

Розділ 3

Інноваційний менеджмент

УДК 330.131.7:658:005.334

Neykova Rumiana,

*doctor of economics, professor, head of «Marketing and management» Department,
University of insurance and finance (Sofia, Bulgaria)*

THE RISK OF THE INDUSTRIAL ENTERPRISES AND ITS MANAGEMENT

The study is initiated by some theoretical, methodological and practical problems of risk in the industrial enterprise as a prerequisite and a condition for its effective and competitive management. Here are placed the problems for the core and the characteristics of the risk and its relations to the results from the enterprise's activities.

Keywords: risk, risky situation, industrial enterprise, business environment, accident, uncertainty, ambiguity.

Introduction. The risk analysis in the industrial companies is an actual problem especially now when the business environment becomes strongly changeable, aggressive and unforeseen. For taking any decisions in such an environment by managers is necessary to have knowledge about foreseeing and evaluating the possible hazardous situations, their prevention and overcoming. The appearance and the development of hazardous situations in the industrial enterprises are due to the high level of ambiguity, uncertainty and unclearness in the behavior of the economic operators from business environments.

The subject of this article is the essence of risk and its main characteristic.

The author's positions are due to personal point of view and personal acceptance of the situations, related to the risk and its management in the industrial enterprise.

The basic material. The risk is a potential possibility or contingency of formation of a definite event that will affect a given object and will provoke damage (loss, failure, unsuccess, negative results, deviation, failure, annihilation of property or injury, accidents, death, etc.) or will appear as a chance for profits or other happy moments.

Regarding the industrial enterprise the risk can be defined as a "possibility for negative deviation from targets" or as a "possibility of creating negative difference between the targets and the results" in a given situation during a given period of time. It is related to the possibility of generating an event that will damage or annihilate the objects owned or managed by the industrial enterprise – its assets. The risk might mean a potential loss or variations of potential losses, as well as indefinite losses, or a possibility of not achieving the expected (planned, desired, predictable) incomes, costs, earnings or profits. The risk is something that could happen to everyone in any moment and to cause damages and losses. For example, the

industrial enterprise may lose a part of its resources, may not receive a part of its incomes or may accomplish additional expenditures for its activity due to the risks. In other cases, however, the occurrence of the risk may cause positive and profitable implications. “The risk has to be viewed as a result of an action or inaction, resulting in a real possibility of receiving indefinite results with different character, influencing positively or negatively the financial and the economic activities of the enterprise (6, 25)”.

Different risks endanger the property in the industrial enterprise and the life of its staff. Every particular risk is an uncertainty that could happen, a probable possibility of occurrence of a crucial event that will cause losses (for example fire in buildings or road accidents, theft, improper change of currency and bank rates, decrease of the necessity of the industrial production, decrease of the value of some assets, etc.) or violation of the state of health or the physical state of the individuals (temporary or constant disease, disability, death). The risk is wide-ranging and concerns the interests of the enterprises and the individuals in all fields of their activity. As a whole, the risk in the industrial enterprise can be defined as every possible issue from a given hazardous situation (Risky situation is regarded to be the totality of all hazardous indications, conditions and circumstances that create the situation, in which the industrial enterprise is functioning with the existing and interacting external and internal components which are potential causes for damages (dangers attending the industrial work and the potential factors which may influence negatively the resources and the activities (phenomena, staff’s work, malicious activities of other people, products and services, the market, business environment, etc.)). The combination of the different conditions and circumstances creates the context for different activities. They make possible the evaluation of the probabilities for occurrence of future events.). Unlike the big part of the definitions, pointing on the negative results of the risk, that definition includes the negative and also the positive issues. That definition presents its qualitative characteristics. If the issue of a given event is absolutely predefined, there is no risk; if, however, it has a possibility for an even slightest diversity of the expected results (irrespective of the positive or negative direction), the situation includes risk at some extent. The definition “every possible issue” means how to bring out the quantitative characteristics of risk. In order to express numerically the extent of risk it is necessary to find a way to measure mathematically the possible diversity of issues. For example, the statisticians apply dispersion as a precise instrument for measuring the diversity.

The risk is also mathematically defined. It is expressed quantitatively as an extent of probability of damage (material damages, losses, accidents). Mathematically the risk is a measure for the deviation around an expected quantity, a level of dispersion of the values around arithmetical mean quantity. That probability is not always a mathematical problem, because it is a function of *the type of the damage or the loss*, issuing from different risks: fire, earthquake, floods or accidents, non-payment of debts of deferred or sinking payments of bank or other credits, big change in exchange rates, change in interest rates, risk of theft, robbery, fraud, risk of non-receiving of incomes from the invested resources or the resources themselves, etc. The algorithmic approach is applicable in evaluation of the level of the risk, when there are real losses of concerned objects and also for the capital and the interests of claims and liabilities of investments and credits. Through this approach the final result is received from the initial variables through definite procedure way. The evaluation, however, could not always be a simple mathematical formula, because it could not stand the constantly changed conditions in the work of an industrial enterprise. For this reason along with the algorithmic approach we can apply the heuristic explanation of the risk that includes analysis

and evaluation of uncertainty and ambiguity. The heuristic approach is applicable for events for which there are unstructured or slightly structured data, for solving problems that could not be solved by algorithmic methods, for the expected changes of currencies and interests and also for unpredictable future events. The methods, used in this approach are non-procedural and through mental process, created by fundamental theories and expert knowledge construct qualitative arguments and quantitative results which become a basis of developing different decisions. Due to this it is possible to point the correct action for preventing and decreasing of risk, for predicting the results of it, for identifying the tendencies of its development and its evaluation.

Each manager has a kind of inner sense about the essence of risk, relating it with something expectable, unwanted and dangerous. One of the most difficult questions for all sciences, related to the problems of risk is to make a suitable definition of it.

Because of the existing variety of definitions of risk it is always necessary that meaning to be specified. The choice of the precise definition of risk has specific meaning for constructing a strategy for reliability and most of all for defining the prevention that will lead to neutralization of all factors that influence it and to diminish that influence over the industrial enterprise.

The impartial existence of risk is related to phenomena not linked to our will, that is, earthquakes, floods, hails, storms, hurricanes, etc., that are really dangerous. There are also situations in which the man is the main person, that is, troubles in the industrial enterprise, ecologic pollution of air, soil and water, the market situation concerning production and sale of goods, damages by other people, vandalism, terrorism, etc., in which the objective category of "danger" withstands with the subjective category of "risk".

The risk in the industrial enterprise is related also with *uncertainty*. It is personally realized sense of risk in a definite situation and has an objective, as well as subjective character. It is "a complex psychological parameter of the subjective situational thinking and confidence, determined by the extent of knowledge, information and experience and influencing the behavior of individuals in decision making process in a given situation" (1, p. 9) and is related to doubts of a person regarding the ability to predict the possible results. The uncertainty is a negatively evaluated event that could not be evaluated by the particular person and is related to the future. It is created by insufficient knowledge, by undetermined situation, by the ambiguity of the size of the potential damages or issues and their influence over the economic position of the company. The uncertainty is a quality, defined by people for a given process or event, because the regularities of its course are not defined yet.

The risk is related and also is different from the category of *indefiniteness*. With risk it is possible to evaluate the probability of a possible issue or the distribution of issues by statistical analysis of the state of the object for previous periods or by presumptive measuring. With indefiniteness the probability of occurrence (or not) of a given event is unknown and cannot be evaluated, i. e. it is not clear what, when and how could occur. There is indefiniteness even when the potential possible issues are well known but the distribution of possibilities in the particular situation is not familiar. The indefiniteness in the organization is "a possible situation, reflecting the status of an event, generated and established by the position and the behavior of the system's elements (material components, processes and phenomena) It is available in cases when the system's elements are situated in a way that they behave ambiguous and uncertain in time and space" (1, p. 10).

With the notion of risk are related the notions of *damage and harm*. Whereas the risk is a possible negative deviation, a potential cause for damage and harm, the damage and harm are

real and actual negative deviation. Every loss of property is a damage that is real, even after compensations of different character. It is a realization of risk as a real possibility that leads to depreciation or loss of a quality of a given object. According to the definitions and the characteristics in *The Dictionary of the Bulgarian language* **harm** is also an inevitable result from the realization of risk.

In the industrial company the risk could have different resources for its origin: mistakes of management change in markets, calamities, etc. The risk is manifested through majority of particular hazardous situations which can be due to **accident, change or mistake**.

The accidental phenomena or events are objective as a whole and they occur regardless of human will. For example, an industrial accident could arise without any regularity, incidentally, and it could have great material damages or it is possible new technologies to appear that could make a radical change in the industrial processes, or it is possible managers to make a quick and incorrect decision due to insufficient information and knowledge. The accidental factors have crucial importance for the industrial company, because they generate events that not only influence negatively the financial status, but they change its competitive positions too.

The second hazardous case of creation of risky situation is the changes that take place in reality. They can occur in the production (in resources and materials, in products, in technologies), in legislation (tariff and fiscal policy, regulation), in economic environment (in the structure and processes in economy, in currencies, in interests, etc.), in nature (geological and meteorological changes), in society (civil wars, revolts, strikes, take-overs, criminalization, etc.) These changes are not always predictable in evaluation of risk and they often lead to deviations in size, number or value as compared to the predicted, expected or prognosticated ones.

The third particular case of occurrence of hazardous situation is mistakes in evaluation of the probable distribution of the expected issues (losses) and in conducting a particular activity or in practicing of a particular job. The reasons for mistakes in risk evaluation can be different: use of unreliable ways, methods, approaches and techniques for evaluation of risk, lack of necessary information, incorrect information, personal mistakes, etc. Personal mistakes are due to the lack of necessary information, knowledge, experience, carelessness, failure in performing obligations, willful defaults, inertness or objective reasons.

In fact those three cases for occurrence of risky situations in the work of the industrial companies are interlaced in the whole evaluation of risk. So that's why the direct analysis of each particular risky case is possible, but hard to accomplish in practice, due to difficulties in collecting the necessary information for each of them.

In realization of risk occur real damages and troubles. The consequences from risk are largely strong in cases when it is unidentified and vice versa. So it is necessary to have a constant observation and examination of risk to make possible the prediction of future troubles. Therefore, before conducting a particular work the risks have to be examined and observed. The more ambiguous is a particular work, the bigger is the risk. In management, however, there are a lot of reasons and factors contributing the neglecting of risk. One of it is that there is an internal inherent disadvantage in management piled in time and traditions. The ambitions of managers is to decrease the expenditure and cost price of products and services, to increase the volume and evaluation of products, to incorporate new technologies, etc., and the damages they may occur are out of their minds. Another reason is that there is no such job that can detect and manage the risk (risk manager) and the conduct of this activity is regarded as a part of the whole management of the industrial enterprise and is conducted by the

manager or by his executives or by persons making the strategic planning. In the third place, some managers of industrial companies are not inclined to run the risk, because they do not evaluate its role for the final results. Moreover it is possible in a particular industrial company to exist dangers that are not clearly realized and evaluated and very often they are accepted as a part of business work. Thus, the range of analysis of the activity is narrowed and the important problems of risk and its influence over business remain outside this range. Another important reason of neglecting the risk is that it is an event or phenomenon that hardly undertakes precise value, thus resulting in management too.

Sometimes the risk and uncertainty can bring advantages in the activities and running the risk by some managers could appear to be a motive power for the industrial enterprise and its work, because the innovations, the creation of new products and incorporation of new technologies are related to keeping of competitive advantages. "The challenges in keeping advantages from the new possibilities for generating value and welfare force the industrial players to run more risk in competition, as well as to develop experience" (10, p.26). The factors that determine the running of risk in an industrial company are the following: the type of the regulators and regulatory adjustments towards the business, strategies of the company for its management and financing of the risk, the relationship between the risk and the main owners and shareholders; initiatives and activities of management; the applied information technologies, etc.

The analysis of the risky situation in a particular industrial enterprise is useful in directing business in a correct direction when defining the strategies and also in overwhelming the negative risks, arising as an obstacle for success and reaching the goals. For that reason the industrial company could use the help of the advisers, such as that of Business Environment Risk Intelligence – BERI, which is a private enterprise, founded in Geneva for analyses and prognoses in business environment. It analyses and ranges the business risk and the lender risk by evaluating the political conditions and perspectives in business environment. The evaluation in business is formed on the basis of operative, economic, political, financial and monetary variables. It varies from 0 to 100 (maximum good conditions).

The correct management of business in the conditions of the existing risky situation of the industrial company depends on human resources, which is not always well oriented in it. The flourishing industrial enterprises succeed to create a sense of motivation, devotion and innovation in staff by successfully overcoming the inherent human contradictions.

Therefore, in order to reach the targets it is important for the managers of the industrial enterprise to follow, investigate and study the potential risks, related to their activities and to apply the necessary methods, approaches and devices for their prevention and restriction. This leads to decrease of damages due to risks and to increase of the effectiveness, productivity and competitiveness in business.

The problems of risk and its management in the industrial enterprise are various. They have an important meaning for the normal and effective conduct of the industrial work in the company. This study refers to some aspects of the risk and its management, primarily in the industrial enterprise. The article does not refer to the problems related to the market, management and financial (investment) risk, which are a major part of the risk in the industrial company.

The great number of problems of risk and its management in the industrial enterprise cannot be solved separately. It is necessary to have cooperation between the scientists and the specialists for the development of formulations of the system of detection, control and management of the risk in the industrial companies.

Розділ 3 Інноваційний менеджмент

1. Габровски, Р. и Б. Илиев. Корпоративен риск мениджмънт. Свищов, СА, 2000
2. Гаврийски, В. Икономика на застраховането. С., Фондация „Проф. д-р Велеслав Гаврийски”, 2003
3. Драганов, Хр. Управление на риска. С., Тракия-М, 2003
4. Илиев, Б. Управление на риска в застрахователното дружество. Годишник на Висшето училище по застраховане и финанси, т. I. С., изд. на ВУЗФ, 2005
5. Каменов, К. и др. Управление на риска. Свищов, 2000
6. Кинев, Ю.Ю. Оценка рисков финансово-хозяйственной деятельности предприятий на этапе принятия управленческого решения. Менеджмент в России и за рубежом, 2000, № 5 – <http://www.dis.ru/library/manag/archive/2000/5/1514.html>
7. Нейков, М., Р. Нейкова. Рискът и застраховането. С., Алма Матер интернационал, 2003
8. Питър, Т., Р. Уотърман, Към съвършенство във фирменото управление. С., изд. „Наука и изкуство”, 1988
9. Източник: Ullberg, E., Rodrigues, E. and Stormby, N. Risk Management: From Portfolio Strategy to Value-creating Systems Strategy. The Geneva Papers on Risk and Insurance (Issues and Practice), Vol. 27, No 2, July, 2002 - Цит. по: Габровски, Р. Архитектурата на европейския застрахователен пазар: предизвикателства, възможности и проблеми на националния застрахователен бизнес. Годишник на Висшето училище по застраховане и финанси, т. II. С., изд. на ВУЗФ, 2006

Румяна Нейкова

Ризик промислового підприємства та управління ним

Дана стаття присвячена деяким теоретичним, методологічним і практичним проблемам ризику промислового підприємства як передумови і умови ефективного управління ним та його конкурентоспроможності. Розглядаються проблеми природи і характеристики ризику, його зв'язку з результатами діяльності підприємства.

Ключові слова: ризик, промислове підприємство, бізнес-середовище, невизначеність, двозначність.

Румяна Нейкова

Риск промышленного предприятия и управление им

Данная статья посвящена некоторым теоретическим, методологическим и практическим проблемам риска промышленного предприятия в качестве предпосылки и условия для эффективного управления им и его конкурентоспособности. Рассматриваются проблемы природы и характеристики риска, его связи с результатами деятельности предприятия.

Ключевые слова: риск, промышленное предприятие, бизнес-среда, неопределенность, двусмысленность.

Отримано 04.11.2010 р.