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The role of Corporate Governance in risk assessment and mitigation

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ABSTRACT

Nowadays it is obvious that, the businesses have a wider obligation to perform risk management not only approaching the financial criteria, but a plethora of other parameters. The new national legislation enhances this approach. There is still limited insight, into how the corporations can effectively conceptualize intangible or non-financial risks, in relation to sustainability. Integrating environmental and social risks are critical to the effective management of any corporation's actual risks, and to improve resources allocation in a sustainable manner. This demands a strategic and systematic identification of issues through non-financial risk management. Our purpose is to identify, how Greek companies currently evaluate the risks, or are planning to do so, at the near future. In particular, the challenge is how to define and manage non-financial risk in their operations effectively, in parallel with the implementation of the new legislative framework. Moreover, the role of audit committee in this procedure is discussed and whether the existence of a different structure (e.g. risk officer or risk committee) could be beneficial.

In order to describe and evaluate the current situation in Greece, we conducted interviews with members of BoD or other executives of Greek companies, using a series of questions that were previously modified, to gain proper information. Gathering data and accordingly evaluate them, contributes to the outcome of the study, because it clearly demonstrates the current situation, derived by the most appropriate source. In order to form the questions in the most suitable way, a lot of preliminary work was needed: review current academic literature, evaluate reports of corporations' studies, gather and discuss articles and documents.

According to the collection and the evaluations of data gathered, both by literature study and the answers of the given questioners, the small and medium size business level Greek companies are currently in an early stages of the induction and evaluation of the different approach of risk management on non-financial risks, at a corporate governance level.. On the other hand, large public companies seem to have reached an adequate level of adjustment. However, it is important to pinpoint that all business have already understand the necessity of such a procedure and it seems that in a short period of time, large adjustments are to be conducted in that area.

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1. INTRODUCTION

1.1 BACKGROUND AND RESEARCH PROBLEM

Risk management is nowadays at a crucial turn, requiring that, businesses or other organizations, regardless their domain, to take their programs to an entirely new level if they are to remain effective in today's more than ever unpredictable environment. In other words, the organizations will need to keep these broader risk management trends firmly in mind, to ensure they plan and implement a program to handle not only financial, but non-financial risks as well, that can meet the continually escalating requirements of today's risk management environment.

Non-financial risks (NFR) comprise a complex and diverse group of risks, with the potential to inflict substantial financial, reputational or similar damage on a firm.

Additionally, supervisory authorities around the world are increasingly focused on the importance of effective management especially on specific group of NFR, such as conduct risk and cyber risk, as well as on NFR Management as a whole.

To face the existing situation and effectively face the supervisory expectations, businesses need to implement an integrated framework for managing NFR. This is not an easy task, especially for medium and small companies. Additionally, differences arise depending on the sectoral category of a business. Thus, each company needs to identify the specific risks that may face and describe it carefully in order to conduct a detailed analysis.

However, big companies and especially financial institutions, have already undertaken these initiatives to enhance NFR management, at a time of noteworthy volatility and uncertainty in the business and risk management environment. However, either for big or small companies, there is the need to include their Risk Identification process with the fundamental trends that are today transforming risk management as a whole. A lot of studies are published that aim to define paths to eliminate the risks. Torabi, et al.(2016), had published a diagram that illustrates diagrammatically the risk handling procedures (Appendix).

In order to have a clear view of the terminology used on the specific area, some widely acceptant terms that are used on literature are:

i. *Risk* is a concept used to express uncertainty about events and/or their outcomes that could have a material effect on the goals and objectives of the organization.

ii. *Risk management* can be defined as "the culture, processes, and structures that are directed towards taking advantage of potential opportunities while managing potential adverse effects" (Australian Stock Exchange Corporate Governance Council [ASXCGC], 2007). The ultimate responsibility for risk management rests with the board of directors.

iii. *Risk assessment* can be defined as measuring and prioritizing different categories of risks so that their levels are managed within defined tolerance thresholds, without being over-controlled or forgoing desirable opportunities. To accomplish this, it is required a risk assessment process that is sustainable, practical, easy to understand and right-sized for the companies.

Obviously, a lot a different definitions can be found in the literature, reflecting different kind of approaches in specific areas. Additionally, a group of other terminology is used, while applying risk factors in a business. Most of them are derived by ISO requirements and are briefly presented below (table 1).

Term	Definition	Reference
Risk	Negative effects of uncertainties and disruptive threats on the objectives of the organization	BS25999, 2007, ISO 22301, 2012
Likelihood	Chance of risk occurring, whether defined objectively or subjectively, and can be stated quantitatively or qualitatively	BS25999 (2007)
Impact	Results/outcomes of a risk that will have an impact on the organization's goals	BS25999 (2007)
Vulnerability	A weakness of an asset/resource that can be exploited by one or more threats	ISO 27005 (2008)
Disruption risk	Any threat or event which may cause major disruption in the organization such as earthquake, terrorism attack, and strike.	Tang (2006)
Operational risk	Any inherent uncertainty such as uncertainty in demand, supply, and environmental data that might lead to negative effects on the objectives of the organization	Tang (2006)
Risk appetite	Maximum amount of risks that an organization can tolerate to pursue or retain in order to meet its objectives	"ISO 22301" (2012)

Table 1. *Terms related to risk assessment*

1.2 AIMS AND OBJECTIVES

The current study is mainly concentrated in the following:

To gather information, identify and evaluate the level of compliance on the risk assessment procedures and more specifically the non-financial risks conception and assessment at Greek companies. The main objective is for the research to focus on small and medium size companies, that represents the vast majority of businesses in the country. However, some bigger companies – preferably public companies- need to be examined as well, to form a holistic image.

In order to approach the previous goal, we need to gather, describe and anaylize the current literature that focuses on the issues of risk identification, evaluation and assessment in corporate governance and also to pinpoint specific elements that concern the non-financial risk domain, which is an area of increasing interest.

As little have been published on this specific issue, the outcome of the current study may significant contribute to the existent knowledge.

1.3 RESEARCH QUESTION

As mentioned above, there is limited information on the management of non- financial risks, whereas the financial risks are well descripted at the literature.

Additionally, there was a notion that managing risks was an area that mainly financial institutions were involved in. However, lately it became obvious that this needs to be managed by all sectors, whereas additional risks, non-financial, were present and need to be identified and effectively managed as well.

Finally, there is limited information about the perception of the above, by Greek companies.

Accordingly, the main areas that the current study aims to clarify, are:

a. The level of involvement on risk assessment procedure in Greek companies
b. The determination and evaluation of non-financial risks
c. The role of the committees- especially the role of audit committee - on risk assessment procedure.
d. Possible implementation of improvement actions aiming to mitigate risks.

1.4 OUTLINE OF THE STUDY

The initial section of the current dissertation, introduces the background and research problem. More specifically, it describes the significance of the risk identification and risk assessment at corporate level. Additionally, it presents the concept and the importance of non- financial risks and also quotes the terminology used on relevant literature. Following the introduction, the study consists by 4 chapters:

Chapter two summarizes an extent study of current literature. It describes the meaning of risks but it mainly focuses on the non-financial risks. It presents a categorization and it gives some insights for its one of them. Additionally, this chapter contents information about the role of corporate governance on that field, as well as the legislative requirements.

Chapter three presents an in-depth explanation of the research methodology. It describes the reason for the selection of the particular way of gathering information and it gives a detailed presentation of the sample and the list of question that were posed.

In Chapter four all given responses are thoroughly presented and analyzed. Furthermore, it presents the discussion of the outcome of the research, in combination with what derived by the literature study.

Finally, Chapter five presents the conclusions and suggestion for future research.

2. RISK MANAGEMENT

2.1 INTRODUCTION

In the recent years and especially since the global financial crisis, most businesses have made substantial investments to upgrade their risk management systems and comply with ever more rigorous, legislative requirements. While most businesses now, have well-developed risk management system to manage credit, market, liquidity and other financial risks, there is a growing recognition of the need to enhance management of non-financial risk as well. However, based not only on literature, but mostly on the latest experience, the traditional governance model is inadequate in the current, most complex and rapidly transforming, environment (Spedding, 2009).

By further analyzing the legislative, industry and multidimensional risk environment faced by all kinds of companies, a need has arose for changes on the way risks are identified, to meet the demands of a wider definition of governance, that specifically incorporates risk management (Brown, 2009). Besides, many of the biggest risk events lately, have arisen by these kind of risks (biological, conduct and cyber risk), rather than from traditional financial risks.

2.2 IDENTIFY NFR

A critical first step may be, to have an effective risk identification process that captures all relevant NFRs, which is a regulatory requirement. In EU, risk identification is a key element of the Internal Capital Adequacy Assessment Process (ICAAP) and the Internal Liquidity Adequacy Assessment Process (ILAAP). Moreover, the Supervisory Board of the ECB has published specific expectations that organizations implement a process to comprehensively identify all risks at least annually, define an internal risk taxonomy and maintain a complete risk inventory, that incorporates an inherent risk assessment (ECB, 2017). In the US, risk identification is a key component of the Comprehensive Capital Analysis and Review (CCAR) stress-testing programs, and the Federal Reserve has published similar expectations (FED, 2018). Identifying NFRs is a significant challenge in large part, because most of the organizations lack an agreed definition and categorization of these risks. Since NFRs is often defined by exclusion as being risks other than financial (market, credit, or liquidity) risks, organizations may find it challenging to identify all their NFRs and establish a robust risk control framework for each of them. Businesses need to start with a comprehensive NFR categorization, which they can then, customize based on their profile. Some of them, will have to address a lack of accurate and comprehensive data that can make it demanding to identify and manage the NFRs. Thus, they may need to record events across the organization for all the risk types in the categorization. This event database will yield a comprehensive view of the organization's experience with all types of NFRs, including hard-to-quantify risks. The risk identification procedure should be related to an organization-wide risk assessment, employing both quantitative, as P&L impact and forward-looking qualitative elements, and also an analysis of the effectiveness of correlated controls.

Most of the times, the NFRs are usually being deemed as intangible issues that need to be properly articulated and managed by an effective non-financial risk management system for enhancing corporate sustainability. Additionally, through different interpretations of sustainability, links could be drawn for highlighting the significance of non-financial risk management and corporate sustainability. Finally, and most importantly, the companies need to identify a systematic and strategic non-financial risk management system that may lead to being more competitive, thus, moving closer to sustainable development (Wong, 2014).

2.3 NON-FINANCIAL RISKS – GENERAL CATEGORIZATION

While it is not easy to apply categorization on the NFR domain, we may propose the following general categories (Table 2), based on the literature review:

Non- financial risks General Categorization				
Natural risks	**Environmental risks**	**IT risks**	**Man-made risks**	**Reputation**
1.Biological 2.Climatological 3.Geophysical 4.Hydrological 5.Meteorological	1.Social 2.Competitor 3.Supplier 4.Governmental 5.Regulation 6.Strategic			

Table 2. *General categorization (categories & sub-categories) of the Non- Financial Risks .*

2.3.1. Natural risks

i. <u>Biological</u>:

The recent Covid-19 epidemic illustrated one of the most important, high-impact, catholic and extremely difficult to face risks, that it has not been properly evaluated.

This pandemic is radically changing the demand pattern for products/services, which has in turn increased the risk of fragility in global and regional supply chains and networks (Lee et al., 2020). To sustain and position themselves for the "new normal," firms should improve their operational resilience, accelerate end-to-end value chain digitization, rapidly increase the transparency of capital and operating expenses, embrace remote work, reimagine sustainable operations, and ensure competitive advantage (Verma et al., 2020). In addition, start-ups need to be more flexible and adapt their business models to dynamic markets. Policy measures will only be successful if they are complemented by an entrepreneurial ecosystem. Further, policy-makers need to implement measures to protect start-ups and adopt or discard policies in the future based on the knowledge derived from crisis situations (Kuckertz et al., 2020). Other epidemics or insect infections may be listed here.(Galindo et al., 2013, Holzmann et al., 2001, Olson et al., 2010 and Hiles, 2010)

ii. <u>Climatological / Mereological:</u>

Droughts, wildfire, extremes temperatures as well as hurricanes and tropical storms have begun to be taken into consideration at specific districts where the climate change have largely affected the micro climate. Specific sectors as agricultural, medical etc. evaluate those risks (Kangas et al.,2004, Kleindorfer et al.,2005, Knemeyer et al., 2009).

iii. <u>Geophysical:</u>

This category refers to incidents as earthquakes, volcano, rock-falls, expansive soils, tsunamis, avalanche, mass movement, subsidence etc. Some of the most memorable of these events include the tsunami in Indonesia in 2004, the hurricane Katrina in 2005, and the Haiti earthquake in 2010. (Nejad et al., 2014, Heckmann et al., 2015, Karimi et. Al, 2007, Wallace et al., 2010, Park et al., 2013)

iv. Hydrological:

Storms and floods are the most frequent and costly weather-related disasters in Europe, and accounted for 77% of the economic losses caused by extreme weather events between 1980 and 2006 (Bubeck et al., 2012). Although, plenty of information can be found in literature for the raising importance of that risk -taking into consideration factors as the global warming (Asgary et al., 2012, Kleindorfer et. al, 2005), little can be found on the evaluation and assessment of such risk on the corporate base.

2.3.2 Environmental risks

i. Social

Social issues, used to assumed to be the domains of government or non-governmental organizations (NGOs), continue to move up the corporate leadership agenda. Incidents of reputational damage related to the way society perceives companies' impacts on climate change, workers' rights, obesity, poverty, and other social issues are becoming increasingly frequent. The challenges that these issues present to companies' traditional ways of conducting business increasingly populate the business headlines (Craighead et al., 2007, Norrman et al., 2004, Sawik, 2011 and Tang , 2006). Socially disclosures tend to be highly valued by investors, financial analysts, and market authorities, to the extent that they are significant and value relevant (Throop et al.,1993).

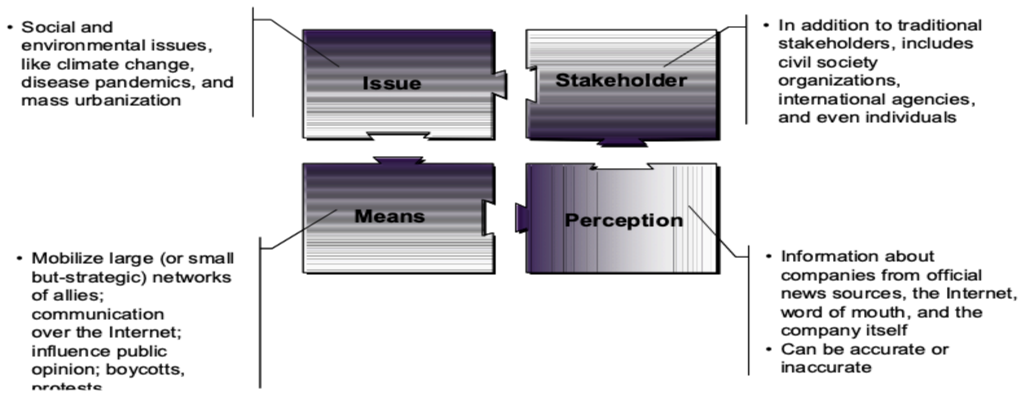

Fig.1 *Social risks analysis (source: Kytle et al. 2005)*

This risk is more significant at the level of companies with global operations that can only address it, by balancing those risks against business decisions and determining the quality of engagement with stakeholders and their associated issues. This kind of companies should start the process by a) identifying the empowered stakeholders and their key issues and b) determining the highest level of engagement and information sharing necessary to deal with their concerns and reap the mutual benefits from better relations with stakeholders and improved accountability.

However, understanding a stakeholder isn't the solution to anything in and of itself. It is a competitive necessity also to utilize the knowledge embedded in global networks. The linkage of social risk approach to core business processes, may improve a company's overall approach to risk management, by developing strategic intelligence and knowledge of social issues or social groups. This allows a company to not only design better risk management for current issues, but also help anticipate those that are about to happen. (Kytle et al., 2005, Husted, 2005).

ii. Competitor

The competitors risk can be classified as an external risk, based on the assumption that is a situation that arise from the competitors' ability in continuous competition. Specific elements that may describe this risk may be the price fluctuation, economic downturn, consumer demand volatility, customer payment, new technology, changes in competitive advantage, obsolescence and substitution alternatives. (Christopher et al., 2011 and Olson et al., 2010).

iii. Supplier

This is mainly refers to manufacturing firms that need to respond to this risk through active management of their suppliers including the management of risks inherent to the supplier (Matook et al., 2005). According to Kearney (2005), approximately 90 % of organizations attach great importance to the risk management of their supply chains, because the their purchasing activities have a considerable influence on the final financial performance. The objective is to develop long-term, reliable relationships with low-risk suppliers, because these can prevent firms from struggling in the prevailing dynamic business environment (Hartley et al., 1996, Lockamy, 2014).

iv. Governmental

Governmental risks refers to the impact that may derived by a number of decisions made by the government, that may affect companies, firms and industries and the overall economy. These kind of decisions may include change on taxes, minimum wage and spending. It may also refers to the potential impact by the announcement of proposed changes on legislation, as well as corruption by people in power position (Nocco et al., 2006) and political instability (Trkman et al., 2009). Governmental risks may lead to increase the cost of running a business, may turn an investment less attractive (Christopher et al., 2011) or alter the competitive landscape of a country (Clarke et al., 1999).

v. Regulation

A change in laws or regulations derived by the government or other regulatory body can increase the costs of operating a company, introduce legal and administrative hurdles, reduce the attractiveness of an investment, or change the competitive environment and sometimes even restrict a company from doing business. Especially for countries like Greece, the frequent and often unjustified changes on national legislative environment, has been pinpointed as one of the main reasons for the reluctance of multinational companies to invest (Chang et al., 2010, Oke et al., 2009 and Samantra et al., 2014).

vi. Strategic

In the specific category, in contrast to traditional hazard or compliance risks, risk and opportunity are generally two sides of the same coin. A strategic risk that is anticipated early and mitigated efficiently, can be converted into a new market, a competitive advantage, a stock of goodwill, or a strategic relationship. A quality strategic risk program will therefore adopt a forward-looking perspective geared as much to prevent missed opportunities as to prevent negative earnings surprises (Kytle et al., 2005).

2.3.3 IT risks

Modern businesses apply several approaches in order to avoid (reduce, mitigate, manage) the IT-related risks and other business risks (Nijaz et al., 2011). This category of risks in a corporate environment may include: unauthorized access to network resources and systems, inability to access necessary network resources due to error or service interruption, leakage

/ loss of corporate or personal data, possibility of intrusion into the corporate network of malware by external users, inability to communicate due to service interruption, inability to execute corporate procedures, etc. (Chopra et al., 2007, Aagedal et al. 2002, Cerullo et al., 2004, Gibb et al., 2006, and Greenberg et al., 2007).

2.3.4 Man-made risk (sabotage)

This may refers to incidents connected to a terrorist attack, stealing or in general workplace sabotage (Aagedal et al., 2002 and Dunjó et al., 2010). Workplace sabotage has been of interest to a broad range of researchers and practitioners, however not properly evaluated on the risk based approach. Based on the literature the sabotage suggests five different motives: powerlessness, frustration, facilitation of work, boredom/fun, and injustice. These categories reflect the relevant terminology used in the sabotage literature to denote antecedent conditions to sabotage (Ambrose et al., 2002, Altay et al., 2010, Lavastre et al., 2014, Parnell et al. 2010, Skogdalen et al., 2011 and Wreathall, 2004).

2.3.5 Reputation risk

The corporate reputation of a firm and reputation risk is becoming increasingly significant, as a result of the rise of social media and the ongoing globalization.

Due to social media, plethora of information is available at all times and spreading very fast. Additionally, the globalization implies a huge number of competing products, employers and business partners. Consequently, an organizations corporate reputation is becoming increasingly important (Sarstedt et al., 2013), and a positive corporate reputation can create a significant competitive advantage. (Gatzert, 2015).A positive corporate reputation has, for example, positive effects on the financial performance in general, facilitates raising capital and supports in the competition for talents (Fombrun et al., 2000). Moreover, firms may benefit from a positive corporate reputation, e.g. when negotiating with suppliers or when building customer relationships (Fombrun et al., 2004). Especially in the cases that there is no personal experience, stakeholders, tend to start co-operation with companies having a good corporate reputation. Hence, a positive reputation is crucial and organizations should take measures to build a positive corporate reputation in the long term, a procedure that is defined as, corporate reputation management.

Additionally, reputation risk events, may jeopardize a corporate reputation that may lead to high financial losses (e.g. due to loss of revenue or increased litigation) (Fiordelisi et al., 2014). For example, the UBS rogue trader scandal in 2011 lead to extremely high financial losses caused by the deteriorated reputation (Eckert, C. 2017). Furthermore, celebrities' scandals (e.g. Tiger Woods scandal) often cause reputational losses in sponsoring companies (Knittel et al., 2014). Due to the new media environment, companies cannot hope for unnoticed wrongdoing (Larkin, 2003). Hence, besides building a positive corporate reputation in corporate reputation management, protecting the corporate reputation in corporate reputation risk management is crucial.

2.4 RISK MANAGEMENT RESPONSIBILITY

The risk management function of a company (listed or not) is found within the audit committee, reflecting common practice and/or legislative requirements. The EU's Statutory Audit Directive demands audit committees to monitor the effectiveness of the company's internal control, internal audit, and risk management systems. Similar rules exist in other countries worldwide. In the US, the New York Stock Exchange (NYSE) listed company rules, as they stand, require audit committees to discuss policies with respect to risk assessment and risk management.

Based on Greek legislation (L. 4706/2020) the Audit Committee is a statutory committee of the Board of Directors of the Company. Among other tasks, obligations and duties, the Audit Committee is responsible to monitor the efficiency of the internal audit unit, quality control and risk management. It also evaluates the process of drafting the Audit Plan, emphasizing the process of Risk Assessment as well as the prioritization of the performed audits. However, the specific obligation is one, among a long series of the committee's competencies. Therefore, there may be skepticism on the effectiveness of a relative established procedure.

2.5 RISK IDENTIFICATION AND RISK MANAGEMENT LIMITATION

The latter global financial crisis has revealed the collapse of multiple businesses internationally, illustrating that no industry or jurisdiction is immune from inappropriate or inadequate risk management. All companies should have the capacity to develop policy with a full appreciation of risk and the development of a suitable set of operating procedures in order to address to changing circumstances in a timely manner (Brown et al., 2009).

Risk can be most simply understood in the context of a company's:

1. Threats;
2. Vulnerabilities;
3. Controls and countermeasures.

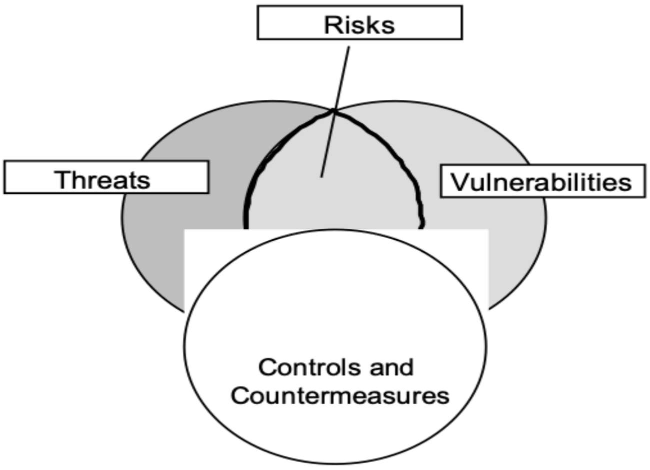

Fig 2. *Defining Risk (source: Kytle, et al., 2005)*

Risk commonly arises when a vulnerability exists within a company's operating system in the absence of effective controls and countermeasures.

When the risk is clearly identified, the need of evaluating it, arises. There is a number of tools that are been used (Ganguly, et al.2010), however a commonly applied and rather popular risk estimation methodology, is the risk matrix. This constructs opposing scales for likelihood and severity of harm, and either descriptive (AMT, 2000) or numerical values (Siehl et al., 1990) are used to define the scales. Consequently, mapping between the scales, lead to the determination of a low, medium and high risk (Woodruff, 2005).

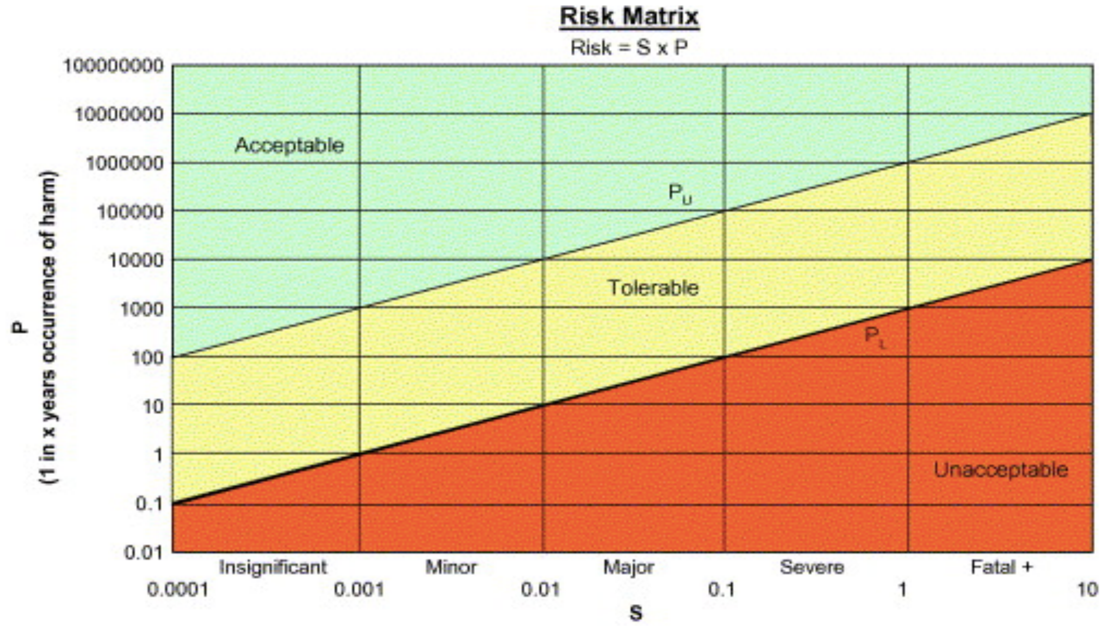

Fig 3. *Risk assessment tool: Impact x Likelihood matrix (source: Woodruff, 2005)*

Accordingly, to mitigate risk, companies develop specific risk management systems. Risk management systems fundamentally aim to address uncertainty in the market place. Their primary scope is to enter countermeasures and controls that minimize or eliminate the disruption, loss or damage to company operations, and reduce the recovery time from an undesirable event and, consequently, reducing its impact on the company.

For many years most of the companies recognized many financial risks, when performing the risk analysis and risk management. As a result, the most familiar categories of risk that mainly appear in the majority of companies are market, credit, and liquidity, exchange risk, etc.

2.6 INDUCE NFR INTO CORPORATE GOVERNANCE

Dealing with NFR effectively, requires institutions to develop new capacities and transform the traditional approach (PricewaterhouseCoopers, 2007). In order to achieve this, there are a series of adjustments that such institutions need to adapt and implement. More specific, key areas that need to be considered are:

<u>Infuse risk management into strategy:</u> Managing NFR in an effective way, requires the risk management department to work closely with the organization and relevant management, to ensure that the NFR risk profile is taken into serious consideration, when setting the organization's objectives and elaborating its strategic plan.

Many strategic risks fall into the category of NFR, that are inherently difficult to assess. For this reason, these key elements of strategy often do not receive sufficient attention and analysis. As the organization sets its strategic plan, it is important to assess the impact of new products and markets on the institution's risk profile, including the NFRs it faces. As each business evolves and adopts new strategic objectives, the risk-categorization and resulting risk profile will need to continually be upgraded in tandem. As part of this process, organizations will probably require a formalized procedure to continually assess the strategic risks to the business model, stemming from recent technology and other changes in the external environment (Deloitee, 2018).

Human resources: The rapidly transforming risk management environment, requires businesses to ensure they have a capable, high- expertise, sufficient number of people in the area of NFR. Handling NFR demands different skills than managing financial (traditional) risks. Furthermore, managing NFR requires more diversity in skills since this category includes risks of very different types ranging from conduct and third-party risks to cyber and compliance risks. Based on the results of the risk Identification process, businesses will need to identify and prioritize the different types of skills and experiences they will need to effectively manage the identified risks. Many of businesses may find that they lack sufficient skills and will need to either hire new personnel or upgrade the skills of their current human capital, with respect to NFR. Each company will also have to consider its culture and the tone set at the top, by senior management, to make sure that the importance of NFR and the responsibility of staff throughout the company to identify and manage NFRs is clearly determined. The importance of NFR should be regularly and consistently communicated by senior level management, and all relevant employees should be familiar with the relevant terminology and risk management processes. However, in order NFR management to be taken seriously, it needs to have real world consequences. Firstly, capabilities for managing those risks could be considered when establishing the operating budgets and investments for a business unit. Additionally, managing NFR should be included among the job description of relevant staff, as well as considered in reaching performance objectives and compensation package.

Leverage emerging technologies: Traditionally, the companies had to rely on the human factor, in order to manage risks. However, the new technology tools have gradually transformed this approach and may further help, in order to link process, risks and control of NFR to the traditional Governance, Risk and Compliance systems. Recent developments in the technological field, like artificial intelligence, predictive analytics, or machine learning are not only reduce costs by automating manual work, but even more importantly, they are providing guidance with the ability to identify and address potential threats, often prior from the initial recognition by the organization's risk practitioners. Technology tools can analyze a much broader range of data, such as unstructured inputs from customer complaint, or social media posts. Patterns and correlations can be therefore identified, that may have gone unrecognized if solely relying on review by relevant staff, as well as flag the potential existence of tail events that were previously hard to identify. Automatically scanning relevant information can provide early warning signals for potential risks, that may exceed the company's risk appetite, contribute to decision support, prioritize areas for monitoring, and develop automated monitoring of limits.

2.7 LIMITATIONS ON CORPORATE GOVERNANCE LEVEL

The limitation on the recognition and assessment on different categories of risk on corporate governance level, are manly based, according to the literature, on the insufficient function of the board. Some of the limitations may be results of the following:

a. Insufficient Information Access and Supply

This refers to insufficient information processing capabilities at board level. The boards - though no legislative requirement is in place- typically consists by eight to twelve members. Much research has been conducted in examining the correlation between board size and final performance, typically finding that a smaller board is usually better due to larger boards' efficiency losses (Agoraki, et al., 2009).

b. Information Overload Increases the Risk of Relevant

Although a board may only obtain a small percentage of information, this is still sufficient to overwhelm the relatively few board members (Lees, 2007). Carter et al., (2002) maintain that "boards are overwhelmed, overscheduled, undereducated, and often uncoordinated in addressing key concerns of the enterprise and its stakeholders." Additionally, the previous paper also argue that, given boards' traditional structure, processes, and membership, the duties they are required to perform are unrealistic.

The role of a BoD is generally held to be fourfold: firstly, to deliver strategic input; secondly, to identify performance objectives; thirdly, to make key appointments; and finally, to issue management oversight. Implicit in these roles is the quality of decision making and thus attention has focused on board, composition, structures and processes. Much of the business orientated research (Forbes et al., 1999; Denis, 2001; Frankforter et al., 2007; Daily et al., 2003; Noonan et al., 2007) has examined these aspects, whilst other recent studies attempt to assess the impact of governance on organizational performance (Brennan, 2006; Choi et al., 2007; Kiel et al., 2006; Kroll et al., 2008; Raja et al., 2007). What remains less fully understood is the actual role of risk management by boards, which is surely their due, however not detailed clarified.

Following the financial crisis, many companies have started to pay more attention to risk management, which in many cases it had been just a bureaucracy obligation (Aebi et al.,2012). This is, however, seldom reflected in changes to formal procedures, except in the financial sector and in specific companies that have faced serious risk management failure in the recent years. It appears that most organizations consider that risk management should remain the responsibility of line managers (OECD, 2014).

Due to fears of a financial collapse and new recession, resilient businesses and sturdy government leadership are urgent and critical (Giritli et al., 2020). Short-, medium-, and long-term plans are required to rebalance and re-energize the economy (Michie, 2020). In addition, socioeconomic risk assessments and strategies for robust and sustainable business models are required across every sector.

Existing risk governance standards for public companies, still focus largely on internal control and audit functions, and primarily financial risk, rather than on (ex-ante) identification and comprehensive management of risk. A 2004 survey of UK audit committee chairmen, showed a shift in audit committee activities from traditional financial reporting to a greater focus on internal controls and risk management (Windram et al., 2004). Corporate governance standards should put adequate emphasis on ex-ante identification of risks. Attention should be paid not only to financial but to non-financial risks, as well and risk management should enclose both strategic, operational and other non- financial risks (Brown, 2009).

TABLE 1
Potential Business Risks – UnitedHealth Group

External environment	Business strategies & policies	Business process execution	People	Analysis & reporting	Technology & data
1. Competitor 2 Legal & Regulatory 3. Catastrophic Loss 4. Medical Cost/ Utilization Trend 5. Customer Expectations	6. Strategy & Innovation 7. Capital Allocation 8. Business/Product Portfolio 9. Organization Structure 10. Organization Policies	11. Operations – Planning 12 Operations – Process/ Technology Design 13. Operations – Process/ Technology Execution & Continuity 14. Resource Capacity & Allocation 15. Vendor/Partner Reliance 16. Channel Effectiveness 17. Interdependency 18. Customer Satisfaction 19. Regulatory Compliance & Privacy 20. Knowledge /Intellectual Capital 21. Change Integration	22. Leadership 23. Skills/Competency 24. Change Readiness 25. Communication 26. Performance Incentives 27. Accountability 28. Fraud & Abuse	29. Performance Management 30. Budgeting/Financial Planning 31. Accounting/ Tax Information 32. External Reporting & Disclosure 33. Pricing/ Margin 34. Market Intelligence 35. Contract Commitment	36. Technology Infrastructure/ Architecture 37. Data Relevance Integrity 38. Data Processing Integrity 39. Technology Reliability & Recovery 40. IT Security

Table 3. *A classification of potential business risks (source: Brown, 2009).*

2.8 LEGAL FRAMEWORK

Corporate collapses and high profile legal actions worldwide in the late 1990s and early 2000s highlighted the importance of making management and directors of companies more liable and have led governments to actively promote higher standards of corporate governance. In the United States, the Sarbanes-Oxley Act of 2002 addressed corporate responsibility and the ethics of senior managers. In Britain, the Department of Trade and Industry is coordinating a Company Law Review. The European Union also adapted similar tools. Giving the general frame, different Member States released national legislation or relevant guidelines, e.g. Germany introduced a Transparency and Control Law. Other examples include initiatives by Italy, France, and Spain, which have all established Corporate Governance Commissions (Brown et.al, 2009)

In Greece, on 17 July 2020 the New Law 4706/2020 (Government Gazette A' 136/17.07.2020) was issued to replace Law 3016/2002. The newly published Law transposes the Directive 2017/828/EU into the Greek law system. The provisions of it strengthen the legal framework on corporate governance for public companies with listed shares or other securities in a regulated market in Greece, taking into account the changes that have occurred in the regulatory framework since the introduction of Law 3016/2002 until today, as well as the current trends on corporate governance. In other words, it aims to modernize the internal structure of the listed companies with a view of strengthening their autonomy in order to meet modern Capital Markets' requirements.

Although, the implementation of the Law is obligatory only for the public companies, it can be beneficial for other companies as well, in order to improve competitiveness, attract investors, enhance confidence of shareholders and meet long-term return of greater value to them.

In order to strengthen the role of the BoD, the new law introduces further obligations for the companies, including the establishment of Policy of Appropriateness, the expansion of the BoD responsibilities and provisions about the composition and operation of the board. One of the most important changes, refers to the obligation of establishing two new independent Committees in addition to the Audit committee, that was obligatory by the previous legislation, the Remuneration Committee and the Nomination Committee (can be merged into one).

3. METHODOLOGY

3.1 INTRODUCTION

This study includes the collection and evaluation of the following elements: revision the current academic literature, evaluation reports of corporations' studies, gather and discuss articles and documents and conduct interviews with members of BoD of Greek companies, following a specific organized question sequence. The latter will strongly contribute to the outcome of the study, because it will clearly demonstrate the current situation, derived by the most appropriate source.

Interviews are a widely used methodology in research. They are flexible, allowing in-depth analysis from a limited sample size and place the focus of research on the views of participants (Young et al., 2018). It turned to be a very convenient way of gathering the information of people working in different organizations or businesses. Also, it has the advantage, of providing responses in the form in which respondents think and use language, and this can be crucial if we are examining how people look at the social world which researchers have chosen to examine. Accordingly, it is no surprise that interviews are currently widely used in research (Hannabuss, 1996).

A group of questions was formed in order to capture the current situation on the business environment in Greece (appendix). It includes information on the existing situation, the structure and procedures related to the risk identification and management as general, as well as more specific questions on the approach of non- financial risk domain.

It was evaluated that in addition to the previous review of academic literature that was thoroughly presented above, the interviews of people dealing with the risk assessment in some Greek companies could form a more holistic image of the present situation.

3.2 DATA COLLECTION

The interviews expand in 5 sections, as follows:

Section A. General framework

In this section, it was required by the interviewees to submit general information on the subject. More specifically, if the company has already installed a procedure for risk identification and management and how it perceived this procedure. The scope is to recognize whether the company perceives this as crucial and important process or as a standard bureaucratic requirement. Furthermore, other elements that are required for this section are, whether the development was done internally or with the participation of an external party (outsourced), the involvement of the BoD (e.g. is it informed afterwards about the recognition / management actions taken by the Management or actively participates in the measurement of risks or how the Company will manage these risks, etc.) and finally if or how this approach is integrated in the culture of the firm.

Section B. Identification- categorization of risks

In this section it was required by the companies to be more specific about the identification of the risks and accordingly their categorization. We seek information about the competent person or unit, the route they follow and the procedure that defines / recognizes the risk. Additionally, details about the measurement, review and means of feedback delivery were asked. Moreover, we required information about the possible adaptation of KPI's. Finally, we asked the companies to report the current recognized risks.

Section C. New Identified Risks

This section is considered the most important for the purposes of the current study. The companies were asked to report if they have already included or are about to, non-financial risks, at their procedure. To facilitate this, we gave some insights (environmental, biological, reputation, climate, sabotage, operational, governmental etc.). More specific, the following questions were imposed:

1. Apart from financial risks, have new risks been included or are they going to be included /evaluated?
2. If yes, can you list these categories?
3. How are trends detected / captured?
4. Where does the need for the modification come from?
5. Is there a specific process for the staff information / training?
6. Is the company's culture considered at any modification? Have you ever abandoned the adoption of the optimal management strategy due to limitations in adapting the culture?

7. Do you believe that the size of the business plays a crucial role in shaping / approaching new risks?

Section D. Committees

In this section, we examine the role of the committees on the risk identification and evaluation procedure. According to the current literature and the data gathered via the released information of multiple companies, audit committee seems to be in charge. Based on that observation, we asked the companies whether they believe that this an overload for the specific committee, taking into consideration that there are a lot of other obligations related to its activity. Additionally, we asked about their prospective on whether they believe that there is a need for the existence of a different unit in order to single perform the assessment, or maybe outsourcing may be optimal.

Section E. Proposals

This section was optional for people to answer. That is because the answers derived by the previous questions, may give indications for improvement actions. The main objectives of this section are to evaluate whether there were any proposals to enhance the current situation and whether action may be taken for the identification / evaluation of the risks.
However, there were some specific questions to lead the interviewees and those are:

1. If you had the absolute ease, what would be the most important thing you would change a. in the operation of the risk identification / management service; b. how to inform the Board; c. in the duties / role of the Institution (of the Committee, or of the Board if there is no Committee) that has the supervision for the risks;
2. Would you like to add something about the risk process?

Prior to the interviews, the questions were sent in order for the participants to be prepared. Also, instructions were provided to facilitate and lead them to common understanding. Those instructions are presented at the appendix.

3.3 SAMPLE

The companies that were chosen are Greek companies, mainly small - medium size, both public and private. Due to the COVID pandemic and the general lockdown, all the interviews were conducted via zoom.

The size (small-medium) was intentionally chosen, to capture the reality in Greek business environment. In order to define the small-medium and large size of a company, the EU Recommendation 2003/361 was used. According to this recommendation, small-sized companies have up to 50 employees and a turnover or balance sheet total of up to 10 million. On the other hand, medium-sized companies have up to 250 employees, or a turnover of up to 50 million or balance sheet total of up to 43 million. Obviously, anything larger than the latter is defined as large-sized company. In order to include public companies as well at the research, two large-sized companies have been evaluated as well.

The public companies follow the legislative requirements, related to the corporate governance principles. However, the rest of the sample is following the procedures and requirements of corporate governance rules too.

At the following table, the main information of the sample is given:

SAMPLE INFORMATION				
	SECTOR	SIZE	PUBLIC	POSITION OF INTERVIEWED PERSON
1	Food	large	yes	Head of quality assurance committee
2	Commercial	large	yes	CFO (Treasury, IR, Risk Management)
3	Food	medium	no	CEO
4	Services	small	no	Internal audit
5	Primary production	small	no	Independent non-executive BoD Audit Committee (Chair)
6	Food	small	no	CEO

Table 4. *Sample Information*

4. RESULTS

4.1 INTRODUCTION

As previously mentioned, the questions were sent to the participants in advance in order to be prepared for the objective of the interview. Afterwards, the interviews took place via zoom and all the responses were collected by the researcher. Below all the answers and opinions are present and analyzed, using the same distinction of the five separate sections.

4.2 MAIN FINDINGS & ANALYSIS

SECTION A. GENERAL FRAMEWORK

At this section a variety of different answers have been given, not only on the question of whether the company has already established a risk identification procedure, but also about the units/ staff, that the competency has been given to.

More specifically, both the two public companies (1 & 2) have already a well structure and clearly defined risk identification and risk assessment procedure. Company 2 stated:

"We run a clear risk assessment procedure. Our Enterprise Risk Management System installed according to COSO model and we totally appreciate the requirements."

As it was probably expected, the public companies on the basis of the series of requirements derived mainly by the legislation, have already adopted a wide and effective framework in order to assess the risks. Additionally, those companies seem to understand in depth the necessity of such a procedure and how the risk management plays a fundamental role on their sustainability and growth. Company 1 stated:

"We understand risk management as a methodology for identifying, evaluating and managing risks under the regime of uncertainty that is inextricably linked to the creation and maintenance of corporate value."

Therefore, it was obvious that they find risk management procedure an important and valuable process and not a bureaucratical requirement.

On the other hand (non-public companies), company 4 has already established a risk assessment procedure, while companies 3, 5 and 6, are on track to implement. All 4 predicted that this system will be on place in the first trimester of 2021. However, all of them declared that this procedure is of a high importance, though not yet part of the culture. Additionally, the risks have already been identified and handled, but in a more empirical and concentrated approach. All 6 companies used, or are using, the participation of an external consultant to map their risks and facilitate the implementation.

In all cases, the BoD is informed for the procedure, by all relevant parties. Company 5 mentioned:

"We are in the final level of the total implementation. The findings and the proposals of the report were already brought to the audit committee of the board and the internal auditor and formed the basis for targeted audits of the latter, while the implementation of the proposals is a priority for the Executive Management."

On the same question companies 1 and 2 stated that the Board of Directors ensures the adequate and efficient operation of the internal control system in the company, which, among other things, aims to the identification and management of the essential risks associated with its business activity and operation.

SECTION B. IDENTIFICATION- CATEGORIZATION OF RISKS

The responsibility for identifying and evaluating the risks is highly differed. For company 1 is the Safety and Quality Committee, for company 2, the management of the company, companies 4 and 5 the internal audit, whilst companies 3 and 6 could not deliver a clear answer, due to their transitional phase. Company 5 stated:

"The internal audit has been used to conduct the specific task for a short period. We expect the proposals about the methodology by the consultant agency."

With the exception of company 2, that stated that there is no defined revised period, the rest of the companies answered that they conduct annual revisions. Additionally, all of the them have already adopted KRI's to measure the quality of processes.

The feedback that may led to possible modifications is derived by all sources, internal and external e.g. gained experience, proposals derived by the audit committee or different departments, etc. Company 2, mentioned:

"Risks are identified during structured workshops based on cumulative knowledge and experience and with the assistance of an appropriate facilitation."

As for the measurement of the risks, the answers vary as well. Company 1, uses multiple tools in order to measure the risk that depends on the nature or the risk. Company 2, measures the risk, on the basis of the table below:

Level	Likelihood	Description	Probability of occurrence %
1	**Remote**	Unlikely but not impossible	1%-20%
2	**Possible**	Could occur	21%-50%
3	**Probable**	More likely to occur than not	51%-80%
4	**Very Probable**	Almost certain to occur	>80%

Table 5. *Risk measure for Company 2.*

The rest of the sample use up to now, empirical ways of measuring. For example in both 4 and 5, the internal audit has been given the competency to place some kind of measurement, based on impact x likelihood evaluation.

Finally, the companies were asked to list the current recognized risks. Company 2, had not a formed list, because it approaches this factor as an ongoing, dynamic situation. The rest of the companies could demonstrate a certain list. All lists included financial risks and other risks that were directly connected to the nature of the company. For example, company 1, which is a food manufacturing company, has included a variety of biological risks (microbiological, etc.), environmental, regulatory and food fraud risks. Company 5, has demonstrate a large list of risks. Most of them are financial risks (credit, market, financial statement, liquidity etc.), but also others as, compliance, fraud, physical catastrophe – robbery, health and safety, other operational and reputation risks. All those are descripted, but not substantive approached.

Finally, the majority of companies declared that are deeply concerned about IT and Cyber risk and are keen to approach it, shortly.

SECTION C. NEW IDENTIFIED RISKS

This section is highly connected to the previous one. By analyzing the answers that had been already given, it is obvious that all companies have identify and include other than financial risks, in their procedures. However, as some of the companies stated, they are on a transitional phase, as they try to modify their procedure, mainly with the aid of a consultant firm.

The companies provided the list of the identified non-financial risks, however there are previously already mentioned. Some additions are:

Company 2 mentioned:

“We do not hold a list. We mainly approach them on department basis. Risks that may not be categorized as financial are: commercial, strategic, regulatory, etc.”

Companies 4 and 6 stated also, that risks are handled by the different departments, based on their competences, but the approach is mainly empirical. Company 5 stated that up to now, it follows what the internal audit proposed, however they will shortly adjust the list, based on the risk model the consultant suggests.

As for all risks, the trends where detected by evaluating all the sources like clients, suppliers, legislative transformations, interaction with stakeholders and participation in sectoral forums. Company 2 claims that the evaluation is performed with the partnership of internal resources and external aid (mainly in areas where expertise is required).

In cases that the above evaluation leads to the addition of a new risk, companies 1 and 2 organize workshops to promote the absorb of the new element. Company 1, declared:

Workshops is not an one-off procedure. They are continuous in order to create a risk – based culture to the competent staff.

On the other hand, companies 3,4,5, and 6 stated that they believe in the necessity of relevant workshops and it is a high priority for them in the forthcoming period.

Finally, there are different approaches on the whether the size of a business plays a decisive role in shaping / approaching new risks. Company 2 made a non-negotiable statement:

"The size of a firm is the main- or maybe the only- parameter in identifying and approaching a risk."

However, company 1 declared that the size indicates a dual role:

"The larger a company is, the more scientists it has in its assets, to utilize and monitor the processes required. However, there is a disadvantage when there are plenty people that need to be managed and activate, especially when cultural issues are involved."

Nevertheless, the medium-small companies of our sample, strongly believe that any approach is driven by management only and the size is irrelevant. In other words, they believe that it is characteristic of the quality of the Management and the Board of Directors to adopt structured approaches including risk management, regardless the size.

SECTION D. COMMITTEES

This sections was aimed to evaluate the role of committees , and especially audit committee, in risk assessment procedure. The answers derived by the companies, varied. The main points are:

The audit committee is not directly competent for the risk management of the companies, but it oversees the procedure in order to present the findings, pros and cons, to the Board of Directors. Also, company 5 mentioned that it is involved only on the evaluation, at the levels of the audit plan. The same company also declared:

"The audit committee, as a separate body, should retain a role of oversight and monitoring of decision-making. In this prospect, it can and would like, to play an active role in monitoring the risk measurement and management process and to how the relevant results are presented to the Board of Directors for further consideration. Additionally, another crucial element is to gain the ability to adopt a recognition / management approach that will

not weaken or become mechanical. Such an approach, should be recognized by the management as an important element that adds value to the company as a whole."

Also, most of the companies stated that, the Audit Committee monitors the effectiveness of the company's risk management system. To this end, it periodically reviews the risk management system to ensure that key risks are properly identified, addressed and disclosed. It also informs the Board of Directors of its findings and submits proposals for improvement if it deems it necessary. Company 3 mentioned:

"Audit committee is currently indirectly involved, in the sense that the risk assessment report significantly determines the audit plan that the Internal Audit is mandated to carry out, the results of which reassess the risks."

As for the limited time the committee can offer, based on its multiple competencies, it was declared that this was not a matter of time and tasks as much as specialization, to be able to recognize the risks and to be able to understand their evaluation in terms of their importance. About the necessity of a risk team or committee, company 1 declared:

"A separate structure within the company will be ideal, because it will understand clearly the operation, the products produced and the services provided and will be able to more quickly and effectively carry out the required controls."

However, smaller companies claimed that, even though a separate unit would bring an added value to the firm, it is unlikely to happen, due to the size of the company. Costs must be taken into account, in combination with confidentiality. Finally all the companies commented that the participation and aid by external bodies are necessary , however the public companies believe that this should be as limited as possible.

SECTION E. PROPOSALS

This section was optimal for people to answer, as the proposals were probably pointed in a wide level at the previous sections. However, some additional elements were highlighted:

- √ Monitoring, recording and analyzing the data of each risk and / or event that has an impact on the company's operations, is critical for making any decisions and is a key principle for improving a company's services and products.
- √ Recognizing and evaluating non-financial risks in corporate governance is of a great importance and is an approach that has come to stay.
- √ Such a process benefits the company not only internally, but gives extra prestige and value.
- √ Involvement and Training at all levels of Management / Board of Directors is crucial.
- √ Continuous awareness to improve the process KPIs in the resulting accuracy of measuring / adopting effective risk management strategies to avoid crises.
- √ Frequent alternations and adjustments should be absolutely mandatory, due to the dynamic nature of the project itself.

4.3 DISCUSSION

Risks identification and risk assessment are important parameters for the sustainability and growth of a company or an organization. This is well absorbed by most of the businesses, especially those of the financial sector. However, not all companies have reached the same level of risk assessment.

It became obvious by the results of the current research, that large companies and especially public companies, are more familiar with this area and they have already established and implement a risk assessment procedure. This may be the results of a number of parameters e.g. the more fragile position demands stronger guardrails, the adequacy of specialized staff, additional legislative requirements etc. Even in this case, the field of non-financial risks is relatively new, mainly in Greek reality.

On the other hand, smaller companies, seem to handle the risks (financial and not financial) in a more empirical way. This reflects their concept of the importance of that area, however there is a lack of formal adaptation. Nevertheless, is essential to pinpoint that all the small and medium size companies of the sample, are under review and implementation of a well-structured risk assessment procedure. This might reflect the added significance of the domain that it may be the result of the current global environment.

Also, differences can be detected between companies of different sectors. Based on the results of this study, it was remarkable that the public company of the food sector, understand and evaluate to a wider extent the non-financial risks, due to the nature of its operations. Similar observations were made on the literature review, for companies of food sector and medical sector.

One important aspect of this study that was heavily discussed is the role of audit committee on the risk assessment procedure. It was reviled that the extent the audit committee's engagement to this subject is not clear. By evaluating the outcomes of the study, it seems that the audit committee, as a separate body, should retain a role of oversight and monitoring of decision-making. In this prospect, it can play an active role in monitoring the risk measurement and management process and to how the relevant results are presented to the Board of Directors for further consideration. Additionally, another crucial element is to gain the ability to adopt a recognition / management approach that will not weaken or become mechanical. Such an approach, should be recognized by the management as an important element that adds value to the company as a whole.

The competency of that kind of procedure another essential segment of the research. There is neither a legislative requirement, nor a common practice on this issue. Different companies can approach this subject following the best path for their case. In some types of businesses that may be handled by a separate structure of the company, whilst at other cases that may be handled by a group of people derived by different departments. Additionally, it seems that in a larger or smaller scale, the interreference of a third party is needed, either as consultant or as specialist in specific field of expertise.

Another significant issue that this research highly revealed, is the importance of the corporate culture. During the past decades it was widely recognized that 'corporate culture' has a significant impact on overall organizational performance (Siehl et al., 1990, Kotter et al., 1992). All companies have cultures or sets of values which influence the way staff behave in different cases, such as innovation, treatment of customers, risk management, etc. (Flamholtz, 2001). Therefore, the repeated references by the participants of the study, was not a surprise. It was also a field of differences between the large and smaller companies. Additionally, the people that were interfered with the risk assessment procedure at small-medium size companies, expressed their belief that the lack of risk based culture of the company, might be the most serious challenge they need to overcome, in order to established a fine tuned procedure.

5. CONCLUSION

5.1 MAIN CONCLUSION

Corporate collapses and high profile legal actions worldwide in the late 1990s and early 2000s, highlighted the importance of making management and directors of companies more liable and have led governments to actively promote higher standards of corporate governance (Pirson et al., 2011).

Risks management is an crucial task for business and institutions because it empowers them with the appropriate tools so that they can adequately identify and face potential risks. Once a risk is identified, it is then possible to mitigate it. Additionally, risk management provides a business with a basis upon which it can reach sound decision making.

Businesswise, risk assessment is the optimal tool to prepare for eventualities that may come in the route of progress and growth. When a company evaluates its plan for dealing with potential threats and afterwards develops structures to address them, it improves its chances of becoming a successful entity.

Furthermore, risk assessment is a procedure that eventually helps the management evaluating the necessary information and use them appropriately to make informed decisions and ensure that the business remains profitable.

Many organizations consume large amounts of resources in implementing internal control procedures and Risk Management Systems. However, without a risk-conscious culture at all levels of the organization, these procedures and systems will fail.

A separate risk management committee, directly reporting to the BoD and the audit committee would be appropriate for specific kind of companies, like biotechnology and others with a similar level of risk. On the other hand, lower risk environments, might have a management committee that reports to the BoD periodically or it may be more appropriate to have a risk specialist appointed to or reporting to the board. The point is that the level and complexity of risk management should be commensurate with the degree, cost and complexity of potential risk. (Nijaz et al., 2011).

The growing significance of NFR management comes at a period of particular uncertainty and volatility in the business environment, due to uneven economic growth, increased political and regulatory uncertainty, and varied revenue opportunities and returns on equity for many companies. Given these turbulent developments, companies need to rethink their approach to risk assessment in general in order to reduce expenses, while simultaneously improving effectiveness.

Global companies face a new reality that has changed the nature of risk and risk management: networked operations and global value chains, empowered stakeholders, and the dynamic tension among sectors. The emergence of the new forms of risk cannot be mitigated through traditional means. The new environment requires innovation by companies in both sensing and understanding these risks, and in adapting risk management systems to include new tools and network-based models of information sharing.

5.2 LITIMATIONS

The current global environment has rapidly changed due to the unexpected incident of the COVID pandemic, that transformed not only the business but also the private life of people. The approach and meeting of people that might significantly contributed to the current study turned to be a challenging and difficult task, therefore the interviews that are presented are limited in relation to the initial design.

However, the size of the sample is adequate for exporting conclusions both on quantity and quality basis, according to the literature. Nevertheless, a wider pool of interviews could have strengthen the observations and results.

5.3 SUGGESTION FOR FUTURE RESEARCH

The current research aimed to identify the non-financial risks assessment procedures in Greek companies. Approaching that kind of risks is a relatively new addition to companies' risk profile.

The literature review emerged a series of different types of that risks. The researcher tried to form a general categorization of them. However, more detailed categories may be formed. Additionally, a focused research in separate sectors would be interesting and beneficial for certain companies (e.g. food industry, medical etc.).

Finally the use of quantitate figures in order to evaluate the importance of different kind of risks in combination with the sector, it could add value to such a research, as the current one is mainly focused on qualitative characteristics.

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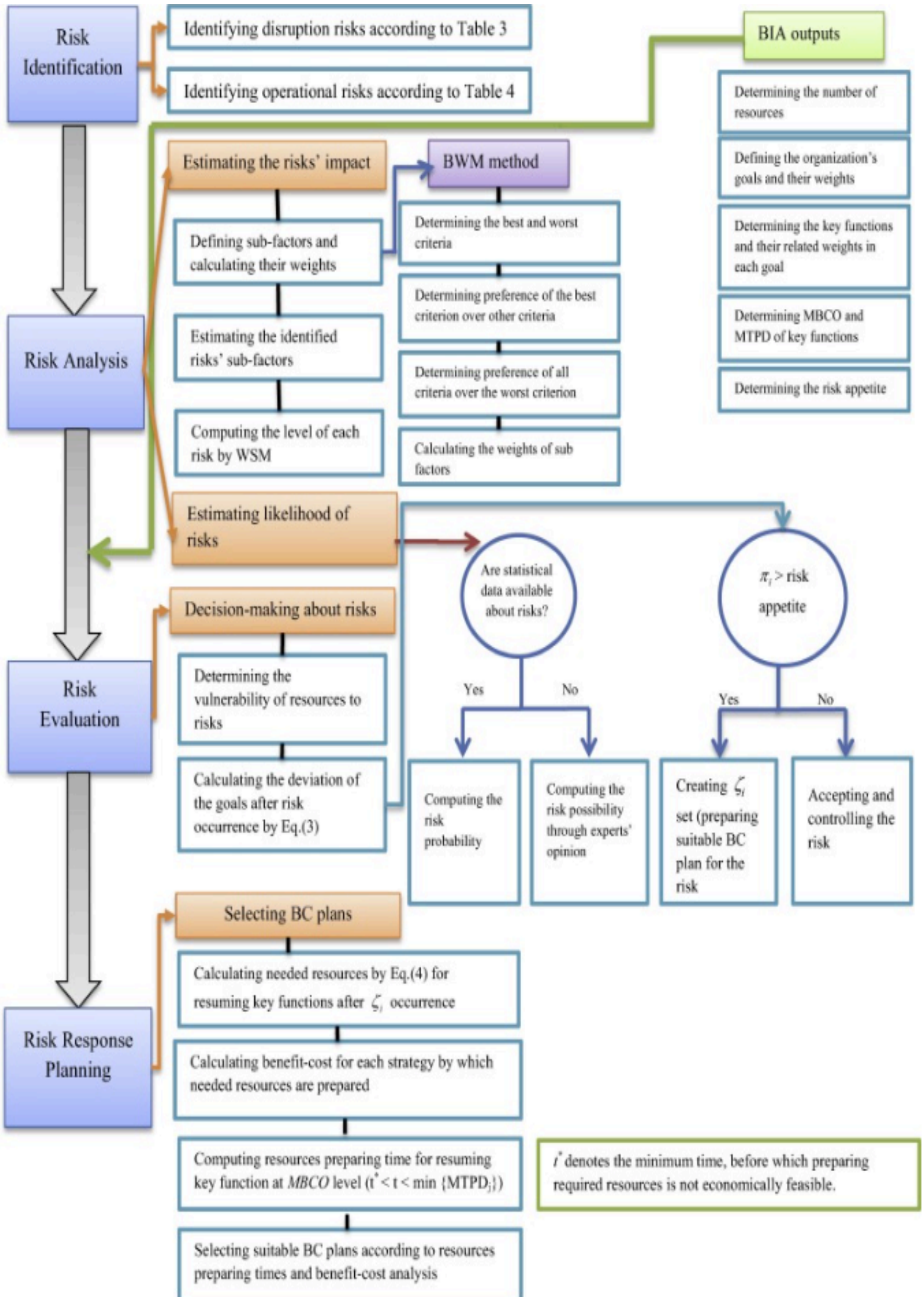
APPENDIX

Fig. 3 The enhanced Risk Assessment framework equipped with analytical tools. (source : Torabi et al, 2016)



Case no..........

QUESTIONAIRE OF EVALUATION FOR NFR

Full name	
Position	
Participation in BoD/ committees	
Company	
Section	
Size	
Public company	YES / NO
Date	
Location	
Communication means	
Comments – additional information	

CATEGORIES	
A. GENERAL FRAMEWORK	
B. RISKS	
C. IDENTIFICATION- CATEGORIZATION OF RISKS	
D. COMMITTEES	
E. PROPOSALS	

INSTRUCTIONS FOR FILLING THE QUESTIONNAIRE

1. The questionnaire expands to 5 categories, mentioned in the previous table.
2. The questionnaire is divided into 3 columns: A. CATEGORY B. DESCRIPTION C. ANSWER
3. COLUMN B. DESCRIPTION outlines the context of the query category. They are not binding if the respondent considers that he/she should answer in more detail or if for any reason he/ she is unable to answer.
4. Some questions are closed type (marked in bold blue).
5. The third column is used for open type answers and other notes.
6. The questionnaire is completely confidential and the results are evaluated for the purpose of academic research. At no point will names or companies be mentioned. The reference will be made in rough lines, e.g. person no1, person no2, company from food / pharmaceutical/ construction sector, etc.

CATEGORY	DESCRIPTION	ANSWER
A. GENERAL FRAMEWORK	**1. Have you installed a risk identification and management unit? YES/NO** 2. How does the company perceive the risk assessment? **3. Is it assessed as an important process or is it a - mainly- standard requirement?** 4. Was the development done internally or with the participation of an external consultant (outsourcing) ?	

	5. To whom is the information produced about the risks, addressed to? Is it part of the culture? Are employees familiar with these terms? **6.** What is the role of the Board of Directors in identifying and managing risks? (e.g. is it informed about the recognition / management actions taken by the Management or actively participates in the measurement of risks or how the Company will manage these risks?)	

B. RISKS • Identification • Record	1. Who is responsible for identifying and recording the different risks? 2. How does he handle it? 3. Who else is involved? 4. What is the procedure that defines / recognizes the risk? 5. What is the procedure that measures the risk? 6. How often is the process reviewed? 7. Where does the feedback for any amendment derives by? 8. Have you adopted KRI's performance indicators to measure the quality of processes? 9. What are the currently recognized risks?	

C. IDENTIFICATION-CATEGORIZATION OF RISKS • Novel risks that have recently been included, or are about to be include for evaluation	**1. Apart from the financial ones - have new risks been included or are they going to be included / evaluated?** **YES/NO** 2. If yes, can you list these categories?	
CONCERNS EXCLUSIVELY NON-FINANCIAL RISKS **e.g.** **environmental, IT, biological, reputation, sabotage, climate, regulatory, strategic risk, operational, governmental etc.**	3. How are trends detected / captured? 4. Where does the need for modification come from? 5. Is there a specific process for integration and for staff information / training?	

	6. Is the business culture taken into account? Have you in the past abandoned the adoption of the best management strategy due to restrictions on adapting the culture? 7. Do you believe that the size of a business plays a decisive role in shaping / approaching new risks?	

D. COMMITTEES • Existence of committees • Efficacy of committees • Need for special committees or groups to assess the risks	**1. Is the Audit Committee responsible for risk assessment?** **YES/NO** **2.** If so, and given that the Audit Committee has many tasks, most of which are urgent, can it be effective in the field of risk assessment? **3.** Do you support the an existence of a separate structure within the company (risk committee) or should it be outsourced?	

E. PROPOSALS • Improvement of the current procedure • Actions for the identification - assessment of risks	**1.** If you had the absolute discretion, what would be the most important thing you would change a. in the operation of the risk identification / management service; b. how to inform the Board; c. in the duties / role of the Institution (of the Committee, or of the Board if there is no Committee) that has the supervision for the risks **2.** Would you like to add something about the risk process?	**OPTIONAL**