

# STATISTICAL ANALYSIS OF THE DEVELOPMENT OF RISK MANAGEMENT IN THE CORPORATE SECTOR OF THE RUSSIAN ECONOMY

Mariia Karelina – Svetlana Dzeranova – Svetlana Bulycheva

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## Abstract

The article shows that stable and successful development of companies based on integrated risk management directly contributes to the improvement of areas. In this case, the variety of approaches to the study of problems and prospects of risk management have determined the complexity of consideration of the concept of "risk" to form objective prerequisites for the analysis of risk management systems in Russian companies.

The review of the main prerequisites for the establishment of corporate risk management in Russia has shown that the number of impulses aimed at the development of risk management in Russian companies is increasing, and the requirements for improving corporate risk management are increasingly high and are defined by both international and national risk management standards: COSO ERM, ISO 31000, etc.

Statistical study of risk management development in Russian companies was conducted in accordance with the methodology of Aon, the world leader in risk management solutions. The expert survey of risk management specialists of the largest companies and organizations of Russia in 2018 allowed to highlight the main problems of risk management at the micro, mezzo and macro levels, as well as to propose specific methods of support and regulation of Russian risk management.

**Key words:** risk management, risk management system (RMS), risk management standards, system analysis, expert survey

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## Introduction

The set of risks may have a significant impact on the internal corporate environment of the company, which in turn affects the external institutional environment consisting of social, economic and political components of the specific region where the company is located.

The development of the world economic structure is necessarily accompanied by a cyclical shift in the instruments of capital accumulation (Glazyev, 2018). The main causes of

mergers and acquisitions are the economies of scale achieved with new technologies, the entry of financial institutions on the Internet, deregulation and liberalization of the financial sector, reducing barriers for mergers (Jimber, 2016). In this connection, the social and economic development of regions is affected by the risks of enterprises, transforming the structure and system of the budget of the region, as well as indicators of its strategic development in general. Thus, it is necessary to take into account the key risks of the enterprises located on the given territory when forming strategies of development of the Russian regions.

Improvement of the risk management process of enterprises located on the territory of Russian regions should be started with specification of fundamental categories describing it. Without this methodological step, further empirical analysis is not reasonable. In order to reveal the "risk" category most accurately, it is necessary to define such concepts as "probability" and "uncertainty". Probability is the possibility of obtaining a certain result, which is associated with an experienced, practical concept of event frequency. Uncertainty (uncertainty) - incompleteness and inaccuracy of information about conditions of economic activity. As a result of action of uncertainty the set goal can be achieved not in full or not at all (Bernstein, 1996). Such mismatch of the received result with the planned one at the moment of decision making is characterized by such category as risk.

Summarizing different interpretations, risk can be defined as a category that characterizes the behavior of economic agents functioning under conditions of uncertainty for the selection of the most acceptable solutions from the set of alternatives based on the evaluation of the probability of achieving the desired result and levels of deviation from it. In this case, in contrast to the uncertainty, the risk is the concept of subjective.

Then in a narrower sense, economic risk can be defined as the possibility of an event that may lead to negative consequences, lost profit, disruption of business processes and/or failure to achieve strategic goals of the company.

At the same time, the concept of "risk" outside insurance was practically not used until the beginning of the 20th century (Dionne, 2013). Knight F., an American economist, one of the founders of the theory of entrepreneurship, uncertainty and profit, was the first to speak about risk as a necessary element of business in the 20s of the last century. He introduced the concept of risk as a measurable uncertainty and stated that business exists only because there is risk (Knight, 1921). The next step was taken by Nobel Prize winner Markovitz G., who

linked the concepts of risk and profitability of business, proving that profitability grows only together with risk (Markovitz, 1952).

By the middle of the last century risk management was finally formed as a direction of economic theory and as a practical sphere of activity. One can take 1955 as a starting point, when American economist Snyder W. (Snyder, 1964) introduced the concept of "risk management". In Russia, in contrast to Western countries, during this period, in view of the command economy, risk was not studied. It can be said that risk was seriously discussed in Russia after the 1998 crisis, when many Russian companies revised their policy in terms of risk study and management.

## **1 Overview of the main stages of risk management development in Russia**

In developed Western economies, the quality of risk management systems is considered a critical component of corporate governance and has a direct impact on the market value of the company, and a number of rating agencies, such as Standard & Poor's and Moody's, take this into account when assessing credit ratings. Industry standards, such as VAR (Value-at-Risk) or RAROC (Risk-Adjusted Return on Capital), international professional risk management organizations - GARP and PRMIA - have emerged, and certification programs with regular exams have been created.

At present, there is no single universal definition of risk management. One of the common definitions is given in ISO 73:2009. According to it, risk management of an organization is a coordinated action to manage the organization taking into account the risk. It is necessary to note that at the present stage it is accepted to speak not simply about measures on risk management, but about creation and use of risk management systems. Modern risk management systems are complex and systemic (Nilsen, 2005), as they consider enterprise risks in close interconnection and take into account the possibility of their influence on each other (Drobot, 2017).

In Russia, the first risk management units began to be established in the mid-1990s, mainly in financial sector organizations (Telenkov, 2018). After the 1998 crisis, risk management began to receive more serious attention and risk management units were established in Russian companies in the real sector of the economy (e.g. Lukoil, Severstal, Norilsk Nickel, Magnitogorsk Iron and Steel Works, etc.).

Let us consider the main stages of risk management development in Russia.

**1995.** One of the first signals for the development of corporate risk management systems for Russian companies in the real economy sector was the enactment of *the Law on Joint Stock Companies* (No. 208-FZ of 26.12.1995), which indicated the need to prepare sections describing the main risk factors of the company's activities in annual and quarterly (public) reports. In addition, the annual reports should have provided the issuer's policy in the field of risk management, information on the organization of risk management and internal control system. Disclosure of this information required companies to at least understand the main risk factors inherent in their activities, to have approved risk regulations, and to formalize the responsibility of the Board of Directors and management in terms of risk management.

**2002.** The most important impulse for the creation and development of risk management in Russian companies was the introduction of *the Code of Corporate Conduct of the Federal Commission for the Securities Market of Russia*, according to which the Board of Directors, authorized to consider the establishment of a risk management committee, should take responsibility for the construction and maintenance of effective risk management systems in joint stock companies.

**2009.** The financial and economic crisis of 2008-2009, similar to the crisis of 1998, demonstrated the practical necessity to build a real risk management system not only in financial institutions, but also in companies of the real sector of economy. Lack of proper organizational structure ensuring early identification, mitigation and monitoring of risks created a basis for incorrect interpretation of risks and low level of risk management. However, some companies that managed to put the risk management at the proper level have benefited from this - they managed to survive the severe conditions of the 2008-2009 crisis.

**2014.** The next stage in the development of Russian risk management is the published requirements of the Ministry of Economic Development of the Russian Federation (Ministry of Economic Development of the Russian Federation) for the preparation of a strategy and a long-term development program for state companies (section on risks and internal control). The requirements set forth in Clause 3.4 of *the Methodological Recommendations on Preparation of Long-term Development Programs for Strategic Joint Stock Companies* determine that companies must disclose information on the analysis of risks and opportunities associated with the program implementation, as well as possible mechanisms for risk and opportunity management. This assessment should take into account possible changes in macroeconomic factors, consumer preferences, industry specifications and other components.

**2015.** The next important step in the development of risk management in Russian companies was the instruction of the President of the Russian Federation (the Government of the Russian Federation and further the Federal Property Management Agency) to improve the efficiency of companies with state participation. Within the framework of this Instruction, the Federal Property Management Agency together with consulting companies developed *Methodical Guidelines for Preparation of Regulations on Risk Management System (RMS)*, which define the structure and content of the Regulations on Risk Management System, as well as the procedure for preparation, approval and modification of the Regulations on Risk Management System.

Thus, despite the difficulties in properly understanding the importance and complexity of the risk management function, problems in the educational process and the overall insufficiently high level of corporate culture in the area of risk management in Russia, a huge step forward was made in a very short period of time. At the same time, there are more and more impulses aimed at developing risk management systems, which sets certain standards of corporate governance maturity within the framework of improving the competitiveness of Russian business and the sustainability of regional systems.

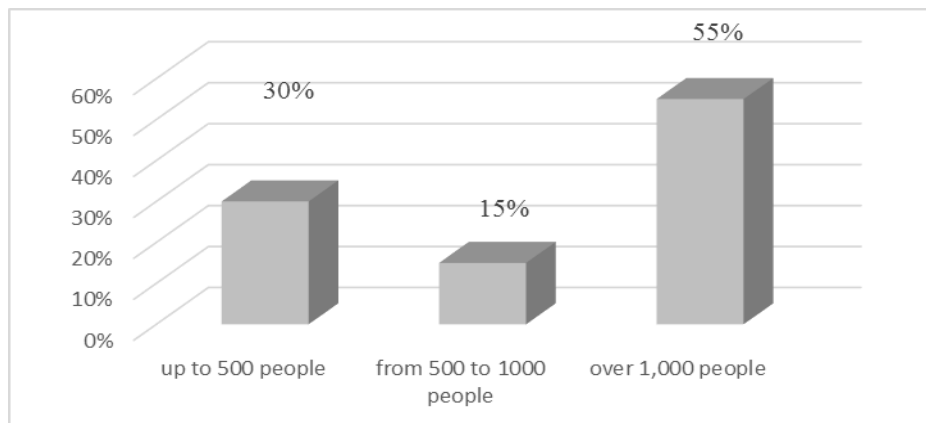
## **2 Statistical analysis of risk management development in Russian companies**

Empirical analysis of risk management development in Russian companies was conducted on the basis of expert opinion research in this area (Karelina, 2018). According to the methodology of the world leader in the field of risk management solutions Aon, the analysis was based on a survey of risk management specialists, insurance specialists and other specialists who are competent in risk management and actively participate in the risk management process. The research was carried out in 2018 by studying the expert opinion of specialists (based on questionnaires sent to experts) in the field of risk management in various industries and regions of the Russian Federation.

As a result, the necessary data was obtained from 32 respondents from a number of major companies and organisations from 15 constituent entities of the Russian Federation (Vologda Region, Moscow, St. Petersburg, Novosibirsk Region, Sverdlovsk Region, Chelyabinsk Region, etc.), which are the largest industrial centres of Russia, as well as investment and budget drivers of the Russian economy.

To make full use of the information that is contained in the values of this indicator, statistics methods were used (Arltova, 2015). The distribution of respondents by the size of the company depending on the number of employed personnel is shown in Fig. 1, which confirms that despite the fact that recently medium and small businesses have been involved in the development of systematic approaches to risk management, still the development of risk management takes place in large (strategic) companies. The sectoral distribution of respondents is shown in Fig. 2.

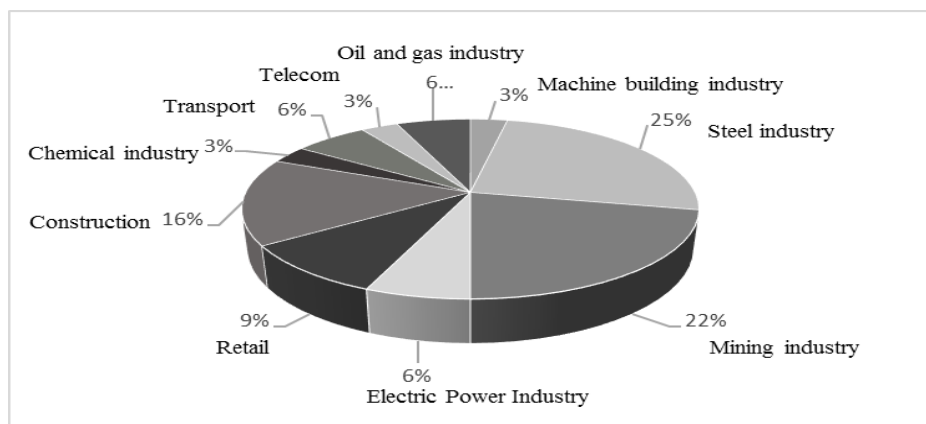
**Fig. 1: Distribution of respondents by company size according to the number of employed personnel**



Source: author development

Based on the data obtained (Karelina, 2019), the number of employees responsible for risk management in companies varies from 2 to 7 people. It should be noted that 82% of respondents have experience in risk management from 2 to 18 years.

**Fig. 2: Sectoral distribution of respondents**



Source: author development

In order to answer the main questions of the research concerning the assessment of risk management in Russia, this part of the research was divided into 2 blocks:

1. problems and factors of Russian risk management development at the level of a separate organization (micro level);
2. problems and factors of risk management development at regional and federal level (meso- and macro-level).

On the basis of the conducted survey it has been revealed that one of the main problems of risk management in Russia at the microlevel is the lack of information and statistical databases for risk analysis in companies (31%), lack of understanding of the essence of risk management subdivisions by other departments of companies (28%), lack of understanding of the need for risk management systems by company management (19%). Also separately respondents noted the lack of automation and imperfection of IT-systems responsible for administration of risk management systems.

One of the main problems of risk management on macro and meso level is: misunderstanding of risk management (25%); misinterpretation of risk management functions and objectives (22%); insufficient knowledge of advanced methods of risk management (19%).

It is interesting to note that despite the adoption of the professional standard "Risk management specialist" and the professional standard "Risk management (risk management) of the organization" in 2015, 16% of respondents noted the lack of qualified risk managers, i.e. specialists who identify all kinds of risks in the company's activities, assess the degree of their danger, amount of damage and develop recommendations and measures to reduce the negative consequences of risk.

It should be noted that in Russia, at the level of regional and federal authorities, risk management has an insufficient status due to lack of understanding of risk management as a mandatory process to ensure sustainable development not only of companies, but also of regions and the state as a whole. At the same time, the vector of influence of the state depends on its position with regard to a certain issue, in particular, assistance in spreading risk management culture and technologies (Belousova, 2010). Fig. 3 shows a diagram based on the data obtained from the survey on methods of risk management support and regulation in Russia.

**Fig. 3: Methods of risk management support and regulation in Russia**



Source: author development

Empirical analysis of risk management development in Russian companies has shown that the current economic situation makes business to consider the issue of allocation of resources through the prism of risks faced by the company even more clearly. Without risk assessment at all levels of the management hierarchy it becomes impossible to achieve the basic goals - profit extraction and growth of the company's value. It is obvious that today there is a need for proactive risk management, which implies improvement of risk management technologies on the part of both the state and Russian enterprises.

## Conclusion

To sum up, it should be noted that in the modern Russian economy the introduction of risk management has started relatively recently, 15-20 years ago. However, this short period of time has been marked by rather severe tests for the Russian economy and has become a period of testing for many industrial and credit and financial structures. It demonstrated that risk management plays an increasingly important role in the effective development of the Russian regions' economies and is gaining reputation. In order to improve the risk image of our country, it is necessary to consolidate the efforts of various business, government and public structures in order to create infrastructure and effective risk management tools in our country.

A review of the main stages of risk management development in Russia has shown that in modern Russian practice there is systematization of risks on the basis of international and national standards, active introduction of risk management disciplines into the educational process and separation of the risk manager profession as an independent one. The



introduction of risk management standards is based on the creation of risk management systems, the main purpose of which is to achieve maximum efficiency and strategic goals of the company in carrying out financial and economic activities in conjunction with and aligned with the development strategy of the Russian territories.

A study of risk management development in Russian companies, based on an expert survey of specialists, made it possible to identify the main problems of risk management at the micro, mezzo and macro levels, as well as methods of support and regulation of Russian risk management. One of the main problems at all levels of the management hierarchy is the lack of understanding of risk management, which has a significant impact on the implementation of risk management culture. Recently, however, owners and managers' awareness of the most important role of risks in companies' activities has prompted their transition to a new, more advanced level of company management as a whole.

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### **Contact**

Maria Karelina

Nosov Magnitogorsk State Technical University

455000, Russian Federation, Magnitogorsk, Lenina st., 38

[marjyshka@mail.ru](mailto:marjyshka@mail.ru)

Svetlana Dzeranova

Nosov Magnitogorsk State Technical University

455000, Russian Federation, Magnitogorsk, Lenina st., 38

[sdz15@mail.ru](mailto:sdz15@mail.ru)

Svetlana Bulycheva

Nosov Magnitogorsk State Technical University

455000, Russian Federation, Magnitogorsk, Lenina st., 38

[svet-bulycheva@yandex.ru](mailto:svet-bulycheva@yandex.ru)