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## IMPROVING THE SYSTEM OF ASSESSMENT AND MANAGEMENT OF FINANCIAL SECURITY OF STATE JOINT-STOCK COMPANIES

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Abstract: Many models for assessing the level of financial security are based on a study of a small number of public industrial enterprises in a particular industry, while the vast majority of financial risks are generated by small and medium-sized enterprises, for which these models are inapplicable. This study aims to present a new model for assessing the level of financial security, differentiated by industry and applicable not only for large companies but also for assessing small and medium-sized businesses.

*Keywords:* Assessment of the financial security of an enterprise, determinants of financial security, financial security.

The financial security of enterprises and organizations is an important indicator of the development of any company (Kovalenko et al., 2019). A high degree of company insurance against internal and external threats is the key to achieving the goals planned by the company (Sergeev, 2019). Financial analysis as the most important component of financial science has received the most powerful development in recent decades. Research scientists around the world have made a huge contribution to the formation of this branch of science. Algorithms and methods for its implementation were created, methods for assessing the probability of bankruptcy, rating models, as well as criteria for evaluating such a complex and multidimensional concept as the financial security of a company were developed.

The importance of finding new financial analysis tools, as well as improving existing ones, lies in the range of tasks that such an analysis helps to solve. First of all, the financial security analysis is necessary when checking the counterparty of a legal entity to reduce credit risks (Safargaliev et al., 2019). Also, the analysis of financial security expands the possibilities for assessing the probability of bankruptcy of an

enterprise. Finally, the financial security analysis is used when choosing long-term investment objects, since the priority in such a strategy is the stability and reliability of companies.

Modern methods of data processing, as well as the creation of information and analytical systems, create the necessary conditions for the development of science and the improvement of methods for assessing the financial security of a company.

The relevance of this study is due to the following reasons:

1. The concept of financial security and the analysis of the financial security of an enterprise have been widely developed in Russian science since the beginning of the 21st century. Having analyzed the main methods of Russian authors, such as Papekhin (2007), Blazhevich (2011), Zaporozhtseva and Ryabykh (2013), Kavyrshina and Sharykina (2016), Sapozhnikova and Tkacheva (2019), it can be concluded that they are not suitable for the study of small and medium-sized businesses, as they are based on an array of accounting data of a limited number of public manufacturing enterprises. This feature is due to the simplicity of collecting information, since the presence of errors or inaccuracies in the audited financial statements of large industrial companies is unlikely, while in openly published reports of small and medium-sized businesses, such inaccuracies occur in every fifth company, creating statistical outliers in the data array, for the search and exclusion of which specialized methods are also needed. Applying the recommended values of financial coefficients of large companies to small and medium-sized businesses, we can make unreasonable conclusions about their financial condition, since these values for them will be overestimated (Kovalev, 2010). One of the objectives of the study is to create a financial security model suitable for companies of any scale of activity.

2. Earlier studies are limited to the study of industrial companies, without providing an opportunity to assess the financial condition of companies in other industries. Undoubtedly, the added value created by industrial enterprises is a significant share of GDP. But, speaking of the generated financial and credit risks, it is worth pointing out that in terms of the absolute number of bankrupt companies from year to year, such industries as trade and construction are leading. The objectives of this study include the differentiation of the financial security assessment model by industry. At the

same time, the work explores such industries as trade, construction, manufacturing and mining. Industries were selected based on two criteria: systemic importance and frequency of bankruptcies.

3. Modern models are also not suitable for analyzing large amounts of data and generating ratings, since they partially use qualitative coefficients or non-public information, which limits the use of the author's models to assess the financial security of a small number of companies.

Various methods are currently used to determine the level of financial security of an enterprise. The most common is the indicator approach, which consists in choosing certain indicators that characterize financial security, comparing actual values with threshold ones.

Among the indicators should be indicators that take into account industry specifics, the most typical for a given enterprise and of great strategic importance for the latter. The system of indicators should correspond to the composition and importance of the main threats to the financial security of the enterprise. That is, when determining the threshold values, it is necessary to take into account the characteristics of the enterprise, the specifics and conditions of the market where the products are sold, and other factors.

The existing assessment models, on the one hand, are a vivid reflection of the scientific progress of Russian scientists in the field of studying the financial security of companies. However, not all of them are suitable for checking counterparties, forming credit ratings (Volna et al., 2020).

A significant contribution of researchers lies in the development of recommended ranges of values of the main financial indicators. The existing models define criteria for assessing the level of financial security for specific values of financial coefficients.

According to the authors, the main disadvantage of the existing methods is that they can all be used for a small group of industrial companies. Another negative aspect of the basic techniques is the presence of linearly dependent variables in them that create autocorrelation in the models. The most difficult task in determining the determinants of financial security that any researcher faces is the absence of a target value (guideline) since financial security is an abstract concept that has no material expression (Kočišováa & Mišankováa, 2014).

After analyzing the methods of Russian authors, the resulting score according to the Kavyrshina method (Kavyrshina & Sharykina, 2016) was adopted as a guideline for this study. At this stage, this author's methodology is the most appropriate for analyzing large amounts of data.

[It is reasonable to divide the presentation of the research results into five stages:

1. Formation of an array of accounting data of the studied group of companies.

2. Determination of the most relevant indicators affecting the level of financial security, assessment of the closeness of their connection with the resulting account.

3. Determination of recommended values for the specified parameters of financial security.

4. Formation of the model.

5. Evaluation of the model's performance.

Formation of input data for model construction

The collection of accounting data was carried out using the information and analytical systems SPARK and Rusprofile. The main criterion for choosing companies was the revenue indicator in 2019. For mining, manufacturing and construction, the minimum figure is 500 million rubles in 2019. For trading companies, the threshold value of annual revenue was taken at 2 billion rubles. The second selection criterion was the availability of financial statements (balance sheet and income statement) for the period 2015-2019. The processing of such a large amount of data takes a long time, while the financial statements for the reporting year become publicly available in April-May of the next calendar year. This is the reason why the study is limited to 2019.

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