## MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

Federal State Autonomous educational institution of higher education

## "NATIONAL RESEARCH TOMSK POLYTECHNICAL UNIVERSITY"

#### YURGINSK TECHNOLOGICAL INSTITUTE

Yurga Technological Institute Training direction 38.03.01 "Economics"

## GRADUATE OUALIFICATION WORK

GRADUATE QUALIFICATION WORK		
Work theme		
Analysis of financial and economic activities on the example of an enterprise		

UDC 658.012.12:658.14

#### Student

Group	Full name	Signature	The date
Z-17B60	Khamidova Farangis Abdukarimovna		

#### Leader

Position	Full name	Academic degree, title	Signature	The date
Docent UTI TPU	Lizunkov V.G.	PhD, Docent		

## **CONSULTANTS:**

For the section "Financial Management, Resource Efficiency and Resource Saving"

of the section. I maneral infanagement, resource Efficiency and resource Saving				
Position	Full name	Academic degree, title	Signature	The date
Docent UTI TPU	Lizunkov V.G.	PhD, Docent		

For the section "Social responsibility"

Position	Full name	Academic degree, title	Signature	The date
Senior Lecturer UTI	Rodionov P.V.	PhD.		
TPU				

#### TO BE ADMITTED TO THE DEFENCE:

PLO leader	Full name	Academic degree, title	Signature	The date
Docent UTI TPU	Tilepenko E.Yu.	PhD, Docent		

# **EXPECTED LEARNING OUTCOMES**

Competency code					
	General cultural competences				
QA(U)-1	The ability to use the basics of philosophical knowledge to form a world outlook				
QA(U)-2 The ability to analyse the main stages and regularities of social historical development form a civic position					
QA(U)-3	The ability to use the basics of economic knowledge in various activities				
QA(U)-4	The ability to use the basics of legal knowledge in various fields of activity				
QA(U)-5	The ability to communicate in oral and written form in Russian and foreign languages to solve problems of interpersonal and intercultural interaction				
QA(U)-6	The ability to work in a team with tolerance for social, ethnic, religious and cultural differences				
QA(U)-7	The ability to self-organise and self-educate				
QA(U)-8	The ability to use the methods and means of physical education to ensure proper social and professional activity				
QA(U)-9	The ability to use first aid methods, methods of protection in emergency situations				
	General professional competences				
BPC(U)-1	Is able to solve standard tasks of professional activity on the basis of information and bibliographic culture with application of information and communication technologies and				
	taking into account basic requirements of information security				
BPC(U)-2	Is able to collect, analyse and process data needed to solve professional problems				
BPC(U)-3	Is able to choose the tools for economic data processing according to the task at hand, analyse the results of calculations and justify the conclusions drawn				
BPC(U)-4	Is able to find organisational and managerial solutions in professional activities and is prepared to take responsibility for them				
	Professional competences of graduates				
PC(U)-1	Is able to collect and analyse the raw data required to calculate economic and socio- economic indicators that characterise the activities of business entities				
PC(U)-2	Is able to calculate economic and socio-economic indicators characterising the activities of business entities on the basis of standard methodologies and the current legal and regulatory framework				
PC(U)-3 Is able to carry out the calculations required for the economic parts of the pla and present the results of the work according to the standards of the organisation.					
PC(U)-4	Is able to build standard theoretical and econometric models based on the description of economic processes and phenomena, to analyse and interpret the results meaningfully				
PC(U)-5	Is able to analyse and interpret financial, accounting and other information contained in the accounts of enterprises of various forms of ownership, organisations, departments, etc. and use the information to make managerial decisions				
PC(U)-6	Is able to analyse and interpret domestic and foreign statistics on socio-economic processes and phenomena, identify trends in socio-economic indicators				
PC(U)-7	Is able, using domestic and foreign sources of information, to collect the necessary data, to analyse it and to prepare an information review and/or an analytical report				
PC(U)-8	Is able to use modern technical tools and information technology to solve analytical and research problems				
PC(U)-9	The ability to document business transactions, conduct cash accounting, develop a chart of accounts for an organisation and generate accounting entries based on this chart of accounts				
PC(U)-10	The ability to make accounting entries for the sources and results of the organisation's inventory and financial liabilities				
PC(U)-11	Ability to draw up payment documents and make accounting entries for the accrual and transfer of taxes and levies to the budgets of different levels, insurance contributions to non-budgetary funds				
PC(U)-12	The ability to record the results of economic activities for the reporting period in the accounting records, to prepare accounting and statistical reporting forms, tax declarations				
PC(U)-13	The ability to organise and implement the organisation's tax accounting and tax planning				

# MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

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# "NATIONAL RESEARCH TOMSK POLYTECHNICAL UNIVERSITY"

YURGINSK TECHNOLOGICAL INSTITUTE

Yurga Technological Institute Training direction 38.03.01 "Economics"

I APPROVE:	
PLO leader	

(Signature) (The date) (Tilepenko E.Yu.)

# THE TASK for the performance of the final qualifying work

In the shape of:

in the shape of.
Diploma work
(thesis project / work)

Student:

otudent.		
Group	Full name	
Z-17B60	Khamidova Farangis Abdukarimovna	

Work theme:

Analysis of financial and economic activities on	the example of an enterprise
Approved by order of the director	

The deadline for the student's completed work:	15/05/2021
--	------------

#### **TECHNICAL TASK:**

The object of the research is OOO Siberian Factory Komus-Upakovka.  The subject of the research: indicators of financial and economic activity of OOO Siberian factory Komus-upakovka.		
In the course of writing a work, it is necessary to solve the		
following questions:		
<ul> <li>consider the theoretical aspects of the analysis of the financial and economic activities of the enterprise;</li> <li>to analyze the balance sheet of the enterprise (analysis of liquidity, financial stability, business activity, profitability);</li> <li>to analyze and evaluate the financial results of the enterprise;</li> <li>to develop basic recommendations for improving the financial condition of the enterprise and increasing its financial results.</li> </ul>		
1 Goals and objectives of the WRC 2 Theoretical aspects of the analysis of financial and economic activities 3 General characteristics of the enterprise 4 Competitive advantages of OOO Siberian Factory Komus-Upakovka 5 Liquidity analysis		

6 Financial soundness analysis				
	· · · · · · · · · · · · · · · · · · ·			
7 Profitability analysis				
	8 Evaluation of the financial results of the enterprise			
	9 Recommendations for improving the financial condition of			
	the enterprise			
	10 18 key types of shares			
	BTL - complex			
	11 Activities contributing to the improvement of the			
	financial condition of the enterprise			
	12 Conclusion			
Consultants for	the sections of the final qualifying work			
	(with indication of sections)			
Section	Consultant			
"Financial management, resource				
efficiency and resource	Docent UTI TPU, Lizunkov V.G.			
conservation"				
Social responsibility	Senior Lecturer UTI TPU, Rodionov P.V.			

Date of issue of the assignment for the performance of the final	30/12/2020
qualifying work according to the linear schedule	

The task was given by the head:

Position	Full name	Academic degree, title	Signature	The date
Docent UTI TPU	Lizunkov V.G.	Candidate of Pedagogical Sciences		

The student accepted the assignment:

Group		Full name	Signature	The date
	0	Khamidova Farangis Abdukarimovna		

# TASK FOR SECTION "FINANCIAL MANAGEMENT, RESOURCE EFFICIENCY AND RESOURCE SAVING"

## Student:

Group	Full name
Z-17B60	Khamidova Farangis Abdukarimovna

Institute	Yurga Technological Institute		
Education level	Bachelor	Direction	38.03.01. "Economy"

List of questions to be researched, designed and developed:						
1 Conduct a liquidity	The analysis of liquidity and solvency of the organization LLC "Siberian					
and solvency analysis	factory" Komus-upakovka "is presented.					
	Which indicates an abnormal, ineffective, illiquid and precarious financial					
	situation. The company is on the verge of insolvency, has no funds to pay					
	short-term obligations. Even with the receipt of money on accounts					
	receivable, the company could pay off creditors by only 43%.					
2 Conduct a financial	Conduct an analysis of financial stability, which indicates that the amount					
soundness analysis	of borrowed funds has increased, and not long-term, but short-term for the					
	implementation of the current activities of the enterprise. The enterprise					
	has a shortage of its own circulating assets, technical re-equipment of fixed					
	assets is required					
	The calculation of the effectiveness of measures to improve the personnel					
	management system by increasing labor productivity and increasing the					
	profit of the enterprise is given.					
3 Conduct an assessment	3 Conduct an assessment of the effectiveness of the financial and economic activities of the enterprise.					

3 Conduct an assessment of the effectiveness of the financial and economic activities of the enterprise, analysis of business activity, profitability.

# Date of issue of the task for the section on a line chart

# The assignment was given by the consultant:

Position	Full name	Academic degree, title	Signature	The date
Docent UTI TPU	Lizunkov V.G.	PhD, Docent		

## The student accepted the assignment:

	8		
Group	Full name	Signature	The date
Z-17B60	Khamidova Farangis Abdukarimovna		

# TASK FOR SECTION "SOCIAL RESPONSIBILITY"

Student:

Group	Full name			
Z-17B60	Khamidova Farangis Abdukarimovna			

Institute	Yurga Technological Institute		
Education level	Bachelor	Direction	38.03.01. "Economy"

# Initial data for the section "Social responsibility":

1. Description of the workplace (work area.

technological process, mechanical equipment)

for the occurrence of:

- harmful manifestations of factors of the working environment (meteorological conditions, harmful substances, lighting, noise, vibration, electromagnetic fields, ionizing radiation)
- dangerous manifestations of production factors environment (mechanical nature, thermal character, electrical, fire nature)
- social emergencies
- 2. List of legislative and regulatory documents on the topic

The object of the research will be the workplace of the chief specialist of the property department of the committee for the management of municipal property of the city of Yurga of the Administration of the city of Yurga.

The office is a room with an area of  $12 \text{ m2} (3 \times 4)$ . Light environment parameters - class 2; the intensity of the labor process - grade 1. The final class of working conditions is class 2.

Harmful and hazardous production factors:

- to increase efficiency, it is necessary to alternate the period of work and rest, according to the type and category of labor activity;
- lack of illumination. It is required to replace the existing artificial lighting system in accordance with the calculations.
- Sanitary and Epidemiological Rules and Regulations SanPiN 2.4.6.2553-09 Sanitary and epidemiological requirements for the safety of working conditions for workers under 18 years of age.
- SanPiN  $2.2.2\,/\,2.4.1340\text{-}03$  Hygienic requirements for personal computers and work organization.
- Order of the Ministry of Health of the Russian Federation dated January 28, 2021 No. 29n.
- Order of the Ministry of Health of the Russian Federation of March 21, 2014 No. 125n.

# List of questions to be researched, designed and developed:

- 1. Analysis of the factors of internal social responsibility:
- the principles of the corporate culture of the studied organization;
- labor organization and safety systems;
- development of human resources through training programs and training and professional development programs;
- Systems of social guarantees of the organization;
- -provision of assistance to employees in critical situations.
- observance of labor protection rules; the possibility of personnel development through training and professional development programs; participation in social programs; organization and procedure for carrying out preventive vaccination measures within the framework of the national calendar of preventive vaccinations; briefings on safety at the workplace; briefings on fire safety.

- 2. Analysis of the factors of external social responsibility: - promoting environmental protection;
- interaction with the local community and local authorities:
- Sponsorship and corporate charity;
- responsibility to consumers of goods and services (production of quality goods)
- readiness to participate in crisis situations, etc.
- 3. Legal and organizational issues of ensuring social responsibility:
- Analysis of legal norms of labor legislation;
- analysis of special (typical for the investigated field of activity) legal and regulatory legal acts;
- analysis of internal regulatory documents and regulations of the organization in the field of the investigated activity

Sources and means of protection against hazardous factors existing in the workplace (electrical safety, conditions for high-altitude work, etc.).

Fire and explosion safety (reasons, preventive measures, primary fire extinguishing means)

- activities that motivate environmental protection; A responsibility.

An operational headquarters has been created to prevent the penetration of COVID-2019.

Examine the following documents: Fire safety instructions, labor protection.

## List of graphic material:

If necessary, submit sketch graphic materials for the design assignment (mandatory for specialists and masters)

Date of issue of the task for the section on a line chart	

The assignment was given by the consultant.

The assistinction was sive	ii by the constituit.			
Position	Full name	Academic degree, title	Signature	The date
Senior Lecturer UTI	Rodionov P.V.	PhD.		

The student accepted the assignment:

Group	Full name	Signature	The date
Z-17B60	Khamidova Farangis Abdukarimovna		

#### The abstract

The graduate qualification work contains 74 pages, 22 figures, 11 tables, 25 sources.

Key words: analysis, financial and economic activity, liquidity, financial stability, profitability, efficiency, business activity.

Relevance of the theme of the study lies in the fact that in today's market economy operates a lot of enterprises, and the goal of each is to obtain as much profit at minimum cost. And it is the analysis of financial and economic activity, as an integral part of the management system and the basic base for development of economic strategy of the enterprise, allows to achieve these goals.

The purpose of the work lies in the analysis of financial and economic activities of the enterprise to identify ways to improve its financial and economic activities.

Subject of the study: indicators of financial and economic activity of the enterprise.

The object of the research: LLC "Siberian factory "Komus-Packaging".

Research objectives:

- To consider theoretical aspects of the analysis of financial and economic activity of the enterprise;
- To make an analysis of the balance sheet of the company (analysis of liquidity, financial stability, business activity and profitability);
  - To analyze and evaluate the financial results of the enterprise;
- To develop basic recommendations to improve the financial condition of the enterprise and increase its financial results.

Definitions, notation, abbreviations, normative references

The financial condition of an enterprise is the ability of an enterprise to function, make a profit, while maintaining solvency and profitability.

analysis of the financial condition of an enterprise is an analysis of the profitability and solvency of an enterprise, an analysis of financial stability and property status.

Economic methods are the most common methods of analysis and are used in almost all enterprises, they have several varieties.

Financial stability is the ability of an enterprise to meet its obligations, develop and make a profit.

Financial stability is a component of the internal side of the financial condition of an enterprise, which reflects the ratio of income and expenses, cash flow, sources of their formation and reserves for use.

The method of analysis of financial and economic activity is a way of researching and the relationship of economic and financial processes.

Methods are divided into two groups: qualitative (logical) and quantitative (formalized).

Qualitative method - analysis of the technique and method, which is based on logical thinking, using the qualified experience of the analyst:

- comparison method;
- method of constructing systems of analytical tables;
- a method for constructing systems of analytical indicators;
- method of expert assessments;
- scripting method;
- psychological and morphological methods, etc.

The quantitative method is the way that mathematics is used. Using this method, you can get an accurate result or several results for further use of the correct conclusion using qualitative methods.

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#### Introduction

Irrespective of what is going on in today's market and economy in general, every enterprise strives to obtain a positive result from its activities, namely, the minimum cost and maximum profit. Some enterprises succeed in this, whilst others fail to achieve their goals.

In order to achieve the desired results, the leaders of any organisation should study the economic processes affecting their activities and be able to analyse their strengths and weaknesses in order to strengthen some of them and eliminate others. In other words, every enterprise needs to analyse and diagnose its financial and economic activities.

The purpose of this graduation qualification work is to make an analysis to identify ways to improve the financial and economic activities of the company and improve its performance.

The object of the research is LLC "Siberian factory "Komus-Packaging".

The subject of the research: indicators of financial and economic activity of LLC "Siberian factory "Komus-packing".

To achieve the goal it is necessary to solve the following tasks:

- To consider the theoretical aspects of the analysis of financial and economic activity of the enterprise;
- To make an analysis of balance sheet of company (analysis of liquidity, financial stability, business activity and profitability);
  - Analyze and evaluate the financial results of the enterprise;
- Develop basic recommendations for improving the financial condition of the company and improve its financial performance.

#### 1 Literature review

1.1 The concept and essence of the analysis of financial and economic activities, its principles and types

The analysis, a way of cognition of objects and phenomena of the environment, based on the division of the whole into elements and study them in all the variety of relationships and dependencies.

The analysis of financial and economic activities - a process through which evaluated the past and current financial position of the company.

At the present stage of economic development, analysis of business activity can be considered as one of the functions of enterprise management. The analysis of business activities of the company precedes decisions and actions, proves them and is the basis of scientific management of production, provides its objectivity and effectiveness.

Analysis of financial and economic activity of an enterprise is a basis for making decisions, which determine the most important characteristics and performance of the company, the forecast of further development. During analysis of financial and economic activities of the company, it is important to establish goals and objectives of the analysis object, systems of indicators, by which the object of analysis is studied, sequence and frequency of analysis, methods of study of analyzed objects, sources of information, guidelines for organizing research, etc.

Financial results are generated cumulatively over the entire reporting calendar period. They are summarised in Form No. 2 of the OKUD Profit and Loss Statement.

On the basis of data contained in it and other form indicators, indicators of financial results of activity of an enterprise are calculated. [2]

The analytical study of the financial and economic activities of enterprises is based on principles:

State approach.

The assessment of economic events and processes considers their compliance with state economic, social, international policies and legislation.

Scientific character.

The analysis should be based on the provisions of the dialectical theory of knowledge, consider the requirements of economic laws of production development.

Complexity.

The analysis requires a comprehensive study of the causal dependencies in the economy of the enterprise.

System approach.

The analysis should be based on the understanding of the object of research as a complex dynamic system with a structure of elements.

5. Objectivity and accuracy.

The information which is used for the analysis of financial and economic activity should be true and objectively reflect reality, analytical conclusions should be proved by exact calculations.

Effectiveness.

The analysis of financial and economic activities should actively influence the course of production and its results.

Planned nature.

For efficiency, the analysis of financial and economic activities should be carried out systematically.

Efficiency.

The efficiency of analysis of financial and economic activities increases if it is performed quickly and analytical information promptly influences the administrative decisions of managers.

Democracy.

Participation of workers in the analysis of financial and economic activities allows more complete identification of intra-economic reserves.

10. efficiency.

The analysis of financial and economic activities must be effective, i.e. the cost of its performance must have a multiplier effect. [6]

There are many notions of the financial condition of an enterprise in the modern academic literature and they all have a number of significant differences (Fig. 1):

1) there is confusion between the concepts of "financial situation", "financial stability", "financial position" and "financial position of an enterprise

2) The range of tasks to be performed in the financial analysis of economic activity and the analysis and evaluation of the financial condition of enterprises is clearly delineated.

Figure 1 - Differences in definitions of the financial position of an enterprise in the modern sense

Having analysed many definitions of the financial position of an enterprise, the following definition can be proposed: the financial position of an enterprise is the ability of an enterprise to function, to make a profit, while maintaining solvency and profitability.

Accordingly, from the definition of financial condition, we can conclude that the analysis of the financial condition of an enterprise is the analysis of profitability and solvency of the enterprise, the analysis of financial stability and property status.

The main tasks of financial analysis are presented in Figure 2:

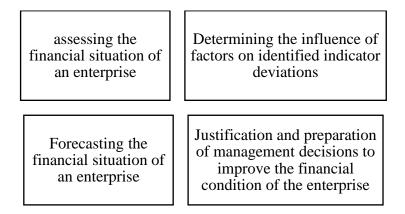


Figure 2 - Objectives of financial analysis

A distinction is made between internal and external financial analysis (Figure

• to search for reserves to strengthen the financial position, profitability and earnings
 • The company's employees are responsible for this task.

 • in order to predict the degree of investment risk
 • determined in the interests of third-party users and conducted on the basis of published financial statements

Figure 3 - Types of financial analysis

In addition to types, there are many methods of financial analysis, which have their own classification (Figure 4):

Formalised methods are basic, objective and based on rigorous analytical relationships.

Informalised methods - based on logical reasoning of analytical techniques, for example: the method of expert judgement and the ranking method.

Economic methods: Absolute method, Relative method, Balance method, Discounting method

Figure 4 - Classification of financial analysis methods

Economic methods are the most common analysis techniques and are used in almost all businesses, and they come in several varieties (Figure 5):

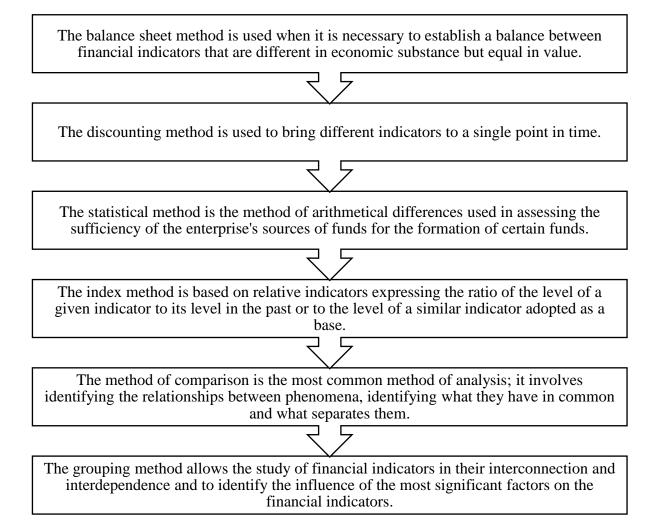


Figure 5 - Types of economic analysis methods

Thus, economic methods of financial analysis are the most common methods of analysis used in an enterprise to determine the solvency, profitability and financial stability of the enterprise. These methods allow not only to calculate coefficients, but also to determine the surplus or deficit of current assets, property or resources of the enterprise.

I.e. these methods make it possible to determine the financial sustainability of an enterprise and the efficiency of its resource use.

Financial sustainability is the ability of the enterprise to meet its obligations, to develop and to make a profit.

The financial position can be of three types (Figure 6):

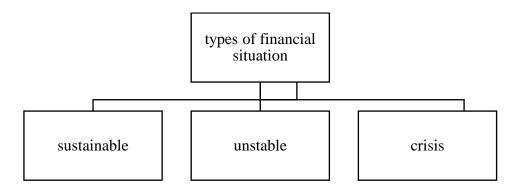


Figure 6 - Types of financial condition of an enterprise

Determining financial sustainability in the analysis of financial position is very important because even with positive changes in the balance sheet and financial indicators, an enterprise may have difficulties in fulfilling its obligations if it uses its resources irrationally, has large debts or a high proportion of borrowed capital.

The positive factors of financial sustainability are shown in Figure 7. 7:

The availability of sources of reserves - i.e. the main ways out of an unstable and crisis situation would be to replenish the sources of reserves, increase the share of own funds, etc.

The financial stability of the company is based on its ability to pay its debts, i.e. it is based on its ability to pay.

Financial sustainability is the ability of an enterprise to function and develop successfully, to maintain a balance between its assets and liabilities in a changing internal and external environment, and to constantly maintain its solvency and investment attractiveness

Figure 7 - Positive factors of financial sustainability of the enterprise

Thus, financial sustainability is a component of the internal side of the financial condition of the company, which reflects the ratio of income and expenses, cash flow, sources of their formation and reserves of their use. Financial sustainability ratios are presented in Figure 8:

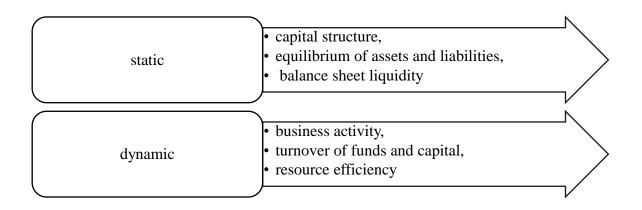


Figure 8 - Indicators of financial sustainability of the enterprise

Thus, the main main purpose of the analysis of financial position is to analyze the current status of financial stability, solvency and efficiency of the use of capital and reserves in order to improve and improve the structure of assets and liabilities, sustainability and stability of the enterprise, and its investment attractiveness.

Because sustainable, stable financial position has a positive impact on profit making, increasing profitability and improving the financial mechanisms of the enterprise.

A sustainable financial position implies a combination of high solvency and liquidity requirements, creditworthiness and profitability of the enterprise. Meeting these requirements requires compliance with the most important balance sheet proportions.

# 1.2 Types of business activities analysis

The analysis of an enterprise's financial and economic activities is determined by industry attributes:

#### Sectoral:

- Sectoral (considers the specifics of individual branches of the national economy (industry, agriculture, transport, etc.)
- interbranch (considers interrelations and structure of economy branches and is a methodological basis for general analysis of financial and economic activity of an enterprise);

#### time feature:

- preliminary (carried out prior to the implementation of business operations to justify administrative decisions)
- operative (to be carried out right after making business transactions for quick identification of financial shortcomings in the process)
- subsequent (to be carried out after business operations and used to control the financial and economic activities of the company).

# Spatial attribute:

- intra-economic (research activities of an economic enterprise and its structural units);
- intercompany (analysis of interaction of an enterprise with contractors, competitors, which allows to show the organization's strengths and weaknesses).

# Control object:

- technical-economic analysis (investigates the interaction of technological and economic processes, as well as establishes their impact on the economic results of the enterprise);
- Financial and economic analysis (shows the financial results of the enterprise implementation of the financial plan, the efficiency of use of equity and loan capital, profitability indicators);
- Social and economic analysis (studies the interrelation of social and economic processes in order to increase the efficiency of the use of labor force, the productivity of labor, etc.)
- economic-statistical analysis (applied to the study of mass social and economic events)
- Economic-environmental analysis (applied to the study of the interaction of environmental and economic processes for a more rational and thorough use of environmental resources);
- marketing analysis (applied to the study of business environment, raw and sale markets, etc.).

According to the method of study of objects:

- comparative analysis (method of comparing the results of financial and economic activities over periods of economic activity)
- factual analysis (identification of the size of the impact of factors on the benefits and the level of performance indicators)
- Diagnostic (identification of a disorder in the mechanism of the organisation's functioning by analysing typical features which are characteristic of a given disorder)
- marginal analysis (method of evaluation and justification of effectiveness of administrative decisions based on cause-and-effect relationship between sales volume, product cost and profit);
- economic-mathematical analysis (identifies the best version of an economic problem solution through mathematical modelling)

- Stochastic analysis (for studying stochastic dependencies between the studied phenomena and processes of financial and economic activity of an enterprise)
- Functional-cost analysis (focused on optimising the performance of functions which are performed at different stages of the product life cycle).

Subject of the analysis:

- Internal analysis (carried out by special structural units of the enterprise for management needs);
- -External analysis (performed by government agencies, banks, shareholders, investors, contractors, auditor firms on the basis of financial and statistical reports of the enterprise).

By programme content:

- complex analysis (the organisation's activities are studied comprehensively);
- thematic analysis (single aspects of activities of great interest at present are studied). [7]

# 1.3 Methods of analysis of financial and economic activities

The method of analysis of financial and economic activities is a method of research and interconnection of economic and financial processes.

The method of analysis of financial and economic activities is characterised by the need for constant comparisons.

#### Features:

- use of a system of analytical indicators, comprehensively characterising the financial and economic activities of the company;
  - study of the causes of changes in these indicators;
- identification and measurement of cause-and-effect relationships between them.

The stages of the analysis of financial and economic activity consist of:

- observation of the subject of research, measurement and calculation of absolute and relative indicators, bringing them into a comparable form;
- systematization and comparison, grouping and specification of factors, study of their influence on indicators of activity of the subject
- generalisation and creation of final tables, drawing conclusions and recommendations for management decision-making. [4]

The method of analysis of financial and economic activities is a system of rules and requirements that guarantee effective application of the method.

Taken together, the method and methodology constitute the methodological foundation of financial and economic activity analysis.

Methods are divided into two groups: qualitative (logical) and quantitative (formalised).

Qualitative method - an analysis of method and method, which is based on logical thinking, the use of skilled experience of the analyst:

- comparison method;
- a method for constructing systems of analytical tables;
- method of constructing systems of analytical indicators;
- method of expert evaluations;
- scenario method;
- psychological and morphological methods, etc.

Quantitative methods are methods that use mathematics. Using this method it is possible to obtain an exact result or several results to further use the correct conclusion with qualitative methods.

Quantitative methods are divided into: accounting, statistical, classical methods of analysis, economic-mathematical methods, etc.

When analysing financial and economic activity, different methods can be used, both logical and formalised. But often used methods of analysis of financial and economic activity are:

The method of absolute, relative and average values.

The method of comparison (objects are compared to determine common features or differences between them. The application of this method is complicated by the problem of the availability of indicators at similar enterprises that could form the basis for comparison. This method is applied in all analytical stages, beginning with preliminary analysis and ending with sophisticated methods of analysis).

Vertical analysis (determining the structure of the final financial indicators to identify the impact of each reporting item on the result as a whole. Calculation of the specific weight of individual items in the balance sheet total and assessment of their dynamics with the ability to identify and predict structural changes in assets and sources of their coverage).

Horizontal analysis (comparison of indicators with previous period, identification of absolute and relative changes in indicators of various items of financial statements for a certain period, assessment of these changes).

Trend analysis (comparing each indicator in financial statements with a number of previous periods and identifying the trend, which is the main trend of the dynamics of the indicator, cleared of random influences and certain features of individual periods. With the help of this analysis, possible indicators in the future are formed, i.e. a forward-looking analysis is carried out).

Factor analysis (the impact of individual factors on the outcome indicator using deterministic or stochastic research methods).

Analysis with the help of financial coefficients (used to analyse the financial condition of the organization and is a relative indicator that is determined according to the balance sheet and income statement).

Method of expert evaluations (used when instrumental methods are not suitable and measurements cannot be based on physical phenomena or are very complex).

The simultaneous use of all methods allows the most precise and objective evaluation of the company's financial position, its reliability as a business partner, and its development prospects. [9]

In the process of collecting information, data on the values of the attributes characterizing each element of the process under study are obtained. This information is presented in the form of indicators. They can be absolute, relative and average. Characteristics of all sides of the economic processes under study can be given only by means of all kinds of generalizing indicators. Each type of indicators has a definite meaning and takes an important place in the analytical process.

The results of the analysis of financial position influence the choice of direction for further financial development of the company, the forecasting of revenues and expenditures.

The analysis of financial position consists of several obligatory stages (Figure 9):

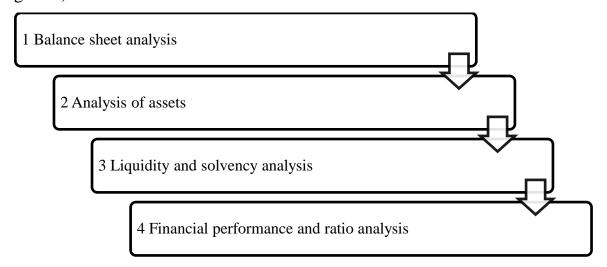


Figure 9 - Steps in analysing the financial position of an enterprise

Thus, the analysis of financial position consists of the analysis of balance for a certain period of time, analysis of ratios and financial stability of the enterprise. Its results are compared in dynamics and corresponding conclusions are made.

Let's take a closer look at the stages of analysis of financial position.

Phase 1 - Balance sheet analysis

This stage consists of several components (Figure 10):

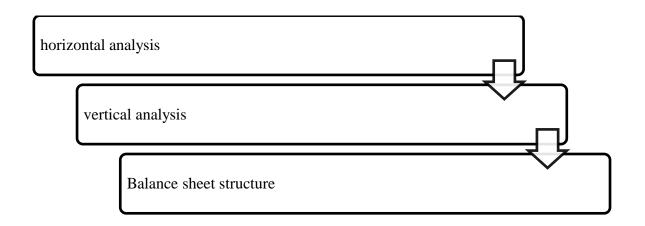


Figure 10 - Structure of balance sheet analysis

Horizontal analysis - comparing each figure with the same figure from the previous period, i.e. calculating the dynamics of change in indicators over a period of time.

These methods of analysis can be applied to all types of financial statements. But the main forms are the balance sheet (Form 1) and profit and loss statement (Form 2). Let us consider their analysis in more detail.

Analysis of form No. 1 "Balance sheet" - this form is the most informative, it reflects in monetary units of financial position, the availability and movement of current and non-current assets, capital and reserves, debt.

The balance sheet is divided into 2 parts (Fig.11) [10]

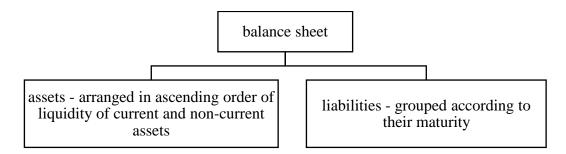


Figure 11 - Balance sheet structure

Profit and Loss Statement provides information on the performance of the enterprise, on expenses and income, on the amount of profit or loss.

Analysis of Form 2 provides information about the dynamics of income, expenses, their composition and the results of the enterprise, it is carried out in several stages (Figure 12) [17].

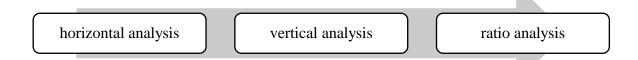


Figure 12 - Stages in the analysis of the income statement

Horizontal analysis makes it possible to assess

the dynamics of indicators over a certain period of time;

the growth rate of indicators;

the percentage change in the dynamics of growth over a specified period of time.

Horizontal analysis is best done in tabular form [18].

Vertical analysis - i.e. determining the share of each indicator in the total balance sheet total and the dynamics of their changes, analysis of the final indicators and identifying the impact of each item on the final indicators and the balance sheet as a whole [9]. The vertical analysis has the main features (Fig. 13):

Moving to relative indicators allows for benchmarking of enterprises, taking into account industry specifics and other characteristics Relative measures mitigate the negative impact of inflationary processes, which significantly distort the absolute figures in the financial statements and thus make it difficult to compare them over time

Figure 13 - Features of vertical analysis

The vertical analysis is carried out by calculating the share of each indicator in total revenue and it allows

identify the role of factors in the formation of financial results estimate the amount of profit;

analyze the reasons for losses, if any [18].

Vertical analysis is also best performed in tabular form.

There are signs of a "good" balance sheet (Fig. 14):

Balance sheet currency at the end of the reporting period has increased compared to the beginning Growth rate of current assets is higher than the growth rate of non-current assets

Equity of the organisation exceeds borrowed capital and its growth rate is higher than the growth rate of borrowed capital

Rate of growth of accounts receivable and accounts payable are approximately equal

Figure 14 - Signs of a "good" balance sheet

After conducting a horizontal and vertical analysis. It is necessary to consider the structure of the balance sheet. To determine the structure of the balance sheet, the indicators shown in Figure 15 are calculated [12]

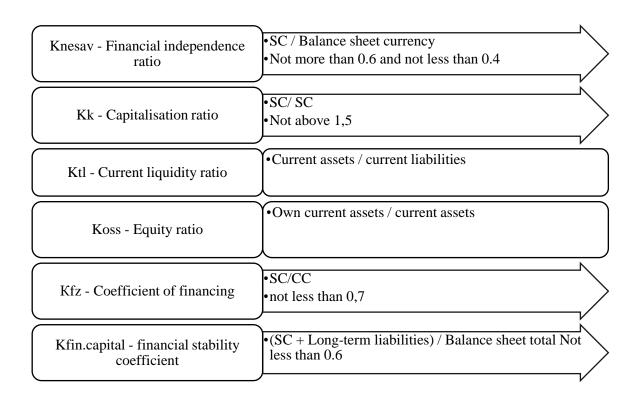


Figure 15 - Balance sheet structure analysis

Thus, horizontal and vertical analyses complement each other, they are especially valuable as they allow comparing the dynamics of various indicators by type and volume of financial activity.

# Stage 2 - Analysis of Assets

To assess the property position, the indicators shown in Figure 16 are calculated [11]

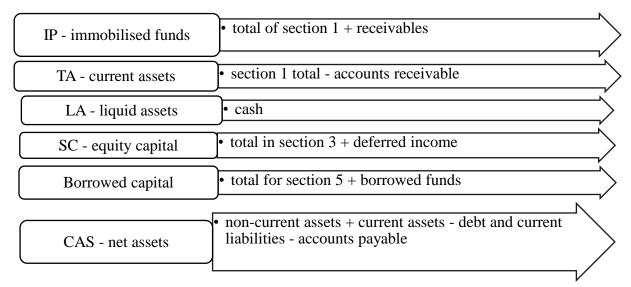


Figure 16 - Analysis of assets and sources of formation

CAS is determined to determine the amount of excess of net assets over the share capital. In addition to the presented ratios, a characteristic of the financial position can be calculated (Figure 17):

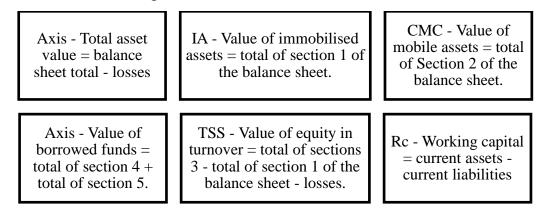


Figure 17 - Characteristics of the financial condition of the enterprise by analysis of the balance sheet

Thus, although the trend towards growing inventories may increase the current liquidity ratio for a certain period of time, it is necessary to analyze whether this increase occurs at the expense of an unjustified diversion of assets from the production turnover, which ultimately leads to an increase in accounts payable and deterioration of the financial situation.

Stage 3 - Liquidity and Solvency Analysis.

Solvency is the availability of cash for prompt repayment of accounts payable. The signs of solvency are shown in Figure 18:

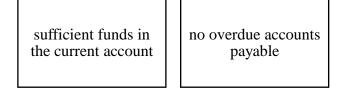


Figure 18 - Signs of solvency of an enterprise

Liquidity ratios show the degree of solvency of an enterprise. Balance sheet liquidity is the extent to which an organisation's liabilities are covered by its assets, property and liabilities [2].

There are several groups of liquidity, which depend on the speed of cash turnover, the higher the speed of turnover, the more liquid the company is (Fig. 19) [14].

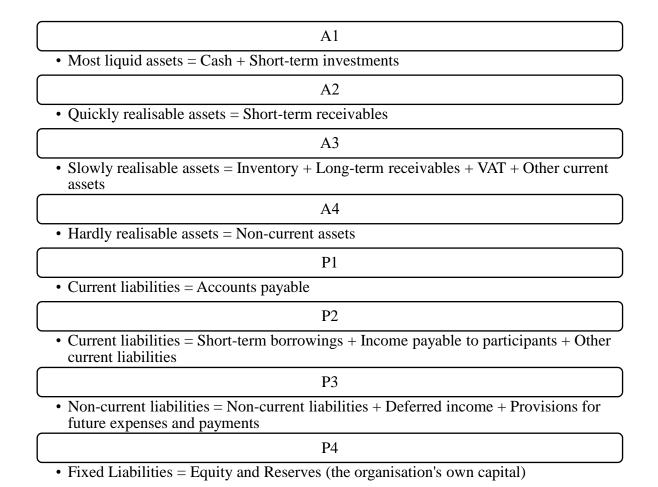


Figure 19 - Characteristics of enterprise liquidity groups

In order to determine whether the balance sheet is liquid, it is necessary to compare the calculated liquidity groups and it is recommended to draw up a table for illustrative purposes.

A balance sheet is absolutely liquid when the following ratios are fulfilled:  $A1 \ge P1$ ;  $A2 \ge P2$ ;  $A3 \ge P3$ ;  $A4 \le P4$ .

Further, liquidity ratios are calculated to determine the liquidity of the balance sheet (Figure 20) [15].

 $Kal - absolute \ liquidity \ ratio = Cash + Short-term \ financial \ investments) \ / \ Short-term \ liabilities \ optimum \ 0.2-0.3$ 

TJ - net current assets = Total liquid current assets - Short-term liabilities

Ktl - current (general) liquidity ratio = total liquid current assets / short-term liabilities (Short-term credits and loans + Accounts payable) - optimally 1.0-2.0

Quick (interim) liquidity ratio = (Cash + Short-term financial investments + Short-term receivables) / Short-term liabilities optimally 0.7-0.8

Figure 20 - Enterprise liquidity ratios

The absolute liquidity ratio shows which part of short-term liabilities can be repaid immediately with available cash and marketable securities if necessary [1]. Quick (intermediate) liquidity ratio is the part of current liabilities that can be repaid from expected receipts [2]. The current (total) liquidity ratio shows whether an entity has sufficient funds for short-term liabilities [2].

Thus, the analysis of an enterprise's balance sheet is an assessment of the dynamics of debt, cash flow, the degree of independence from borrowings and, most importantly, the assessment of the liquidity of the enterprise.

# 2 Objects and research methods

2.1 General characteristics of the enterprise LLC "Siberian factory "Komus-Packaging"

Komus-Packaging" branch office - LLC "Siberian factory "Komus-Packaging" (hereinafter referred to as SFKU) is located at: Yurga, Zheleznodorozhnaya 1a. Phone: (38451) 4-96-06. Opening hours: from 8 a.m. to 5 p.m.

"KOMUS-PACKAGING" develops its own production in 7 factories for the production of food packaging, office supplies and paper, fax and receipt tape.

"KOMUS-PACKAGING ranks first by coverage of corporate clients on the office supplies market with 64% of the capital market and 35% of the regional market. It is developing a network of contact centres to service corporate partners. The company has the largest retail and regional network in the industry in Russia - 70 company shops in Moscow and regions, 17 regional representative offices.

The company's competitive advantages are shown in Figure 21:



Figure 21 - Advantages of the company

The assortment policy of LLC "Siberian Factory KOMUS-PACKAGING" is based on the system of analysis and construction of well-balanced complex assortment offer taking into account individual needs of the partner.

"KOMUS-PACKAGING" has been working in the industry of domestic rigid polymeric packaging for more than 14 years, being one of the divisions of commercial and industrial association "KOMUS-PACKAGING".

# 3 Calculations and analytics

# 3.1 Liquidity and solvency analysis

There are several groups of liquidity that depend on the speed of cash turnover, the higher the speed of turnover, the more liquid the company is (Table 1).

Table 1 - Groups of enterprise liquidity, RUB thousand

Designation	2018	2019	2020	Change, thousand roubles	Growth rate, %
1	2	3	4	5	6
A1	430	103	2	-428	0,47
A2	20215	13113	0	-20215	0
A3	28634	31546	30324	1690	105,90
A4	5303	6852	5872	569	110,73
P1	37941	37494	36491	-1450	96,18
P2	65111	63355	64377	-734	98,87
P3	0	0	0	0	0
P4	-10629	-11741	-18864	-8235	177,48

As can be seen from the table, A1 and A2, i.e. the most liquid and quick assets, have decreased from the assets, and P1, P2 and P3, P4, i.e. there are no long-term liabilities at all, from the liabilities.

In order to determine whether the balance sheet is liquid, it is necessary to compare the calculated liquidity groups and for clarity it is recommended to draw up a table (Table 2).

Table 2 - Balance sheet liquidity analysis, in thousand roubles

Indicator	Sum		Indicator	Sum		Payment surplus (+), deficit (-)	
group	2018	2020	group	2018	2020	2018	2020
1	2	3	4	5	6	7	8
A1	430	2	P1	37941	36491	37511	36489
A2	2021 5	0	P2	65111	64377	44896	64377
A3	2863 4	3032 4	Р3	0	0	-28634	-30324
A4	5303	5872	P4	- 10629	- 18864	-15932	-24736
Balance	5458 2	4551 3	Balance	54582	45513	0	0

As can be seen from the table, the most liquid assets experience a payment surplus (2013 - 37511 thousand rubles, 2015 - 36489 thousand rubles), fast assets also experience a surplus (in 2013 - 44896, in 2015 - 64377), the remaining indicators have a payment deficit.

The balance sheet is considered to be absolutely liquid when 4 inequalities are fulfilled, in our case the fulfillment of the inequalities is presented in table 3.

Table 3 - Fulfilment of balance sheet liquidity inequalities

Inequality	A1 ≥ P1	$A2 \ge P2$	$A3 \ge P3$	$A4 \le P4$
1	2	3	4	5
2018	no	no	yes	no
2020	no	no	yes	no

Only one of the four inequalities is met, so we cannot say that the balance sheet is completely illiquid, we can conclude that the company is not liquid, but there is a chance of recovering liquidity and solvency.

Next we need to calculate liquidity ratios.

Current liquidity ratio as of:

2018

Knat the beginning of the year = (33651-40) / (27968+28139) = 0.757.

K at the end of the year = (49279-17) / (27170+37941) = 0.76.

2019 year

Kna beginning of the year = (49279-17) / (27170+37941) = 0.76.

K at the end of the year = 44762 / (25861 + 37494) = 0.71.

2020

Kna beginning of the year = 44762 / (25861 + 37494) = 0.71.

K at the end of the year = (39541-77) / (27886+36491) = 0.61.

In 2018, there were no such dramatic changes as in the following years, which gave hope for a stable financial position in the future. The current ratio as at 01.01.2020 was 0.71 and as at 30.12.2020 it was 0.61. According to the standards, the ratio is considered to be between 1 and 2. Current assets of the enterprise as of 01.01.2020 are not enough to repay short-term liabilities, but decrease of this indicator indicates deterioration of financial position, the growing risk of loss of solvency.

Quick Liquidity Ratio as of:

2018

Knat the beginning of the year = 19447 / 56107 = 0,347.

K at the end of the year = 20645 / 65111 = 0.317.

2019 year

Kna beginning of the year = 20645 / 65111 = 0.317.

K at the end of the year = 13216 / 63355 = 0.209.

2020

Kna to start of the year = 13216 / 63355 = 0.209.

K at the end of the year = 9217 / 64377 = 0.143.

In the example, it was 0.347 at the beginning of 2013 and decreased to 0.143 by the end of 2015.

Absolute liquidity ratio at:

2018

Kna beginning of the year = 342 / 56107 = 0.006.

K at the end of the year = 314 / 65111 = 0.005.

2019

Kna beginning of the year = 314 / 65111 = 0.005.

K at the end of the year = 103 / 63355 = 0.002.

2020

Kna at the beginning of the year = 103 / 63355 = 0.002.

K at the end of the year = 2 / 64377 = 0.00003.

It is believed that the value of this coefficient should not fall below 0.2. At the end of 2020, our ratio is 0.00003, which is almost zero. Our company is illiquid.

Let us summarize the calculated ratios in the table (Table 4).

Table 4 - Liquidity ratios

	at the beginning of		at the end of the year			Recommended	
Indicator	the year					criterion	
	201	201	202	2018	2019	2020	Criterion
	8	9	0				
1	2	3	4	5	6	7	8
Total liquidity ratio	0,6	0,76	0,71	0,76	0,71	0,61	>1,0
Quick liquidity ratio	0,347	0,317	0,209	0,317	0,209	0,143	>1,0
Absolute liquidity ratio	0,006	0,005	0,002	0,005	0,002	0,00003	>0,2

The analysis of liquidity ratios suggests that the current liquidity ratio has decreased by 0.55 and the solvency recovery ratio has also undergone a decrease by 0.1, which leaves little chance for the company to restore a stable financial position.

The liquidity ratios reviewed in table 4 indicate an abnormal, inefficient, illiquid and fragile financial position. The company is on the verge of insolvency and has no cash to pay its short-term liabilities. Even with cash receivables, the company could only pay its creditors by 43% 9.

Thus, analysis of the balance sheet of an enterprise is an assessment of the dynamics of debt, turnover of cash, assessment of the degree of independence from borrowings and, most importantly, an assessment of the liquidity of the enterprise.

Many factors influence the liquidity and stability of an enterprise, such as: the position of the organisation on the market; market share, production volume, enterprise potential, etc. All of these factors need to be considered, analysed and appropriate decisions need to be made.

## 3.2 Analysis of Financial Stability

Equity ratio as at:

2018

Kna beginning of the year = (6921-15635) / 33651 = -0.259.

K at the end of the year = (10629-5303) / 49279 = 0.108.

2019 year

Kna beginning of the year = (10629-5303) / 49279 = 0.108.

K at the end of the year = (11841-6852) / 44762 = 0.11.

2020

Kna beginning of the year = (11841-6852) / 44762 = 0.11.

K at the end of the year = (18964-5972) / 39541 = 0.33.

There is a normal limit for this indicator: K2 0.1. In 2018, the indicator increases from negative (-0.259) to positive (0.108), i.e. the availability of own funds in the enterprise. In 2019, the availability of the company's own funds increases slightly (from 0.108 to 0.11). By the end of 2020, there is a strong increase in this indicator (from 0.11 to 0.33).

The solvency recovery (loss) ratio for:

2018

$$K = (0.76 + 6/12 - (0.76 - 0.757)) / 2 = 0.7615.$$

2019

$$K = (0.71 + 6/12 - (0.71 - 0.76)) / 2 = 0.685.$$

2020 year

$$K = (0.61 + 6/12 - (0.61 - 0.71)) / 2 = 0.66.$$

As the current ratio at the end of the reporting period has a value of less than 2 and the equity ratio at the end of the reporting period has a value of less than 0.1, the solvency recovery ratio is calculated for a period of 6 months. The obtained coefficient is less than 1, hence it is possible to say that in the last 3 years the company has no real possibility to restore the solvency in the nearest future.

Autonomy coefficient as of:

2018

Coefficient at the beginning of the year = 6781 / 6821 = 0.991.

At the end of the year = 10512 / 10529 = 0.998.

2019 year

Kna beginning of the year = 10512 / 10529 = 0.998.

K at the end of the year = 11741 / 11841 = 0.992.

2020

Kna at the beginning of the year = 11741 / 11841 = 0.992.

K at the end of the year = 18941 / 18864 = 1.004.

It is desirable for the autonomy ratio to exceed 560%. In this case, its creditors have peace of mind, knowing that all the debt can be repaid from the company's assets.

Debt-to-equity ratio as of:

2018

Kne at the beginning of the year = 27968 / 6821 = 4.1.

K at the end of the year = 27170 / 10529 = 2.58.

2019

Kna beginning of the year = 27170 / 10529 = 2.58.

K at the end of the year = 25861 / 11841 = 2.18.

2020

Kna at the beginning of the year = 25861 / 11841 = 2.18.

K at the end of the year = 27886 / 18864 = 1.48.

The meaning of the first two indicators is very close. Practically, one of them (either one) can be used to assess financial sustainability.

Investment coverage ratio as of:

2018

Kna beginning of the year = 12686 / 33611 = 0.38.

K at the end of the year = 25910 / 49279 = 0.53.

2019

Kna beginning of the year = 25910 / 49279 = 0.53.

K at the end of the year = 31351 / 44762 = 0.7.

2020

Kna beginning of the year = 31351 / 44762 = 0.7.

K at the end of the year = 30209 / 39464 = 0.77.

Current assets are not provided with own working capital.

Tangible assets are secured with own working capital as at:

2018

Kna at the beginning of the year = 12686 / 14164 = 0.9.

K at the end of the year = 25910 / 28617 = 0.91.

2019

Kna beginning of the year = 25910 / 28617 = 0.91.

K at the end of the year = 31351 / 31543 = 0.99.

2020

Kna to start of the year = 31351 / 31543 = 0.99.

K at the end of the year = 30209 / 30247 = 0.999.

In this case, inventories are not covered by own working capital.

The inventory coverage ratio as at:

2018

Kna beginning of the year = (12686 + 27968 + 28139) / 14164 = 4.86.

K at the end of the year = (25910 + 27170 + 37941) / 28617 = 3.18.

2019 year

Kna beginning of the year = (25910 + 27170 + 37941) / 28617 = 3.18.

Year-end K = (31351 + 25861 + 37494) / 31546 = 3.002.

2020 year

Kna beginning of the year = (31351 + 25861 + 37494) / 31546 = 3.002.

K at the end of the year = (30209 + 27886 + 22159) / 39464 = 2.004.

In our company's normal sources of funds to cover the inventories are sufficient.

Permanent asset index as at:

2018

Kna beginning of the year = 15635 / 6821 = 2.29.

K at the end of the year = 5303 / 10529 = 0.5.

2019

Kna beginning of the year = 5303 / 10529 = 0.5.

K at the end of the year = 6852 / 11741 = 0.58.

2020

Kna at the beginning of the year = 6852 / 11741 = 0.58.

K at the end of the year = 5972 / 18864 = 0.32.

These ratios indicate that the company has a high level of fixed assets and non-current assets in equity.

Ratio of real value of property as at:

2018

Kne at the beginning of the year = 12686 / 49286 = 0.26.

K at the end of the year = 25910 / 54582 = 0.475.

2019 year.

Kna beginning of the year = 25910 / 54582 = 0.475.

K at the end of the year = 30209 / 45513 = 0.66.

2020 year

Kna beginning of the year = 30209 / 45513 = 0.66.

K at the end of the year = 31351 / 51614 = 0.61.

Essentially, this coefficient determines the level of production potential of the enterprise, the provision of the production process with means of production.

The coefficient of accumulation of depreciation for:

2018

At the beginning of the year = 3180 / 14532 = 0.22.

At the end of the year = 796 / 5303 = 0.15.

2019

Kna at the beginning of the year = 796 / 5303 = 0.15.

K at the end of the year = 1058 / 6852 = 0.16.

2020

Kna at the beginning of the year = 1058 / 6852 = 0.16.

K at the end of the year = 1,896 / 5972 = 0.32.

Ratio of current assets to real estate as at:

2018

At the beginning of the year = 33611 / 15635 = 2.15.

K at the end of the year = 49279 / 5303 = 3.29.

2019

Kna beginning of the year = 49279 / 5303 = 3.29.

K at the end of the year = 44762 / 6852 = 6.53.

2020

Kna beginning of the year = 44762 / 6852 = 6.53.

K at the end of the year = 39464 / 5972 = 6.61.

The optimum and critical value of the ratio of current assets to real estate is due to the industry characteristics of the enterprises.

Table 5 - Summary table of financial stability indicators

	Value of the indicator							
Indicator	at the	beginnin	g of the y	ear	at the end year	Recom mended criterion		
	2018	2019	2020	2018	2019	2020	Criterion	
1	2	3	4	5	6	7	8	
cha	racterisin	g the debi	t to equity	ratio				
Equity ratio	0,991	0,998	0,992	0,998	0,992	1,004	0,5	
Ratio of current assets to own current assets	0,38	0,53	0,7	0,53	0,7	0,77	0,1	
Ratio of inventory to own current assets	0,9	0,91	0,99	0,91	0,99	0,999	0,5	
Coverage ratio of inventories	3,002	3,18	4,86	3,18	3,002	2,004	i	
charac	terising th	he conditi	ion of fixe	ed assets				
Fixed asset index	2,29	0,5	0,58	0,5	0,58	0,32	-	
Net asset value coefficient	0,26	0,475	0,66	0,475	0,66	0,61	0,5	
Depreciation accumulation ratio	0,22	0,15	0,16	0,15	0,16	0,32	0,25	
Current asset to real estate asset ratio	2,15	3,29	6,53	3,29	6,53	6,61	1	
Equity ratio	0,991	0,998	0,992	0,998	0,992	1	0,5	
Leverage ratio	4,1	2,58	2,18	2,58	2,18	1,48	-	

Table 5 shows that the amount of borrowed funds has increased, not long-term but short-term funds for the current activity of the company. The company lacks its own working capital and needs to upgrade its fixed assets 20

3.3 Evaluation of the efficiency of financial and economic activities of the enterprise.

A condensed analytical balance sheet based on the data from Form 1 is shown in Table 6.

Table 6 - Analytical balance sheet, in thousands of roubles

Indicators	20	18	2019		2020		Modified 2018- 2020	
1	2	3	4	5	6	7	8	9
ASSETS	Start of the year	Con.	Start of the year	Con.	Start of the year	Con.	Start of the year	Con.
Liquid assets	19447	20645	20645	13216	13216	9217	-6231	-11428
MOTIONAL ASSETS	14204	28617	28617	31546	31546	30247	17342	1630
Immovable property	15635	5303	5303	6852	6852	5972	-8783	669
PASSIVE								
Current liabilities	36107	65111	65111	63355	63355	64377	27248	-734
Long term liabilities	0	0	0	0	0	0	0	0
Equity	6781	10512	10512	11741	11741	18941	4960	8429
BALANCE SHEET	49286	54582	54582	51614	51614	45513	2328	-9069

The analysis of Table 6 shows that liquid assets are receivables, cash and short-term financial investments and by the end of 2015 they had decreased by 11428 thousand rubles.

Immovable assets are non-current assets and increased by RUB 669 thousand.

Fixed assets are inventories and VAT, they also increased by 1,630 thousand rubles.

Let us estimate the financial condition of "Komus-Packaging".

Table 7 - Estimation of financial position of "Komus-Packaging" from 2013 to 2015, in th. rub.

ACTIVE	2018	2019	2020	change, thousand roubles	growth rate, %
1	2	3	4	5	6
ACTIVE					
Immovable property	5303	6852	5972	669	112,6
Current assets	49262	44762	39464	-9798	-19,89
Inventories	28617	31546	30247	1630	105,7
Production inventories	28634	31546	30324	1690	105,9
Finished goods	5980	6837	8172	2192	136,7
Cash assets	430	103	2	-428	99,5
Other petroleum products	0	0	0	0	0
Liquid assets	20645	13216	9217	-11428	-55,3
Goods shipped	0	0	0	0	0
PASSIVE					
Equity	10512	11741	18941	8429	180,2
Borrowed funds	27170	25861	27886	716	102,6
Long term liabilities	0	0	0	0	0
Short term liabilities	65111	63355	64377	-734	-1,13

Table 7 shows a decrease of current assets by almost 20% (19.8%), decrease of liquid assets by 55.3% and decrease of short-term liabilities by 1.1%. The decrease was due to increase of finished goods by 36.7% and increase of equity by 80%.

In practice it is quite common to combine horizontal and vertical analysis, i.e. to build analytical tables that characterise both structure of funds of the enterprise and its sources and dynamics of its individual indicators.

Table 8 - Analysis of enterprise sources

Indicator	Amoun	mount, thousand roubles			as a percentage of the balance sheet total			% change
	2018	2019	2020	nd.	2018	2019	2020	
1	2	3	4	5	6	7	8	9
ACTIVE Immovable property	5303	6852	5972	669	10,27	13,27	13,12	2,85
Current assets, total	49279	39464	44762	-4517	30,28	36,72	36,71	6,43
Of which inventories, total	28617	31547	30247	1630	52,43	61,12	66,46	14,03
production inventories	22637	24709	22075	-562	41,47	47,87	42,77	1,3
finished goods	5980	6837	8172	2192	10,96	13,25	17,96	7
Liquid assets	20645	13216	9217	-11428	37,82	25,61	20,25	-17,57
including cash	314	103	2	-312	0,58	0,2	0,004	-0,576
PASSIVE Shareholders' equity	10512	11741	18941	8429	88,32	22,75	41,62	-46,7
Current liabilities	65111	63355	64377	-734	19,29	22,75	41,45	22,16
incl. bank loans	27170	25861	27886	716	49,78	50,1	61,27	11,49
- settlements with creditors	21499	21917	26120	4621	39,39	42,46	57,39	18
<ul><li>other current liabilities</li></ul>	16442	15577	10371	-6071	30,12	30,18	22,79	-7,33
BALANCE SHEET	54582	51614	45513	-9069	100	100	100	0

Table 8 shows that the property (assets) of the company from 2018 to 2020 increased by 5853 thousand rubles, i.e. by 17.5%. The growth of assets was due to an increase in inventories, the value of which increased by RUB 16083 thousand (RUB 14164 thousand, RUB 30247 thousand). (from 14164 to 30247), i.e., by 2.13 times, and by 213.55%.

At the same time, the value of immovable property decreased by 9653 (from 15635 to 5976), i.e., 2.62 times, and its share in the total value of assets decreased from 28.65% to 13.12%. According to the balance sheet data, the value of liquid assets decreased by RUB 10260 thousand (19477 to 9217). (from 19477 to 9217), and their share in the total value of assets during the reporting year decreased from 2.14% to 5.36%.

The liabilities section of the balance sheet is characterised by the prevailing share of short-term liabilities, which increased by 4.86% (from 13.84 to 18.7).

Equity capital increased by 419 thousand rubles from 2018 to 2020. (from 6781 to 7200). This is extremely insufficient. There was a significant increase in short-term liabilities in the period under review, with an increase of 8270 thousand rubles (56107 thousand rubles, 643 thousand rubles). (from 56107 to 64377), i.e., by 13.25% (from 5.45 to 18.7).

# 3.4 Analysis of business activity

Analysis of capital structure is one of the tasks of the analysis of financial statements; it is characterized by the indicators given in table 9 [16].

Table 9 - Capital structure indicators

Designati on	Name	Calculation formula	Optimal value	2018	2019	2020	Change
1	2	3	4	5	6	7	8
Ck	Capitalisation ratio	SC / SC	Not more than 1.5	2,58	2,20	1,47	-1,11
Knezav	Financial independence ratio	SC / Balance sheet currency	Not more than 0.6 and not less than 0.4	0,19	0,23	0,42	0,22
Kfz	Financing ratio	CC/CC	Not more than 0.7	0,39	0,45	0,68	0,29
C fnc	Financial sustainability ratio	(SC + Long-term liabilities) / Balance currency	0.6	0,19	0,45	0,68	0,49

The capitalisation ratio, in spite of a decrease of 1.11, is within the optimum value.

The financial independence ratio is less than the optimum value, which means that the company is dependent on external sources of funding and its own capital is not sufficient to pay off all liabilities of the company.

The coefficient of funding increased by 0.29 but is still within the range of less than the optimum value, it means that the company is underfunded.

The financial stability coefficient is less than the optimum value, it means that the company is not financially sustainable.

Thus, indicators of financial sustainability and capital structure show that the company is not able to develop and function, interact with the external environment and make a profit, and suggests that the company needs to improve its financial performance.

## 3.5 Profitability Analysis

Profitability of all assets as at:

$$2018 \text{ K} = 5296 / 2648 = 2.$$

$$2019 \text{ year } K = 2968 / 1484 = 2.2.$$

$$2020 \text{ K} = 6101 / 3031 = 2.01.$$

Return on equity at:

$$2018 \text{ K} = 5296 / 0.5 - (10612 - 6781) = 2.84.$$

$$2019 \text{ K} = 2968 / 615 = 4.83.$$

$$2020 \text{ K} = 6101 / 3600 = 1.69.$$

Return on sales ratio for:

$$2018 \text{ K} = 5296 / 3708 = 1.43.$$

$$2019 \text{ K} = 2968 / 1212 = 2.45.$$

$$2020 \text{ K} = 6101 / 7123 = 0.86.$$

This indicator shows how efficiently and profitably the company conducts its activities.

Let's calculate the profitability ratio of the core business (rate of return) for:

$$2018 \text{ K} = 2661 / 3708 = 0.72.$$

$$2019 \text{ K} = 2,844 / 1,212 = 2.35.$$

$$2020 \text{ K} = 9584 / 7123 = 1.35.$$

Labour productivity for:

$$2018 \text{ K} = 3708000 / 276 = 13434.8.$$

$$2019 \text{ year } K = 1212000 / 224 = 541.07.$$

$$2020 \text{ year K} = 7123000 / 253 = 28154.2.$$

Equity at:

2018 K = 1563000 / 276 = 56648.6.

2019 year K = 6852000000 / 224 = 30589,3.

2020 K = 5972000 / 253 = 23604.7.

In general, there is a deterioration in the use of the company's assets. For each rouble of funds invested in assets, the company's balance sheet profit in the reporting year was 0.01 kopecks higher than in 2018. Accordingly, the return on equity decreased by 1.15 kopecks. Return on sales in the reporting year decreased by 0.57 kopecks. Labour productivity per employee increased by 14.75 kopecks. Labour efficiency decreased by 33.04 thousand rubles.

Table 10 - Summary table of profitability and labour productivity

Indicator	Valı	Value of the indicator				
Indicator	2018	2019	2020	2018-2020		
1	2	3	4	5		
Return on assets (ke	opecks per ro	ouble investe	d)			
Assets: by book profit	2	2,2	2,01	0,01		
Equity: by book profit	2,84	4,83	1,69	-1,15		
Retu	urn on sales					
For core activities: - On balance sheet profit	1,43	2,45	0,86	-0,57		
- on net profit	0,72	2,35	1,35	0,63		
Productivity of labour, p.c.m.	13,4	5,41	28,15	14,75		
Equity ratio, RUB ths.	56647,6	30589,3	23604,7	-33042,9		

The data in Table 10 allow us to draw the following conclusions: the analysis of the financial condition of the enterprise based on the above calculations shows that the enterprise is in an unstable financial position.

Based on the analytical balance sheet, we calculate and assess the dynamics of a number of ratios characterising liquidity, financial stability and production efficiency.

Thus, the analysis of financial position shows that the company is in an unstable financial situation. Based on the calculated indicators, the enterprise should develop measures to improve its financial position.

# 4 Results of the study

The calculated values of current liquidity ratio, quick ratio and absolute liquidity ratio are below the recommended criteria. The calculated values of the above ratios at the beginning and at the end of the year show that the company does not have enough current assets to repay its short-term liabilities. Decrease in the ratios indicates deterioration of financial position and possible risk of loss of solvency. Equity-assets ratio tends to decrease 0.38 - at the beginning of 2013, 0.77 - at the end of 2013. This indicator characterizes the enterprise as financially unstable, as it does not have enough own working capital.

The obtained value of the solvency recovery coefficient is 0.48, which is less than 1. Consequently, the enterprise may lose its solvency in the near future. The debt to equity ratio exceeds the recommended value of 1 (at the beginning of 2013 - 4.1; at the end of 2013 - 1.48), and shows that the company is becoming increasingly dependent on borrowed funds. At the end of the year it is 1.48.

The calculated value of the current assets ratio is lower than the normative value of 0.7. If at the beginning of 2013 it was 0.38, at the end of 2013 it was 0.77. This indicates that current assets are not provided with own current assets. Inventories are also not provided with own working capital and need to borrow funds. Estimated figures are 0.91172 - at the beginning of 2013 and 0.999033 - at the end of 2013, which is higher than the normative value - by more than 0.4. Cash flow analysis shows that the company does not receive cash from investment activities and financial activities. Cash inflow mainly comes from the sale of goods, works and services and accounts for 46% of revenues.

The indicators that characterize the state of fixed assets show that the company has a high level of fixed assets and non-current assets in equity. The equity ratio was 0.26 at the beginning of 2013 and 0.61 at the end of 2013. Despite the fact that this indicator tends to decrease, the level of productive capacity is quite high. Calculation of the turnover rate shows slight changes at the end of the year: accounts

receivable decreased by 49 days, current assets decreased by 474 days (from 574 to 100).

Profitability shows how efficient and profitable the company is. Calculation of return on assets and return on sales shows deterioration of the financial position of the company at the end of the year.

4.1 Recommendations for improving the financial and economic activity of the company

As a result of the analysis and evaluation of the financial condition of the company, it can be seen that it is not enough just to reduce the cost of goods or change the supplier of raw materials. A complex change in the policy of the enterprise in the area:

- sales (finished products), and for this purpose it is necessary to make a management decision on implementation of marketing activities of the company, aimed at improvement of its market policy by improving the organization of sales, strategic planning and product sales promotion.

In order to improve marketing activities we have analyzed BTL - a set of marketing communications, which differ from direct advertising ATL level of impact on consumers and the choice of means of influence on the target audience.

Which includes sales promotion, merchandising, POS-materials, direct mail, exhibitions and many others.

BTL allows to deliver an advertising message or call for a purchase directly to the individual consumer, the message in this case is personal and individual, the place of influence is closest to the place of sale or the place where the decision to buy.

Today's BTL - complex, includes 18 key types of promotions that can be used to stimulate the buying power of the audience and attract new customers, the key ones are:

1 Promotions with communication. BTL events aimed at communicating a promotional message may not form a strong image of the product, but may emphasize certain image characteristics. These BTL projects are usually quite extensive and accompanied by additional ATL advertising, including:

- Charity promotions;
- Club programmes;
- Leaflets:
- POS material;
- Promotional theatre;
- Events;
- Special packaging;
- Sponsoring.
- 2 Promotions with a possible prize. BTL promotions with a likely win for the consumer can significantly increase sales if the right gifts are given for participation, including:
  - Raffles;
  - Instant surprise;
  - Contests;
  - Games.

3 Promotions with a guaranteed win. Giving a guaranteed win is the easiest and most straightforward promotion mechanism. It is the easiest to implement, the most controllable and the most rewarding for the customer, because it requires no extra steps:

- Bonus Packs and merchandise packs;
- Loyalty programs;
- Sampling (Samling or Tasting);
- Price promotions / discounts;
- Cash back promotions (Cash returns);
- Coupon Promotions.

During work marketing actions from which optimum, as much as possible effective for use in LLC "Siberian factory "Komus-Packaging" have been listed.

1 Charity actions.

It was suggested that 3 roubles should be donated to charities for every 1,000 roubles of revenue. In 2015, the company's revenues amounted to about RUB 2 million; with the same revenues, next year the company will spend about RUB 6,000 on charity.

## 2 Club programmes.

Club BTL projects are actions aimed at creating a community of brand buyers in order to build loyalty, retain large customers and increase purchases per customer. Club programmes give club members special privileges: they are the first to know about new promotions, special offers, advantages in service, service and brand news.

The costs for this type of activities will consist of the production of 200 club cards. The cost of each will be 5 rubles.

#### 3 Leaflets.

A leaflet is a type of promotional activity that consists of printing information about a promotion or other brand bonuses in a retail chain's advertising newspaper. The most common type of BTL activity in large retail chains of consumer goods. In our case, a leaflet is understood to be a handout, in the form of brochures, which will be distributed not only in the shop itself, but also in other public places. In addition it is proposed to place ads on billboards located in lifts in the city. The costs of this type of activities will consist in the production of 2000 pcs. leaflets. The cost of each will be 2 rubles, and rent meta on a billboard located 15 lifts in the city, the cost of renting 5000 rubles per month.

# 4 Sponsorship

Sponsorship in BTL advertising is comparable to sponsorship in ATL advertising and refers to the brand's support of certain events by financial, product and other means.

Examples of sponsorships are: sponsorship of major sporting events, sponsorship of individual restaurant parties, sponsorship of major cultural events, children's parties, important concerts, etc.

The company manager was asked to partially sponsor an annual city-wide sports day for the city's companies.

The expenditures of this kind of events will be equal to 20,000 RUR.

#### 5 Raffles

Promotional activities providing purchasers with a chance to win prizes on purchase of company products. The standard scheme of any lottery: buy a certain product, in the required amount and quantity, register your purchase and get the chance to win a super-prize and several promotional prizes.

The prize for participating in the lottery is usually very attractive and encourages the buyer to tell their family, acquaintances and relatives about the promotion. Creates a WOM effect.

The biggest challenge of any lottery is the need for proper registration, tight control and presentation of results. In order to sell goods our manager was asked to make a list of prizes from a list of our products, for a total amount of 30 thousand rubles. 3 super prizes and 7 incentive prizes.

### 6 Instant Surprise

Instant Surprise Promotions promise a guaranteed unknown prize to the customer when they purchase the product. This type of promotion is an instant lottery in which the end consumer is offered the chance to win a big, desirable prize right now.

The most common example of a BTL promotion with an instant surprise is giving the customer a scratch card after presenting the receipt. This type of promotion will be valid only for customers who made a purchase of 10 thousand rubles and more.

The card will contain a discount or goods offered by the partner company as a bonus for LLC "Siberian factory "Komus-Packaging" in order to save money for the campaign.

7 Promotions with price reductions.

Price promotions are the most common type of promotional activity as they are simple and low-cost, require minimal involvement of additional staff and require minimal time for preparation.

Price promotions mean a temporary reduction by a certain percentage of the full price of an item. Price promotions are usually presented with a striking promotional price tag indicating the new promotional price. Often promotional goods with significant price reductions are put on additional display.

An important consideration in promotions with price reductions is how to set the size of the discount. Here are some rules suggested to the management of "Siberian factory "Komus-Packaging" Ltd:

- The higher the size of the discount, the more attractive the promotion is;
- Sometimes it is more profitable to specify the new price rather than the size of the discount, because sometimes the price with a discount is perceived more favourably (for example, a 10% discount on the price of a product turns the cost of the product into \$1.)
- when setting discounts on a number of products within a wide product range, it is more effective to set a bigger discount on 1 product than to set small discounts on all products at the same time;
- promotions with significant price reductions are better limited in time and develop a rush demand for the product.

These actions are to be coordinated with partner companies and are to be performed according to the above-mentioned principle, described in point 6.

## 8 Couponing.

Couponing is a type of promotion that allows the buyer to buy goods at a discount. Coupons are comparable in mechanics to normal trade marketing promotions to reduce the price of an item at a retail outlet, but:

- the discount is only given on presentation of the coupon and filters out those customers who are not interested in the discount and who would have bought the product anyway (and therefore helps to earn more);

- the coupon attracts new customers, new traffic, allows you to easily announce promotions;
  - allows you to use affiliate programs.

Coupon promotion options are constantly being improved. The most effective techniques of such incentive marketing: distribution of coupons by mail, in magazines, in product packaging, in advertising; provision of electronic promo codes in Internet commerce.

LLC "Siberian factory "Komus-Packaging" monthly issues 50 coupons with nominal value up to 200 rub. With the possibility of using a coupon when paying no more than 10% of the cost of goods.

Table 11 - Complex of marketing measures contributing to attraction of new buyers with costs for 2021

Event	Costs RR per year	Expected impact
1	2	3
Promotions with commun	nication	
1 Charity events	6000	
2 Club programmes	1000	
3 Flyers (billboard advertising)	64000	A
4 Sponsorship	20000	Attracting new
Promotions with a likely gift		customers and
5 raffles	30000	continuing to work with existing
6 Instant Surprise		customers
Promotions with guaranteed winnings		customers
7 Promotions with price reductions		
8 Coupon promotions	12000	
Total:	133000	

These activities will help to attract new customers and retain existing ones, as well as expand the markets for the products on offer.

## 5 Social responsibility

## 5.1 Description of the workplace

The object of the study is a director's office located at 1a Zheleznodorozhnaya Street, Yurga.

The room where the specialist's workplace is located has the following characteristics:

- length of the room (A): 6 m;
- width of the premise (B): 3 metres;
- height of the room (H): 3 metres;
- Number of windows: 2 (dimension 2x2.5 m)
- Number of work places: 6
- Lighting: Total artificial and natural (i.e., through a window). The main source of light in the room are two white LB fluorescent lamps of 80W each placed in fixtures type SHOD.

Interior: The walls are covered with wallpaper (to be painted) and whitewashed in light green, the floor is wooden, covered with linoleum, the ceiling is whitewashed.

There is one computer in the room and one MFP. In terms of the severity of the work performed, it is classified as "light".

In accordance with protocol No. 13 of 21.07.2013 on measuring the actual level of indicators of microclimate in the office, which was carried out by OOO Centre of expertise of working conditions "Expert", the microclimate parameters are as follows:

- air temperature in cold period 21 23°C,
- in warm period 23 25°C;
- Relative humidity in cold period 40-60%,
- 40% to 60% in warm periods;
- Air velocity 0.1 m/s.

#### Noise level 47 dB

The room is ventilated. Daily wet cleaning (dusting, floor cleaning) and natural ventilation are provided.

There are two fire extinguishers type OU-5 (carbon dioxide fire extinguisher) in the room.

5.2 Analysis of detected harmful factors of the projected production environment

Real production conditions are characterized by the presence of some dangerous and harmful factors of production.

A harmful factor of production is an industrial factor whose effect on the worker, under certain conditions, leads to illness or reduction of working capacity.

Standards on requirements and standards for types of hazardous and harmful factors contain quantitative or qualitative characteristics of these factors. Classification of factors is given in the basic standard GOST 12.0.003 - 74 "Hazardous and harmful production factors. Classification".

According to this standard all factors are divided into the following groups by the nature of their action

- a) chemical;
- b) physical;
- c) biological;
- d) psychophysiological.

Harmful factors identified at a given workplace:

- insufficient illumination of the working place;
- non-standard parameters of microclimate;
- exposure to electromagnetic fields and radiation and other harmful effects of the computer;
- excessive noise:
- inappropriate colour design of the workplace interior.

Each of these factors has a negative impact on human health and well-being.

1. Insufficient lighting in the workplace.

Lighting is the use of light energy from the sun and artificial light sources to provide visual perception of the world around us.

The workplace lighting system must be calculated to provide the required illumination. The size of the room is 18 m<sup>2</sup>. To calculate the lighting, you must select the lighting system, light sources, type of lighting fixtures, determine the illumination of workers, the safety factor, the required number of luminaires and the power of light sources.

For our space, the most rational system of general lighting that is used for those rooms where work is carried out on the entire area, and there is no need to improve the lighting of individual areas.

Fluorescent lamps are a good light source, because they have many advantages over incandescent lamps: their spectrum is closer to natural light; they are more economical and last 11 to 12 times longer than incandescent lamps. However, there are also disadvantages: their operation is sometimes accompanied by a little noise; they work worse at low temperatures; they cannot be used in rooms with explosive atmospheres. Lighting fixture type for fluorescent lamps - a two-lamp fixture of SHOD type with a protective grid, as they are designed for lighting in normal premises, and the microclimate parameters of our premises according to GOST 30494-96 "Parameters of microclimate in premises" correspond to the category of "normal premises".

The values for rated illumination are set out in construction rules and standards SNiP 23-05-95. For our premise requires illumination corresponding to visual work of very high precision (smallest size of object of distinction - 0,15 - 0,3 mm, digit of visual work - 2, sub digit of visual work - G, background - light, contrast of object with background - big).

In accordance with SNiP 23-05-95 to ensure visual comfort in the premises for such visual work requires the necessary illumination of the workplace E=300

lux. The illuminance value obtained is corrected taking into account the reserve factor due to soiling of luminaires and reduction of luminous flux of lamps.

Main characteristics of used lighting equipment and workplace:

- luminaire type with SHOD type protective grid;
- minimum height of lamp suspension above the floor h2 = 2.5 m;
- Standard illumination of the working surface E=300 lux for general lighting;
- Length A = 6m, width B = 3m, height H = 3m;
- safety factor for premises with low dust emission k=1,5;
- Height of working surface h1=0,75m;

Wall-reflection coefficient  $\rho c=30\%$  (0.3) - for walls with light-coloured wallpaper;

ceiling reflectance  $\rho p=70\%$  (0.7) - whitewashed ceiling.

Let's make the most favourable for the working conditions of the location of lighting devices. Using the relation for the most favourable distance between luminaires, and the fact that h = h2-h1 = 1.75 m, then  $\lambda = 1.1$  (for luminaires with protective grid), therefore = 1.925 m. Distance from outermost luminaires to the walls of the room =0.642 m. Based on the room dimensions (A=6m and B=3m), size of SHOD luminaires (A=1.53 m, B=0.284 m) and the distance between them, we determine that the number of luminaires in a row should be 3 and the number of rows should be 1, i.e. there should be 3 luminaires in total.

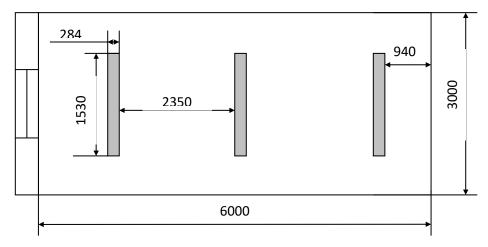


Figure 21 - Layout of the lamps

Calculate the lighting installation. Calculation of total uniform artificial lighting is done using the luminous flux factor method. The luminous flux of the lamp is determined by the formula:

$$F = (E \times k \times S \times Z) / (n \times \eta),$$

where F is luminous flux of each lamp, lm;

E - minimum illuminance, lux;

k - safety factor;

S - area of the room, m2;

n - number of lamps in the room;

- luminous flux utilization factor (in fractions of one);

Z - coefficient of irregularity of lighting for fluorescent luminaires Z = 0.9.

In order to obtain the luminous flux utilisation factor it is necessary to know the room index i, the ceiling and wall reflection coefficients st and the luminaire type. The room index is given by the formula:

$$i = S / (h \times (A + B)),$$

where S - area of the room, m2;

h - height from work surface to suspended luminaires, m;

A, B - room sides, m.

The value of the reflection coefficient of the ceiling is taken 70% and the reflection coefficient of the walls - 30%. Based on this, the coefficient of utilization of luminous flux equal to 0.43 (SNiP 23-05-95 tab. Luminous flux factor).

Determine the value of luminous flux:

lm.

We choose the type of lamp. In our case for indoor lighting should be provided, as a rule, discharge lamps. 80 W.

Thus, the lighting system of the premise under consideration should consist of 2 two lamps of SHOD type with 80 W fluorescent lamps LB, built in 1 row of 2 lamps.

Let us now compare the required lighting system with the actual lighting system in place. The room lighting system consists of 2 x LED downlights mounted

in 1 row of 2 lamps, each with 80W LL bulbs. The luminaires are arranged parallel to the wall with windows. The burned out lamps will be replaced in a timely manner.

It can be concluded that the existing lighting system meets the requirements of SNiP 23-05-95.

2. Not acceptable microclimate parameters.

The microclimate of the production premises, i.e. the climate inside them, is determined by the relationships of humidity, temperature and air velocity that act on the human body. Therefore, in order to ensure the required hygienic air quality corresponding to SNiP 2.04.05-91 "Heating, ventilation and air conditioning" and SP 2.2.1.1312-03, ventilation is provided in all production and auxiliary premises.

It is advisable to limit the relative humidity to approx. 30-70 % when workers are in closed rooms for long periods of time.

In hot weather it is advisable to ventilate the room.

3. Exposure to electromagnetic fields and radiations and other harmful effects of the computer.

In our case, the source of EMF and radiation is a computer. Prolonged exposure to industrial frequency EMF leads to the following disorders: headache, drowsiness, sleep disturbance, memory loss, increased irritability, apathy, heart pain. Slow heart rate and rhythm disturbances, functional disorders of central nervous system and cardiovascular system disorders, disturbances in blood composition for chronic exposure to EMF of industrial frequency are characteristic.

#### 4. Excessive noise.

Noise is a combination of sounds of different pitches and intensities, changing randomly over time and causing unpleasant subjective sensations to the worker. According to its origin, noise is divided into the following types:

- Noise of mechanical origin (vibrations from equipment surfaces)
- noise of aerodynamic origin (arising from compressed air or gas movement);
- Noise of electromagnetic origin (arising from oscillations of electromechanical devices);

- Noise of hydrodynamic origin (arising from processes in fluids);
- The main normative document that establishes classification of noise, and its permissible level in workplaces is the sanitary norms SN 2.2.4/2.1.8.562-96 "noise at workplaces, in residential and public buildings and in territory of residential buildings".

## 5. Interior colour design.

The rational use of colours in the interior design is an important factor in improving people's livelihood and working life. That is, experts have found out that colours have different effects on people: some irritating and others soothing.

The colour interior of the room in question is favourable for work, has a calming effect on the nervous system and is rather beneficial for the employee's mood.

Occupational hazards are factors which may cause injuries or accidents. These factors are caused by exposed moving machine parts, unprotected drives and electrically live machine parts.

Hazardous factors at the workplace include:

- Exposure to electrical current;
- fire risk;
- 1. Exposure to electric current.

Electrical shock can cause serious injury and death.

Effects of electric current on humans:

- Thermal heating of tissues up to 60-700 C;
- Mechanical rupture of muscle tissues, vessels, tendons;

Biological - involuntary contraction of muscles in a living organism.

electrolytic - decomposition of blood into charged particle ions with a change in the physical and chemical composition of blood.

Causes of electrocution are:

- touching or approaching live parts while they are live;
- faulty or damaged insulation;
- incorrect operation of the system;

The maximum permissible values of touch voltages and currents are established for paths of current from one hand to another and from hand to foot of direct and alternating current with frequency 50 and 400 Hz (GOST 12.1.038-82).

Correct organisation of maintenance of operating electrical installations, repair, installation and preventive maintenance works is of great importance for the prevention of electrical injuries. Electrical equipment complies with electrical safety requirements, since ensuring these requirements is achieved by using protective earthing, which in our case complies with SanPiN 2.2.4.1191.

#### 2. Fire hazard.

Fire is understood to be an uncontrolled combustion process involving danger to human life and destruction of material assets. Improper use of the PC may result in fire. When operating a PC the following situations may cause a fire:

- short circuit;
- overloads;
- increase of transient resistances in the electric contacts;
- overvoltage.

When a fire occurs, employees are stressed and, as a rule, people in such situations are prone to panic and, as a result, their behaviour is inadequate - this makes it difficult to rescue people and property.

Primary fire fighting means are used to extinguish a fire.

Primary fire fighting means are tools, materials, devices that are designed to eliminate and/or localize the fire in its initial stages (internal fire hydrant, fire extinguishers, sand, water, asbestos cloth, burlap, shovel, bucket, etc.). Such equipment shall be available at all times.

The following fire-fighting measures have been developed in the company: fire alarms are provided; evacuation plans are posted; fire shields are installed in the main building and throughout the company.

## 5.3 Environmental protection

Environmental protection is a set of measures designed to limit the negative impact of human activity on nature. In our case, such measures may include limiting atmospheric and hydrospheric emissions in order to improve the overall environmental situation.

The main objective of Stroyprospect is to provide construction services and ensure the safety and security of citizens.

The formal structure of protective measures is defined in Article 134 of the Constitution of the Russian Federation. They consider the implementation of technical and organisational measures.

The technical measures include:

- Providing employees with standardised facilities and space;
- Ensuring an air-friendly environment at the workplace;
- Fire protection equipment for the workplace;
- illumination of premises with artificial, natural, rational lighting, sewage, water supply, ventilation, heating, rest, hygiene and catering facilities;
  - electrical safety equipment;
  - protection against vibration and noise.

Organisational measures include:

- a pre-employment medical examination upon entry to work;
- Briefing and training of the employee;
- Preferential pension schemes for employees;
- routine and periodic medical examinations according to the Russian Ministry of Health standards;
  - provision of personal protective equipment to employees.

In terms of the use of a personal cosplayer in the workplace, one type of energy pollution of the environment is the electromagnetic field. As a biologically active factor, an electromagnetic field of artificial origin can have an adverse effect on the environment and on humans.

## 5.4 Protection in emergencies

Emergency situations (ES) are caused by natural phenomena (earthquakes, floods, landslides, etc.) and technological accidents.

Fire hazards.

The general requirements on fire safety are regulated in GOST 12.1.004-91. According to All-Union norms of technological designing all industrial buildings and premises are divided into categories A, B, C, D and D according to fire hazard.

The building in question falls within explosion hazard category C. The building in which the study room is located is constructed of fire resistant materials - brick and concrete, i.e. materials with the ability to retain their working functions of fire barrier, thermal insulation or load-bearing capacity under the action of high temperatures.

Fire prevention measures:

- organisational correct use of the equipment, correct maintenance of the territory and buildings, fire safety briefings for employees and workers;
- technical adherence to the norms of building design, equipment and electric installation, ventilation, heating, lighting, fire safety regulations;
- regime prohibition of smoking in places not equipped for this purpose, electric welding works in fire-hazardous premises;
  - operational timely repairs, inspections and tests (preventive maintenance).

Carbon dioxide fire extinguishers must be used in connection with live electrical installations in the building.

The building is equipped with an automatic fire detection system - fire alarm.

There are primary fire extinguishing means on the territory of the workshop: hand-held fire extinguishers type OU-3 - designed to extinguish fires of various types.

The level of fire resistance of the building, as well as structural and functional fire hazard is regulated by SNiP 21-01-97.

The main and emergency entrances are used to evacuate people in case of fire. In order to ensure safe conditions for the evacuation of people in a fire, the non-proliferation of combustion products within the fire compartment and the rescue of people and the successful suppression of a fire, regardless of the location of the fire, a smoke exhaust system with mechanical impulsion is provided.

The room is equipped with fire alarms and fire extinguishers, there is a responsible person for fire safety and the staff is trained in fire safety, which complies with safety regulations.

The premises in question are in safe distance from potential sources of natural hazards (rivers and mountains), geographical location protects from seismic activity and earthquakes.

Fire training must be carried out once every 6 months. According to the nature and timing of fire safety briefings at the enterprise, fire safety briefings are divided into primary at the workplace, introductory, repeated, target and unscheduled, which are conducted in accordance with the requirements of GOST 12.0.004.

All employees shall be allowed to work only after fire safety briefing in accordance with the Federal Law "On Fire Safety", which defines the responsibilities and actions of employees in case of fire, including:

- rules for the use of office equipment;
- rules for calling the fire brigade;
- regulations for the use of fire-fighting equipment and fire extinguishing equipment;
  - evacuation procedures, fire exits, etc.

The level of training of employees can be assessed as good.

There is a fire safety officer in the room, signs indicating evacuation routes, and an emergency exit. There are 3 floors in the whole building - evacuation will not cause turmoil and problems as there are not many people in the room. In general, in the event of a fire, trained and certified personnel. Trained personnel will react quickly and prevent or minimise possible damage.

Seismic safety.

In the event of an earthquake, the following precautions should be taken: do not panic and remain calm.

When indoors, you should stand against retaining walls or doorways. Outdoors, move away from electric wires and, if possible, avoid narrow streets. During an earthquake, you should not enter the stairs or the lift.

The building in question is of normal quality and is not designed to withstand horizontal forces.

The procedure for the preparation of the population in the area of protection against emergencies is approved by Resolution No. 738 of the Government of the Russian Federation of 24.7.95.

The main objective of emergency training is to teach all groups of the population the basic means of protection from emergencies and the rules of conduct, the methods of providing necessary first aid to victims, the rules of use of personal and collective protective equipment.

# 5.5 Legal and organisational safety issues

When performing organizational issues of safety assurance of aviation technician, various legal norms of labour legislation were applied:

SanPiN 2.2.4.548-96 "Hygienic requirements for the microclimate of production premises". ,  $\pi$ . 4.10;

SanPiN 2.2.4.548-96 Computer rooms, etc.

GOST 12.1.003-83. Noise. General safety requirements.

GOST 12.1.005-88. TSBT. Air of working zone. General hygienic requirements.

GOST 12.1.030-81. SSBT -- electrical safety. Protective earthing, grounding.

#### 5.6 Section Conclusion

This section has considered the following hazardous and harmful factors that affect health, well-being of the worker and occupational safety: insufficient lighting of the workplace; non-normative parameters of the microclimate, exposure to electromagnetic fields and radiation and other harmful effects of computers, excessive noise, improper colour design of the workplace, exposure to electric current, risk of fire.

As a result of the analysis of hazardous and harmful factors of production, we can conclude that for the investigated facility, most of the factors potentially posing a health hazard to the employee correspond to the normative values.

In accordance with this, it is important to provide the following measures to eliminate or reduce the impact of harmful factors:

local heating should be used to increase the temperature during the cold period;

To reduce the impact of harmful electromagnetic fields and radiations it is recommended to:

replacement of monitors with CRTs by liquid crystal monitors.

Powder and carbon dioxide fire extinguishers should be used as extinguishing media. Air-conditioning systems should be installed and used indoors.

In summary it can be said that the working conditions in the room in question are comfortable and sufficiently safe.

#### Conclusion

As a result of the conducted analysis of the financial position of "Komus-Packaging" the following conclusions can be made.

The indicators of financial stability and structure of the capital prove that the company is not able to develop and operate, cooperate with external environment and make profit and prove that it is necessary to improve financial activity of the company.

There is an increase of borrowed funds, not long-term, but short-term funds for the current activity of the company. The company lacks its own working capital and needs to upgrade its fixed assets.

The derived value of solvency recovery coefficient is 0.48 that is less than 1. Consequently, in the near future the enterprise may lose its solvency.

Indicators characterizing the state of fixed assets show that the company has a high level of fixed assets and non-current assets in the equity. The equity ratio was 0.26 at the beginning of 2013 and 0.61 at the end of 2013. Despite the fact that this indicator tends to decrease, the level of productive capacity is quite high. Calculation of turnover indicators shows slight changes at the end of the year: accounts receivable decreased by 49 days, current assets - by 474 days (from 574 to 100).

Profitability shows how efficient and profitable the company is. Calculation of return on assets and return on sales shows deterioration of the financial position of the company at the end of the year.

The company as a whole is experiencing a deterioration in the use of its assets. For each ruble of funds invested in assets, the company's balance sheet profit in the reporting year was 0.01 kopecks higher than in 2012. Accordingly, the return on equity decreased by 1.15 kopecks. Return on sales in the reporting year decreased by 0.57 kopecks. Labour productivity per employee increased by 14.75 kopecks. Labour efficiency decreased by 33.04 thousand rubles.

Thus, the analysis of financial condition shows that the company is in an unstable financial condition. On the basis of the calculated indicators the enterprise should develop measures to improve its financial situation.

We have proposed a complex of marketing events facilitating attraction of new customers to LLC "Siberian factory "Komus-Packaging", including:

- charitable actions;
- club programs;
- flyers (billboard advertising)
- sponsorship;
- lotteries;
- instant surprise;
- discount promotions;
- coupon campaigns.

The approximate cost of which is 133000 roubles.

These activities will allow the enterprise to enter new markets, expand the range of products and win new potential customers.

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