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FORMATION OF THE SYSTEM OF ASSESSMENTS OF THE FINANCIAL AND INVESTMENT POTENTIAL OF AN ENTERPRISE

Abstract. Based on the analysis of literary sources and based on the research objective it is suggested to group the evaluation indicators in the following directions: indicators of profitability, indicators of market activity, indicators of liquidity, indicators of capital structure (financial stability).

To form a well-grounded list of indicators, it is suggested to apply a ranking method, where the basis for determining the rank of an indicator is the frequency of its use in the considered methods. In order to determine the expediency of grouping the indicators of evaluation of financial and investment potential of an enterprise, the use of factor analysis is proposed. Thus it allows to classify and systematize the space of the research features and group the factors into their economic content.

In the course of the research carried out, the existing theoretical approaches to assessing the financial and investment potential of enterprises were considered, which made it possible to group the evaluation indicators in a number of areas, to form a well-founded list of indicators based on the application of the ranking method. The use of factor analysis allowed to form a final list of indicators of financial and investment potential of an enterprise in the context of the proposed assessment groups.

Keywords: indicator, grouping, ranking, evaluation, financial and investment potential, factor.

JEL Classification: C01, G3

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ФОРМУВАННЯ СИСТЕМИ ПОКАЗНИКІВ ОЦІНКИ ФІНАНСОВО-ІНВЕСТИЦІЙНОГО ПОТЕНЦІАЛУ ПІДПРИЄМСТВА

Анотація. У статті розглянуто проблему формування системи показників оцінювання фінансово-інвестиційного потенціалу підприємств, досліджено теоретичні підходи до його оцінки. Здійснено групування показників оцінювання за рядом напрямків, формування обґрунтованого переліку показників на основі застосування методу ранжування, визначено

доцільність групування визначених показників за допомогою факторного аналізу. Проведено класифікацію та систематизацію простору ознак дослідження та згруповано фактори за їх економічним змістом.

Ключові слова: показник, групування, ранжування, оцінювання, фінансово-інвестиційний потенціал, фактор.

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ФОРМИРОВАНИЕ СИСТЕМЫ ПОКАЗАТЕЛЕЙ ОЦЕНКИ ФИНАНСОВО-ИНВЕСТИЦИОННОГО ПОТЕНЦИАЛА ПРЕДПРИЯТИЯ

Аннотация. В статье рассмотрена проблема формирования системы показателей оценки финансово-инвестиционного потенциала предприятий, исследованы теоретические подходы к его оценке. Проведена группировка показателей оценки по ряду направлений, формирование обоснованного перечня показателей на основе применения метода ранжирования, определена целесообразность группирования определенных показателей с помощью факторного анализа. Проведена классификация и систематизация пространства признаков исследования и сгруппированы факторы по их экономическому содержанию.

Ключевые слова: показатель, группировки, ранжирования, оценки, финансово-инвестиционный потенциал, фактор.

Формул: 0; рис.: 3; табл.: 2; библ.: 13.

Introduction. In conditions of limitation and high costs, the complexity of attracting financial and investment resources, an important role in formulating the methodical provision of strategic management of domestic enterprises is given to the solution of a problem of constructing a sound system of indicators for evaluating their financial and investment potential, which will facilitate the most expedient use of the relevant resources.

Analysis of recent researches and problem statement. Many domestic scientists such as V.G. Bykov, O. M. Vakulchik, N. O. Vlasov, T. A. Govorushko, T. S. Golubev, S. A. Yerokhin, S. O. Zubkov, I. V. Zyatkovsky, O. A. Kirichenko, N. I. Klymash, M. A. Kovalenko, A. E. Kuzmin, K. V. Pavlyuk, O. A. Proboev, Yu. M. Rysnyansky, G. V. Silakova, V. L. Chesnokov, MV Cherna and others were engaged in the study of various theoretical approaches to assessing the financial and investment potential. But despite a large number of scientific papers on this issue, there are various approaches to the development of a system of indicators for evaluating financial and investment potential. That is why this problem requires a thorough solution.

The purpose of the paper is to develop a system of indicators for assessing the financial and investment potential of machine-building enterprises.

Research results. Based on the analysis of literary sources [1-12] and based on the research objective it is suggested to group the evaluation indicators in the following directions (Fig. 1):

– indicators of profitability – characterize the efficiency of using the resources of an enterprise through its profitability, expressed through the comparison of profits received in the process of its financial and economic activity with the volume of financial and economic resources spent;

- indicators of market activity – provide an opportunity to assess an enterprise in terms of the intensity and efficiency of the entity's activities in different types of markets, where this entity operates. In this connection it is expedient to distinguish:
 - indicators of activity in the market of goods and services;
 - indicators of activity in the financial market;
- indicators of liquidity – characterize an enterprise in terms of expediency of its assets formation and the ability to fulfill its obligations in a timely and complete manner;
- indicators of capital structure (financial stability) – provide an opportunity to determine the financial and investment potential of a company from the point of view of ensuring the necessary level of its financial independence from external sources of financing.

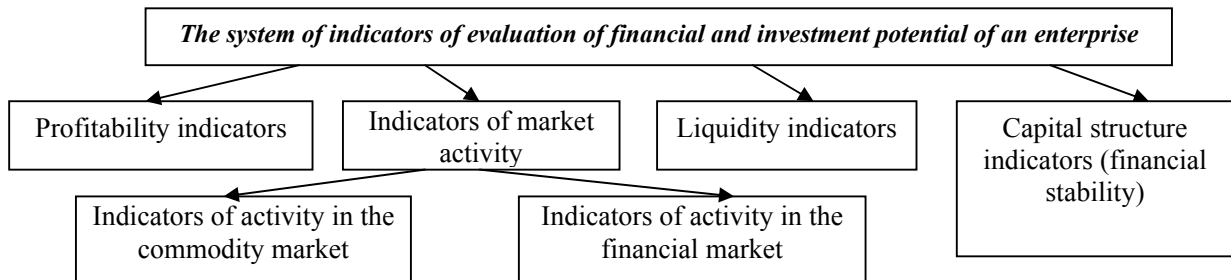


Fig. 1. The system of indicators of evaluation of financial and investment potential of an enterprise

- indicators of profitability – characterize the efficiency of using the resources of an enterprise through its profitability, expressed through the comparison of profits received in the process of its financial and economic activity with the volume of financial and economic resources spent;
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- indicators of capital structure (financial stability) – provide an opportunity to determine the financial and investment potential of a company from the point of view of ensuring the necessary level of its financial independence from external sources of financing.

The tool for forming the initial set of indicators is an analysis of literary sources and the existing system of methodical recommendations for conducting financial analysis of business entities in Ukraine, the use of which is conditioned by the need for a detailed and comprehensive study of existing approaches and achievements in the issues under study. In the course of the study, the analysis of literary sources [1-12] on the choice of indicators that reflect the financial and investment potential of an enterprise by the selected groups has been made (Figure 1). To form a well-grounded list of indicators, it is suggested to apply a ranking method [13], where the basis for determining the rank of an indicator is the frequency of its use in the considered methods. In order to include the indicators to the final set, it is expedient to select the highest ranks (especially from the first to the third), except on the group of indicators of capital structure(financial stability), which is stipulated by the following. In this group, the coefficient of concentration of attracted capital (rank 2) has a direct logical connection with the coefficient of autonomy (rank 1) (their sum is always equal to one); the coefficient of financial dependence (rank 3) is reversed to the coefficient of autonomy. In this case, we can argue that it is impractical to use them for further analysis, and only the indicators with rank 1 (autonomy coefficient and financial risk coefficient) should be included in the final aggregate.

Thus, a substantiated list of indicators for assessing the financial and investment potential of an enterprise is given in Table. 1

Table 1

A validated list of indicators for evaluating the financial and investment potential of an enterprise

| Sign of grouping | Indicator | Symbolic designation | Formula of an indicator calculation | |
|---|---|---|--|--|
| 1.1 Profitability Indicators | Return on assets of an enterprise | X ₁₁₁ | The ratio of net profit to the average annual value of an enterprise assets | |
| | Cost effectiveness of implementation | X ₁₁₂ | The ratio of net profit to the overturn | |
| | Return on equity | X ₁₁₃ | The ratio of net profit to the average annual cost of equity | |
| 1.2 Indicators of market activity | 1.2.1. Indicators of activity in the commodity market | Assets turnover rate | X ₁₂₁ | The ratio of net revenues from sales to the average annual amount of assets |
| | | Days sales outstanding coefficient | X ₁₂₂ | The ratio of net revenues from sales to the average customers' receivable |
| | | Turnover rate of accounts payable | X ₁₂₃ | The ratio of the cost of sales to the average annual cost of payables to suppliers |
| | | Coefficient of turnover of material and production supplies | X ₁₂₄ | The ratio of the cost of sales to the average annual cost of m inventories |
| | | Coefficient of turnover of fixed assets (return on capital) | X ₁₂₅ | The ratio of the volume of sales to the average annual cost of fixed assets |
| | | Return on equity ratio | X ₁₂₆ | The ratio of the volume of sales to the average annual cost of equity capital |
| | 1.2.2. Indicators of activity in the financial market | Return on equity | X ₁₂₇ | The ratio of net profit to share capital |
| | | Provision of share capital with net assets | X ₁₂₈ | Ratio of share capital to net assets of an enterprise |
| | | Share of dividends paid | X ₁₂₉ | The ratio of dividends paid to net profit |
| | | Earnings per a share | X ₁₂₁₀ | The ratio of net profit to share capital |
| 1.3. Liquidity indicators | Coefficient of total (current) liquidity | X ₁₃₁ | The ratio of current assets to short-term liabilities | |
| | Current liability ratio | X ₁₃₂ | The ratio of cash, short-term financial investments, net receivables to short-term liabilities | |
| | Absolute liquidity ratio | X ₁₃₃ | The ratio of cash to short-term liabilities | |
| 1.4. Capital structure indicators (financial stability) | The coefficient of autonomy | X ₁₄₁ | Ratio of equity capital to balance making-up | |
| | Coefficient of financial risk | X ₁₄₂ | The ratio of borrowed capital to equity capital | |

In order to determine the expediency of grouping the indicators of evaluation of financial and investment potential of an enterprise, the use of factor analysis is proposed. Thus it allows to classify and systematize the space of the research features and group the factors into their economic content. One of the most common approaches to factors constructing is the use of the method of main components, the main advantages of which is the transparency of calculation algorithm, automatization due to application packages and the possibility of obtaining more adequate results by means of the inverse of factor loads matrix.

The algorithm for applying the principal component method is shown in Fig. 2. The implementation of this algorithm is carried out with the help of PP Statistica 10.0 based on statistical information for 41 machine-building enterprises of Kharkiv region.

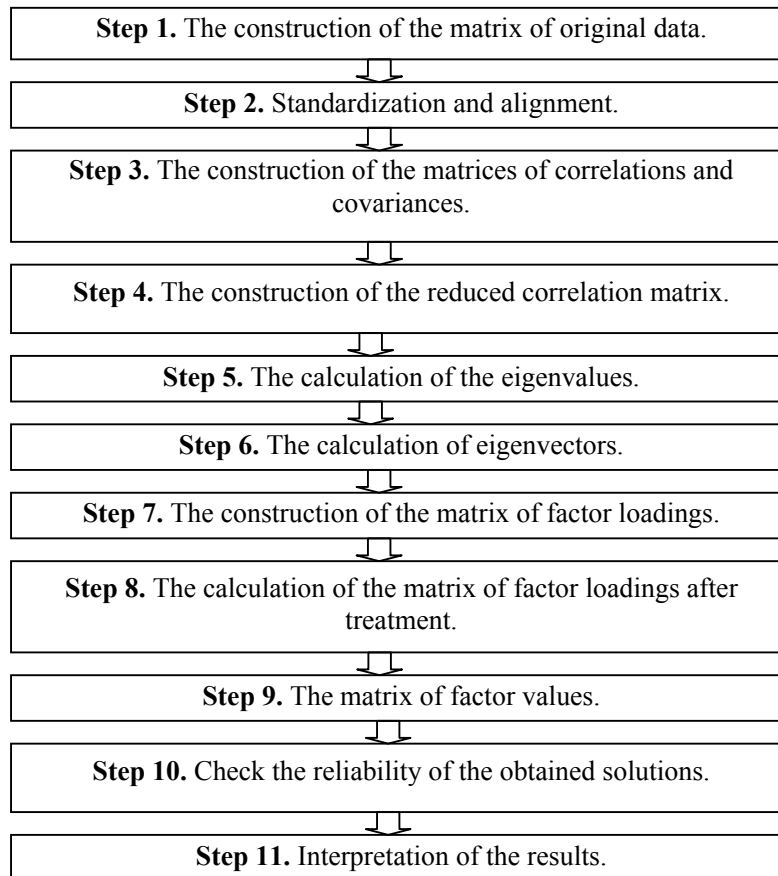


Fig. 2. The algorithm for applying the principal component method

In Fig. 3 the matrix of factor loads is given according to the complex of factors of estimation of financial and investment potential of an enterprise.

| Variable | Factor Loadings (Varimax normalized) (База 2013) Extraction: Principal components (Marked loadings are >,700000) | | | | |
|----------|--|-----------------|-----------------|------------------|-----------------|
| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
| x111 | 0,478672 | 0,328116 | 0,866110 | -0,002297 | 0,352280 |
| x112 | 0,413790 | -0,047054 | 0,777172 | 0,079937 | 0,102040 |
| x113 | 0,192032 | 0,036639 | 0,719307 | 0,118266 | 0,468925 |
| x121 | 0,930328 | -0,021347 | 0,240136 | 0,016132 | 0,104182 |
| x122 | 0,901056 | 0,086459 | -0,097059 | 0,072150 | 0,213379 |
| x123 | 0,925347 | -0,097264 | 0,042925 | 0,014250 | 0,137520 |
| x124 | 0,910880 | 0,547599 | 0,192744 | 0,037639 | 0,027796 |
| x125 | 0,745961 | 0,017475 | 0,303647 | 0,010397 | 0,078792 |
| x126 | 0,759417 | -0,072623 | 0,394781 | -0,003324 | -0,182099 |
| x127 | -0,055485 | 0,895258 | 0,173006 | 0,062113 | -0,100838 |
| x128 | -0,031312 | 0,841609 | -0,044304 | 0,192558 | 0,104055 |
| x131 | 0,042331 | 0,294042 | 0,089435 | 0,031119 | 0,707808 |
| x132 | -0,029864 | 0,172210 | -0,036811 | 0,034920 | 0,710439 |
| x133 | 0,334011 | 0,150551 | -0,011995 | 0,142610 | 0,719125 |
| x141 | 0,038360 | 0,025647 | 0,135362 | 0,933547 | 0,000801 |
| x142 | 0,073547 | 0,115786 | 0,062471 | -0,936978 | 0,002510 |
| Expl.Var | 5,0589645 | 2,0966911 | 2,2892937 | 1,8404882 | 2,0137013 |
| Prp.Totl | 0,3161852 | 0,1310432 | 0,1430808 | 0,1150305 | 0,1258563 |

Fig. 3. Matrix of factor loads

The results of the analysis show that the five factors that have been identified describe 83% of the variance of the entire initial list of factors, which confirms the adequacy of the calculations performed. The economic interpretation of the selected factors is given in Table 2.

Table 2

Composition and economic content of the selected factors

| Factor | List of indicators included in the factor | Grouping sign |
|----------|---|--|
| Factor 1 | X ₁₂₁ , X ₁₂₂ , X ₁₂₃ , X ₁₂₄ , X ₁₂₅ , X ₁₂₆ | Indicators of activity in the commodity market |
| Factor 2 | X ₁₂₇ , X ₁₂₈ | Indicators of activity in the financial market |
| Factor 3 | X ₁₁₁ , X ₁₁₂ , X ₁₁₃ | Profitability indicators |
| Factor 4 | X ₁₄₁ , X ₁₄₂ | Capital structure indicators (financial stability) |
| Factor 5 | X ₁₃₁ , X ₁₃₂ , X ₁₃₃ | Liquidity indicators |

Conclusions. In the course of the research carried out, the existing theoretical approaches to assessing the financial and investment potential of enterprises were considered, which made it possible to group the evaluation indicators in a number of areas, to form a well-founded list of indicators based on the application of the ranking method. The use of factor analysis allowed to form a final list of indicators of financial and investment potential of an enterprise in the context of the proposed assessment groups.

Further research is aimed at conducting the assessment of the financial and investment potential of enterprises.

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