Risk management standards – the review of approaches and concepts

Piotr Tworek

Abstract
This paper deals with the issues of risk management as one of management functions in modern companies. In particular, it reviews a range of risk management concepts. The author compares selected concepts and considers their applicability. The subject of the paper results from the author’s research and it attempts to create a universal risk management concept, which could mainly be useful for construction companies.

Key words
Risk, risk management standards.

Introduction
In order to select an appropriate risk management concept and tailor it to a company’s profile, one needs to know, firstly, universal risk management principles, secondly, modern risk management concepts, thirdly, international regulations and standards which are in force and effect in this respect, fourthly, the risk mechanism itself, and fifthly, the requirements and a specific profile of the company’s business activities and, consequently, the specific type of risks (for a given entity) and risk inducing factors (risk drivers). At present, risk management belongs to the basic management functions in modern companies. All over the world, attempts are made to standardise and systematize risk management procedures as a process composed of individual phases and stages. Depending on a business entity’s activities and profile, its risk management may be carried out in various ways. In Poland there are a lot of companies which still don’t manage their risks in any formalised way. Both public entities and commercial enterprises (apart from some exceptions, i.e. banking and insurance) don’t have any professional integrated risk management systems in place.

The aim of this publication is to outline the risk management concept as practical knowledge and a separate branch of science at the same time. In particular, the author attempts to discuss and compare the essential risk management concepts (risk management standards). Risk management is regarded here to be a separate science, i.e. the science of risk and, at the same time, a separate area within the framework of modern corporate management. The deliberations presented in the paper are mostly theoretical. The author provides just a synthetic presentation of the issues related to the topic. The author, when formulating conclusions in the paper, draws on his experience gained during the research into risks that construction and assembly companies in Poland are exposed to.

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1. Overall presentation of the concept of risk and the most important risk management standards

Risk is an interdisciplinary and multifaceted category and, that’s why, it’s very difficult to provide its explicit definition. Risks occur in all areas of a human being’s life and knowledge, including economics and management. Therefore, there are risks of various characters and the risk management concepts vary as well. Unlike uncertainty, risk is a measurable category, which can be fully qualified. This category concerns the future, which cannot be foreseen completely, but one can only forecast, with a certain degree of likelihood, a possibility that a certain event (threat) may occur. That’s why, risks, in theory and in practice, are described by means of probability distribution. Also the implications of risks are important and need to be anticipated for every risk. This’s, surely, one of the key issues in the theory of economics; such knowledge is necessary in investments, finance, management etc. in the scientific literature, a risk is defined in a number of ways. G.C.A. Dickson, for example, defines a risk as „(…) the possibility of an unfortunate occurrence, risk is a combination of hazard, risk is unpredictability - the tendency that results may differ from predicted results, risk is uncertainty of loss, risk is the possibility of loss”[1]. In general, a risk means that the results (benefits) to be obtained in the future will vary (in minus) from the ones expected by an owner of capital (company, project), i.e. the company will make a loss. According to the representatives of the offensive trend in risk definitions, a risk may not only mean a loss but it may also be a source of success (profit) [2]. This kind of an approach to the risk definition is presented e.g. by such author as P.F. Drucker. All this means that there’s still a need in the science to carry out the research into this issue. This’s such an important issue because e.g. a risk (from the point of view of corporate economics) has impact on a company’s goodwill, i.e. an increase in risks results in a decrease in the company’s goodwill and contributes to a fall in the company’s efficiency, and vice versa. Therefore, there are important reasons why risks should be examined and managed in a complex, formalised and systematic way. A complex way means that risks should be examined and managed in every dimension, in which the company operates. It should be added that attempts are made, all over the world, to formalise risk management processes. In particular, we can mention ISO 31000:2009 Risk management Principles and guidelines, published in 2009 by the International Organization for Standardization (ISO) [3], as well as the guidelines issued by the Basel Committee [4]. There are a wide range of other risk management standards worldwide, depending on a type of business activities. Some of them are presented in a table 1.

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<td>ISO 14971:2000 Medical devices - Application of risk management to medical devices</td>
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<td>CSA</td>
<td>CSA Q 850:1997 Risk Management Guidelines for Decision Makers</td>
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<td>JIS Q 2001:2001 Guidelines for development and implementation of risk management system</td>
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<td>AS/NZS 4360:2004 Risk management</td>
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Table 1: The most important international standards for the risk management

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When analysing the table 1, one should remember that it doesn’t contain all the solutions in this field. There are a lot of various organisations, institutions and scientific and research centres worldwide, which have developed their own risk standards, norms, definitions, concepts or risk management principles. We should mention, first of all, the International Risk Management Institute in Dallas (USA). This institute has created a set of risk management principles called *101 rules of risk management* [6]. This’s a collection of various rules which may be used in many public institutions and economic entities. Their main feature is universalism. „Another example of such regulations is Standard no 7 (MFRSs), which has been created within the framework of the International Financial Reporting Standards – this’s a standard entitled ‘Financial instruments: disclosures’[7]. One should also pay attention to an organisation named the Committee of Sponsoring Organizations of the Treadway Commission (COSO), which defines Enterprise Risk Management (ERM) as „(…) a process, effected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives”[8]. „There is a direct relationship between objectives, which are what an entity strives to achieve, and enterprise risk management components, which represent what is needed to achieve them”[8], and its graphic presentation can be found in a figure 1.
In particular, the figure 1 presents the individual stages of risk management, treated as a separate process in a company. Furthermore, attention should be drawn to the solutions to this problem, offered by such organisations as e.g. The Institute of Risk Management (IRM) [9], The Association of Insurance and Risk Managers (AIRMIC) [10] and The National Forum for Risk Management in the Public Sector (ALARM) [11] and many others. In Poland, the organisation called POLRISK has brought a significant contribution into risk management. This’s an association, whose members represent various professions which normally deal with risk management [12]. In particular, the Federation of European Risk Management Associations (FERMA) has developed A Risk Management Standard, which standardises all the risk management issues, and unifies “(...) the meanings of terms used, risk management processes, organisational structures in risk management, risk management objectives”[9]. This publication provides a general division of risks and risk drivers into internal and external ones and the following risk categories, namely: financial risks (interest rate risk, rates of exchange risk, credit risk), strategic risks (e.g. competition), operational risks (e.g. change of management board) and other risks (e.g. force majeure, the environment etc.). Their graphic illustration is shown in a figure 2.
As you can see in the figure 2, financial liquidity (and a company’s cash flows) plays a crucial part here. Companies face problems with financial liquidity, when a risk has already occurred. These problems can then be regarded to be the effects of the impact that a risk has on an entity. Proper estimation of cash flows, in addition to correct calculation of a discount rate ($r$), is particularly important when measuring effectiveness of investment projects carried out by companies. In practice, any mistakes made in this area result in incorrect measurement of a company’s financial efficiency which, consequently, may lead to wrong investment decisions and an unsuccessful investment. In order to mitigate a cash flow risk, in turn, a company that wants to measure such a risk should use the Cash Flow at Risk (CFaR) method.

Source: [9].
where CFaR means a company’s cash flows, which are at risk. In particular, „(...) CFaR is a maximum value, by which a company’s cash flows may be lower than the planned value in the analysed period”[7]. In Poland, in business practice of the leading companies, this method is basically not applied; similarly to another method, i.e. Earnings At Risk (EaR)\(^2\). A similar situation can be found in the 100 leading construction and assembly companies in Poland, i.e. such methods as CFaR, EaR or Value at Risk (VaR) are practically not used. Entrepreneurs from the construction industry in Poland are traditional and tend to evaluate risks only qualitatively, by means of traditional methods, such as brainstorming etc, as well as intuition and experience. In Poland there is no research centre, operating as an independent institute, which would conduct regular research into risks. Only at universities, there are departments whose names include ‘Risk management’. Globally, however, „(...) other important organisations of this type include the following: GAPR (Global Association of Risk Professional, SRA (Society for Risk Analysis), FERMA (Federation of Enterprise Risk Management Associations)\(^7\). Furthermore, there are numerous other organisations in the world which deal with risk management\(^3\) such as, firs of all, insurers. Here we can enumerate, for instance: American Association on Risk Management (ARIA), Risk and Insurance Management Society (RIMS), The Geneva Association – Risk and Insurance Economics and Research etc. For example, in the USA alone, there are a few dozens organisations and institutions which, directly or indirectly, deal with the issues of risks; the following ones operate in North America, e.g.: „(...) ACORD, Advocates for Highway and Auto Safety, Agents Council for Technology, Alliance of American Insurers (AIA), Alliance of Insurance Agents and Brokers, American Academy of Actuaries, American Academy of Insurance Medicine, American Academy of Physical Medicine and Rehabilitation, American Association for Long Term Care Insurance, American Association of Crops Insurers (AACI), American Association of Insurance Services (AAIS), American Association of Managing General Agents (AAMGA), American Association of State Compensation Insurance Funds (AASCIF), American Board of Independent Medical Examiners (ABIME), The American College, American Council of Life Insurers (ACLI), American Institute for Chartered Property Casualty Underwriters (AICPCU), American Institute of Marine Underwriters (AIMU), American Insurance Association (AIA), American Land Title Association, American Risk and Insurance Association (ARIA), American Society for Healthcare Risk Management (ASHRM), American Society of Pension Professionals & Actuaries (ASPPA), American Society of Safety Engineers (ASSE), America’s Health Insurance Plans (AHIP), Applied Systems Client Network, Associated General Contractors of America (AGC), Associated Reporting Companies (ARCO), Association for Advanced Life Underwriting (AALU), Association for Cooperative Operations Research and Development (ACORD), Association of Governmental Risk Pools (AGRP), Association of Health Insurance Advisors, Association of Insurance Compliance Professionals (AICP), Association of Life and Health Administrators, Association of Professional Insurance Women, Association of Workers’ Compensation Boards of Canada (AWCBC), Australian Risk Policy Institute (ARPI), Automobile Insurance Plans Service Office (AIPSO), Automobile Insurers Bureau of

\(^2\) Such a conclusion was drawn from the empirical research. The author belonged to a team working on a two-year research project, during which the use of risk assessment methods in the leading Polish companies was examined, through questionnaires and personal interviews. The project was carried out at the Department of Investments and Real-Estate, the University of Economics in Katowice, under the scientific direction of Prof. Krzysztof Marcinek. See more: [13].

\(^3\) For instance, worldwide the risk management issues, in the area of project management, are dealt with by such institutions as the International Project Management Association (IPMA) in Holland and the Project Management Institute (PMI) in the USA.
(NISS), National Institute for Occupational Safety and Health (NIOSH), National Institute of Pension Administrators (NIPA), National Insurance Crime Bureau (NICB), National Organization of Life and Health Insurance Guaranty Associations, National Safety Council, National Society of Insurance Premium Auditors (NSIPA), Nonprofit Risk Management Center, Physician Insurers Association of America (PIAA), Professional Liability Underwriting Society (PLUS), Property Casualty Insurers Association of America (PCI), Property Insurance Plans Service Office (PIPSO), Property Loss Research Bureau (PLRB), Public Agency Risk Managers Association (PARMA), Public Risk Management Association (PRIMA), Public Utilities Risk Management Association (PURMA), Reinsurance Association of America (RAA), Risk & Insurance Management Association of Singapore (RIMAS), Risk and Insurance Management Society, Inc. (RIMS), Risk Management Institution of Australasia Ltd. (RMIA), Self-Insurance Institute of America (SIIA), Society for Risk Analysis (SRA), Society of Actuaries, Society of Insurance Financial Management (SIFM), Society of Insurance Research, Society of Insurance Trainers and Educators (SITE), Society of Professional Benefit Administrators (SPBA), Society of Risk Management Consultants (SRMC), Southern Association of Workers' Compensation Administrators (SAWCA), Surety Association of America (SAA), Surety Information Office, Tennessee Public Risk Management Association, Texas Public Risk Management Association (Texas PRIMA), Texas Surplus Lines Association, Inc. (TSLA), University Risk Management and Insurance Association (URMIA), Workers Compensation Research Institute (WCRI)[14].

Summing up, attention should be drawn to the importance of a new international risk management standard of ISO 31000:2009 Risk management - Principles and guidelines, and the accompanying documents of: ISO Guide 73:2009 - Vocabulary and ISO/IEC 31010:2009 Risk Assessment Techniques. This constitutes some kind of basis for risk management in organisations all over the world. At the same time, this’s the most important international regulation in the practical art of risk management. According to this document, risk management in an organisation „(…) creates and protects value, is an integral part of all organizational processes, is part of decision making, explicitly addresses uncertainty, is systematic, structured and timely, is based on the best available information, is tailored, takes human and cultural factors into account, is transparent and inclusive, is dynamic, iterative and responsive to change, facilitates continual improvement of the organization”[15].

Conclusions

Risk managers all over the world need to have a solid basis in order to manage risks. Such solutions are offered i.e. by risk management standards. Their introduction results from the need to standardise terminology and risk management principles at the level of international corporations, on one hand, and the need to create a certain model or a universal integrated risk management system, on the other hand. Formalisation of a risk management process will undoubtedly contribute to better efficiency in the operation of any economic entity or public institution worldwide.

Bibliography


Summary

The knowledge of international risk management solutions and regulations forms the basis for risk managers all over the world. No matter what area of life or an institution risk management concerns, there is a certain universal set of rules and principles, which risk managers should follow. Risk management standards should be regarded as a kind of bible in management, describing threats and hazards in organisations all over the world, irrespective of their specific character and entities’ profiles.