Kyiv National University of Trade and Economics

Department of Economics and Business Finance

FINAL QUALIFYING PAPER

on the topic:

Diagnostics of an enterprise financial crisis

based on data of LLC "AMAKO Ukraine", Kyiv

Student of the 2nd year, group 3am, specialty 051 Economics specialization Financial Management

Anastasiia Lubenets

Scientific adviser PhD, Associate Professor Olena Matusova

Manager of the educational program Doctor of Economics, Professor

Hanna Sytnyk

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INTRODUCTION

Actuality of the theme. Nowadays every enterprise set stable development and efficiency as a target to achieve. This is due to market requirements to increase efficiency, implement successful management techniques and modern technologies surrounded by continuous competitiveness conditions. Solution to those problems is results of a comprehensive of effective ways of elimination of possible crisis situations in the enterprise, which allow making optimal management decisions for the further development of the enterprise and enhancement its performance or profitability. The changing state of the economy of Ukraine, excessive tax pressure and significant interference of state authorities into the activity of enterprises hinder their development. General political situation in the country is also quite unstable, what creates unfavorable conditions for successful business. This situation which has arisen for today's period in domestic economy leads to active development of the crisis phenomena both on macro- and at the micro level, having carried out the activity analysis of business subjects, becomes obvious that many enterprises works is unprofitable, the number of bankruptcies increases. The functioning of the enterprise in such market conditions significantly increases the likelihood of crisis situations at any stage of the life cycle of the business unit. All these questions demand from the enterprises to use those tools which will help to overcome the crisis phenomena in the activity and not to allow further bankruptcy of these enterprises. Accordingly, the value of the accuracy of assessing the quality of the financial condition of the enterprise, determination the level of its stability and the introduction of an effective mechanism of crisis management is increasing nowadays. It has given an impetus for development and research of rather new type of management.

The conceptual foundations of the essence and theory of diagnostics of an enterprise financial crisis are considered in the scientific works of domestic and foreign economists: I.Z. Adamova, T.I. Batrakova, I.O. Blank, S.M. Esh, O.M. Galenko, V.I. Hrachov, D. Iskandar, S.B. Dovbnya, I.P. Kosareva, T.B. Kuzenko R.P. Kyryliuk, T.V. Larikova, L.O. Lihonenko, O.D. Lytvynenko, O.A. Ostrovska, N.O.

Parhomenko, M.V. Pataridze-Vyshynska, T.O. Pozhuieva, V.V. Prohorova, A.A. Romanchuk, R.M. Skrynkovskyi, N.I. Synkevych, H.V. Sytnyk, N. Tanklevska, O.O. Tereshchenko, Y.S. Tsal-Tsalko, H.L. Vozniuk, M. Zubareva and others.

However, there are a number of theoretical and practical problems that remain unresolved both at the level of enterprises in general and at the level of individual branches. These should include the problem of improvement of the crisis-prevention system at the enterprise, clear mechanism of first steps-to-do in crisis conditions, qualify crisis-management system implementation and, of course, balanced system of post-crisis measures.

The purpose and tasks. The purpose of the research is to assess financial state of an enterprise in crisis condition and to find out the reserves of financial situation improvement.

The following **tasks** were set and solved in the final qualifying paper in order to achieve this goal:

- to identify theoretical aspects of investigation the financial crisis of an enterprise;
 - to conduct express diagnostics of crisis state of an enterprise;
 - to analyze factors of financial crisis of enterprise;
 - to make an assessment of enterprise financial crisis state with statistical model;
 - to evaluate of enterprise probability of bankruptcy;
 - to analyze the enterprise financial state in the planned period;
 - to give proposals of enterprise's performance indicators improvement.

The object of the research is a process of financial crisis diagnostics of an enterprise.

The subject of the research are theoretical, methodical and practical aspects of financial crisis diagnostics of an enterprise AMAKO UKRAINE LLC.

AMACO UKRAINE LLC is one of the largest dealers in Ukraine for the sale of agricultural machines and commercial vehicles. The company represents brands of agricultural machines such as Massey Ferguson, WESTERN, Geringhoff,

commercial vehicles IVECO and others.

The company started its activity in 1996 and is a part of powerful group of companies Alkhorayef Group, which activities are concentrated in 40 countries worldwide. AMACO's distribution network has 16 representative offices throughout Ukraine. Priority of the company operation is the after-sale customer service and assistance in solving any technological problems. Company has service centers with modern equipment and accurate methods of diagnosis.

Methods of the research. The methodology used for data collection includes document review combining case study method thesis. Research methods were based on general scientific and empirical methodical techniques of economics. During the literature review economic-statistical and mathematical methods of analysis, abstraction techniques were used. Such general theoretical methods of scientific knowledge as synthesis, deduction, induction and other methods were also used. Concerning methodical approaches, according to specific scientific (empirical) research of selected topics was conducted, among them the most frequently used in the work were calculation and analytical methods of comparison, data grouping, summarizing.

The main method used during practical part was linear regression analysis compared with descriptive and inferential analyses were conducted using Microsoft Excel.

The **information base** for research is articles, books and other scientific works of scientists regarding the importance and role of efficiency, performance or analysis of enterprise, methodical approaches to the implementation of a comprehensive economic analysis of the enterprise's activity. Secondary data was retrieved from statistical, annual reports of enterprises for the period 2018-2020.

The **scientific novelty** of the results obtained is the further development of the assessment of financial and crisis phenomena of enterprises in the field of trade in agricultural machinery equipment and details for it.

Practical meaning. The results of the conducted research and the suggested ways of optimization can be taken into account and used by the enterprise in the

further decision-making concerning financial crisis diagnostics of an enterprise.

Approbation. The results of the study were presented at the enterprise for their further application and published in the collection of master's articles "Economics and Finance of Enterprise" in an article on the topic: "Methodological basis of enterprises' financial state assessment on the basis of crisis management".

Structure of the paper. The logic of the research resulted in the structure of the work: introduction, 3 chapters, conclusions and proposals, references, 5 appendices. Total amount of pages in the work is 52 pages. Total amount of pages in the work with appendices is 65 pages.

CHAPTER 1

THEORETICAL BASES OF AN ENTERPRISE FINANCIAL CRISIS DIAGNOSICS

The changing state of the economy of Ukraine, excessive tax pressure and significant interference of state authorities into the activity of enterprises hinder their development. General political situation in the country is also quite unstable, what creates unfavorable conditions for successful business. The functioning of the enterprise in such market conditions significantly increases the likelihood of crisis situations at any stage of the life cycle of the business unit. According to information of Supreme Court of Ukraine, number of cases of bankruptcy proceedings in 2018 was 377, in 2019 – 356 and 528 cases in 2020 [1], so we can see the tendency to increasing on bankrupt enterprises recent years. Accordingly, the value of the accuracy of assessing the quality of the financial condition of the enterprise, determination the level of its stability and the introduction of an effective mechanism of crisis management is increasing nowadays.

The first step in the process of research of crisis phenomena on enterprises is to define essence of the term "financial crisis". I.O. Blank and H.V. Sytnyk defined financial crisis of an enterprise as one of the most serious forms of financial imbalance, which express cyclically arising during lifecycle of an enterprise under influence of different factors contradictions between actual financial state of its financial potential and the required amount of financial demand, which carries the most dangerous potential threats to functioning of an enterprise [2].

Other domestic author L.O. Lihonenko equates crisis to aggravation of contradictions in socio-economic system of the enterprise, which threatens its existence in the environment [3]. American scientists define crisis as an event, which threatens company's reputation or its continued operation and creates certain consequences regardless of the size of the company, management quality, industry or location [4].

Summarizing approaches to definition of financial crisis, we can conclude,

that financial crisis is certain imbalance in enterprise operation and limit possibilities of management to have influence on financial relations of an enterprise. The source of such imbalance is chronic inability of financial support of economic activity, which conditioned by the influence of both internal and external environments. On practice, we usually identify crisis as threat of insolvency and bankruptcy of the enterprise, its activities in the non-profit zone or lack of potential for successful functioning of this enterprise.

To understand how to cope with financial crisis, how to predict it or how to suspend crisis phenomena of enterprise, we have to identify factors that may have bad influence on financial state of it. Economists divide factors that create threat for stability of enterprise on two main groups: external and internal factors. It is also clear that factors may differ depending on country, region, sphere of enterprise operation, its size etc. However, we will pay more attention to factors mostly proper to Ukrainian enterprises (table 1.1).

Factors of financial crisis of Ukrainian enterprises

Table 1.1

in

Internal factors External factors bankruptcy Low quality management Imperfection of legislation and property rights Low corporate culture and absence of corporate values Abuse in the judiciary Absence of strategy management Abuse by business partners and Struggle between minority and unfair competition overuses majority owners **Defects** and Depreciation of fixed assets and privatization processes and non-

bankruptcy

through

social obligations by new owners of monopolism Presence certain markets

fulfillment of investment and

- bribery High level of and corruption
- High loan interests
- Raider attacks of enterprises and organizations
- High level of economy shadowing

prevention system

inability for its renovation

low personnel productivity

High number of frauds

overuses among management

and

sells

Presence of surplus assets

Absence

Purchases

intermediaries

Imperfect motivation systems and

of

^{*}Source: developed by the authors [5-7].

Before development and implementation of proper crisis management system at the enterprise, it is important to analyze current situation on it and to evaluate level of crisis. Modern economics studies consist of a range of different approaches, models and methods of crisis diagnostics. Several approaches are used to diagnose bankruptcy probabilities: conducting a comprehensive economic analysis of the subject of management; conduct an express analysis on a limited range of financial indicators; methods based on the integral assessment (scoring models; multivariate rating analysis; multiplicative discriminatory analysis etc.) [8]. The main approach to crisis evaluation is based on analysis of enterprise's financial state.

Assessment of the financial state characterize [9]:

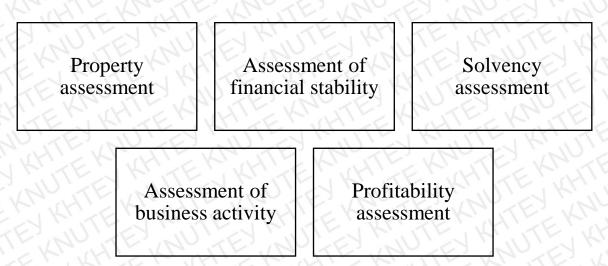
- The efficiency of financial and economic activity of the enterprise in general, as well as the efficiency of financial resources in particular;
- The level of creditworthiness of the enterprise as the borrower of financial resources for business activities;
- The level of business risk connected with the ability to repay liabilities,
 the ability to increase assets and attract investment;
- The main priorities of quality planning, forecasting, budgeting;
- The policy of distribution and use of profits for the needs of the entity;
- The reasons for the relevant changes, as well as trends and priorities for the development of the enterprise in terms of its financial condition.

By methods of analysis of financial and economic activities of enterprises of the public sector of the economy, approved by the Order of the Ministry of Finance of Ukraine №170 dated 14.02.2006 [10], the following main components of the financial analysis of the enterprise are identified:

- horizontal financial analysis (conducted to study the dynamics of individual financial indicators, calculated according to the financial statements for a certain period of time);
- vertical financial analysis (based on the comparison of the share of individual structural components);
- comparative financial analysis (conducted to compare planned and

- actual indicators, actual and regulatory (industry, general) indicators);
- analysis of financial ratios (consists in comparing the indicators of reporting and (or) financial plan in order to calculate the ratios: solvency ratio (liquidity), assessment of asset turnover, financial stability of the enterprise, etc.);
- factor financial analysis (conducted to assess the impact of individual factors on the level of relevant performance indicators).

The most common of these types is the analysis of financial state using financial ratios, as they give high accuracy of the result, provided if their interpretation is correct. The assessment of financial condition can be carried out on the basis of the use of five groups of ratios shown on fig.1.1. Detailed methodology, based on forming of system indexes-indicators financial state evaluation is added in appendix A [9].



^{*} Source: developed by the authors [9]

Fig. 1.1 Groups of indicators for assessing the financial state of the enterprise *

Given the variety of financial analysis indicators, the difference in the level of their critical assessments, many domestic and foreign economists recommend an integrated assessment of financial analysis, we will compare them below (table 1.1).

Most models, created by economists are not very suitable for Ukrainian enterprises, because they do not take into account peculiarities of economy sector, where enterprise operates. So, it is recommended to use methods and methodologies,

developed by state bodies, because they cover more indicators and take into account peculiarities of domestic economy and different economy areas.

 ${\it Table~1.1} \\ {\bf Integral~models~of~financial~state~evaluation}$

Name	Description
Altman's Z-Score model [11]	Altman's Z-Score model is a numerical measurement that is used to predict the chances of a business going bankrupt in the next two years. This model is considered an effective method of predicting the state of financial distress of any organization by using multiple balance sheet values and corporate income.
Springate S-Score method [12]	The Springate Score is one model that can be used to evaluate the possibility of company bankruptcy developed from the Altman model by Gordon L.V. Springate. He uses four financial ratios that can be combined to be able to see the difference between a healthy company and an unhealthy company.
Taffler's linear regression model [13]	This is the linear regression model with four financial ratios for the evaluation of financial health of a company. In particular, it incorporates the leverage, profitability, liquidity, capital adequacy and other parameters that in aggregate provide an objective picture of company's financial state during fifteen-years period.
R. Lis's model [13]	This model analyzes bankruptcy probability of the enterprise basing on indicators of business activity and profitability.
Davydova-Belikov model [13]	Model was created for Russian enterprises and shows high level recognition of stable enterprises but shows bad results in recognition of enterprises, close to bankruptcy.
R-model bankruptcy prognosing [13]	Model, adopted to transition economy conditions, bases on indicators of operational activity and assets of enterprises.
William H. Beaver`s model [14]	According to the model, the firm is viewed as a reservoir of liquid assets, which is supplied by inflows and drained by outflows. The solvency of the firm can be defined in terms of the probability that the reservoir will be exhausted, at which point the firm will be unable to pay its obligations as they mature.

In our investigation we will analyze financial state of the enterprise using such models as:

1. Davydova-Belikov quantitative model of bankruptcy possibility

evaluation [15] – this model is suitable for evaluation of trade enterprises, with the help of this model bankruptcy possibility can be determined with an accuracy of 81%.

Its formula looks as follows (1.1):

$$R = 8.38 * K1 + K2 + 0.054 * K3 + 0.63 * K4 , \qquad (1.1)$$

where K1 = Working Capital / Assets

K2 = Net Profit / Equity

K3 = Revenue / Assets

K4 = Net Profit / Costs

Decoding of bankruptcy possibility according to the value of the R-number is presented in the table 1.3.

Table 1.3

Enterprise's bankruptcy possibility according to the meaning of R-number

R-numb	er	Bankruptcy possibility, % Maximum (90-100)			
Less than	10				
0 - 0.18	3	High (60-80)			
0,18-0,3	32	Middle (35-50)			
0,32-0,4	42	Low (15-20)			
More than	0,42	Minimum (less than 10)			

2. O. Tereshchenko Model [16,17] – this model is the most popular for using in Ukraine because it has a lot of advantages in use.

This model takes into account modern international and Ukrainian economic practices and wholesale industry peculiarities enterprise operates in.

Here is a formula (1.2) for calculation of integral indicator of financial stability of the enterprise by O. Tereshchenko:

$$Z = 1.5 * X1 + 0.08 * X2 + 10 * X3 + 5 * X4 + 0.3 * X5 +$$

$$+0.1 * X6,$$
(1.2)

where X1 = Cash Flow / Liabilities

X2 = Total assets / Liabilities

X3 = Net Profit / Total assets

X4 = Net Profit / Gross Profit

X5 = Inventories / Gross Profit

X6 = Gross Profit / Equity

Decoding of level of financial stability of the enterprise according to the value of the Z-number is presented in the table 1.4.

Table 1.4

Enterprise's financial stability according to the meaning of Z-number

Z-number	Financial stability level			
Z > 2	Crisis possibility is minimal or absent			
1 < Z < 2	Average crisis possibility			
0 < Z < 1	High bankruptcy possibility			

3. Method of financial and economic stability estimation (after M.S.Abryutina) [18].

This method lies in determination of financial and economic stability rate (R_{FES}) which is estimated by comparing of one's own capital (equity) with nonfinancial assets or by one's of loaned capital with financial assets.

The scale of financial and economic stability of the enterprise by M. Abryutina is added in the table 1.5.

The scale of dynamic evaluation of financial and economic stability of the enterprise is added in appendix B.

There are also exist some methods of financial state evaluation of the enterprise,

prepared by government. Such methods are considered as the most exact, because they are regularly updated by the governmental organs of the country, take into account current economic situation in the country and consider local peculiarities of different industries.

 ${\it Table~1.5}$ Static scale of financial and economic stability of an enterprise

Area, state	FES rate	Own capital	Loaned capital
KINTENKIN	value	estimation	estimation
Area of stability	$R_{FES} > 0$	OC > NFA	LC < FA
Equilibrium state	$R_{FES}=0$	OC = NFA	LC = FA
Area of instability	$R_{FES} < 0$	OC < NFA	LC > FA

OC – own capital (equity)

NFA – non-financial assets

LC – loaned capital

FA – financial assets

Some examples of such Ukrainian methodologies shown in the table 1.6.

Table 1.6
State methods of financial state evaluation

Name	Description
Methods of integrated assessment of investment attractiveness of enterprises and organizations [19]	Financial evaluation of enterprises by this method involves the calculation of more than 40 relevant indicators in different areas of economic activity of enterprise.
Methodology for conducting an in- depth analysis of the financial and economic state of insolvent enterprises and organizations [19]	The methodology is aimed at recognizing the enterprise as solvent (insolvent) after evaluating the results of activities, as well as identifying positive and negative factors of influence.
Methodological recommendations for the analysis of the financial condition of the debtor enterprise when receiving deferrals (installments) [19]	The letter provides a diagram of the analysis of the financial condition, which provides the necessary tables and characteristics of coefficients.
Methodical recommendations for the analysis and evaluation of the financial condition of enterprises [19]	The methodological recommendations describe the characteristics of express analysis and in-depth analysis for business entities.

Methodology, that we are going to use in this work is methodology described in the Order "On approval of the Procedure for assessing the financial condition of a potential beneficiary of an investment project, the implementation of which is envisaged on the basis of financial self-sufficiency, as well as determining the type of collateral for servicing and repaying a loan provided at the expense of international financial organizations" [20].

According to this methodology assessment of financial state of the enterprise depends on the sphere of its operation. Sphere of activity of the "AMAKO Ukraine" LLC enterprise is defined in balance sheet as 46.61 Wholesale of agricultural machinery and equipment.

As soon as investigated enterprises "AMAKO UKRAINE" LLC type of economic activity is 46.61 Wholesale of agricultural machinery and equipment, financial state of the enterprise will be calculating by integral model formula (1.3).

$$Z = 1,03 * K_3 + 0,001 * K_4 + 0,16 * K_6 + 0,6 * K_7 + 2,9 * K_8 + 0,08 * K_9 - 0,14,$$

$$(1.3)$$

where K_3 – the ratio of financial independence;

 K_4 - the ratio of non-current assets to equity;

 K_6 - profitability of sales by financial results from operating activities (EBIT) ratio;

 K_7 - EBITDA margin;

 K_8 - return on assets for net income ratio;

 K_9 - turnover ratio of current assets.

This methodology evaluates financial state of the enterprise by classes from first to fifth, where the first class means the highest level of the enterprise financial stability and the lowest probability of bankruptcy and the fifth, accordingly, the highest possibility of bankruptcy in the nearest future. Explanation of these classes is shown at the table 1.7.

 $Table \ 1.7$ Classes according to the level of financial condition of the borrower

Classes	1st class	2nd class	3rd class	4th class	5th class
Z-number	> 0,91	0,9 to 0,16	0,15 to -0,6	-0,61 to -4,6	< -4,7
Description	High level of	Sufficient	Below average	The financial	High default
	ability to fulfill	ability to meet	performance	condition of the	possibility
	obligations and	its obligations	KINTE	beneficiary is	KNIE
	the lowest	and a low	1 KINT	unstable and	KHINT
	probability of	probability of	EKILTE	indicates the	EKRIT
	default	default	EY KINU	presence of signs	KHI
	TEKK	TEKKY	TEKIL	of insolvency	EXX

Therefore, it is clear that an enterprise have many sources of threats and the best way to save the stable financial state is to prevent their influence. Detection symptoms and signs of crisis phenomena should be the basis of the crisis management mechanism of enterprises.

CHAPTER 2

INVESTIGATION OF LLC "AMAKO UKRAINE" FINANCIAL CRISIS STATE

2.1 Express diagnostics of enterprise financial state

Enterprise's financial crisis state evaluation usually starts from express diagnostics. Diagnosis of the financial condition of the enterprise is carried out in order to develop and implement measures aimed at strengthening its financial state, building capacity and expanding the capabilities of the enterprise on the basis of increasing profitability.

Therefore, we analyze the financial condition of "AMAKO UKRAINE" LLC on the basis of its financial statements, given in Appendix C, D and E according to the method of assessing the financial condition of the enterprise on the basis of financial ratios proposed by Yatsukh O.O. and Zakharova N.U. [9]. This methodology involves the assessment of five groups of indicators, namely: property assessment, assessment of financial stability, solvency assessment, assessment of profitability and assessment of business activity.

For this company indicators of property assessment are not very important because mostly its property consists of office and warehouse buildings, office and warehouse maintenance and the largest volume belongs to goods in warehouses, which have high turnover.

The first group of indicators - indicators of financial stability, which characterize the degree of financial dependence of the enterprise on external sources of financing and indicate its solvency and creditworthiness. Analyzing financial stability, it is necessary to calculate a set of relative indicators (Table 2.1).

Equity ratio is one of the most important, because it shows the level of autonomy of the enterprise. As we can see, in the whole investigated period equity ratio is below 0, this is happening because of high amounts of uncovered loss, but at the end of 2020 it is growing, which is good tendency, but amount of own equity in

total amount of investments to activity of the enterprise is not enough. The high share of equity encourages creditors to cooperate with businesses, which opens up new opportunities to attract new fixed assets and expand production. The low ratio, in turn, reduces investment attractiveness of the enterprise.

Table 2.1

Financial stability indicators of "AMAKO Ukraine" LLC

in 2018-2020

Index	KILLE	A basic absolute			
	01.01.2018	01.01.2019	01.01.2020	01.01.2021	deviation
Equity Ratio	-0,72	-1,08	-0,72	-0,24	0,48
Debt Ratio	1,72	2,08	1,72	1,24	-0,48
Capitalization Ratio	-0,97	-12,45	4,29	2,11	3,09
Accounts Payable-to- Accounts Receivable Ratio	3,42	5,02	3,30	2,18	-1,24

Debt ratio shows amount of liabilities in total amount of assets. Recommended size of debt ratio is 0,5, but could not be higher than 0,6-0,7. Debt ratio for our enterprise is twice or even trice higher than required, considerable portion of debt is funded by assets. In other words, the company has more liabilities than assets "AMAKO Ukraine" LLC may be putting itself at risk of default on its loans if interest rates were to rise suddenly.

Next ratio we will be looking at is long-term debt to capitalization, that shows the financial leverage of the company. In 2018-2019 this ratio is lower than 0, because number of uncovered losses is higher than amount of long-term liabilities. At the end of 2019, the most part of operational financing of the enterprise is debt financing. Equity can be more expensive source of financing than debt, but there have to be balance between own equity and liabilities, because enterprise with big amount of debt may cause its freedom of action restricted by its creditors or have its profitability hurt by high interest-rate payments.

Accounts payable-to-account receivable ratio shows the balance between money company owed to its creditors and money that are owed to the company by customers. The whole investigated period is characterized by privilege of payables by receivables. At the end of 2020 we can see decreasing of the ratio by 1,24 comparing with start of the 2018, which is a good sign, but in perfect situation the ratio equals to 1, so this situation may cause financial instability.

In conclusion, we can say, that financial stability of the enterprise is unsatisfactory: "AMAKO Ukraine" LLC is depended from outer sources of financing and has low solvency potential. But such situation can be explained by specific of economic activity of the enterprise. It is wholesale company, so its activity is provided by borrowed sources.

The second group of indicators used to assess the financial condition of the enterprise are indicators of liquidity and solvency of the enterprise. Liquidity and solvency characterize the sufficiency of current assets of the enterprise to repay current liabilities on time and in full amount. The group of indicators of liquidity and solvency of the enterprise will be presented in table. 2.2.

Table 2.2
Liquidity and solvency indicators of "AMAKO Ukraine" LLC
in 2018-2020

Index	As on date:				A basic absolute
muex	01.01.2018	01.01.2019	01.01.2020	01.01.2021	deviation
Cash Ratio	0,03	0,07	0,06	0,07	0,04
Current Ratio (Working capital ratio)	0,59	0,82	1,17	1,18	0,59
Quick Ratio (Acid- test ratio)	0,26	0,28	0,39	0,37	0,11
Solvency Ratio	1,58	3,18	9,38	5,45	3,87
Financial Leverage (Debt-to-Equity Ratio)	-2,40	-1,93	-2,39	-5,14	-2,75

Cash ratio normative is 0.2 - 1, for the enterprise it is very low during last 3 years and shows, that current liabilities can be covered only for 3-7%. This situation is very risky despite we see small increasement in dynamic of ratio.

Next ratio is working capital ratio, normative indicator fluctuates from 1 to 3.

In 2018 index is very low and the enterprise can cover current liabilities through current assets only for 60% at the start of the year and for 82% at the end. In 2019 indicator grew and at the end of the year current assets could cover short-term liabilities fully, the same situation is observed during 2020.

Quick ratio is calculated in order to evaluate the ability of the enterprise to pay off short-term liabilities with the help of cash and accounts receivables. Normative meaning of this indicator is higher than 0,7. During 2018-2020 short-term liabilities of "AMAKO Ukraine" LLC could be covered by cash and accounts receivables only for 25-40%, this may cause financial instability of the enterprise because of imbalance between liquid assets and short-term liabilities. At the end of 2020 there was growth of ratio by 0,11 since start of 2018, that shows good tendency for the enterprise financial state.

Next indicator of liquidity and solvency of the enterprise is solvency ratio. This indicator is calculated in order to assess the ability of the enterprise to cover daily costs through only cash and current financial investments. For investigated enterprise this ability is growing during 2018-2020, maximum meaning reached at the end of 2019 (more than 9 days) and at the end of 2020 it equals to more than 5 days coverage. Tendency of growth shows improvement and strengthening of the financial state of the enterprise.

Last calculated index (debt-to-equity ratio) shows, that financial stability of the enterprise and its ability to pay off all debts are critical and this is happening because during the whole investigated period equity of the company is below zero. It is very important to cover uncovered loss of the enterprise as soon as possible.

Thus, we can talk about very low level of liquidity and solvency of the studied enterprise during recent years.

Another group of indicators for the study of the financial condition of "AMAKO Ukraine" LLC are indicators of business activity (turnover ratios) of the enterprise, we analyze them in table. 2.3.

Business activity characterizes the whole set of efforts of the enterprise to promote products, labor, capital in the markets. From the calculations we see that the

asset turnover ratio increases, which indicates that the amount of net revenue per unit of assets increases. On the other hand, it is known that the shorter the terms of turnover of certain types of assets, the faster the funds are released and the company's opportunities for their further use expand. Accordingly, for the researched enterprise the speed of release of cash decreases, as well as possibilities of their further use.

Table 2.3
Business activity indicators of "AMAKO Ukraine" LLC
in 2018-2020

Index	FKA	A basic absolute		
index	2018	2019	2020	deviation
Asset Turnover	2,38	2,43	2,67	0,29
Inventory Turnover	3,49	3,15	3,48	-0,01
Accounts Receivable Turnover	14,28	19,84	18,03	3,74
Accounts Payable Turnover	2	2	4	1,83
Days Inventory Outstanding (Days Sales of Inventory)	128	132	124	-4
Cash Conversion Cycle	-80	-40	23	103

Inventory turnover ratio was calculated in order to evaluate how many time the enterprise uses its inventory per year. During investigated period this ratio had a little slow down, low turnover implies weak sales and possibly overstocking. It may be an indicator of a problem with the goods being offered for sale or be a result of weak marketing strategy.

The accounts receivable turnover ratio is an accounting measure used to quantify a company's effectiveness in collecting its accounts receivable, or the money owed by customers or clients. The meanings of the indicator show that "AMAKO Ukraine" LLC improve usage and managing the credits extended to customers, short-term debts are collected or paid quicker, efficiency at collecting on its payment is getting higher. Accounts payable turnover ratio shows that efficiency of a company at paying its suppliers and short-term debts grows twice during 2018-2020.

Days Inventory Outstanding is a period from the starting day of inventory

investment till the first day of receiving revenue. For this company the period of return on inventories is shortens in investigated period, but, from my point of view, for dealer-company 124 days of inventory outstanding is too high.

The cash conversion cycle is a metric that expresses the time it takes for a company to convert its investments in inventory and other resources into cash flows from sales. Trend of changes in this indicator shows that the efficiency of a company's operations and management is quite questionable and need to be reviewed.

The business activity indicators mostly show good influence on financial stability of the enterprise except inventory turnover ratio and cash conversion cycle.

The last group of indicators for assessing the financial condition of the enterprise are indicators of profitability of the enterprise, calculated in table. 2.4.

Table 2.4

Profitability indicators of "AMAKO Ukraine" LLC

in 2018-2020

Index	HILK	A basic absolute		
index	2018	2019	2020	deviation
ROE (Return on Equity)	0,00	-0,04	-0,90	-0,90
ROA (Return on Assets)	0,00	0,03	0,42	0,42
ROI (Return on Investment)	0,00	0,29	0,24	0,24
ROD (Return on Debt)	0,00	0,03	0,61	0,61
ROR (Net Profit Margin)	0,00	0,01	0,16	0,16
Return on Operating Activity	-0,10	0,04	0,17	0,27
Operating Expenses Ratio	0,00	3,84	0,72	0,72

In 2018 "AMAKO Ukraine" LLC didn't have any net profit, only losses, so we won't calculate profitability ratios for that period. Amounts of equity below zero during whole investigated period and net profit covers them, that is why return on equity ratio below zero also.

Effectivity of using assets and debt is growing during 2019-2020 from 3 to 42% and from 3 to 61% accordingly. Return on investment achieved its maximum in 2019

-29%, and in 2020 indicator was on good level -24%.

Operating expenses ratio shows that in 2019 amount of operating expenses was extremely high, 4 times higher than net operating income, in 2020 situation improves. Expenses amount lowers in 2019-2020, so net profit increases to 16% in 2020, this is a good tendency.

Let's compare return on operating activity of the enterprise with average indicator of wholesale of other machinery, equipment and supplies industry based on data presented on the official web-site of State Statistics Service of Ukraine [25] on fig.2.1.

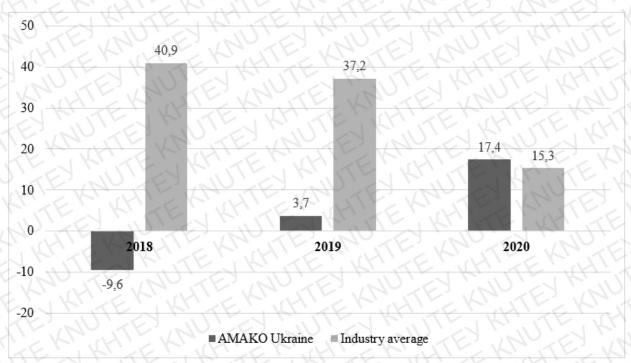


Fig. 2.1 Comparison of return on operating activity of "AMAKO Ukraine" LLC with industry average

In 2018 enterprise had operating losses, in comparison with industry average return on operating activity 41%, this is catastrophic situation. In 2019 enterprises operating activity is 12 times lower than industry average, but in 2020 situation improves and with pandemic situation on the background "AMAKO Ukraine" has a little higher indicator than market average, which says about stabilization of financial state of the enterprise.

Thus, according to the results of the study, we can state that during 2018-2020 the financial condition of "AMAKO Ukraine" LLC was quite unstable, especially bad indicators we see in 2018-2019, in 2020 some of financial stability indicators, main part of the liquidity and solvency indicators, a couple indicators of business activity and most of profitability ratios show the improvement of the results. However, in 2020 return on operating activity shows better performance of the enterprise than in average in the wholesale of other machinery, equipment and supplies industry.

For a complete general assessment of the financial condition of the enterprise in the next section we will calculate the integrated indicators of the financial condition of the enterprise according to the statistical models (Tereshchenko model and methodology of assessment of the financial condition of the potential beneficiary of the investment project, the implementation of which is provided on a financial basis, as well as determining the type of collateral for servicing and repayment of the loan provided by international financial organizations, serviced by the beneficiary by Ministry of Finance of Ukraine.

2.2 Assessment of enterprise financial crisis state with statistical models

When we try to detect any signs of looming bankruptcy, the first step is to analyze all kinds of financial ratios, this step can be quite difficult because each ratio is unique and describes different side of financial health of the company, at the same time, ratios can contradict each other. So, relying on a bunch of individual ratios may be confusing and difficult for evaluation, that is why we use statistical models for assessment of financial state of "AMAKO Ukraine" LLC in this part of scientific work. Statistical models distill a certain amount of key performance ratios into a single score and this score gives very good description of financial state of the company.

The first model we will be using for evaluation of the financial state of the enterprise is Tereshchenko model, that takes into account peculiarities of Ukrainian

economy and peculiarities of industry, calculations of the indicators presented in the table 2.5.

Table 2.5

Key performance ratios of "AMAKO Ukraine" LLC, calculated according to Tereshchenko model in 2018-2020

Ratio	EXITE	Period	LES, KM
Kauo	2018	2019	2020
x ₁	-0,71	-0,74	-0,69
X	0,53	0,53	0,68
x ₃	0,00	0,03	0,42
X ₄	0,00	0,01	0,16
X ₅	0,22	0,25	0,23
X ₆	-2,65	-2,73	-5,75
Z	-1,22	-0,88	3,48

According to the presented results, in 2018-2019 years the enterprise is on the verge of bankruptcy, but in 2020 financial crisis possibility is minimum or absent according to the model. Such results caused by the great increment of very valuable ratios in the model: return on assets (x_3) and products profitability $(x_4) - 16$ times in 2020, in comparison with 2019. The main factor, that cause huge decrease of Z-number are below zero meanings of return on equity (x_6) and reducing of the indicator twice in 2020.

The second model we will be using for evaluation of the financial state of the enterprise is the model described in the Order "On approval of the Procedure for assessing the financial condition of a potential beneficiary of an investment project, the implementation of which is envisaged on the basis of financial self-sufficiency, as well as determining the type of collateral for servicing and repaying a loan provided at the expense of international financial organizations". This model is maximally adapted to the Ukrainian economy and enterprises and takes into account industry specifics. According to this order, the assessment of the financial condition of a potential beneficiary is carried out by assigning it a class depending on the value of

the integrated indicator of financial condition. The higher the class of the enterprise according to the evaluation results, the lower the probability of its bankruptcy in the nearest future.

According to the size (middle-sized enterprise) and main type of economic activity of the studied enterprise (wholesale and retail trade and repair of motor vehicles), the calculation of the integrated indicators for "AMAKO Ukraine" LLC during 2018-2020 presented in the table 2.6.

Table 2.6
Integrated indicators of the financial condition of "AMAKO Ukraine"
LLC according to the methodology of the Ministry of Finance of Ukraine in
2018-2020

Ratios	Periods		
	2018	2019	2020
K ₃	-1,08	-0,72	-0,24
K ₄	-9,54	-8,52	-3,13
K ₆	-0,18	0,04	0,18
K ₇	-0,10	0,04	0,15
К ₈	-0,45	0,03	0,42
K ₉	3,01	2,88	3,07
Z	-2,43	-0,53	1,19

In accordance with interpretations, described in the methodology, resented calculations shows that in 2018 the enterprise belongs to the forth class and, therefore, beneficiary financial state is unstable and indicates the presence of signs of insolvency of the enterprise, in 2019 the enterprise belongs to the third class and its ability to fulfill obligations is below the average level and in 2020 enterprise belongs to the first class and characterized by high level of ability to fulfill obligations and the lowest probability of default.

The main factors of increasing of Z-number in 2020 in comparison with 2018 were doubling of return on assets by net profit ratio (K_8), more than 2 times increase of return on operating activity by EBITDA ratio (K_7) and also 2 times growth of return

on sales by financial results from operating activity (EBIT) (K₆). In 2018 "AMAKO Ukraine" LLC had losses from operating activity as well as net losses, and the reason of financial stability growth is the emergence of profits and their growth.

Let's compare the results of two statistical models at the fig. 2.2.



Fig. 2.2 Comparison of statistical models results

From the comparison picture it is well seen, that results of statistical models are similar from year to year, so the results obtained are considered as reliable and close to the truth.

As the final conclusion of this investigation, it can be summarized that in 2018 "AMAKO Ukraine" LLC had the worst conditions of the financial state, then in 2019 it got better and finally in 2020 financial state of the enterprise characterized as stable with minimal possibility of crisis.

2.3 Evaluation of enterprise probability of bankruptcy

The next step of assessment of the financial state of the enterprise will be evaluation of the probability of its bankruptcy. For this task we are going to use Davydova-Belikov Model and Method of financial and economic stability estimation after M.S. Abryutina.

Davydova-Belikov Model is a model of bankruptcy prognosing and the future financial stability of the enterprise prognosing and it is constructed using multiple discriminant analysis tools. This model allows us to classify analyzed enterprise into one of two classes: bankrupt or non-bankrupt. If the company falls into the class of a bankrupt, it means that there is a high probability that it will become bankrupt in 1 year.

Usage of this model will be very reasonable in our investigation because it takes into account peculiarities of the enterprises which operate in the CIS territories and also because it was created based on the data of trade enterprises. We will show the results of calculations of evaluation of "AMAKO Ukraine" LLC in the table 2.7.

Table 2.7

Evaluation of the bankruptcy probability of "AMAKO Ukraine" LLC according to Davydova-Belikov Model in 2018-2020

Ratios	Periods			
	2018	2019	2020	
K ₁	-0,37	-0,02	0,14	
K ₂	0,00	-0,04	-0,90	
K ₃	2,38	2,43	2,67	
K ₄	0,00	0,02	0,19	
R	-3,01	-0,05	0,51	

In 2018 and 2019 the results of calculations describe the enterprise as one with the maximum risk of bankruptcy (90-100%).

The first financial ratio (K₁), which shows the part of working capital in the

assets, has the greatest importance in determining the bankruptcy of the enterprise according to the Belikova-Davydova model. This is due to the fact that it has a specific weight of 8,38, which is incomparably more than the other financial ratios in the model.

So, mostly due to the growth of the amounts of the working capital in 2020 since the end of 2019, "AMAKO Ukraine" LLC, has the status of an enterprise with the minimal bankruptcy risk (less than 10%) at the end of 2020.

Among other factors, that caused such positive changes were an 26% growth of net income and 14,6 times increase of net profit amount.

The next method, we will use in our work for financial state of the enterprise assessment is the method of financial and economic stability estimation created by Maryna Abryutina.

This method lies in determination of financial and economic stability rate (R_{FES}) which is estimated by comparison of own capital (equity) with nonfinancial assets of the enterprise or by comparison of loaned capital with financial assets of the enterprise. Table 2.8 has visual presentation of the results, we got as a result of using this method. We compared both groups of indicators (own capital with nonfinancial assets and loaned capital with financial assets) in the table for higher accuracy.

During the whole investigated period amount of the own capital for "AMAKO Ukraine" LLC is below zero and accordingly, this is lower than amount of nonfinancial assets of the enterprise. Similar situation is observed in imbalance between amount of loaned capital and amount of financial assets.

During 2018-2020 the volumes of the first mentioned indicator were significantly outweighing the volumes of the second indicator and this predominance is 5,6 times in 2018, 5,9 times in 2019 and 6,4 times in 2020.

The fact, that "AMAKO Ukraine" LLC in 2018-2020 had got huge amounts of uncovered losses mentioned in the balance sheet, had very strong not positive influence on the overall financial stability of the enterprise. The equity, in accordance with that, is also below zero and the level of the autonomy of the enterprise is literally absent, this situation is very briefly but accurately described by the line of own capital

estimation (table 2.8) of financial and economic stability evaluation after M.S. Abruytina.

Table 2.8

Financial and economic stability estimation results of "AMAKO

Ukraine" LLC according to M.S. Abryutina method in 2018-2020

Indicators, thds. UAH	Periods			
MUTEN MUTEN	2018	2019	2020	
Own capital (OC)	-400358,5	-423868,5	-253665	
Nonfinancial assets (NFA)	378352	399130	474858	
Loaned capital (LC)	375945,5	461751,5	456406	
Financial assets (FA)	67337	78370,5	71377,5	
NUTEY NUTEY KI	Estimation	TE KHIT	KHITI	
OC estimation	OC < NFA	OC < NFA	OC < NFA	
LC estimation	LC > FA	LC > FA	LC > FA	
Financial and economic stability	KHITE	KHILEKU	TIFEK	
rate value	$R_{FES} < 0$	$R_{\text{FES}} < 0$	$R_{FES} < 0$	

The next moment, considered by the model, is the estimation of loaned capital. Usually, for retail or wholesale enterprises as "AMAKO Ukraine" LLC, the situation when loaned sources of operating activity has privilege by owned one's is natural but in this case this situation requires attention.

Financial assets can cover only about the sixth part of loaned capital and during investigated period this ability was getting worse and this situation occurs on the background of the total dependence of the enterprise on the external financing resources. In the results of these estimations, according to the scale of financial and economic stability of an enterprise, each year can be characterized as area of instability and three such instability areas in a row create instability enhancement, according to the dynamic scale of financial and economic stability.

This may indicate, that, perhaps, in 2020 the enterprise had reached some goals and managed to improve its financial stability at a superficial level, but more changes and improvements need to be done to make these changes significant and profound.

CHAPTER 3

WAYS OF LLC "AMAKO UKRAINE" FINANCIAL STATE IMPROVEMENT IN THE PLANNED PERIOD

As the financial condition of the enterprise was defined as unstable, it is worth to pay attention to the study of current exist problems at the enterprise, as well as to preventive crisis management in order to maintain the stability of the financial condition of the enterprise and respond to emerging risks successfully in the future.

In order to identify possible ways of future development of the enterprise and resources of the competitiveness increment of "AMAKO Ukraine" LLC, we will analyze indicators of four main groups of express diagnostics of financial state, its statistical models and integrated assessment, as well as factors influencing its financial condition.

Analysis of indicators of financial stability of the enterprises and most part of the following investigation indicates the need in coverage of uncovered losses for fulfilling equity amount to give autonomy to the enterprise. At the end of 2020 more than 52% of amount of uncovered losses can be covered by net profit. The higher share of equity will encourage creditors to cooperate with business more active, that will open new opportunities for growth and expansion.

Debt ratio, capitalization ratio and accounts payable-to-account receivable ratio calculations shows that it is important for the enterprise to reduce amount of liabilities by repayment those for increasing of stability of the financial state and, probably, a good decision will be to increase amount of some statements of the current assets.

Analysis of indicators of liquidity and solvency identified the need to increase the volumes of cash and other current assets and the numbers of debt-to-equity ratio emphasized the need to increase equity volumes.

Analysis of business activity of "AMAKO Ukraine" LLC points out that the marketing strategy should be reviewed in accordance with current situation, including pandemic of COVID-19, because inventory turnover ratio has no change during 2018-2020.

Changes, mentioned higher, will have positive influence on indicators of profitability ratios of the enterprise, the only addition we can put here is a review of expenses of the enterprise. This can be achieved by concluding contracts on more favorable terms with suppliers (as a result there may be a reduction in the cost of goods and reduce of the financial costs). The company can reduce sales costs, this can be achieved by optimizing advertising costs, optimize the cost of packaging and presale preparation of goods, as well as improve organization of the logistics of the warehouses. As a result, all these measures have to cause growth of gross profit, of net profit and of total financial stability of the enterprise.

The average growth rate of net income in 2018-2020 is approximately 17% per year. According to experts' prediction, as a result of the implementation of the above measures, the possible increase in net income in the next period compared to 2020 may be about 20%. Taking into account the trends in previous periods and the impact of factors projected for 2020, using the method of average growth rate and factor-analytical method, we will plan the balance sheet and the statement of financial performance for the end of 2021 the results of the planning are presented lower in the table 3.1, table 3.2 and in the table 3.3.

Planned amounts of intangible and fixed assets of the enterprise for the end of 2021 were calculated based on the average growth rate of initial value and depreciation in previous investigated periods. Amount of other financial investments was determined based on previous year's figures. As a result of planning, we see that total amount of fixed assets is growing by more than 5% in planned period.

The most part of current assets statements was planned according to turnover indicators of the previous year, except of money and cash equivalents and other current assets amounts. The first one was planned according to existed tendencies of changes and, including recommendations, the planned growth of money and cash equivalents in 2021 is 44%. Amount of current assets was determined based on previous year's figures. As a result of planning, we see that total amount of current assets of the enterprise is growing by more than 10% in planned period. The same result is seen in total balance amount of "AMAKO Ukraine" LLC.

Table 3.1

Balance sheet (Statement of financial performance) of "AMAKO

Ukraine" LLC as planned for 31.12.2021 (thds.UAH) (assets part)

Assets	Code	01.01.2021	01.01.2022
TE WITE WY	2	3	4
NOTE KNOTE KNO	I. Fixed as	sets	1 KINU
Intangible assets:	1000	200	206
Initial value	1001	2046	2103
Accumulated depreciation	1002	1846	1897
Incomplete capital investments	1005	1984	1984
Fixed assets:	1010	42655	44930
Initial value	1011	111487	117432
Depreciation	1012	68832	72502
Long-term financial investments: other financial investments	1035	50	50
Total for Section I	1095	44889	47169
THE WOLLD FILL	I. Current	assets	KHITE
Inventories	1100	367201	383011
Manufacturing inventories	1101	2203	2424
Goods	1104	364998	380587
Accounts receivable for products, goods, works, services	1125	88747	106496
Receivables accounts:	1130	TEKYHTE	KILLE
for advances paid	TE N	35162	42194
with a budget	1135	621	745
Other current receivables	1155	4550	5460
Money and cash equivalents	1165	32264	46482
Other current assets	1190	9164	9164
Total for Section II	1195	537709	593553
III. Non-current assets held for sale and disposal groups	1200	TE KNUTE	KNOTE
Balance	1300	582598	640722

The liability part of balance sheet formation also has some peculiarities in planning process. Thus, registered capital and additional capital amounts were planned in accordance with previous period numbers but amount of uncovered loss is enlarged by amount of net profit the enterprise got at the end of 2020. Such changes allowed us to transform the total amount of equity into positive number.

Table 3.2

Balance sheet (Statement of financial performance) of "AMAKO

Ukraine" LLC as planned for 31.12.2021 (thds.UAH) (liability part)

Liability	Code	01.01.2021	01.01.2022
HIEW HIEW H	I. Equity	IE KNITE	KNOEY
The registered capital	1400	295000	295000
Additional capital	1410	1288	1288
Retained earnings (uncovered loss)	1420	(436847)	(208555)
Total for Section I	1495	-140559	87733
II. Long-te	rm liabilitie	s and ensuring	KMITELY
Long-term bank credits	1510	THE RELIEF	KULLE
Other long-term liabilities	1515	266639	266639
Total for Section II	1595	266639	266639
III. Curre	nt liabilities	and ensuring	TE KILT
Short-term bank credits	1600	167882	10 -4-11
Current accounts payable: for the long term obligations	1610	EN WITEN	HILEK
for goods and services	1615	274084	269748
for payments to budget	1620	3432	4071
for insurance payments	1625	8	231
for payments of wages	1630	24	24
on advances received	1635	6	3
Current ensuring	1660	7198	7198
Other current liabilities	1690	3884	5076
Total for Section III	1695	456518	286350
IV. Liabilities related to non- current assets held for sale and disposal groups	1700	HIEN KUTE	EXMUTE
Balance	1900	582598	640722

According to financial statement assessment results of 2018-2020, such changes in balance sheet were the most required. Amount of long-term liabilities statements or, to be exact, other long-term liabilities amount, was planned based on previous period number and stayed the same.

The third part of liability – current liabilities and ensuring – also was planned according to turnover indicators of the previous year, except of current accounts payable for goods and services and other current liabilities. Amount of other current liabilities is planned based on average existed tendency of growth in previous periods. The number of current accounts payable was planned in accordance with financing, required for assets formation, in this case it is decreasing in planned period by 1,6% in comparison with number we had for the end of 2021. At the table 3.3 are performed results of statement of financial performance planning.

Table 3.3

Statement of financial performance (Statement of comprehensive income) of "AMAKO Ukraine" LLC as planned for 2021 (thds.UAH)

Item	Code	2021	2020
Net income (revenue) from sales of products (goods and services)	2000	1751725	1459771
Cost of sales of products (goods and services)	2050	1331311	1176756
Gross: profit	2090	420414	283015
Other operating income	2120	277353	277353
Administrative expenses	2130	64926	64926
Selling expenses	2150	110359	84165
Other operating expenses	2180	92482	154137
Financial results of operations: profit	2190	430000	257140
Other financial income	2220	2220	835
Other income	2240	3820	3820
Financial expenses	2250	32741	32741
Other expenses	2270	762	762
Financial results before tax: profit	2290	402538	228292
Expenses (income) income tax	2300	0	0
Net financial result: profit	2350	402538	228292

As it was predicted, that in result of proposed measures implementation growth of revenue will be at the level of 20%, so planned amount of revenue at the end of 2021 is planned in the amount of 1,75 billion UAH. Cost of sales of products in 2020 accounted for more than 78% of total revenue amount, we planned it on the level of 76% as soon as we planned suppliers' contracts review in 2021. As a result, gross profit is growing by 48,5%.

Other operating income and administrative expenses are planned based on previous period amounts. Increasing of selling expenses was planned on the level of 6% for increasing inventory turnover and, as a result, growth of net income amount. Other operating expenses are planned based on their amount in net income of previous period.

Other financial income, other income, financial expenses and other expenses were planned based on existed tendencies of change or just based on the numbers of previous period. Financial results before tax in 2021 are growing by 76% in comparison with 2020. As soon as "AMAKO Ukraine" LLC operates in agricultural field, its expenses for income tax equals to zero and net profit equals to financial results before tax. On the fig.3.1 presented an illustration of net income and net profit planned volumes, the enterprise may get as a result of proposed measures implementation at the end of 2021.

At the end of 2018 the enterprise achieved total revenue result in amount a little bigger, than 1 million UAH, but bad sales, cost and operational management as a result reached net losses in amount of 202,5 million UAH.

Then. In 2019 and 2020 situation was improving, revenue amount increased by almost 400 million UAH till the end of 2020, at the end of 2019 and 2020 the company received net profit in amount of 15,7 million UAH and 228,3 million UAH accordingly.

Thus, we see that as a result of using the company's available capabilities and implementing the proposed measures to mitigate the impact of circumstances affecting the financial and economic state of the enterprise, the projected increase in net income in the next period is about 292 million UAH, and the growth of net profit

is projected on level of 76,3% or about 174 million UAH.

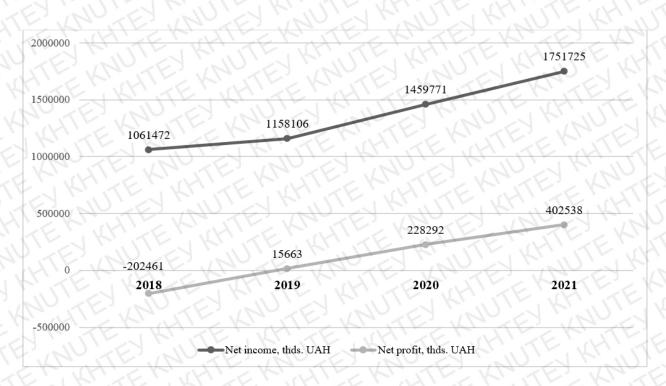


Fig. 3.1 Planned volumes of net income and net profit of "AMAKO Ukraine" LLC for 2021

Taking into account the results of planning, we will determine the main indicators of the financial condition of the enterprise, that had described unsatisfactory performance of the enterprise on previous periods, to assess the impact on them of the measures mentioned above in the planning period (table 3.4).

Changes is equity and debt ratio perform positive changes, the level of autonomy of the enterprise grows, recommended debt ratio size is less than 0,7 and, as we can see till the end of 2021 its meaning is getting much closer to that number. Dynamic of accounts payable-to-accounts receivable ratio also have positive influence on overall financial state of the enterprise. The situation, when wholesale enterprise has bigger part of borrowed resources in financing of its activity is stable, but at the end of 2021, compared with 2020, the correlation between owned and borrowed resources are better balanced.

Cash ratio becomes 9% closer to normative, and not low anymore, current liabilities can be covered for 16% by cash assets in 2021. Quick ratio increment

strengthens financial stability of the enterprise, short-term liabilities can be covered for 74% by cash and accounts receivables. Among profitability ratios, the greatest growth is seen in return on debt and return on assets but most part of them shows increase.

Table 3.4

Financial state indicators of "AMAKO Ukraine" LLC as planned for 2021

Indicators	As	An absolute		
	01.01.2021	01.01.2022	deviation	
Financi	al stability ratios	MUTENK	MUTH	
Equity Ratio	-0,24	0,14	0,38	
Debt Ratio	1,24	0,86	-0,38	
Accounts Payable-to-Accounts Receivable Ratio	2,18	1,80	-0,38	
Liquidity	and solvency ratio	S	UT KI	
Cash Ratio	0,07	0,16	0,09	
Quick Ratio (Acid-test ratio)	0,37	0,74	0,36	
Prof	fitability ratio	KINDIE	YKHUTE	
Return on Assets	0,42	0,66	0,24	
Return on Investment	0,24	0,32	0,08	
Return on Debt	0,61	1,51	0,90	
Net Profit Margin	0,16	0,23	0,07	
Return on Operation Activity	0,17	0,27	0,10	

To evaluate the increment of financial state strengthening we will perform change tendency of the R-number calculated in accordance with Davydova-Belikov integral model on the fig. 3.2.

According to this model bankruptcy possibility of the "AMAKO Ukraine" LLC in 2018-2019 was at the maximum level (90-100%) and the integrated indicator was equal to -3,01 and -0,05 accordingly. In 2020 bankruptcy possibility reached

minimum level (less than 10%), R-number equals to 0,51 and bankruptcy possibility minimizes even more in planned period, in comparison with results of 2020, the R-number is equal to 7,59.

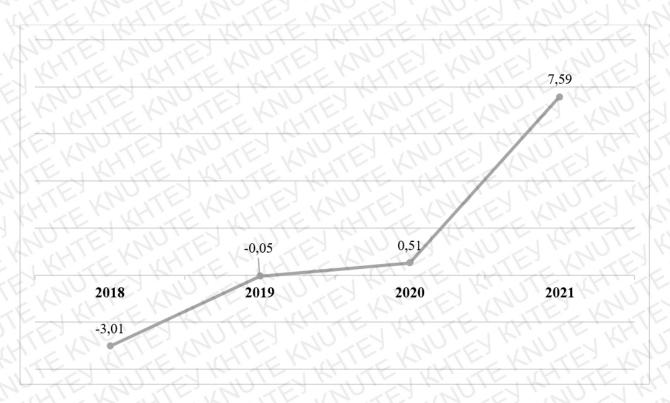


Fig.3.2 Dynamics of the integrated indicator of the probability of bankruptcy of "AMAKO Ukraine" LLC in the planned period according to Davydova-Belikov model

On the fig. 3.3 we will perform the changes in the integral number, calculated in accordance with statistical model developed by O. Tereshchenko. Results we got with the help of this model are very similar to those, we got with the help of previous model calculation.

During 2018-2019 integrated indicator of the probability of bankruptcy of "AMAKO Ukraine" LLC according to Tereshchenko model equals to -1,22 and -0,88 accordingly and shows, that financial stability of the enterprise is in a very bad condition and bankruptcy possibility is very high.

In 2020 Z-number is equal to 3,48 (growth by 4,36 points), such changes tell us about strong improvement of enterprise performance and minimal or absent crisis

possibility. In 2021 Z-number growth prognosed on the level of more than 5,5 points and it means, that financial stability will continue its strengthening, and bankruptcy possibility will be even less.

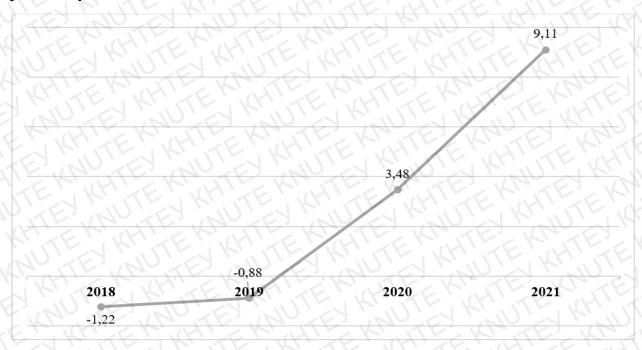


Fig.3.3 Dynamics of the integrated indicator of the probability of bankruptcy of "AMAKO Ukraine" LLC in the planned period according to Tereshchenko model

And to finalize our investigation, on the fig.3.4 we will evaluate changes in planned period with the help of integral model, created by the Ministry of Finance of Ukraine.

As we can see, in 2021 growth of the integrated indicator is 1,16 points. Such changes will be caused by increase of financial independence ratio (from -0,24 to 0,14) and great increase of covering non-current assets by equity (from -3,13 to 1,86) because of equity amount growth in company liability by 228,3 million UAH.

Calculations of the integrated indicator reinforce the strengthening of the financial stability of "AMAKO Ukraine" LLC in planned period and in 2021 it will belong to the first class by level of financial stability and will be characterized by high level of ability to fulfill its obligations and will have the lowest probability of default.

All of the models, we used for assessment of financial state of the enterprise, describe improvement of the overall financial state in planned period.

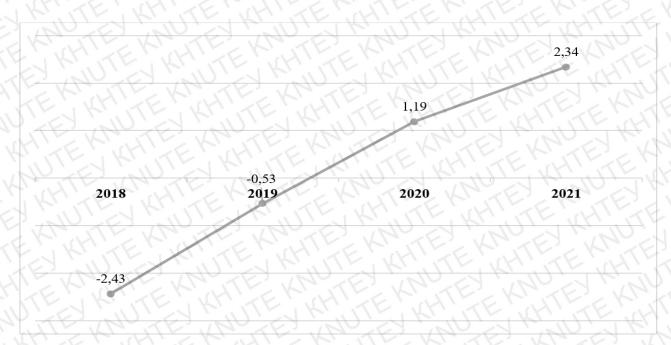


Fig.3.4 Dynamics of the integrated indicator of the probability of bankruptcy of "AMAKO Ukraine" LLC in the planned period according to methodology of Ministry of Finance of Ukraine

Such improvements are also performed in changes with balance sheet and statement of comprehensive income numbers as much as in changes of different financial state indicators.

CONCLUSIONS AND PROPOSALS

The changing state of the economy of Ukraine, excessive tax pressure and significant interference of state authorities into the activity of enterprises hinder their development. General political situation in the country is also quite unstable, what creates unfavorable conditions for successful business. The functioning of the enterprise in such market conditions significantly increases the likelihood of crisis situations at any stage of the life cycle of the business unit.

Accordingly, the value of the accuracy of assessing the quality of the financial condition of the enterprise, determination the level of its stability and the introduction of an effective mechanism of crisis management becomes more important nowadays.

Financial crisis is certain imbalance in enterprise operation and limit possibilities of management to have influence on financial relations of an enterprise. The source of such imbalance is chronic inability of financial support of economic activity, which conditioned by the influence of both internal and external environments. On practice, we usually identify crisis as threat of insolvency and bankruptcy of the enterprise, its activities in the non-profit zone or lack of potential for successful functioning of this enterprise.

In this work we also identified main external and internal factors, that have influence on the financial stability of the Ukrainian enterprises.

It was also investigated, that analysis of financial state using financial ratios in complex with integrated assessment of financial analysis, as they give high accuracy of the result and are easier for correct interpretation. The assessment of financial condition can be carried out on the basis of the use of five groups of ratios: property assessment, assessment of financial stability, solvency assessment, assessment of business activity, profitability assessment.

For evaluation of financial stability of "AMAKO Ukraine" LLC we chose such integral models: Davydova-Belikov quantitative model of bankruptcy possibility evaluation because it is suitable for evaluation of trade enterprises and with its help bankruptcy possibility can be determined with an accuracy of 81%; O. Tereshchenko

Model because it takes into account modern international and Ukrainian economic practices and wholesale industry peculiarities enterprise operates in; Method of financial and economic stability estimation (after M.S.Abryutina) because it shows performance of the enterprise in timeline very accurately and state methodology described in the Order "On approval of the Procedure for assessing the financial condition of a potential beneficiary of an investment project, the implementation of which is envisaged on the basis of financial self-sufficiency, as well as determining the type of collateral for servicing and repaying a loan provided at the expense of international financial organizations" because state methods are considered as the most exact, because they are regularly updated, take into account current economic situation in the country and consider local peculiarities of different industries.

Investigation of financial stability ratios of the enterprise shows unsatisfactory results because "AMAKO Ukraine" LLC is depended from outer sources of financing and has low solvency potential. But such situation can be explained by specific of economic activity of the enterprise. It is wholesale company, so its activity is provided by borrowed sources.

All of the calculated liquidity and solvency ratios during 2018-2020 describe very low level of liquidity and solvency of the studied enterprise during recent years and have very bad influence on the overall financial stability of the enterprise.

The business activity indicators mostly show good influence on financial stability of the enterprise except inventory turnover ratio and cash conversion cycle.

Calculated profitability ratios show us, that in 2018-2019 "AMAKO Ukraine" LLC had quite bad performance in comparison with industry average indicators. According to the results of the study, we can state that during 2018-2020 the financial condition of "AMAKO Ukraine" LLC was quite unstable, especially bad indicators we see in 2018-2019, in 2020 some of financial stability indicators, main part of the liquidity and solvency indicators, a couple indicators of business activity and most of profitability ratios show the improvement of the results. However, in 2020 return on operating activity shows better performance of the enterprise than in average in the wholesale of other machinery, equipment and supplies industry.

According to the Tereshchenko statistical model, in 2018-2019 years the enterprise was on the verge of bankruptcy, but in 2020 financial crisis possibility is minimum or absent according to the model. Such results caused by the great increment of very valuable ratios in the model: return on assets and products profitability – 16 times in 2020, in comparison with 2019. The main factor, that cause huge decrease of Z-number are below zero meanings of return on equity and reducing of the indicator twice in 2020.

In accordance with interpretations, described in the methodology of Ministry of Finance of Ukraine, presented calculations shows that in 2018 the enterprise belongs to the forth class and, therefore, beneficiary financial state is unstable and indicates the presence of signs of insolvency of the enterprise, in 2019 the enterprise belongs to the third class and its ability to fulfill obligations is below the average level and in 2020 enterprise belongs to the first class and characterized by high level of ability to fulfill obligations and the lowest probability of default.

In 2018 and 2019 the results of calculations according to Davydova-Belikov model describe the enterprise as one with the maximum risk of bankruptcy (90-100%) but mostly due to the growth of the amounts of the working capital in 2020 since the end of 2019, "AMAKO Ukraine" LLC, has the status of an enterprise with the minimal bankruptcy risk (less than 10%) at the end of 2020 according to this model.

According to the model, developed by M.S. Abryutina, financial assets of "AMAKO Ukraine" LLC can cover only about the sixth part of loaned capital and during investigated period this ability was getting worse and this situation occurs on the background of the total dependence of the enterprise on the external financing resources. In the results of these estimations, according to the scale of financial and economic stability of an enterprise, each evaluated year can be characterized as area of instability and three such instability areas in a row create instability enhancement, according to the dynamic scale of financial and economic stability.

Based on the assessment of financial state of the enterprise there were proposed such measure for strengthening of financial stability: coverage of uncovered losses for fulfilling equity amount to give autonomy to the enterprise, reduction of amount of liabilities by repayment those for increasing of stability of the financial state, increasing amount of some statements of the current assets, increase the volumes of cash and other current assets, reviewing of the marketing strategy in accordance with current situation, including pandemic of COVID-19, reviewing of expenses of the enterprise, this can be achieved by concluding contracts on more favorable terms with suppliers (as a result there may be a reduction in the cost of goods and reduce of the financial costs), the company can reduce sales costs, this can be achieved by optimizing advertising costs, optimize the cost of packaging and pre-sale preparation of goods, as well as improve organization of the logistics of the warehouses.

And in a result of such measures implementation it is predicted, that growth rate of net income may be about 20%. After financial statements planning, we can conclude, that measures can cause net profit increasing by 76%.

Calculated financial state indicators, based on the planned financial statements, perform improvement of financial state of "AMAKO Ukraine LLC" as well as calculated integral models shows future strong performance of the enterprise.

So, we can conclude, that proposed measures, based on financial state of the enterprise assessment will cause improvement of the financial state of the enterprise and strengthen its performance in future.

REFERENCES

- 1. Офіційний веб-сайт Верховного Суду України [Електронний ресурс]. Режим доступу: https://supreme.court.gov.ua/
- 2. Бланк І. О., Ситник Г. В. Управління фінансами підприємства [Текст]: Підручник. / І. О. Бланк, Г. В. Ситник К.: КНТЕУ, 2006. 780 с.
- 3. Лігоненко Л. О. Антикризове управління підприємством [Текст]: Підручник. К.: КНТЕУ, 2005. 824 с.
- 4. Corporate Crisis Management / Center for Chemical Process Safety of the American Institute of Chemical Engineers. New York, USA, 2005. 31 p.
- Кірілюк Р. П. Фінансова криза на підприємстві: фактори виникнення та механізм попередження [Електронний ресурс] / Р. П. Кірілюк. // Економіка. Управління. Інновації. Серія : Економічні науки. 2013. № 1. Режим доступу: http://nbuv.gov.ua/UJRN/eui 2013 1 24
- 6. Управління фінансовою санацією [Текст] : монографія / Грачов В.І., Косарева І.П., Прохорова В.В., Кузенко Т.Б. Харків: ВД"ІНЖЕК", 2004. 208 с.
- 7. Терещенко О.О. Антикризове фінансове управління на підприємстві [Текст]: Монографія. – К.: КНЕУ, 2004. – 268 с.
- 8. Pozhuieva T. O. Crisis diagnostics and the threat of bankruptcy research the main crisis management way [Електронний ресурс] / Т. О. Pozhuieva // Економічний вісник ДВНЗ "Український державний хіміко-технологічний університет". 2019. № 1. С. 125-129. Режим доступу: http://nbuv.gov.ua/UJRN/evdvnz_2019_1_19
- Яцух О.О., Захарова Н.Ю Фінансовий стан підприємства та методика його оцінки [Текст] // Вчені записки ТНУ імені В. І. Вернадського. Серія: Економіка і управління – 2018. – Том 29 (68). №3 – С. 173 – 180.
- 10. Офіційний веб-сайт Міністерства Фінансів України [Електронний ресурс]- Режим доступу: https://mof.gov.ua/
- 11. Web-site of Corporate Finance Institute [Електронний ресурс] Режим

доступу:

https://corporatefinanceinstitute.com/resources/knowledge/credit/altmans-z-score-model/

- 12. Iskandar D. Predicting the Possibility of Bankruptcy in Coal Mining Company: Springate S-Score Method [Електронний ресурс] / D. Iskandar // International Journal of Innovative Science and Research Technology. 2019. Vol. 4, № 10. Режим доступу: https://ijisrt.com/assets/upload/files/IJISRT19OCT1582.pdf.pdf
- 13. Скриньковський Р. М. Діагностика фінансового стану підприємства з метою попередження кризи та ідентифікації банкрутства [Електронний ресурс] / Р. М. Скриньковський, Ж. В. Семчук, Ю. Я. Візняк, Х. І. Горічко // Бізнес Інформ. 2016. № 2. С. 165-172. Режим доступу: http://nbuv.gov.ua/UJRN/binf_2016_2_24
- 14. Батракова Т. І. Рання діагностика та фінансовий аналіз стану підприємства як частина антикризисного управління [Електронний ресурс] / Т. І. Батракова, В. В. Конєв // Науковий вісник Херсонського державного університету. Сер. : Економічні науки. 2016. Вип. 17(2). С. 57-59. Режим доступу: http://nbuv.gov.ua/UJRN/Nvkhdu_en_2016_17(2)__16
- Г.В. Давыдова, А.Ю. Беликов. Методика количественной оценки риска банкротства предприятий [Текст] / Г.В. Давыдова, А.Ю. Беликов. // Управление риском. 1999. N 3. C.13-20
- Янковець Т. М., Чернюк Ю. В. Порівняння сучасних моделей діагностики ймовірності банкрутства підприємства: закордонний та вітчизняний досвід [Текст] / Т. М. Янковець, Ю. В. Чернюк // Інвестиції: практика та досвід. 2016. № 20. С. 58-62.
- 17. Мурована Т., Пасхал В. Діагностика ймовірності кризового стану та її ефективність для підтримання фінансової стійкості суб'єктів підприємництва [Текст] / Т. Мурована, В. Пасхал // Економічний аналіз. Тернопіль. 2019. Том 29. № 4. С. 121-131. Режим доступу: https://doi.org/10.35774/econa2019.04.121

- 18. Abryutina M.S. Analysis of financial and economic activity of the enterprise [Tekct] / M.S. Abryutina, A.V. Grachev // M.: Business ans service. Edition 3, pererab. And additional. 2017. 272 p.
- 19. Патарідзе-Вишинська М. В. Діагностика фінансового стану підприємств як інструмент управління фінансовою безпекою [Електронний ресурс] / М. В. Патарідзе-Вишинська // Наукові записки Національного університету "Острозька академія". Серія : Економіка. 2019. № 12. С. 140-145. Режим доступу: http://nbuv.gov.ua/UJRN/Nznuoa_2019_12_24
- 20. Про затвердження Порядку проведення оцінки фінансового стану потенційного бенефіціара інвестиційного проєкту, реалізація якого передбачається на умовах фінансової самоокупності, а також визначення виду забезпечення для обслуговування та погашення позики, наданої за рахунок коштів міжнародних фінансових організацій, обслуговування якої здійснюватиметься за рахунок коштів бенефіціара: Наказ Міністерства фінансів України від 14.07.2016 №616. [Електронний ресурс]. Режим доступу: http://zakon.rada.gov.ua/laws
- 21. Методика інтегральної оцінки інвестиційної привабливості підприємств та організацій № 22 від 23.02.98 [Електронний ресурс] / Рекомендації Агентства з питань запобігання банкрутству підприємств та організацій. Режим доступу: http://zakon4.rada.gov.ua.
- 22. Методичні рекомендації по аналізу фінансово-господарського стану підприємств та організацій від 27.01.98 р. № 759/10/20-2117 [Електронний ресурс] / Рекомендації Державної податкової адміністрації України. Режим доступу: http://pro-u4ot.info/index.php.
- 23. Веб-сайт Національної бібіліотеки України імені В. І. Вернадського [Електронний ресурс]. Режим доступу: http://www.nbuv.gov.ua/
- 24. Офіційний веб-сайт компанії ТОВ «АМАКО Україна» [Електронний ресурс]. Режим доступу: https://amacoint.com/
- Official web-site of State Statistics Service of Ukraine» [Електронний ресурс].
 Режим доступу: http://www.ukrstat.gov.ua/

- 26. Online journal "Investopedia" [Електронний ресурс]. Режим доступу: https://www.investopedia.com/
- 27. Базілінська О.Я. Фінансовий аналіз: теорія та практика [Текст] : навч. посіб. для студ. вищ. навч. закл. / О.Я. Базілінська. К.: Центр учбової літератури, 2011. 328 с.
- Павленко О.І. Вдосконалення механізму оцінки фінансового стану підприємства [Текст] / О.І. Павленко // Бізнеснавігатор. 2010. № 2(19). С. 72–78.
- 29. Про затвердження положення про порядок здійснення аналізу фінансового стану підприємств, що підлягають приватизації [Електронний ресурс] : Наказ Міністерства фінансів України та Фонду державного майна України від 26.01.2001 р. № 49/121. Режим доступу: http://zakon4.rada.gov.ua.
- 30. Gajda, W., Zaplatynskyi, V. Innovations in crisis management [Електронний ресурс] / W. Gajda, V. Zaplatynskyi // MEST Journal. 2017. Vol. 5, № 1. Р. 32–39. Режим доступу: https://doi.org/10.12709/mest.05.05.01.04.
- 31. Borzenko, V. I. Anticrisis management / V.I. Borzenko. Kharkiv: Vyd-vo Ivanchenka I. S., 2016. 306 p.
- 32. Klepac, V., Hampel, D. Predicting financial distress of agriculture companies in EU [Електронний ресурс] / V. Klepac,, D. Hampel // Agricultural economics. 2017. Vol. 63. P. 347–355. Режим доступу: https://doi.org/10.17221/374/2015-AGRICECON.
- 33. Brzozowska, A., Bubel, D., Kalinichenko, A., Nekrasenko, L. (2017), Transformation of the agricultural financial system in the age of globalisation [Електронний ресурс] / A. Brzozowska, D. Bubel, A. Kalinichenko, L. Nekrasenko // Agricultural economics. 2017. Vol. 63. P. 548–558. Режим доступу: https://doi.org/10.17221/155/2016-AGRICECON.
- 34. Miroshnychenko, V. O., The improvement the financial potential of agricultural enterprises [Tekct] / V.O. Miroshnychenko // Ekonomika i finansy. 2017. №3. P. 42–50.
- 35. Tanklevs'ka, N. S., Miroshnychenko, V. O. Methodical approaches to assessing

- agricultural financial potential enterprises: domestic and foreign experience. Actual problems of accounting analytical process in management Entrepreneurship // Materials of the 3rd International Scientific and Practical Internet Conference 2015 November 26.
- 36. Tanklevs'ka, N. S. Miroshnychenko, V. O. (2017), Strategic guidelines for strengthening the financial potential of agrarian enterprises [Текст] / N.S. Tanklevs'ka, V.O. Miroshnychenko // Finansovyy prostir. 2017. №2. Р. 7–12.
- 37. Tanklevska N., Miroshnichenko V. Theoretical basis of managing of enterprises' financial potential on the basis of anti-crisis management [Електронний ресурс] / N.S. Tanklevs'ka, V.O. Miroshnychenko // Agricultural and Resource Economics: International Scientific E-Journal. 2019. Vol. 5. No. 2. P. 51–61. Режим доступу: http://are-journal.com.
- 38. Doing Business: Measuring Business Regulations. The World Bank [Електронний ресурс] Режим доступу: https://www.doingbusiness.org/en/reports/global-reports/doingbusiness-2020.
- 39. Khryniuk, O. S., Bova, V. A. (2018). Bankruptcy probability calculation models as a method of assessing the financial potential of an enterprise [Електронний ресурс] / O.S. Khryniuk, V.A. Bova // Effective Economy. Vol. 2. Р. 46-50. Режим доступу: http://www.economy.nayka.com.ua/pdf/2_2018/46.pdf
- 40. YouControl: Express Analysis Technique from You Control. [Електронний ресурс] Режим доступу: https://youcontrol.com.ua/contract or/expressanalisis/method/?id=8266672.
- 41. Vasylenko V.O. Anti-crisis management of the enterprise [Текст] : Teaching manual / V.O. Vasylenko К. : KNUE, 2013. 504 с.
- 42. Lamben Jean-Jacques. Market-Oriented Management: Strategic Marketing [Текст] / Jean-Jacques Lamben. M: Peter, 2014. 800 р.
- 43. Hliebova A.O., Konerska T.O. Formation of the system of crisis management in the enterprise [Текст] / A.O. Hliebova, T.O. Konerska // Young scientist. 2015.
 No. 11 (2). P. 35-40.

- 44. Economic security of the enterprise: the essence and mechanism of provision [Текст] : monograph / Kozachenko H.V., Ponomarev V.P., Liashenko O. M. K .: Libra, 2003. Т. 280. Р. 32.
- 45. Tytenko, L. V. Economic security as an element of strategic management system: accounting and analytical aspect [Електронний ресурс] / L.V. Tytenko // Baltic Journal of Economic Studies. 2018. No. 4. Р. 309—318. Режим доступу: https://doi.org/10.30525/2256-0742/2018-4-3-309-318
- 46. Ghajevska, L. M., Marchenko, O. I. Pidpryjemnycjka dijaljnistj / L.M. Ghajevska, O.I. Marchenko. Universytet DFS Ukrajiny, 2019. 228 p.
- 47. Bohdan, S. V., Tytenko, L. V., Mizirenko, O. S. Management internal control in the system of providing economic security of the enterprise [Електронний ресурс] / S.V. Bohdan, L.V. Tytenko, O.S. Mizirenko // Ekonomika ta suspiljstvo. 2018. No.19. P.1358-1363. Режим доступу: https://doi.org/10.32782/2524-0072/2018-19-20
- 48. Savchenko, A. M., Pajanok, T. M. Analysis of receivables of the enterprise using economic and mathematical methods [Τεκcτ] / A.M. Savchenko, T.M. Pajanok // Ekonomist. 2017. No.3. P.27-32.
- 49. Фінансовий аналіз та звітність [Текст] : навчальний посібник / Грабовецький Б. Є., Шварц І. В. Вінниця: ВНТУ, 2011. 281 с.
- 50. Фінансовий аналіз [Текст] : Навчальний посібник / Лучко М. Р., Жукевич С. М., Фаріон А. І. Тернопіль: ТНЕУ, 2016. 304 с.
- 51. Методичні рекомендації щодо проведення аналізу фінансового стану підприємства-боржника при отримані відстрочок (розстрочок) [Електронний ресурс] Режим доступу : https://zakon.rada.gov.ua/rada/show/v7141225-98
- 52. Методика проведення поглибленого аналізу фінансово-господарського стану неплатоспроможних підприємств та організацій [Електронний ресурс] Режим доступу : https://zakon.rada.gov.ua/laws/show/z0288-97
- 53. ACCA: Audit and Technology [Електронний ресурс] Режим доступу: https://www.accaglobal.com/us/en/professionalinsights/technology/audit-and-

tech.html.

- 54. Dyatlov S. A. Managed institutional chaos: the development of conceptual approaches to research [Електронний ресурс] / S.A. Dyatlov // Modern management technologie. 2016. No.2(62). P.57-60. Режим доступу: https://sovman.ru/article/6203/
- 55. Житар М.О., Бежевець І.В. Діагностика фінансового стану підприємства як основа забезпечення його економічної безпеки [Текст] / М.О. Житар, І.В. Бежевець // Збірник наукових праць Університету державної фіскальної служби України. 2020. вип.1-2. С.87-99.
- 56. Обущак Т.А. Сутність фінансового стану підприємства // Матеріали наук.практ. конф. «Актуальні проблеми економіки». - 2018. - №9. - 92 с.
- 57. Samorodov B.V., Sosnovska O.O., Zhytar M.O., Ananieva J.V. Methodical approach to the Quantification of Enterprise Financial Security Level // Financial and credit activity: problems of theory and practice. 2020. № 32.
- 58. Житар М. О., Сосновська О.О. Аналіз методів оцінки рівня економічної безпеки підприємств [Текст] / М.О. Житар, О.О. Сосновська // Бізнес Інформ. 2019. №1. С. 21–26.
- 59. Сосновська О.О., Житар М.О. Економічна безпека підприємства: сутність та ознаки забезпечення [Текст] / М.О. Житар, О.О. Сосновська // Облік і фінанси. № 3 (81). 2018. С. 124-132.

APPENDICES

Appendix A

 $Table\ A.1$ Basic methodological grounds of forming the system of indexes-indicators of a crisis state and a bankruptcy risk

Indicator	Normative	Calculation
10 LEX MOLES	Property assess	sment
Total Assets	Increase	TA (1300 fs№1)
Wear Factor	Decrease	1012 fs№1 / 1011 fs№1
Suitability Factor	Increase	1010 fs№1 / 1011 fs№1
Share of Fixed Assets	Decrease is positive in case if operational activity increasing	1010 fs№1 / TA (1300 fs№1)
Asset Mobility Ratio	Increase	1195 fs№1 / 1095 fs№1
WHITE KNUTE	Financial stability a	ssessment
Equity Ratio	0,5	E (1495 fs№1) / TA (1300 fs№1)
Debt Ratio	0,5 and not more than 0,6 -0,7	TL (1900 - 1495 fs№1) / TA (1300 fs№1)
Capitalization Ratio	0,5 and not more than 0,6 -0,7	LTL (1595 fs№1) / [LTL (1595 fs№1) + E (1495 fs№1)]
Accounts Payable-to-Accounts Receivable Ratio	KHILEKA	AP (1615+1620+1625+1630+1690 fs№1) / AR (1125+1130+1135+1155 fs№1)
MALEKANTE	Solvency assess	sment
Cash Ratio	0,2 - 1	[C (1160 fs№1) + CFI (1165 fs№1)] / STL (1695 fs№1)
Current Ratio	1 - 3	CA (1195 fs№1) / STL (1695 fs№1)
Quick Ratio	>0,7 - 0,8	[CA (1195 fs№1) – I (1100 + 1110 fs№1)] / STL (1695 fs№1)
Solvency Ratio	MATEKN	[C (1160 fs№1) + CFI (1165 fs№1)] / [(DC (2050+2130+2150+2180 fs№2)) / D]
Financial Leverage (Debt-to- Equity)	1-1,5	TL (1900-1495 fs№1) / E (1495 fs№1)
KNUTTEKNU	Business activity as	ssessment
Asset Turnover	Increase	NR (2000 fs№2) / TA (1300 fs№1)
Inventory Turnover	Increase	S (2050 fs№2) / AI (1100+1110 fs№1)
Accounts Receivable Turnover	Increase	NR (2000 fs№2) / AR (1125 fs№1)

Continuation of table A.1

Accounts Payable Turnover	Increase	S (2050 fs№2) / AP (1615 fs№1)
Days Inventory Outstanding (Days Sales of Inventory) (DI)	Decrease	[D / AR (1125 fs№1)] / [D / I (1100+1110 fs№1)]
Cash Conversion Cycle	Decrease	DI – [D / AP (1615 fs№1)]
WINTER KINDS	Profitability a	ssessment
ROE (Return on Equity)	Increase	NI (2350 fs№2) / E (1495 fs№1)
ROA (Return on Assets)	Increase	NI (2350 fs№2) / TA (1300 fs№1)
ROI (Return on Investment)	Increase	[NR (2000 fs№2) – S (2050 fs№2)] / S (2050 fs№2)
ROD (Return on Debt)	Increase	NI (2350 fs№2) / LTL (1595 fs№1)
ROR (Net Profit Margin)	Increase	NI (2350 fs№2) / NR (2000 fs№2)
Return on Operating Activity	Increase	NOI (2190 fs№2) / [OE (2130+2150+2180 fs№1)]
Operating Expenses Ratio	Decrease	OE (2550 fs№2) / NOI (2190 fs№2)

Table B.1 Dynamic scale of financial and economic stability (after M.S. Abryutina)

Appendix B

FES rate value **Description** Increment Beginning of an Grade End of an accounting rate of a stability state accounting period period (R₁) (\mathbf{R}_0) $\Delta \mathbf{R}$ Stability enhancement 1 >0 >0 >0 2 Stability support >0 >0 =03 Stability reduction >0 >0 <0 Equilibrium to stability =0>0 >0 transition Instability to stability 5 <0 >0 >0 transition Stability to equilibrium =06 >0 <0 transition Equilibrium =0=0= 0Instability to equilibrium =08 <0 >0 transition Stability to instability 9 >0 <0 <0 transition Loss of equilibrium <0 10 =0<0 Instability reduction 11 <0 >0 <0 12 Instability <0 <0 13 Instability enhancement <0 <0 <0

Appendix C

Дата 01.01.2019

Підприємство Товариство з обмеженою відповідальніств	ю «АМАКО Україна» за
ЄДРПОУ 21665011	
Територія	за КОАТУУ 3220888000
Організаційно-правова форма господарювання	KHUTE KHIUTE
Вид економічної діяльності	за КВЕД 46.61
Середня кількість працівників 235	JAKINI KIN
Адреса, телефон 08322 Київська область, Бориспільськи	й район, с.Проліски
Одиниця виміру: тис. грн. без десяткового знака	

Баланс (Звіт про фінансовий стан) на 31.12.2018 р.

Актив	Код рядка	На початок звітного періоду	На кінець звітного періоду
1,1151 1,151 14,11	2	3	4
I. Heod	боротні активі	MO SY MO	IN KIND
Нематеріальні активи:	1000	667	487
первісна вартість	1001	1904	1923
накопичена амортизація	1002	1237	1436
Незавершені капітальні інвестиції	1005	1267	2064
Основні засоби:	1010	83929	47764
первісна вартість	1011	146331	104957
знос	1012	62402	57193
Довгострокові фінансові інвестиції: які обліковуються за методом участі в капіталі інших підприємств	1030	46	46
інші фінансові інвестиції	1035	50	50
Усього за розділом І	1095	85959	50411
II. 06	оротні активи	NOTE	MO, EZ L
Запаси	1100	202353	258598
Виробничі запаси	1101	1906	2864
Товари	1104	200447	255734
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	105080	43552
Дебіторська заборгованість за розрахунками:	1130	26300	45767
за виданими авансами	Y SIL	L'ALLE KIL	UTE KR
у тому числі з податку на прибуток	1136	1569	1654
Інша поточна дебіторська заборгованість	1155	961	344
Гроші та їх еквіваленти	1165	17336	33515
Рахунки в банках	1167	8272	33515
Інші оборотні активи	1190	6436	7638
Усього за розділом II	1195	360291	394717

Continuation of the appendix C

III. Необоротні активи, утримувані для продажу, та групи вибуття	1200	0	0
Баланс	1300	446250	445128
Пасив	Код рядка	На початок звітного періоду	На кінець звітного періоду
І,Вл	асний капітал	ENHITE	THE !
Зареєстрований (пайовий) капітал	1400	195000	195000
Капітал у дооцінках	1405	1133	1133
Нерозподілений прибуток (непокритий збиток)	1420	-515884	-677099
Вилучений капітал	1430	(1950)	(-)
Інші резерви	1435	1950	HILEK
Усього за розділом I	1495	-319751	-480966
II. Довгострокові з	вобов'язання і	забезпечення	SHITE
Довгострокові кредити банків	1510	E KNOE	205205
Інші довгострокові зобов'язання	1515	157686	240007
Усього за розділом II	1595	157686	445212
III. Поточні зоб	ов'язання і заб	резпечення	TE MUT
Короткострокові кредити банків	1600	148993	11) 1 K1
Поточна кредиторська заборгованість:	1610	KILLEY	L'ILE, KI
за товари, роботи, послуги	1615	456431	472708
за розрахунками з бюджетом	1620	252	518
за у тому числі з податку на прибуток	1621	E KINITE	KILTE
за розрахунками зі страхування	1625	1207	800
за розрахунками з оплати праці	1630	158	3
Поточні забезпечення	1660	TE KH	3768
Інші поточні зобов'язання	1690	1274	3085
Усього за розділом III	1695	608315	480882
Баланс	1900	446250	445128

Continuation of the appendix C

Дата 01.01.2019

Підприємство <u>Товариство з обмеженою відповідальністю "АМАКО Україна"</u> за ЄДРПОУ 32007740

Звіт про фінансові результати (Звіт про сукупний дохід) за 2018 рік

І. ФІНАНСОВІ РЕЗУЛЬТАТ

Стаття	Код рядка	За звітний період	За аналогічний період попереднього року
Чистий дохід від реалізації продукції (товарів, робіт, послуг)	2000	1061472	864901
Собівартість реалізованої продукції (товарів, робіт, послуг)	2050	(804788)	(671614)
Валовий: прибуток	2090	256684	193287
Інші операційні доходи	2120	710376	270507
Адміністративні витрати	2130	(64509)	(78976)
Витрати на збут	2150	(70577)	(81506)
Інші операційні витрати	2180	(1020100)	(605983)
Фінансовий результат від операційної діяльності: прибуток	2190	NIES KIN	JEN KUN
збиток	2195	(188126)	(302671)
Інші фінансові доходи	2220	384	91
Інші доходи	2240	57624	10703
Фінансові витрати	2250	(17312)	(18494)
Інші витрати	2270	(26361)	(8181)
Фінансовий результат до оподаткування: прибуток	2290	ELIFT	2
збиток	2295	(173791)	(318552)
Чистий фінансовий результат: прибуток збиток	2350 2355	(173791)	(318552)

ІІ. СУКУПНИЙ ДОХІД

Стаття	Код рядка	За звітний період	За аналогічний період попереднього року
Сукупний дохід (сума рядків 2350, 2355 та 2460)	2465	-173791	-318552

III. ЕЛЕМЕНТИ ОПЕРАЦІЙНИХ ВИТРАТ

Матеріальні затрати	2500	8185	9179
Витрати на оплату праці	2505	55312	73649
Відрахування на соціальні заходи	2510	13191	17508
Амортизація	2515	13905	18342
Інші операційні витрати	2520	95218	68479
Разом	2550	185811	187157

Appendix D

Дата 01.01.2020

Підприємство Товариство з обмеженою відповідальніст	ю «АМАКО Україна» за
ЄДРПОУ 21665011	
Територія	за КОАТУУ 3220888000
Організаційно-правова форма господарювання	KY JE KHI JE
Вид економічної діяльності	за КВЕД 46.61
Середня кількість працівників 220	JIN KININ KINI
Адреса, телефон 08322 Київська область, Бориспільськи	й район, с.Проліски
Одиниця виміру: тис. грн. без десяткового знака	

Баланс (Звіт про фінансовий стан) на 31.12.2019 р.

Актив	Код рядка	На початок звітного періоду	На кінець звітного періоду
	2	3	4
I. Heo	боротні активі	A COLO	IN KIND
Нематеріальні активи:	1000	487	353
первісна вартість	1001	1923	1991
накопичена амортизація	1002	1436	1638
Незавершені капітальні інвестиції	1005	2064	1982
Основні засоби:	1010	47764	40639
первісна вартість	1011	104957	102912
знос	1012	57193	62273
Довгострокові фінансові інвестиції: які обліковуються за методом участі в капіталі інших підприємств	1030	46	46
інші фінансові інвестиції	1035	50	50
Усього за розділом І	1095	50411	43070
II. O6	оротні активи	NOTE	MU ES IT
Запаси	1100	258598	309903
Виробничі запаси	1101	2864	2082
Товари	1104	255734	307810
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	43552	73197
Дебіторська заборгованість за розрахунками:	1130	45767	44145
за виданими авансами	47.54	LA LA	UT - KM
з бюджетом	1135	5303	1660
у тому числі з податку на прибуток	1136	1654	1654
Інша поточна дебіторська заборгованість	1155	344	204
Гроші та їх еквіваленти	1165	33515	22395
Рахунки в банках	1167	33515	22395

Continuation of the appendix D

Інші оборотні активи	1190	7638	15299
Усього за розділом II	1195	394717	466803
III. Необоротні активи, утримувані для продажу, та групи вибуття	1200	0	0
Баланс	1300	445128	509873
Пасив	Код рядка	На початок звітного періоду	На кінець звітного періоду
І. Вл	асний капітал	THE KILL	T. KHIT
Зареєстрований (пайовий) капітал	1400	195000	295000
Капітал у дооцінках	1405	1133	1288
Нерозподілений прибуток (непокритий збиток)	1420	-677099	-663059
Усього за розділом І	1495	-480966	-366771
II. Довгострокові з	вобов'язання і	забезпечення	KRITE
Довгострокові кредити банків	1510	205205	206382
Інші довгострокові зобов'язання	1515	240007	271909
Усього за розділом II	1595	445212	478291
III. Поточні зоб	ов'язання і заб	безпечення	TE KNO
Поточна кредиторська заборгованість:	1610	CHILE IN	TEIN
за товари, роботи, послуги	1615	472708	386213
за розрахунками з бюджетом	1620	518	3764
за розрахунками зі страхування	1625	800	400
за розрахунками з оплати праці	1630	3	19
Поточні забезпечення	1660	3768	5327
Інші поточні зобов'язання	1690	3085	2630
Усього за розділом III	1695	480882	398353
Баланс	1900	445128	509873

Continuation of the appendix D

Дата 01.01.2020

Підприємство <u>Товариство з обмеженою відповідальністю "АМАКО Україна"</u> за ЄДРПОУ 32007740

Звіт про фінансові результати (Звіт про сукупний дохід) за 2019 рік

І. ФІНАНСОВІ РЕЗУЛЬТАТ

Стаття	Код рядка	За звітний період	За аналогічний період попереднього року
Чистий дохід від реалізації продукції (товарів, робіт, послуг)	2000	1158106	1061472
Собівартість реалізованої продукції (товарів, робіт, послуг)	2050	(896799)	(804788)
Валовий: прибуток	2090	261307	256684
Інші операційні доходи	2120	175720	725977
Адміністративні витрати	2130	(65084)	(64509)
Витрати на збут	2150	(78319)	(70577)
Інші операційні витрати	2180	(245460)	(1020024)
Фінансовий результат від операційної діяльності: прибуток	2190	48164	LE KHIE
збиток	2195	NO EN IN	(172449)
Інші фінансові доходи	2220	314	384
Інші доходи	2240	4492	57624
Фінансові витрати	2250	(35413)	(17312)
Інші витрати	2270	(1894)	(26361)
Фінансовий результат до оподаткування: прибуток	2290	15663	S MULLY
збиток	2295	TE - SHI	(158114)
Витрати (дохід) з податку на прибуток	2300	110	1 1 1 1 1 1 1
Чистий фінансовий результат: прибуток збиток	2350 2355	15663	- (158114)

ІІ. СУКУПНИЙ ДОХІД

Стаття	Код рядка	За звітний період	За аналогічний період попереднього року
Сукупний дохід (сума рядків 2350, 2355 та 2460)	2465	15663	-158114

III. ЕЛЕМЕНТИ ОПЕРАЦІЙНИХ ВИТРАТ

Матеріальні затрати	2500	13077	8185
Витрати на оплату праці	2505	62971	55312
Відрахування на соціальні заходи	2510	9374	13191
Амортизація	2515	9706	13905
Інші операційні витрати	2520	89827	95218
Разом	2550	184955	185811

Appendix E

Дата 01.01.2021

Підприємство Товариство з обмеженою відповідальністю	«АМАКО Україна» за
€ДРПОУ 21665011	
Територія	за КОАТУУ 3220888000
Організаційно-правова форма господарювання	EKITEKTE
Вид економічної діяльності	за КВЕД 46.61
Середня кількість працівників 230	TENTERIT
Адреса, телефон 08322 Київська область, Бориспільський	район, с.Проліски
Одиниця виміру: тис. грн. без десяткового знака	

Баланс (Звіт про фінансовий стан) на 31.12.2020 р.

Актив	Код рядка	На початок звітного періоду	На кінець звітного періоду
KASA KA	2	3	4
I. Heod	боротні активі	И	TE M
Нематеріальні активи:	1000	353	200
первісна вартість	1001	1991	2046
накопичена амортизація	1002	1638	1846
Незавершені капітальні інвестиції	1005	1982	1984
Основні засоби:	1010	40639	42655
первісна вартість	1011	102912	111487
знос	1012	62273	68832
Довгострокові фінансові інвестиції: які обліковуються за методом участі в капіталі інших підприємств	1030	46	TEYRU
інші фінансові інвестиції	1035	50	50
Усього за розділом І	1095	43070	44889
II. 06	оротні активи	V KINTE	KITE
Запаси	1100	309903	367201
Виробничі запаси	1101	2082	2203
Товари	1104	307810	364998
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	73197	88747
Дебіторська заборгованість за розрахунками:	1130	44145	35162
за виданими авансами	MITE	JUN EX	MU EX C
з бюджетом	1135	1660	621
у тому числі з податку на прибуток	1136	1654	KITTE
Інша поточна дебіторська заборгованість	1155	204	4550
Гроші та їх еквіваленти	1165	22395	32264
Рахунки в банках	1167	22395	31225

Continuation of the appendix E

Інші оборотні активи	1190	15299	9164
Усього за розділом II	1195	466803	537709
III. Необоротні активи, утримувані для продажу, та групи вибуття	1200	0	0
Баланс	1300	509873	582598
Пасив	Код рядка	На початок звітного періоду	На кінець звітного періоду
І . Вл	асний капітал	THE KIND	THY
Зареєстрований (пайовий) капітал	1400	295000	295000
Капітал у дооцінках	1405	1288	1288
Нерозподілений прибуток (непокритий збиток)	1420	-663059	-436847
Усього за розділом І	1495	-366771	-140559
II. Довгострокові з	вобов'язання і	забезпечення	KRITE
Довгострокові кредити банків	1510	206382	KH TE
Інші довгострокові зобов'язання	1515	271909	266639
Усього за розділом II	1595	478291	266639
III. Поточні зоб	ов'язання і заб	резпечення	LES VAD
Короткострокові кредити банків	1600	CH LE VY	167882
Поточна кредиторська заборгованість: за довгостроковими зобов'язаннями	1610	KNUTEY	MILEY KI
за товари, роботи, послуги	1615	386213	274084
за розрахунками з бюджетом	1620	3764	3432
за розрахунками зі страхування	1625	400	8
за розрахунками з оплати праці	1630	19	24
Поточна кредиторська заборгованість за одержаними авансами	1635	TEXT	6
Поточні забезпечення	1660	5327	7198
Інші поточні зобов'язання	1690	2630	3884
Усього за розділом III	1695	398353	456518
Баланс	1900	509873	582598

Continuation of the appendix E

Дата 01.01.2021

Підприємство <u>Товариство з обмеженою відповідальністю "АМАКО Україна"</u> за ЄДРПОУ 32007740

Звіт про фінансові результати (Звіт про сукупний дохід) за 2020 рік

IV. ФІНАНСОВІ РЕЗУЛЬТАТ

Стаття	Код рядка	За звітний період	За аналогічний період попереднього року
Чистий дохід від реалізації продукції (товарів, робіт, послуг)	2000	1459771	1158106
Собівартість реалізованої продукції (товарів, робіт, послуг)	2050	(1176756)	(896799)
Валовий: прибуток	2090	283015	261307
Інші операційні доходи	2120	277353	175720
Адміністративні витрати	2130	(64926)	(65084)
Витрати на збут	2150	(84165)	(78319)
Інші операційні витрати	2180	(154137)	(245460)
Фінансовий результат від операційної діяльності: прибуток	2190	257140	48164
Інші фінансові доходи	2220	835	314
Інші доходи	2240	3820	4492
Фінансові витрати	2250	(32741)	(35413)
Інші витрати	2270	(762)	(1894)
Фінансовий результат до оподаткування: прибуток	2290	228292	15663
Витрати (дохід) з податку на прибуток	2300	K-PI-TI	KALE
Чистий фінансовий результат: прибуток	2350	228292	15663

V. СУКУПНИЙ ДОХІД

Стаття	Код рядка	За звітний період	За аналогічний період попереднього року
Сукупний дохід (сума рядків 2350, 2355 та 2460)	2465	228292	15663

VI. ЕЛЕМЕНТИ ОПЕРАЦІЙНИХ ВИТРАТ

Матеріальні затрати	2500	13962	13077
Витрати на оплату праці	2505	76134	62971
Відрахування на соціальні заходи	2510	11722	9374
Амортизація	2515	9557	9706
Інші операційні витрати	2520	74125	89827
Разом	2550	185500	184955