Kyiv National University of Trade and Economics
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FINAL QUALIFYING PAPER

on the topic:

“Risks in International commercial activity of the enterprise”

(based on data of JSC "UKRTRANSGAS", Kyiv)

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ВИПУСКНА КВАЛІФІКАЦІЙНА РОБОТА

на тему:

«Ризик у міжнародній комерційній діяльності підприємства»

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INTRODUCTION

Deep structural crisis of economy of Ukraine, political instability of the state, bureaucracy and high level of corruption, military operations in the east of the country and considerable social tension in society significantly aggravate an uncertainty situation, economic activity of the domestic enterprises, even in the short term, process difficult determined and difficult predicted that is a prerequisite emergence of risk.

Actuality of this topic is really high nowadays. We can see that in the market environment functioning which work on the principles of freedom of choice and competition, sustainable development of the enterprise is impossible without aimed at finding ways rational use of favorable opportunities and achievement the desirable purposes in conditions of total instability and dynamically accruing threats of a modern economic era.

Need of adaptation of economic subjects to new realities managing justification theoretical expediency and methodological provisions on formation effective organization ensuring process of management of risks of their activity. For this reason in recent years increase in interest is observed to risk as among scientists, and managers of various levels of management. However, despite active scientific research and powerful achievements in this direction, today, still there is no unambiguous understanding entities of risk and criteria of his assessment; majority of methodical approaches risk come down generally to development of a mathematical probabilistic calculations of possible losses also have limited sphere applications in separate highly specialized branches (finance, bank business, insurance, etc.); practical risk management mainly it is directed to minimization of risk, but not to realization of strategy the maximum use of chances thanks to accounting of risks and to decrease in their size to acceptable level.

Research objective is improvement of theoretical, methodological bases and development of practical recommendations on organizational and economic

ensuring process formation of the effective risk management system of gas transmission enterprise.

Achievement of a goal has caused need of the solution of such main objectives: to investigate genesis and to determine the conceptual and categorial device of risk in the context of activity of the enterprise; to carry out classification of risks of domestic gas transmission of enterprises taking into account branch specifics of their functioning; to create a technique of complex diagnostics of risks of activity gas transmission company; to develop model of risk activity assessment at the enterprise; to define the main problems of functioning of gas transmission enterprise in the conditions of uncertainty, dangers and threats to carry out diagnostics and estimates risks of their activity in modern conditions of managing; to systematize theoretical provisions on risk management activity of the enterprise and to analyze a state risk management gas transmission company; to prove conceptual bases and to develop recommendations on organizational and economic ensuring process of formation of effective risk management system integrated into the general control system association activity.

Object of a research are processes of management of risks of activity the enterprises in modern conditions of managing.

Subject of the research are theoretical, methodical and applied aspects of organizational and economic ensuring management process risks of activity of gas transmission company.

Purpose of the work is to improve theoretical and methodological principles and the development of practical recommendations regarding organizational and economic provision of the process forming an effective system management of the risks on gas transport enterprise.

Tasks are the next:

1) To study genesis and to determine the conceptual-categorical apparatus of risk in the context of enterprise activity;

2) To carry out the classification of risks of domestic gas transport companies taking into account sector specifics of their operation;

3) To formulate a methodology for complex diagnostics of the risks of the activity of the gas transportation company;

4) Develop a model for assessing the risks of an enterprise;

5) To identify the main problems of operation of gas transport enterprises in conditions of uncertainty, hazards and threats; to diagnose and assess the risks of their activities in modern economic conditions;

6) To systematize theoretical positions on risk management of the enterprise and analyze the state of risk management at the gas transport enterprises of Ukraine;

7) To substantiate the conceptual foundations and to develop recommendations on the organizational and economic provision of the process of formation of an effective system of risk management, integrated into the general system of managing the activities of the gas transport company.

Methods of the research what we used are statistical, settlement and analytical, normative, scenario analysis, simulation method, risk analysis of possible losses and method of expert assessments.

Scientific novelty of our research is in the distention of knowledge about risk in the enterprise activity and development of risk management methods according to each type and level of threat which can decrease the level of losses.

Structure of the final qualifying paper we organized like three main topics which explain theoretical and practical approach of managing risk in the International enterprise activity. Analyzing theoretically types of risk and methods of the minimizing losses in the first part, we analyzed financial and economic activity of JSC "UKRTRANSGAS" in the second part, evaluate level of risks. Based on results, we made justification for improvement of risk response of the enterprise and make forecasts according to implementation of methods in the third part.

PART 1

THEORETICAL BASES OF RISKS IN INTERNATIONAL COMMERCIAL ACTIVITY OF ENERPRISE

1.4 Economical Essence and Peculiarities of Risk in International Commercial Activity of Enterprise

In the process of researching the issues of risks in the researcher necessarily business faces with the concepts of risk and uncertainty. These concepts are the main pillars in the study of risks.

Unfortunately, there is no the only one definition of economic risk concept in economic literature. It can be explained by fact that a risk as a phenomenon has a lot of aspects. In addition, it's complicated a phenomenon that is characterized by a large number of not just non-coincidental, but also opposite real bases. The existence of a single definition of the concept of economic risk. This view can be explained by the diverse aspects of this phenomenon and almost completely ignored by our economic legislation in certain economic practices and organizational activities. In addition, risk is a complex phenomenon that has many contradictory and sometimes contradictory deterministic principles, which in turn generates many interpretations of the risk concept from different judgments.

Intuitively, risk is an event that causes negative consequences and possibility of occurrence of such an event. But there is a number of more scientific ones definitions given by domestic and foreign scientists:

1. Risk is a potential numerically measured loss capability. This concept is characterized by the uncertainty associated with the possibility emergence of crisis situations and their consequences.

2. Risk is a probability of expenses occurrence, lack of income, losses, etc.

3. Risk is a uncertainty of future financial results.

4. Risk is a degree of uncertainty in future clean revenues obtaining.
5. Risk is a value of the probabilistic event that causes it losses.
6. Risk is a probability of danger, loss.
7. Risk is a probability of loss of certain values as a result

Entrepreneurial activity under the conditions of that environment of activity will change in another direction than the intended one.

Scientists O.Savchenko and L. Melnyk understand the risk as "the likelihood of a company's losses of its own resources for non-profit or the occurrence of side-effects as a result of the implementation of specific production and financial activities" [78]. In his work, B. Reisberg defines risk as "the threat of potentially acceptable loss of resources or lack of revenue compared with the option designed to use the resources of the company reasonably" [92, p.231]. O. Kuzmin also observes such a viewpoint, describing the risk as a "threat" of unforeseen losses caused by changes in working conditions or penalties by unfavorable situations. But I. Goncharov explains risk as a threat to the disadvantageous effect of the alleged phenomenon, and a variant of positive deviation with stable Measures are called "chance." Well-known domestic scientists I. Sakhartsev and O. Shlyag see at risk the "situational characteristic of functioning, which combines an uncertainty of its outcome and a possibility of disadvantageous effects in activity as a consequence of failure" [92, p.192].

From the definitions we can see that basic concepts for risk research are concepts of probability and uncertainty. Consider the concept of probability. As noted above, it is with the emergence of probability theory began the history of risk management as a separate type of human activity, and hence the notion of probability is fundamental for this science.

From the probability theory it is known that probability is a quantitative estimate possibility of occurrence of some event. Emphasize the concepts of objective and subjective probabilities. The concept of objective probabilities is based on interpretation

of probability concept as the boundary value of the frequency at infiniting of large experiments number, and a probability estimate is conducted by calculating the frequency with which this event occurs.

The accuracy of measuring objective probabilities depends on the volume statistical data and the possibility of their using in the future, that is from preservation of the conditions in which past events took place. However, in many cases, during making decisions, statistical data about the frequency of certain events occurrence is very small in scope or not at all.

Therefore, the second way is used to measure the probabilities of a situation, based on a subjective dimensions of the decision maker.

In this connection, the probabilities measured in this way are called subjective probabilities of an event. Probability of the first place is the opinion of the subject reflecting at state his information fund. In other words, the subjective probability is determined on the basis of an assumption based on a judgment or a personal experience of the decision maker, and not at a frequency with which a similar result was obtained in similar conditions.

Hence the wide variation of subjective probabilities, which is explained by a wide spectrum different information or different operating possibilities with the same infor-mation. Subjective probabilities under some assumptions have the properties of ordinary objective probabilities. Therefore, it is possible with them to do usual operations that are determined in the theory of probabilities. However, sometimes, when we evaluat subjective probabilities, we are evaluat qualitatively (i.e., the notion of “high probability”, “low probability”, “average probability”, etc.).

As described above, to study the risk of the second basic concept after probability is the notion of uncertainty.

The nature of uncertainty stems from awareness decision makers on the economic environment, preliminary empirical experience and external risk factors in a decision making.

Uncertainty implies the presence of factors at which the result from the decision taken is not deterministic, but the degree of influence of these factors are unknown. These factors are most often attributed to such factors incompleteness, inaccuracy or lack of information of decision makers.

Conditions of uncertainty that occur in any kind entrepreneurial activity, is the subject of research and the object of a permanent one observation of economists different profiles, as well as specialists of other branches (lawyers, sociologists, political scientists, psychologists, etc.).

The approach to studying the phenomenon of uncertainty in business is due to the fact that economic entities in the process of their functioning feel dependence from a number of factors that can be divided into external and internal.

External factors include those that can not be directly influenced, which generated by the external environment. It can be legislation, political situation in the country, actions of competitors in the market, market reaction on released products, etc.

The internal factors include economic factors subject and which may be directly influenced by his leadership or personnel. It includes the incompetence of employees at the enterprise, inaccurate measurements or information, incorrect project characteristics.

The nature of uncertainty can be classified quite broadly. The following approach classifies uncertainty depending on the information and forms of this information that the subject has in making decisions − from a complete lack of information and ending up with problems logical positivism: uncertainty (ignorance of the object); physical uncertainty; inaccuracy of information (incompleteness, insufficiency, vagueness, inconsistency of reality); ambiguity; linguistic uncertainty.

Another approach to the classification of uncertainties given in the book. J. Von Neumann and O. Morgenstern “Theory of games and economic behavior. 1970” [87, p.67-72]: the impossibility of considering all possible strategies and consequences because of their large number even in the presence of high-speed

computers (for example, if the likelihood is expressed qualitatively in characteristic strategies and impacts). random forces, the result of which can not be predicted.

Strategic uncertainty due to inability to predict the behavior of the rival in the market. These uncertainties are rarely found in pure form. Often, you can find variants of mixed uncertainties.

Another approach to the classification of uncertainty is used with design works:

human uncertainty is related to the impossibility of accurate anticipating human behavior in the work process. People differ one from one level of education, experience, creative abilities, interests. Individual reactions change day by day, depending on the state of health, mood, contact with other people, etc; the technical uncertainty is much smaller in comparison with the human, however, it must be reckoned with. Technical uncertainty is associated with reliability of equipment, predictability of production processes, complexity technology, level of automation, volume of production, pace of updating etc; social uncertainty stems from people's desire to form social networking and helping each other. Conduct yourself according to mutually accepted commitments, official relations, roles, incentives, conflicts, traditions, etc. The structure of such relationships not defined.

In these conditions, forecasting and planning of production, sales and the magnitude of cash flows, the development of construction projects and business plans can be calculated only approximately, and often business, instead of expected profit, can bring losses, the magnitude of which can exceed not only the money invested in the case, but also all the property at the disposal of the owner.

We agree that uncertainty is an inevitable condition for managing, and therefore the risk is a fragment of the results of the economic decision. We believe that such elements as uncertainty and risk will be important part of entrepreneurship. Comparing them, one can come to the conclusion that the main difference between them is that the risk is subject to the possibility of choice, and uncertainty, alas, no. It is known that planning and implementation of projects takes place in conditions of uncertainty, which form the conditions for changing

both internal and external environments. Therefore, uncertainty should be understood as the absence of complete and reliable data on the basics of project implementation. the uncertainty itself may be related to the potential chance of the emergence of unfavorable conditions, situations and consequences, which are called risks. Uncertainty is due to incompleteness, lack of timeliness, a small degree of specification, which is related to the activities of subjects of entrepreneurial activity. Therefore, in case of an increase in the level of uncertainty, the risk of economic activity in the enterprise increases.

We conclude that the risk is a consequence of uncertainty. Thus, the reasons for the uncertainty of entrepreneurial activity are: ignorance, accident and counteraction. The emergence of uncertainty is primarily due to the fact that the vast majority of activities associated with entrepreneurial activity are not deterministic (in fact, it is paradoxical to estimate in advance the pace and trends of scientific and technological advancement, change the market conjuncture, consumer preferences, the occurrence of various natural and climatic adverse conditions).

On the basis of this, one can reaffirm that in the foundation economic risk laid probabilistic nature of market activity and uncertainty of the situation when it is implemented. It should also be remembered that the risk accompanies all processes that are in the company. Thus, it can be noted that the risk relates to a certain type of activity. For example, if a company implements a certain one project, then it is under the influence of the investment risk, if carry out technical activities then take effect technological risks, even if the company does not carry out any activity at this time is at risk of losing profit.

Thus, a risk situation arises when making decisions in any way in any case, since the result of decision-making depends not only on decision makers, but also from many factors of the internal and external environment.

Considering the contradictor of risk, it is necessary to emphasize its manifestation in various aspects. The risk, from the one hand, is oriented towards obtaining positive for the system of decision-making results in effective ways in

conditions of uncertainty and conflict in a situation of inevitable choice. This risk profile has important economic and social implications. From the other hand, risk can lead to adverse socio-economic consequences, because the assessment or selection of an alternative is based on incomplete, fuzzy, and unreliable at the time of decision making. An important component of risk in commercial activity is its legitimacy, since the risk is inherent in commercial activity, but it is also necessary that a certain mechanism regulating the legal aspect of the risk is taken into account and implemented. The criteria of justification here are legislation, legal right and, in my opinion, primarily moral and ethical standards. These criteria entail the establishment of appropriate functions, powers, responsibilities, competencies, as well as the establishment of an appropriate system of qualitative and quantitative evaluation indicators.

Objectively, economic activity and commerce are not possible without the certain risk to which they are burdened. Even absolute inaction in business is burdened with the risk of unused opportunities, buried talents.

In the opinion of the famous German expert in the field of risk Paul Braes both from the standpoint, the concept of risk is the central point of the relationship. At the same time, as a consequence of modern studies of social relations, the problem of risk is gaining ever more general economic significance, since risk is perceived as one of the visual factors of the modern and especially of the future society. A number of authors sees in it even the change of political and economic accents and the initiation of the process of formation on the basis of modern “industrial society” of its newest phase – “society of risk”. The reason for such changes in the economic orientation of modern society was the German economist, the former president of the Cologne Institute of the World Economy, Herbert Hirsch in that the main problem of the future economic growth will be manifested not so much in the growing need for funds to finance new investments, necessity reserve capital to ensure those needs that will be caused by risk. Known financiers in Ukraine E. Nikkacht and A. Groppeli emphasize that “the emphasis now are on finding ways to effectively use limited financial resources and investing in assets

or projects that generate high revenues at the lowest risk." The manifestation of this tendency is favorably distinguished by the economic structure of the developed countries from the rest of the world. Thus, at the end of the 1980s, Polish specialists argued that the significant difference existing between the situation in Poland and the highly developed industrial countries at that time was that in those latter times, then, the greatest problem was not the feeling of need for money in general, but only lack or just lack of venture capital, avant-garde, innovation capital - that is, funds which should be kept at the disposal of enterprises for a long time and which are intended to finance risky measures. This situation is becoming increasingly tangible and relevant to Ukraine general production costsy, which exacerbates the issue of risk [2].

Several experts in risk theory have expressed conviction that in the near future, world society is expected to undergo a significant transformation. Its consequence is that it will build its economic development strategy not only on the basis of risk, but even on the basis of risk management.

The mere description of the probable risk without specifying in the business plan of those measures that can minimize it is a waste of time and place. Therefore, in a specific business plan, it is necessary to explain in details how risks and losses can be reduced.

The risk control concept should include the following components [3]: assessment of the degree of risk, that is, identification of the potential negative consequences of the decisions taken, as well as side effects that can adversely affect the end result; elaboration of the mechanism for responding to possible negative consequences; development of measures for neutralization or compensation of possible negative consequences of one or another activity.

Risk analysis is to obtain the necessary data for making managerial decisions about expediency of participation in a certain business project and means development for protection against possible financial losses. In order to take into account the potential risk of a particular business plan, information on the effects

of possible risk factors that were noticed during the implementation of similar projects can be useful.

Response to the possible negative effects of market activities involves the development of organizational and operational procedures of a precautionary nature. These procedures include specific recommendations for certain actions in the event of adverse effects.

It is clear that it is necessary not only to avoid unreasonable risk, but also to never risk excess of own liquidity, as accurately as possible defining the future effects of risk activities.

To understand the essence of commercial risk, the fundamental importance is the relationship of risk and profit. Thus, an entrepreneur is ready to risk in uncertainty, as there is a possibility of additional profits along with the risk of losses. Still J. Schumpeter argued that even when risks are not taken into account in the economic plan, they nevertheless become a source, from the one hand, of losses, and other − profits. We can also choose solutions that are less risky, but less profit will be generated by entrepreneurs. Thus, the risk is the probability (a threat) of the loss of an enterprise's share of profits as a result of the implementation in a specified production or financial activity.

The main reasons that are the source of commercial risk are [3]: sudden unpredictable changes in the external environment that have occurred and affect company's activities (price changes, changes in tax legislation, exchange rate fluctuations, etc.); changes in the relations of the enterprise with its counterparties (the possibility of concluding a more favorable contract, provisions or shortening of the contract, more attractive conditions of activity, change of partners in business, etc.), which entails changes in the achieved agreements or refusal from them; changes occurring within the enterprise itself (mismatch of the level of skills of the employees of the enterprise to planned tasks, the sudden failure of the main production assets, etc.).

The main factor limiting commercial risk include the ones that most allow to regulate its value, since the risk of an entrepreneur mainly concerns whether the

company will achieve the expected results or suffer financial losses as a result of its activities. Depending on the degree of influence of such factors, the level of risk is applied.

The level of commercial risk is influenced by factors [4]:

1. An unfavorable change (increase) in the purchase price of goods in the process of implementing an entrepreneurial project and not blocked by the terms of the procurement agreement leads to probable losses;

2. Unforeseen decline in purchasing volume leads to a reduction in sales volu-me. Loss of profit (income) is calculated as a product of a decrease in the volume of procurement on the amount of profit (income), sales of goods per unit of volume;

3. Loss of goods in the process of circulation (transportation, storage), loss of quality, consumer value of goods, leading to a decrease in its value. The level of such damage is established as the product of the quantity of the lost product at the purchase price or the product of the spoiled quantity of goods on the reduction of the selling price;

4. Increased turnover. The increase in the cost of turnover compared with the target leads to adequate reduction in income, profits;

5. Reduced product prices;

6. Reduced sales volume;

7. Changes in demand for goods (an increase in demand for goods reduces the risk of an enterprise);

8. Changes in product offerings;

9. Impact of the time factor on the level of commercial risk. The factor of time enhances the effect of the uncertainty factor;

The existence of commercial risk is a reverse side of economic freedom, and the further development of market relations in country will further increase uncertainty that will provide to the growth of commercial risk.

Eliminating of future uncertainty in commercial activity is impossible, because it is an element of objective reality.

Some scientists are developing a subjective approach to risk. As an entrepreneur evaluates the situation, generates many possible results and presents the likelihood of their implementation, chooses from a variety of options, the risk is always subjective. In addition, the perception of risk depends on each individual. For one entrepreneur, this amount of risk is acceptable, while for another it is unacceptable. Of course, risky solutions are avoided by conservative entrepreneurs. Given this circumstance, there are two forms of such entrepreneurship. First, these are commercial organizations based on old business relationships that avoid risk by adapting to new business conditions.

Secondly, newly created small enterprises, which are characterized by developed horizontal ties. Such entrepreneurs are at risk, maneuvering resources, quickly finding new partners.

In the adoption of an entrepreneur's decision on risk, an important role is played by his knowledge, experience, qualifications.

The principle decision about accepting a risky project for an entrepreneur depends on its benefits between the expected return on investment in this project and its reliability (profit generation).

Consequently, commercial risk is the risk that an entrepreneur will suffer losses in the form of additional losses or will receive income below what he expected.

Commercial risk carries out four types of functions in the economic activity: innovative, regulative, protective and analytical. Innovative function performs commercial risk by stimulating the search for non-traditional solutions of the problems facing an entrepreneur. World experience shows that most enterprises are competitive on the basis of innovative risk-based economic activities.

Regulatory function has a contradictory character and acts in two forms: constructive and destructive.

The constructive form of the regulatory function of risk is that the ability to take risks is one way of successful entrepreneurial activity (overcoming the barriers that interfere with promising innovations).

However, risk can become a manifestation of adventurism, subjectivism, when decisions are made under conditions of incomplete information. In this case, the risk is a destabilizing factor.

The protective function of risk finds expression in the fact that when the risk for an entrepreneur is a natural state, then a normal attitude to failure should also be normal. Initiative entrepreneurs need a social protection, legal, economic guarantees that stimulate a justifiable risk.

The analytical function of commercial risk is the need to choose one of the possible solutions, in connection with which the entrepreneur analyzes all possible alternatives, choosing the most cost-effective and least risky.

Analyzing the functions of commercial risk, it should be emphasized that, despite the significant losses that give rise to risk, it is also a source of potential profit. Therefore, the main task of the entrepreneur is not the abandonment of risk in general, but the choice of decisions related to risk based on objective criteria.

The complexity of classifying commercial risks lies in their diversity. Yes, there are certain types of risks ranging from fires, natural disasters and even to changes in legislation governing business. At the same time, the economic and political development of the state creates new types of risk.

There are several approaches. Thus, J. Schumpeter identifies two types of commercial risk: the risk associated with a possible technical failure of production, here is also the risk of loss of wealth generated by natural disasters; risk due to the lack of commercial success.

Other economists already distinguish three types of business risk: inflation, financial, operational. However, we believe that the above classification of risks does not adequately reflect their diversity. The most comprehensive and substantiated is the following classification of risks that arise in small business: the risk associated with economic activity; the risk associated with the identity of the entrepreneur; risk due to insufficient information on the state of the environment.

Since the probability of the latter risk is inversely proportional to how the company informed about the state of the environment in relation to the enterprise,

it is the most important in the current economic conditions. Lack of information about partners, competitors − the source of losses for the entrepreneur.

The risk associated with the individual entrepreneur is determined that all businesses have different knowledge, skills and experience of doing business, different requirements for risk level of individual transactions.

The main internal risks are personnel risks associated with the professional level and features of the nature of the employees in a small business.

By the level of decision-making distinguish two types of commercial risk [3]:

1. Macroeconomic (global) risk;
2. Microeconomic (local) risk.

In modern economic conditions, the bulk of the risk is borne by commercial organizations. Thus, independently defining their investments, concluding agreements with consumers, suppliers, they completely assume the commercial risk associated with these decisions.

In terms of the length of time, commercial risks can be divided into short-term and permanent ones. The short-term group includes those risks that threaten the entrepreneur during a certain period of time, for example, transport risk, where losses may be incurred during the carriage of goods, or the risk of non-payment under a specific agreement.

Permanent risks include those that are continuously threatening commercial activity in a given geographical area or in a defined area of the economy, for example, the risk of non-payment in a country with an imperfect legal system, or the risk of destruction (for example, landslide) of buildings in an area of high ecological danger.

Since the main task of the entrepreneur is to risk wisely, without crossing the threshold for possible bankruptcy of the enterprise, allocate the following types of risks [4]: permissible; critical; catastrophic.

Admissible risk − the threat of a complete profit loss from a particular project or commercial activity in general. So in this case, losses are possible, but their size is less than expected business profits.

Therefore, despite the probability of risk, this type of activity remains economically feasible.

Critical risk is associated with the risk of losses in the amount of realized costs for the implementation of this type of commercial activity or a separate agreement.

There is a critical risk of the first degree, which is associated with the threat of obtaining zero income, but when replacing the material costs of the entrepreneur. Critical risk of a second degree, associated with the possibility of losses in the amount of full costs as a result of business.

Under the catastrophic sense of risk, which is characterized by danger, a threat of loss in the amount that is equal to or exceeds the value of the property of the entrepreneur.

Catastrophic risk predetermines bankruptcy of the enterprise, because in this case loss of not only invested funds by the entrepreneur in a certain type of activity or in a concrete transaction, but also his property is possible. This occurs in a situation where the company received external loans under the expected profit; in the event of a catastrophic risk the entrepreneur returns the loan from his own funds.

By the degree of legality commercial risks are divided into justified and unreasonable risks. In order to distinguish between justified and unwarranted risk, it is necessary to take into account, first of all, the fact that the boundary between them in different sectors of the small economy is different. There are also two groups of risk: dynamic and static.

Dynamic − the risk of unexpected changes in the value of fixed assets due to the adoption of managerial decisions or unforeseen changes in market or political circumstances. Such changes can cause both loss and additional income.

Static − the risk of loss of real assets as a result of damage to property, as well as loss of income due to the inability of the organization, this risk only leads to losses.

Consequently, the given classification of risks allows to correctly identify a specific risk, and therefore, to manage it.

1.5 Methodological Approaches of Reaction on Risk in International Commercial Activity of Enterprise

A prerequisite for an objective risk assessment and, as a consequence, making an effective management decision is a thorough grounding qualitative risk analysis.

Most contemporary domestic scientists emphasize expediency application of a systematic approach to qualitative analysis of risks [27, p.122-132; 39, pp. 26-38; 139, p.224-227], which usually involves execution the following steps:

1. A comprehensive study of various aspects of the enterprise and the environment of its functioning as sources of potential risks;
2. Analysis of risk factors, generated both internal and external environment of the operation of the enterprise;
3. Substantiation of the logical chain of events under influence risk factors (risk factor 1 → risk 1 (risk factor2) → risk 2 (risk factor 3) → ...);
4. Definition of indicators of risk;
5. Establishing mechanisms and models of interconnection of indicators and

risk factors.

Many scientific papers devoted to the issues of risk-taking [24; 25; 27; 33; 36; 40], the authors distinguish between qualitative and quantitative risk analysis. The main objectives of qualitative analysis are the justification of risk factors, carrying out of diagnostics of risks, establishment of risk zones.

At the stage of carrying out qualitative risk analysis, leading domestic scientist V. Vitlinsky, one of the most authoritative specialists in the field risk-taking in Ukraine, emphasizes the need to “compare the expectations positive results with possible economic, social and other consequences”, as well as “to determine the influence of decisions that are made in the conditions uncertainty, on the interests of the subjects of economic life” [27, p.85].

Quantitative risk analysis is conditioned by the need to rank risks for their size and provision of prerequisites for the possibility of effective managing them in the conditions of traditional resource constraints. Its the main task to determine the degree of possible negative impact investigated risk to the possibility of achieving the set goal, calculation of the risk of a specific management decision, aggregated the risks of individual subsystems (groups, hierarchical levels), and enterprises like system as a whole.

An American expert B. Berlmer proposes an analysis risks based on the following assumptions [150]:

1. Losses caused by the onset of various kinds of risk events are not interconnected;
2. The implementation of one type of risk does not always affect the likelihood realization of another (except for force majeure circumstances);
3. The maximum possible losses due to the occurrence of a risk event must not exceed the financial capacity of the enterprise.

In our view, the diagnosis and risk assessment should be done on systemic principles, their interconnection and interdependence, in the context achievement of the goals of the enterprise.

According to V. Lukianovoy and T. Holovatch, methods of quantitative risk assessment can be grouped into four groups [92, p.247]:

1. Economic and statistical: can be used only if available significant amount of retrospective information that allows you to identify trends past and project them for the future (square-rings are calculated deviation, coefficient of variation, β-coefficient);

2. Expert: based on a survey of highly skilled specialists-experts, are used in the absence of the required amount statistical information for conducting calculations or comparisons;

3. Settlement and analytical: based on the use of internal information base of the enterprise; usually used for evaluation financial risks of the enterprise activity;

4. Analogue: give an opportunity to assess the level of risk specific activity on the basis of comparison with the similar, repeatedly carried out activity (it analyzes both own experience of the enterprise and experience of others economic entities).

The most common methods of quantification of risks to ours look, there is a statistical, method of expert assessments, settlement and analytical, normative, method of expediency analysis, method of "decision tree", analog, sensitivity analysis (vulnerability), scenario analysis, simulation method, risk analysis of possible losses.

The statistical method is based on the use of basic provisions probability theory of the distribution of random variables. Probability of the risk realization in the future is determined on the basis of analysis of statistical information regarding the frequency of occurrence of risk events in the past.

Note that the methods of risk assessment using objective probability based on the use of distribution laws random variables, although quite well designed from a mathematical point of view, but, in our opinion, the possibility of their application for risk assessment the activity of the enterprise is really limited. Of course, normal law distribution of probabilities assumes the homogeneity of the sample, provision the independence of random events and the assumption that "under the same conditions an offensive (non-stretching) event in the future will follow the same tendencies, as in the past" [12, p. 146]. In the context of the enterprise as an open socio-economic system that operates in a tight manner interconnected with the external environment and dynamically changes over time, to ensure the fulfillment of these preconditions, even in the context of the

assessment of individual species the risks are quite difficult, and in most cases it is completely impossible.

The enterprise is, in our opinion, a subjective probability based on the degree of confidence of the personal managerial decision making regarding the probability of a statement.

An expert method (expert estimation method) is used for determining the degree of risk of various types of economic activity at lack of statistical information. Risk assessment and degree of their impact on the activity of the enterprise is carried out on the basis of subjective opinions of experts-specialists.

An expert evaluation is carried out according to such an algorithm [8, p. 56]: formation of the objectives of the survey; setting the task that is needed solve an expert method; creation of a working group for implementation expert work; selection of members of the expert group (managers, leading specialists, external experts, employees of insurance companies); processing, formalization and interpretation of received information.

Expert methods are widely used to determine the degree probability of occurrence of inflation, investment, currency risks etc. But, one must take into account the fact that attracting highly skilled.

Experts often require considerable expenses. Among the methods of expert assessments the most widely used are the following methods of group poll method of brain attack and Delphi method. Advantage of these methods is that they reinforce the element of collegiality. In the process of adopting complex solutions, you can use intuition and collective generation of ideas, which makes it possible to find original solutions problems that can not be solved with the help of logical ones considerations [8, p. 58]. The method of collective generation of ideas or brainstorming is a process, in which any expressed idea generates creative or positive critical reaction and negative assessments are not allowed at this time.

The Delphi method was developed in the early 1960's in the United States firstly tested in 1964. This method is a series of consistent procedures, aimed at

forming a group opinion of experts from different fields for using their sequential questionnaire.

The main features of the Delphi method are: anonymity, adjustable feedback, formation of group evaluation on the basis of statistical processing of individual expert assessments, multi-step character evaluation.

The main purpose of the Delphi method is to reduce the psychological pressure that tested by some people with personal contact. It allows eliminate the impact on the final result of people who have good oratory abilities that is far from the most qualified specialists [8, p. 62].

There are several well-known methods for assessing the risk level on the basis is using of the expert estimation method, namely: the methodology Swiss Banking Corporation, BERI Technique. However, their feature is risk assessment for the economy of the whole country without taking into account the specifics of the activities directions in specific subjects of management [8, p. 64].

An analytical method for risk assessment involves use traditional indicators that are used in the assessment of investment and innovation projects - payback period, internal rate of return, profitability index, net reduced income. Comparing the meaning listed indicators of alternative projects, define them attractiveness and degree of risk. For example, net reduced income (NPV) allows you to compare investment with an additional profit, that is necessary to invest in projects in which NPV> 0. The payback period shows the interval required to cover the cost of the project, therefore, than it is the shorter, the less risky the project is. Several projects are required choose the one that is characterized by the optimal ratio of pure present value and payback period [39, p. 64].

However, with external convincing calculations they are not taken into account the impact of specific risk factors that prevents the use of this method in pure form for an accurate assessment of project risks to a high degree risk

An analytical-calculation method is proposed to be used in the case risk management in unstable conditions of operation of the enterprise.

One of the main tasks of the method is the analysis of underutilized commodity- tangible assets that significantly impair financial sustainability enterprises because they are not included in the loan plan. Algorithm determination of the risks degree in accordance with the analytical and calculation method includes the following stages [120, p. 82-83]:

1. Preparation for analytical processing of information: definition of the key parameters in relation to which is performed evaluation of a particular area of activity (for example, sales volume, profitability, etc.);

a) selection of factors influencing the activities of the company, and therefor on key parameter (for example, inflation rate);

b) calculation of key parameters values at all stages production process (R&D), introduction into production, production, sales, etc..

2. Construction of diagrams of selected performance indicators dependence from the values of the input parameters; their comparison and allocation of the main indicators that have the greatest impact on this type of business activities.

3. Definition of critical values of key parameters (for example, calculation of the critical point of production).

4. Analysis based on the obtained critical values of the key parameters and factors of possible ways to increase efficiency and stability of work enterprises, reducing the risk level. This method is widely used to assess the company's risk insolvency, risk loss of financial stability.

Sensitivity analysis (vulnerability) is one of the most common methods factors account of uncertainty. The essence of the method is to identify sensitivity (risk measures) of the main results indicators in the object (project) when changing the input parameters values. For example, it was being investigated the sensitivity of the net present value of the project to a specific change of such the main input indicators, such as the price of raw materials, the price of finished products, the rate discount, etc. The sensitivity analysis allows you to identify the most sensitive indicators that affect a viability of the project, and develop measures that reduce an extent of this impact. An essential disadvantage of this method is orientation to

change only one factor (its individual influence), that is, is not taken into account possible interconnection between individual factors and their integral influence [27, p. 134-136].

The script method is to some extent the development of the sensitivity analysis method and is aimed at eliminating its shortcomings. It provides an opportunity consideration of the simultaneous change of the main parameters of the project, taking into account them interdependence and total impact on the chosen efficiency indicator the project. The scenario approach involves performing alternatives calculations using data that characterize different options development (demonstration) of the project. Most often the values of the main ones are calculated variables for the worst case scenario (pessimistic scenario), for best development (optimistic scenario) and most likely conditions (the realistic, most likely scenario) [88, p. 146].

The main purpose of simulation is to bring hypothetical situations closer to real ones. The selected risk factors are given different allowable values, as well then calculate the results. Next is the generation of random scenarios based on the system of hypotheses taken about possible values of key factors. This process can be repeated arbitrarily number of times. The final stage of this method is statistical processing and interpretation of the results. The final decision depends on attitude of the subject to risk [27, p. 136-142].

The essence of the analogues method is that when determining the risks degree it is expedient to use data on the development of similar directions activities (projects) in the past. It involves: analysis of past factors risk based on the use of various information sources (company reports about their activities in previous years; disseminating information state organizations; data of insurance companies); processing received data to identify the relationship between the planned performance results and taking into account potential risks [5, p. 92].

Taking into account the dynamism of development of each activity enterprises, the most optimal is a comparison of indicators within one his stage; otherwise it is possible to make a mistake in the process of analysis. Using the

analog method is expedient when it is necessary to identify the degree of risk of any innovative direction enterprise activity, in the absence of a base for comparison, if necessary − assessment of investment or credit risks, etc. [5, p. 94].

Normative method of risk assessment is based on comparison normative and actual values calculated for the specified enterprises. By the level of their deviations determine the magnitude of the risk, which provide a score on a certain scale (low risk - normal risk - high risk). An example of using this method is the comparison of values financial ratios (liquidity, autonomy, etc.), calculated on the basis of the reporting of a particular enterprise, with their normative values [88, p. 96-98].

Risk analysis using the “decision tree” scheme is graphical images of solutions and environmental conditions, taking into account relevant ones probabilities and results of action for any combination of alternatives and states the environment. The branches of a tree are subjective and objective assessment of possible events. Moving along the built branches, using special methods of calculating probabilities, evaluate different ways and choose from them a least risky [68, p. 119].

There are several varieties of this method: development of optimal algorithm in action, taking into account their effectiveness and risk; multifactorial risk assessment in the conditions of their multi-directional influence; graphic representation a chain of events, the consequences of which can lead to some major event (tree of failures), etc. [68, 27].

The main problem of applying the decision tree is a complexity of allocation solution options and assessment of their impact on the development of events in the future, the impossibility of taking into account the influence of the environment on enterprise activity.

The method of expensiveness analysis is based on a financial diagnostic.It involves the distribution of enterprise assets for the degree of risk or liquidity (groups of the minimum, small, medium and high risk) and analysis of trends in

the proportion changes of each group; determining the degree of loss risks, funds with the help of identification in potential risk areas [88, 25, 33].

1.6 Criteria and Indicators of Effectiveness Risk Evaluation in International Commercial Activity of Enterprise

In practice, using a simplified approach to determining the magnitude of risk in absolute terms. Its essence is that the degree of impact of risk on the main indicators of the enterprise is estimated. After that, the conclusion is made on the appropriateness of taking this risk and the implementation of this type of activity.

The calculation of the absolute value of the risk (absolute level of losses) can be made by the formula 1.1:

$$W_i = P_i \times r, \tag{1.1}$$

where

W_i – absolute value of the risk for the i-th parameter;

P_i – planned value of the i-th parameter with a successful result;

r – estimated value of the risk level.

The advantage of this method in that as the second parameter of the parameter Pi it is possible to use a wide range of indicators, according to which the company expects losses in case of realization of certain risks.

Similarly, the calculation of the absolute level of the not risky part can be made by formula 1.2:

$$I_i = P_i \times (1 - r), \tag{1.2}$$

where

I_i – the value that is not exposed to the risk of the i-th parameter;

P_i – planned value of the i-th parameter with a successful result;

r – estimated value of the risk level.

In practice, situations often arise when it is not enough to know only the magnitude of risk in absolute terms, but its value must be compared with certain indicators characterizing the activities of the firm, but expressed in different units and therefore in absolute terms incommensurate. In this case, a relative risk assessment is used.

The calculation of risk in relative terms can be made by the formula 1.3:

$$R_i = \frac{I_i}{P_i}, \tag{1.3}$$

where

R_i – relative risk value for the i-th parameter;

I_i – the value that is not exposed to the risk of the i-th parameter;

P_i – planned value of the i-th parameter with a successful result.

According to the theory the distribution of Poisson in conducting a significant amount of observations for random events we can find the regularity of their iteration, to predict the frequency of occurrence of a certain accidental event, which is defined as the ratio of the number of observations recorded on the occurrence of this event before the total number of observations [92, p. 255-256].

Accordingly, the probability of occurrence of losses is determined by the formula 1.4 [31, p. 60]:

$$P = N_i / N_{gen}, \tag{1.4}$$

where

P - likelihood of losses;

Ni - the number of losses cases;

Ngen - total number of cases in the statistical sample, including successful activity (no loss).

In the case of applying a statistical method, often a criterion absolute risk estimates choose the expected value of possible losses or deviation (dispersion). In

relative measure, risk are defined as the ratio of the magnitude of possible loss of activity to a certain the basis, in which, as a rule, is considered the expected income, the cost the property of the enterprise or the total cost of resources for this type of activity [92, 256-258].

Considering a portfolio of securities representing a set of different investments in securities that are rotated in the financial market, which are collected together to achieve a specific investment purpose of the depositor. The portfolio may include securities of only one type, such as stocks or bonds, or different investment values (stocks, bonds, deposit and savings certificates, etc.).

The risk of a security is the uncertainty of its income at the end of the investment period. It is measured by the variance of the yield of a security for a fixed time interval (month, quarter, etc.).

The purpose of forming a portfolio of securities is to achieve the optimal ratio between risk and income for the investor.Among the existing methods of quantitative estimates of economic risk widespread is the definition of systematic risk β, which gives the ability to assess of fluctuations level or deviations in performance enterprises relative to the average results of the industry.

The systematic risk of the industry is calculated by the formula 1.5 [42, p.92]:

$$\beta=\frac{V_{RIR}}{\sigma_R^2}, \quad (1.5)$$

where

R – random variable characterizing the industry in general;

Ri – random variable that characterizes i-th enterprise;

V_{RIR} – covariance of a random variable the whole industry characterizing and random variable characterizing i-th enterprise;

σ_R^2 – variance of a random variable characterizing the entire branch.

As we can see, the coefficient of sensitivity β gives an opportunity to compare efficiency of separate enterprise functioning with efficiency of all

industry. Enterprise with indicator $\beta = 1$ has a fluctuation in the results that corresponds to sectoral, $\beta > 1$ – fluctuations in the results of more industry, $\beta < 1$ – the fluctuations of results are less than industry. When score β is higher, is the magnitude of the risk of the enterprise. Present the coefficient is used predominantly for quantitative systematic estimation the risk associated with the general market fluctuations in prices and yields and making decisions on investing in securities.

In general, the disadvantages of this indicator are instability, impossibility reflect the risk that was inherent in the system in a later period; trend of approximation with time of coefficient to one. Based on this, future value β is expedient to calculate the average weighted value past periods. Probabilistic-statistical approach is based on the analysis of oscillations indicators characterizing the performance of the enterprise for a certain period of time. The following are used as evaluation criteria characteristics of a random variable as a mathematical expectation of loss, median, mod, variance, semivariation, semicircular deviation. It's help to determine the function of the distribution of a random level of damage, which corresponds to the estimated risk. In this case, it is necessary to make some assumptions about which law the distribution of probabilities is subject according to this economic indicator.

The dispersion indicates the degree of uncertainty in the investor's expectations, which estimates future profitability as average by all possible values.

In calculating the standard deviation of the portfolio (Formula 1.6), the term covariation $cov\ (xy)$ is used as a statistical measure of the interaction of two securities.

$$cov_{xy} = V_{xy} = \frac{1}{n}\sum_{i-1}^{n}(x_i - \bar{x})(y_i - \bar{y}) = \frac{1}{n}(\sum_{i-1}^{n} x_i y_i - \overline{nxy}), \qquad (1.6)$$

where

n – number of periods for which the profitability of the x-th and y-th shares were calculated;

x_i – profitability of the i-th share;

$\bar{x}$ – the average profitability of the i-th share.

If *cov (xy)> 0*, then the profitability of securities *x* and *y* tend to change in one direction, for example, better than expected, profitability of one of the securities should probably lead to better than expected profitability of another security.

If *cov (xy) <0*, then the profitability of securities x and y tend to compensate each other, for example, better than expected, profitability of one security is usually accompanied by worse than expected, profitability of another security.

Relatively small or zero value of covariance, shows that the relationship between the profitability of these securities is weak or absent altogether.

On the stock market it is considered the correlation (interdependence) of different stocks, or shares and indices. It is believed that domestic actions are highly correlated, that is, at a certain point in time, all shares move in one direction. The correlation coefficient varies from -1 to +1. The positive value of the coefficient indicates that the profitability of assets varies in one direction when the situation changes, and the negative − in the opposite. At zero value of the coefficient, there is no correlation between the return on assets.

The correlation index is determined by the formula 1.7:

$$Cor = \mathrm{Cov}_{ij} / (\delta_i \times \delta_j), \quad (1.7)$$

where

Covij − covariation of the yield of the i-th and j-th shares;

δi − standard deviation of profitability of the i-th share;

δj − standard deviation of profitability of j-th share.

We can also apply a slightly simplified method for determining the degree of risk. Quantitatively, the investor's risk is characterized by his estimation of the probable magnitude of the maximum and minimum incomes. Moreover, the greater the range between these two values at their equal probability, the greater the degree of risk.

The following formula 1.8 can be used to calculate the variance, mean square deviation and coefficient of variation:

$$\delta^2 = \sum \frac{(x_i - \bar{x}_i)^2}{n-1}, \quad (1.8)$$

where

δ^2 –dispersion;

x_i – profitability of the i-th share;

x_i – the average profitability of the i-th share;

n – number of periods.

In general, using the correlation data, we can draw conclusions:

1. If coefficient of shares correlation is smaller in the portfolio, the less risk portfolio, so in the formation of the portfolio should include in it the shares with the least correlation;

2. If the coefficient of correlation of shares in the portfolio +1, then the risk of the portfolio is averaged;

3. If the coefficient of correlation of shares in a portfolio is less than +1, the risk of a portfolio decreases;

4. If the coefficient of correlation of shares in portfolio -1, then we can get a portfolio without risk.

The principle of securities portfolio formation, in which risk reduction is achieved through the inclusion of a large number of different stocks in a portfolio, is called diversification.

The founder of this theory is Harry Markowitz (winner of the Nobel Prize in Economics in 1990). Markovits Diversification is a strategy for maximizing risk reduction while maintaining the required level of profitability; it is the choice of such assets, the profitability of which will have the least possible correlation.

In accordance with the theory of G.Markovitsa, when substantiating the portfolio, the investor should be guided by the expected profitability and standard deviation. Intuition thus plays a decisive role. Expected profitability is considered

as a measure of the potential remuneration associated with a specific portfolio, and standard deviation is the degree of risk associated with the portfolio. An important assumption is made that, under all other conditions, the investor will prefer high yields if two portfolios with the same standard deviations are given. If the investor has a choice between portfolios that have the same level of expected returns, then the advantage is given to a portfolio with a minimum risk, that is, in essence, to receive higher income for a minimum of a possible deviation [95, p.112-114].

The main types of probability distributions of discrete random variables − binomial and poisson distribution. For continuous random variables the most commonly used normal distribution. Especially important role it in performing of calculation and analysis of the mean values random variables [40, p.62].

Method of analysis of the possible losses risk (method of constructing a curve risk) is one method of probabilistic approach. Using constructed risk curve, depending on the effectiveness of the action for the analyzed period of time and level of losses, the activity of the enterprise belong to one of the risk areas.

In the context of enterprise activities, the following is often used classification of risk areas [27, 36, 39]: risk-free, permissible risk, critical risk, catastrophic risk.

The main criteria for separating zones can be considered income, profit, equity, etc. Some authors within a zone of minimal permissible separating zones risk and increased risk, using as a criterion the gross and net profit from implementation economic activity [30, p.19].

Risks assessment of activity of gas transmission company to perform by three criteria offered in the first section dissertation work (probability of approach of a risk event, degree possible negative impact on achievement of the goal and the importance of the purpose in to the general system of the purposes of the enterprise). Risk assessment we suggest to perform, using following formula (1.9):

$$R = PR \times (a_1 \times NI_G + a_2 \times W_G), \quad (1.9)$$

where

PR − probability of approach of a risk event (implementation of risk);

NI_G − degree of a possible negative impact on achievement of the goal;

WG − the importance purposes in the general system of the purposes of the enterprise;

α1, α2 − weight coefficients of the second and the third evaluation criteria.

At the same time probability of approach of a risk event of PR it is traditional to define in an interval (0; 1).

For determination of criteria of *NIG* and *WG* (the price risk) we will use to a 100-mark scale of estimation. amount of weight coefficients 1 has to equal.

At the same time size we will consider "at the price of risk".

To define it in points by expert poll. Respectively the probability of implementation of *j* risk and the second group is offered to define in the way интегрування expert evaluations taking into account individual level of competence of experts in a formula 1.9:

$$P_R^{ij} = \frac{\sum_{k=1}^{r}(p_{ijk} \times K_{ik})}{\sum_{k=1}^{r} K_{ik}}, \quad (1.9)$$

where

P_{ijk} − probability of implementation of *j* of risk of *i* of group on *k* assessment expert;

K_{ijk} − the individual level of competence of k of the expert it is relative estimates of hazard rates of *i* of group;

n − the current index and quantity groups of risks respectively;

ji - the current index and a total quantity the marked-out risks in *i* to group respectively.

The aggregated risk assessment *I* of group forms by addition the integrated expert evaluations of probabilities of separate operational risks with accounting of the price of risk on a formula 1.10:

$$AR_i = \frac{\sum_{j=1}^{mj}[(P_R^{ij} \times (a_1 \times NI_G^{ij} + a_2 \times W_G)]}{\sum_{j=1}^{m_i}(a_1 \times NI_G^{ij} + a_2 \times W_G^{ij})} \times 100\%, \quad (1.10)$$

Integral risk assessment of gas transmission company can be defined as follows:

$$IR = \frac{\sum_{i=1}^{n}(AR_i \times Z_i)}{\sum_{i=1}^{n} Z_i}, \quad (1.11)$$

where

Zi - mark expert evaluation of the weight (importance) *i* of group of risks.

For establishment of admissible risk level the concept of zones is used (Areas) of risk. Unlike traditional for industrial enterprises four areas of economic risk (normal, high, maximum and critical), in the thesis classification is offered with use of 7 gradation of risk depending on the level of their mark assessment and 5 areas of risk, table 1.1.

Table 1.1

Empirical scale of permissible level of enterprise risk

Probability of unwanted result (risk value)	Grading of risk
0.0-0.1	minimum
0.1-0.3	small
0.3-0.4	average
0.4-0.6	is high
0.6-0.8	maximum (critical)
0.8-1.0	disastrous

Source: [25; 77; 92; 159; 160]

Table. 1.1 shows an empirical risk scale that most authors have offer to apply to business entities for risk ranking by their size.

Characteristics of the main areas of business risks are filed in table 1.2.

In determining the area of risk, great importance is in degree awareness of the subject of management about the investigated situation. From this exist point of view it is possible to distinguish four situations characterized by different degrees of knowledge of the manager regarding the state of the environment: deterministic, moderately stochastic and stochastic [152, p. 128].

Table 1.2

Characteristics of the main occupational risk areas enterprises

Risk Area	Characteristic features
1	**2**
Risk free zone	No loss during activity.
Zone permissible risk	The amount of possible losses does not exceed the size expected profit. High incidence of the risk. High probability of occurrence of losses on this level. Losses are accurately calculated within one year. The occurrence of risky events does not necessitate change system goals.

Continuing of the table 3.1

1	**2**
Critical zone risk	The amount of possible losses exceeds the profit, but not higher than gross income. Average frequency of onset risk. The average probability of occurrence of this level of losses. The onset of risky events leads to change certain system goals.
Catastrophically zone risk	The size of possible losses exceeds gross income and can achieve a value of equalty to the value of the property enterprises exceptional risk cases. Very low likelihood of loss of this level. The onset of a risky event can lead to bankruptcy, collapse or liquidation of the enterprise.

Source: [77]

Deterministic information situation is characterized by presence enough information about the state of the environment of the organization (from 100 to 75% of the required amount of information). In this situation, the subject management has the ability to determine the trends with the highest accuracy development of the system, adequately and timely responding to them. A moderately determined situation occurs in the presence of uncertain tangible elements in the structure of information provision enterprises. In this case, company's management provided with making managerial decisions when information only 50-75%.

Moderately stochastic situation is a situation in which the control apparatus the organization has only a small (less than 50%) share necessary information about the state of the environment.A stochastic informational situation occurs when the subject management has virtually no information about the current state

of the environment and the prospects for its development. Fraction the information support of the head is from 0 to 25% of the required volume [152, p. 129].

The risk zone and the information situation in which it is carried out the adoption of a management decision, determine the set of used risk management methods.

Carrying out an economic risk assessment according to this method implies the need to construct a risk curve − the distribution curve the probability of a certain level of profit loss.

The process of constructing a risk curve includes the following steps [31, p.65]: 1 step − establishment of risk areas within losses which not exceed a certain level; 2 step − determination of dependence of losses probability on their level; 3 step − construction of a typical probability curve for obtaining a certain profits level; 4 step − construction of the risk curve based on the probability curve getting a certain level of profit and risk areas.

The risk curve makes it possible to determine the dependence of the likelihood of losses from them equal; to substantiate expediency or inexpediency of carrying out risky ones transactions, determine the loss probability of funds within certain intervals. Trace note that the frequency of occurrence of certain losses, intensity, shape of the curve the risk on the chart will be different for different types of risk.

The adoption of high-risk management decisions depends on predisposition of the subject to risk. However, the adoption of high-risk solutions is possible only if it is within the acceptable level and, for according to preliminary estimates, will not lead to bankruptcy of the enterprise [31, p.68].

The likelihood of loss is an important indicator that allows assess the expected risk and its appropriateness. If loss probability is catastrophic it's expressed as an indicator of tangible threat of loss of all property, then the cautious subject of management consciously will refuse such activity and do not dare to take this risk.

Knowledge of the limit values of the permissible occurrence probability *(P)*, the critical (Rcr) and the catastrophic level of losses (Rcat) are allows formulating the most common conditions for acceptability of the risk level in examined species activities [120, p.246]:

1. The rate of permissible risk should not exceed the limit meaning, that is, *Pmax <P*;

2. The critical risk indicator must be lower than the limit value, that is, *Pmax <Pcr;*

3. The indicator of a catastrophic risk should not be higher than the marginal level, that is, *Pmax <Rcat*.

The adoption of a final decision in a risk situation requires identification limit values of risk levels (maximum values of risk indicators, excess of which can cause excessive loss, lead to abrupt deterioration of the financial condition of the enterprise). According to D. Shtefanich, it is necessary to focus on such values of indicators as *PN = 0,1; Pcr = 0,01* and *Rcat = 0,001* respectively for permissible, critical and catastrophic risks [154, p.126]. However, in our opinion, these values can not be universal and essentially dependent on the characteristics of the economic activity of a particular subject.

According to types of methodological approaches, which we consider in previous item, we can see, that each method is not without flaws, therefore in practice it is necessary to use combinations of different methods.

Also, a variety of formal risk assessment methods are not in each case can give unambiguous recommendations, therefore, in the process of developing solutions.

It is desirable to combine formal-economic and expert procedures.

In general, the main criteria of the traditional quantitative assessment of the risk degree is: likelihood of loss; volume of losses (the size of possible damage) [38, p. 58].

The amount of possible losses or potential gain (income) is called “The price of risk”, which is determined by the formula 1.12 [144, p. 92]:

Conclusion to the part 1

The carried-out review of domestic and foreign scientific sources demonstrates absence today, uniform conventional universal terminology of a risk as sciences. In the published scientific works the illegibility in differentiation is observed, and also full is frequent identification of risk with danger, threat, uncertainty, uncertainty, probability, losses and so forth. At the same time effective organization of process managements of risk it is impossible without accurate awareness of his essence and contents.

It is offered author's interpretations of economic risk as expected characteristic of any purposeful of activity of the subject of managing caused by need adoptions of administrative decisions in favor of election of alternatives probabilistic character, capable to generate chances despite existence of dangers and threats, reflects a possibility of a negative deviation from the established purposes. This definition is based on understanding that the risk is inherent in any purposeful activities (inaction) the enterprises, has future focus, is considered in context of achievement of a specific goal and always is in dualistic unity with chance.

It is proved that despite rather close interrelation, the concept "risk", "danger" and "threat", have different semantic value.It is defined that threats arise at a stage of transition of dangers from passive forms in active, when potential opportunities of negative impact are transformed to concrete intentions of the accurate address direction.

According to danger and threat it is necessary to consider as risk factors and in which case not to identify with him.As a result of the analysis and systematization of the existing approaches to classifications of risks of activity of the enterprise, it is improved approach to classifications of risks of gas transmission companies by their sources emergence which main feature is allocation of group corporate risks, intermediate between internal risks, which we

we correlate to JSC “UKRTRANSGAZ” as the direct subject managing, and traditional external risks.It is carried out the comparative characteristic of methods of quantitative risk estimates, are analysed advantages and shortcomings and is reasonable expediency their combination depending on the available information and taking into account desirable end result.

PART 2

RESEARCH OF RISKS IN INTERNATIONAL COMMERCIAL ACTIVITY OF JSC "UKRTRANSGAS"

2.1 Analysis of Financial and Economic Activity in JSC "UKRTRANSGAS"

Joint Stock Company(JSC) "UKRTRANSGAS" is a state-owned enterprise for the supply, transportation and storage of natural gas.

"UKRTRANSGAS" was established on the basis of gas transport enterprises and structural subdivisions of the joint stock company "UKRGAZPROM" in accordance with the decree of the Cabinet of Ministers of Ukraine dated July 24, 1998 "On the delimitation of functions for the extraction, transportation, storage and sale of natural gas".

Due to the high technical and production potential, high qualification of employees, and also modern production facilities, the company takes the leading position in providing customers of Ukraine and other countries with gas raw materials.

"UKRTRANSGAS" annually delivers to consumers in Ukraine about 50−60 billion cubic meters of natural gas and transports it to 20 European countries in the amount of up to 120 billion cubic meters. Technical capabilities of the company allow transporting to Europe of 140 billion cubic meters of gas.

At present JSC "UKRTRANSGAS" consists of 13 structural subdivisions in the rights of affiliates whose production facilities are located in all regions of Ukraine, including [65]:

1. Six departments of the main gas pipelines: "KYIVTRANSGAZ", "KHARKIVTRANSGAZ", "LVIVTRANSGAZ", "PRIKARPATRANSGAZ", "DONBASSTRAGASGAS", "CHERKASYTRANSGAS", which carry out gas

transportation. All gas transportation departments, except UMG "CHERKASYTRANSGAS", have underground gas storage (UGS).

2. Construction and assembly firm (CAF) "UKRGAZPROMSTROY" − carries out construction and repair of main gas pipelines, construction and arrangement of gas fields and wells, housing construction.

3. Industrial repair and technical enterprise (IRTE) "UKRGAZENERGOSERVIS" − performs comprehensive service of gas pumping, power and other equipment, instruments and systems of compressor stations (CS).

4. The management of "UKRGAZTEHSVYAZ" − provides technological communication services.

5. The Joint Dispatcher Office (JDO) ensures uninterrupted gas supply to n consumers by gas and the implementation of transit export supplies of Russian gas in accordance with the contracts.

6. Normative-analytical center (NAC) − develops regulatory and analytical materials and documentation and provides them with divisions of the State Enterprise "UKRTRANSGAS", offers and recommendations on the organization of work, its payment and use of labor resources.

7. Scientific and Production Center for Technical Diagnostics "TEDIAGAZ" performs diagnostics and certification of the main and auxiliary equipment.

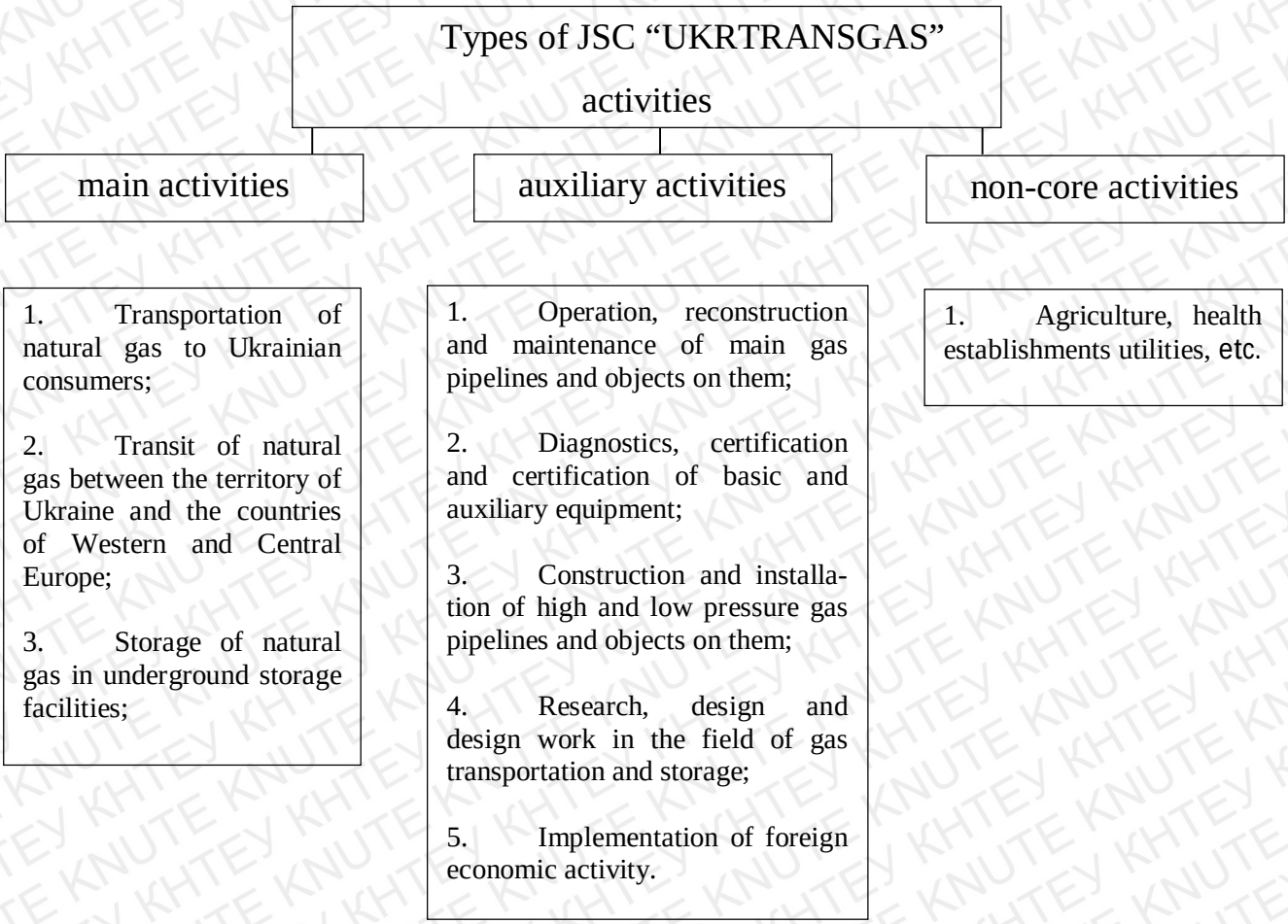
8. The department of servicing and repair of imported automotive special vehicles (SIAT) - carries out maintenance and repair of imported road construction machinery and special equipment.

9. The Directorate for the construction and operation of the Dzhankoy − Feodosia − Kerch pipeline − carried out the construction and operation of gas transportation system facilities in the Autonomous Republic of Crimea until the Crimea was annexed to the Russian Federation.

10. Research and design institute of gas transport − carries out research and design and survey works for scientific and technical support of transportation, storage and delivery of natural gas.

11. The branch of “AGROGAS” − the main activities of the branch are the cultivation, processing and marketing of agricultural products.

All structural units have wide technological capabilities and provide enterprise activity in the some different areas of work (Picture 2.1).



Picture 2.1. Types of JSC “UKRTRANSGAS” Activities

In order to get better and more clear picture of JSC “UKRTRANSGAS” activities, we will carry out an in-depth economic analysis, for which it is necessary to compare the data presented in the balance sheets for different years, in our case, from 2013 to 2017. For this we use an information base, which includes the following documents[81]:

1. Form № 1 “Balance of Enterprise”;
2. Form № 2 “Statement of financial results”;
3. Form № 5 “Notes to the Financial Statements”;

4. Form №5-FER “Report on export (import) of goods not undergoing customs declaration”;

5. Form № 9-FER “Report on Export (Import) of Services”;

6. Primary documents (contracts for the supply of products, trade agreements).

First of all, in order to get a general impression about the economic characteristics of JSC “UKRTRANSGAS” consider the main production and financial results of the company. We have calculated that Value added tax are following: 0,73 for year 2013; 0,01 for 2014; -072 for 2015; 1,75 for 2016 and 1,74 for 2017. So due to these indicators we can calculate index which are presented in the table below.

Results of calculations of general indexes presented in table 2.1.

Table 2.1

Analysis of the Main Financial Performance of JSC “UKRTRANSGAS” for 2013 - 2017 years, mln.UAH

Indexes	Years								
	2013	2014	AD for 2014 from 2013	2015	AD for 2015 from 2014	2016	AD for 2016 from 2015	2017	AD for 2017 from 2016
Revenue	15,69	14,26	-1,43	25,19	10,92	38,38	13,19	51,18	12,79
Net sales	14,96	14,26	-0,69	23,43	9,16	37,19	13,75	50,84	`13,65
Cost of sold product	14,98	10,96	-4,02	26,47	15,51	37,04	10,57	65,63	28,58
Gross profit	0,70	3,30	2,59	-1,28	-4,58	1,37	2,66	-14,4	-15,82
Net profit	-1,25	-0,77	0,47	-3,29	-2,51	-6,13	-9,42	-24,83	-18,69

*(AD) absolute deviation

Source: built by the author according to the company’s data

Gross profit of the enterprise, which is defined as the difference between net sales and production cost [36], in the 2017, compared with 2013, decreased in

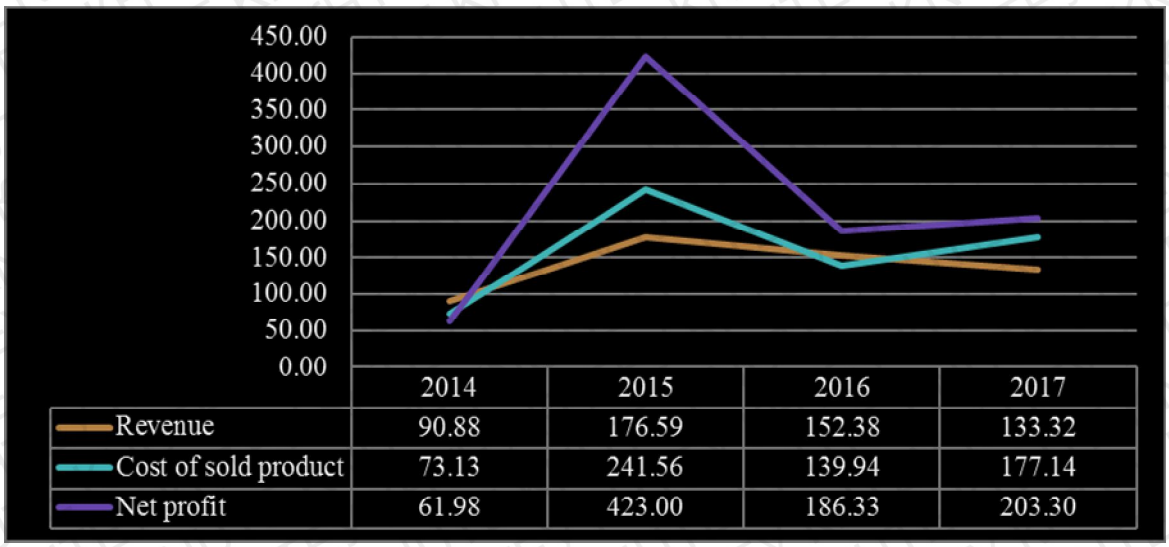
approxiemately 6 times and it was 70thsd UAH. In 2014 we can track the positive tendancy for gross profit, it increased to 3,3mln UAH.

The company tried to maintain this indicator positive and created a tension, but in 2017 it decreased again. It shows that the company was incapable of covering production costs at the expense of sales proceeds.

Analyzing the indicators of financial and economic activity of JSC "UKRTRANSGAS", we can conclude that the company was profitable only in 2013, 2014 and 2016 years. Indicators of effectiveness was growing, but we can see the opposite for 2015 and 2017, because the company couldn't generate not only profits but also to cover the cost of production by amount of revenue.

The enterprise received the largest revenues in 2017 year, it amounted to 51,181 million UAH, which is explained by the following circumstances: expansion of sales markets and attracting new partners. We can see that during hole period from 2013 to 2017 net profit of the company was negative and this tendency worsened to 2017, where net income dropped to -24,83 million UAH at all.

To see the tendancy we will conduct a comparative description of the growth rate for revenue, cost of sold product and net profit of JSC "UKRTRANSGAS", which is presented in Picture 2.2.



	2014	2015	2016	2017
Revenue	90.88	176.59	152.38	133.32
Cost of sold product	73.13	241.56	139.94	177.14
Net profit	61.98	423.00	186.33	203.30

Source: built by the author according to the company's data

Picture 2.2 Comparative Characteristics of the Growth Rate for Revenue, Cost of Sold Product and Net Profit of JSC “UKRTRANSGAS” in 2013-2017 Years,%

Based on Table 2.2, we can conclude that of JSC “UKRTRANSGAS” hadn’t got a profit, so losses indicator similarly in 2014, compared to 2013, decreased by 1,2 mln UAH, and amounted to 0.7 mln UAH, but this indicator was still negative. Since the year of 2015, loses increased significantly. In 2016, they grew 2 times, and already in 2017 it was 24,8 mln UAH.

This trend is actually negative. Indicators for five years remain volatile and low. This is a problem for the company and for the economy of the country as a whole. Therefore, the company has to change its approach and maybe add new business development strategies to bring it out of such a disadvantage.

The company does not rank first in the world market, which is related to the strategy and orientation on the domestic market of the enterprise. But despite this, the company maintains close links with existing partners in the relevant regions, including Slovakia, Poland and Hungary. An enterprise needs to improve its performance and become more effective in order to reach a decent level in the country, maintain partnerships with other countries and take a favorable position on the world market.

To make a comprehensive feature that reflects the efforts of enterprises, aimed at ensuring the dynamism of development and achievement of goals in different areas of activity, we will consider the business activity of the enterprise which shows reflects the level of efficiency of the using material and other resources, but at the same time characterizes the quality of management.

For efficiency evaluation of business activities of a tma also used profitability indicators.

Indicators of profitability are relative indicators of a financial performance of activity of the enterprise. for their determination we at first counted Annual average of fixed assets and stocks: 22,19 mln UAH for 2013; 20,99 mln UAH for

2014; 31,49 mln UAH for 2015; 46,74 mln UAH for 2016 and 46,68 mln UAH for 2017 year.

Indicators of profitability are important characteristics of factor forming of the environment of profit (income) of the enterprise. For this reason they are important obligatory elements of comparative analysis and assessment of a financial condition of the enterprise. So calculations of these indicators we presented in the table 2.2.

Table 2.2

Research of Indicators of Profitability of Using Enterprise Resources on JSC "UKRTRANSGAS" for 2013-2017 years, %

Indicator	Years								
	2013	2014	AD for 2014 from 2013	2015	AD for 2015 from 2014	2016	AD for 2016 from 2015	2017	AD for 2017 from 2016
Return production assets	-5,65	-3,70	1,95	-5,23	-1,53	-13,13	-7,90	-53,19	-40,06
Cost efficiency	0,89	1,26	0,37	1,82	0,56	0,89	-0,93	2,28	1,39
Return on equity	-0,08	-0,05	0,03	0,04	0	-0,01	-0,05	-0,01	0
Profitability of debt capital	-0,96	-0,46	0,5	-0,68	-0,32	-1,00	-0,32	-0,87	0,13

* (AD)Absolute deviation

Source: built by the author according to the company's data

Proceeding from data of the table we can tell, it is obvious that the company will be interested in higher values of this coefficient, it will indicate effective use of the assets which are taking part in income formation process. This value should be compared to value of competitors. However, for these 5 years the profit ratio was negative due to unprofitability of the enterprise all the time and though in 2014 it improved for 2,65 percent, however, already in the following, 2015, it decreased to-5,23% again and still remained low. Low value the coefficient of a rentebelnost of business assets purchased in 2017 and made -53%.

From indicators of profitability of operating expenses we can see that from 0,89 to 2,28 UAH are the share of the profit amount from 1 UAH of the incurred operating expenses. The value the indicator of profitability of operating expenses purchased the greatest in 2017 and camps of 2,28 UAH on 1 UAH of expenses, and the lowest was in 2013 and 2016, and during the entire period was unstable.

Calculation of coefficient for the different periods helps to understand changes in profitability. It is obvious that higher coefficients it is better because they show relative increase in the net profit generated on the same capital sum. However, we observe a tendency of stable decrease in profit ratio of an equity that means decline in the ability of the company to generate profit to owners. Increase in profit ratio of an equity which we trace the first 4 years is result of high of level of debt, it means that the company uses the credit capital instead of own as a financing source.

We calculated an indicator of a payback period of an equity and found out that during the entire period though it also fluctuated, but constantly it was negative. Of course, the negative measure value is unacceptable and speaks about decrease in welfare of owners.The indicator of profitability of the loan capital shows how many profits we can get per unit of the attracted capital. As during the entire period the enterprise had negative this indicator, it says that the enterprise had no profit on the capital attracted from the outside. Low this indicator was in 2017 and made -2,8 UAH.

At production analysis indicators of profitability are used as the tool of investment policy and pricing. Therefore below, in the table 2.3, we gave calculations of these indicators.

Table 2.3

Analysis of Profitability Indicators in Business Activity of JSC "UKRTRANSGAS" for 2013-2017 years, %

Indicators	Year								
	2013	2014	AD for 2014 from	2015	AD for 2015 from	2016	AD for 2016 from	2017	AD for 2017 from

			2013		2014		2017		2016
Profitability of products	-5,75	-31,14	-25,39	5,75	36,90	-5,67	-11,42	22,65	28,32
Net profit margin	-8,25	-5,44	2,81	-14,05	-8,61	-16,49	-2,44	-48,83	-32,34

* (AD)Absolute deviation

Source: built by the author according to the company's data

Profitability of products on a gross profit shows how many to profit it is the share of 1 UAH of cost of sales. So, we see that profit we only in 2015 and 17 years which respectively makes 5 and 22 UAH on 1 UAH of cost value. In other years this indicator has only damage therefore indicators negative. Characterizes profitability of production, performance of works, rendering services or sales of goods.

Profitability of a goods sold during the entire period is unfavourable that reaches a negative point. The value indicates a share of revenue of the company which remains after a deduction of all expenses for a current period. As there is no such normative measure value. As well as many other indicators, it is necessary to compare values to the competitors working in the same segment. However, to normative values consider 1. The enterprise which we considered is not enough indicators from -5,4 to -48,8 UAH. In 2013 this value increased by 3 points, but then, in the years ahead started over again falling promptly and reached the minimum value in 2017 and made -48,8 UAH. The negative value means degradation of the company.

For the analysis of business activities of the enterprise we made calculations in table 2.4.

Table 2.4

Dynamic of indicators in business activity of JSC "UKRTRANSGAS" for 2013-2017 years

Indicator	Year								
	2013	2014	AD 2013-2014	2015	AD 2014-2015	2016	AD 2015-2016	2017	AD 2016-2017
Asset turnover rate	0,26	1,14	0,88	0,04	-1,1	0,09	0,05	0,53	0,44

Turnover rate of working capital	-0,05	-0,25	-0,20	-0,08	0,17	-0,11	-0,03	-0,44	-0,33
Turnover rate of accounts receivable;	-0.10	-0,04	0,06	-0,12	-0,08	-0,17	-0,05	-0,75	-0,58
Turnover rate of accounts payable	-0,24	-0.02	0,20	-0,81	-0,79	-1,23	-0,52	-3,11	-1,88

* (AD)Absolute deviation

Source: built by the author according to the company's data

Data of assets conversion cycle show that the efficiency of use of assets of the Ukrtransgaz enterprise increases. If to compare 2014 with 2013, then the measure value decreased twice. However, if to observe dynamics further, we will see what in 2015 for each ruble of the raised funds was provided services on the amount of 0,04 UAH, in 2017 − already 0,5 UAH. For further increase in an indicator it is possible to sell a part of idle assets.

The measure value of working capital turnover fluctuates, depending on a field of activity of the company because such normative value is absent, but decrease in an indicator during the period of a research is sign of inefficiency, testifies to gaps in a company performance on improvement of an inventory policy, accounts receivable, money and other current assets. Thus, we observe decrease by 11%.

Having calculated accounts receivable turnover ratio, we see that the value of the enterprise is negative and traces a downward tendency. Thus, within 5 years the indicator decreased by 14% and the minimum value purchased in 2017 with a mark of-0,7 turnovers.

The same situation is observed also with turnover accounts payable. The decrease percent during the period reaches 7,7%.

In order to maintain a high level of business activity of the enterprise, it must be remembered that the basis for profit is compliance, so that the cost of the resources used is less than the value of the goods sold, that is, an enterprise can generate profit when it adds value to the resources used.

In addition, as is known, capital is in constant motion, moving from one stage to another. The faster funds of the enterprise will make a turn, more products will receive and sell the enterprise with a same amount of capital. A delay in the movement of funds at any stage leads to slowing down of a turnover of capital, requires additional investment and may cause a deterioration in the financial condition of the enterprise.

Thus, in carrying out economic activity, an enterprise should try not only to accelerate the movement of capital, but to obtain its maximum return [6].

An enterprise is considered to be liquid if its current assets exceed short-term liabilities. So, we will check the liquidity of the enterprise in 2017year by comparing using coefficients below.

Absolute liquidity ratio determined by the ratio of most liquid assets to current liabilities of the enterprise;

The coefficient of rapid (intermediate, severe) liquidity, or the coefficient of acid test. Calculated by the ratio of cash, short-term financial investments and receivables to current liabilities;

The generalized indicator of liquidity is the ratio of current liquidity (coefficient of general liquidity, coverage ratio, coefficient of general solvency). It is calculated by the ratio of current assets to current liabilities.

The results of coefficients we can see in table 2.5.

Table 2.5

Comperative Characteristic of Liquidity Ratios at JSC "UKRTRANSGAS" Activity for 2013-2017 years

Indexes	Years								
	31.12. 2013	31.12. 2014	AD for 2014 from 2013	31.12. 2015	AD for 2014 from 2013	31.12. 2016	AD for 2014 from 2013	31.12. 2017	AD for 2014 from 2013
Current ratio	0,94	0,74	-0,20	1,57	0,83	1,91	0,34	2,39	0,48
Quick ratio	0,49	0,67	0,18	1,03	0,36	1,13	0,1	0,99	-0,14
Absolute liquidity ratio	0,01	0,002	-0,008	0,02	0,02	0,01	-0,006	0,38	0,36

* (AD)Absolute deviation

Source: built by the author according to the company's data

In the perfect way, these indicators should be: total liquidity ratio (current liquidity) ≥1.5; quick liquidity ratio (intermediate, strict, refined, critical liquidity, acid test) ≥ 0.7; absolute liquidity ratio (immediate liquidity) ≥ 0.2;. And only if, for three consecutive years, the figures are lower than the allowable parameters, we can testify to the liquidity crisis. However, by analyzing the data in the table, we understand that indicators in the norm, they held indicators below the standard no more than 2 years then began to grow.

Thus, as of 2017, the ratio of absolute liquidity (immediate liquidity) – 0,38; fast liquidity ratio (intermediate, strict, refined, critical liquidity, acid test) – 0,99; total liquidity ratio (current liquidity) – 2,39.

Group of indicators which indicate the level of financial risks for the enterprises and the level of their dependence on the loan capital are indicators of financial stability. therefore, we give calculations in table 2.6.

Table 2.6

Analysis for Dynamic of Financial Stability Indicators in Business Activity of JSC "UKRTRANSGAS" for 2013-2017 years

Indexes	Year								
	31.12. 2013	31.12. 2014	AD 2014-2014	31.12.2015	AD 2014-2015	31.12.2016	AD 2015-2016	31.12. 2017	AD 2016-2017
Coefficient of financial autonomy	0,49	0,44	-0,05	0,87	0,43	0,79	-0,08	0,80	0,01
Coefficient of maneuverability	0,84	1,22	0,48	0,07	-0,15	0,09	0,02	0,09	0
Ratio of financial resources' utilization	0,41	0,54	0,14	0,06	0,48	0,06	0	0,07	0,01
Debt to equity ratio	0,82	0,78	(0,04)	0,08	(0,07)	0,12	0,04	0,19	0,07

* (AD)Absolute deviation

Source: built by the author according to the company's data

The coefficient of financial autonomy shows what part of assets the enterprise is capable to finance at the expense of an equity. A normative measure value is 0,4 - 0,6. Above the value can mean not complete use of potential by the

enterprise. We can observe it for 2015 - 2017 where the indicator fluctuates from 0,79 to 0,89. But within the first two years (2013 and 2014) the measure value was within basic level.

The equity mobility ratio allows to define an equity share, directed to financing of current assets. The positive value demonstrates sufficiency of own financial resources for financing of non-current assets and a part of turnover. Positive dynamics is increase in an indicator, is traced also 2014, in comparison with 2013, and normative value - 0,1 and above. However, it at the enterprise is not traced, value began to decrease March, 2015, and reached the lowest value in 0,07, but in 2016 it started over again growing (on 0,02 marks). The amount of own current assets − it indicates an indicator that part of current assets of the enterprise that it can finance by the financial resources. Dynamics of increase in volume of an indicator of also positive. The degree of financial independence of the enterprise in terms of ownership of its property and its use is characterized by a measure of financial sustainability.

This degree of independence can be evaluated according to different criteria: level of coverage of material working capital (stocks) with stable sources of financing; potential ability of an enterprise to cover urgent liabilities with mobile assets); the share of own or stable sources in the total funding sources.

The given criteria correspond to the coefficients presented in the previous subdivision – the coefficient of financial stability (stability), the coefficient of financial independence (autonomy), the coefficient of financial dependence, the coefficient of financial risk.

They can be added: the coefficient of maneuverability of working capital – the ratio of the value of working capital (own working capital) to the amount of sources of own funds. It characterizes the degree of mobility of the use of own funds by the enterprise (recommended value>0,5); coefficient of ratio of attracted and equity capital (financing coefficient) ratio of the total amount of borrowed funds and the amount of own funds (the recommended value depends on the nature of foreign economic activity).

To understand different calculations in financial analysis, special attention should be paid to the concept of own working capital. In domestic practice, these are the current assets that are purchased on their own, and not on borrowed money.

We calculate equity and net working capital in the table 2.7.

Table 2.7

Characteristic of Net Working Capital and Equity Dynamic at JSC "UKRTRANSGAS" activity for 2013-2017 years, mln UAH

Indexes	Years								
	31.12.2013	31.12.2014	AD for 2014 from 2013	31.12.2015	AD for 2015 from 2014	31.12.2016	AD for 2016 from 2015	31.12.2017	AD for 2017 rom 2016
Net working capital	-3,02	-3,21	-0,19	-53,77	-50,56	-61,52	-7,75	-43,59	17,93
Equity	52,38	-0,09	-52,47	7,47	7,56	11,81	4,34	11,69	-0,12

* (AD)Absolute deviation

Source: built by the author according to the company's data

Within 5 years equity turnover decreased that specifies on not effective policy of the enterprise in use of money resources.

According to statistics and researches we can make a conclusion. For the enterprise of foreign economic activity his solvency (liquidity) is of particular importance. It is related with need of obtaining a certain image in international market, establishment of the relations with foreign partners.

The solvency of the enterprise demonstrates availability of money throughout a sufficient time frame for timely accomplishment of financial liabilities. It is a possibility of the enterprise cash money resources timely to repay the urgent obligations. At a research of the current solvency the amounts of means of payment of the enterprise for urgent obligations are compared. Such indicator at JSC "UKRTRANSGAS" during 2013-2017 years was not stable, but in the frame of standart. They held indicators below the standard no more than 2 years then started to grow. That mean the enterprise hasn't a liquidity crisis and during five years had a tandency to increase liquidity ratios.

If to talk about financial autonomy of the enterprise, such indicator of autonomy was not stable and changed. We can observe for 2015 - 2017 where the indicator fluctuates from 0,79 to 0,89. But within the first two years (2013 and 2014) the measure value was within admissible level [65].

The equity mobility ratio allows to define an equity share, directed to financing of current assets. The positive value demonstrates sufficiency of own financial resources for financing of non-current assets and a part of turnover. Positive dynamics is increase in an indicator, is traced also 2014, in comparison with 2013, and normative value - 0,1 and above. However, it at the enterprise is not traced, value began to decrease March, 2015, and reached the lowest value in 0,07, but in 2016 it started over again growing (on 0,02 marks). So, we can make a conclusion that JSC "UKRTRANSGAS" has a financial autonomy and not depend on investors at all. The enterprise has positive availability at of the own current assets amount at admissible level. Dynamics of increase in volume of the indicator also positive.

The degree of financial independence of the enterprise in terms of ownership of its property and its use is characterized by a measure of financial sustainability.

The level of JSC "UKRTRANSGAS" independence is high. So, the eneterprise try to use it own capacity and can exchange at any time the current and non-current assets for money, and thus the majority of assets can be liquidated quickly if there are problems, regardless that it leads to big loses and the enterprise is not profitable now. Ananalysis of external and internal factors can show us what influences on such situation at the enterprise.

2.2 Research of International Markets in Commercial Activity of JSC "UKRTRANSGAS"

Foreign economic activity should be understood as the activities of economic entities of Ukraine and foreign business entities, built on the relations between them, which takes place both in Ukraine and abroad.

Modern economy in Ukraine is determined by a rather high level of the economy, where the effective foreign economic activity is extremely important, as due to the exit of enterprises into foreign markets, our economy adapts to international relations and the formation of an open-economy takes place.

Also, foreign economic activity acts as a factor of economic prosperity of the country. First of all, it affects the enterprises of national machine-building, because we believe that it is their effective functioning that can play a very important role in the process of creating a strong, stable economy.

This sphere of industry has a significant impact on ways of scientific technological progress in various areas of internal management. In the modern world of globalization, enterprises in this industry are trying to enter new markets, establish relationships with international partners, unfortunately, most of them are not sufficiently competitive compared with foreign entities, especially this situation is observed in the western markets.

All this provides the basis for reforms and certain legislative changes in the field of foreign economic activity, which would simplify and help the process of development and strengthening of key enterprises.

JSC “UKRTRANSGAS” has rather wide range of activity. The main objectives are: transportation of natural gas to consumers of Ukraine; transit of natural gas through the territory of Ukraine to the countries of Western and Central Europe; natural gas storages in underground storage warehouses[65];

Among auxiliary it should be noted: operation, reconstruction and field service of main gas pipelines and objects on them; diagnosings, certification of the capital and service equipment; construction and installation of gas pipelines of high and low pressure and objects on them and research, design and project works in the field of transportation and gas storage.

To analyse the activity of the enterprise we devided it into two parts: domestic market and foreign economic activity. Information is introduced in the table 2.9 below.

Table 2.9

Analyse of JSC "UKRTRANSGAS" income from domestic and foreign markets for 2013-2017 years, mln UAH

Income from activity on markets:	Year								
	2013	2014	AD for 2014 from 2013	2015	AD for 2015 from 2014	2016	AD for 2016 from 2015	2017	AD for 2017 from 2016
Domestic	12,12	11,16	-0,96	25,19	14,03	32,69	7,50	47,69	15,00
Foreign	3,56	3,10	-0,46	0	-3,10	5,69	5,69	3,49	-2,20
Total	15,69	14,26	-1,43	25,19	10,93	38,38	13,19	51,18	12,8

* (AD)Absolute deviation

Source: built by the author according to the company's data

We can see from this table that enterprise was oriented on domestic market during most of time, but according to political situation in the country, which made impossible working with a main partner from Russia, JSC "UKRTRANSGAS" stoped all foreigh activity in 2015. It was a period when the enterprise changed the strategy and was looking for new partners in other countries.

That's why income from foreighn economic activity increase approximately twice to 5,6 mln UAH if to compare with previus years (in 2013 it was 3,1 mln UAH).

Over the past two years, the company has increased the number of sales, which in turn stimulated profit.

This was accomplished through the following steps:

1. Changes in the strategy of the enterprise;
2. Changes in purchasing activity (import);
3. Improvement of the work process;
4. Improvement of existing land and subsquent storage facilities;
5. Expansion of geography of markets.

Most of the company's shares are owned by the state. So, government also try to find ways to improve the company's performance, because we understand that this is the largest supplier not only in the country but also in Europe, which is one of the main sources of Ukraine's income. Therefore, the state supports all-round business.

As we see from the table 2.9, JSC "UKRTRANSGAS" started to orient more on foreign markets last two years. For active economic development of the enterprise availability of foreign trade is important. Export activity of the enterprise is an important source of currency and forming of income. Import is not less important source of income, is an indicator of his development. So we decided to make a research and compere import and export structure of the enterprise due to that market. Results are presented in the table 2.10.

Table 2.10

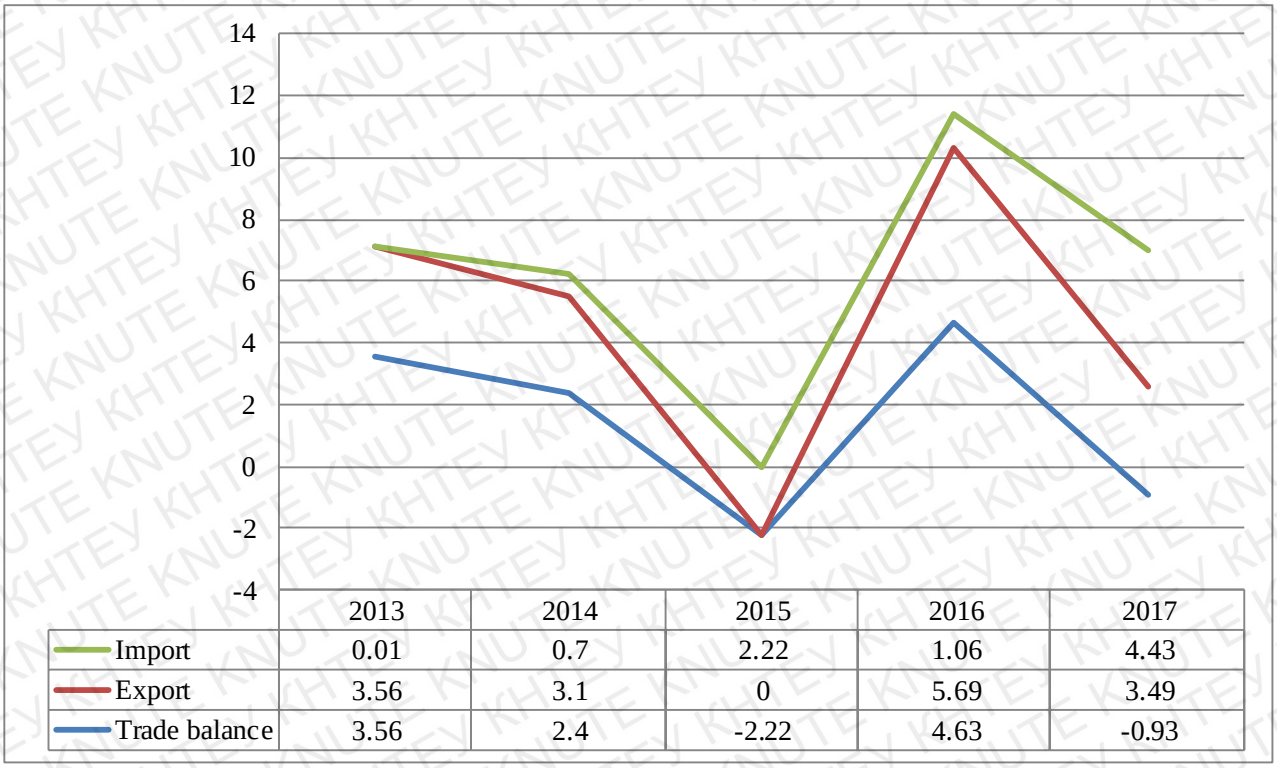
Analyse of The Foreign Economic Activity by JSC "UKRTRANSGAS" for 2013-2017 years, mln UAH

Type of the activity	Year								
	2013	2014	AD for 2014 from 2013	2015	AD for 2015 from 2014	2016	AD for 2016 from 2015	2017	AD for 2017 from 2016
Import	0,01	0,70	0,69	2,22	1,52	1,06	-1,16	4,43	3,37
Export	3,56	3,10	-0,46	0	-3,10	5,69	5,69	3,49	-2,20
Total	3,57	3,80	0,23	2,22	-1,42	6,75	4,53	7,92	1,17

* (AD)Absolute deviation

Source: built by the author according to the company's data

We can see that almost five years export was higher than import, what is good for the company. And we made a comparative characterstic of the trade balance of JSC "UKRTRANSGAS" in Picture 2.3. It shows us that trade balance is active and during 2013-2014 was approximately the same. In 2015 it was not active, course enterprise hadn't any export, but in 2016 this indicator increased again and was 4,6 mln UAH. Later in 2017 it got the highest result in 30 mln UAH.



	2013	2014	2015	2016	2017
Import	0.01	0.7	2.22	1.06	4.43
Export	3.56	3.1	0	5.69	3.49
Trade balance	3.56	2.4	-2.22	4.63	-0.93

Source: built by the author according to the company's data

Picture 2.3 Comperative Characteristic of the Trade Balance of JSC "UKRTRANSGAS" During 2013-2017 Years, mln UAH

This picture show us that difference between export and import were not stable, in 2015 import was higher than import, that talks about uneffective foreign activity of the company. In 2016 the indicator icresed to 4,63 mln UAH, but in 2017 decreased again and was -0,937 mln UAH.

Most of the time the enterprise did it main activity related with storaging, transit and transportation of gas, but at the time of changing the policy and strategy, when there was no a lot of partners and they lost link with main, the enterprise didn't intensive foreign activity. So, they stayed up only on their auxiliary brunch.

Table 2.11

Analyse of The Commodity Structure on JSC "UKRTRANSGAS" in Export Activity for 2013-2017 Years, mln UAH

Activity	Years								
	2013	2014	AD for 2014 from	2015	AD for 2015 from	2016	AD for 2016 from	2017	AD for 2017 from

			2013		2014		2015		2016
Gas transportation	1,05	3,07	2,02	0	-3,07	5,69	5,69	3,49	-2,20
Engineering services and commodity control	0	0,03	0,03	0	-0,03	0	0	0,02	0,02
Other non-core activity	2,51	0	-2,51	0	0	0	0	0	0
Total export	3,56	3,10	-0,46	0	-3,10	5,69	5,69	3,51	-2.18

* (AD)Absolute deviation

Source: built by the author according to the company's data

The quality control of natural gas (including determination of its component composition and heat of combustion), which is transferred to the gas distribution networks of the PJSC for gas supply, is carried out by 65 chemical analytical laboratories of JSC "UKRTRANSGAS". All of them are certified taking into account the requirements of the normative and technical documentation, orders and orders of the Ministry of Economic Development and Trade of Ukraine, Naftogaz of Ukraine, JSC "UKRTRANSGAS".

Hundreds of analyzes of physico-chemical indicators of gas are carried out daily on the system of main gas pipelines of JSC "UKRTRANSGAS". The reliability of all types of analyzes of physical and chemical indicators of gas is annually confirmed by the territorial bodies of the Department of Technical Regulation of the Ministry of Economic Development and Trade during verifications, scheduled and unscheduled inspections.

The auditors especially noted the high level of professional knowledge of Ukrtransgas personnel, awareness of the requirements of legislation and international standards, proper documentation of environment and safety of work.

Deloitte noted that JSC "UKRTRANSGAS" integrated management system meets the requirements of international standards in terms of quality management, environmental management, energy management and labor safety management.

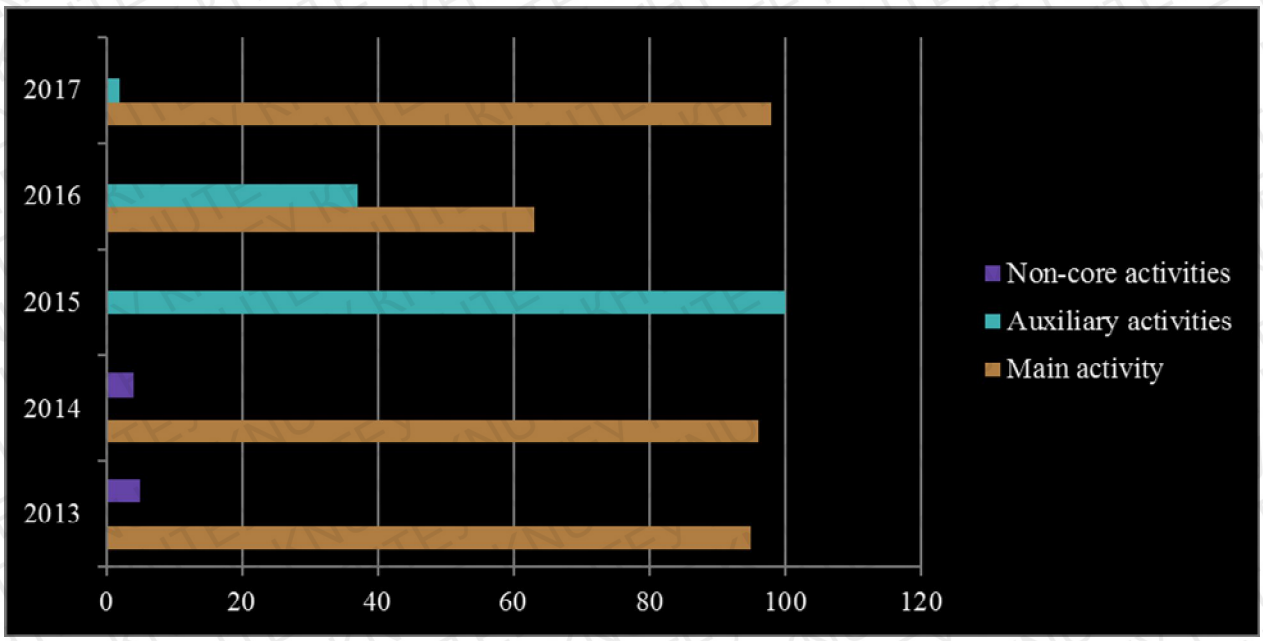
For the purpose of providing proper and safe natural gas of transportation to the Ukrainian and European consumers to the main directions of international cooperation of JSC "UKRTRANSGAS" is operator, dispatching and sci-tech cooperation with operators and the leading international energy companies.

The basis of such cooperation is traditionally made by cooperation with the companies: PGNiG (Poland), Gaz System (Poland), Eustream (Slovakia), FGSZ (Hungary), “Moldovagaz” (Moldova), SNTGN Transgaz S.A. Medias (Romania), “Gazprom” (Russian Federation), “Gazprom transgaz Belarus” (Belarus), E.ON (Germany), RWE (Germany), GDF SUEZ (France), Net4Gas (Czech Republic) Bulgargaz EAD (Bulgaria), DESFA (Greece), Botas (Turkey) and others[47, p.72].

For ensuring a variety of deliveries and creation of the uniform mechanism of cross-border natural gas of transportation from side of EU countries reconstruction of a number of objects for the purpose of providing is performed technical capability of acceptance of gas in a gas-transport system of Ukraine from side of Poland (“Germanovich”), Hungary (“Beregdarots”) and Slovakia (“Budingqie”).

Before 2014 Russian Federation and Belorussia were main partners and suppliers of raw materials and services. However, having undergone reorganization changes in the period 2015-2017, the company abandoned the raw material of the main supplier, which will come into force after the terms of the contract is broken up, and is developing new markets for the purchase and sale. Due to the political situation and Ukrainian legislation, the company changed its strategy and began to direct its activities to European countries. The enterprise quickly orientated and began to direct its efforts to support and develop the enterprise.

As we said before, the enterprise has some branches of activity, so we presented the export structure to compare tendency of different activities during five years in percentage in the picture 2.4.



Source: built by the author according to the company's data

Picture 2.4 Comparison of the Export Structure at JSC "UKRTRANSGAS" for 2013-2017 Years, %

We can see, that already in 2015, the company provided technical control and analysis services to United Arab Emirates, which was observed in the following year (2017). The company began to establish contacts with neighboring countries and seek partners who are interested in cooperation. Thus, JSC "UKRTRANSGAS" has started cooperation with Belgium, Hungary, Switzerland, the Czech Republic and the Netherlands for supply of the domestic gas, as the main products and support of the subsidiary activity of the enterprise. By thus closing the entire gas shortage at the moment.

In 2014, the cost of export services of Ukrainian pipeline transport decreased by 33.8% compared to 2013, which is due to the rapid decrease in the volumes of Ukrainian gas transportation from Russia to Europe. Subsequently, the cost of export services of Ukrainian pipelines increased by almost 20% in 2016. From 2016, there is a tendency to increase the share of revenues from new consumers. Already in 2017, revenues grew.

The reason for the increase in supplies to this country is the following factors:

1. Lack of own developed base of this sphere of production;
2. Lack of a certain kind of products;
3. The dominant supplier of other competitors products;
4. Relatively lower prices for similar products;

At present JSC “UKRTRANSGAS” exports its products to about 6 countries, but gradually expands its range of partners. Not touched by today’s number of foreign partners, at present, the company is establishing trade relations with representatives of Slovakia, Great Britain, Germany, Poland and Czech Republic.

Consider the geographical structure of JSC “UKRTRANSGAS”, which is presented as a percentage in table 2.12.

Table 2.12

Characteristic of the geographical structure in JSC “UKRTRANSGAS” export activity for 2013-2017 years, mln UAH

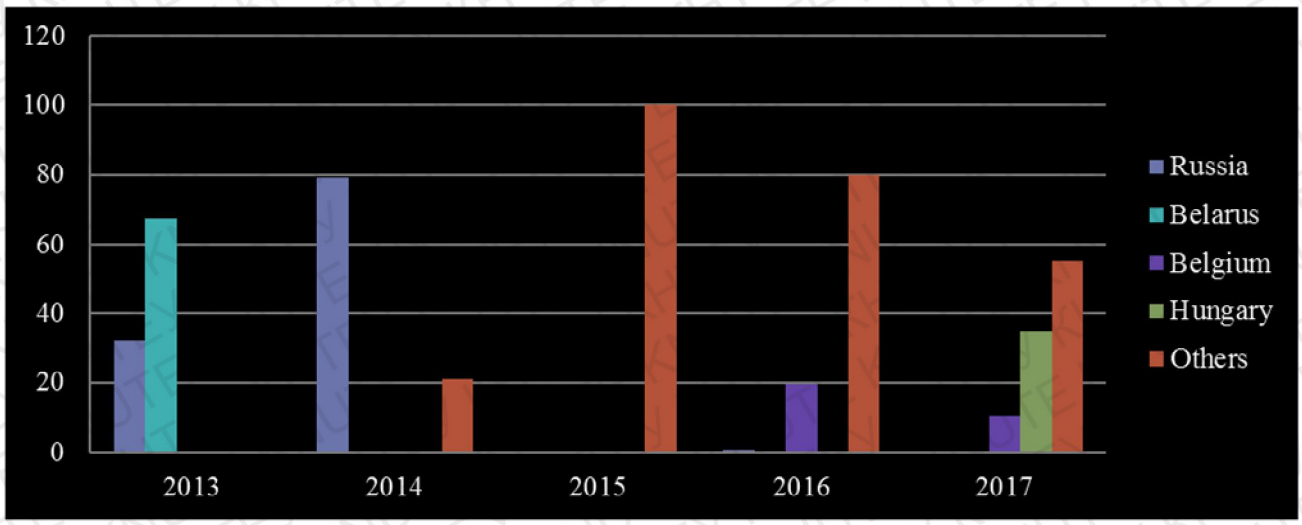
Country	Year								
	2013	2014	AD for 2014 from 2013	2015	AD for 2015 from 2014	2016	AD for 2016 from 2015	2017	AD for 2017 fromm 2016
Russia	1,54	3,09	1,55	0	-3,09	0	0	0	0
Belarus	2,52	0,01	2,516	0	-0,01	0	0	0	0
Belgium	0	0	0	0	0	1,30	1,30	0,39	-0,91
Czech Republic	0	0	0	0	0	0	0	0,04	0,04
Netherlands	0	0	0	0	0	0	0	0,03	0,03
Hungary	0	0	0	0	0	0	0	2,12	2,12
Others	0	0	0	0	0	4,39	4,39	0,90	-4,49
Total	3,56	3,10	-0,44	0	-3,10	5,69	5,69	3,49	-2,16

* (AD)Absolute deviation

Source: built by the author according to the company’s data

This analyse show us how company changed the strategy and partners in 2015. Earlier main parners were Russia and Belarus, but than the enterprise started to work with Europeen counties. Most of all with Hungary, Netherlands, Czech Republic, Switzerland, Belgium[39, p.41-44].

For visualization we created the schedule of a percentage ratio of JSC “UKRTRANSGAS” partnership with other countries to track a tendency.



Source: built by the author according to the company's data

Picture 2.4 Analyse of the Geographical Structure Trend in JSC "UKRTRANSGAS" Export Activity for 2013-2017 Years

Based on the data in the table, supply of basic products prevailed during the whole time, but in 2015, the period was quite a turning point for the Ukrainian company, JSC "UKRTRANSGAS" directed its efforts for supporting activities, since refused to work with the main partner – Russia and started to provide with neighbor European countries like Hungary, Slovakia, Belgium most of all and other countries.

To make clear ananlysis of trade balance, we compared export with import. So, statistics of main import activity non-core activity of the company during 2013-2017 years are presented below in table 2.13.

Table 2.13

Analyse of the Commodity Structure on JSC "UKRTRANSGAS" in Import Activity for 2013-2017 Years, mln UAH

Activity	Years								
	2013	2014	AD for 2014 from 2013	2015	AD for 2015 from 2014	2016	AD for 2016 from 2015	2017	AD for 2017 from 2016
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Engineering	0,01	0,60	0,59	2,22	1,62	0,58	-1,64	1,50	0,92

services and commodity control									

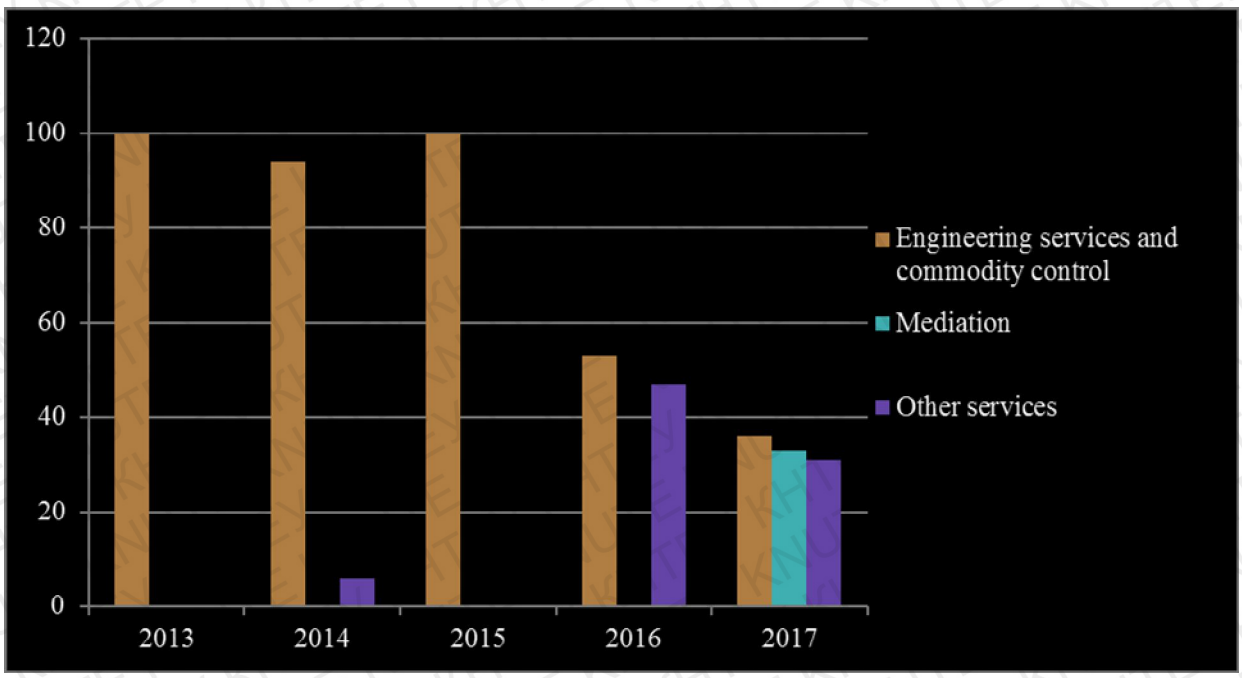
Countinuing to the table 2.13

1	2	3	4	5	6	7	8	9	10
Promotion service	0	0,01	0,01	0	-0,01	0	0	0	0
Mediation	0	0	0	0	0	0	0	1,59	1,59
Other services	0	0,09	0,10	0	-0,10	0,48	0,48	1,34	0,86
Total import	0,01	0,70	0.69	2,22	1,53	1,06	-1,84	4,43	3,37

Source: built by the author according to the company's data

We can see that in general JSC "UKRTRANSGAS" was focused on main services, using engineering services and commodity control. Such costs grown from 4000 UAH in 2013 to 5990 UAH in 2014, then increased more then in 3 times in 2015 to 2200UAH. But in 2016 it decreased again. At the same time the company started order non-core services for activity like financial and legal mediation, services for the lease of own property and other personal services, which cover two thirds of hole import.

The percentage tendancy of changing import activities during five years we can see in the picture 2.5.



Source: built by the author according to the company's data

Picture 2.5 Comparison of the Import Structure at JSC "UKRTRANSGAS" for 2013-2017 Years, %

JSC "UKRTRANSGAS" has very wide list of partners to make foreign economic activity, particulary in import. So, we made a more deep research to recognize the part of influence of each partner enterprise depends on. Geographical structure of import activity we present in the table 2.14.

Table 2.14

Characteristic of the Geographical Structure of JSC "UKRTRANSGAS" Import Activity for 2013-2017 Years, mln UAH

Country	Year								
	2013	2014	AD for 2014 from 2013	2015	AD for 2015 from 2014	2016	AD for 2016 from 2015	2017	AD for 2017 from 2016
Russia	0	0,01	0,01	0	-0,01	0,01	0,01	0	-0,01
Belarus	0,01	0	-0,01	0	0	0,01	0,01	0,02	0,01
Belgium	0	0,09	009	0	-0,09	0	0	0,43	0,43
Hungary	0	0	0	0	0	0,01	0,01	0,57	0,56
Others	0	0,60	0,60	2,22	1,61	1,06	-1,16	3,39	2,43
Total	0,01	0,70	0,69	2,22	1,53	1,06	-1,14	4,43	3,37

* (AD)Absolute deviation

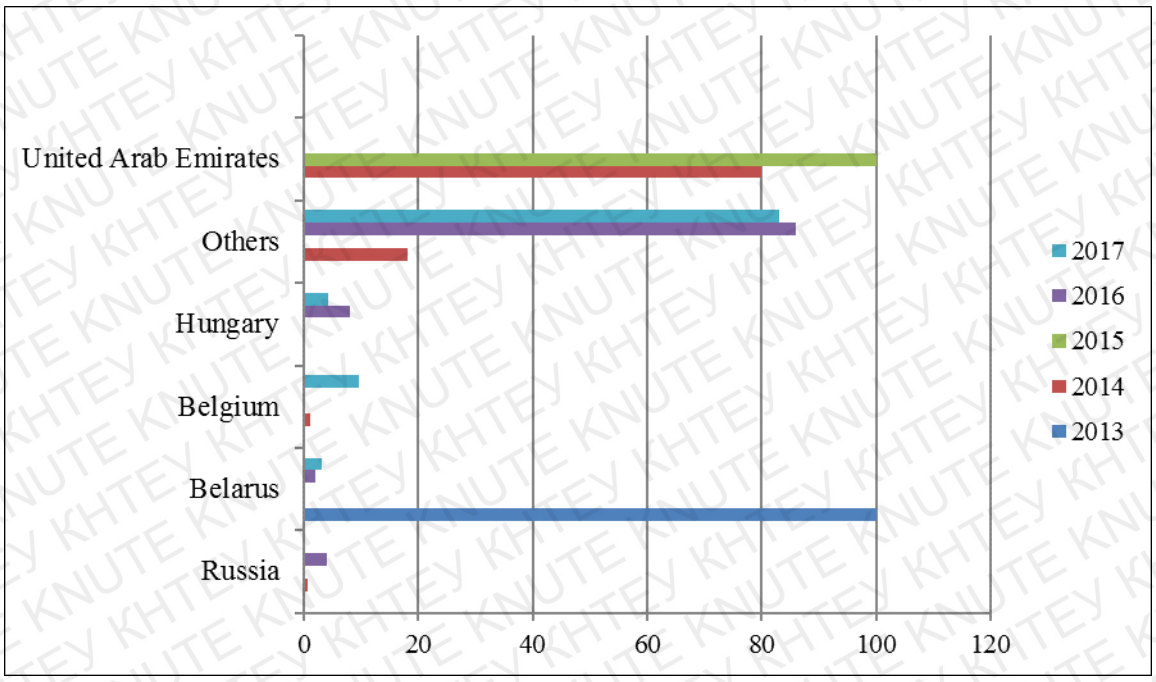
Source: built by the author according to the company's data

During five years, from 2013 to 2017 the enterprise changed countries-partners for work with. In the start the main was Russia and Belarus, wich were not very expensive in services, but then an enterprise started to work with a lot of other countries instead of previous. JSC "UKRTRANSGAS" started to orient on European countries, like Belgium, Czech Republic, Netherlands, Hungary, Italy, France, Slovakia. Services by such counties are more expensive, that's why costs for the enterprise increased in four times from 2013 with amount 0,01 mln UAH to 4,44 mln UAH in 2017 [62, p.18-19].

On the basis of the research conducted by analysts, E. Andrianov, A. Eremenko and L. Unigovsky point out that "it is too early to talk about the full integration of the Ukrainian gas transmission system into the European network.

If we really want to become an equal partner in the European natural gas market, we need to actively develop common infrastructure projects, ensuring the transportation of natural gas using the Ukrainian gas transmission system from North-West Europe to the countries of Central and Eastern Europe and further to the Balkans and in the reverse direction. It is also very important to get - through the European gas transmission network - access to LNG terminals." However, at the moment, the management of the company and the state are trying to actively resolve this issue. Let's analyze the main competitors of JSC "UKRTRANSGAS", which the company encounters in the process of foreign economic activity. Taking into account the fact that the gas transport company sells almost all of its products and products to export partners mainly to European countries. Therefore, the main competitor for the investigated subsidiaries enterprise of the Russian Federation, Germany, Poland and Netherlands.

Schematic analysis of geographical structure trend we present at the picture 2.6.



Source: built by the author according to the company's data

Picture 2.6 Analyse of the Geographical Structure Trend in JSC "UKRTRANSGAS" Import Activity for 2013-2017 Years

Notwithstanding the large number of similar companies engaged in storage and transportation of gas, JSC "UKRTRANSGAS", until recently, was the main consumer of the Russian Federation, but due to the military-political situation between the Russian Federation and our country, the volume of sales to this country has decreased.

In such cainas as: Slovakia, Poland, the company has a high percentage of market saturation with its products, the main competitors are domestic producers.

Also, JSC "UKRTRANSGAS" has a representative office in Slovakia, which is engaged in the search for new European consumers and partners, as well as Poland, which is building an interconnector gas pipeline (it is planned to finish the project and start the project in 2020). And, therefore, new opportunities are opening up to the Ukrainian enterprise. However, Gazprom's Russian Federation, fearing to lose its position on the market, intends to build two new gas pipelines that will pass through the Baltic Sea and the Black Sea, which is an obstacle to the activities of our company. After all, this increases the risk of consumer loss[25, p.32].

The external competitors of JSC "UKRTRANSGAS" also include companies from Italy and France, but their market share is insignificant, because of the very high prices for raw materials and geographic location[25, p.33].

So, JSC "UKRTRANSGAS" have all possibility to be competitive on the domestic and foreign market, but to be effective and profitable they should improve something in their policy.

2.3 Evaluation of Risks in International Commercial Activity of JSC "UKRTRANSGAS".

The current state of development of an entrepreneurship in Ukraine is characterized by high level of uncertainty, dependences on big sets of external and internal factors of activity of the enterprises, and also constantly growing risk level. In such conditions except typical risks there are risks caused various crisis phenomena, instability economic and political development, considerable inflation rates, lack of accurate legislation and frequent changes in her, use of outdated technology and worn-out equipment, low economic culture. Under such circumstances subjects of managing need to be able to estimate extent of possible influence of risks and to manage them with decrease purpose. Entrepreneurs need knowledge of the theory of risks and practical application of this knowledge, timely accounting of factors risk at acceptance of important management decisions, qualified the organization of process of assessment and decrease in risks directed on fast adaptation of activity of the enterprises in unstable and to quickly changing conditions of external and their internal environment functioning.

According to many researchers, commercial risks are the most unpredictable and dangerous, especially if it is about production of the innovation products [3, 13, 22, 35]. We can talk about difficult predictability of consumer demand for the made and sold products, his dependence on many factors which are very dynamic. At the same time the probability of commercial success of new goods is usually much lower, than probability of their technical success [15]. Need of forming of demand for new products demands considerable costs which not always manage to be compensated, and actual expenses on implementation of innovations usually considerably exceed planned level [5, 12]. Therefore, commercial feasibility of products (services) finally defines their competitiveness and influences risk level.

Work on research of information and identifications of risks gives the chance to identify the majority of dangers, but, as a rule, after a while there are new dangers that it is connected as with accumulation of experience and statistical data, and with implementation in production of new technologies.

Therefore an important component of the analysis is creation of the special program or methodology on control and identification of new risks and factors which cause.

One of the most authoritative techniques of carrying out to a risk-management and in particular risk analysis approach is, offered by the Pricewaterhouse Coopers company that in one of the researches on the International Federation of Accounts task allocated the three-level system of risks. We will take this approach fore basis [17].

According to this approach the system of risks has an appearance: internal and external organizational levels.

At the one level of the structure there are internal organizational risks − risks which the company has an opportunity to influence: risk factors direct activity of the enterprise.

Another one level – microenvironment, which creates conditions of the habitat of the enterprise and in most cases, does not carry specific character in relation to separately taken company. The enterprise cannot to control, but has an opportunity to influence a little them. These are risks, related with activity of partners, suppliers and competitors of the enterprise and also customs control, considering an opportunity export and commodity import. Macroeconomic and microeconomic risks in the set create the external environment of functioning of the enterprise. They belong to different components an environment in which it functions.

In 2017 survey, in connection with development of new methods and approaches in determination and creation of risk management system in branches of the enterprise, by Semenyutina Tatyana in what took partin the participation employees of the enterprise, scientists and specialists of this industry was conducted. Everyone gave the value judgment according with evaluation of risks of the enterprise at all levels. This assessment was used further in our calculations of risks assessment on internal and externally levels.

As a result of the conducted survey it was established expert estimates of probability of emergence of risk situations according to scheme 1.1 classifications, it is estimated the importance of separate types of risks, it is executed mark risks assessment of separate groups, dynamics of change of probability of emergence is defined risk situations.

Survey results of respondents showed also high level uniformity of answers concerning risks of activity.

The analysis of tendencies of development of internal risks is characterized rapid growth of size technical and technology, managerial, property and information risks. If in 2015 probability emergence of these risks was estimated by experts as average, beginning since 2017 − as high.

Not good signal is that other types of risks at the same time too grow, however not so intensively. The most dynamic growth is expected technical and technology and property risks that it is caused in the first case first of all need of updating, modernization and reconstruction GTS, in the second − the annual growth of number of thefts and damages property, it is considerably connected with difficult economic and political situation in the state.

Potential threats of deterioration in financial and economic activity today result from gas transmission companies and inefficiencies of management. It is also established that there is a high probability preserving of the specified negative tendencies during following to five years.

Calculations for groups corporate are carried similarly out, interstate and supranational risks, which results graphically it is reflected at tables 2.15 below.

Table 2.15

Calculations of Risk Level According with Results of Expert Evaluation of Financial Risks at Exogenous Level at JSC “UKRTRANSGAS” for 2013-2017 Years

Risk assessment criterion	Year					
	2013	2014	2015	2016	2017	AD for 2017 from 2013 year
Probability approach of	0,37	0,38	0,40	0,39	0,41	0,04

risky events, Pr (0-1)						
Degree of possible negative influences on achievements purposes NIg (0-100)	44	47	47	49	53	9
α1	0,5	0,4	0,5	0,4	0,5	0
Ponderability of the purposes in the general to the system of the purposes enterprises, Wg (0-100)	51	55	55	63	75	24
α2	0,5	0,6	0,5	0,6	0,5	0
Level of risk	17,57	19,68	20,4	22,39	26,24	8,67

* (AD)Absolute deviation

Source: built by the author according to the company's data

At this table the basis is exogenous level of financial risks. So, at this level we took into account political unstability, social and economical factors, national and interethnical fights, peculiarities of brunch and things development, unstubility of financial market and currency, inflation, needs in investitions, and custemer's demand.

So, we can see, that during five years level of such difference of factors in financial sphere on exogenous level became higher and higher every year. In 2017 this level increased to 26,24 degree from 17,57 degree in 2013, according grading scale of risks, which is on 43,1% higher.

At the same way we looking for financial risk level at endogenous environment.

Results of calculations we presented in the table 2.16 below.

Table 2.16

Calculations of Risk Level According with Results of Expert Evaluation of Financial Risks at Endogeneus Level at JSC "UKRTRANSGAS" for 2013-2017 Years

Risk assessment criterion	Year					
	2013	2014	2015	2016	2017	AD for 2017 from 2013 year
Probability approach of risky	0,35	0,39	0,48	0,48	0,45	0,1

events, Pr (0-1)						
Degree of possible negative influences on achievements purposes NIg (0-100)	39	45	48	51	58	19
α1	0,4	0,4	0,5	0,6	0,5	0,1
Ponderability of the purposes in the general to the system of the purposes enterprises, Wg (0-100)	91,76	78,12	66	74,63	75	16,13
α2	0,6	0,6	0,5	0,4	0,5	-0,1
Level of risk	24,73	25,30	27,36	29,02	30,20	5,47

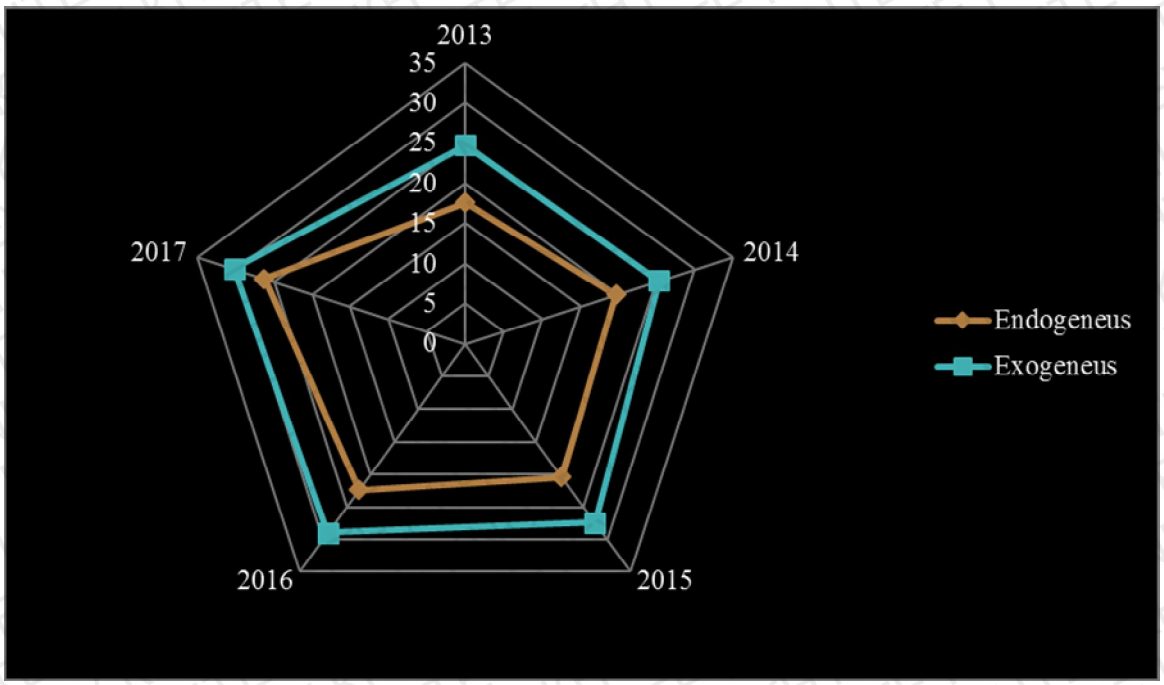
* (AD)Absolute deviation

Source: built by the author according to the company's data

To find the level of financial risks for endogenous environment at JSC "UKRTRANSGAS" we considered such factors like: technologies and structure of main productive assets, their functioning and economical wear; constant and veriable costs, profitability of activity and efficiency fron investition and equity; sources of financial activity of the enterprise, cost of borrowed and involved capital.

Based on indicators we can make a conclusion that internal level of financial risk also was growing like on external. Every year risk level constantly was growing approximately on 8%. And if in 2013 it was 24,73 degree, what is realy high, in 2017 it became already 30,20 degrees. It means, that in five years level of risk increased on 18,3%.

Generalised results of calculation we presented on the picture 2.7, where we can easily see the general growing of financial risk level and compare results of each from five years from 2013 to 2017.



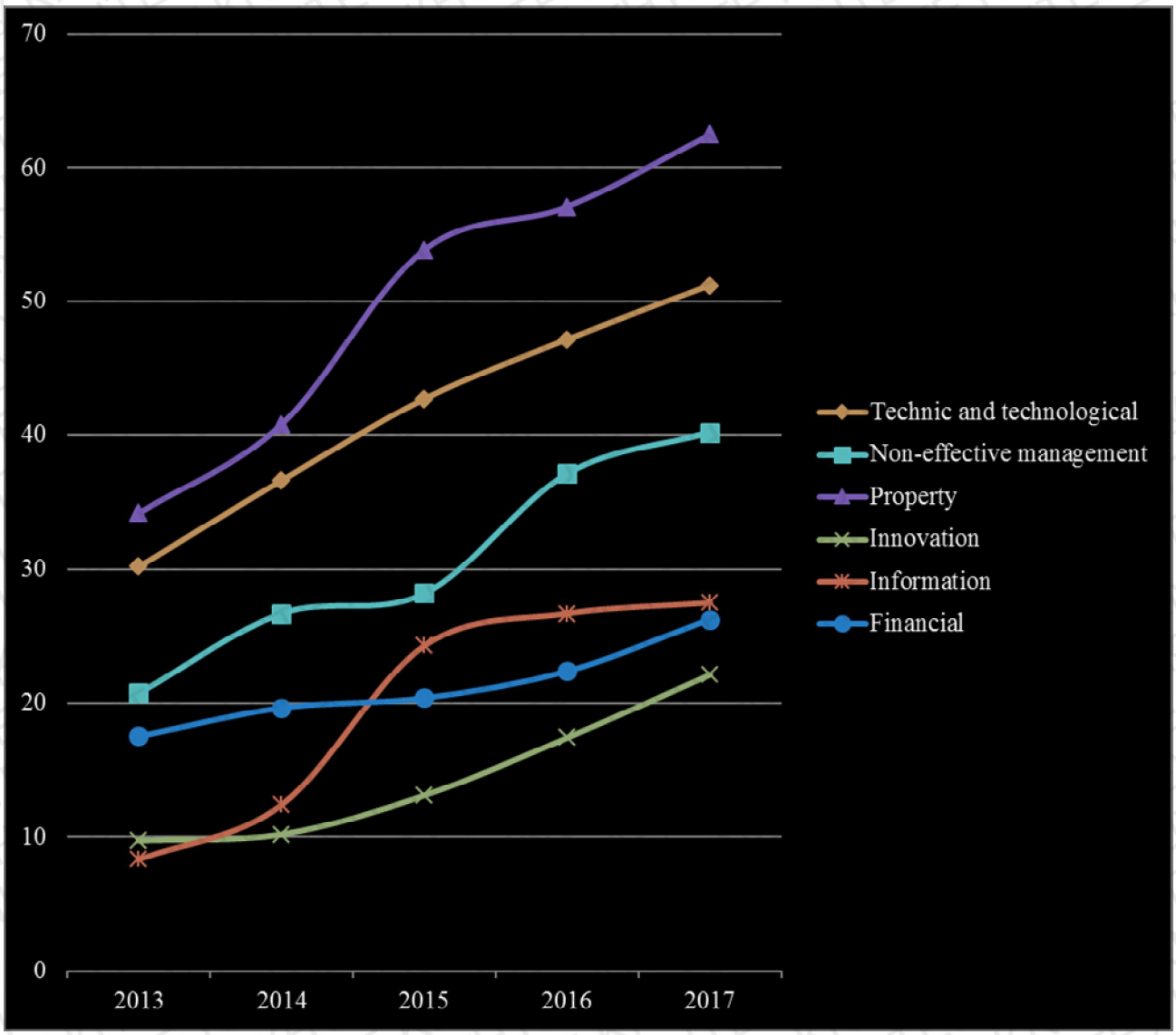
Source: built by the author according to the company's data

Picture 2.7 Comparison of the Financial Risk Level in JSC "UKRTRANSGAS" Activity for 2013-2017 Years

We can follow up that level of exoneus financial risks higher then endogenous in average on 10 degrees each year. Together they make the level of financial risk on degree 20-25 degrees in average during 2013-2017 years.

We calculated the level of different risk types for 2013-2017 years. On example of financial risks we made the same calculations for technic and technological, perssonel, non-effective management, propert, innovation, information and other risks for internal and external levels.

Results for exogenous level we are presenting on the picture 2.8 below.

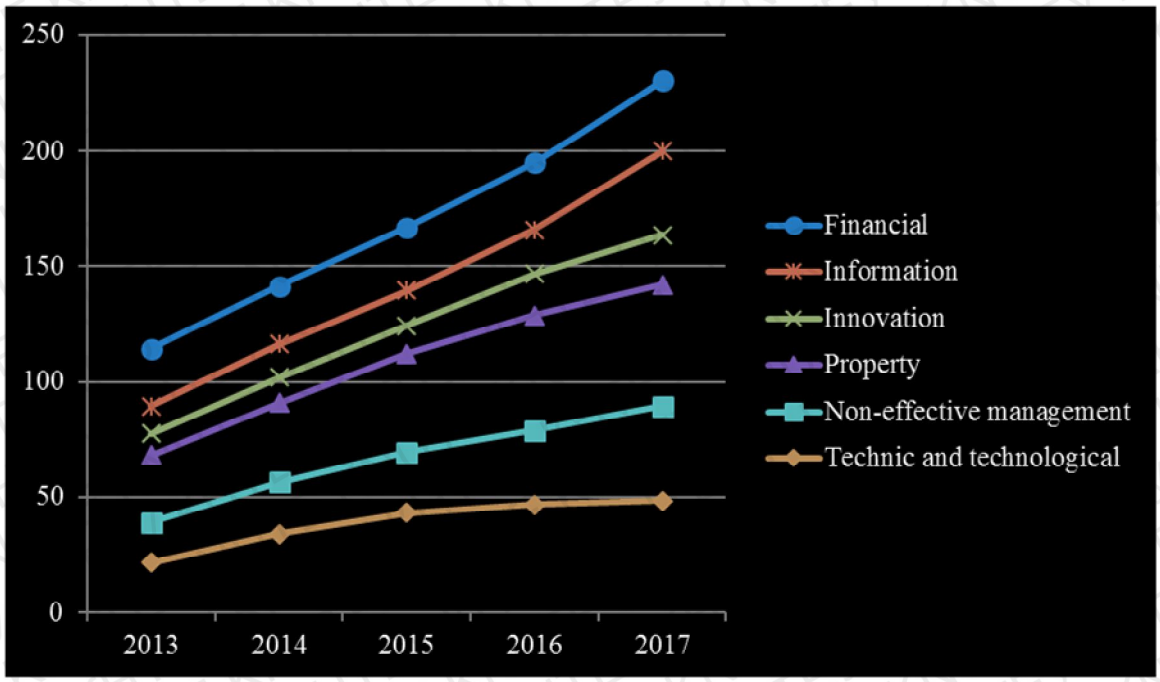


Source: built by the author according to the company's data

Picture 2.8 Comparison of the Risk Level on Exogenous Level in JSC "UKRTRANSGAS" Activity for 2013-2017 Years

As we can see, during 2013-2017 years degree of all risks increased proportionaly in general. The highest level of risk for the enterprise is in risk of property and technical risks. Their amount is near third part of all risks, which is extreamly high. The smallest level of risk in innovation, financial and information factors. They are all cover approximately that amount of risks, which take only technical.

To compare what influence more, external or internal factors, we evaluate level of all risks on endogenous environment. Results of calculations we presented on the similar picture 2.9 below.



Source: built by the author according to the company's data

Picture 2.9 Comparison of The Risk Level on Endogenous Level in JSC "UKRTRANSGAS" Activity for 2013-2017 Years

Feature of our research is that except traditional internal and external risks, we allocated group of corporate the risks caused by existence of an administrative superstructure represented by public joint stock company "UKRTRANSGAS" [45]. By expert poll it is established that is essential in this group financial and personnel risks, probability which realization within the next 5 years steadily raise.

Experts focused special attention on threat of inefficiency of personnel purposes to senior positions and inefficiencies of distribution of corporate income.

By results of mark estimation of risks of a subsystem "Corporate risks" it is possible to state the developed negative tendency of growth of the threats caused by the considered corporate risks which in 2013-2017 belonged to a zone of

averages, and in later the specified risks passed into the category of negative, high with preservation
tendencies.

Also results of the research of risks in group are indicative “Interstate risks”. Here growth is accurately traced political, financial risks, risks of suppliers of gas and
gas consumers during the period from 2013 to 2017, which by quantitative estimates
experts approach border between high and very high risks. Results of calculations we presented in the table 2.17 below.

Table 2.17

Calculations of Risk Level According with Results of Expert Evaluation of Risks Inside of The Country at JSC “UKRTRANSGAS” for 2013-2017 Years

Type of risk	Years					
	2013	2014	2015	2016	2017	AD for 2017 from 2013
Political	70	69	62	60	52	-18
Demographical	11	12	12	12,5	13	2
Standart and legislative	20	19	19	18	17	-3
Credit	22	21	21	20	20	-2
Corruption	50	47	44	40	35	-15
Gas consumption	49	49	41	40	36	-13
Criminogenic	30	38	44	40	34	4
Gas supply	60	59	54	48	30	-30
Social	6	7	9	9	10	4

* (AD)Absolute deviation

Source: built by the author according to the company’s data

As we notesed earlier, domestic gas transmission companies provide with transport services not only domestic market, but also transit gas supply of the countries of Europe. Therefore significant effect on them production economic activity is rendered by such factors as political stability, national energy strategies of the certain countries, relationship with supplying countries of natural gas, economic situation in supplying countries and consumers, policy of the certain states in to the sphere of a difersifikation of gas supply of the national markets

through formation the competing transport routes, etc. [45]. By results of researches it is established that such risks of group "supranational regional and global risks" as technological, credit, standard and legislative, demographic and risk of failures in logistic chains of transit were not and not will become within the next 5 years a source of essential threats for functioning of domestic gas transmission companies

Table 2.18

Calculations of Risk Level According with Results of Expert Evaluation of Risks on the International Level for JSC "UKRTRANSGAS" for 2013-2017 Years

Type of risk	Years					
	2013	2014	2015	2016	2017	AD for 2017 from 2013
Standart and legislative	12	16	17	16	16	4
Failures in logistic chains	42	40	30	30	31	-11
Demographical	17	20	21	20	20	3
Competitive routes	70	74	75	75	75	5
Gas consumption	80	78	53	52	42	-38
Gas supply	50	48	47	42	39	-11

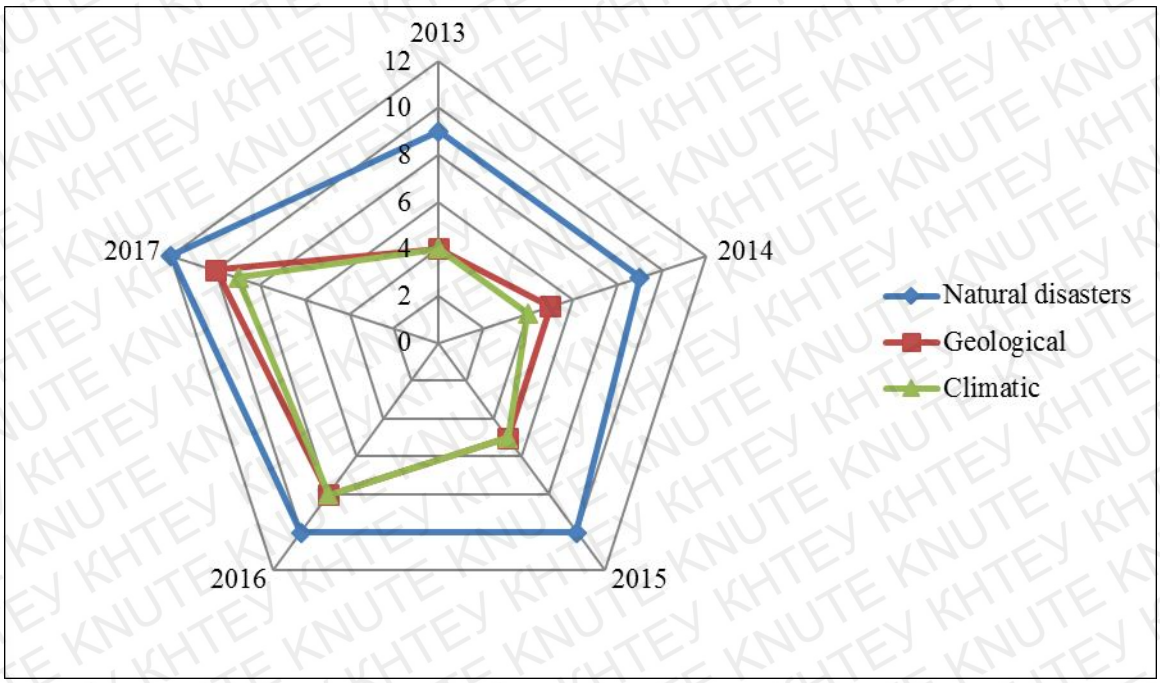
* (AD)Absolute deviation

Source: built by the author according to the company's data

However it is established that from 2013 to 2017 took place significant growth political risk and also risk of the competing routes and risk supplier of gas. It causes need of revision of the development strategy gas transmission companies of Ukraine the next 10−20 years.

As for a subsystem "Natural risks", are identified by us risks, taking into account probability of their emergence and the importance on scales potential negative consequences, do not hand over essential threat for functioning of gas transmission companies and within the accepted gradation can be carried to minimum and small risks.

For making conclusions and regarding ways to decreasing level of risk at the enterprise we shoul also consider such factors like natural disasters, geological and climatic situation. The enterprise can't influence on these factors, but can take into account in risk management and be flexible. So in the picture 2.10 below we presented level of risk which depend on list previously.



Source: built by the author according to the company's data

Picture 2.10 Estimation of Natural Risks at JSC "UKRTRANSGAS" for 2013-2017 Years

By results of calculation of the aggregated risks of subsystems it is established negative trend of their growth. So, if in 2015 the aggregated risks most of groups were in a zone of average risks (except internal and natural that were characterized by low level), in 2017 only the group of natural risks to treat a zone of low risks whereas subgroups of internal, corporate and interstate risks supranational risks by results will be displaced in a zone of high risks, and expert estimates will pass into a zone of very high risks.Integrated assessment of risk of gas transmission company of public joint stock company "UKRTRANSGAS", executed by aggregation of risks of separate groups taking into account their

importance, allowed to establish the general trend of influence as internal, and external threats on production economic activity gas transmission companies which are a part of JSC "UKRTRANSGAS" on rights of branches.

There are also other methods of risk analysis in business activity. However, the most relevant and convenient in use it seems to us rather new to domestic practice method − a method of the map of risks which can characterize all circle risks which cause negative situations in the enterprise. So, taking into account our previous calculations, we can create a visualization of risk level at the enterprise which presented below on the picture 2.11.

Very high	suprastate				
High	state-owned			corporate	state-owned suprastate corporate
Medium	corporate internal	internal corporate	corporate	internal	internal
Low	natural	natural	internal natural	natural	natural
	2013	2014	2015	2016	2017

Source: built by the author according to the company's data

Picture 2.11 Estimation of Risk Groups at JSC "UKRTRANSGAS" for 2013-2017 Years

This picture clearly show us the tendency of changing level of enterprise risk of different types. 2014 and 2015 were with medium level of risks, they were still not high, but in 2016 and 2017 the level of most influential of them started to increase. In the case of non-interferance the enterprise can have huge losses, which leads to unprofitableness.

Conclusion to the Part 2

Generally, in the course of the research it is established that future development gas transmission company it is essential to depend on prospects development of the European gas market. The processes happening in to the external environment, generate a wide range of risks, in structure whom it is expedient to consider such groups as corporate, interstate, supranational and natural risks. By results of forecasting of external risks it is found out that essential threats within the next 5 years characterize group supranational (regional and global) risks, in particular political, the competing routes and risks of the supplier of gas.

Instability inside − and a foreign policy situation reflects adversely on efficiency and stability business activities on enterprises, especially engaged in export of products and providing services.

In general accounting of policy risks is very important in Ukrainian conditions when there is a constant and predicted change of economic legislation and local regulations. A political situation in to the country, staff movements in higher levels and changes the existing financial flows have priority influence on functioning of domestic enterprises. Regulations of some executive bodies quite often reflect change political and social and economic country situation as they are a consequence lobbying by different political groups of influence of the interests. Also regional policy risks have not smaller value: formations of authorities in a number of regions it can be carried out by way active pressure upon electorate with use of different economic levers.

By results of the conducted research the current state is defined, tendencies and problems of functioning of gas transmission companies of the joint-stock company “UKRTRANSGAS” in the conditions of uncertainty, dangers and threats. Analysis of activity JSC “UKRTRANSGAS” allowed to establish that essential decrease in volumes of the provided gas transmission services is observed. Except a tendency of reduction of the outputs are found also gradual deterioration in a condition of material and technical resources of domestic gas transmission

companies, application of irrational forms service already traditional for the last years of insufficient funding requirements even of simple reproduction of the main gas pipelines, without telling already about need of their continuous modernization and improvement for conditions fierce competition in the international gas market.

It is revealed relationship of cause and effect between the existing problems, risk factors and directly risks of activity of gas transmission enterprises. It is proved that problems characterize available (actual) situation which characteristics do not correspond desirable (planned), then as risks, having future focus, at the same time are directly connected with those tendencies which are shown in the present on the basis of last events. According to realization of risk will lead to emergence of a problem which, in turn, to become the reason or a factor of the subsequent risk, etc.

The major external factors of negative impact on functioning of gas transmission companies are defined critical dependence on import of natural gas; reduction of internal requirements national economies in hydrocarbonic energy resources, opacity functioning of the domestic gas market, absence weighed and consecutive, focused on a long-term outlook, state power policy; reduction of demand for gas in the countries of Europe; creation new pipeline gas transmission routes bypassing the territory of Ukraine;

PART 3

IMPROVING THE RISKS RESPONSE MECHANISM IN INTERNATIONAL COMMERCIAL ACTIVITY OF PJSC "UKRTRANSGAS"

3.1 Justification for Improvement of Risk Response in International Commercial Activity of JSC "UKRTRANSGAS"

In general, a significant reason that constrains the practical implementation of the mechanism for responding to risks in many enterprises is, according to our observations, the complexity of analyzing its economic efficiency. So, if the calculation of the cost value does not contain any difficulties, then the quantitative assessment of the results is possible, as a rule, only when the risk has been realized. Otherwise, it is not that simple to determine the extent to which the result is a consequence of the efforts of the risk managers team. In our case, the absolute effectiveness of the mechanism should be understood as the mechanism of responding to risks in the process of achieving the goals set. Relative efficiency can be determined by comparing the total economic benefits (elimination of losses, cost savings, income growth, etc.) from the implementation of the system to the expected costs associated with the implementation of the mechanism for responding to risks and ensuring its functioning.

In particular, in the process of implementation, the gas transportation company will have the following types of costs:

1. Expenses for the organization of the workplace for the activities of the risk manager and working risk groups;
2. Wage costs to the risk manager and special incentive payments to members of the risk groups involved in the risk management process;
3. Expenses for the organization of the system of reception and processing of information;

4. Expenses for the implementation of measures to prevent the implementation of risks;

5. Expenses for elimination of the consequences of the implementation of risk, if it was considered acceptable for the enterprise;

The analysis of normative-methodical documentation by JSC "UKRTRANSGAS" conducted by survey of managers, professionals and specialists make it possible to conclude that gas transmission companies (GTP) does not fully use the program in its activities risk management and not everywhere able to develop them. At the same time, the positive point is that in the course of the research a number of people who were particularly interested in effective risk management at the given enterprises were found:

1. Shareholders of the enterprise (interested in the payback of invested funds;

2. Management personnel of the GTP (effective risk management will be a testimony high quality of their managerial skills);

3. Ordinary staff (interested in the effectiveness of the operation of the GTP, the performance of which depends on the stability of their income);

4. Lenders (need to ensure that the issued credit and will be returned in a timely fashion);

5. Local government bodies (interested in the profitability of the GTP, the amount of which will depend on the amount of revenues to the local budget).

Thus, we observe the considerable interest of many parties in implementing an effective risk management system at the GTP, rationally using which one can to significantly accelerate the process of organizing SDD activities of the subjects of management.It should be understood that the risk management program is not an end in itself but a necessary tool for achieving the totality of enterprise goals that are dynamically changing over time. There are different approaches to the logic and sequence of key stages of risk management [73, p.68-69; 130, p.99-103; 60, p.91-95]. Despite a number of minor differences, they all meet the provisions [73].

We substantiate the main stages of developing a risk management program for a gas transportation company.

1. The system of target and resultant risk-diagnostic indicators of the gas transport company as a whole and its separate subsystems is formed.

2. On the basis of the theoretically generalized risk spectrum of the enterprise, taking into account the specifics of the activity of the GTP, the diagnosis and classification of risks is carried out, a qualitative analysis of risk factors is carried out, and a risk profile of the GTP is formed.

3. Quantitative risk assessment is carried out within individual subsystems and GTP as a whole. The main types of risks that will be included in the risk management program will be identified (according to the principles of AVSanalysis and Paretto it is expedient to select 20-30% of the risks with the highest value of the final score).

4. Comparison of possible benefits and losses. The levels of acceptable risk in each particular situation are determined. For a better visual perception, it is advisable to construct a risk signaling card or to use any other instrument of visual risk systematization.

5. In accordance with the principle of the required adequacy, a specific action plan is developed for each risk group. In case of inadequate funding, this part of the program can be corrected, except for less important measures.

6. Developing budgets needed to finance activities in accordance with the plan developed. A consolidated budget for risk management is formulated. It should take into account the possibility of combining the same type of activities for different departments GTP.

7. Estimated opportunities for financing the process of managing each group of risks.

8. A system of risk management measures is developed for the integral (common for the entire set of risks).

9. Corrected the financing mechanism for the possibility of implementing the above measures.

10. Developed declarations, contracts, schedules, orders and other normative and regulatory documents that should ensure the implementation of the risk management program. The deadlines for implementing the program are determined, responsible persons.

11. Monitoring and monitoring of the implementation of the risk management program is carried out, as well as collection of the information necessary for the development of the program for the next period.

The advantage of this algorithm is that it allows for risk management on a preventive basis in accordance with an integrated approach to risk management. The first stages of the program related to the diagnosis, classification and assessment of the risks of the operation of the gas transportation company are described in detail in the first and second part of the work [38].

We consider it expedient to use the results of the research and to further elaborate on the substantiation of the main directions of strategic policy and tactics of risk management of a typical GTP.Thus, the results of the expert risk assessment presented in previous paragraphs revealed a general trend towards an increase in practically all risk groups of gas transport companies. Moreover, the risks of the Subsystem “Supranational (supranational regional and global) risks”, in particular the political, competing routes and risks of the gas supplier, will be the most significant over the next five years (according to our proposed grading scale, the above-mentioned risks are characterized by a high and very high level of a steady tendency for further growth). At the same time, the main risk indicator is the rapid decrease in the volume of gas transmitted services ranging from 2004 to 2005. In general, the change in the dynamics of transit of Russian gas in recent years reflects the strategy of Russia aimed at gradually developing gas pipelines for gas supplies to Europe bypassing the territory of Ukraine and expresses the intention after 2019 (after the termination of the current transit treaty) to stop the transit of its own gas through Ukraine or to carry it out on “reasonable” terms, including acceptable tariff policy. These scenarios are based on the intentions of PJSC Gazprom to build gas pipelines bypassing Ukraine (at least both “North Stream 2”

threads and the “Turkish Stream” pipeline and the necessary pipelines in Europe) and the possibility of obtaining PJSC “Gazprom” or its subsidiaries the structures of exclusions from the European energy legislation regarding full access to the capacities of the built gas pipelines in Europe. Implementation of the North Stream 2 project may create additional prerequisites and technical capacity to reduce transit of natural gas through Ukraine (by GVS Uzhgorod, GVS Beregovo, HVD Drozdovichi) by 55 billion m3. Creating a “Virtual Point of Sale” in the Baltic Sea, it can increase transport capacity in the direction of Europe by 10-11 billion m3 [70].

The implementation of the “Turkish Flow” project can also create preconditions and technical capacities to reduce the transit of natural gas through the territory of Ukraine in the southern direction (through the OVS Orlovka) from 15.25 to 32 billion m^3 (up to 63 billion m^3 depending on the number of laid threads) [70]. Summing up these facts, we can state that there is a direct threat to reduce the volume of gas transit through the territory of Ukraine, based on the existence of already constructed and designed gas pipelines, as well as on obtaining exemptions from the European energy legislation concerning the full gas pipeline of Gazprom or its subsidiaries. Access to the capacities of the constructed gas pipelines in the territory of Europe, which is the main reason for the growth of supranational regional and global risks of the operation of the gas transportation pipeline enterprises. The feature of this group of risks is that the degree of influence on them from the side of the GTP is rather limited. Therefore, in this case, it would be advisable to justify the general strategic risk-oriented policy not at the level of territorial UMG, but at the level of JSC “UKRTRANSGAS” as a whole. In view of the current challenges facing Ukraine regarding the security of natural gas supply and its strategic provision to Ukrainian consumers, in the context of risk management of its activities, JSC “UKRTRANSGAS” is expedient to formulate a policy of expansion of its GTS in accordance with the forecasts of the expansion of the GTS of neighboring European states such as Poland , Romania, Slovakia and Hungary. At the same time, the expansion of the GTS should be in accordance

with a risk-oriented strategy of "mitigating" risk by diversifying the routes and sources of natural gas supply in order to avoid dependence on supplies of gas from one source. The main areas of potential diversification of gas import sources are:

1. LNG supply from countries that traditionally export LNG to Europe (Egypt, Algeria or Qatar);

2. Import of gas from Azerbaijan through the "White Stream" gas pipeline or liquefied gas through LNG terminals;

3. Supply of gas from Europe through the use of existing infrastructure in the reverse direction (Germany-Czech Republic-Slovakia or Turkey-Bulgaria-Romania) [18, p.75].

In general, in the long run, the countries of North Africa (Algeria, Egypt, Libya, Nigeria) and the Middle East (Iran, Qatar, OAU, Yemen, Oman) are the most potentially attractive natural gas in terms of external alternatives to the needs of the Ukrainian economy. Thus, according to British Petroleum, the total volume of proven reserves of natural gas in Africa, despite the underdevelopment of much of the continent, has already reached 14.5 trillion by the end of 2011. m^3, and in the Middle East – 80 trillion. m^3 [89], which indicates a significant gas-mining potential of these regions.

It should be understood that natural gas can not be considered as a commodity isolated, without being tied to the transportation system, therefore, the rationale for the most optimal technologies for supplying this energy carrier to Ukraine is today one of the priority tasks. The strength of JSC "UKRTRANSGAS" is that the domestic gas transportation system, due to its unique technological and technological features, is potentially able to provide transportation and distribution of natural gas that will be supplied from external sources by new routes based on the use of LNG technology. It should be noted that ensuring the supply of natural gas to Ukraine in the liquefied state from diversification external sources requires the preparation of the production infrastructure of the gas transport enterprises in advance (construction of terminals for receiving and regasification of LNG, the creation of storage facilities for temporary accumulation and storage of gas, etc.)

and the availability of a sufficient number of gas carriers , and this, in turn, requires the attraction of significant investments. Among the closest neighbors of Ukraine, the experience of Poland, which already carries out construction of a terminal for receiving liquefied gas, is actively negotiating with Algeria, and also considers the possibility of concluding contracts with Egypt, Libya, Qatar, Nigeria and Norway on LNG supplies, is indicative in this regard. In this case, the so-called “modified” LNG technology, which, unlike the traditional one, does not require the creation of receiving terminals for re-gasification in consumer countries, due to the fact that shipbuilders have mastered the production of new type gas carriers with regasification equipment, located directly on board the vessel [47 , p.23]. In the longer term, an alternative to offshore gas transportation may be its compressed natural gas (CNG). Introduction of CNG technology in Ukraine requires the availability of tankers for the transport of compressed natural gas and a decompression terminal with gas storage facilities. The main advantage of CNG is that it has a lower cost compared to LNG, since its production does not require expensive cooling and cryogenic reservoirs [84]. It should be noted that, at present, the manufacture of CNG tankers in the world is still at the stage of development and planning. Thus, the introduction of alternative gas supply options for Ukraine within the framework of the strategy of diversification of the group of supranational regional and global risks will significantly reduce their negative impact on the functioning of domestic gas transport companies.

The second direction of the policy of expansion of the GTS is the implementation of a risk-oriented strategy for integrating Ukraine’s GTS into European gas infrastructure, in particular by building new and expanding existing trans boundary gas pipelines (interconnectors). JSC “UKRTRANSGAS” is expedient to invest in the construction of new interconnectors to join existing pipelines and planned interconnectors of the EU member states and to develop cooperation with operators of neighboring European countries in the direction of the organization of a single regional gas hub and, as a result, to be able to more effectively counteract political pressure from the sides of Russia.

The accession of the countries of Central and Eastern Europe (CEE) to the western part of the Ukrainian GTS will enable the provision of transportation, loading, storage and selection of Ukrainian UGSs to 15 billion m^3 of natural gas for foreign owners. Currently the enterprise is cooperating with GTS operators of neighboring countries in the context of expanding the import of natural gas to Ukraine. Gas deliveries from Europe started from Poland (November 2012), Hungary (March 2013) and Slovakia (August 2014). Nevertheless, the share of transit of Russian natural gas through the territory of Ukraine to European countries is 61% of the total volume of natural gas transportation MG. It should be noted that besides the developed pipeline infrastructure (the total length of gas pipelines is 38.2 thousand km, including the main ones − 22.2 thousand km), an important technological link of the gas transportation system of Ukraine is also a powerful underground storage network Gas , which consists of 13 underground gas storage facilities and the total capacity (32.1 billion m^3), is the second largest in Europe, yielding only Russia (63.5 billion) [99].

From the point of view of the external use of underground gas storage network, it is important that almost 80% of Ukraine's gas storage facilities are located in its western regions on the way of the largest transit gas flows from Russia in close proximity to the EU border. Taking into account that most industrial facilities, which are the main domestic gas consumers, are concentrated in the eastern and south-eastern regions of our state, expansion of the PSG network of the Black Sea and Donetsk complex would allow the gradual transfer of Western gas storage facilities for the needs of transit gas transportation. The natural prerequisites for this in Ukraine are: a significant amount of underground gas (gas condensate) reservoirs, and with increasing demand − and oil fields, mostly substantially produced, which have favorable conditions for the PZG (relatively small depth of formation of productive strata, their high geological-physical parameters, sufficient tightness). The achieved capacity of the Western complex of Ukraine's PZG amounts to 25.9 billion cubic meters, which exceeds the aggregate capacity of gas storage facilities in any of the EU countries. Recall

that during the conflict with Russia at the beginning of 2009, the enterprise managed to secure the eastern regions of the gas through its reverse flow from the western gas storage facilities [72]. It should be noted that the creation of UGS requires significant investments, the payback period of which can reach 12 years. At the same time, Ukraine's important advantage is that, despite the implementation of a number of projects on the development of underground gas storage in the countries of Europe, PJSC "Gazprom" currently has not been provided with adequate gas storage facilities along its routes, and in the near future, bypassing trunk gas pipelines Ukrainian GTS will continue to be the guarantor of the reliability of transit of Russian gas to Europe. However, in the medium to long term, the value of Ukrainian gas storage facilities for the EU can significantly decrease, so now Ukraine needs to make every effort to use its existing underground gas storage potential and strengthen its position in the European energy security system.

Thus, due to the advantageous geographic position and large active storage capacity of the UGS, Ukraine has significant potential for the establishment of the network of European significance.

3.2 Prognostication of Riskiness Degree in The International Commercial Activity of JSC "UKRTRANSGAS".

In the group of national risks, the most significant experts recognized the political risk (very high), and in the corporate group − financial (high). The impact on the UMG's risk group data is also rather limited, so the most successful risk management strategy for a gas transportation company in this case is the risk-taking strategy and the development of a clear risk-based action plan. An important point is also that the EU's external energy policy is still under development and harmonization. EU member states are reluctant to delegate their powers of decision-making in the gas sector to a supranational level, while maintaining their

national sovereignty in the field of energy. This situation is definitely beneficial for Russia's geopolitics as it enables it to effectively use the "gas lever" for political pressure on the European Union by providing price preferences in the gas sector to individual EU countries in exchange for their political loyalty. In general, the most suitable for risk management are, traditionally, internal risks, in the group of which, in relation to gas transport companies, according to the results of an expert survey, dominated technical and technological, personnel, property risk and risk of inefficiency of management.

But in order to find out whether such an initiative will be profitable not only logically, but also economically sound, we propose calculating the size of the costs of enterprises for creating this structural element. After that, assess the impact of foreign trade risks on the profitability of export-import operations as one of the methods of activity of the "Mechanism for Responding to Risks".To determine the amount of potential losses (relative revenue expected) and the required budget, such methods of collecting information as questionnaires, interviews, analysis of statistical and financial reporting were used. The size of the budget necessary for the implementation of measures to manage financial, technical, technological and property risks is set in accordance with the Plan for the development of the gas transmission system of the "UKRTRANSGAS" Joint Stock Company for 2018-2023.

To consider all factors of risk at the enterprise, we divided risks on groups like suprastate, state, internal and corporate. In the table 3.1 below we presented a plan of risk minimized tools and offer of potential departments which can be responsible of control that on suprastate level of enterprises activity.

Table 3.1

Mechanism for Responding to Risks on the International Level of the JSC "UKRTRANSGAS"

Risk	Risk value, points, (0-100)	The amount of possible losses, mln UAH.	Way of influence	Risk-oriented measures	Budget, thsd UAH	Deadline	Responsible for execution
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Political	52	26,71	Creating a reserve	- Creation of the action plan on a case of risk approach; - creation of reserve fund; - development of the adaptation plan.	5000	Mode-rately need	Financial and legal departments
Standart and legislative	17	8,85	Distributi on of risk	- Development of the adaptation plan for currency changes, increasing of inflation.	1000	Mode-rately need	- Legal sup-port department; - finance and economics department.
Credit	20	10,42	Taking risk	- Insurance; - limitation of the credits; - definition and creation of balance between indicators of financial activity and liquidity.	2500	Mode-rately need	Finance and economics department.
Gas supply	35	18,23	Creating a reserve	- Development, deployment of penalty system.	100	Mode-rately need	- Depart-ment of operational efficiency; - Depart-ment of production ensuring.

Continuing of the table 3.1

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Competitive routes	75	39,06	Creating a reserve	- Analysis of activity of competitors; - creation of a stock of financial firmness is not lower than 30%.	2,2	March 2019	- Department of strategy and development; - department of transportation of gas.
Gas consumption	30	15,63	Taking risk	- Creation of an insurance reserve stock on a case of increase in consumption; - forecasting of demand.	3110	Mode-rately need	- Department of operational efficiency; - Department of production ensuring.

Source: built by the author according to the company's data

We can see, that a lot of factors influence on the enterprise' activity and to minimize such big influence they have to invest great amount of money. Only for

international level risks they need approximately 10 mln UAH not to allow loses in amount of 79,8 mln UAH.

In general, departments should make prognostication for next periods to forecast all possible factors of influence and be prepared for pessimistic situations.

Possible changes in logistics of supply of gas in the gas market of Europe in rather near future can already make very multidimensional impact on the Ukrainian gas industry and the fields of domestic economy, adjacent to it.

First of all it is necessary to consider probable changes in volumes and the directions of transportation of gas by the Ukrainian gas transmission system (GTS). As it was noted in the previous section of this work, it is possible to assume what will be guaranteed constructed only one gas pipeline "The Turkish Stream" as its construction will be geopolitical value both for Russia, and for Turkey as demonstration of progress of the ruling modes of both of these states. Besides construction of this one pipeline in general is economic for Turkey, does not incur any expenses on realization of the offshore section of this project. For Russia use of one gas pipeline "The Turkish Stream" allows the Russian power "to save face" and also to count on gradual though, probably, and very slow return on investment, made in the South Stream and Turkish Stream projects. As for construction of the second gas pipeline "The Turkish Stream" the final decision by the Russian side, probably, is not accepted yet. As for "Nord Stream-2", as it was already noted in the previous section of this work, in the European Union quite influential forces which act both pro, and contra implementation of this project. And the Ukrainian officials in different spheres of the international relations oppose implementation of the "Nord Stream-2" projectAs we know, JSC "UKRTRANSGAS" more focused on the domestic market, so we should consider factors which influence on the country level. The results of research we present in the table 3.2 below.

Table 3.2

Mechanism for Responding to Risks on the Country Level of the JSC "UKRTRANSGAS"

Risk	Risk value, points, (0-100)	The amount of possible losses, mln UAH.	Way of influence	Risk-oriented measures	Budget, thsd UAH	Deadline	Responsible for execution

Standart and legislative	16	8,33	Creating a reserve	- Development of the adaptation plan for currency changes, increasing of inflation.	1000	Mode-rately need	Deprtament of legal support
Failures in logistics	31	16,15	Taking risk	- Creation of an insurance reserve stock; - insurance; - implementation of penalties in contracts on delivery.	1550	Mode-rately need	- Central dispatching department; - department of ensuring production.
Competitive routes	43	18,30	Creating a reserve	- Analysis of activity of competitors; - creation of a stock of financial firmness is not lower than 30%.	1200	March 2019	- Department of strategy and development; - department of transportation of gas.
Gas supply	42	21,88	Taking risk	- Forecasting of dema nd - creation of an insurance commodity stock.	2000	January 2019	Department of transportation of gas
Gas consumption	39	20,31	Taking risk	- Forecasting of demand; creation of an insurance commodity stock.	2500	January 2019	- Department of operational efficiency; - department of social problems.

Source: built by the author according to the company's data

This table of country risk factors analysis show us one more time that the enterprise should pay attention for this group of risk, especially for issues related with competitive routes, gas supply and gas consumption. As we talked before, political situation and some changes in law provided to changing enterprise strategy and ways of activity. The group Naftogaz carries out the operating activities in the territory of Ukraine and its dependence on currency risk is defined, mainly, by need of purchases of natural gas at foreign suppliers whose proposals generally dominated in euro and dollars. The debt of group Naftogaz in foreign currency for December 31, 2016 made 21 billion dollars.

Possibilities of Naftogaz to hedge risk in the local market are limited owing to specifics of the Ukrainian market of hedging, in particular:

1. Sizes of the market of currency forwards cannot satisfy requirement of the company, and entry into this market can give essential rate fluctuations of national currency;

2. Existence of the restrictions determined by standard and legal base.

With entry into force of the Law of Ukraine of "About the Natural Gas Market" since October 1, 2015 the company independently monthly determines the prices for industrial and commercial consumers of natural gas who do not fall under action.

Naftogaz carries out the constant analysis of the foreign exchange market of Ukraine and depending on its environment makes the decision about currencies in which the remains of means on accounts are stored (taking into account acts of the National Bank of Ukraine on this matter). Also, activity of group has seasonal nature: the volume of realization of natural gas and services in its transportation during a heating season is about 70% of annual volume.

During this peak period monetary receipts for the realized goods and services significantly increase, but during the summer period sales volumes low, and volumes of purchases of gas during a winter season - high. In this regard there is a need for additional financial resources for financing of pumping natural gas in the underground gas storages (UGS).

The group attracts additional proceeds of credit in the foreign financial markets on lower interest rates to a covering of expenses on pumping natural gas in UGS

With such amount of risks on macrolevel we have to consider possible ways of solving according to situation on microlevel.

The result of research we presented in the table 3.3.

Table 3.3

Mechanism for Responding to Risks on the General Enterprise Level of the JSC "UKRTRANSGAS"

Risk	Risk value, points, (0-100)	The amount of possible losses, mln UAH.	Way of influence	Risk-oriented measures	Budget, thsd UAH	Deadline	Responsible for execution
Technic and technological	48,6	25,21	Reduction of risk	- Technical control and cheking; - updating of gas-distributing units.	5000	January 2019	Chief engineer
Property	32,2	14,3	Reduction of risk	- Modernization of security signal system; - control of aceess to video tracking; - reconstruction of the gas and foamy fire extinguishing.	2000	September 2019	- Chief engineer; - department of property and non-core assets.
Innovative	21,7	11,25	Taking risk	- Creating of the adaption plan for case of risk; - making the reserve.	1500	September 2019	- Strategic development department of business; - department of transformation.
Financial	52,6	28,29	Reduction of risk	- Formation of reserve fund; - creating the adaptation plan for case of risk; - increasing of work capital amount; - increasing of working capital turnover; - evaluation of debitor trust level.	2000	February 2019	Financial and legal departments

Source: built by the author according to the company's data

This table cleary show how important for the enterprise to pay attention for financial risks, technical and technological risks. They take a pretty high level of influence.

Becomes obvious, and it is emphasized by experts of the domestic gas industry, in the long term there is no need for preservation of all available

capacities of the Ukrainian GTS, in due time was formed as compound the uniform gas transmission system of the Soviet Union.

They note that capacities for transportation of gas of 275 billion cubic meters on an entrance on the territory of Ukraine our state are not necessary. Considering surplus of capacities of the domestic gas transmission system of Ukraine, 30% of gas-compressor stations stand idle in a waiting mode. Therefore uninvolved production assets, experts consider, it is expedient to take out of service. In fact, it is excess maintenance costs of personnel, compressor stations, units and so forth.

In the table 3.4 below we considered work of the enterprise experts. That is, personnel activity, management and information risks.

Table 3.4

Mechanism for Responding to Risks on the Corporate Level of the JSC "UKRTRANSGAS"

Risk	Risk value, points, (0-100)	The amount of possible losses, mln UAH.	Way of influence	Risk-oriented measures	Budget, thsd UAH	Deadline	Responsible for execution
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Mannagement	40,8	21,26	Reducti on of risk	- Development of motiva te on system for workers; - increasing in percent of use of capital assets; - creating risk-management position at the enterprise; - Impoving of risk diagnostic process and risk management.	1300	March 2019	CEO

Continuing of the table 3.4

1	2	3	4	5	6	7	8

Personnel	32,2	14,7	Reduction of risk	- Professional development of workers; - socio-economic programs for the personnel; - employee motivation programs.	1000	January 2019	- Human Resources Department; - head of relevant production units; - chief accountant.
Information	36,5	19,01	Taking risk	- Improving of information transmission related with threats or emergency; - installation of sensors for instant response to gas leakage and damage to the gas transmission system.	1000	May 2019	- Department of corporate communica-tions; - chief dispatcher.

Source: built by the author according to the company's data

As a result of failure to follow the action plan for corporate management accepted by the decision of the government on December 5, 2015 the control system of "Naftogaz" remains outdated and inefficient.

Though significant progress in performance by the company of the obligations provided by this plan was made.

Except influence on corporate management, a delay of implementation of the action plan on corporate to the management makes the great risk for liquidity of "Naftogaz" caused by impact on crediting from international financial institutions for the total amount about 800 million dollars.

For the purpose of leveling of this risk the company repeatedly brought up a question of introduction of an effective corporate management system during the meetings with representatives of the government.

3.3 Forecast of Risk Minimization Technology Influence on the JSC "UKRTRANSGAS" Iinternational Commercial Activity

It should be noted that there is a large list of methods and means of influencing the risk, but their choice in each particular risk situation will depend on the established objectives of the activity, the degree of risk tolerance and financial capacity of the enterprise in the field of risk management, etc. Concerning the assessment of the program's economic efficiency, agree with the position Rishchuk L.I. [123, c.356], which is most rational to do it by comparing the difference in potential losses before and after implementation of the risk management program with the costs of its implementation:

$$Cef = \frac{Lbi - Lai}{Exp}, \quad (3.1)$$

where

Lbi – is the amount of expected losses before the implementation of the program, UAH;

Lai – amount of expected losses after implementation of the program, UAH;

Exp – expenses for implementation of the program, UAH.

Thus, this ratio will reflect the cost savings through the implementation of the risk management program in the amount of 1 UAH for the implementation of this program. The most complex is the forecasted estimate of the amount of losses after the implementation of the risk management program, since domestic gas transportation companies do not have the practice of implementing mechanism for responding to risks, which does not allow for a comparative approach to the assessment. Taking into account this, we calculate the coefficient in three variants of the forecast: optimistic, realistic and pessimistic. According to the forecast of the optimistic scenario, we anticipate full elimination of potential losses as a result of the occurrence of risk events; Under the scenario of a pessimistic scenario, avoiding risk losses due to the implementation of the program will be 70-90% of the initial, respectively, realistic – 85 to 95% (Table 3.5).

Table 3.5

Assessment of the Effectiveness of Mechanism for Responding Risk on the International Level of the JSC "UKRTRANSGAS"

Indicator	Type of risk	Forecast		
		Pessimistic	Realistic	Optimistic
Potential losses before the implementation of mechanism for responding to risks, mln UAH	Political	26,71	26,71	26,71
	Standart and legislative	8,85	8,85	8,85
	Credit	10,42	10,42	10,42
	Gas supply	18,23	18,23	18,23
	Competitive routes	39,06	39,06	39,06
	Gas consumption	15,63	15,63	15,63
Potential losses after implementation of mechanism for responding to risks, mln UAH	Political	20,03	24,04	0
	Standart and legislative	6,63	7,57	0
	Credit	7,82	9,38	0
	Gas supply	13,68	16,41	0
	Competitive routes	29,29	35,15	0
	Gas consumption	11,72	14,07	0
Expenses on implementation of mechanism for responding to risks, mln UAH	Political	5		
	Standart and legislative	1		
	Credit	2,5		
	Gas supply	1		
	Competitive routes	2,2		
	Gas consumption	3,1		
The coefficient of economic efficiency of mechanism for responding to risks	Political	1,34	0,53	5,33
	Standart and legislative	2,22	1,28	8,85
	Credit	1,04	0,42	4,17
	Gas supply	4,55	1,82	18,23
	Competitive routes	4,44	1,77	17,75
	Gas consumption	1,26	0,31	5,04

Source: built by the author

Estimates of the efficiency coefficient (> 1) indicate the feasibility of introducing this program. No less important is that the implementation of this program will not only improve the financial and economic performance of the gas transport company, but will also contribute to improving the risk management process in the gas transport company, the development of corporate risk-culture, raising the level of riskiness of the enterprise as a whole.

We can see, that in case if the administartion introduce risk management at the enterprise and try to control the level of risk, make a plan of the adaptation, JSC "UKRTRANSGAS" will deacrese the level of losses and become more stable.

Coefficients are pretty high unlike to maximum coefficient of economic efficiency of mechanism for responding to risks, which equal to 1. We have

indexes like 17 and even 18 for gas supply risk and competitive routs. So, the strategy which we presented has a sence.

Thus, with confidence it is possible to say that in the long term (the truth, specifically it is still unknown, in how many years) volumes of transit of the Russian gas to Europe the Ukrainian gas transmission system can be less at least on scopes of supply of the Russian gas to Turkey only on one gas pipeline "The Turkish stream". That is on 15,75 billion of CBM of natural gas a year if this gas pipeline is used at full capacity. However, considering the need for regular control of a condition of this gas pipeline, his probable preventive repair, etc., it is possible to expect that actual annual volumes of transportation of the Russian gas by one thread of "The Turkish stream" will be less than 15,75 billion of CBM.

The worst option of prospects of change of volumes of transit of the Russian gas to Europe of the Ukrainian GTS can occur in case of putting into operation of two strings of "The Turkish stream" and full implementation of all project "Nord Stream-2". Cumulative maximum transport power of the specified main gas pipelines is more than 140 billion cubic meters of natural gas a year that much more not only from the actual volumes of transit of the Russian gas to Europe of the Ukrainian GTS, observed in recent years, but also the volumes of transportation of the Russian gas to Europe provided Russian-Ukrainian gas by agreement 2009. All other options of a current of events connected, for example, only with partial implementation of the "Nord Stream-2" project, in fact, are intermediate between the options of succession of events given above, so to speak, "optimistical" and "pessimistic" in the international gas sphere for the prospects of development of the Ukrainian gas transmission system. However, it is worth to remember that for functioning of the cumulative maximum transport power of "The Turkish stream" mentioned above and "Nord Stream-2" still it is necessary to make multi-billion investments into development of gas transmission infrastructure of Europe. And this problem still in detail isn't discussed. Though the scandal mentioned above with the permission of Gazprom blocked in a jurisdicial proceeding from the European Commission on increase in volumes of

transportation of gas through the OPAL gas pipeline testifies relevance of a problem of shortage of the corresponding capacities of the European gas transmission infrastructure for implementation of ambitious plans of Russia for creation of the main gas pipelines to Europe bypassing Ukraine today.

In the next table 3.6 below we consider the coefficient of economic efficiency of mechanism to responding risk.

Table 3.6

Assessment of the Effectiveness Of Mechanism for Responding Risk on the Country Level of the JSC "UKRTRANSGAS"

Indicator	Type of risk	Forecast		
		Pessimistic	Realistic	Optimistic
Potential losses before the implementation of mechanism for responding to risks, mln UAH	Standart and legislative	8,33	8,33	8,33
	Failures in logistics	16,15	16,15	16,15
	Competitive routes	18,3	18,3	18,3
	Gas supply	21,88	21,88	21,88
	Gas consumption	20,31	20,31	20,31
Potential losses after implementation of mechanism for responding to risks, mln UAH	Standart and legislative	6,25	7,49	0
	Failures in logistics	12,11	14,54	0
	Competitive routes	13,73	16,47	0
	Gas supply	16,41	19,69	0
	Gas consumption	15,23	18,28	0
Expenses on implementation of mechanism for responding to risks, mln UAH	Standart and legislative	1		
	Failures in logistics	1,5		
	Competitive routes	1,2		
	Gas supply	2		
	Gas consumption	2,5		
The coefficient of economic efficiency of mechanism for responding to risks	Standart and legislative	2,08	0,84	8,33
	Failures in logistics	2,69	1,1	10,77
	Competitive routes	3,81	1,53	15,25
	Gas supply	2,73	1,09	10,94
	Gas consumption	2,03	0,81	8,12

Source: built by the author

The level of the coefficient of economic efficiency of mechanism for responding to risks is also very high, so, week risk management of JSC "UKRTRANSGAS" can lead to huge losses in amount 10 mln UAH each of them. The most dangerous for entrprise's activity which related with competitive routes, gas supply and gas consumption. They are 19 mln UAH, 18 mln UAH and more then 16 mln UAH. But exist a possibility to avoid such losses if the enterprise will use risk managements plan. So, losses can descresed to 0.

Of course, for installation of risk minimization strtategy enterprise should invest some millions UAH, but in the result thry can save JSC “UKRTRANSGAS” from buncrupsy.

In the table 3.7 below we presented results of all possible ways entrprise’s activity for future.

Table 3.7

Assessment of the Effectiveness of Mechanism for Responding Risk on the General Enterprise Level of the JSC “UKRTRANSGAS”

Indicator	Type of risk	Forecast		
		Pessimistic	Realistic	Optimistic
Potential losses before the implementation of mechanism for responding to risks, mln UAH	Technic and technological	25,21	25,21	25,21
	Property	14,30	14,30	14,30
	Innovative	11,25	11,25	11,25
	Financial	28,29	28,29	28,29
Potential losses after implementation of mechanism for responding to risks, mln UAH	Technic and technological	18,91	22,69	0
	Property	10,73	12,87	0
	Innovative	8,44	10,19	0
	Financial	21,22	25,46	0
Expenses on implementation of mechanism for responding to risks, mln UAH	Technic and technological	5		
	Property	2		
	Innovative	1,5		
	Financial	2		
The coefficient of economic efficiency of mechanism for responding to risks	Technic and technological	21,43	20,67	5,04
	Property	8,94	7,87	7,15
	Innovative	5,62	4,46	7,5
	Financial	17,68	15,56	14,15

Source: built by the author

If to talk about general risk at the enterprise, which can be inside of the JSC “UKRTRANSGAS”, the biggest losses can bring financial, technical and technological factors. Even in optimistic case, the enterprise the coefficient of economic efficiency of the mechanism for responding risk can be near 14−15 points. It’s so high index, which can be decisive for the enterprise. Of course, financial risk is extremely important and play one of the main role in the activity of the enterprise. So, JSC “UKRTRANSGAS”

should pay attention to minimize such risk.

In the table 3.8 we present results of calculations of the mechanism on the corporate level.

Table 3.8

Assessment of the Effectiveness of Mechanism for Responding Risk on the Corporate Level of the JSC "UKRTRANSGAS"

Indicator	Type of risk	Forecast		
		Pessimistic	Realistic	Optimistic
Potential losses before the implementation of mechanism for responding to risks, mln UAH	Mannagement	21,26	21,26	21,26
	Personnel	14,7	14,7	14,7
	Information	19,01	19,01	19,01
Potential losses after implementation of mechanism for responding to risks, mln UAH	Mannagement	15,95	19,13	0
	Personnel	11,03	13,23	0
	Information	14,26	17,12	0
Expenses on implementation of mechanism for responding to risks, mln UAH	Mannagement	1,3		
	Personnel	1		
	Information	1		
The coefficient of economic efficiency of mechanism for responding to risks	Mannagement	8,99	6,54	16,35
	Personnel	3,67	1,47	14,7
	Information	4,75	1,89	19,01

Source: built by the author

Existence on domestic gas transmission company is revealed fragmentary functional risk management, at which risk factors are diagnosed by structural divisions of GTP independently, rather separate business processes and compliance with the carried-out functions. At it system complete approach to risk management within everything there is no enterprise, interrelations between risk factors are ignored, the possibility of obtaining synergetic effect of complex is lost managements of set of risks.

The comparative characteristic functional is carried out and the enterprise integrated approaches to risk management. The expediency of formation at the enterprise is proved the complex system risk management integrated into the general system managements of JSC "UKRTRANSGAS".

It is offered as the operating control subsystem risks of activity of gas transmission company to consider the head and board members of JSC

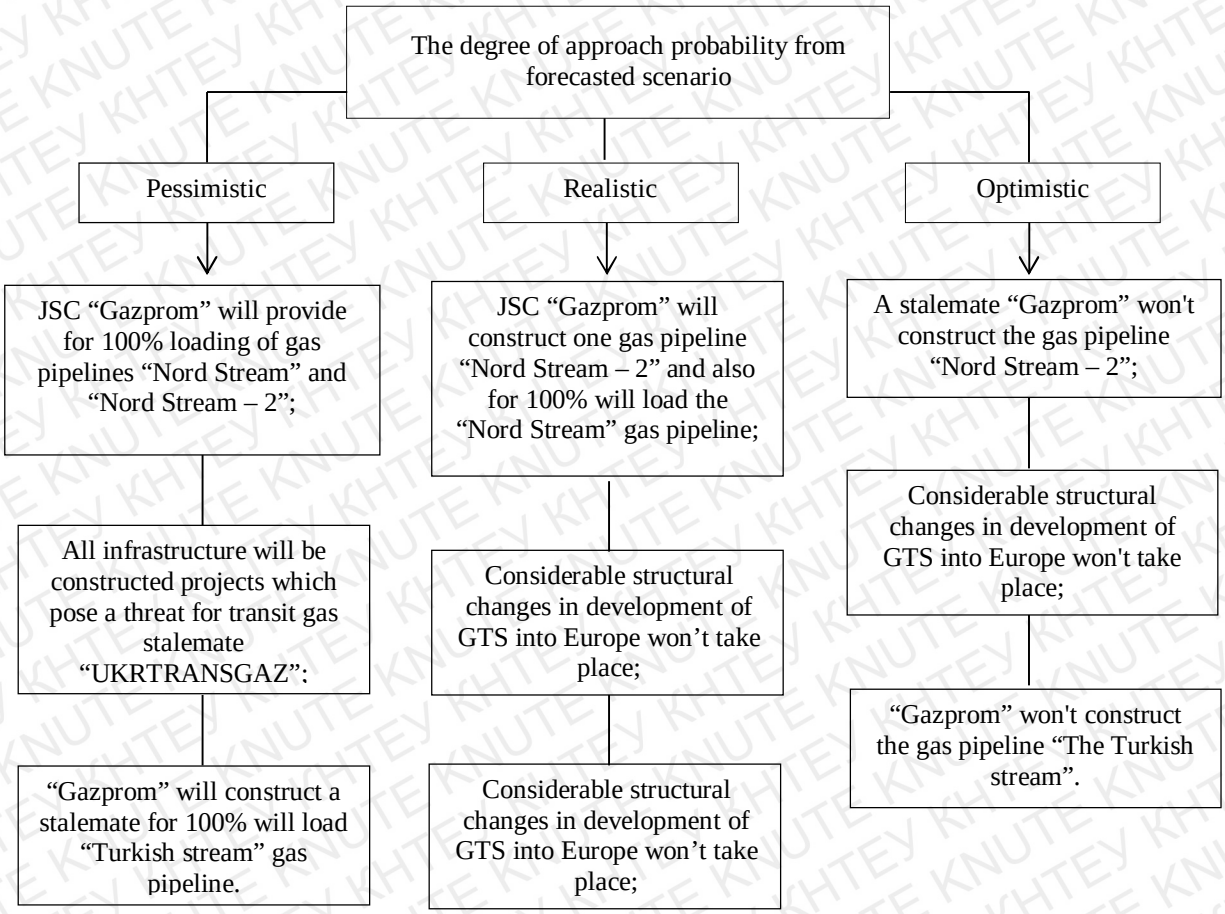
"UKRTRANSGAS", heads of departments transportation and underground storage of gas (if necessary can be also other departments), the executive director of society are attracted and directors of the relevant branch. Besides, it is recommended to expand quantity available departamet of JSC "UKRTRANSGAS" creation of risk management department which will coordinate process risk management in limits of all society and, therefore, will be the conceptual center the managing director subsystems risk management association activity.It is noted that each JSC "UKRTRANSGAS" branch has to have the regular risk manager subordinated department of risk management.The interrelation of key links of the managing director of a subsystem of the RMS is defined fundamental functional obligations [72].

Reasonably problem aspects of assessment of efficiency functioning of a risk management system at the enterprise. It is accented attention that quantitative assessment of results is possible, as a rule, only in that case when the risk was implemented. Otherwise to establish, in what measure the received result is a consequence of efforts of team risk management, not so simply. A number of indicators for assessment economic is offered and organizational effect of RMS functioning at the enterprise. It is specified on ponderability of social effect of introduction of complex system risk management on gas transmission company. It is developed the risk generalizing integrated effectiveness ratio – focused managements which will allow to consider all types of effects. Necessary condition of ensuring competitiveness and growth of business formation cost and culture of management is defined risks.

The list of indicator signs high corporate is developed culture's risk management and also are proved the main stages of introduction and cultural development risk management gas transmission company. It is proved the general algorithm of formation of the risk management program at the enterprise. The lack of such is stated programs on domestic GTP. The example of the program is developed and also estimated the efficiency. In the context of management national and international regional and global risks, influence on which from outside gas

transmission company is limited, the main is proved the directions of strategic policy in the sphere risk management at the level of public joint stock company "UKRTRANSGAS". For management of internal and corporate risks is developed the risk management program for one of regional. The efficiency of this program is estimated and it is specified its expediency practical introduction on GTP for process improvement, development corporate risk culture, increase the level of risk and improvement of financial and economic results of gas transmission company activity in general.

We have considered all levels of risk at the enterprise, and we can see that huge part of risks are in international level, so we presented three possible forecasted scenarios for the enterprise on the picture 3.1 below.



Picture 3.1 The Degree of Approach Probability from Forecasted Scenario for JSC "UKRTRANSGAZ" at the International Level

According with our forecasting from the most negative to the absolutely optimistic events, which also based on conditions from previous five years and situation nowadays, we can make a consumption of that amount of money, which JSC "UKRTRANSGAS" can lost or save in future if it use our method of risk minimization.

Calculations of these forecasts we presented in the table 3.9 below.

Table 3.9

Forecast of Risk Minimization Technology Influence on the JSC "UKRTRANSGAS" International Commercial Activity, mln UAH

Type of risk	Forecast		
	Pessimistic	Realistic	Optimistic
Political	5,68	2,67	26,71
Standart and Legislation	2,22	1,18	8,85
Credit	2,60	1,04	10,42
Gas supply	4,57	1,82	18,23
Competitive routes	9,77	3,91	39,06
Gas consumption	4,91	1,56	15,63

Source: built by the author

From the research and prospect further researches in this direction. Planning development of GTS of Ukraine, it is necessary to consider universal tendencies in the market of energy resources in general and natural gas in particular; interests of the import countries of natural gas, which try to monopolize the market of natural gas and the export countries which try to diversify ways and sources of deliveries gas; important also consideration interfuel competition.

Now guarantee of successful European integration domestic GTS is ensuring its competitiveness through modernization and updating technical and technological base, cost cutting on transportation of natural gas, improvement corporate structure and culture, improvement of accounting of natural gas.

Conclusion to the Part 3

In our work theoretical generalization is carried out and it is offered new decisions important scientific and applied task, related with improvement of theoretic and methodical provisions and development of practical recommendations on organizational and economic providing process of formation of an effective risk management system at gas transmission company.

The conducted research has allowed to draw a number of conclusions theoretical and practical character, basic of which are as follows.

It is established that uniform complete approach to interpretation of essence risk as economic category, today it is still not created.

Respectively aren't developed also the uniform conventional universal terminology risk as science. In the work own understanding is offered definitions of economic risk, based on understanding that risk it is inherent in any purposeful activities (inaction) of the subject managing, has future focus, is considered in a context achievements of a specific goal and always is in dualistic unities with chance.

For the characteristic of material and non-material resources the enterprises which can suffer losses as a result of realization of risk and to interfere with achievement of the goal, the term "risk projections" is offered.

The difference between concepts of "risk", "danger" and "threat" is reasonable.

The advanced conceptual and categorial device of a riskology was used in the course of development of conceptual bases of effective risk management activity at gas transmission company.

It is carried out the critical analysis and systematization of methodological tools of identification, analysis and assessment of risks of activity of subjects managing. Approach to classification of risks is offered gas transmission company on sources of their emergence which feature is allocation by the hierarchical

principle and taking into account branch specifics of managing of four groups of risks (internal, corporate interstate and international (regional, global) and also their components.

CONCLUSIONS AND PROPOSALS

The advanced system of the balanced risk oriyented is offered diagnostic indicators and methodical approach to construction matrixes of diagnostics of risks of activity of gas transmission company, allow to reveal a full range of risks, provide accurate identification of objects at the different levels of risk management, are open for continuous updating and adjustment in the conditions of dynamic changes of market spaces. It is developed to a trial criteria special model of assessment of risks activity at the gas transmission company which provides account probabilities of realization of a risk situation, degree of possible negative influences on achievement of the goal and importance of the purpose in the general system of the enterprise's purposes. Advantages of such assessment of risk is its universality (the possibility of application for assessment of risks at any level: from operating to strategic) a possibility of the analysis of situations as full, and partial realization of risk; consideration of a concrete type of risk in interrelation with the general system of risks of activity of the enterprise.

The main problems of activity at gas transmission are analysed the enterprises in the conditions of uncertainty, dangers and threats. Reasonably relationships of cause and effect between the existing problems and potential risks of activity. Tendencies of volumes reduction are revealed productions, gradual deterioration in a condition of material and technical resources gas transmission company, application of irrational

forms of service, insufficient financing of requirements of reconstruction and modernizations of GTP and so forth.

Among external factors of negative impact on functioning gas transmission company are defined critical dependence on import of natural gas; reduction of

internal volumes of gas consumption, opacity of functioning of the domestic gas market, absence weighed and consecutive, focused on a long-term outlook, state power policy; reduction of demand for gas in the countries of Europe; creation of new pipeline gas transmission routes around territories of Ukraine; difficulties with operation of GTS in the occupied territory and etc.

Complex diagnostics and assessment of risks of activity is carried out gas transmission company. It is revealed a negative tendency of growth risks at all hierarchical levels (in groups internal, corporate, interstate and international risks). It is established that in to long-term outlook activity of gas transmission company of Ukraine will depend substantially on tendencies of functioning international gas market. Key influence on activity of investigated agrees the enterprises will have regional and global risks (political, risks suppliers of gas and the competing gas transmission routes, etc.).

Theoretical provisions are generalized and systematized about risk management of the enterprise's activity in modern managing conditions. The state research risk management is conducted domestic gas transmission company, by results of which existence only of separate elements of fragmented is stated functional risk management, lack of system complete approach to risk management and low level corporate risk culture on GTP.

It is proved that the functional system risk management has a row essential shortcomings, ignoring of interrelation is basic of which between risk factors, and consequently, impossibility of objective assessment of their cumulative influences on achievement of final target indicators of activity of the subject managing. According to introduction of this system risk management expediently only when the risk range of the enterprise contains insignificant amount of local risks between which communication is absent or insignificant. Considering what gas transmission companies carry out the activity within JSC "UKRTRANSGAZ" are also structural elements one of the most large-scale industrial complexes of Ukraine, more as effective it is recognized the integrated risk management model.

Conceptual bases are proved and recommendations are developed on formation preventive to a basis of complex system, the activity integrated into the general control system gas transmission company. The main links of the managing director are defined

risk subsystems on GTP and their interrelation. It is specified on importance of development of corporate culture risk management gas transmission company. The list of indicator signs is created high corporate culture the main are also developed stages of introduction and cultural development risk management gas transmission company.

The main directions of strategic policy in the sphere is defined and also the program of risk management of activity is developed gas transmission company. The efficiency of this program is estimated and it is specified expediency of her practical introduction on GTP for process improvement risk management, development of a corporate risk culture, increase the level of a risk stability and improvement of financial and economic results of activity of gas transmission company in general.

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