Introduction

Enterprise risk management (ERM) is now considered to be a leading approach to risk management and is being widely promoted worldwide and in Poland*. In general, the adoption of ERM approach allows the organisation to clarify its risk appetite and embed it into the business strategy. Also, ERM helps to refine the identification of risk-bearing events and determining the risk-response strategies in case of risk occurrence. The idea of ERM is to implement the risk management process across the organisation and ensure that it is carried out by people at every level of organisation. Its main objective is to create a complete picture of all internal and external threats and to develop strategies that determine the response to so-called key risks. The process should be anchored in the main strategy of the organization as well as in the strategies of its individual units. The effectiveness of risk management process in an integrated approach depends on its clear definition and communication to all levels of an organisation. Also, the effectiveness of risk management activities is dependant on the definition of risk appetite which provides a platform for a comparative analysis with the organisation’s current risk profile.

The prime purpose of this study is to highlight the ambiguities of risk appetite definitions and to indicate the importance of risk appetite concept in the risk management process. In particular, the study is based on the recommendations included in popular applicative documents that are accessible to end-users. As the problem is a novel one, the literature often does not follow the details included in applicative documents and remains focused more on the general concepts.

The first section of the paper provides an explanation of enterprise risk management process with regard to its specific features. In the second of the paper

* Compare the findings presented in: The Risk Intelligent Enterprise (2006); Global Risk Management Survey (2009), Slobosz and Ziomeko [2009]).
the overview of different approaches to risk appetite definitions is conducted whereas section four discusses the utility of risk appetite concept. Section five presents some empirical evidence on the practices within the definition of risk appetite and the sixth section concludes the study.

1. The key elements of enterprise risk management (ERM) process

For the proper understanding of the concept of risk appetite, the key elements of the enterprise risk management process should be revised as the term ‘risk appetite’ refers to these elements. In this study, the concept of enterprise risk management will be underpinned to one of the leading and latest risk management standards – the ISO 31000:2009 standard, which is increasingly recognised and applied in the world*. The standard recommends that the risk management process should be an active element of the strategy, planning, management, reporting, principles, values and culture of the organisation. The risk management process in ISO 31000:2009 standard consists of seven interlinked stages, as presented in Figure 1, where the “glue” are two sets of activities: the constant communication and consultation and the monitoring and reviewing actions.

* According to FERMA’s (Federation of European Risk Management Associations) European Risk Management Benchmarking Survey 2010, the practical application of ISO 31000:2009 standard declared 13% of respondents (N = 782). The ISO 31000:2009 standard was published in December 2009 and the FERMA’s research was conducted in the first half year of 2010 (European Risk Management Benchmarking, 2010, p. 3).
The focus on communication and consultation with stakeholders (both internal and external) indicates the input of stakeholders in determining the risk criteria, in this in shaping risk appetite. Also, it guarantees the transparency of the process. The monitoring and review of risks enables an organisation to respond appropriately in case of the emergence of new risks as well as in case of the changes in the level of existing risk factors (which may result from the changes in the organisation's objectives or its external or internal environment).

The domain part of the risk assessment stage is preceded by what the organisation plans to achieve and how the external and internal factors may affect the achievement of organisation’s objectives. According to ISO 31000:2009, the risk assessment stage consists of the three sub-stages: risk identification, risk analysis and risk evaluation. All of these sub-stages require a systematic approach (interactions at each level of risk analysis – see Figure 1). At the same time, it is recommended that the manner in which risk is expressed (with regard to the combined probability and results of risk occurrence) and the degree of details in risk analysis are adjusted to the type of risk, the availability of information and pre-defined goals. Also, it is required to inform decision-makers and stakeholders
about the acceptable level of risk and the sensitivity of these levels to the changes in the organisation’s environment.

The risk assessment procedure aims at supporting the choice of appropriate risk treatment methods. Here the costs and benefits of each method should be carefully revised, with regard to the risk accompanying each of alternatives. If these actions are continuous in nature, it may be assumed that the risk management process is efficient and allows to obtain the expected results.

2. Risk appetite – definitional and methodological problems

Risk appetite is an extremely ambiguously defined concept as it is often considered in different contexts. In literature, it is sometimes associated with risk tolerance, risk willingness or risk attitudes (Hopkin, 2010, p. 233-243; Chapman, 2007, p. 186-188; Moeller, 2007, p. 61-67). In the popular applicative enterprise risk management standards, risk appetite is associated with the maximum risk exposure that the organisation is able to accept in achieving its goals. Such a concept is followed in the above mentioned ISO 31000:2009 standard, where the appetite for risk is defined as the amount and type of risk that an organisation is prepared to pursue, retain or take. At the same time, the standard provides the definition of risk tolerance which is understood as the organization’s or stakeholder readiness to bear the risk after treatment in order to achieve its objectives (see: Risk Management – Principles and Guidelines, 2009, p. 2; Risk Management – Vocabulary, 2009, p. 9). The latter is mainly determined by the regulatory and legal requirements, as well as the size of an organization. Accordingly, the ISO standard clearly indicates that the appetite for risk should be considered from the perspective of the interests of all groups of stakeholders, such as organizations, owners and management. The ISO standard defines the risk appetite quite generally, especially with regard to the need to establish criteria for assessing the risks (risk criteria) and to assess the risks in terms of these criteria (risk evaluation). This definition was adopted also in the UK’s leading risk management standard BS ISO 31100:2011*.

In turn, according to the Orange Book developed by HM Treasury’s** (recommended for use in the Polish public sector) risk appetite is “(...) the amount of risk that an organization is prepared to accept, tolerate, or be exposed to at any point in time” (The Orange Book..., 2004, p. 49). The concept of risk appeti-


** The HM Treasury is a commonly used abbreviation for “Her Majesty’s Treasury” which is the United Kingdom’s economics and finance ministry, http://www.hm-treasury.gov.uk/about_index.htm [Accessed 15.08.2011]
te adopted in this document refers both to an acceptable level of risk and so called residual risk. The document clearly highlights that the definition of risk appetite across the organisation can be complex. In addition, the Orange Book indicates three levels of risk appetite. The corporate risk appetite is the overall amount of risk judged appropriate for an organisation to tolerate, which should be agreed at board level. Delegated risk appetite is the risk appetite agreed on different levels of the organisation. The project risk appetite is attached to the projects that fall outside of day-to-day business operations of an organisation (The Orange Book..., 2004, p. 24). The approach to determining risk appetite for particular risk groups makes it easier to define the acceptable level of risk exposure, both in value and frequency.

Risk appetite is also a subject of considerations in another risk management standard providing recommendations of ERM implementation – The COSO standard titled Enterprise Risk Management – Integrated Framework (COSO, 2004a; COSO, 2004b). The document provides two approaches to understanding the risk appetite. The first one states that risk appetite is the degree of risk (on a broad-based level) that an entity is willing to accept in pursuit of its goals. The second approach says that the risk appetite is the amount of risk an entity is willing to accept in pursuit of its goals (COSO, 2004b, p. 19-20, 124). Such definitions indicate that the risk appetite can be expressed qualitatively and quantitatively by the use of indicators such as market risk or risk capital. However, from the methodical point of view, it is important to determine the risk limit which expresses the acceptable level of variation in the implementation of individual goals.

The definition of risk appetite is also provided in a consultation document Risk Appetite and Risk Tolerance developed by Institute of Risk Management (IRM) and published in May 2011 r. (IRM, 2011). The document provides the definitions based on the ISO31000:2009 and the British Standards (BS BS31100) issued in 2011 (BSI, 2011, p. 7). According to this document, the concept of risk appetite is clearly a tendency to take risks (propensity to take risk) and the tendency to risk control (propensity to exercise control). Moreover, these two concepts cannot be analysed in isolation from each other. Appetite for risk must be measurable and the type of measurement depends on the level of governance at

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* The term “residual risk” means the risk that remaining after the controls put in place to mitigate the inherent risk (the risk linked to the activity itself) (The Orange Book..., [2004, p.49]; Risk Management – Vocabulary [2009, p.11]).

** The Committee of Sponsoring Organizations of the Treadway Commission (known as COSO) is a voluntary private sector organisation gathering professional associations dealing with accounting and internal auditing. In particular, the COSO is famous for the guidelines on the proper financial reporting, corporate governance, business ethics, risk management and internal control. http://www.coso.org/ [Accessed: 15.08.2011]

*** The Institute of Risk Management (IRM) is the independent, world’s leading enterprise-wide risk education institute. http://www.theirm.org/ [Accessed 15.08.2011].
which risk is considered (i.e. strategic, tactical or operational). At the strategic level, appetite for risk should focus on risks that may shape the organisation’s competitive advantages. The key point of reference should be the shareholders value creation. At the tactical level, the appetite for risk relates to the risks normally associated with the implementation of already established organisation’s strategy. Here, the recommended way to measure risk appetite is the establishment of the Key Risk Indicators (KRI). At the operational level, the appetite for risk is a set of recommendations on the procedure in the event of specific threats, without having to consult with the senior management. At this level, as a measure of risk appetite Key Control Indicators (KCI) are suggested (IRM, 2011, p. 32-34). Also, the IRM standard states that the determination of risk appetite requires an organisation’s maturity in the area of ERM. The maturity in risk management means here the advanced level in ERM implementation. The organisation which is immature in risk management, exposes itself to the additional risk while trying to define the risk appetite. The IRM, however, provides a few recommendations on how to independently evaluate the maturity of risk management and thus check the preparedness to evaluate risk appetite. There are four areas of evaluation (IRM, 2011, p. 19-20):

1. Business context: i.a. the state of development, size, industry sector, geographical spread, complexity of business model;
2. Risk management culture: i.a. the extent to which the board (and its relevant committees), management, staff and relevant regulators understand and embrace the risk management systems and processes of the organisation;
3. Risk management processes: i.a. the extent to which there are processes for identifying, assessing, responding to and reporting on risks and risk responses within the organisation;
4. Risk management systems: i.a. the extent to which there are appropriate IT and other systems to support the risk management processes.

In 2009 AIRMIC* coordinated the research which was devoted to the problem of defining risk appetite. The report confirmed that definitions of risk appetite vary between practitioners. Some organisations prefer the definition of risk tolerance which is associated with the maximum risk that can be taken before financial distress. Accordingly, such organisations tend to define risk appetite as the amount of risk that is actually taken for reward (Research into..., 2009, p. 5).

The above conducted overview of the definition of risk appetite leads to the conclusion, that there are distinct differences in interpreting this crucial term.

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*AIRMIC is a members’ association operating in United Kingdom which supports those responsible for risk management and insurance within their own companies. The association provides research, training and networking for the benefit of its members. http://www.airmic.com/about/about-airmic [Accessed: 15.08.2011]
However, the core problem for defining risk appetite is the understanding of risk which influences the further approaches to risk management. If the risk is perceived as a threat, then the risk appetite is associated with the acceptable and reasonable level of risk exposure for a particular organisation. The level of risk exposure might be expressed as the balance between the cost of risk mitigation (financial or other costs) and the cost of risk occurrence (the loss). However, if the risk is considered as an opportunity, risk appetite expresses a proactive approach to risk in order to obtain the benefits of risk occurrence. In this case, the level of risk exposure is established by the comparison of potential benefits (financial or other) with the burden of potential losses. Such a concept of risk appetite is consistent with the concept included in *The Orange Book...*, (2004).

The Standard & Poor's (2007) indicates that the establishment of risk appetite definition (also referred to as risk tolerance) should be done both in quantitative and qualitative terms, in direct connection with the strategy of the organisation. This is under the assumption, that the adoption of any strategy carries the uncertainty of its accomplishment. Clear definition of risk appetite allows to specify a framework for a decision-making. Thus, it can be concluded, that the determination of the organisation’s risk appetite is a managerial tool. However, business practice indicates that there are significant difficulties in defining risk appetite and the adoption of effective risk appetite measures in the organisation (*Research into...*, 2009; Kamiya et al., 2007, p. 29-31). The effectiveness of ERM is assured only if the risk appetite is embedded into the planning process and if it is not just a way of risk reporting or risk control. In addition, there is a growing tendency for greater transparency in the activities of the organisation, which is connected with informing stakeholders about the current and target levels of risk taking.

3. The utility of risk appetite declaration

Despite the reported differences in defining risk appetite, it is undoubtedly the core of enterprise risk management process, being a comparative platform of the desired and the current risk profile of the organisation. Defining risk appetite means providing the “point of risk exposure” clarifying the real size of the risk area. Also, the risk appetite provides information about the possible responses to risk in the specific decision-making situations.

With regard to the risk perceived through likelihood – impact lenses, risk appetite represents a border line for risk taking. The risk which is above risk appetite is simply too high for an organisation with regard to the scale of its possible outcomes (compare Figure 2). Accordingly, an organisation may take the risk which is below its risk appetite without worrying about too excessive burden of risk.
The vision of risk appetite presented in Figure 2 underlines also the importance of proper conduction of risk assessment stage (which is presented above in Figure 1) as any mistakes in risk assessment result in improper definition of risk appetite. Obviously, such a situation might be very dangerous for an organisation if it leads to taking over-excessive risk.

The proper declaration of risk appetite supports the efficiency of an organisation in numerous ways. However, the key areas of activity which benefit from the declaration of risk appetite level are presented in Figure 3, and discussed further briefly.
Risk appetite – critical element of enterprise risk management process

With regard to the implementation of strategy, the correctly defined risk appetite supports the accomplishment of the strategy by increasing the efficiency of decision making. Also, it improves the planning process by clear identification of risks which the is willing to take and which should be avoided. Furthermore, risk appetite presents a balanced picture of risk an organisation identified, and among these it may seek the opportunities to create added value.

The definition of risk appetite is also valid from the risk management efficiency point of view. The organisation may focus on protection of more risky areas while maximising the resources to secure less risky areas. Also, it obtains greater clarity in the indication of the benefits of risk management, which is a valid argument in a better understanding of risk management and the need for expenses on it.

Determination of risk appetite is also important for stakeholders of an organisation, as it makes its activities more transparent. Accordingly, it ensures the cohesion of the decisions concerning the approved risk bearing capacity. Risk bearing capacity means the risk that an organisation may take with respect to the implemented risk control mechanisms. It should be underlined, that risk capacity is not always synonymous to risk appetite. If the risk bearing capacity is slightly higher or similar to the risk appetite, the organisation represents the balanced (neutral) approach to risk. If the risk appetite is greatly exceeding the risk bearing capacity, the organisation represents the aggressive attitude to risk and is often called a risk taker. In a contrary situation, the organisation manifests its risk aversion.

Assuming that the organisation tends to continuously improve the relations with its stakeholders (as it helps to increase the value maximisation), the stakeholders’ risk preferences should also be taken into account. In this context, the role of risk appetite is also valid. If risk appetite is set correctly, then it can be a subject of deeper consideration in terms of combination of risk preferences of particular stakeholders groups.
4. Risk appetite – Some evidence of European practices

In practice, the problem of the implementation of risk appetite concept is of great importance and represents a valuable subject of empirical studies. Such a research was commissioned and coordinated by AIRMIC and undertaken in 2009 by Marsh Risk Consulting and the University of Nottingham Business School. To gain a reasonable perspective of the development and application of the risk appetite, AIRMIC questioned all its members (over 800 entities). However, the return rate was just over 13% but the respondents come from various industries. The results of the study were published in (Research into..., 2009). For the purposes of the presentation in this study, only a few relevant aspects were chosen and among these:

1) the definition of risk appetite followed in the questioned organisation,
2) the methods of defining risk appetite (including qualitative or quantitative techniques),
3) the level of management at which risk appetite is shaped,
4) identification of benefits and barriers of determining risk appetite.

Within the definition of risk management, most of the respondents rely on definitions of risk appetite included in risk management standards. Accordingly, 37% of respondents rely on the definition of risk appetite stating that risk appetite is the amount and type of risk that an organisation is prepared to seek, accept or tolerate, and declare that such a definition is very useful* (Research in..., 2009, p. 18).

The research confirmed that risk appetite is perceived as an important tool of planning and strategic decision-making, which was indicated by 29% of the survey’s respondents. Moreover, 24% of questioned entities indicated that risk appetite is a valid tool of monitoring. Also, 24% of respondents claimed that risk appetite is an instruction how to conduct a decision-making process with regard to the applied risk management approach (Research in..., 2009, p. 19). Such results indicate that risk appetite is plays an important function in the strategic and planning areas as well as in controlling.

With regard to type of methods applied in defining risk appetite, 88% of respondents indicated the application of qualitative methods, whereas 78% quantitative methods. However, the proportions of the application of these methods depend on the level of decision making and risk to which they are applied to. The quantitative methods were preferred by the respondents for operational and financial risk. Accordingly, the strategic, compliance and reputation exposures were assessed by means of quantitative methods by less of the respondents (66%) (Research into..., 2009, p. 20). As for the application of risk appetite in practice,

* Such a definition of risk appetite is promoted in ISO 31000:2009 and the British Standard BS 31100, as mentioned above in section 2 of the paper.
65% of respondents indicated a probability-impact analysis and 39% the establishment of limits, targets or thresholds for key risk indicators. The 30% of respondents rely on the comparison with industry benchmarks or loss experience whereas 26% analyses impact on profit and loss account (Research into..., 2009, p. 22).

In the analysed sample of companies, risk appetite was shaped by predominantly at the leadership level as 50% of respondents indicated the top down approach from the senior management level and 42% – the top down approach from the board level. However, 38% of respondents indicated that risk appetite is shaped during the risk assessment workshops (Research in…, 2009, p. 20).

Finally, the research included identification of the benefits and barriers of determining the risk appetite level. The most frequently indicated benefits and barriers in this field are presented in Figure 4 and 5 respectively.

Fig. 4. Core benefits of determining risk appetite level
Source: Own study based on: Research into…, 2009, p. 20-21).
The most frequently indicated benefits of determining risk appetite level are connected with improvement of managerial capabilities and transparency (communication). The domain barriers are connected with both the understanding of risk appetite concept as well as with measuring its level.

The discussed research results revealed some valid disparities in the conceptual and methodological aspects of risk appetite. Accordingly, they confirmed the need to extend the concept of risk appetite and proved the importance of education in this area. Not surprisingly, risk appetite issue is a substantial element of various recommendations of activities within enterprise risk management.

**Conclusions**

The above considerations lead to the general conclusion, that the problem of risk appetite still requires extension within theoretical, methodological and applicative area. The definitions provided in popular risk management standards are ambiguous and thus raise confusion among the organisations willing to implement properly the idea of enterprise risk management. Thus, the prime concern is to provide a clear and applicative definition of risk appetite that will truly follow its idea. The experiences of practitioners, however, suggest that it is particularly interesting problem on a management board level.

The ambiguities of risk appetite definitions result in the difficulties in measuring risk appetite which raises the discussion over the possible risk indicators
Risk appetite – critical element of enterprise risk management process

that might and/or should be applied. The problem is even more demanding as it is beyond doubt that the correctness of risk appetite level is the core for the effective risk management implementation. Also, it may rise some valid benefits in various areas of organisation’s activity, such as accomplishment of strategy, risk management, risk capacity and relations with stakeholders.

The considerations presented in the study are non-exhaustive and attempted only to highlight the importance of risk appetite problem and to provide a convincing start point for further discussions and researches in this field. Surely, the problem of defining and measuring risk appetite will be in the centre of most of the risk management related studies, as it is the essence of the proper risk assessment and risk response strategies.

Bibliography


APETYT NA RYZYKO – KRYTYCZNY ELEMENT PROCESU
ZARZĄDZANIA RYZYKIEM

Streszczenie

Zarządzanie ryzykiem staje się w obecnej dobie ważnym elementem działań zarządzających podejmowanych w różnych jednostkach. Ważnym elementem tego procesu jest określenie poziomu apetytu na ryzyko, również ze względu na efektywność ogółu działań w obrębie zarządzania ryzykiem. Celem niniejszego artykułu jest przybliżenie definicji apetytu na ryzyko oraz ukazanie roli, jaką pełni on właśnie w zarządzaniu ryzykiem. Przyjmując za podstawę aplikacyjne ujęcie problemu, w artykule podniesiono problem niejednoznaczności definicji apetytu na ryzyko w regulacjach podstawowych standardów zarządzania ryzykiem. Omówiono również użyteczność prawidłowego określenia poziomu apetytu na ryzyko z punktu widzenia możliwej poprawy różnych aspektów funkcjonowania organizacji. Całość rozważań uzupełniono syntetyczną prezentacją wyników badań odnoszących się do zaobserwowanych praktyk w zakresie określenia apetytu na ryzyko.