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# RISK OF INVESTMENT PROCESSES IN ENTERPRISES

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**Abstract:** Risk is quite inherent in the market economy and it has a different impact on each business activity, including investment activities. Taking investment activities with substantial risk largely depends on the opportunities of preventing its adverse effects. Risk cannot be entirely eliminated but it is possible to limit its level. In this context, adequate risk management seems to be critical.

**Keywords:** investments, investment risk, investment risk management

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## Introduction

A prerequisite for the economic growth of any country is constant capital accumulation. The accumulation can result from collecting savings, investment activity and continuous improvement of human skills and implementation of the scientific and technological advances. Hence the role of investments in the development process is an important consideration (more about financing of development activities by Łukomska-Szarek 2011). However, capital absorption of the Polish economy is low while major barriers to investment activities include not only insufficient level of own capital but also the substantial risk involved in investments.

The willingness of the enterprises to engage in investment activities largely depends on the opportunities to utilize instruments that reduce the level of this risk.

## The idea of investment activities in enterprises

The investment-based development of the enterprise is necessary for reinforcing and maintaining its market position whereas investment projects are considered the most important pillar of this development. Investments are needed for the business entity to maintain or reinforce its potential. With investments, the enterprise does not only acquire new or modernized fixed assets but it also increases the value of current, intangible and legal assets. Investments naturally change the structure of enterprise assets and structure of financing sources, thus impacting new internal and external relations.

Although there are many various definitions of the investment concept, the investment is mainly defined as spending funds (on physical, financial, intangible

and legal assets) in order to generate higher profits in the future (Zachorowska, Łukomska-Szarek 2011).

In the business practice, investments are a complex and individualized process, which has an effect on the development of the enterprise and the increase in its value. Changes in the enterprise's assets induced by investments stimulate other changes that impact on its functioning, mainly on reinforcing its market position. Specific properties of investments include collecting and spending capitals in the expectation of future return with additional benefits i.e. profits (dividends).

In reference to the enterprises, the investment policy[1] is a part of not only the survival strategy but, first and foremost, development strategies. This concerns in particular physical investments since they allow for the increase in production capabilities of the enterprise and the increase in competitiveness of its products. Consequently, this impacts positively on the economic growth of a country.

Therefore, physical investments are a precondition for the development of any enterprise. The expenditures in this period can ensure maintaining or increasing the market share of the enterprise in the future. This process results from the incessant scientific, technological and economic advances, which represent a driver of the development in both individual enterprises and the whole economy.

## Risk and uncertainty in investment processes in enterprises

The basis for any investment decision is prognosis of future operating conditions, which is to a certain degree exposed to uncertainty, which also relates to individual factors of current decisions concerning the investments (Goldie, Murray 2011, p. 28). In the process of making investment decisions and the related financial decisions, enterprises incur a specific risk that the decision can be wrong and would not produce the expected business benefits.

Despite the lack of accurate and comprehensive information concerning future conditions of management, the business entity has to make the decision which consequently involves some errors. With this approach, the term risk can have a negative (the risk can lead to loss) and a positive aspect (if the effects are higher than expected) (Wójcik-Mazur 2012, p. 36-37; Wójcik-Mazur, Szajt 2015).

There is no a clear-cut and coherent definition of the investment risk as part of business risk in the economic literature. In general, the risk is linked to uncertainty of reaching the expected investment effects (the goals set in the decision-making process) (see: Bodie, Taqqu 2012, p. 50; Cooper et al. 2005, p. 3; Zachorowska 2006, p. 64; Skowron-Grabowska 2011; Łukomska-Szarek 2016). This is connected with the likelihood of return on investments which is different than expected while it concerns not only the opportunities to obtain worse but also

[1]The investment policy in the enterprise represents a set of any current and long-term activities that are aimed at indication of the investment needs of the business entity and those aimed to satisfy the needs. The investment policies are used to derive an investment strategy that consists in determination of the reasons and aims of investing and, eventually, making the investment decision. More details on this problem were discussed by A. Zachorowska and P. Kokot-Stępień in a study: *Inwestycje w strategii rozwoju przedsiębiorstwa* (Zachorowska, Kokot-Stępień 2008, p. 24-31).

better outcomes. Therefore this concept describes the uncertain phenomenon concerning the future, which will have a negative effect on business activity or will lead to positive effects of the investment project (Okręglicka 2017).

The risk of the investment projects has been also defined as a quantifiable likelihood of the situation in which actual expenditure on the project and real effects of investment activities would negatively deviate from the primary evaluation. The scale of deviations between the actual and expected values reflects the level of risk, which increases with the rise in the likelihood of the unfavourable phenomena or the scale of loss caused by this phenomenon (Marcinek et al. 2010, p. 16).

Therefore the risk of investment projects is an equivocal concept, which involves many elements (Zachorowska 2013, p. 7-19). The related literature emphasizes three major components: event (unwanted change), likelihood of the event and the effect of the event (level of threat) (Kerzner 2009, p. 747).

The complexity of the investment risk results from many stages of the investment process. It should be emphasized that at individual stages of the investment projects, sources of risk and consequently its categories and risk management are changed, as is the scale of risk (Tworek et al. 2013; Suchecka, Nieszporska 2015). The likelihood of making a mistake relates both to the decision process and the implementation of a project. All the decisions made later during the investment process depend on the initial investment decision and its accuracy is critical to the future success of the investment.

All the investment decisions can be made under conditions of certainty or uncertainty. Due to the specific nature of the decision process, human behaviour is very important in risk conditions. The literature on risk emphasizes the three basic attitudes of investors towards risk: aversion, neutrality and propensity[2]. A substantial role in the determination of the investment risk is played by subjective sensations of the investor, which means that the choice of the concrete variant of the investment depends on his or her risk propensity.

The risk of investment projects can be considered from the standpoint of the three methodological approaches (Czekaj, Dresler 2006, p. 108):

1) The risk of investment projects can be approached separately, without consideration for the correlations with other parts of the enterprise.
2) This risk can be analysed in the context of the risk of the already owned resources and the effect of the analysed project on the risk of the entire enterprise.
3) The risk of the investment project can be analysed from the standpoint of the risk market and opportunities to create various packages of investments by the investors.

Differences between these approaches are critical to the practice because from the standpoint of the risk incurred by the entire enterprise or the market risk, highly

[2] From the scientific standpoint, additional intermediate forms of behaviours can be highlighted apart from the three basic attitudes towards risk (see: Misztal 2010, p. 14 and further; Seog 2010, p. 18 and further).

risky projects that are analysed separately can become the projects with low risk. The benefits that result from diversification of assets of the economic entity can substantially limit the risk of the investment project.

The character of the investment risk is varied. It can be single-directional (loss) or multi-directional (profit, loss).

Making right investment decision requires the assessment of the risk level. Risk identification and assessment depend on the conditions in which the decisions are mad. The risk of investment activities is affected by various factors, both of internal and external character. Depending on the specific nature of the investment project, the risk is more or less affected by other market, political, technical and random factors.

## Stages in the investment risk management

In the literature, the explorations concerning the specific risk are linked directly to risk management (Kościelniak et al. 2016)[3], which represents the core element of the strategic management in any enterprise. In the case of the investment projects, risk management is a separate process, which can be arbitrarily divided into phases and stages when various activities are performed and adequate methods, tools and techniques are used to identify, analyse and respond to the project risk.

Risk management should have a planned and purposive character. This means that such activities should be regular and sustained, and their goal is to maximally limit the risk and prevent from its negative effects. This process is mostly divided into three stages (Marcinek et al. 2010; Murphy 2008):

- risk identification and quantification,
- risk control,
- risk monitoring in order to maximally limit the risk.

Risk management is a continuous process, concerning all the phases of the process. It can be concluded that regardless of concrete solutions, the above listed stages constitute the standard model of risk management.

The first stage is mainly informative and prognostic. It concerns in particular risk identification, definition of its specific character and type. Risk identification involves all the areas of threats. Adequate risk identification and risk assessment largely depends on the scope, completeness and quality of information. Risk identification helps choose adequate measurement methods i.e. risk quantification. Identification of the sources of risk of the investment[4] can be followed by the assessment of individual types of risk. It is also important to evaluate the effect of individual types of risk on the investment. Risk quantification is one of the difficult

[3] Risk management means identification of potential events or situations, evaluation of their effects and likelihood of occurrence, definition and using adequate methods to respond to these events and risk monitoring (Korombel 2013, p. 43).

[4] Risk identification consists in determination of the types of risk which are most likely to affect the investment. At this stage, the characteristics of each type of risk are also determined (*A Guide to the Project …*, 2004, p. 111 and further).

stages in risk management. A variety of techniques can be used and their choice depends on many factors, both objective and subjective. The objective factors include the type and size of the investment, scope and credibility of collected information, time consumption (Zoła 2014, p. 153) and level of costs of the analysis and risk assessment, and experience and knowledge of the analysts. The subjective factors include economic potential and financial standing of investors.

Risk quantification has a substantial effect on the risk management process. After risk is quantified, the directions of further actions can be defined and the second stage can be started i.e. risk control. At this stage, the decisions to limit risk are made, characterized by active or passive strategies used to prevent the risk.

From the standpoint of risk uncertainty, it is essential that a risk management plan is developed by the person who manages the investment project during the last phase of the pre-investment stage i.e. during development of the detailed technical concept of the project. On the one hand, such a plan would indicate the strategy that should be adopted in the phase of concluding the contracts (with suppliers, subcontractors at the stage of investment realization). On the other hand, the plan would make it easier to choose the most favourable types of contracts. The plan should help make the decisions concerning the correlations between the detailed technical design and implementation of the project in the future from the standpoint of the division of responsibilities and allocation of risk among individual participants of the investment cycle. Adequate assessment of the scale and sources of risk allows for the determination of the resources for limitation of threats and limitation of the possible loss.

Monitoring of the effectiveness of the methods and forms to reduce risk is the last stage in the risk management process. The monitoring involves many areas that focus on the assessment of the effectiveness and efficiency of the methods and instruments used to reduce risk. In general, risk monitoring can be divided into physical and financial (Tarczyński, Mojsiewicz 2009, p. 37 and further). Physical risk monitoring encompasses all the activities and instruments that lead to total elimination of the likelihood of a loss (i.e. risk avoiding or loss prevention) or a substantial limitation of the loss (using the measures that determine the frequency and size of losses). The financial risk monitoring focuses on all the activities and instruments that lead either to stopping the risk (independent risk management by the entity) or risk transfer. Therefore, the monitoring system allows for the assessment of the effectiveness of activities that reduce the risk. It should be noted that there is not universal procedure for risk management in any conditions and with respect to any investor. Such procedures should be designed individually by adjusting them to the internal and external determinants of the concrete investment activities.

As an organized process, risk management provides the foundation for collecting data concerning the types of investment risk, their effects and efficiency of various tools used to control risk. The controlling used in the investment activities extends the information system thus allowing for creation of databases which, if used

properly, can impact on the quality of the decision-making processes[5]. Overcoming the informational barrier helps evaluate the likelihood of specific events in the future, which can in turn have an effect on reduction in the risk level.

## Conclusions

The investment decisions should take into consideration all the risk elements and possible methods to monitor the risk. The financial reserves used to prevent the investment risk can significantly impact on the profitability of the designed investment and, consequently, have an effect on the decisions on the implementation of the investment. The investment project should be designed according to the investment strategy adopted by the investor and it should also identify the possible strategies to control the risk.

## Literature


1. *A Guide to the Project Management Body of Knowledge*, Project Management Institute, Upper Darby, 2004.
2. Bodie Z., Taqqu R. (2012), *Risk Less and Prosper: Your Guide to Safer Investing*, John Wiley & Sons, New Jersey.
3. Chudzicki M. (2016), *Analiza opłacalności inwestycji w branży transportowej*, "Zeszyty Naukowe Politechniki Częstochowskiej. Zarządzanie", nr 19, p. 103-115.
4. Cooper D., Grey S., Raymond G., Walker P. (2005), *Project Risk Management Guidelines: Managing Risk in Large Projects and Complex Procurements*, John Wiley & Sons, Chichester.
5. Czekaj J., Dresler Z. (2006), *Zarządzanie finansami przedsiębiorstw*, Wydawnictwo Naukowe PWN, Warszawa.
6. Goldie D.C., Murray G.S. (2011), *The Investment Answer*, Business Plus Hachette Book Group, New York.
7. Kerzner H. (2009), *Project Management. A System Approach to Planning Scheduling and Controlling*, John Wiley & Sons, New York.
8. Korombel A. (2013), *Apetyt na ryzyko w zarządzaniu przedsiębiorstwami*, Wydawnictwo Politechniki Częstochowskiej, Częstochowa.
9. Kościelniak H., Puto A., Bajdor P., Budzik-Nowodzińska I. (2016), *Trends of Polish Enterprises in Risk Management*, "European Scientific Journal", Special Edition, p. 1-11.
10. Łukomska-Szarek J. (2011), *Finansowanie działalności rozwojowej samorządów terytorialnych*, "Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie", nr 1864, z. 59, p. 75-86.
11. Łukomska-Szarek J. (2016), *Ewaluacja ryzyka w systemie kontroli zarządczej oświatowej jednostki budżetowej*, "Zeszyty Naukowe Uniwersytetu Szczecińskiego. Finanse, Rynki Finansowe, Ubezpieczenia", nr 6(84), p. 243-253.


[5] All further choices made during the investment process are determined by the investment decision made at the beginning. The future success of investment depends on its accuracy. Therefore the phaze of investment decision making is so essential – it is the critical point for the whole investment undertaking (Zachorowska 2006, p. 64). In theory of decision making, risk is defined as such decision situation, where the uncertainty about future events exists, but the decision-maker has subjective information at his disposal, which are related to possibility distribution of future situation shaping.

12. Marcinek K., Foltyn-Zarychta M., Pera K., Saługa P., Tworek P. (2010), *Ryzyko w finansowej ocenie projektów inwestycyjnych. Wybrane zagadnienia*, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice.
13. Misztal M. (2010), *Ryzyko w działalności przedsiębiorstwa – szanse czy zagrożenia*, [in:] Dębicka O., Winiarski J. (red.), *Ryzyko – teoria i praktyka*, Fundacja Rozwoju Uniwersytetu Gdańskiego, Gdańsk, p. 10-14.
14. Murphy J.D. (2008), *Understanding Risk: The Theory and Practice of Financial Risk Management*, Taylor & Franacis Group, London.
15. Okręglicka M. (2017), *Poziom ryzyka techniczno-informacyjnego oraz produkcyjnego w kontekście strategii małych i średnich przedsiębiorstw w Polsce*, "Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie", nr 1975, z. 102, p. 281-290.
16. Seog S.H. (2010), *The Economics of Risk and Insurance*, John Wiley & Sons, Chichester.
17. Skowron-Grabowska B. (2011), *Koncepcja offshoringu w analizie ryzyka w łańcuchu dostaw*, "Zeszyty Naukowe Politechniki Częstochowskiej. Zarządzanie", nr 1, p. 39-47.
18. Staniec I. (2013), *Zarządzanie ryzykiem w organizacji w świetle paradygmatu sieciowego*, "Organizacja i Zarządzanie. Kwartalnik Naukowy Politechniki Śląskiej", nr 3(23), p. 147-157.
19. Suchecka J., Nieszporska S. (2015), *Koncepcja ryzyka w kontekście funkcji użyteczności*, "Zeszyty Naukowe Politechniki Częstochowskiej. Zarządzanie", nr 19, p. 103-115.
20. Tarczyński W., Mojsiewicz M. (2009), *Zarządzanie ryzykiem*, PWE, Warszawa.
21. Tworek P., Adamek-Hyska B., Pera K., Tomecki M., Marcinek K. (2013), *Inwestycje rzeczowe przedsiębiorstw. Wybrane zagadnienia*, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice.
22. Wójcik-Mazur A. (2012), *Zarządzanie ryzykiem płynności w bankach*, Wydawnictwo Politechniki Częstochowskiej, Częstochowa.
23. Wójcik-Mazur A., Szajt M. (2015), *Determinants of Liquidity Risk in Commercial Banks in the European Union*, "Argumenta Oeconomica", nr 2(35), p. 25-47. DOI: 10.15611/aoe.2015.2.02
24. Zachorowska A. (2006), *Ryzyko działalności inwestycyjnej przedsiębiorstw*, PWE, Warszawa.
25. Zachorowska A. (2013), *Zarządzanie ryzykiem inwestycyjnym*, [in:] Wielgórka D. (red.), *Wybrane procesy zarządzania w przedsiębiorstwach i instytucjach publicznych*, Wydawnictwo Wydziału Zarządzania Politechniki Czętochowskiej, Częstochowa, p. 7-19.
26. Zachorowska A., Kokot-Stępień P. (2008), *Inwestycje w strategii rozwoju przedsiębiorstwa*, [in:] Wielgórka D., Łukomska-Szarek J. (red.), *Wybrane problemy zarządzania finansami w przedsiębiorstwach*, Wydawnictwo Politechniki Częstochowskiej, Częstochowa, p. 24-31.
27. Zachorowska A., Łukomska-Szarek J. (2011), *Działalność inwestycyjna przedsiębiorstwa*, [in:] Czapka M. (red.), *Ekonomiczno-finansowe aspekty finansowania przedsiębiorstwa*, Wydawnictwo WSEiA, Bytom, p. 103-138.
28. Zoła M. (2014), *Zarządzanie czasem w projekcie z uwzględnieniem ryzyka*, "Organizacja i Zarządzanie. Kwartalnik Naukowy Politechniki Śląskiej", nr 2(26), p. 153-166.

## RYZYKO PROCESÓW INWESTYCYJNYCH PRZEDSIĘBIORSTW

**Streszczenie:** W warunkach gospodarki rynkowej ryzyko jest zjawiskiem powszechnym, w różnym stopniu dotyczącym każdej działalności gospodarczej, w tym działalności inwestycyjnej. Podejmowanie działalności inwestycyjnej obciążonej znacznym ryzykiem zależy w dużym stopniu od możliwości zabezpieczenia się przed jego negatywnymi skutkami. Ryzyka nie można wyeliminować całkowicie, możliwe jest jednak ograniczenie jego rozmiarów. W tym kontekście ważne jest odpowiednie zarządzanie tym procesem.

**Słowa kluczowe:** inwestycje, ryzyko inwestycyjne, zarządzanie ryzykiem inwestycyjnym