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RISKS MANAGEMENT IN SMALL AND MEDIUM-SIZED ENTERPRISES

Urgency of the research. SMEs has a significant role in the economic development of most countries of the world and have become engine of economic growth. In Ukraine SMEs account for more than 99% of the total number of enterprises in Ukraine but its share in GDP of the national economy is only 15%. Therefore, the SMEs growth is one of the most challenging problem for Ukraine.

Target setting. It is estimated that only half of SMEs are well doing after the first two years' operation period. The main cause is high risks in the small business sector. So the improvement of SMEs risk management system is one of the most challenging issue for Ukraine.

Actual scientific researches and issues analysis. SMEs development has been investigated broadly.

The impact of risk on SMEs is tried to evaluate by Hudáková, M., Buganová, K., Dvorský, J., Shuying, Z., Mei, Z. and others.

Uninvestigated parts of general matters defining. Issues of the SMEs risks management in the context of globalization in emerging economies continues to be actively explored. However, despite the rigorous contribution to this area the problem is not resolved completely.

The research objective. This research paper aims to discuss the problems of risk management for SMEs.

The statement of basic materials. We identified the crucial risks for SMEs, namely financial risks. In our investigation we based on a dataset obtained via questionnaire surveys in Kharkiv region of Ukraine. The theoretical basis for the application of methods and tools for managing financial risks are substantiated on the law of downward impact. A new approach to SMEs financial risks managing are developed.

Conclusions. As a result of the research a new approach to SMEs financial risks managing has been developed that should be taken into account in order to adjust the SMEs development strategy taking into account the level of financial risk and improve the SMEs performance indicators.

Keywords: risk management; financial risk management; small and medium enterprises; rating approach; risk factors.

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УПРАВЛІННЯ РИЗИКАМИ В ДІЯЛЬНОСТІ МАЛИХ ТА СЕРЕДНІХ ПІДПРИЄМСТВ

Актуальність теми дослідження. МСП відіграють значну роль у економічному розвитку більшості країн світу і визнані рушійною силою економічного зростання. В Україні кількість МСП складає 99,8% від кількості всіх підприємств, однак їх частка у ВВП національної економіки становить лише 15%. Тому підвищення надійності функціонування суб'єктів малого та середнього бізнесу є одним з найважливіших питань для України.

Постановка проблеми. За оцінками, лише половина МСП функціонують стабільно після перших двох років функціонування. Основною причиною є високі ризики у секторі малого бізнесу. Отже, вдосконалення системи управління ризиками МСП є однією з найбільш складних питань для України.

Аналіз останніх досліджень і публікацій. Питання розвитку МСП широко вивчається. Спроби оцінити вплив ризику на МСП були зроблені такими вченими, як Худакова, М., Буганова, К., Дворскі, Дж., Шуйінг, З., Мей, 3. та інші.

Виділення раніше недослідженої частини загальної проблематики. Проблеми управління ризиками МСП в контексті глобалізації у країнах з економікою, що розвивається продовжують активно вивчатися. Однак, незважаючи на значний внесок у цю сферу, проблема не вирішена повністю.

Постановка задач. Метою дослідження є обговорення питань управління ризиками для МСП.

Виклад основного матеріалу. Було визначено ключовий ризик для МСП, а саме фінансовий ризик. Наше дослідження ґрунтувалось на даних, отриманих за допомогою анкетування, що було проведено в Харківській області України. Обґрунтовано теоретичні засади застосування методів та інструментів управління фінансовими ризиками на підставі закону зменшення впливу. Розроблено підхід до управління фінансовими ризиками МСП.

Висновки. В результаті дослідження було розроблено новий підхід до управління фінансовими ризиками малих та середніх підприємств, що дасть можливість скоригувати стратегію їх розвитку із урахуванням рівня фінансового ризику, підвищити результативні показники діяльності.

Ключові слова: ризик-менеджмент, управління фінансовими ризиками; малі та середні підприємства; рейтинговий підхід; ризикоутворюючі фактори.

Urgency of the research. One of the directions of economic policy of Ukraine in recent years is the priority of the development of the small business sector whose development should contribute to the improvement of the economy and the growth of the welfare of the population. Ensuring the development of the small and medium-sized businesses is objectively due to the fact that it is small and medium-sized enterprises that make up the bulk of the gross domestic product (GDP) in countries with a developed market economy. Thus, according to the UN, in the small business, more than 50% of the world's able-bodied population is employed [10]. In countries such as the USA, Japan, Germany, the share of GDP produced by small and medium-sized enterprises is 60-70% of its total volume, depending on the country [10].

Target setting. According to the results of 2017 there were 337,855 small and medium enterprises (SMEs) in Ukraine accounting for 99.8% of the total number of enterprises. In general, the sector of small business employs more than 6,88 million people, which is almost 80% of the number of the employees in the business entities. By type of economic activity, the largest number of small and medium-sized enterprises is concentrated in the services sector, wholesale and retail trade.

The volume of sold products for small businesses increased by 2017, according to the year 2012, by almost 10% and amounted to 4.66 billion UAH or almost 61.5% of its total value [2]. In general, domestic small and medium-sized businesses generate 59% of added value, which even exceeds those of more economically developed countries such as Poland and Germany, but its share in GDP of the national economy is only 15% [2]. Moreover, almost half of SMEs cease to operate during the first two years of operation [2], which is primarily due to the high risks in the small business sector. In these conditions, there is an objective need to increase the reliability of the functioning of small and medium-sized enterprises, which to a certain extent is also conditioned by the improvement of the risk management system. In today's conditions of an unstable economic situation in the country and a constant change in the financial market situation of management, it is financial risks that are an important trend in the development of SMEs. Moreover, a significant number of scholars argue that the ability of SMEs to grow strongly depends on the domestic financial resources, as SMEs have limited access to the external sources of funding.

Actual scientific researches and issues analysis. Such domestic scientists as Bagrova I. V., Bochan I. O., Budkin V. S., Varnalij Z. S., Halchynsky A. S., Danylyshyn B, Kozhevina N. D., Luchakova O. V., Lyashenko S. V., Umanets T. V. and many others made a significant contribution to the research of the problems of SME development. Problems of enterprise risk management were raised in their works by such scientists as Kravchenko V. A., Solomenko O. E., Pavlogradsky D. A., Bilous V., Binko I., Vavdiyuk N., Geyets V., Herasymchuk Z., Porkopyvny S., Sytnyk H., Revenko A., Muller P., Peters M., Tepman L. M. and others. Significant contribution to the scientific field of the financial risk management was carried out by Vitlinsky V. V., Zolin P. A., Lapustova M. H., Taran O. V., Sharshukova N. H and other scholars.

Uninvestigated parts of general matters defining. The issue of the SMEs risks management in the context of globalization in emerging economies continues to be actively explored. However, despite the rigorous contribution to this area the problem is not resolved completely.

The research objective. This research paper aims to discuss the problems of risk management for SMEs.

The statement of basic materials. Small business carries out its activities in conditions of uncertainty and faces a lot of risks. Risk can be represented as the effect of uncertainty on the purpose of a small business. Under influence refers to a deviation from the expected result with positive or negative consequences [5]. An enterprise can have different goals (financial, relating to occupational safety and health, environmental, etc.) [7]. Risk is often expressed in the combination of the consequences of events and the probability of incidents associated with them.

Most of the sources of risk faced by a small business can not be uniquely attributed to standard categories. Risks can take different forms, and therefore in the scientific literature on this issue, there are a large number of classifications of the small business risks. The risks faced by SMEs concern various areas of entrepreneurial activity (market, financial, operational, personnel, technical risk) [6].

The financial risk is considered one of the most important types of risk, as a high risk of financing may in turn significantly affect the company's liquidity. The financial risk refers to the type of risk that occurs in the entity's financial and economic activity when the cause-and-effect result or its achievements differ from the established objectives and planned norms, and the deviations received are valuable [6]. A distinctive feature of the financial risk is that it occurs at all the stages of the production and economic activity of the enterprise without exception. The manifestations of this risk are completely different - starting with the percentage (fluctuation of the market interest rates) when lending to the enterprise, and ending with the risk of loss of the solvency in sales operations. That is why the financial risk management pays considerable attention both in theory and in business practice.

Based on the fact that for the small enterprises of Ukraine are characterized by a wide range of risk factors, this study attempts to highlight the risk factors that play a leading role for small enterprises. To do this, we conducted a survey of the managers of SMEs in the Kharkiv region. The number of small and medium-sized enterprises of the sample for its representativeness was determined by the formula:

and medium-sized enterprises of the sample for its representativeness was determined by the formula:
$$n=\frac{z^2\times p\times q}{e^2} \tag{1}$$

where *n* - sample size;

z - normalized deviation that is determined based on the selected level of confidence probability;

p - definite variation for the sample;

q = 100 - p;

e - permissible error margin.

Based on the data of the Main Department of Statistics in the Kharkiv region, as of 01.01.2018 in the region there were 22583 SMEs, which is 99.9% of the total number of enterprises in the region. We accept the confidence interval p = 0.95, then z = 1.96. For more reliable results, it is expedient to apply the maximum values of p. In the absence of the statistical information, we accept p = 0.5, since this gives the maximum dispersion: 0.5*0.5 = 0.25. The resulting amount for the sample size will be overestimated, which gives additional reliability of the results.

Thus, the questionnaire covered 384 SMEs of the Kharkiv region, which is 1.7% of their total number. The conducted questionnaire confirmed that among the most important risks of the small business in the Kharkiv region the managers identify financial risks and innovation and investment risks (Fig. 1).

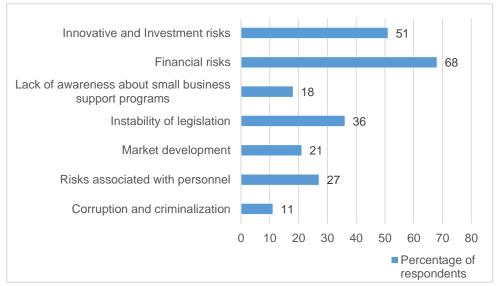


Fig. 1. The rating of the importance of risk factors for SMEs in the Kharkiv region

Foreign scholars Shuyin and May (2014) also emphasize that the financial risk is one of the main reasons for default on SMEs due to lack of bank financing [12]. Similarly, it is argued that the financial risk management can minimize competition by improving the financial position and increasing the production capacity. They also determined that the inefficient capital structure of SMEs is the main reason for their unsatisfactory financial situation.

Thus, financial risks, on the one hand, are the key to small business, and on the other hand, are multifaceted in their essence. There are four risk situations that give rise to this risk. The first risk situation is low demand, which results in a decrease in the level of proceeds of financial resources. In this case, the demand is not meant for the market as a whole, but for the products of a particular subject of the small business. The second risk situation is direct cash losses associated with the lack of a preliminary assessment of planned measures, fraud by partners, extortion by criminal structures, etc. The third risk situation is high costs that reduce the amount of the financial resources. The fourth risk situation is an unfavouable macroeconomic situation associated with a limited market that impedes or restricts cash inflows.

According to Hudakova (2015) the most significant barriers that prevent SMEs from effectively managing the financial risks are the availability of reliable information, regardless of internal or external data, which is necessary for the assessment and management of the financial risks [11].

According to Fetysova and coauthors (2012) the financial risks are complex and can be subdivided into the following groups: financing risk, credit risk, liquidity risk, interest rate risk, currency risk, inflation risk, and counterparty risk [11].

The results of the research of the domestic scientists on this issue [1] make it possible to identify the most characteristic groups of financial risks for SMEs:

- 1. The risk of a lack of financial resources.
- 2. Liquidity risk the possibility of losses caused by the inability to buy or sell an asset in the right amount for a fairly short period of time due to the deterioration of the market conditions; the possibility of a cash deficit or other high-liquidity assets to fulfill the obligations to counterparties.
- 3. Operational risk the possibility of unforeseen losses due to technical mistakes during operations, intentional and unintentional operations of the personnel, emergency situations, hardware failures, etc. (operational risks also include losses caused by the errors in the application of the models and valuation methods in risk management).
- 4. The risk of an event the possibility of unforeseen losses as a result of force majeure, changes in legislation, influence of the decisions of state bodies, etc. (often legal and tax risks are one of the manifestations of the risk of an event).

The conclusion of the international research The Economist Intelligence Unit and Dun & Bradstreed (Raidenie odberateľských a dodavatelských rizík), conducted in 2013, showed that the companies that not only manage business risks but also regularly evaluate such management receive better results. A system approach forces the companies to solve the problems as they emerge. Considering that the financial risk management (for example, currency or interest risk) and client credit risk are rather diverse, the companies pay much less attention to other risks, such as vendor risks or reputational risk. Nevertheless, all of the above risks can affect the financial risk itself.

That is, risk management is essential for the successful functioning of the small (medium) enterprise in terms of risk and uncertainty and can significantly enhance its stability. SMEs whose leadership has been using risk management methods since the establishment of the company have a better chance of survival. Risk management at a small enterprise can be represented as a multi-stage process, which includes: determining the conditions in which a small business carries out activities; identification of the risk; risk analysis and determination of the level of risk; selection of methods of management and application of risk management techniques; monitoring of the results and the improvement of the risk management system [1].

Since there are no national risk management standards in Ukraine, it is advisable to use the international risk management standards as the basis for developing the internal risk management standards.

ards for any enterprise, including small (medium) ones. The main international standards of risk management include [3]:

- Enterprise Risk Management Integrated Framework (ERM, 2004) an integrated risk management plan for the organization;
- Risk Management Standard (2002) the standard of the risk management adopted by the Federation of European Associations of Risk Managers;
- General guidelines for principles and implementation of risk management general principles and guidelines for risk management (ISO/CD31000:2009 (international standard).

Since the early 2000s there has been a noticeable shift in the paradigm in the risk management. Thus, the trend towards a complex and integrated view of enterprise risk management should be noted. The goal of the integrated enterprise conceptual framework is to identify, assess and monitor all the potential and existing threats and opportunities faced by the organization [12]. Therefore, ERM implements a risk management model that supports an integrated risk management methodology that seeks to achieve rational operational and strategic management solutions, even for small and medium-sized enterprises in the context of European business.

An important document in risk management is "Organizational Risk Management: An Integrated Model" developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) [9].

Studies show that the entrepreneurs are compelled to take risks in order to obtain a positive financial result from a random process, as the reserves of the financial resources in them, as a rule, are very limited [4]. Therefore, the priority task of the head of SME in the financial risk management is to maintain the optimal level of the latter, which requires the search for such a value of financial risk in which the marginal utility reaches a minimum, and the next risk aversion varies by giving priority to a risky decision. This means that the most effective risk management of SMEs involves measures in which the level of risk increases to generate higher incomes.

It should be noted that the management of SMEs almost always has the opportunity to reduce the level of the financial risk to an acceptable value having spent some resources (material, financial, etc.). However, due to the limited financial resources that SMEs can allocate to risk management, it is advisable to study the impact of each method of the risk management and build in each case the company's own ranking using in practice the most effective of them. Thus, one of the key requirements for the risk management methods for small enterprises is their low cost.

The domestic scientist Ye. I. Maslennikov considers risk as a resource that has the following property: it gives an increase in returns to a certain level of its attraction, and then (with an excess of this resource), the return not only ceases to grow, but also diminishes [8], in other words with increasing resource consumption there is a decrease in its marginal efficiency.

In this study we have used the well-known law of decreasing resource efficiency (downward marginal product, marginal productivity, or return of any variable factor, if at least one factor of production remains constant). The law of diminishing returns assumes that starting from a certain moment a consistent investment of capital gives less additional or marginal reduction of the level of financial risk for each subsequent invested unit of costs. Thus, based on the general theoretical economic nature of costs, one can assume that there is a rational level that provides the most appropriate reduction in the level of the financial risk. In other words, we proceed from the assumption that there is a functional relationship between the reduction in the level of the financial risk of SMEs and the funds invested in methods of managing it:

$$R_{\text{вал}} = \frac{R_{\text{вих}} - \Pi + X}{C + K} \tag{2}$$

where R_{3aπ} - the residual level of the financial risk that is achieved when investing funds for the implementation of the risk management methods, %;

1) $R_{\mbox{\tiny BMX}}$ is the initial level of the financial risk to implementation of the risk management methods, %.

 $R_{\text{\tiny BMX}}$ is always below the maximum possible risk level of $R_{\text{\tiny max}}$, since even in the absence of the financial risk management, there is always a certain probability of success - the likelihood of a favourable coincidence of circumstances. So:

$$R_{\text{BMX}} = R_{\text{max}} - R_{\text{ycn}} = 100 - R_{\text{ycn}},\%$$
 (3)

where R_{vcn} - the likelihood of a favourable coincidence of circumstances;

- Π the amount of the financial risk reduction due to the advantages of SMEs that reduce risks, %;
- X value of increase of the financial risk at the expense of the risk factors of SMEs that lead to risks, %;
 - C coefficient of initial certainty of the situation, in particles;
- M coefficient of accumulated returns from the applied methods of the financial risk management, in partial reduction of financial risk per hryvnia of invested funds for the management of the financial risks;
- K coefficient of the financial risk reduction at the expense of the funds on methods of the risk management, in shares.

It is advisable to reduce the level of the financial risk to some point from which the result of investing in the risk management methods is a negligible risk reduction. Subsequently, the return on investments, generally, becomes negative, and the risk reduction is negligible. In this regard it is advisable to use the rating of the risk factors and in accordance with it to formulate an algorithm for reducing the level of the financial risk.

In the absence of a clear formalized theory of the financial risk for SMEs the proposed approach may serve as the theoretical basis for the application of methods and tools for managing the financial risks based on the law of diminishing returns.

The proposed approach to the financial risk management of SMEs takes into account their specificity and the condition of saving money.

Thus, we can conclude that there is an optimum investment of funds in the management of financial risks and the returns from them, and accordingly it is necessary to invest limited resources. This provision is the theoretical basis for managing the financial risks of SMEs, which, in turn, allowed us to draw the following conclusions.

Firstly, the same methods and tools for managing the financial risks in different specific situations have different effectiveness, which makes it expedient to use the rating approach in determining their set according to the specific conditions.

Secondly, it is fundamentally impossible to bring the levels of the financial risks to zero, and their objective affiliation to a particular type makes it advisable to use the concept of acceptable risk, that is, its reduction to some acceptable level and the cessation of investment to reduce it for its achievement.

Thirdly, according to the law of diminishing returns over time, investing in methods of managing the financial risks, their effectiveness will be reduced. The limited resources that are characteristic of small businesses make it expedient to invest them to a certain point due to the return, as well as the requirement for the primary use of the methods and instruments that have a higher return (risk reduction) from the invested in comparison with others.

Conclusions. We believe that this approach to financial risk management for SMEs can be applied to all the types of the financial risks. At the same time, it has no independent practical value from the standpoint of determining the specific interim value of the level of financial risk, because it characterizes the theoretical aspects of this process and proves the expediency of the financial risk management, which ensures the implementation of the rating approach in the study of risk factors. This allows to provide the maximum possible reduction of financial risks in each particular situation with the minimum expedient investment.

The use in the economic practice of SME of the financial risk management algorithm will make it possible to adjust the strategy of their development taking into account the level of the financial risk, improve the performance indicators of such enterprises, and apply the practice of introducing international standards for the management of their financial and economic activities.

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