

CLASSIFICATION OF RISK AREAS OF ACTIVITY OF ENTERPRISES

Edyta Bielińska-Dusza

*Cracow University of Economics, Department of Strategic Analysis,
ul. Rakowicka 16,31-510 Kraków, Poland
Email: edytadusza@gmail.com*

Abstract. The article presents problems of classification of risk areas in an enterprise. The risk is inextricably linked to the existence of any enterprise, so it is important not only to identify but also to provide for those sensitive areas of the enterprise. In the face of the turbulent character of the environment and economic crisis, risk identification is of particular importance. The objectives of this article are: preparation of a classifier for the risk of the enterprise's activities, as well as characteristics and adoption of the definition of classification, as well as the risk of the enterprise's activities. Our research procedure will be limited to characterizing the notion of classification, analyzing the risk and finally we will make an attempt to present a classifier for the risk of the enterprise's activities, along with referring to functioning of companies in the conditions of the economic crisis.

Keywords: risk, classification, classification of risk, business environment, crisis economics.

Jel classification: H83, M42

1. Introduction

The risk the enterprise's activity is connected, on the one hand, with the internal environment, that is: type and features of the organization, the features of the employees, the type of organizational culture, the functions of business operations, or the chief directors and the supervisory board. On the other hand, the conditions of functioning within the enterprise's environment are seen as important (Gierszewska, Romanowska 2009; Johnson *et al.* 2010).

The areas of the activities risk, from the point of view of the environment, may relate to both some features of the environment, and, therefore, political, economic, socio-demographic, cultural, international and other conditions, as well as the situation within the sector. This applies in particular to the intensity of competitive fight inside the sector, the possibility of emergence of new, substitute products, the force in negotiations of suppliers and recipients, or shortening life cycle, development of scientific, technical, social progress, as well as shortening the period of duration of economic expansion. According to Chudzyńska – Stępień (2011), the duration of economic expansion has been shortened from 58 months to 24 months.

The risk is an imminent feature of the contemporary globalization, the turbulent character of the environment of enterprise operations and is inseparably related to the enterprise's activities. Therefore it may occur in every enterprise, regardless of the size, the trades or the historical tradi-

tions, at the same time, threatening correct functioning. Companies, in the present economic conditions, should focus not only on predicting, but also on effectively counteracting negative phenomena.

In connection with the above, the objectives of this article are: preparation of a classifier for the risk of the enterprise's activities, as well as characteristics and adoption of the definition of classification, as well as the risk of the enterprise's activities.

Our research procedure will be limited to characterizing the notion of classification, analyzing the risk and finally we will make an attempt to present a classifier for the risk of the enterprise's activities, along with referring to functioning of companies in the conditions of the economic crisis.

2. The essence and the meaning of the notion of classification, as well as the risk of the enterprise's activities

When conducting the analysis of the reference books with regard to management, as well as the issue of risk of the enterprise's activities, it is possible to reach a conclusion that, in order to fully understand the nature of the examined phenomenon, this analysis should begin with the presentation of the notion of classification, as well as the essence and the meaning of the notion of the risk of the enterprise's activities.

For transparency of this article, as well as taking into account the assumed objective, the synthetic presentation of basic classification assumptions seems significant (Bielińska-Dusza 2009).

Generally understood classification is a process of dividing and combining, which, through multi-purpose transformation of the structure of an object or a set is to lead to putting the elements of the structure or a set in order (Antoszkiewicz 2000). The task of classification itself may assume different forms of grading, taxonomic ranking, ordering. Pursuit of classificatory solutions is intended to determine the direction and the scope of systematization and hierarchization.

Systematization is an “activity consisting in listing – in a single-stage or a multi-stage system – the components of the given whole, basing on the type classificatory criterion” (Stabryła, Trzcieniecki 1980). Whereas hierarchization “is an ordering activity referring to simple elements of single classes of similarity (division) in a given classificatory rank or to classificatory ranks, and it consist in their placement according the section of validity, the temporal sequence (chronology of occurrence) or also because of causality relation” (Stabryła, Trzcieniecki 1980).

Another name for the multi-level classificatory system is the “hierarchical classification” where the word “hierarchy” indicates superiority from the point of view of the conceptual scope of the set, divided in relation to subsets introduced, as a result of classification.

Conditions of correct classification:

1) There is at least one element in the object of classification; 2) In the second classificatory rank, overlapping of similarity classes does not occur; 3) The sum of elements of at least one rank is completely consistent with the sum of elements belonging to the general class of the object of classification (Stabryła, Trzcieniecki 1980).

One of the fundamental problems of classification is selecting the function of the object of classification. The function of the object can be defined as a feature or a complex of combination of features that the analyzed object should have and fulfil. Stabryła (1974) pays particular attention to the fact of “occurrence of phenomena of exclusion of some functions by other, the presence of the so-called empty functions, as well as unnecessary functions resulting from irregularities present in the process of division or classification”.

The most common reasons for incorrectness of division include the lack of the strict separation of the basis or the feature, according to which the division is done, and independent features. They can lead to violating the principle of separation, as well as the completeness of division (Stabryła 1974).

It should be pointed out that the process of correct classification consists of five stages concerning determining:

1. Object of classification that is the whole being a specific or an abstract object or a collection or a set of objects.

2. Element that is the smallest component of the object of classification (the whole) that will not be subject to further division. At this point, it should be remembered that these elements are the consequences of only the agreed indivisibility that was adopted by the person conducting the classification.

3. Classificatory criteria that is single characteristics or complex features, according to which the object of classification is divided, or combining the elements. The classificatory criterion is otherwise referred to as the basis for division (combining). The classificatory criteria indicate quantitative and qualitative distinctiveness or similarity of objects or categories. In order to carry out correct classification, separated criteria are recommended to be arranged, according to the decreasing value of a feature.

4. The next stage is connecting the classificatory criteria, consisting in indicating the method treating single classificatory criteria as a whole. In other words, the formula of connecting the classificatory criteria indicates the order of their application to the object of classification, starting from the general class up to the elements or vice versa.

5. The last stage consists in determination of criterion of classification effectiveness that is the measure of usability evaluation for a specific solution of classificatory task. The problem here consists in the fact that the same object of classification may be classified in different ways, thus it can be depicted by various classifiers. Then it is necessary to determine which solution – in the form of the specific classifier (classificatory scheme) or ranging matrix – is better than the other.

It should be pointed out that the classifier is a “one-grade or multi-grade system of similarity classes. It is usually presented as: a graphic form as a dendrogram that is a tree or a classificatory scheme, a table form as a classificatory grouping table (by means of appropriate numbering symbols)” (Stabryła, Trzcieniecki 1990; Lisiński, Martyniak 1981).

As emphasized by Trzcieniecki and Stabryła (1990), a basic classificatory unit is an element or a group of elements that have been conventionally specified as the class of similarity with the required size for the needs of a specific research. This means that the “primary enumerating classification may contain classes of a lower degree, other than those that have been selected as the basic classificatory units” (Stabryła, Trzcieniecki 1990).

The probability class is, on the other hand, defined as a set of similar elements owing to the

given classificatory criterion. The main criterion for differentiation of particular classes is the size of a class or the number of elements (or conditions) which meet all the conditions of affiliation to a specified class of similarity.

To diversify the sizes of classes, it is necessary to introduce a procedure consisting in a change in the quantitative structure of features comprising the notion of a specified class. The scope of the notion thus indicates the size (the number of elements) of the class of similarity. The size of the similarity class depends upon conducting one of the possible procedures – expansion or narrowing. Expansion of a class means eliminating some features of similarity, while narrowing is an activity of distinguishing subsequent particular features in a given class (Stabryła 1974).

Owing to the size, the following classes are enumerated:

Elementary classes – they form the smallest proper classificatory unit, being a result of narrowing the notion. The classes of this kind are not subject to any further division into smaller units, that is subclasses.

Temporary classes – are the extension of the elementary classes to higher-degree classificatory units. These are intermediary classes, occurring between elementary and general classes.

General classes – they are not subject to expansion, and are limited with the proper scope of a given general notion (Stabryła, Trzcieniecki 1980).

It is recommended, when conducting classification according to the size of similarity classes, to clearly specify the “consideration of similarity”, that is the condition of the object, in a given moment, for the distinguished class. From the point of view of effectiveness of classification, the crucial thing is to find measure of comparability of particular functional classes, as well as the hierarchy of functions owing to accuracy of identification of the object’s state. Hierarchization of functions understood in this way enables indication of validity of the functions in the aspect of replacement, as well as in the sense of recognizing the object (the condition) as recognized completely or only partially. According to Stabryła (1974), inappropriate classificatory units are either empty classes, or classes which overlap with units of a superior (inferior) rank. Therefore, it seems that in some conditions, it is possible to resign from the full description of the object’s condition, and it is enough to conduct only partial characteristics, so that the identification could be assumed as correct.

The above presented short characteristics of classification enables, in the further part of the article, to propose a classification of risk areas for

the enterprise’s activities. First, however, we will discuss the notion of the risk of the enterprise’s activities.

Fulfillment of the objective of the article assumed by us is inseparably associated with estimation of risk, which is an inseparable part of functioning of any organization. The term “risk” is commonly used with regard to economic activity and the insurance theory or at decision-making (Zeliaś 1998).

The analysis of the reference books provides many definitions of risk (Bernstein 1996; Griffiths 2005; Borkowski 2008; Staniece *et al.* 2008; Kaczmarek 2008; Fierla 2009). We will refer to the definition according to which “the risk is a hazard that actions or events will affect, in an adverse manner, the ability of the organization to achieve its goals and successfully implement the adopted strategy” (Griffiths 2005). This definition indicates that a risk is a hazard related to a certain event, having negative impact on the results achieved by the enterprise.

As correctly pointed out by Griffiths (2005), a risk might also bring a positive result, and thus in this publication, the risk will be defined as an action or an event having a positive and a negative impact on the activities of an organization and achieving its goals. Additionally, an important thing is also the probability of its occurrence, the importance as well as the strength of impact on the organization.

We have noted above that activities risk areas, from the point of view of the environment, may relate to both some features of the environment, and therefore political, economic, socio-demographic, cultural, international and other conditions, as well as the situation within the sector. Certainly, the years of the crisis which began in 2007 make enterprises operate in particularly difficult external conditions.

A crisis, apart from the encyclopedic meaning, which means a decreasing phase of the economic cycle (Gesicki, Gesicki 1996) or a periodical or rapid decrease in the activity of economic life, expressed by reduced production and employment size, reducing prices, bankruptcies of companies and unemployment (Pawlik 2010; Sztaba 2007), results in economic stagnation, uncertain times for all companies regardless of the size, more and more often frequent collapses of large concerns such as e.g. Lehmann Brothers. There are drops and fluctuations on the stock exchange, there is a reduction in the actual income and the living standard of the population, a decrease occurs in trust towards currencies, banks or political systems (The crisis, its origin, the essence

of crisis is more broadly discussed by among others (Roubini, Mihm 2010; Krugman 2008; Minsky 2008; Taleb 2007; Ghosh 2001; Galbraith 1929; Kindleberger 1986; Minsky 1992). In such conditions, it becomes harder and harder to anticipate the future, regardless of the time horizon.

As correctly pointed out by Sztaba (2007), a crisis is a necessary phase in the economic development, as it forces a change in the strategy of companies and governments, which, under conditions of good economic situation, would not have been conducted. On the other hand, it is important maintain it within a reasonable range, not distorting the social order.

Consequently, the issue of efficient management becomes nowadays an extremely important topic. This results from the fact that the proper management process conditions efficient implementation of the enterprise's objectives. On the other hand, the dynamic character of the enterprise's environment results in the fact that the determined ways of activities are not always effective. As a result of frequent internal and external changes, management of an enterprise becomes highly complex. For this reason, the companies more and more often use contemporary management tools such as e.g. internal audit, which, by means of, among others, risk analysis and ways to eliminate risk, contribute to the enterprise's improvement and facilitate its management (Lisiński 2011).

The risk is inseparably related to the activity of each enterprise, regardless of its characteristics.

It seems, however, that it is relatively easy to assess the risk from the point of view of its size, importance and the impact force, while it is definitely harder to estimate the probability of emergence of a given risk. We will assume that the likelihood of a risk occurrence is a derivative of the effectiveness of control applied by the management of the enterprise. The worse the control levels of a given process or a function, the greater the probability of exposing it to the risk. However, interpretation of the control effectiveness is a subjective notion and may be the object of discussion between the auditor and the manager. Even at the best intentions, it is extremely difficult to completely eliminate subjectivity in the risk assessment, especially when we refer here to the issues of effectiveness, quality and opinions. For this reason, it is recommended that all parties taking part in the process of risk assessment were aware of the existing constraints and undertook actions aiming to reduce and/or understand the subjective aspects of this process (Chambers Board 1999). While discussing the issues of risk identification,

attention should be paid to the competences of the people identifying them (Coderre 2009).

To sum up, it can be stated that a risk is an inseparable element of functioning of every enterprise and may constitute a hazard in pursuit of implementing its assumed goals. That is why it may prove to be important to use internal audit in its identification. Below, we present risk areas that can be diagnosed in companies.

3. Classification of risk areas for the enterprise's activities

Assuming the above assumptions, we offer our own proposal for the classification of risk areas of the enterprise. Its basis will be the previously adopted definitions of classification and risk.

While conducting critical analysis of the reference books, the author has distinguished two basic kinds of risk. The first one includes general risk areas of the enterprise's activities, while the other one covers detailed risk areas of the enterprise's activities. However, because of the theoretical and methodological character of the article, we will present their short characteristics.

The general classifier of risk areas of the enterprise's risk, under which the author has distinguished the following criteria:

1. Organizing process, whose risk results from the complexity of activities running in stages and in various thematic scopes.

2. Implementation of the assumed goal, whose risk results from the assumed objective and its implementation with the use of resources and funds.

3. Commonness, whose risk results from the possibility of common occurrence.

4. Acquisition and analysis of information, whose risk results from acquisition, information processing, IT technology, knowledge management; originating both from the external environment and the internal environment.

5. Making decisions, whose risk results from managing and organizing the decision-making process.

6. Functioning of internal control, whose risk results from imperfections of the existing internal control system.

7. Managing level, whose risk results from improper identification of problems.

8. Risk of communicative nature - resulting from the improper method of transferring commands, missing or limited possibility to make statements or contact superiors, criticism of work or a person, avoiding contacts.

9. Risk of organizational culture conditioning – presence of low organizational culture; re-

duction in moral and ethical values; improper atmosphere, lack of support.

10. Risk of management method – resulting from improper management style; incompetent method of solving conflicts; improper human resource management process.

11. External environment, whose risk results from the environment in which the organization operates. We can mention here the following risk areas:

a. *Legal and political conditions* – resulting from legal regulation of business activities and general relations between the economy and the state, e.g. the quality, the variability of law, the effect of politics on the enterprise, the level of corruption; use of gaps and inconsistencies in the law by companies.

b. *Socio-demographic conditions* – customs, habits, values and demographic characteristics of the society in which the organization operates, and among them e.g. unemployment, the threat of losing job; no opportunities for changing job; reduction in the wealth of the society.

c. *Ethical and cultural conditions* – such as e.g. reduction in ethical standards and principles, cultural differences; social approval and permission for this type of behaviour.

d. *Turbulent character of the environment* – resulting from sudden and unpredictable changes in parameters. Turbulence of the environment, as emphasized by Ansoff (1985), is characterized by the growth in the change newness, the intensity of the environment the speed of changes in the environment and the complexity of the environment. This calls, consequently, for the need to adjust to new working conditions, which may result in stressful conflict situations.

e. *International conditions* – the scope in which an organization participates in business activities of other countries, remains under its effect; level of globalization; multiculturalism.

f. *Technical conditions* – methods and ways allowing transforming resources into products and services, having effect on the pace of technological changes, adaptation to changes, changes in objectives and working conditions.

12. Internal environment – arising from the methods of functioning of the enterprise. The detailed classification is presented below.

Below, a detailed classification has been presented for risk areas, whose identification will stem from, among others, the implementation of functions in an enterprise. In parentheses, examples of risk areas of the enterprise's activities have been provided.

The detailed classifier for risk areas of the enterprise's activities:

I. Basic activity: risk in the field of operational activities resulting from the structure of the systems and the course of operations from the point of view of effectiveness (organization of the production process or provision of services; organization of the working process).

II. Additional activities:

1. Risk in the field of strategic activities, resulting from implemented strategic goals, the principles of creating the strategy, its adequacy and correctness as well as the consistency of vision and mission (creation and formulation of vision, mission and strategy; knowledge of and compliance with strategy, vision and mission; consistency of vision and mission of the activities systems with the strategy; adequacy of strategy selection; compliance with strategy assumptions strategy implementation).

2. Risk in the field of organizational activities, resulting from incorrect functioning of all areas of the enterprise's organizational system (inappropriate definition of system goals; wrong selection of system components and establishing organizational positions; inadequate grouping of positions in organizational cells and units; inappropriate shaping of functional and hierarchical dependencies; wrong distribution of decision-making rights and division of the scope of liability; unsuitable formalization of constructing the manufacturing system).

3. Risk in the field of financial activities, arising from the method of preparing financial statements and the quality of information contained therein, as well as the strategy of the enterprise's financial policy (identification and implementation of the financial strategy; budgeting; investments; reports and reporting; unreliable keeping of documentation and recording of financial operations; loss of funds; loss of liquidity; inappropriate organization and management; incorrect public-legal settlements).

4. Risk in the field of marketing activities, resulting from the adopted marketing strategy, activities in this area and relations with the external environment. (Improperly determined and applied strategy; wrong execution of preparatory tasks; wrong implementation of executive tasks; wrong implementation of supporting tasks).

5. Risk in the field of personal activities, resulting from the existing human resources management system (errors under implementation of personal strategy; errors in the structure of employment; human capital management process).

6. Risk in the field of IT activities, resulting from improper planning, organization and management of IT resources (errors under implementation of the strategy with regard to IT functions (protection against fraud; access to the system; managing network and computers; creation of the system and its maintenance; security of information; possessed equipment and software; security of computer hardware; compliance with regulations).

7. Risk in the field of logistic activities, resulting from operation of the logistics system, as well as the method, the schedule and the effectiveness of achieved results, especially in the categories of costs, using resources and customer service (errors under implementation of logistics strategy (construction of organizational structure of companies as well as the type of logistics organization; processing orders; storage; inventory management; transport management).

8. Risk in the field of quality and safety policy, resulting from quality management with regard to medical services, occupational health and safety (errors resulting from inappropriately adopted quality system; failure to meet the legal requirements; lack of system effectiveness).

When analyzing the above classification, we can notice some fault of the above statement resulting from the inability to present all risk areas, as it depends to a large extent on the situation and system aspect. However, the made attempt of synthetic classification for risk areas of the enterprise's activities does not decide on all issues. It indicates however, in our opinion, a number of significant social phenomena, which can determine the activities risk. The above conclusions should be treated more like the problematic areas, requiring further discussion, rather than the final decisions.

The basis for identification of risk areas in the enterprise should be a review of processes implemented by it. This identification may consist in, e.g. confronting the actual condition with the adopted pattern. According to Grelik et al. (1982) such pattern may be, e.g. principles of good organization and management, standards, normative acts, resulting from logical analysis or common sense, as well as the experience of other organizations.

Unfortunately, the words of Koźmiński (1971) that every organization, even the most efficient one, in the initial period of its existence, is after some time, after some time, subject to increasing "learned inefficiency", are still valid. The author believes that the basis for these pathologies is the cumulative mechanism of increasing the degree of formalization. This is more severe for the enter-

prise, if its adaptation to prevailing conditions is less flexible. The problem of the lack of adjustment of the enterprise's needs to unexpected changes taking place in the general situation was also noticed by Kepner and Tregoe (1965).

In conclusion, it is important that risk areas of the enterprise's activities were characterized by the following parameters: validity, proper formulation, adequacy, feasibility, and those they were based on reliable assumptions.

4. Conclusions

Functioning of contemporary enterprises in the face of the turbulent character of the environment and the crisis is more and more complex and also burdened with a high risk of making wrong decisions. Anticipating future state of affairs is difficult and often even impossible.

Consequently, it is essential, when specifying the activities risk, to take into account all areas of the enterprise's activities. This means that the detected irregularities and dysfunctions, first of all, do not have to be included in the groups previously discussed by the author, and secondly, they will impose yet another concept of risk classification.

It should be also emphasized that, depending on the type of the enterprise's activities, it is possible to differentiate the implemented processes, thus resulting in many, often different, irregularities. In addition, they may have both various sources of origin and be demonstrated in various areas. They result not only from its internal conditions, but also from relations with the environment. Consequently, identification in all risk areas is, firstly, impossible and secondly, ineffective.

The classification presented above by the author for risk areas of enterprise's activities should be treated only as a basis for the broader discussion on the subject and it is to be an inspiration for further research. It is also beyond any doubts that a number of problems contained in this study could be discussed in more detail. An attempt was made, however, to maintain a specified proportion of considerations resulting from the objective adopted in the beginning. What is important, the identified risks of operations should undergo analysis from the point of view of possible effects and their importance, as well as determination of the probability of their occurrence. Removal of the identified risks should cause an automatic reduction in their importance or their complete elimination.

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