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УДОСКОНАЛЕННЯ ОЦІНКИ ФІНАНСОВОГО СТАНУ ПІДПРИЄМСТВА

Анотація. Запропоновано удосконалену методику оцінки фінансового стану підприємства за допомогою матричного моделювання. Методика передбачає побудову матриць, що характеризують окремі аспекти фінансового стану: ліквідність та платоспроможність, рентабельність, фінансову стійкість, ділову активність та майновий стан підприємства. Також обґрунтовано підхід до визначення інтегральної оцінки фінансового стану на підставі результатів розрахунку матриць.

Ключові слова: матричне моделювання, фінансовий стан, ліквідність, рентабельність, фінансова стійкість, ділова активність, майновий стан підприємства.

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СОВЕРШЕНСТВОВАНИЕ ОЦЕНКИ ФИНАНСОВОГО СОСТОЯНИЯ ПРЕДПРИЯТИЯ

Аннотация. Предложена усовершенствованная методика оценки финансового состояния предприятия с помощью матричного моделирования. Методика предусматривает построение матриц, характеризующих отдельные аспекты финансового состояния: ликвидность и платежеспособность, рентабельность, финансовую устойчивость, деловую активность и имущественное состояние предприятия. Также обоснован подход к определению интегральной оценки финансового состояния на основе результатов расчета матриц.

Ключевые слова: матричное моделирование, финансовое состояние, ликвидность, рентабельность, финансовая устойчивость, деловая активность, имущественное состояние предприятия.

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IMPROVING THE ASSESSMENT OF A COMPANY'S FINANCIAL CONDITION

Abstract. The article offers an improved method for assessing the financial condition of a company using a matrix model. The method involves building matrices that describe certain aspects of financial condition: liquidity, solvency, profitability, financial stability, business activity and property condition of enterprises. An approach to definition of an integral assessment of financial condition on the basis of matrix calculation results has been substantiated.

Key words: matrix modelling, financial condition, liquidity, profitability, financial stability, business activity, property condition of a company.

Statement of the problem. In the transition to a market economy Ukraine relations, the development of the economic independence of enterprises greatly increased the role and importance of timely and qualitative analysis of the financial condition of the company and its management.

The main purpose of financial analysis is to obtain a small number of key indicators (most informative) that enables an objective and accurate picture of the financial condition of the company, its profits and losses, changes in the assets and liabilities in settlements with debtors and creditors. To solve this problem, many methods of analysis used.

The structure of the analytical procedures included two models structure: rapid assessment of financial and business enterprises and in-depth financial analysis [10].

The aim of rapid analysis is to obtain rapid, visual and reliable information about the financial position and the selection of a small number of indicators and track their dynamics.

In general, the program is an in-depth analysis of the financial condition of the enterprise includes horizontal and vertical analysis balance sheet analysis ratios.

Thus, there is the problem of developing methodically approach for comprehensive analysis of financial condition.

Analysis of recent research and publications. Today many authors dealing with financial analysis [2, 4, 5, 6, 7, 8, 10], paying attention

to the composition of indicators by which to assess the financial position. This, basically, is the in-depth financial analysis. Question rapid analysis is also not left unattended researchers [2, 6, 10], but the problem is solved at the level of structure parameters on which it is advisable to conduct such an analysis. The main drawback of the traditional approach to assessing the financial situation is the fragmentation of the results and the inability to obtain the synthesis result.

One method that helps to not only adequately show state of the phenomenon as a whole, but also come to identify in unused internal reserves to improve enterprise, is the method of matrix modeling [1]. Using matrix models to assess the financial condition, it is possible to get results more quickly and do s conclusions. Efficiency is ensured by providing automation capabilities payments, which reduces the complexity of its implementation.

Analysis methods of financial analysis we present in Table 1.

Table 1

Advantages and disadvantages of methods of financial analysis

The method of financial analysis	The Benefits	Deficiencies
1	2	3
Horizontal analysis of balance	-Informative analysis; - Analysis of changes in individual indicators and forecasts; - The possibility of inter-farm comparisons; - Objectivity of automation and the possibility of settlement; - Description of the dynamics of the indicators	- Analysis of the subject only original or modified reporting; - The complexity of the analysis in terms of inflation; - Inaccuracy of the results; - Lack of complexity estimation
Vertical analysis of balance	- The possibility of inter-farm comparisons; - Easing of inflationary processes; - Informative analysis; - Objectivity of the assessment; - Possibility to automate calculations	- Analysis of only the original or modified reporting; - Inaccuracy of the results; - The lack of complexity of the evaluation; - Study the structure of the balance sheet only

Ending the table 1

1	2	3
Analysis of relative indicators	- Objectivity of the assessment; - Informative analysis; - Integrated assessment; - Construction of time series of indicators; - To establish the nature of economic growth; - The possibility of factor analysis	- High complexity in the analysis; - It is difficult to automate the process of settlement; - The difficulty to identify "bottlenecks" and proposals; - Lack of compactness presentation of results; - Difficulty in obtaining integral indicators
The matrix model	- The accuracy of the results; - Objectivity of the assessment; - Integrated assessment; - Possibility to automate calculations; - Provide compact results; - To provide generalized results	- Very high information content, which complicates the perception of information; - The results can be seen only in the dynamics and compare them with those of other enterprises

Matrix model, with all these techniques has more advantages than disadvantages, so it was selected for further to a handling error.

To assess the financial condition have been asked this matrix [3]. With this matrix it is advisable to generally characterize lnyy financial condition , and on some of its sides (liquidity, profitability, etc.), then conduct their analysis is complicated because the factors that characterize a specific side, "scattered" in the matrix. The proposed method can be regarded as a rapid analysis.

Remaining components of the overall problem. Despite current efforts to assess the financial condition of improvement entities using matrix modeling, remain unresolved issues related to the formation of private matrices to characterize the individual aspects of the financial situation of the company.

The wording of Article goals. Determination of parameters of the components of private-matrices, layout and generalization of the results is the goal of this article.

The main material of the study. The composition of private matrices characterizing certain aspects of the financial condition of an

enterprise, it is advisable to take a standard, according to the already existing todyk [3, 4]: liquidity and solvency, financial stability, business activities, return.

To construct the matrix was selected basic indicators that are responsible to the following criteria:

a) universality - a frequency component in the index calculation formulas;

b) neobchyslyuvanist component;

c) informative - an opportunity record keeping component.

For ease of reading matrix models, facilitating the drawing of inferences useful to provide a composite orderly appearance - to rebuild them. The matrix on the structure is square and all its elements are symmetrically main diagonal. From this it follows that the improved financial condition of the Company numeric value of one or more elements below the main diagonal is always increasing, on the other hand - are reduced.

Matrix characterizing the liquidity and solvency of the company, provides indicators by which to calculate the known factors: absolute liquidity ratio and coverage of investment; value of receivables and payables; coefficient of term (operational) liquidity; intermediate coverage ratio (or critical evaluation); current ratio. These figures are current assets (ПА); current liabilities (ПП); costs (К); receivables (Дз); payables (Кз); current assets minus inventories (ПА – З).

After ordering these parameters we obtain the matrix shown in the Fig. 1.

Matrix that describes the financial stability of the company, has the following components: their running costs (ВОК) current assets (ОА); equity capital (ВК) ; liabilities (П); debt (ПК).

According to the method of organizing the components have ordered a number of factors: ВОК, ВК, ОА, П, ПК. On the basis of building a matrix assessing the financial viability, as reflected in Fig. 2.

Matrix that describes the business activity (resursoviddachu, turnover of capital, transformation of assets) and property performance, has the following components: fixed productive assets (ОВФ); current assets (ОА); assets (А); non-current assets (НА); net sales (ЧВ); receivables (Дз); equity capital (ВК); payables (Кз).

	$К$	$ПА-3$	$ПА$	$Дз$	$Кз$	$ПП$
$К$	1					
$ПА-3$	$\dfrac{К}{ПА-3}$	1				
$ПА$	$\dfrac{К}{ПА}$	$\dfrac{ПА-3}{ПА}$	1			
$Дз$	$\dfrac{К}{Дз}$	$\dfrac{ПА-3}{Дз}$	$\dfrac{ПА}{Дз}$	1		
$Кз$	$\dfrac{К}{Кз}$	$\dfrac{ПА-3}{Кз}$	$\dfrac{ПА}{Кз}$	$\dfrac{Дз}{Кз}$	1	
$ПП$	$\dfrac{К}{ПП}$	$\dfrac{ПА-3}{ПП}$	$\dfrac{ПА}{ПП}$	$\dfrac{Дз}{ПП}$	$\dfrac{Кз}{ПП}$	1

Fig. 1. **Matrix assessing the liquidity and solvency company**

	$ВОК$	$ВК$	$ОА$	$П$	$ПК$
$ВОК$	1				
$ВК$	$\dfrac{ВОК}{ВК}$	1			
$ОА$	$\dfrac{ВОК}{ОА}$	$\dfrac{ВК}{ОА}$	1		
$П$	$\dfrac{ВОК}{П}$	$\dfrac{ВК}{П}$	$\dfrac{ОА}{П}$	1	
$ПК$	$\dfrac{ВОК}{ПК}$	$\dfrac{ВК}{ПК}$	$\dfrac{ОА}{ПК}$	$\dfrac{П}{ПК}$	1

Fig. 2. **Matrix assessing the financial viability**

According to the method of organizing the components are forged ordered a number: ЧВ, ОА, ОВФ, ВК, НА, А, Дз, Кз. On the basis of building a matrix displayed in Fig. 3.

	ЧВ	ВК	ОА	ОВФ	НА	А	Дз	Кз
ЧВ	1							
ВК	$\dfrac{ЧВ}{ВК}$	1						
ОА	$\dfrac{ЧВ}{ОА}$	$\dfrac{ВК}{ОА}$	1					
ОВФ	$\dfrac{ЧВ}{ОВФ}$	$\dfrac{ВК}{ОВФ}$	$\dfrac{ОА}{ОВФ}$	1				
НА	$\dfrac{ЧВ}{НА}$	$\dfrac{ВК}{НА}$	$\dfrac{ОА}{НА}$	$\dfrac{ОВФ}{НА}$	1			
А	$\dfrac{ЧВ}{А}$	$\dfrac{ВК}{А}$	$\dfrac{ОА}{А}$	$\dfrac{ОВФ}{А}$	$\dfrac{НА}{А}$	1		
Дз	$\dfrac{ЧВ}{Дз}$	$\dfrac{ВК}{Дз}$	$\dfrac{ОА}{Дз}$	$\dfrac{ОВФ}{Дз}$	$\dfrac{НА}{Дз}$	$\dfrac{А}{Дз}$	1	
Кз	$\dfrac{ЧВ}{Кз}$	$\dfrac{ВК}{Кз}$	$\dfrac{ОА}{Кз}$	$\dfrac{ОВФ}{Кз}$	$\dfrac{НА}{Кз}$	$\dfrac{А}{Кз}$	$\dfrac{Дз}{Кз}$	1

Fig. 3. **Matrix to assess business activities and property of the enterprise**

Matrix characterizing the profitability of the enterprise, has the following components: tax profit (БП); assets (А); net Profit (ЧП); equity capital (ВК); net sales (ЧВ); irreversible actives (НА); current assets (ОА). According to the method of organizing the components are forged ordered a number: ЧП, БП, ЧВ,ВК, ОА, НА, А. Building a matrix displayed in Fig. 4.

In addition to the qualitative features "stable financial position" and impeccable reputation of the enterprise must have a scientifically based generalized quantitative assessment of the financial condition of the company.

The integrated assessment allows to combine in a single index many different in content and title, units of measurement, the weight factors and other characteristics of financial condition.

	ЧП	БП	ЧВ	ВК	ОА	НА	А
ЧП	1						
БП	$\dfrac{ЧП}{БП}$	1					
ЧВ	$\dfrac{ЧП}{ЧВ}$	$\dfrac{БП}{ЧВ}$	1				
ВК	$\dfrac{ЧП}{ВК}$	$\dfrac{БП}{ВК}$	$\dfrac{ЧВ}{ВК}$	1			
ОА	$\dfrac{ЧП}{ОА}$	$\dfrac{БП}{ОА}$	$\dfrac{ЧВ}{ОА}$	$\dfrac{ВК}{ОА}$	1		
НА	$\dfrac{ЧП}{НА}$	$\dfrac{БП}{НА}$	$\dfrac{ЧВ}{НА}$	$\dfrac{ВК}{НА}$	$\dfrac{ОА}{НА}$	1	
А	$\dfrac{ЧП}{А}$	$\dfrac{БП}{А}$	$\dfrac{ЧВ}{А}$	$\dfrac{ВК}{А}$	$\dfrac{ОА}{А}$	$\dfrac{НА}{А}$	1

Fig. 4. **Matrix estimation profitability of the enterprise**

Using the proposed method for assessing the financial condition of the company is not sufficient, as each of the coefficients (a_1, a_2, ... ,a_n) differently affect the synthesis rate, which describes a different aspect of financial condition or in general, that the weight coefficients are different. Therefore proposed to compute the summary (integral) as the weighted average of the index.

$$Y = \Sigma(a_i \cdot k_i), \tag{1}$$

where Y - integral index;

     a_i - weightings financial condition;

     k_i - correction factors that take into account the significance of the relevant weightings of financial condition.

Conclusions. The technique for assessing the financial condition of the company on the basis of matrix modeling enables significantly simplify the analysis, and get the most info about rmatsiyu object is studied in terms of various aspects of financial sovogo condition. In addition, the approach is justified for the calculation of the integrated

assessment of the financial condition based on the results of calculation of some matrices.

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