

**Czech University of Life Sciences Prague**

**Faculty Economics and Management**

**Department of Economics**



**Bachelor Thesis**

**Financial risk management system of the chosen enterprise LLC**

**“RosEcoil”**

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## BACHELOR THESIS ASSIGNMENT

Karina Shaikhullina

Economics and Management

Thesis title

**Financial risk management system of the chosen enterprise LLC "RosEcoil".**

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### Objectives of thesis

Objectives of the bachelor thesis are to study financial risks for enterprises, to analyze types of risks for enterprises and define methods for managing risks. The main goal of this work is to analyze the existing risk management system of LLC "RosEcoil", to suggest measures to improve existing risk management system and, also assess the effectiveness of the proposed activities.

### Methodology

During working on this bachelor thesis, several scientific research methods will be used, which based on the requirements of objective factor analysis of the financial situation of the enterprise LLC "RosEcoil" and on the assessment of financial risks of this enterprise. Researches will be conducted using a combination of methods and ways of scientific knowledge. Abstract-logical approach will reveal theoretical aspects, related to the concept, essence and varieties of financial risks. This approach also will used to analyze general characteristics of the enterprise LLC "RosEcoil", types of financial risks for the enterprise and to determine methods of managing these risks. To achieve these goals, will be used writings of scientists, namely: J.S. Mill, N.U. Senior, F.H. Knight, A. Marshall, A.S. Pigou, Blank I.A, J.M. Keynes. The system-structural method will be applied to analyze the financial and economic activities of the enterprise and to identify structural changes. And first of all, for the analysis of current risk management system of this enterprise. Application of economical, mathematical, financial and graphic methods will allow to analyze the financial stability of the enterprise, liquidity of the balance sheet, profitability of sales, production and assets. To suggest measures to improve the financial risk management system, and to evaluate the effectiveness of the proposed activities, deductive thinking will be applied. To improve the risk management system in LLC "RosEcoil" the implementation into practice of analysis of complex financial state techniques will proposed, namely: method of credit scoring by D. Duran and method of the Altman Z-Score. The method of credit scoring by D. Duran categorizes enterprises into classes according to the degree of risk. The task of this method is to find out the degree of reliability and obligatoriness of the enterprise or, in other words, scoring gives an assessment of how much the enterprise is "worthy of loan." Finally, the Altman Z-Score technique is a financial model (formula) developed by the American economist Edward Altman, designed to predict the probability of bankruptcy of an enterprise. Proposed methods will allow the enterprise to improve the process of assessing financial risks for further analysis and for management of possible consequences.

## The proposed extent of the thesis

40 pages

## Keywords

Risk, Financial risk, Financial situation, Bankruptcy, Risk management methods, Altman Z-Score

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## Recommended information sources

1. Blank Igor Alexandrovich (2011), Management of financial resources, Omega-L, 768, ISBN: 978-5-370-01821-3.
2. James Lam(2014),Enterprise Risk Management: From Incentives to Controls 2nd Edition, Wiley Finance, 496, ISBN: 978-1-118-41361-6
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4. Allan S. Benjamin(2017), Enterprise Risk and Opportunity Management, Wiley Finance,360, ISBN: 978-1-119-28842-8

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## **Declaration**

I declare that I have worked on my bachelor thesis titled "Financial risk management system of the chosen enterprise LLC "RosEcoil"" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

**In Prague on**15.03.2018

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### **Acknowledgement**

I would like to thank Ing. Petr Prochazka, Ph.D., MSc and all other persons, for their advice and support during my work on this thesis.

# **Financial risk management system of the chosen enterprise LLC “RosEcoil”**

## **Summary**

The thesis explores financial risk management system in LLC “RosEcoil”. In the work were explained key theoretical fundamentals related to the main aim of the work that is to develop activities which will improve risk management system in LLC “RosEcoil”. In the first chapter were studied the concept and essence of the risk, were analyzed types of risks for the enterprise and were defined methods for managing risks. In the second chapter were analyzed the general characteristics of the enterprise LLC "RosEcoil", was performed an analysis of financial and economic activities and was conducted an analysis of managing risks in the enterprise. In the last chapter were suggested measures to improve risks management system and also was assessed the effectiveness of the proposed activities. In this work are used: theory and methodology for the considering problem, Internet materials and data of LLC "RosEcoil" for 2015-2016.

**Keywords:** Risk, Financial risk, Financial situation, Bankruptcy, Risk management methods, Altman Z-Score

# **System řízení finančního rizika vybraného podniku LLC "RosEcoil"**

## **Souhrn**

Práce zkoumá system řízení finančního rizika v LLC "RosEcoil". V práci jsou vysvětleny klíčové teoretické základy související s hlavním cílem práce, která má rozvíjet činnosti, které zlepší system řízení rizik v LLC "RosEcoil". V první kapitole byla studována koncepce a podstata rizika, byly analyzovány druhy rizik pro podnik a byly definovány metody řízení rizik. Ve druhé kapitole byly analyzovány obecné charakteristiky podniku LLC "RosEcoil", provedena analýza finančních a ekonomických činností a byla provedena analýza řízení rizik v podniku. V poslední kapitole byly navrženy opatření ke zlepšení system řízení rizik a rovněž byla posouzena účinnost navrhovaných aktivit. V této práci jsou používány: teorie a metodika pro zvažování problému, internetové materiály a data LLC "RosEcoil" pro roky 2015-2016.

**Klíčová slova:** Riziko, Finanční riziko, Finanční situace, Bankrot, Metody řízení rizik, Altman Z-Score

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# 1 Introduction

The actuality of the work associated with the fact that foresight and neutralization of risks have a particular importance in the Russian current crisis economic situation. On how well the enterprise manages their risks depends not only its prosperity in the economy, but also its viability and existence.

In the real sector of economy, long time of projects implementation, insufficient volume of investment, low circulation and recoupment of funds, a relatively low level of economic competence of administrative and managerial staff, prevent to an objective evaluation of the benefits of concepts which reduce risks in the company's operations. In turn, this leads to ineffective management of financial flows, the lack of forecasting the results of financial and economic activities, and incorrect strategic planning for the development of the enterprise.

The object of this work is LLC "RosEcoil".

The subject of the work is the process of managing risks in the enterprise.

The aim of the work is to develop activities to improve the risk management system in LLC "RosEcoil".

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

- to study the concept and essence of the risk;
- to analyze types of risks for the enterprise;
- to define methods for managing risks;
- to analyze general characteristics of the enterprise LLC "RosEcoil";
- to make an analysis of financial and economic activities;
- to conduct an analysis of risks management in enterprise;
- to suggest activities to improve the risks management system;
- to assess the effectiveness of the proposed activities.

## **2 Objectives and Methodology**

### **2.1 Objectives**

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### **2.2 Methodology**

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assessment of how much the enterprise is "worthy of loan." Finally, the Altman Z-Score technique is a financial model (formula) developed by the American economist Edward Altman, designed to predict the probability of bankruptcy of an enterprise. Proposed methods will allow the enterprise to improve the process of assessing financial risks for further analysis and for management of possible consequences.

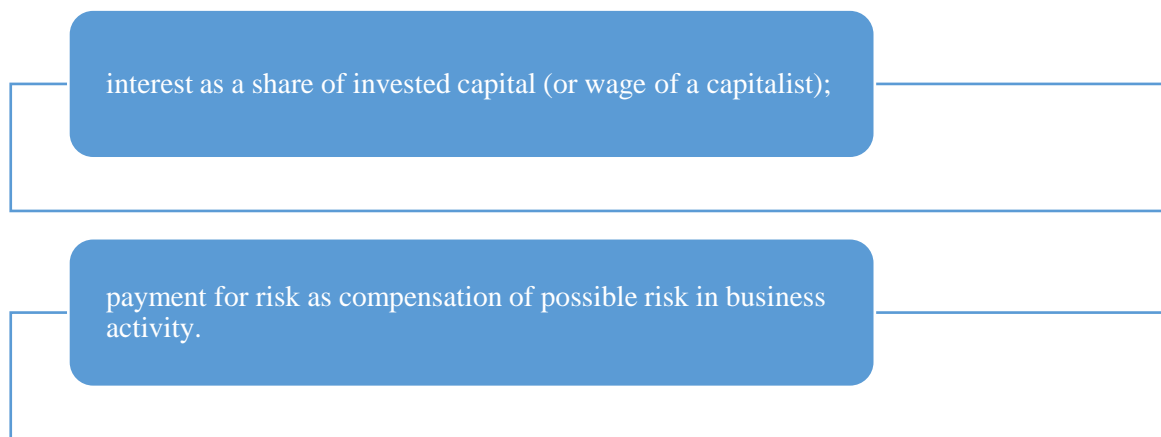
### 3 Literature review

#### 3.1 The concept and essence of the risk

In economic science, basic theories of economic risks are: classical and neoclassical.

The creation of classical theory of economic risks is associated with economists such as John Stuart Mill, Nassau William Senior, Frank Hyneman Knight and etc. They distinguished two components in the structure of entrepreneurial income (Novitsky, 2014, p. 211) presented in Figure 1.

**Fig. 1 The components of the entrepreneur's risk**



**Source: own creation**

Economists of classical school considered "economic risk" either as compensation of possible income as a result of a decision, or as a result of losses (the onset of adverse consequences) after the implementation of an unsuccessful decision.

They understood economic risk only as a possible losses due to economic action.

Economists define "risk" as a mathematical expectation of losses. This orientation of economists of classical school to a unilateral understanding of the "economic risk" caused critique of their statements and it was the reason for the creation of a different theory of economic risks, which was called neoclassical. The development of this theory is connected with the names of economists: Alfred Marshall, Arthur Cecil Pigou, as well as economists of the Scandinavian school (Jon Magnussen and others) (Novitsky, 2014, p. 211).

Main statements of neoclassical theory of economic risks are follows. Economic agents who operate in conditions of uncertainty with profit as a random variable, should be guided by two statements:

- the amount of the expected profit;
- the magnitude of its possible fluctuations (deviations from the expected value).

Behavior of the entrepreneur in such conditions is determined by marginal utility, he should choose that option of investing funds, in which the fluctuations in profits will be smaller. From the neoclassical theory of risk follows that the correct profit will always have greater utility than the profit of the expected amount, related to possible fluctuations. On this basis, Marshall concluded that the economic risk is generally unacceptable.

The most widespread theory of the economic risk is neoclassical with the additions made by the well-known economist John Maynard Keynes.

He was the first who gave a detailed classification of economic risks, which was complementing neoclassical theory with pleasure factor. John Maynard Keynes considered an underestimation of the propensity for excitement which often encountered in the practice of entrepreneurs as the main drawback of the previous neoclassical theory. In his opinion, the entrepreneur for the greater profit, as a rule, goes to a greater risk (Novitsky, 2014, p. 211).

The multifaceted nature of such phenomenon as a risk leads to the existence of a large number of interpretations of this concept. In addition, risk is a complicated phenomenon, which has a lot of different and sometimes opposite, real foundations. This explains the possibility of existence of several definitions of concept from different points of view (for example, juridical, commercial, financial).

Let us consider a number of definitions of risk, given by Russian and foreign authors:

Risk is a potential, numerically measurable opportunity of loss. The concept of risk is characterized by the uncertainty associated with the possibility of occurrence of adverse situations and consequences during the course of the project's implementation (Levchaev, 2015, p. 125).

The risk is a possibility of loss of values (financial, material commodity resources) as a result of the activity, if the situation and conditions of realization the activity will change

in a direction different from that stipulated by the plans and calculations (Rebrin, 2016, p. 31).

Blank I. A. considers the financial risk, since this type of risk plays the most significant role in the total portfolio of enterprise risks and is one of the most complicated categories associated with the implementation of economic activity (Balabanov, 2014, p. 200).

The financial risk is manifested in the sphere of the economic activity of the enterprise, is directly connected with the formation of its profit and is characterized by its possible economic losses in the process of implementation of financial activities.

Taking into account given forms of its manifestation, the financial risk is characterized as an economic category, occupying a certain place in the system of economic categories associated with the implementation of the economic process.

The financial risk is an objective phenomenon in the functioning of any enterprise; it accompanies almost all types of financial transactions and all areas of its financial activities. Although a number of parameters of financial risk depend on subjective management decisions, the objective nature of its manifestation remains unchanged.

The probability of category of financial risk is manifested in the fact that a risk's event may or may not occur in the process of implementation of the financial performance of an enterprise.

The degree of this probability is determined by the action of both objective and subjective factors, but the probabilistic nature of the financial risk is a constant characteristic of it.

This characteristic of the financial risk is determined by the non-determinability of its financial results, first of all, the level of profitability of financial transactions. The expected level of effectiveness of financial operations may fluctuate depending on the type and level of the risk in a fairly significant range. In other words, the financial risk can be accompanied by both significant financial losses for the enterprise and by the formation of additional revenues.

The level of financial risk inherent in a financial transaction or a particular type of financial activity of an enterprise is not unchanged. First of all, it significantly varies in time, i.e. depends on the duration of the financial transaction cause the time factor exert an independent influence on the level of the financial risk (manifested through the liquidity

level of the funds being invested, the uncertainty of the movement of the interest rate on the financial market, etc.).

In addition, the indicator of the level of the financial risk varies significantly under the influence of numerous objective and subjective factors that are in constant dynamics.

Despite the objective nature of the financial risk as an economic phenomenon, the level of the risk its main indicator, and it is subjective.

This subjectivity, i.e. the unevenness of the assessment of this objective phenomenon is determined by the different level of completeness and reliability of the information base, qualifications of financial managers, their experience in the field of risk management and other factors.

Characteristics of the category of financial risk considered above, make it possible to define its concept formulated by Blank I.A.

The financial risk of the enterprise is understood as the probability of appearance of unfavorable financial consequences in the form of loss of income or capital, in the situation of uncertainty of the conditions for implementation its financial activities.

Financial risks of the enterprise are characterized by great variety, and for the purpose of effective management of them, are classified according to the following main features (Balabanov, 2014, p.203).

By forms. This classification of financial risks is the main parameter of their differentiation in the management process. Characteristics of a particular type of risk simultaneously provides an idea of its generating factor, which allows you to "tie" an estimate of the probability of occurrence and size of possible financial losses for this type of risk to the dynamics of the corresponding factor.

The specific variety of financial risks in their classification system are represented in the widest possible range. At the same time, it should be noted that the emergence of new financial technologies, usage of new financial instruments and other innovative factors will accordingly generate new types of financial risks.

At the present stage, among the main types of financial risks, Blank I.A. includes following.



Risk of the decline in financial stability (or risk of disruption of the equilibrium of financial development) of the enterprise.

This risk is generated by the imperfection of the capital structure (excessive share of borrowed funds), which creates an imbalance in the positive and negative cash flows of the enterprise by volume.

As part of financial risks by the degree of danger (generating a threat of bankruptcy of an enterprise), this type of risk plays a leading role.

Risks of insolvency (or risk of unbalanced liquidity) of the enterprise. This risk is generated by decrease in the level of liquidity of current assets, which causes the imbalance of the company's positive and negative cash flows over time. Due to its financial consequences, this type of risk is also one of the most dangerous.

Investment risk. Characterizes the possibility of financial losses in the process of implementing the investment activity of the enterprise. In accordance with the types of this activity, the types of investment risk are also divided: risk of the real investment and the risk of financial investment.

All considered types of risks associated with the implementation of investment activities, they are referred to as so-called "complicated risks", which in turn are divided into individual subspecies.

Inflationary risk. Isolated in an independent form of financial type of risks. This type of risk is characterized by the possibility of depreciation of the real cost of capital (in form of financial assets of the enterprise), as well as possible revenues from financial transactions in an inflationary environment. For this type of risk, is given special attention in the modern enterprises.

Interest Rate risk. This type of risk consists of an unforeseen interest rate on the financial market, both deposit and credit. Negative financial consequences of this type of risk are manifested in the emissive activity of the enterprise, in its dividend policy, in short-term financial investments and in some other financial transactions.

Deposit Risk. This type of risk reflects the possibility of non-return of deposit investments.

Credit Risk. It can occur in the financial activity of the enterprise, when it provides a commodity (commercial) or consumer loan to buyers.

Tax risk. Here are possible: the probability of introducing new types of taxes and fees on the implementation of certain aspects of economic activity; possibility of increasing the level of rates of current taxes and fees, etc.

Structural risk. This type of the risk is generated by inefficient financing of the company's current costs, which causes a high proportion of fixed costs in the total amount of the enterprise's costs.

Criminogenic Risk. In the sphere of financial activity of the enterprise, it occurs in the form of declaring by its partners fictitious bankruptcy, forgery of documents, illegal appropriation of money and other assets by third parties.

Other types of risks: risks of natural disasters, risk of issuing securities and others.

### **3.2 Management Methods and Ways to Reduce Risk**

The peculiarities of enterprise risk management are, first of all, in the consideration of risks from the position of financial institutions in conditions of relatively unstable economic situation.

The need to consider the risks of production enterprises in unstable political, economic and social conditions requires the correction of existing principles of risk management and additional justification of the effectiveness of the methods used to analyze the risks.

One of the main reasons of ineffective risks management is the lack of clear and precise methodological foundations of this process.

The analysis of the principles of risk management presented in the literature, shows their fragmentation, and to the individual attempts of their systematization are inherent many controversial issues.

Nevertheless, the analysis of research in the field of risk management methodology, taking into account the requirements of modern economics, makes it possible to formulate a system of principles for managing risks:

- decision connected to the risk should be economically literate and should not have a negative impact on the results of the financial and economic activities of the enterprise;
- management of the risks has to be carried out within the framework of the corporate strategy of the organization;
- risk management decisions have to be based on the necessary volume of reliable information;
- in the risk management, decisions which are made, should take into account the objective characteristics of the environment in which the enterprise operates;
- risk management should have systemic nature;
- risk management should assume a current analysis of the effectiveness of decisions that are made, and an operational correction of the set of principles and methods used to manage the risks.

The entire process of managing risks can be displayed as follows.

The stage of setting goals for risk management is characterized by the use of methods for analyzing and forecasting the economic conjuncture, identifying the opportunities and needs of the enterprise within the framework of the strategy and current plans for its development.

At the stage of the risk analysis, are used methods of qualitative and quantitative analysis: methods of collecting available and new information, modeling enterprise activity, statistical and probabilistic methods, and so on.

The third stage compares the effectiveness of various methods of influence on the risk: avoiding risk, reducing risk, accepting risk, transferring part or all of the risk to third parties, which concludes with developing a decision on choosing their optimal set.

At the final stage, methods influencing the risk that was chosen for risk management. The result of this stage should be a new knowledge about the risk, allowing, if necessary, to adjust previous set of objectives for the risk management.

Thus, each of the stages uses its own methods for managing risks. Results of each stage become the initial data for the subsequent stages, forming a decision making system with feedback. This system provides the most effective achievement of objectives because the knowledge obtained at each stage, allows you to adjust not only the methods of influencing risks, but also the objectives of risk management.

The basic stage which allows to form a further strategy for risk management is the stage of the analysis of the risk.

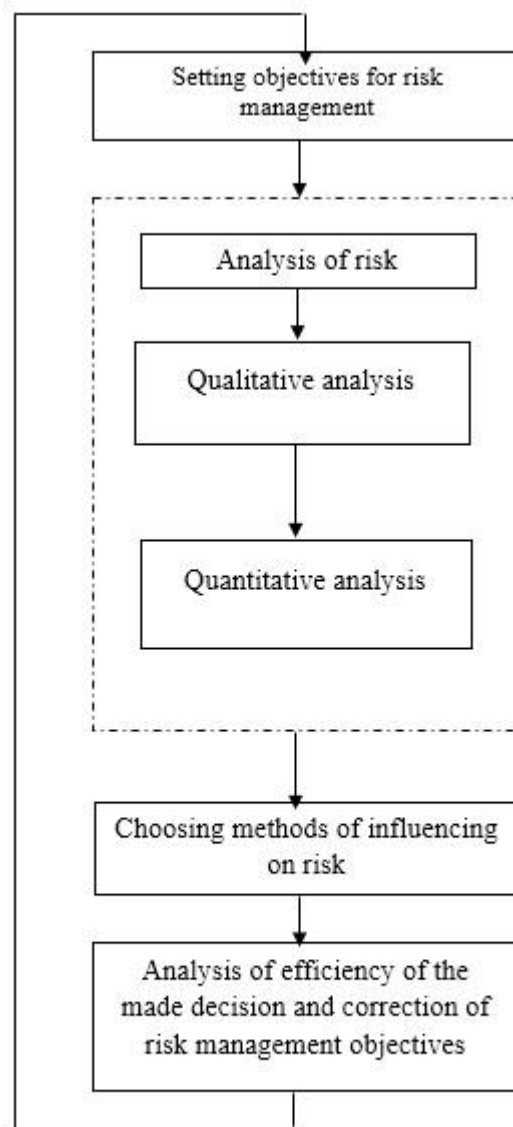
The task of qualitative analysis of the risk is to identify the sources and causes of the risk, the stages and the work, in the implementation of which exist a risk, that is:

- identifying of potential areas of the risk;
- identification of the risks associated with the enterprise activities;
- predicting of the practical benefits and possible negative consequences of the manifestation of the identified risks.

The final results of the qualitative analysis of the risk, in turn, is the initial information for the quantitative analysis.

At the stage of quantitative analysis, are calculated numerical values of probability of risk occurrence events and the amount of damages or benefits caused by them.

**Fig.2 The Process of Risk Management**



**Source: own creation**

Considering the whole set of methods for quantitative analysis of the risks, it should be said that the application of a particular method depends on many factors:

- for each type of analyzed risk, exist methods of analysis and specific features for their implementation. For example, in the analysis of technical and production risks, related to the failure of equipment, the most widely used methods of constructing trees;

- for the analysis of risks, the volume and quality of the initial data play an important role. So, if there is a significant database about dynamics of the RFF(risk-forming factor), it is possible to apply methods of simulation modeling and neural networks. Otherwise, the most likely is application of expert methods or methods of fuzzy logic;
- when analyzing risks, it is fundamentally important to take into account the dynamics of the indicators that affect the level of the risk. In the case of risk analysis on markets in a condition of shock, a number of methods are simply not applicable;
- when choosing methods of analysis, should be taken into account not only the depth of the calculated data, but also the horizon of predicting the indicators that affect the level of the risk;
- the effectiveness of application of the methods of risk analysis is enhanced by the formalization of the risk for the purpose of mathematical modeling of its impact on the performance of the enterprise. Nowadays, not only economic systems, but also industrial complexes have reached such complexity, that often calculation of their stability is impossible without elements of the theory of probability;
- the requirements of state regulatory authorities should be taken into account for the formation of reporting about the risks. In that case, if use of simulation methods is required at the regulatory level, their application is mandatory.

All of the above allows to conclude that for an effective analysis of the whole variety of risks in the operation of the enterprise, it is necessary to apply a whole range of methods, which, in turn, confirms the actuality of developing an integrated mechanism for managing risks.

In the current business environment, characterized by political, economic and social instability, existing management system in the enterprise have to include risk management mechanism (Kondrakov, 2012, p. 506).

The first stage of mechanism formation of risk management in the enterprise is the creation of a risk management service.

At the present stage of development of the Russian economy the purpose of this service is to minimize losses through monitoring the activities of the enterprise, to analyze the whole complex of RFF, to make recommendations to reduce risks and to monitor their implementation.

It is important to determine the place of service in the organizational structure of the enterprise, to define the rights and responsibilities of its personnel and to inform employees about the functions of the service and the nature of its activities.

Sources of information for risk analysis are presented in figure 3.

**Fig.3 Sources of information for analysis**



**Source: own creation**

Social and economic instability (SEI), in condition of which enterprises operate, introduces its own adjustments both to the activities of business entities; and in the mechanism of enterprise risk management.

At the same time, it is practically impossible to trace its influence in full volume, but it is quite possible to determine the aspects of its impact on individual risks.

Upon completion of the collection of information intended for the analysis of risks, the risk management service will have an opportunity to really assess the dynamics of the enterprise's performance indicators, taking into account the impact of external and internal social, economic and political factors.

This will make it possible to comprehensively and professionally predict the future condition of the market situation and to really assess possible risks.

A logical continuation of the work of the risk management service should be the formation of a program of actions for managing the risks in the development of which the following should be taken into account:

- the amount of possible damage and its probability;
- existing mechanisms for reducing the risk, proposed by the state and their production and economic efficiency;
- production and economic efficiency of the proposed actions by the service to reduce the risks;
- the practical possibility of implementing activities within the allocated limit of funds;
- the compliance of the program activities with the existing normative acts, to the objectives of long-term and short-term development planning of the enterprise and the main directions of its financial policy;
- subjective attitude to the risk by the program developers and the company's management.

When developing a program of actions for managing risks, specialists of the risk management service should be oriented on the maximum unification of the generated assessments of the risk level, which is expressed in the formation of universal parameters characterizing the volume of possible damage. As such parameters, it is most expedient to use the impact of risks on the financial flows and financial condition of the enterprise. The final stage of the development of the program is the formation of a set of actions to reduce the risks, indicating the planned effect from their implementation, the time of implementation, funding sources and persons responsible for implementing of this program. The program have to be approved by the management of the enterprise necessarily and should be taken into account in the financial and production planning.

This approach will allow the development of subsequent programs of activities to reduce the risks at a better level, using a new knowledge about risk.



## **4 Practical part**

### **4.1 General characteristics of the organization**

LLC "RosEkoil" established by Protocol No. 1 of 21.04.2003 on general meeting of members, and operates in accordance to the Civil Code of the Russian Federation, by Federal law "About limited liability companies" and by other regulatory acts of the Russian Federation. Full corporate name: limited liability company "RosEkoil", abbreviated company name: LLC "RosEkoil".

The location of the company is in Samara.

The company is a legal entity. Company is created without restriction of period of validity. The company has a round seal containing full name and location of the company. The company has own property, independent balance, Bank accounts, stamps and letterheads bearing its corporate name, trademark and other means of individualization, may establish branches and open representative offices on the territory of the Russian Federation and abroad.

The purpose of the company creation is the implementation of economic and other activities aimed on satisfaction on social needs in goods and services and on profit.

To achieve this objective, company performs the following activities:

- the provision of services related to oil production;
- removal and processing of solid waste;
- removal and cleaning of sewage;
- extraction of crude oil and associated petroleum gas;
- processing oil;
- cleaning contaminated soils;
- cleaning oil-contaminated water;
- refinery;
- receiving of oil and oil products from oil waste, oil contaminated soils, oil-contaminated water and their implementation;
- remediation of oil-contaminated soils and oil wasted soils;
- foreign economic activity;
- the execution of construction and installation works in different directions;
- export and import of products, goods and services;

— mediation.

The implementation in the prescribed manner of other commercial activities not prohibited by current legislation of the Russian Federation.

Certain activities, listed by the law, company may engaged only on the basis of special permission (license).

If by the conditions for granting special permission (license) to carry out a certain activity envisaged a requirement to undertake such activity as exclusive, company within the duration of the special permit (license) shall implement only types of activities stipulated by the special permission (license) and it accompanying.

Corporate structure is linear. Linear organizational structure of management is one of the simplest organizational structures of management. It is characterized by the fact that at the head of Department is the executive leader, he has full authority and he is implementing sole supervision of subordinate employees and he take in hands all management functions. For linear control, each link and each subordinate have one leader, through whom, by one-time channel, go all control commands. In this case, the managerial units are responsible for the results of all activities on managed objects. It concerns a single unit allocation of managers, each of which performs all kinds of works, develops, and makes decisions related to the management of the given unit.

The main advantages of the structure:

1. the unity and clarity of stewardship;
2. coherence of actions by performers;
3. easy to control;
4. efficiency in decision making;
5. clearly defined responsibility;
6. personal responsibility of the head.

The main disadvantages of the structure:

1. high requirements to the head;
2. no links for planning and preparation of decisions;
3. difficult communication between authorities;
4. the concentration of power in the hands of the head.

The executive leader shall do the following functions:

1. general management of production, economic and financial activity of the enterprise;

2. organization of interaction of all structural divisions;
3. ensuring implementation of all adopted enterprise obligations, including obligations to budgets of different levels and extra-budgetary funds, and also under the contracts;
4. creation of conditions for the introduction of new techniques and technologies, progressive forms of management and work organization;
5. the adoption of measures to ensure healthy and safe working conditions at the enterprise;
6. control over observance of the legislation of the Russian Federation in the activities of all services.

## 4.2 Analysis of the financial conditions of the organization

Let's analyze financial conditions of the company on data of accounting statements.

Structure and dynamics of the asset balance is presented in table 1.

**Table 1 – Comparative analytical balance sheet of the company for 2014-2015.**

Name of balance sheet	Horizontal analysis, thousands of rubles			Vertical analysis, %		
	2014	2015	Changes	At the beginning of the year	In the end of the year	Changes
1. Non-current (long-term) assets						
Main assets	32672	33405	733	26,10%	27,90%	1,79%
Deferred tax assets	200	391	191	0,16%	0,33%	0,17%
Total for section 1	32872	33796	924	26,26%	28,22%	1,96%
2. Circulating (current) assets	63802	56303	-7499	50,97%	47,02%	-3,95%
Reserves	63802	56303	-7499	50,97%	47,02%	-3,95%
VAT	294	320	26	0,23%	0,27%	0,03%
Receivables (during 12 months)	23826	16412	-7414	19,04%	13,71%	-5,33%
Financial investments	84	56	-28	0,07%	0,05%	-0,02%
Cash	4116	12773	8657	3,29%	10,67%	7,38%
Other current assets	173	82	-91	0,14%	0,07%	-0,07%
Total for section 2	92295	85946	-6349	73,74%	71,78%	-1,96%
Balance	125167	119742	-5425	100,00%	100,00%	0,00%

Source: [www.spark-interfax.ru](http://www.spark-interfax.ru), 2017

**Table 2 – Comparative analytical balance assets of the enterprise for the period of 2015-2016**

Name of balance sheet	Horizontal analysis, thousands of rubles			Vertical analysis, %		
	2015	2016	Changes	At the beginning of the year	In the end of the year	Changes
1. Non-current (long-term) assets						
Main assets	33405	32944	-461	27,90%	19,27%	-8,63%
Deferred tax assets	391	516	125	0,33%	0,30%	-0,02%
Total for section 1	33796	33460	-336	28,22%	19,57%	-8,65%
2. Circulating (current) assets						
Reserves	56303	44765	-11538	47,02%	26,19%	-20,83%
VAT	320	130	-190	0,27%	0,08%	-0,19%
Receivables (during 12 months)	16412	34407	17995	13,71%	20,13%	6,42%
Financial investments	56	53	-3	0,05%	0,03%	-0,02%
Cash	12773	58074	45301	10,67%	33,97%	23,31%
Other current assets	82	52	-30	0,07%	0,03%	-0,04%
Total for section 2	85946	137351	51405	71,78%	80,35%	8,57%
Balance	119742	170941	51199	100,00%	100,00%	0,00%

**Source:** [www.spark-interfax.ru](http://www.spark-interfax.ru), 2017

Conclusions: analyzing the table, it should be noted that in the period 2014-2016 currency of the balance sheet increased by 45774 thousand of rubles, which indicates the increase in the volume of their activities in the enterprise. The greatest increase was observed for current assets, which rose in this period by 45056 thousand of rubles, and non-current by 588 thousand of rubles.

It should be noted that current assets make up the largest share in the assets of the company – over 70% in 2014 and over 80% by the end of 2016. This circumstance, and the fact that in 2015 the largest share in current assets of the company were reserves – 47,02% at the end of the year, and in 2016 it was cash – 33,97% at the end of the year, attests about growth of liquidity of the balance sheet.

Dynamics of composition and structure of sources of own and borrowed funds are estimated according to the balance sheet (Table 3).

**Table 3 – Comparative analytical balance of liabilities of the company for 2014-2015**

Name of balance sheet	Absolute value, thousands of rubles			Relative value, %		
	2014	2015	Changes	2014	2015	Changes
<b>Capital and reserves</b>						
Authorized capital	1140	1140	0	0,91%	0,95%	0,04%
Revaluation of non-current assets	147	147	0	0,12%	0,12%	0,01%
Reserve capital	175	175	0	0,14%	0,15%	0,01%
Retained earnings (uncovered loss)	75545	69839	-5706	60,36%	58,32%	-2,03%
<b>Total for section 3</b>	77007	71301	-5706	61,52%	59,55%	-1,98%
Long term liabilities	0	0	0	0,00%	0,00%	0,00%
Deferred tax liability	133	202	69	0,11%	0,17%	0,06%
<b>Total for section 4</b>	133	202	69	0,11%	0,17%	0,06%
Borrowed funds	7454	0	-7454	5,96%	0,00%	-5,96%
Accounts payable	39656	35061	-4595	31,68%	29,28%	-2,40%
Estimated liabilities	606	1597	991	0,48%	1,33%	0,85%
Other current liabilities	311	11581	11270	0,25%	9,67%	9,42%
<b>Total for section 5</b>	48027	48239	212	38,37%	40,29%	1,92%
<b>Balance</b>	125167	119742	-5425	100,00%	100,00%	0,00%

Source: www.spark-interfax.ru, 2017

**Table 4 – Comparative analytical balance liabilities of the enterprise for the period of 2015-2016**

Name of balance sheet	Absolute value, thousands of rubles			Relative value, %		
	2015	2016	Changes	2015	2016	Changes
<b>Capital and reserves</b>						
Authorized capital	1140	1140	0	0,95%	0,67%	-0,29%
Revaluation of non-current assets	147	147	0	0,12%	0,09%	-0,04%
Reserve capital	175	175	0	0,15%	0,10%	-0,04%
Retained earnings (uncovered loss)	69839	122302	52463	58,32%	71,55%	13,22%
<b>Total for section 3</b>	71301	123764	52463	59,55%	72,40%	12,86%
Long term liabilities	202	302	100	0,17%	0,18%	0,01%
<b>Total for section 4</b>	202	302	100	0,17%	0,18%	0,01%
Accounts payable	35061	44078	9017	29,28%	25,79%	-3,49%
Estimated liabilities	1597	2510	913	1,33%	1,47%	0,13%
Other current liabilities	11581	287	-11294	9,67%	0,17%	-9,50%

<b>Total for section 5</b>	48239	46875	-1364	40,29%	27,42%	-12,86%
<b>Balance</b>	119742	170941	51199	100,00%	100,00%	0,00%

Source: [www.spark-interfax.ru](http://www.spark-interfax.ru), 2017

Conclusions: analyzing data table, it should be noted that in 2014-2016 the largest share of liabilities is own capital, authorized capital has not changed, and was in 2014-2016 1140 of rubles. And if at the end of 2014, the share of own capital accounted for 59.55%, at the end of 2016, its share rose to 72,40%, which is directly related to the increase in retained earnings of enterprise from 75545 thousand of rubles at beginning of 2015, to 122302 in 2016, i.e. a growth made up 161.89%.

A significant increase in retained earnings indicates a growing independence of the enterprise from external sources of funding and it is a positive moment.

It should be noted that long-term liabilities of the company are represented by deferred tax liabilities, while short-term liabilities are actually fully represented by accounts payable – at the beginning of 2015, its value was 31,68% in the total amount of liabilities of the company, at the end of 2016 – 25,79%. In absolute terms, the accounts payable of the company increased by 4422 thousand of rubles. Other items of liabilities side of balance is a negligible amount from the total sum.

The indicators of financial results (profits) characterize the absolute efficiency of the enterprise in all areas of its activities.

Let's consider the dynamics of the size and composition of profits. For convenience, table 5 should be constructed, which clearly shows the formation of the overall financial result of the organization in the reporting and previous years.

**Table 5 – Analysis of financial results**

Name	2014	2015	2016	Deviation	Growthrate, %
Revenue (net) from the sale of goods, works, services ( minus VAT, excises and similar compulsory payments)	617 911	650433	690793	72 882	111,79%
The cost of sold goods, products, works, services	586 449	617315	666076	79 627	113,58%
Grossprofit	31 472	33128	24717	-6 755	78,54%
Commercialexpenses	22 658	23850	27910	5 253	123,18%
Administrativeexpenses	17 577	18502	24129	6 552	137,28%
Profit (loss) fromsales	-8 763	-9224	-27322	-18 559	311,80%
Interestreceivable	0	0	50	50	
Interestpayable	511	538	212	-299	41,48%

Other income	35 810	37695	103716	67 906	289,63%
Other expenses	8 074	8499	10890	2 816	134,88%
Profit (loss) before tax	18 462	19434	65342	46 880	353,92%
Deferred tax asset	-15	-16	38	53	-250,00%
Deferred tax liability	-66	-69	-100	-34	152,56%
Current income tax	3 793	3993	13131	9 338	346,16%
Net income (loss) of the reporting period	14 468	15229	52236	37 768	361,06%

**Source: own creation**

Conclusions: analyzing the data presented in the table, it should be noted that in the period under review, there was an increase in revenue and cost, while the growth rate of cost is higher, which, coupled with increased commercial and management costs, led to a decrease in gross profit from sales. For 2015-2016 the enterprise has a loss in its core business, which is a negative trend and indicates a decrease in the efficiency of the enterprise. In other words, the effectiveness of the work is negative. However, due to an increase in other revenues, the company was able to receive a positive dynamics of net profit, an increase by 37007 thousand of rubles to the 2015, which is a positive moment. Undoubtedly, the growth of profits creates a financial base for self-financing, expanded production, solving problems of social and material incentives for personnel. Profit is also the most important source of generating budget revenues and repaying the organization's debt obligations to banks, other creditors and investors. Thus, the profit indicators are the most important in the system of assessing the performance and business qualities of the enterprise, the degree of its reliability and financial well-being as a partner. Accordingly, it is necessary to find reserves of profit growth from sales at the enterprise (increase in the sales market, marketing activity, promotional activities, discounts, etc., as well as possible cost savings in all areas).

Let's find out where the surplus of sources of funds for the formation of reserves is concentrated. This analysis is part of the analysis of financial stability.

It is possible to distinguish four types of financial situations:

- 1) Absolute stability of financial situation, which is rare and represents an extreme type of financial stability.
- 2) The normal stability of the financial situation of the organization, which guarantees its solvency.

- 3) Unsustainable financial situation associated with a violation of solvency, in which there is a possibility of restoring the balance by replenishing sources of own funds and increasing own working capital.
- 4) Crisis financial situation, in which the organization is on the verge of bankruptcy, because in this situation, the funds, short-term securities and receivables of the organization do not cover even its accounts payable and overdue loans.

The methodology includes the following items:

1) Surplus ("+"), shortage ("-") of own circulating assets:

$$+ FS = OCA - SE, (2.1)$$

Where OCA - own circulating assets

SE - stocks and expenses;

2) Surplus ("+"), shortage ("-") of own long-term borrowed sources of formation of stocks and expenses:

$$+ FD = OCA + LBS - SE, (2.2)$$

Where LBS - long-term borrowed sources;

3) Surplus ("+"), shortage ("-") of the total value of the main sources for the formation of stocks and expenses:

$$+ FO = OCA + LBS + SO - SE, (2.3)$$

Where SO - short-term obligations.

With the help of these indicators, you can define a three-component indicator of the type of financial situation. There are four types of financial situations:

1. Absolute financial stability meets the following conditions:

$$FS > 0; FD > 0; FO > 0.$$

The three-component exponent is:  $S = (1; 1; 1)$ .

2. Normal financial stability guarantees the solvency of the enterprise:

$$FS < 0; FD > 0; FO > 0.$$

The three-component exponent is:  $S = (0; 1; 1)$ .

3. Unstable financial situation, coupled with a violation of the company's solvency. With this type of financial situation, it is possible to restore equilibrium by replenishing sources of own funds:

$$FS < 0; FD < 0; FO > 0.$$

The three-component exponent is equal to:  $S = (0; 0; 1)$ .



4. Crisis financial situation, in which the company is completely depends on borrowed sources of financing. Own capital, long-term and short-term loans and borrows are not enough to material and production stocks. Replenishment of stocks is carried out by the funds resources, generated as a result of repayment of accounts payable:

FS <0; FD <0; FO <0.

The three-component exponent is: S = (0; 0; 0).

To determine the type of financial stability, the dynamics of funds sources will be analyzed, which is necessary for the formation of stocks and expenses (Table 6).

**Table 6- Evaluation of the type of financial stability**

Indicators	2014	2015	2016	Changes
1. Ownfunds	77 007	71 301	123 764	46 757
2. Non-currentassets	32 872	33 796	33 460	588
3. Owncirculatingassets	44 135	37 505	90 304	46 169
4. Long-term loans and borrowings	133	202	302	169
5. Own and long-term loans and borrowings	77 140	71 503	124 066	46 926
6. Short-term loans and borrowings	48 027	48 239	46 875	-1 152
7. Total value of main sources of funds (5+6)	125 167	119 742	170 941	45 774
8. Reserves	63 802	56 303	44 765	-19 037
9. The share of financing of non-current assets from own funds (2/1),%	0,43	0,47	0,27	-0,16
10. The share of financing replenishment of working capital from own funds (3/1),%	0,57	0,53	0,73	0,16
11. Share of financing of reserves from own current assets (3/8),%	0,69	0,67	2,02	1,33
12. Share of financing of reserves from own and borrowed funds (7/8),%	1,96	2,13	3,82	1,86
13. FS	-19 667	-18 798	45 539	65 206
14. FD	-19 534	-18 596	45 841	65 375
15. FO	28 493	29 643	92 716	64 223
16. Three-component indicator of the type of financial stability (S)	(-1;-1;1)	(-1;-1;1)	(1;1;1)	

Source: [www.spark-interfax.ru](http://www.spark-interfax.ru), 2017

Conclusion: According to the calculation, can be reached a conclusion that in 2014-2015 at the enterprise was observed unstable financial situation, in 2016 the enterprise was absolutely financially stable, as evidenced the importance of the three-component indicator of the type of financial stability.

43% of own funds were directed to purchase non-current assets in 2014, in 2016 - 27%.

57% of own funds were directed to replenish current assets in 2014, in 2016 - 73%.

Assuming that this share is fully directed to the formation of reserves, in this case they cover only 69% in 2014, and in 2016 - 202%. Thus, 196% in 2014 and 318% in 2016 of the cost of stocks are covered, due to sources of own and borrowed funds, which is enough.

To obtain quantitative characteristics of the company's financial stability, a number of coefficients are calculated (Table 7).

**Table 7- Coefficients of financial stability**

Name	Years			Changes
	2014	2015	2016	
The equity ratio (the ratio of concentration of equity capital, ratio of ownership)	0,62	0,60	0,72	0,11
Concentration ratio of debt capital	0,38	0,40	0,28	-0,11
Coefficient of security of current assets of OCA	0,48	0,44	0,66	0,18
Coefficient of coverage with own funds	0,69	0,67	2,02	1,33
The flexibility ratio of own capital	0,57	0,53	0,73	0,16
The ratio of financial stability	0,62	0,60	0,73	0,11
Coefficient of long-term investment structure	0,00	0,01	0,01	0,00
Coefficient of financial dependence	1,63	1,68	1,38	-0,24
Debt capital structure ratio	0,003	0,004	0,006	0,00
Debt-to-equity ratio	0,63	0,68	0,38	-0,24

**Source: own creation**

Conclusion: analyzing the data presented in the table, it should be noted that in 2014-2016 at the enterprise was an increase in independence from external sources of financing, as evidenced by an increase in the coefficient of autonomy and a decrease in the coefficient of financial dependence. Positive, is the importance and dynamics of the coefficients of

reserves security and current assets with own circulating assets, the values of indicators above the normative boundaries in 2015-2016. The low value of the long-term financial investment ratio indicates that the company cannot attract long-term loans, which is a negative point, since they are more profitable than short-term ones. It should be also noted, that the low value of the coefficient of structure of borrowed capital indicates that the company is attracting very small amounts to the restoration or acquisition of non-current assets. Estimating the value of the loan and equity ratio, it should be noted, that it was in favor of the latter in 2015-2016, and in the period under review, own funds began to significantly prevail over the borrowed funds, which indicates the growth of the company's independence and financial stability.

The liquidity of the balance is defined as the degree of coverage of the organization's liabilities with its assets, transformation of which into money corresponds to the maturity of liabilities.

Analysis of balance sheet liquidity consists of comparing of funds of the asset, grouped according to the degree of their liquidity and located in order of decreasing liquidity, with obligations on liabilities grouped by maturity and located in the order of increasing maturities.

Depending on the degree of liquidity, that is, the rate of conversion into cash, the assets of the enterprise are divided into the following groups:

A1 - the most liquid assets: short-term financial investments and cash;

A2 - quick assets: short-term receivables;

A3 - slowly sold assets: stocks and VAT, long-term receivables, other current assets;

A4 - hard-to-sell assets: non-current assets.

The liabilities of the balance are grouped according to the urgency of their payment:

P1 - the most urgent obligations: accounts payable;

P2 - short-term liabilities: short-term borrowed funds, debts to founders, other short-term liabilities;

P3 - long-term liabilities: long-term liabilities, deferred income, reserves of future expenses;

P4 - permanent or stable liabilities: capital and reserves.

Comparison of the results of the given groups on the asset and liabilities, with the purpose of determining the liquidity of the balance of the analyzed enterprise, is shown in the table.

**Table 8 – Analysis of liquidity of the balance sheet**

<b>Assets</b>	<b>2014</b>	<b>2015</b>	<b>Liabilities</b>	<b>2014</b>	<b>2015</b>
The most liquid assets (A1)	4200	12829	The most urgent liabilities (P1)	39656	35061
Marketable assets (A2)	23826	16412	Short-term liabilities (P2)	8371	13178
Slowly sold assets (A3)	64269	56761	Long-term liabilities (P3)	133	202
Illiquid assets (A4)	32872	33796	Permanent liabilities (P4)	77007	71301
Balance	125167	119798		125167	119742
<b>Assets</b>	<b>2015</b>	<b>2016</b>	<b>Liabilities</b>	<b>2015</b>	<b>2016</b>
The most liquid assets (A1)	12829	58127	The most urgent liabilities (P1)	35061	44078
Marketable assets (A2)	16412	34407	Short-term liabilities (P2)	13178	2797
Slowly sold assets (A3)	56705	44947	Long-term liabilities (P3)	202	302
Illiquid assets (A4)	33796	33460	Permanent liabilities (A4)	71301	123764
Balance	119742	170941		119742	170941

**Source: own creation**

To assess the solvency of the organization, three relative liquidity ratios are used, differing by a set of liquid assets that are considered to cover short-term liabilities.

Their calculation is made in Table 9.

**Table 9 - Indicators of solvency of the enterprise**

Indicators	2014	2015	2016	Deviation
Absolute liquidity ratio	0,09	0,27	1,24	1,15
The coefficient of "critical evaluation"	0,58	0,61	1,97	1,39
Coefficient of current liquidity	1,92	1,78	2,93	1,01

**Source: own creation**

Conclusions: analyzing the data of the table, it should be noted, that during the period under review, the solvency of the enterprise has increased significantly, at the end of 2016 all liquidity indicators correspond to the normative values and even higher, which indicates a high degree of solvency of the enterprise for its obligations.

Profitability indicators are the main efficiency characteristics of the enterprise economic activity. They are calculated as relative indicators of financial results received by the enterprise for the reporting period. The economic content of the enterprise's profitability indicators is reduced to the profitability of the enterprise's activities.

The results of the calculations are given in Table 10.

**Table 10 – Calculation of profitability indicators, %**

Indicators	2014	2015	2016	Changes
Profitabilityofsales	-1,28%	-1,42%	-3,96%	-2,68%
Profitabilityofproduction	-1,34%	-1,49%	-4,10%	-2,76%
ReturnOnAssets	-6,78%	-7,53%	-18,80%	-12,02%
Profitabilityofequitycapital	4,62%	5,13%	13,39%	8,77%
Profitabilityofborrowedfunds	7,09%	7,88%	27,31%	20,22%

**Source: own creation**

Conclusion: analyzing the data presented in the table, it should be noted, that the profitability of sales, production and assets in the period under review decreased and have negative values, which, as noted earlier, is caused by the company's losses after profits from sales. At the same time, the profitability of own and borrowed capital has a positive value, accordingly, the enterprise uses its own and borrowed capital effectively for the purposes of shareholders and obtaining net profit.

### **4.3 Organization of work on the management of the risks in the enterprise**

The principles of managing financial risks in LLC “RosEcoil” represent a process of anticipating and neutralizing their negative financial consequences, associated with their identification, valuation, prevention and insurance.

Tables 11 and 12 show ways to reduce the negative consequences of different types of risks that may arise on LLC “RosEcoil”.

**Table 11 – Ways to reduce the negative consequences from the risks**

Risks	The way to reduce the negative consequences
Commercial risk	Correct determination of the permissible level of ratio of financial coefficients. The correct choice of ways to increase the predicted return on investment in this project
Risk of non-optimal distribution of resources	A clear and correct determination of priorities for resource allocation depends on their availability. Correct and precise marketing research to determine the exact number of produced products. Use of the matrix method
Actions of competitors	Active research and prediction of possible actions of competitors and their inclusion into marketing and production activities
Dissatisfaction of workers, which can lead to their dismissal or to strikes	Well-designed social and economic programs for employees, based on their requirements and requests, the problems of motivation, creation of favorable psychological climate, etc.
The financial risk associated with the passivity of the capital, with simultaneous placement of a large funds in one project, etc.	Proper finance management, the timely placement of passive funds in profit-making projects or the provision of lucrative loans. The main thing is that the capital does not lie as a "dead weight", but works. Transfer of a part of the risk to other firms, by switching them to participation in the financing of expensive and risky projects, the use of venture capital
Mistakes of managers	A more thorough system of control and verification, justifiable duplication, especially at crucial business links, when a manager's error can be very expensive. In this regard, it is useful to model the possible financial consequences of errors within execution of the most expensive projects
Changes in prices, demand, profit level	More thorough prediction. Hedging and other ways to mitigate consequences of risk
Risk of incorrectly selected project	Careful examination of all the arguments "for" and "against". Use of computer modeling for more accurate miscalculation of options in case of special complexity of projects

Unexpected political events with serious consequences for this business	This cannot always be predicted and cannot be insured. But this have to be taken into account as a force majeure circumstance, that is, to have some kind of life and psychological schemes
National and international riots	This can be considered and anticipated. Serious consequences can be avoided through the correct work on relations with society, taking into account the national and psychological conditions in the area
Unforeseen government regulations (on changes in laws, prices, taxes, etc.)	In Russia, this has a particularly important meaning. Therefore, it is necessary to study carefully the by-laws under the basic laws, as well as monitor the situation closely. Absolutely unforeseen resolutions do not exist. They are prepared in advance, after processing public opinion

Source: gks.ru, 2017

**Table 12 – Types of risks that need to be insured**

Type of risk	The way to reduce the negative consequences
Fire and other natural disasters	Insurance of amounts of probable losses
Car crashes	Carinsurance
Risk of destruction or damage of cargo during transportation	Insurance of the value of cargo (sea, aviation and other types of transport insurance)
Risk of negligence of the company's employees	Insurance of the value of possible losses from negligence of employees
Risk of the likely dishonesty of employees, which can cause material and moral damage of the firm	Acquisition of "honesty" bonds in the insurance company
Risk of neglect of responsibility by one of the workers or by the group of workers, which determines the performance of the whole project	The acquisition of the "guarantee" bonds
Risk of suspension of business activity of the company (different reasons)	Insurance of the amount of possible losses for the entire period of business stoppage
Risk of possible death or illness of the leader, of the leading worker of the firm, of	Insurance of the amount of possible losses. This is especially

the intellectual or other qualified activity on which depends the success of the firm	important in the most responsible period
Risks in connection with a possible disease, death or accident with the employee	Insurance in the insurance companies

Source: gks.ru, 2017

When choosing a specific tool for risk resolving, the enterprise have to proceed from the following principles. Firstly, it is impossible to take risks more than it is possible for own capital, and secondly, it is necessary to foresee the consequences of the risk.

Applying of these principles in practice means that it is always necessary to calculate the maximum possible loss, according to the given type of risk, then compare it with the capital of the enterprise, which exposed to the given risk, and then compare the entire possible loss with the total volume of own financial resources. And only after making the last step, it is possible to determine whether this particular risk will lead to bankruptcy of the enterprise.

As a guide in choosing the methods of risk reduction a special schemes are used.

**Table 13 – Scheme of a choice of risk reduction methods**

Possible loss of profits or resources	The probability of occurrence of a crisis situation		
	high	medium	low
Compared with the amount of project assets	Reject a project	Reject a project	Analysis of ways to reduce the
Does not exceed the amount of estimated revenues	Preventive measure	Insurance of the risk	Insurance of the risk
Does not exceed the amount of the estimated profit	Preventive measure	Application of the reservation policy, self-insurance	

Source: gks.ru, 2017

The final step in the analysis of the risk reducing methods in LLC “RosEcoil” is the formulation of a general risk management plan for the project.

This plan should include: the results of identification of all risk areas of the project, a list of the main identifiers of the risk in each area; the results of the rating evaluation of the indicators of the risk, which determine their significance for the achievement of the project objectives; the results of statistical analysis of the risk, analysis of sensitivity and global analysis of the risk for project acceptance process; recommended risk reduction strategies



in each area of activity, related to the project realization; a list of procedures that ensure the monitoring of the risks of the entrepreneurial project.

#### 4.4 Recommendations for reducing risks of the organization

To improve the risk management system in LLC “RosEkoiil”, it is proposed to introduce the analysis of complex methods for analyzing the financial situation:

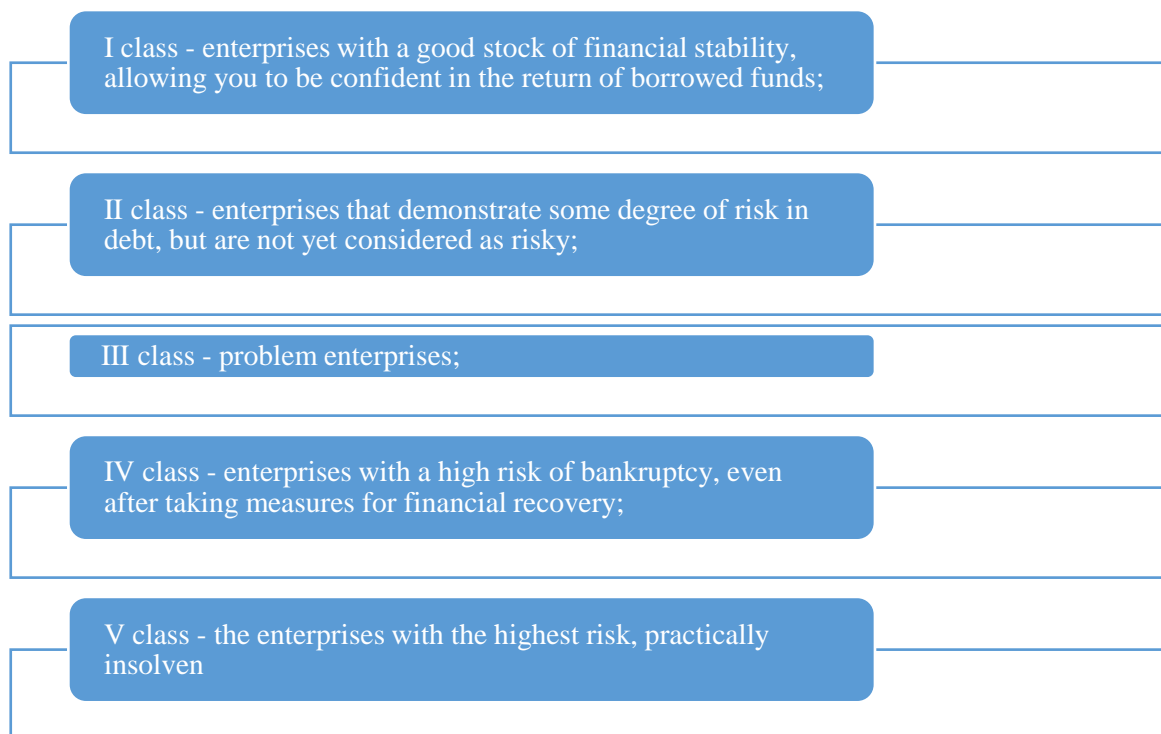
- Method of credit scoring by D. Duran;
- Altman's Z-score methodology.

Let’s consider the methodology of credit scoring, which groups enterprises into classes according to the degree of risk.

The main task of the scoring is not only to find out the degree of reliability and obligatoriness of the enterprise. In other words, scoring assesses whether the company is "worthy of a loan."

The method of credit scoring was first proposed by the American economist D. Duran. Five classes of enterprises are distinguished by the degree of risk, which are shown in Figure 4.

**Fig. 4 Classes of enterprises by degree of risk**



**Source: own creation**

**Table 14 – Grouping of enterprises into classes according to the degree of risk**

Indicator	Class boundaries according to the criteria				
	I class	II class	III class	IV class	V class
Return on total assets, %	30% and above - 50 points	From 29.9 to 20% - from 49.9 to 35 points	From 19.9 to 10% - from 34.9 to 20 points	From 9.9 to 1% - from 19.9 to 5 points	Less than 1% - 0 points
Current liquidity ratio	2,0 and above - 30 points	From 1.99 to 1.7 - from 29.9 to 20 points	From 1.69 to 1.4 - from 19.9 to 10 points	From 1,39 to 1,1 - from 9,9 to 1 point	1 and below - 0 points
Financial independence ratio	0,7 and above - 20 points	From 0,69 to 0,45 - from 19,9 to 10 points	From 0,44 to 0,3 - from 9,9 to 5 points	From 0.29 to 0.2 - from 5 to 1 point	Less than 0,2 - 0 points
Class boundary	100 points and higher	From 99 to 65 points	From 64 to 35 points	From 34 to 6 points	0 points

Source: gks.ru, 2017

In the practice, when determining the bankruptcy of enterprises, a quantitative indicator is used, which is applied to predict the collapse - "Z-score", based on a weighted sum of financial ratios.

The Z-score is a five-factor model, constructed from the data of 33 bankrupt US enterprises in 1968, by the American scientist Altman.

The Altman Z-score is calculated by the formula:

$$Z = 1,2 \cdot X1 + 1,4 \cdot X2 + 3,3 \cdot X3 + 0,6 \cdot X4 + X5$$

(3.1)

Where:

X1- is the ratio of current assets to the sum of assets;

X2 - is the ratio of profit from ordinary activities to the sum of assets;

X3 -is the ratio of net profit to the sum of assets;

X4 - is the ratio of authorized capital to short-term liabilities;

X5 -is the ratio of proceeds from sales to the sum of assets.

The probability of bankruptcy depends on the value of Z.

**Table 15 –“Z-score” by Altman**

Score	Probability of bankruptcy
1,8 or less	Very high
1,81-2,7	High
2,8-2,9	Possible
3,0 or more	Unlikely

**Source: gks.ru, 2017**

The proposed methods will allow the enterprise to improve the process of assessing the financial risk for further analysis and for management of possible consequences.

## 5 Results and discussion

### 5.1 Evaluation of the effectiveness of the proposed activities

We will select the class of the enterprise in accordance to the methodology of credit scoring.

**Table 16 – Grouping of enterprises into classes according to the degree of risk**

Indicator	Class boundaries according to the criteria				
	I class	II class	III class	IV class	V class
Return on total assets, %					Less than 1 % - 0 points
Current liquidity ratio	2.0 and above-30 points				
Financial independence ratio	0.7 and above – 20 points				
Class boundary			50 points		

**Source: own creation**

Thus, according to the results of the analysis, it was noted that the enterprise has 50 points and belongs to the third class - problem enterprises. Negative point in this analysis is the negative value of return on equity, according to this indicator the enterprise received 0 points.

We will calculate the probability of bankruptcy in accordance with the methodology of the Altman Z-score in Table 17.

**Table 17 – Calculation of the profitability of bankruptcy for the Altman model**

Indicators	2015	2016
X1	0,72	0,80
X2	0,58	0,72
X3	0,16	0,38
X4	1,47	2,62
X5	5,43	4,04

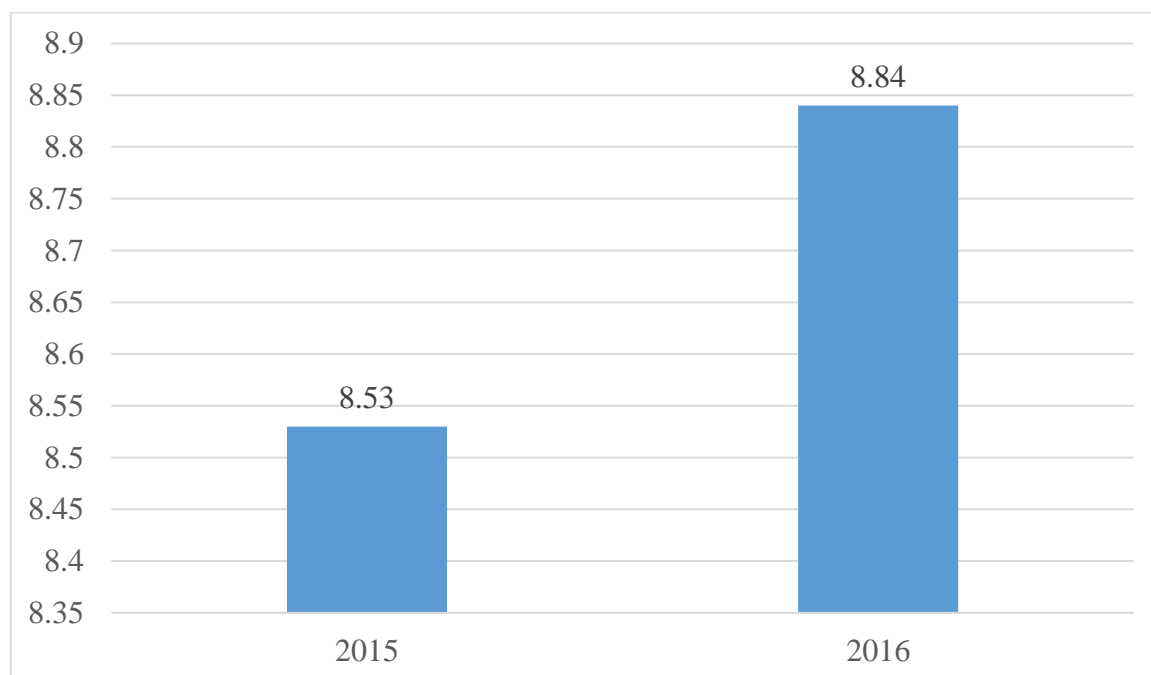
Z	8,53	8,84
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Source: gks.ru, 2017

Conclusion: analyzing the data presented in the table, it should be noted that the Altman Z-score, in the period under review, increased by 0.31.

To determine the probability of bankruptcy, the calculated index "Z" should be compared with its critical value given in Table 17. The dynamics of the indicator is shown in Figure 5.

**Fig. 5 Dynamics of the Altman Z-score in 2015-2016**



Source: own creation

It should be noted, that in accordance with the presented scale, the situation at the enterprise in 2015-2016 is stable, risk of the insolvency is small.

## **6 Conclusion**

In this work, on the basis of the completed research, a number of conclusions and generalizations were made.

According to the calculation, it can be concluded that in 2015 the enterprise had an unstable financial situation, in 2016 the enterprise was absolutely financially stable, as evidenced by the importance of the three-component indicator of the type of financial stability.

In 2015-2016 there was an increase in independence from external sources of financing at the enterprise, as evidenced by an increase in the coefficient of autonomy and a decrease in the coefficient of financial dependence. Positive is the importance and dynamics of the coefficients of supply of reserves and current assets with own circulating assets, the values of indicators above the normative boundaries in 2015-2016. The low value of the long-term financial investment ratio indicates that the company cannot attract long-term loans, which is a negative point, since they are more profitable than short-term ones. It also should be noted, that the low value of the structure coefficient of borrowed capital indicates that the enterprise attracts very small amounts for the restoration or acquisition of non-current assets. Estimating the value of the loan and equity ratio, it should be noted, that it was in favor of the latter in 2015-2016, and in the period under review, own funds began to significantly prevail over the borrowed funds, which indicates the growth of the enterprise's independence and financial stability.

The balance of the enterprise at the end of 2016 is absolutely liquid, the enterprise is solvent at the balance sheet date.

In the period under review, the company's solvency increased significantly, at the end of 2016 all liquidity indicators correspond to the normative values and even higher, which indicates a high degree of solvency of the enterprise for its obligations.

In the period under review, the enterprise's revenue increased, but at the same time decreased the turnover of assets, current assets, stocks, receivables, which is a negative

trend, since it indicates that the period of diversion of funds from turnover to financing these groups of assets was increased. At the same time, it should be noted that the purpose of any enterprise is to accelerate the turnover of current assets.

This is ensured by reducing the duration of the production cycle, reducing the duration of operations in supply and sales processes, improving the settlement system, improving the work with debtors of the enterprise, motivating managers to receive funds in time, without violating payment terms, reducing inventories, reasonable economic calculation of the reserve's amount in the enterprise.

The indicators of profitability of sales, production and assets in the period under review decreased and have negative values, which, as noted earlier, is caused by the company's losses from sales. At the same time, the profitability of own and borrowed capital has a positive value, accordingly, the enterprise uses its own and borrowed capital effectively for the purposes of shareholders and obtaining net profit. The main ways to improve the profitability of sales are: reducing costs per unit of output, improving the use of production resources that form the cost of production (reducing the capital intensity, material intensity, salaries, depreciation of output and increasing returns to them, return on assets, material output, etc.), increase in production and sales products, increase in prices for products, accompanied by an improvement in its quality.

Principles of financial risk management in the company "RosEkoiil" represents the process of anticipating and neutralizing their negative financial consequences associated with their identification, assessment, prevention and insurance.

When choosing a specific risk resolution tool, the company have to follow the next principles. First, they cannot risk more than can afford their own capital, and secondly, they need to anticipate consequences of risk.

Practical application of these principles means that it is always necessary to calculate the maximum possible loss for this type of risk, then compare it with the amount of capital of the enterprise which exposed to this risk, and then compare all possible loss with the total

amount of its own financial resources. And only after taking the last step, it is possible to determine whether this risk will lead to bankruptcy of the enterprise or not.

Special schemes are used to guide the selection of risk reduction tools.

The final step in the analysis of the tools of reducing the risk in LLC “RosEcoil” is the formulation of a general management plan for the project.

To improve the risk management system in LLC “RosEcoil”, it is proposed to introduce the analysis of complex methods for analyzing the financial situation into practice:

- methods of credit scoring by D. Duran;
- Altman's Z-score methodology.

The proposed methods will allow the enterprise to improve the process of assessing the financial risk for further analysis and management of possible consequences.

According to the results of the analysis, it is noted that the enterprise has 50 points and belongs to the third class - problem enterprises. Negative point in this analysis is the negative value of return on equity, according to this indicator the enterprise received 0 points.

It should be noted that the Altman Z-score in the period under review increased by 0.31. It should be mentioned, that in accordance with the presented scale, the situation at the enterprise during 2015-2016 is stable, risk of the insolvency is small.



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2. [www.spark-interfax.ru](http://www.spark-interfax.ru)

## 8 Appendix

### The balance sheet for the year 2016

Name	on 31.12.2016	on 31.12.2015	on 31.12.2014
1.Non-current (long-term) assets			
Fixed asset	32944	33405	32672
Deferred tax assets	516	391	200
Total for section 1	33460	33796	32872
2.Current assets		56303	63802
Reserves	44765	56303	63802
VAT	130	320	294
Receivables	34407	16412	23826
Financial investment	53	56	84
Cash	58074	12773	4116
Other circulating assets	52	82	173
Total for section 2	137351	85946	92295
Balance	170941	119742	125167
Capital and reserves			
Authorized capital	1140	1140	1140
Revaluation of non-current assets	147	147	147
Reserve capital	175	175	175
Retained earnings (uncovered loss)	122302	69839	75545
Total for section 3	123764	71301	77007
Deferred tax liability	302	202	133
Total for section 4	302	202	133
Borrowed funds	0	0	7454
Accounts payable	44078	35061	39656
Estimated liabilities	2510	1597	606
Other short-term liabilities	287	11581	311
Total for section 5	46875	48239	48027
Balance	170941	119742	125167

Source: [www.spark-interfax.ru](http://www.spark-interfax.ru), 2017

**Statement of financial results for 2016**

Name	2016	2015
Revenues	650433	617 911
Cost of sold goods, products, works, services	617315	586 449
Grossprofit	33128	31 472
Commercialexpenses	23850	22 658
Managementexpenses	18502	17 577
Profit (loss) fromsales	-9224	-8 763
Interestincome	0	0
Interestpayable	538	511
Otherrevenue	37695	35 810
Otherexpenses	8499	8 074
Profit (loss) beforetaxation	19434	18 462
Deferred tax assets	-16	-15
Deferred tax liabilities	-69	-66
Currentincometax	3993	3 793
Net profit (loss) of the reporting period	15229	14 468

**Source: [www.spark-interfax.ru](http://www.spark-interfax.ru), 2017**