time) analysis - comparison of each reporting item with the data of the previous period.
- Vertical (structural) analysis - identifying the proportion of individual items in the final indicator, taken as 100%.
- Trend analysis - comparing each reporting item with the data of previous periods and determining the trend, that is, the main dynamics of the indicator, without considering external factors.
- Analysis of relative indicators (coefficients) - calculation of the relationship between the individual items of the reporting and determination of their relationships.
- Comparative (spatial) analysis is an analysis of the reporting indicators of subsidiaries and structural divisions, as well as a comparative analysis with the indicators of competitors.
- Factor analysis - analysis of the influence of individual factors (causes) on the result indicator. Moreover, factor analysis can be either direct (analysis itself), when the resulting indicator is divided into its component parts, and reverse (synthesis), when its individual elements are combined into a common indicator.

Each method has its own pros and cons.

So horizontal analysis helps to study the change in the balance sheet totals over time. Any two or three periods are taken for analysis, these can be quarters or years. As part of a temporary balance sheet analysis, the values of both absolute indicators in monetary terms and relative indicators in percent are compared. For example, when determining the change in the amount of fixed assets, the formula will look like (Financial Statement Analysis):

Absolute growth = amount of fixed assets in the current year - amount of fixed assets in the previous year.

$$\text{Relative growth} = \frac{absolute growth}{amount of fixed assets in the previous year} * 100\%, \quad (1)$$

When studying long-term phenomena occurring for three years or more, it is advisable to use deflators to obtain real results of changes in the phenomenon in the process of its development. Therefore, the positive side of horizontal analysis is the ability to assess the dynamics of financial indicators over the years. A significant drawback is the fact that this type of analysis is not very suitable for assessing the financial condition and decision-making by managers. In addition, it requires the participation of the analyst, since the interpretation of the results depends on the phenomenon that is being investigated.

In vertical analysis, reporting items are given as a percentage of its total indicator. They clearly show how much deviations have occurred and in which direction, for data analysis this method is more convenient, since when calculating in absolute terms it is not always clear how much the situation has worsened or improved. Vertical analysis allows you to determine the structure of the main elements of assets and liabilities of the organization and the influence of individual factors on the financial result.

The calculation of the structure of assets occurs through dividing a certain element of an asset by the total amount of assets. For example, determining the share of inventories in the total structure of assets is as follows:

$$\text{Share of production stocks} = \frac{costofinventory}{amountofassets} * 100\%, \qquad (2)$$

Vertical analysis can be carried out in relation to the three main elements of financial statements: balance sheet, income statement and cash flow statement.

Therefore, we can say that vertical analysis makes it possible to track changes in the structure of assets and liabilities of a firm, but does not allow assessing its financial condition. Also, when analyzing the results, it is necessary to pay attention to the scope of the enterprise, the history of its functioning, the state of the market and the influence of its participants on the capital structure.

Trend analysis is a type of horizontal analysis and is used when comparing indicators for more than three years. The trend analysis method is based on the use of data from the series of dynamics of the estimated factors, such as the balance sheet currency, the structure of assets and liabilities of the enterprise. The use of this method makes it possible to assess the main directions of changes in the factors characterizing the business, development of the enterprise at the current moment and in subsequent periods (Trend Analysis).

The use of this method is irrelevant in this period of time due to the unstable situation in the world and, moreover, can only be applied by specialists - qualified analysts.

As a key method of financial analysis can be called coefficient. This is explained by the fact that the assessment of the state of the enterprise and the adoption of various management decisions aimed at changing specific indicators are made on the basis of financial and economic coefficients. In this method, one can observe a direct relationship between the company's resources that have been considered and the efficiency of their operation.

In the coefficient analysis of enterprises, the following disadvantages can be identified:

- The value of financial ratios is greatly influenced by the accounting policy of the enterprise.
- The plurality of the proposed sets of coefficients in the analysis makes it difficult to assess the state of the enterprise on their basis, as well as the development and implementation of management decisions.
- The complexity of reasonable rate setting. The diversification of activities makes it difficult to comparative analysis of the coefficients by industry, since the standard values can vary for different industries.
- There are no uniform formulas for calculating the coefficients, often in different sources the same coefficients are called different terms and have different calculation formulas.
- The normative coefficients selected as a basis for comparison may not be optimal and may not correspond to the short-term objectives of the period under review.

The method of comparative (spatial) analysis is to compare homogeneous objects with each other. These can be financial ratios, quality characteristics of goods, property values, income, net profit, and so

on. This method is used, for example, when studying the dynamics and structure of a process or phenomenon, when determining the market position of a company, when identifying the direction of development of an enterprise, and so on.

Examples of using this method:

- Comparison of the value of a certain indicator for a period in time.
- Comparison of the indicator value with the data of competitors.
- Comparison of the indicator with the industry average values.
- Comparison of the indicator with the final one to determine the share.
- Comparison of the indicator with the normative or reference values.

Using this method requires specialized knowledge and additional information about the performance in your industry.

Factor analysis is used to study and measure the impact of factors on the value of the final indicator. This analysis is a method of multivariate mathematical statistics used in research in order to identify a certain number of factors hidden from direct observation. With the help of factor analysis, not only a connection is established between changes in one variable and changes in another variable, but the measure of this connection is determined and the main factors underlying these changes are revealed. This analysis is used to study the impact of factors on the value of the final indicator.

Factor analysis can be direct, when the effective indicator is broken down into its component parts, and inverse, when individual elements are combined into a common effective indicator.

Factor analysis can be one-stage, when only one level factors are studied for analysis, and multi-stage, when factors are detailed into their constituent elements to study their behavior.

Factor analysis can be retrospective, when the reasons for changes in the final indicators for past periods are studied, and promising, when the behavior of factors and their impact on performance indicators in the future is examined.

Factor analysis can be static, which is used to study the influence of factors on performance indicators at a certain date, and dynamic, when causal relationships are investigated in dynamics.

This analysis is especially productive at the initial stages of scientific research, when it is necessary to highlight any preliminary patterns in the area under study. This allows the subsequent experiment to be made more perfect in comparison with the experiment on variables chosen arbitrarily or randomly. As a method, this analysis has certain weaknesses, in particular, there is no unambiguous mathematical solution to the problem of factor loads, that is, the influence of individual factors on changes in various variables (Chistyakova, 2019). Also, this method is difficult for an ordinary entrepreneur to understand without involving an analyst.

6. Findings

Modern financial analysis has certain differences from the traditional analysis of financial and economic activities. First of all, this is due to the growing influence of external factors on the operation of enterprises. In particular, the dependence of the financial condition on inflationary processes, the

reliability of counterparties, and the increasingly complex organizational and legal forms of functioning has increased. Since the existing methods and models for assessing the financial condition of an enterprise are basic and in practice are very rarely used in their pure form, it is proposed to use a certain complex assessment model to obtain a more accurate result (Firsova, 2009).

A comprehensive assessment of the financial condition of an enterprise is the final, most perfect method for analyzing its financial condition. This assessment of the financial condition of an enterprise helps to determine its economic potential, which makes it possible to find its place in the economic environment. Assessment of the property and financial and economic condition of the enterprise creates the necessary information base for making managerial and financial decisions in relation to problematic issues and attracting investments, if necessary. Also, a comprehensive analysis makes it possible to identify problematic aspects of the enterprise and find out the reasons for them, but on its basis, it is very difficult to draw specific conclusions about the financial condition of the enterprise as a whole (Efimova, 2010).

7. Conclusion

As a result of the work carried out, traditional methods of analyzing the financial condition of an enterprise were studied, which allow a comprehensive assessment of the state of the enterprise, in order to identify and eliminate shortcomings in the financial and economic activities of the enterprise, as well as to search for reserves to increase liquidity, financial stability, the level of business activity and the efficiency of the enterprise. ... But their use in practice has shown that each of the methods has its own shortcomings; to eliminate them, a combination of existing methods in the analysis of financial condition is necessary. The resulting assessment model helps to draw a conclusion about the state of the organization at the moment, in which specific areas it is necessary to conduct this work, make it possible to identify the most important aspects and the weakest positions in the financial condition of the enterprise.

References

Bezzubov, M. Y. (2017). *Analysis of the financial condition of the organization "TEKHNOSREDA" LLC.* http://e-koncept.ru/2017/770355.html

Chistyakova, A. P. (2019). *The value of factor analysis in terms of assessing the financial situation of a commercial enterprise.* https://moluch.ru/archive/244/56317.html

Efimova, O. V. (2010). *Financial analysis: modern tools for making economic decisions: textbook.* Omega-M.

Federal Law dated 26.10.2002 No. 127-FZ "On Insolvency (Bankruptcy).

Financial Statement Analysis: Concept and Methods. *Finstanon.* https://www.finstanon.com/articles/39-financial-statement-analysis-concept-and-methods.html

Firsova. E. V. (2009). *Financial analysis methods.* https://cyberleninka.ru/article/n/metody-finansovogo-analiza-1/viewer.html

Kashirina, E. A. (2016). *Review of methods of financial analysis of Efimov.* https://cyberleninka.ru/article/n/obzor-metodov-finansovogo-analiza.html

Makarova, L. V., Tarasov, R. V., & Akzhigitova, O. F. (2014). *Methodology of enterprise ompetitiveness evaluation.* http://web.snauka.ru/issues/2014/02/31616