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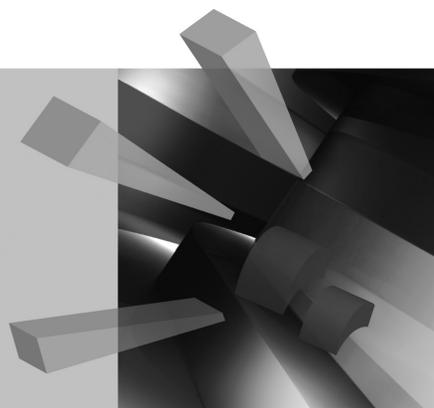
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## **EVALUATION OF RISK MANAGEMENT PRACTICES IN COMPANIES LISTED ON THE WSE**

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**Summary:** The aim of the article is to provide an analysis of the risk management systems in companies listed on the Warsaw Stock Exchange. The choice of risk management systems of listed companies, as the objects of analysis was not accidental. It was due to the fact of special exposure of these organizations on risk and usually more serious effects of its materialization than in other companies. The aim of the analysis is to identify trends in risk management practices, its measurement and reporting in Warsaw listed companies.

**Keywords:** risk, risk management, business reporting, stock exchange.

### **1. Introduction**

It has been few years since the situation on the Warsaw Stock Exchange, as well as on other global stock exchanges, has remained highly unstable. Publicly-traded companies have to deal with changes that are becoming harder to predict. As a result of that not only the achievement of success, understood as the income generation, but also more often the survival of a business depends on how quickly it is able to identify changes occurring in its surrounding and to determine their impact on the company's strategy, offer, resources, processes and finally the expectations of stakeholders. A prerequisite is the identification, but also a thorough and comprehensive analysis of the nature, significance and likelihood of a positive or negative impact on the activity of the organization. Such an analysis will result in the establishment and implementation of appropriate actions aimed at minimizing risks and making use of opportunities. In order to be able to react in the appropriate time and adapt to the changing conditions, a listed company should implement and maintain an effective system of risk management. Law provisions impose on listed companies the obligation to publish information in the form of current and periodic reports. Additionally the "Stock Exchange Best Practices" require from them to follow an open and transparent information policy. Therefore in connection with the above, the consequences of the materialisation of risks in listed companies are more serious than in non-listed companies. They must immediately inform market participants about

risk materialisation, which results in disclosing to competitors their weaknesses and exposing them to further risks. To achieve the purpose of this article, the first part presents the concepts and the most popular management standards. The second and third parts of this article demonstrate studies on the practices used within the risk management system and internal control carried out between 2008–2011, as well as an in-depth analysis of the approach to risk management in selected companies.

## 2. Concepts and standards for risk management

The types of financial and operational risk, which were crucial several years ago, are now identified, described and systematized in terms of the methods for their monitoring and limitation. The variability of opportunities and threats coming from the environment, causes that the approach to the risk management is still evolving at the conception level and at the management standards. The most popular concepts in practice, which are also the subject of the widest theoretical reflection, include traditional risk management and enterprise risk management. The main difference between them is other perception of risk, which determines the distinction of: the approach to risk, risk management purposes, identification methods, analysis, risk monitoring and response to them, systems of reporting and communicating opportunities and threats, as well as formalization of the process and responsibility for its operation and improvement [more on this subject can be found in Liebenberg, Hoyt 2003, p. 37-52; Lam 2003, p. 51-56]. The evolution of the concept of risk management is the cause of development of standardization of this area. At present, the most commonly applied standards include:

1. FARMA – A standard developed by the Federation of European Risk Management Associations (Polish version 2003).

2. COSO II – An American standard developed by The Committee of Sponsoring Organizations of the Treadway Commission (Polish version 2007).

3. ISO 3100:2009 Risk Management Standard (PN-ISO 31000:2012).

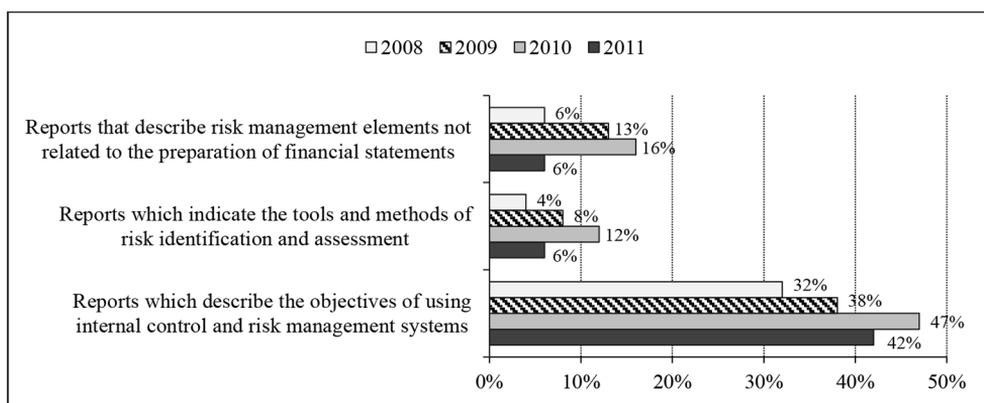
In principle, the risk management process is treated similarly as in terms of standards. An individual approach can be observed at the level of implementation and utility. However, none of the standards imposes specific solutions, but constitutes only a set of guidelines and recommendations. Risk management standards are not obligatory provisions for companies<sup>1</sup>. The organization may voluntarily choose one of them which will guide them to the implementation of the risk management process or use guidelines of several selected standards and create individual norms, tailored exclusively to the needs of the organization and embedded in the organizational culture [Machowiak, Staniec 2007].

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<sup>1</sup> The exceptions are the following standards: Bazylea II for the banking sector and Solvency II for the insurance sector.

### Control and risk management system – practice of publicly traded companies

Risk management benefits are undeniable and their derivative is an increase in the value of organization. Unfortunately, according to research conducted in Poland from 2008 to 2011, even though companies are aware of the need of a risk management system, they do not implement specific actions<sup>2</sup>. It is surprising that the number of companies providing information about their reports on the solutions applied within risk management and internal control systems, including reports on the objectives set against these systems, in 2011 decreased by 11% compared to 2010 (Figure 1). At the same time, the number of companies that present tools and methods used in the process of identification and assessment of risks decreased. The percentage of companies describing in their reports the elements of the risk management system not associated with the process of preparing financial reports in 2011 achieved the percentage from 2008, thus substantially reducing the level from the previous year.



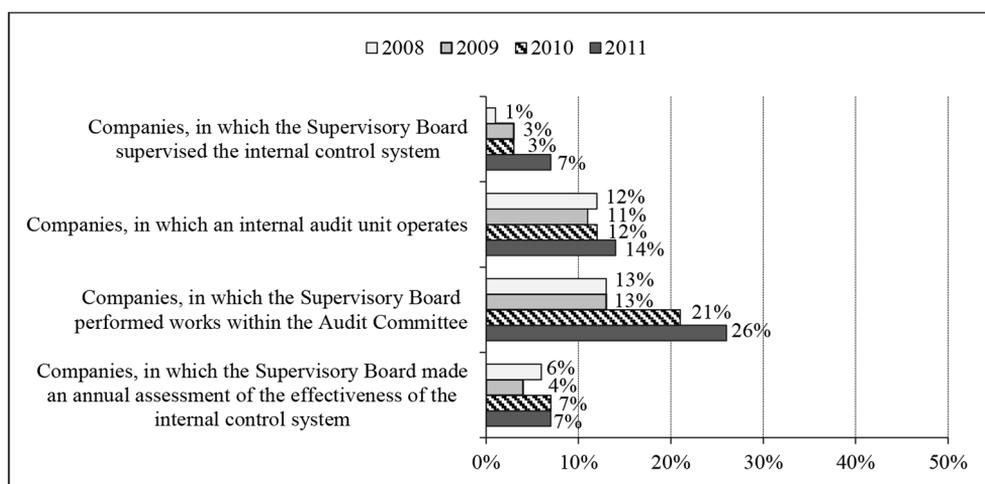
**Figure 1.** Research results within the purposes of internal control and risk management from 2008 to 2011

Source: Control and risk management system – practice of publically traded companies on the Warsaw Stock Exchange, Grant Thornton Frąckowiak, editions: 2008, 2009, 2010, 2011, [www.grantthornton.pl](http://www.grantthornton.pl).

The internal control is an important system tool, guaranteeing effective risk management. It plays a priority role for company security. Inefficient operation of control mechanisms may result in an increased level of risk, as well as financial losses. Therefore, the evaluation of the internal control system in terms of accuracy

<sup>2</sup> The only studies in Poland on systems of internal control and risk management in companies listed on the Warsaw Stock Exchange that have been conducted consecutively since 2008 are based on a review of current and periodic reports conducted by Grant Thornton Frąckowiak and published at [www.grantthornton.pl](http://www.grantthornton.pl).

and efficiency of operation should be carried out by an internal auditor. The purpose of the audit is an independent evaluation of the effectiveness of the functioning system of planning, monitoring and evaluation of risk in the entire organization. According to the research presented in 2011, only 14% of companies had internal control units in their structures. Only 5% of them performed a periodic evaluation of the internal control system (see Figure 2). This raises doubts as to the companies' correct interpretation of the functions and purposes of internal control in risk management or suggests a disrespectful attitude towards its role in this regard.



**Figure 2.** Research results within monitoring, supervision and evaluation of risk management and internal control systems in 2008-2011.

Source: *Control and risk management system – practice of publically traded companies on the Warsaw Stock Exchange*, Grant Thornton Frąckowiak, editions: 2008, 2009, 2010, 2011, [www.grant-thornton.pl](http://www.grant-thornton.pl).

In the listed companies the supervision over the internal control unit should be performed by the audit committee – a working team of the supervisory board. What should be considered positive, though puzzling in the context of the above-mentioned approach to the evaluation of the functioning of internal control in the company, is the fact that since 2008 the number of companies in which such units are established has been gradually increasing. However, if since 2009 there has been an obligation to establish units in all companies, despite an increase by 50% compared to 2009, the number of companies with an audit committee in their organizational structures is still not satisfactory. It is a very negative phenomenon because according to studies, a well-organized audit committee prevents the management board from making a lot of inappropriate decisions which may result in serious financial consequences.

According to the “Best Practices for Companies Listed on the Warsaw Stock Exchange” guidelines, the system of internal control and risk management, as well as internal audit should be supervised. However, studies indicate that in 2011 only every 15<sup>th</sup> company met this requirement. In addition, the supervisory board is required to make an annual evaluation of the company’s situation, with particular emphasis on the assessment of the internal control system and risk management system that are essential for the company. Unfortunately, as in the case of supervision, the supervisory board met this obligation only incidentally – in 7% of the studied companies.

The presented results have inspired the authors to carry out an in-depth analysis of the reports of selected listed companies in terms of checking the impact of risk management practices on the financial results from 2008 to 2011 (a period comparable with study conclusions presented above).

### **3. Evolution of risk management systems of selected companies listed on the Warsaw Stock Exchange**

Companies listed on the Warsaw Stock Exchange can be divided into three groups in terms of the approach to risk management and practical experience in this area:

1. Companies which ignore the need of introducing and using risk management systems.
2. Companies commencing formalization and systematic processes of risk management.
3. Companies using advanced risk management systems.

The first group includes companies in which only single risks are managed. In addition, these companies do not take any steps to implement an integrated risk management system. The second group includes companies managing risk in a non-system and informal manner, which commence steps to implement an integrated risk management system. They are focused on using best practices and increasing the effectiveness of the solutions used so far. The third group includes organizationally mature companies, in which a comprehensive risk management system based on the highest standards and consistent with best practices has been implemented and creates added value. In order to conduct an in-depth analysis, the following companies operating in the same fuel industry were selected: Grupa Lotos S.A. and Petrolinvest S.A. Petrolinvest S.A. is one of the three worst companies listed on the Warsaw Stock Exchange in terms of rate of return<sup>3</sup>. Within 3 years the company has brought to the stockholders a 94% loss of the invested capital<sup>4</sup>. In the company every risk is

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<sup>3</sup> According to the ranking of “TSR Złota Akcja Biznes.pl”, the first ranking in Poland illustrating the actual rates of return achieved by shareholders holding shares (also including the dividends paid). The ranking is for investors who are interested in building value by the company in the long run.

<sup>4</sup> The remaining two of the three worst companies, Pronox and Jago, are currently in bankruptcy.

managed separately without analyzing the dependencies that exist between individual risks and the impact they may have on achieving the set operational and strategic objectives. Petrolinvest S.A. perceives risk only as a threat whose materialization can have impact on decreasing the financial results. The company pays no attention to new types of risks, which may include the risk of loss of reputation or fraud risk. The company also does not take into consideration factors that may pose a threat to the entire enterprise. Risk management is treated as a collection of unrelated and individual actions, not as a process consisting of sequentially performed steps.

The company does not present in the reports the tools and techniques used to identify and analyze risks. It indicates only that the basis for risk quantification is the frequency of the occurrence of specific events in the past and the basis of hierarchy – the amount of any eventual financial losses. In the reports Petrolinvest S.A. declares that it takes a number of measures aimed to minimize the adverse effects of risk. However, it does not indicate typical reactions to risk, as well as it does not show data demonstrating that the company has a risk reporting and monitoring system in areas other than financial reporting.

The reports for the years 2008–2011 show that the company copies from year to year its annual reports, changing only the figures. Since 2008 almost all the sentences in the reports are identical, so it is clear that the preparation of reports is an automatic process. If the company places no effort in the preparation of financial statements, in which the information is too general and is of improper quality, investors do not want to invest their capital in the company without being able to assess the company risk. Difficulties in raising capital result in the lack of investment in company development, including the implementation and development of risk management and internal control systems as well as financial reporting.

Grupa Lotos S.A. as part of the WIG20 index, is one of the three best companies in terms of the rate of return. The rate of return has made it possible for stockholders to earn 95%. As one of the first three companies it received the “Golden Laurel for best computerized company in 2011”, for, among others, the design of the “Enterprise Risk Management System”<sup>5</sup>.

The report for 2008 shows that the approach to risk management during that period was not effective. However, in the subsequent three years a number of measures aimed to implement an integrated enterprise risk management system at the level of the entire organization was implemented. In particular:

1. The understanding of risk was changed and risk started to be treated not only as a threat, but also as an opportunity.
2. Risk management became not only a decision support process, but also an integral part of management, as well as implementation of business processes and organizational culture.

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<sup>5</sup> In the eleventh contest of the Businessman.pl report “Teleinfo 100” Grupa LOTOS won a Golden Laurel for the best computerized company of 2011 in the field of energy and fuel.

3. Risk management objectives were amended and since 2011 the company has started to include also the following objectives:

a. Promotion of sustainable and stable development to achieve set objectives through cyclical and recurrent identification of risks which may affect the achievement of these objectives.

b. Providing comprehensive knowledge of the risks associated with the activity of the capital group.

c. Provision of the opportunity of quick and effective decision-making based on risk analysis.

d. Preparation of the organization for an immediate response in the event of risk.

In 2009, within the Integrated Management System, detailed principles of identification and assessment of risk, as well as a method of monitoring, reporting and verifying the effectiveness of actions were determined. The basic principles and the scope of responsibility applicable in the system were set out in the Enterprise Risk Management Policy. Since 2010 risk management has begun to include all key stages. Identification was used in risks affecting the implementation of strategic and process objectives. The process involved all employees who were obliged to report threats and opportunities that might affect the achievement of the set objectives. Today, for each identified risk the probability of its occurrence, as well as the financial and reputational consequences, which could pose a potential risk for the company, are determined. This data in the form of risk maps is the basis for preparation of plans for dealing with risk for the entire Capital Group. Since 2010 the owners of individual risks have been obliged to periodically report monitoring results to the Management Board and the Audit Committee. An Enterprise Risk Management Committee was established, which issues opinions and verifies the consistency of actions undertaken by the owners of the risks and their impact on the risks in other areas. Once a year, the effectiveness of enterprise risk management system is assessed with the use of the “Governance, Risk Management, and Compliance”<sup>6</sup> model.

The conducted analysis shows that the companies have very different approaches to risk management, starting with the issue of its perception, through monitoring, evaluation and ending with application in decision-making processes, which is presented in Table 1. Pretolinvest S.A. manages only single risks of a financial nature, so the company’s integrated risk management system does not exist. The company also does not express a desire to implement such a system. However, Grupa Lotos S.A. has a comprehensive enterprise risk management system which creates value for the organization. No matter how effective the system is, the company is still improving and updating it.

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<sup>6</sup> A model developed by “Open Compliance & Ethics Group”, related to the principles of corporate governance, assuming a uniform approach to review and preparation of evaluations in relation to the design of individual systems, as well as compliance of their activity with the accepted standards.

**Table 1.** Differences in risk management in Petrolinvest S.A. and Grupa Lotos S.A.

Category	Petrolinvest S.A.	Grupa Lotos S.A.
Risk perception	Risk	Risk and opportunity
Risk management definition	No definition	A process supporting decision-making, being an integral part of the management and implementation of business processes as well as an element of organizational culture.
Risk management procedures	No procedures	“Enterprise Risk Management Policy in the Capital Group of Grupa Lotos S.A.”
Risk identification	Identification aimed at revealing risks of a financial nature.	Risks are identified for the implementation of strategic and operational objectives.
Risk measurement	The basis for risk quantification is the frequency of occurrence of specific events in the past.	For each risk, the probability of its occurrence is estimated, and then the impact of financial and reputational consequences for Grupa LOTOS is assessed.
Risk assessment	Risks were assessed in terms of their influence on the financial result.	Risks are evaluated in terms of the results of the probability of their occurrence, as well as financial and reputational consequences.
Response to risk	No information on response to risk.	Indication of the rules of responding to risk. Four basic responses can be listed: reduction, avoidance, transfer, acceptance.
Risk monitoring	Risk monitoring, especially in the process of preparing financial statements.	For all registered risks the methods of their monitoring are indicated.
Risk management assessment	No information on risk management assessment.	Once a year, the effectiveness of the risk management system is assessed.
Responsibility system	No separate organizational unit responsible for coordinating risk management.	Price and Trading Risk Committee, Enterprise Risk Management Committee.

Source: own elaboration based on Petrolinvest S.A., 2011, [www.petrolinvest.pl](http://www.petrolinvest.pl) and Grupa Lotos S.A., 2011, [www.lotos.pl](http://www.lotos.pl).

#### 4. Conclusions

The presented studies and reports constitute only a partial source of information on the practices used within risk management systems in the companies listed on the Warsaw Stock Exchange. However, they confirm that risk management in these companies is just starting to develop. In the analyzed period, one cannot talk about changes in the approach to risk management, but about stagnation, because the companies only take certain actions in those areas in which changes are imposed by the law.

As a consequence, in terms of the maturity of organizations using risk management, the majority of companies listed on the Warsaw Stock Exchange can be included in the group of companies which ignore risk management or use a traditional approach to risk. Companies that have effective integrated risk management systems, which can be a good example for the market, are exceptions. As a result, a lot of years have to pass in order to be able to talk about the advanced level of development of risk management systems in companies listed on the Warsaw Stock Exchange. Building the capacity and maturity of an organization within risk management requires time and the rate of achieving the appropriate level depends on many factors. Taking into consideration the experience of business entities that have implemented a comprehensive risk management system in the entire organization, it shows that it takes about five years.

## Literature

- Control and risk management system – practice of publically traded companies on the Warsaw Stock Exchange*, Grant Thornton Frąckowiak, editions: 2008, 2009, 2010, 2011, [www.grantthornton.pl](http://www.grantthornton.pl).
- Liebenberg A.P., Hoyt R.E., *The determinants of enterprise risk management: Evidence from the appointment of chief risk officers*, "Risk Management and Insurance Review" 2003, 6.
- Lam J., *Enterprise Risk Management: From Incentives to Controls*, John Wiley & Son, New Jersey 2003.
- Machowiak W., Staniec I., *Nie ma jednego sposobu zarządzania ryzykiem*, Raport CFO – Zarządzanie ryzykiem, CFO – magazyn finansistów, <http://cfo.cxo.pl>, accessed 2007.
- [www.coso.org/-ERM.htm](http://www.coso.org/-ERM.htm).
- [www.ferma.eu/risk-management/standards/risk-management-standard](http://www.ferma.eu/risk-management/standards/risk-management-standard).
- [www.iso.org/iso/home/standards/iso31000.htm](http://www.iso.org/iso/home/standards/iso31000.htm).
- [www.lotos.pl](http://www.lotos.pl).
- [www.petrolinvest.pl](http://www.petrolinvest.pl).

## OCENA PRAKTYK ZARZĄDZANIA RYZYKIEM W SPÓŁKACH NOTOWANYCH NA GPW

**Streszczenie:** Celem artykułu jest przedstawienie analizy systemów zarządzania ryzykiem funkcjonujących w spółkach notowanych na GPW w Warszawie. Wybór systemów zarządzania ryzykiem spółek giełdowych jako obiektów analiz nie był przypadkowy. Wynikał z faktu szczególnej ekspozycji tychże organizacji na ryzyko oraz z zazwyczaj poważniejszych skutków jego materializacji od tych występujących w innych podmiotach. Przedstawiona analiza ma na celu wskazanie trendów w zakresie praktyk zarządzania ryzykiem, jego pomiaru i raportowania w warszawskich spółkach giełdowych.

**Słowa kluczowe:** ryzyko, zarządzanie ryzykiem, raportowanie biznesowe, giełda papierów wartościowych.