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Financial Risk Management on Enterprises

Introduction

Financial activities of modern enterprises in all its forms is connected with a lot of risks, degree of influence on the results of this activity significantly increased in terms of competition.

Enterprise, by its definition, is one of the most trusted institutions in the society. It represents the basis for the stability of its economic system at this question of strategic management of business risk. Financial and economic securities of the enterprise are paramount. Concepts of financial risks, the scope of their occurrence, factors that create financial risk, classification, search; minimizing the consequences of the risks is the subject of scientific research and have a great application value [Streltsov 2011, p. 84].

Research Goals, Tasks, Objects and Methods

The goal of the research is to study the factors of financial risks, the features of their impact on the results of the activity of the enterprise and methods of neutralization of their actions. Introduction of this purpose is connected with the solution of the following tasks:

- to investigate concept “financial risk”;
- to define factors of financial risks and their influence on company activity;
- definition of the main methods of neutralization of financial risks at the enterprise;
- definition of methodical and methodological bases of financial risk management.

Object of research is finances of the Ukrainian enterprises and financial risk management.

The following methods were used in the research: analytical, statistical, normative, formalization, observation, etc.

Results of the Research

Risks are becoming an integral part of economic relations of economic mechanism of enterprises, because largely affect the financial results of economic activity and cause the emergence of the need to establish appropriate mechanisms for managing them.

Scientists believe that the first attempt scientifically define the essence and content of the concept of "risk" was made the mathematician of 18th century by Johannes Tetens. His research with the measurement of risk found practical application in life insurance. Further development of mathematics and insurance led to the fact that the term "risk" started to be used initially in insurance theory, and with the growing influence of scientific and technical progress on financial-economic and social life of the society which spread on the economic theory. The analysis of recent studies and publications, examines the problems in managing the financial risk of enterprises, shows that in the scientific literature the concept of "financial risk" and "financial risk management" are interpreted differently [Zhuravka 2006, p. 43].

Theoretical and practical aspects of the development of the risk management system at the enterprise was investigated by well-known foreign and native scholars, such as J. Keynes, G. Markovic, A. Marshall, F. Knight, J.-B. Say, N. Senior, A. Smith, G.J. von Tunen, J. Schumpeter, G. Bashnyanin, O. Bila, V. Zagorskij, G. Velikoivanenko, G. Verbytska, E. Velychko, V. Vitlinskij, Yu. Yermolev, I. Kachmarik, I. Kopych, Yu. Lysenko, A. Mazaraki, N. Mizuk, S. Nakonechny, M. Pavlishenko, V. Tochyulin, I. Shevchenko, etc.

The system of market attitudes objectively causes existence of risk in all areas of economic activities. The market environment brings elements of uncertainty in activity of the enterprises and increases "the range" of the risky situations arising at presence of specific conditions and circumstances. Risky situations shape conditions for existence and realization of economic risks to which practically all enterprises are exposed during their activity. Financial risks are an indispensable component of a business life, and management of them is a part of that scale work which any enterprise conducts for the sake of creation of cost. However crash of many companies and corporations which took place in recent years, testifies, that many of them not only possess systems of adequate risk management, but also badly understand character and peculiarity of risks to which their activity is connected [Zhuravka 2006, p. 45].

Financial risks should be considered as an essential element of the organization existence process on the market. Therefore, you can do nothing without an understanding of the causes of risk in general and its growth over the last period of the development of humanity. The main ones are the following:

1. Society development expands rapidly due to scientific and technical progress.
2. The environment of mankind activity is gaining market nature, it gives rise to a very brutal competition in which facts of numerous bankruptcies and collapses becomes normal.
3. An important problem is the growth of a global risk, i.e. the destruction of humanity as a result of their own actions.

The result of theoretic-methodological research has specified the essence of the financial risk as a component of economic risk and specific areas of its manifestation [Vinnytsya 2010, p. 170].

For deeper understanding of essence of financial risk, we will consider its basic elements.

First of all, object of financial risk – financial activity of the enterprise, efficiency and which operating conditions in advance precisely aren't known.

The subject of financial risk is the physical or legal entity interested in results of management of object of risk and possesses competence to make decisions concerning object of risk.

So the financial risk is a probability of emergence of adverse situations which arise at implementation by the economic subject of economic activity, that is loss of the economic income in the conditions of uncertainty of financial activity.

Thus, this approach covers all operations of each economic subject, expresses risk actions in financial performance and isn't limited negative a factors.

Sources of financial risk are actions, processes and the phenomena which cause uncertainty of a financial situation in the market.

The most common type of classification of financial risks is division on the external and the internal ones. According to this feature, external risks are the following [Stadnik 2011, p. 76]:

- inflation – that is the risk under which that inflation will go ahead of income of investment (i.e. the risk of impairment of the real cost of capital);
- deposit;
- tax (risk of changes in conditions of tax legislation);
- interest rate risk (the risk of changes in interest or size of income for investment);
- foreign exchange;
- Internal financial risks include;
- risk of decreasing of the financial sustainability;
- the risk of insolvency;
- investment;
- credit;
- risk of the lost benefit.

The classification system of risks based on the Generally Accepted Risk Principles (GARP) is widespread in the practice of forming the risk management system of companies GARP. It was developed by the auditing group of Coopers Lybrand that identifies the six risk groups: market, credit, liquidity, risk concentration risks, operational risks and risks of business events. This system of classification makes it possible to differentiate the financial risk and entrepreneurial risk and does not cover the entire scope of economic risk [Kolovorotna 2012, p. 168].

Financial risks at the enterprises can arise for the different reasons: limitation of resources, counteraction of partners, a weak and unstable national economy, inflation, increase of expenses at the enterprise, essential fluctuations of exchange rates of currency, political factors, an economic crisis, reduction of prices in the world market, competitive struggle and many other things. All these reasons have all external original, concerning the enterprise, that's why enterprise cannot supervise them. It is possible to enumerate such e internal reasons for formation of financial risks as: increase of expenses at the enterprise, unsatisfactory financial policy of the enterprise and etc. Their various combinations create variety of situations of risk under which it is necessary to understand unforeseen situations which have developed as a result of influence of uncertainty of factors of the external and internal environment on activity of the enterprise and can cause display of financial, material and other types of losses which can be estimated quantitatively.

The growth of the degree of influence on the results of financial risks and financial stability of the enterprise is connected with fast genetic variability in the country and the economic situation of the financial market conditions, expansion of the scope of the financial relations between business entities, the emergence of new financial technologies and tools, as well as a number of other factors. Therefore, the detection of the economic nature of the financial risks and their influence forms on the results of activity of the enterprise is one of the urgent tasks of the system of financial management.

Enterprise financial risk management is a specific area of financial management, which had been allocated in a special direction of activity – "risk management".

The main function of financial risk managers is to manage the financial risk management of the enterprise [Zhuravka 2006, p. 46]. Financial risk management can be minimized to six functions (Figure 1).

Management of financial risk represents process of studying of parameters of object and subjects of risk, the external and internal factors influencing on the object and behavior of the subject of risk, its optimization, planning, the account and the control, motivation and regulation of work performance on management of risk.

1. Forecasting is a development perspective on the changes of the financial status of objects in general and its various parts.

2. The organization is an association of people jointly implementing risk capital software attachments based on specific rules and procedures.

3. Assessment of financial risks – qualitative and quantitative analysis of markets in order to determine their impact on the project.

4. Planning and response to risks is developing of measures to ensure minimization of probability and weakening the negative consequences of risky events under the general increase of the probability of successful completion of the project.

5. Coordination – is a consistent work of all risk management system links, the management and definition of directions and stages of risk analysis activities.

6. Monitoring and controlling financial risk is monitoring of risky events, identifying new of risks, risk project management plan implementation and evaluation of the effectiveness of the action of minimizing risks.

Figure 1
Functions of Financial Risk Management

Source: Author's presentation.

Risk management is a challenge for all financial organizations. In general, management of risks is a process of an assessment of potential threats and the further development of the strategy for management of these threats. As a whole strategy includes avoidance of risk, decrease in its negative influence acceptance of some or all consequences of risk which nevertheless can't be avoided [Feridun 2006, p. 135].

One of the primary goals of risk management is developing programs of risk management which is the main document of all structural divisions' actions of the enterprise for prevention of undesirable event, minimization of damage after occurrence of such undesirable events.

Apparently, that the risk management's aim is to stabilize gaining by the enterprise of the planned profit, that positively influences its investment appeal.

Management of financial risks is one of the major functional problems of financial management. In practice this area of management becomes a specific direction of activity of financial management and is called risk management.

Goals which are put by the enterprise before itself at a specific stage of the progress, one way or another conflict with possible risks which accompany it on its way to the realization.

Only management of risks can resolve this contradiction. Therefore the analysis of financial risks does not come to an end only with their quantitative assessment, but the development of safety methods against risks is continuing, i.e. acceptance of administrative decisions on prevention, transfer or decrease in a degree of risks.

Management of financial risks becomes one of the most important conditions of maintenance of effective activity of the enterprise on the market. Thus methods and stages of financial management are represented by financial risks in Figure 2.

The qualitative analysis maybe rather simple, its main task is to define financial risk factors, stages of work on which performance risk arises, i.e. to establish potential areas of risk.

The quantitative analysis is the most complex and requires thorough knowledge, experience and intuition in the given area of economic activities. Its primary objective is to define risk factors, areas of risk and then to identify all possible risks [Vinnitska 2010, p. 170].

The complex approach to management of financial risks allows the director to make good use of resources, to distribute the responsibility, to make better results of activity, to provide an economic security of activity of the enterprise.

So, we shall consider in greater details the following methods:

– *economic-statistical methods* – are based on the mathematical theory of probability; allow to receive the most precise quantitative concept about a degree of probability of occurrence of risks, but these methods can be used at availability of the sufficient statistical information;
– *settlement-analytical methods* allow to receive rather precise quantitative concept about a degree of probability of risks on the basis of internal information base of the enterprise use (for example, values of planned targets of economic financial-activities). By means of the given methods it is possible to estimate economic risk, risk of insolvency and risk of financial analogy methods, to define the degree of probability of risks for the individual operations of enterprises; using these methods you can associate with the assessment of the degree of reliability of commercial, economic, price risk;
– *analog methods* means to define a degree of probability of risks on separate operations of the enterprise, use of these methods can be connected with an assessment of a degree of reliability of commercial, economic, price risk;

– *expert methods* – are applied only in the case when at the enterprise there is no necessary information or statistical data for realization of the further rated comparisons; these methods are based on interrogation of the qualified experts (insurance, tax, financial) with the subsequent mathematical processing results of this interrogation; expert methods can be used at definition of a degree of probability price, inflationary, percentage, tax, investment and other risks [Zhuravka 2006, p. 46].

As we can see that at present there are many approaches to the analysis of financial risks.

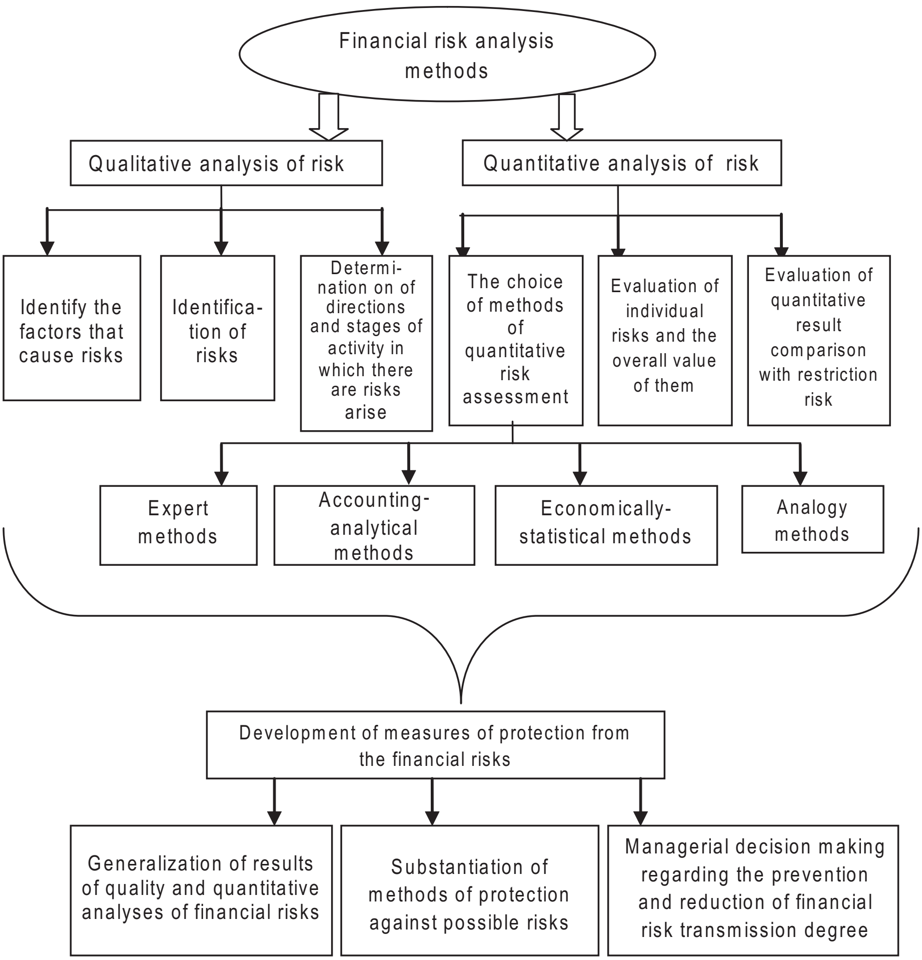

Figure 2
Collection Methods and Stages of Financial Risk Management

Source: Author’s presentation.

To estimate a level of financial risk it is probably possible also by means of a parameter of risk cost allowing giving uniform operative and easily understood assessment of possible losses of cost of a portfolio of actives for the certain period of time. It acts as the adequate standard of the information on risk of firm which is used inside of the enterprise of the company, as well as to be specified in reports for investors and adjusting bodies. Risk cost (VaR) reflects the greatest possible losses from variation of cost of the financial tool, a portfolio of actives, the companies, etc. which can occur for the given period of time with probable set of display.

Models VaR are the main tools by means of which the financial organizations define and estimate a level of the vulnerability and propensity to risk. In total Value at Risk (VaR) it is a cost measure of risk. Differently, it is the size expressed in monetary units which will not exceed expected losses during the certain period of time. There are many models for VaR assessment, each of them is based on the certain set of assumptions. However in the basic models it is possible to carry:

– a method of standard factor delta;
– historical modeling (historical simulation). Here supposed, that the profit which is given with actives, in the future will satisfy same distributions which they had in the past (historical market data);
– modeling by a method of Monte-Carlo [Kyshakevych 2008, p. 299].

Method of standard factor delta. Essential advantage of a method of standard delta factor is that it is extremely simple in use. However it has some lacks, namely: instability of used parameters and assumptions concerning normal distribution for all risk factors and linearity for all securities in risk factors. This method consists in calculation of fluctuations and correlations between all parameters of risk – the risk portfolio is calculated by means of a combination of levels of propensity to various factors and forecasting covariance matrix.

Fundamental requirements of this method is definition of a position of the company in relation to factors of propensity to risk, forecasting volatility and correlations for each risk factor. The method of standard delta factor does not suit for portfolios which keep options or tools with the built in options, such as the securities provided by the mortgage, the bond.

The historical method or method of historical simulations. Historical method too is rather simple. Profit distribution here can be wrong, and securities – nonlinear. This approach includes conducting historical accounting of the previous price fluctuations. As a matter of fact, it is a technique of modeling which assumes that, irrespective of understanding of a price movement and indicators throughout earlier period, at current estimation they can fall outside the limits forecasting. At application of a historical method actual changes have been taken, then these changes are analyzed and applied to existing rates, and already then used for a repeated estimation of a securities portfolio. A lack of the given approach is that it uses only one selective trajectory which can't effectively represent the future distribution of profits. This method demands the characteristic of stochastic process for each risk factor and a position of various securities and model of estimation for all assets in a portfolio. In general this approach includes returning back in time and studying of last incomes of bank assets through a prism of modern requirements.

Method of Monte-Carlo. The analysis of Monte-Carlo is considered the most complex method VaR. Many hours or even days are necessary to carry it out. Theoretically its essence consists in formation of some assumptions concerning distribution of variations of market prices and rates and the further data gathering for an assessment of parameters of distribution. Further these assumptions are used for the further analysis of variations and a repeated assessment. Then appropriating model VaR is chosen. Application of a method of Monte-Carlo helps to cope with superfluous with nonlinearity as at carrying out of this analysis are considered "non-standard" securities [Feridun 2006, p. 134].

In the system of methods of management of financial risks of the enterprise the dominant role belongs to internal mechanisms of their neutralization.

The major is the question of a choice of an effective way of neutralization of financial risks.

First of all, some internal mechanisms of neutralization of financial risks are identified. They include:

– *avoiding risk*. This direction of neutralization of financial risks is the most radical. It consists in development of such actions of internal character which completely exclude a specific type of financial risk [Zhuravka 2006, p. 45];
– *diversification* – strategy of decrease in a degree of risk by distribution of investments or other resources between several directions of activity. In the majority of cases this mechanism is possible only for the separate investor that is at an individual level, instead of at a level of the enterprise. Characterizing the mechanism of diversity as a whole, it is necessary to note, that it selectively influences decrease of negative consequences of separate financial risks. Providing doubtless effect in neutralization complex, financial risks portfolio of not regular (specific) group, it does not give effect of neutralization of an overwhelming part of regular risks – inflationary, tax and others. Therefore use of this method has the limited character at the enterprise;
– *a capping* – an establishment of a limit, i.e. the limiting sums of carried out operations on expenses, sales, investments, the credit and etc. More often a capping is applied to decrease financial risk in credit or investment activity of the enterprise;

- *self-insurances* is protection against financial risks. It provides creation of natural and monetary insurance funds directly at the enterprises. That is, availability of the sufficient alternate capital (it is shaped during the favorable period);
- *hedging* is a way of neutralization of the financial risks, connected with use of securities. It provides the way to reduce risk by means of the conclusion of the appropriating agreement. More often hedging are applied as means of insurance of cost of the goods or profits, as well as currency risks of the enterprise [Stadnik 2011, p. 76–78].

For financial managers of the modern enterprises the method of minimization of financial risks is comprehensible. It proves that it to some extent answers almost to all criteria put forward by experts, in particular such, as reliability, a coordination, influence of factors of an environment, efficiency, profitability, expenses of time. Though, this method has some drawback, such as availability of a supply with information and influence of factors of internal environment.

Conclusions

The financial risk by the nature assumes uncertainty therefore management of it and its assessment is very important for the enterprise. Financial risks accompany any activity of the enterprise. The financial risk is one of the most difficult categories connected with implementation of economic activity and is characterized by uncertainty concerning implementation of this or that financial operation in the future.

Management of financial risks is rather important for the enterprise and is considered as the key sphere of financial management where the considerable attention is given to studying of brave spheres, search of effective control methods, an assessment and monitoring of financial risks, to creation of the corresponding control systems of. Procedure of management by financial risks assumes use of the following methods: risk avoidance, limitation of concentration of risk, hedging, diversification, distribution of risks, self-insurance (internal insurance), insurance and others.

It is necessary to develop a control system of financial risk which will provide the timely prevention of its emergence, an assessment and localization for ensuring successful activity of the enterprise.

Therefore, expediency of definition of financial risk on which subjects of managing for the purpose of receiving profit agree to go increases, considering that the success in achievement of a goal in many respects depends on applied methods of control over financial risk.

References

FERIDUN M.: *Risk management in banks and other financial institutions: lessons from the crash of long-term capital management (LTCM*), Banks and Bank Systems, issue 3, Sumy, 2006, pp. 132–141.

HALAIMOVA A.: *Features of methods of control over innovative risks, «Activization and increase of efficiency of investment processes in Ukraine»*, Days of the theory and practice of investment, the electronic carrier, 2011: http://masters.donntu.edu.ua/2011/iem/halaimova/library/tez4.htm.

KOLOVOROTNA G.: *Critical analysis of essence of categories «Financial risk» and «Management of financial risk»,* Management of Risk, issue 2 (123), 2012, pp. 167–169.

KYSHAKEVYCH YU.: *Usage of variance-covariance model for portfolio VaR calculation*, Scientific messenger of NLTU of Ukraine, issue 18.10, 2008, pp. 297–301.

PARTYN G., BURBA O.: *Financial risks of the company and how they neutralize*, Scientific messenger of NLTU of Ukraine, issue 20.9, 2010, pp. 215–221.

PASERBA M.: *Need for the development control system in economic risk trading companies*, Scientific Messenger of NLTU of Ukraine, issue 2.10, 2010, pp. 200–202.

STRELTSOV A.: *Management of financial risks in system of strategic management of financial safety of the enterprise*, The Messenger of DITB, issue 15, 2011, pp. 84–86.

STADNYK I.*: The financial risks of enterprises and ways of their neutralizing*, Magisterium. Economic Studiosissue 44, 2011, pp. 75–78.

VINNYTSYA I., SHOKALO O.: *Management of financial risks of the enterprise*, Economic space, issue 942, 2010, pp. 168–173.

ZHURAVKA F.: *The methodological going near the management of enterprise financial risks*, Messenger of the Ukrainian Academy of Banking, issue 2 (21), 2006, pp. 42–47.

Ryzyko finansowe w zarządzaniu przedsiębiorstwem

Streszczenie

Skutecznie prowadzona działalność gospodarcza (jako całość) zależy od podejścia do zarządzania ryzykiem w przedsiębiorstwie. Celem w procesie zarządzania ryzykiem jest ograniczanie i minimalizowanie, na ile jest to możliwe, ryzyka.

Artykuł przedstawia metodologiczne oraz metodyczne aspekty zarządzania ryzykiem finansowym w przedsiębiorstwie. Opisano podstawowe zasady, etapy oraz metody zarządzania ryzykiem finansowym. Ponadto wyróżniono kluczowe czynniki kształtujące ryzyko finansowe, w szczególności wpływ wewnętrznych mechanizmów ich neutralizowania na działalność przedsiębiorstwa.