INTERNATIONAL MODELS OF RISK MANAGEMENT: FERMA, COSO AND ISO

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Abstract

This article discusses the most important risk management standards that play a very significant role in the activity of any enterprise, both at the micro- and macro level, in order to reduce negative factors that have an impact on the financial activities of the enterprise. During the analysis, we considered the main models of risk management known as FERMA, COSO and ISO, the origin of which is European, American and international, respectively. The scientific work reveals the essence of each risk management model, highlighting their features and characteristics.

Keywords: risk management, uncertainty, auditing, European model FERMA, American model COSO, International model ISO

I. Introduction

An important role in the development of any enterprise is played by the company's risk management methodology, which contributes to the timely analysis and search for solutions to reduce factors that are negative for the activities of the considered subjects [1]. As a rule, the risk management process covers such a range of areas as risk management, monitoring the internal environment and auditing the company's activities, as well as the compliance with certain requirements. Accordingly, the result of all the above-mentioned steps is the creation of certain standards for risk management. At the same time, each of these standards differs in its methodology and approach to responding to these risks.

Under the conditions of a contemporarily developing society, a very significant place is occupied by risk management models that have worldwide application and which are known as COSO, FERMA and ISO models.

II. Methods

So, the main aim of this article is to review and study international models of risk management through a comparative analysis between them.

The objects of our study are the international models COSO, FERMA and ISO.

The subject is the assessment of the advantages and disadvantages of each model with the highlighting of their distinctive features.

As applied research methods used in this article, we would like to highlight the method of comparative analysis between various models of risk management.

The works of various economists, who made a great contribution to science on the considered topic, as well as articles in periodicals and Internet resources were used in the course of writing this scientific work.

III. Results

What is the essence of these models? What methods are used to manage risks considering these economic categories? How do they differ from each other and are there similarities between them? What are the main advantages and disadvantages of these models? Let's try to answer these questions.

As expected, each of these models, both FERMA and COSO, propose some kind of ideal model in their opinion, necessary to manage risks that differ from each other [2].

If we consider the COSO model, we can note that the main contribution to the formation of this model was made by the auditors of PricewaterhouseCoopers.

It should be added that this information, as a rule, required professional knowledge and was not designed for the general public. Exactly the auditors mostly acted as the main users.

At the same time, in this case, much attention was paid to the compliance with the basic requirement regarding the reliability and accuracy of the financial statements of companies.

Note that the compliance with the reliability of information in the reports in the United States of America is a mandatory requirement for public enterprises [3].

Concerning the FERMA model, it should be noted that its developers are a small group of European organizations with a highly specialized focus, which in terms of risk management increases the scope of persons for whom this information can be understood, compared to the COSO model.

As the experience of world practice shows, the FERMA model is in great demand due to its easiness and accessibility for a wider scope of persons and has a recommendatory nature [4].

At the same time, the main information, presented in this model, is taken from ISO 31000, which is decoded as the international standard for risk management.

Thus, as we see it, risk management plays a rather important role for any organization.

After all, thanks to risk management, we get the opportunity for timely analyzing certain vulnerabilities of enterprises to quickly respond by making the most effective management decisions and reducing the level of risk.

In our opinion, the main direction of risk management is the organization of such working conditions that will be aimed at reducing risks with a corresponding increase in profits under conditions of uncertainty.

As we see it, in order to apply risk management, first of all, it is necessary to ensure that the staff has a certain competence and understands the essence of risk management with the disclosure of its significance for the prosperity of the company.

Thus, summarizing all the above, we can conclude that at this stage of economic development, the humankind actively applies the following risk management models in the course of its activities:

- American model, known as COSO
- European model FERMA
- International model ISO.

It is worth to mention that the first standard in this area was already developed in 1995 in Australia and was designated as AS/NZS 4360:2004.

Accordingly, over time, other standards of other states also began to be applied.

As for the international standard ISO 31000, it was developed and put into practice since 2009.

Undoubtedly, considering all three models, one can notice the differences between them, which, first of all, consist in the style of presentation, the volume of documentation used and the method of research.

As an example, we can compare an international standard, which is characterized by a small content (about twenty pages) and the American model, which is presented in two hundred pages.

But, in our opinion, the main similarity of all three models, first of all, is the presence of risk, which contributes to the search for solution for the way out of an uncertain situation.

For clarity and a better understanding of the significance of these models, we would like to analyze each of them separately.

Let's start with the risk management model known as FERMA.

As noted above, this European model was developed by the Federal Association of Risk Management Professionals.

An important feature of this standard is universality in terms of its application in the present time, both for short-term and long-term purposes.[5]

In practice, the FERMA model is implemented in seven stages.

First of all, the whole analysis begins with the determination of the main goals and objectives of the company.

Further, the next step is to identify and assess all the risks of the enterprise. That is, specialists collect all the information about the company's activities, studying the competitive environment and market conditions.

Accordingly, on the basis of the collected data, all risks are calculated and considered, creating a kind of a risk map that displays all the weaknesses of the enterprise, to which the attention should be paid.

Thus, with the help of a competent and effective analysis, we get the opportunity, thanks to quantitative and qualitative indicators, to identify and eliminate all risks by developing certain measures that will be aimed at maximum reduction or complete elimination of risks.

The next, third step, is the compilation of a report on all the risks that the enterprise faces in the course of its operation.

Further, on the basis of this report, some decisions are applied that are aimed at the risk management process, including such stages as calculating the effectiveness of certain decisions, the level of costs for risk reduction measures, etc.

Of course, it is almost practically impossible to completely insure oneself against all risks.

In this case, the functioning of the company is considered, based on the legislative framework.

At the sixth stage, a repeated report is carried out, which includes two components: internal and external.

Thus, in our opinion, an internal report is necessary for use and application within the enterprise, and mostly this document is given to the manager in order for him to assess the situation.

As for the external report, it is aimed at external users who, for one reason or another, are interested in this information. In this case, the report is mainly compiled according to the risk management methodology.

And the final stage of risk management according to the FERMA model is the implementation of control measures for continuous monitoring of the situation for the most rational managerial decision-making.

Summarizing all the above, we can conclude that the essence of FERMA as a European association is to work out and apply a specific plan of actions for risk management.

As a rule, this method is used to ensure the continuity of the workflow.

At the same time, FERMA focuses on the following risks in its standard: strategic, security, financial and production risks.

The chronology of the stages outlined above can be summarized as follows:

- Identification of the factors of risk management;
- Evaluation activities of the existing risks;
- Determination of methodology and technology for risk monitoring;
- Making recommendations on risk management;
- Basic requirements for a risk manager.

In our opinion, the universality of this standard in terms of its use in any organization can be attributed as an advantage.

Thus, we have considered the European risk management model FERMA.

Now, we would like to consider the next important model known as COSO.

So, COSO ERM is an American model, the founder of which is the Committee of Sponsoring Organizations.

At the same time, let's note that ERM, which is decoded as Enterprise Risk Management, served as the first document in 2004.

And the second document, published in 2017, is Enterprise Risk Management Integration with Strategy and Performance.

If we compare these two documents, then in terms of interpreting the essence of risks there are practically no differences as such, but the difference consists mainly in the methodology.

The COSO 2004 model defines risk management as a kind of work to be performed by the management and employees of the company in order to improve the financial status of the organization.

For clarity, this model can be represented in the form of a matrix having a cubic shape.

Note that the upper zone of this matrix contains information regarding both strategic and operational goals, as well as reporting and compliance with the legal requirement of the state.

The front zone includes eight stages, the necessity of which is associated with the goal of solving problems. Let's consider each of these stages.

So, the first stage begins with such an analysis, which studies the internal state of the company business and the whole staff, focusing on their reaction and response to the risk system.

The second stage is the definition of tasks. Moreover, this stage should be carried out even before the risk occurrence. The execution of this point will sufficiently protect the company from certain difficulties, enabling the enterprise to identify the main goals depending on the mission.

The next stage is the search for factors that have a negative impact on the activities of the enterprise. It is very important in this case to consider both internal and external factors.

Next, it is necessary to carry out evaluation activities to identify the level of risks in the activities of enterprises.

The fifth stage is the reaction of the risk manager to the resulting situation. As the main reactions, one can single out the acceptance or denial of these risks, a decrease or increase in its significance, etc.

Accordingly, the task of the risk manager is an elaboration of measures for reducing the risk level to a certain acceptable value.

The sixth stage is devoted to the control measures, the essence of which consists in the timely response to emerging risks.

According to the COSO model the seventh stage is the importance of communication links.

After all, it is very important for the employees to be competent and have information about the risks that threaten the company.

For this reason, it is necessary to be guided by mutual exchange processes among employees as well as between management and employees.

And, finally, the last stage is risk monitoring, which must be carried out either on a permanent basis or in regular intervals.

Moreover, we'd also like to note that the COSO 2004 model contains about 128 methods aimed at risk management, which are designed to minimize them and stabilize the normal functioning of the enterprise.

Speaking for the COSO model according to the standard published in 2017, we can note that in the new edition much attention is paid to the trends of modern society with a deep analysis of risk management.

In this context, the term "risk" is considered from the point of view of the control element, due to which the analysis and forecasting of the expected factors, that have a negative impact on the activities of the enterprise, are carried out.

We'd like to note that COSO 2017, compared to COSO 2004, includes five stages and twenty different processes required for the entire cycle. [8]

At the same time, this technique can be applied to any enterprise, regardless of the type of activity and location.

Speaking about the main stages of the COSO 2017 model, we would like to start with its first component, which characterizes the culture and methodology of management.

In this context, culture means, first of all, the competence of employees in terms of the qualitative fulfillment of their obligations.

Respectively, the management process exercises control function and is responsible for supervisory activities.

The second stage is a goal-oriented planning, with the help of which certain risks are clarified based on the goals.

The third point is effectiveness, the essence of which is the timely identification and elimination of risks that have a negative nature.

In addition, risk division by hazard level plays an important role, as it enables the organization to understand which risk needs to be focused first.

The fourth stage is to determine the efficiency of risk management based on the analysis of risks.

And, the final stage is the compliance with communication links between various departments in order to exchange data for risk management.

Thus, we have also considered the essence of the COSO risk management model.

We'd also like to give a brief description of the ISO 31000 model mentioned above.

Let's start with the fact that ISO 31000 acts as an international universal standard, which includes various regulations for risk management. According to this document, such requirements include:

- Internal environment of the organization;
- Strategic goals;
- A group of persons responsible for their actions;
- Analysis of risks and force majeure circumstances and prompt response to them;
- Carrying out monitoring;
- Data collection and analysis;
- Links between individuals having an identical interest in a particular issue.

Besides, we would like to add that today ISO 31000 serves as a unique international model for risk management.

At the same time, ISO 37000 appeared in 1946 in London; it is decoded and translated as the International Organization for Standardization.

IV. Discussion

So, we have considered the main risk management standards known as COSO, FERMA and ISO. Considering all the above-mentioned, we can conclude that the main consumer of the standard according to the American COSO model is the auditors of the company; according to the European FERMA model – competent risk managers of the enterprise; and according to the international ISO model – any organization, regardless of the form of ownership.

At the same time, an important role is played by the fact that only the American COSO model is characterized by the obligatory compliance with this standard by organizations whose securities

are quoted on the stock exchange located in New York.

In conclusion, we'd like to note the interpretation of the term "risk" that each model of risk management offers.

So, by the word "risk" the American COSO model implies the negative factors that have an impact on the company's activities, reducing the company's income.

The European FERMA model, on the other hand, interprets risks from some probable events with their further outcomes.

As for the international ISO model, the word "risk" is denoted in the context of an uncertainty factor that interferes with the implementation of the company's strategic goals. In other words, as a discrepancy between the expected indicators and those actually received and having both a positive and a negative nature. Thus, as we see it, the risk management process is not a copy of already existing methods, but, on the contrary, it serves as an addition, primarily in matters of internal audit. The considered risk management models can be easily applied in the practice of various organizations. Indeed, due to the presence of an effective risk management system, enterprises can significantly reduce the level of certain risks to achieve the most reliable and rational development and expansion without negative consequences.

Thus, we have revealed the topic of our study and identified the essence of each risk management standard.

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