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EXPLORING RISK MANAGEMENT KNOWLEDGE AMONG MBA STUDENTS AT CENTRIA UNIVERSITY OF APPLIED SCIENCES

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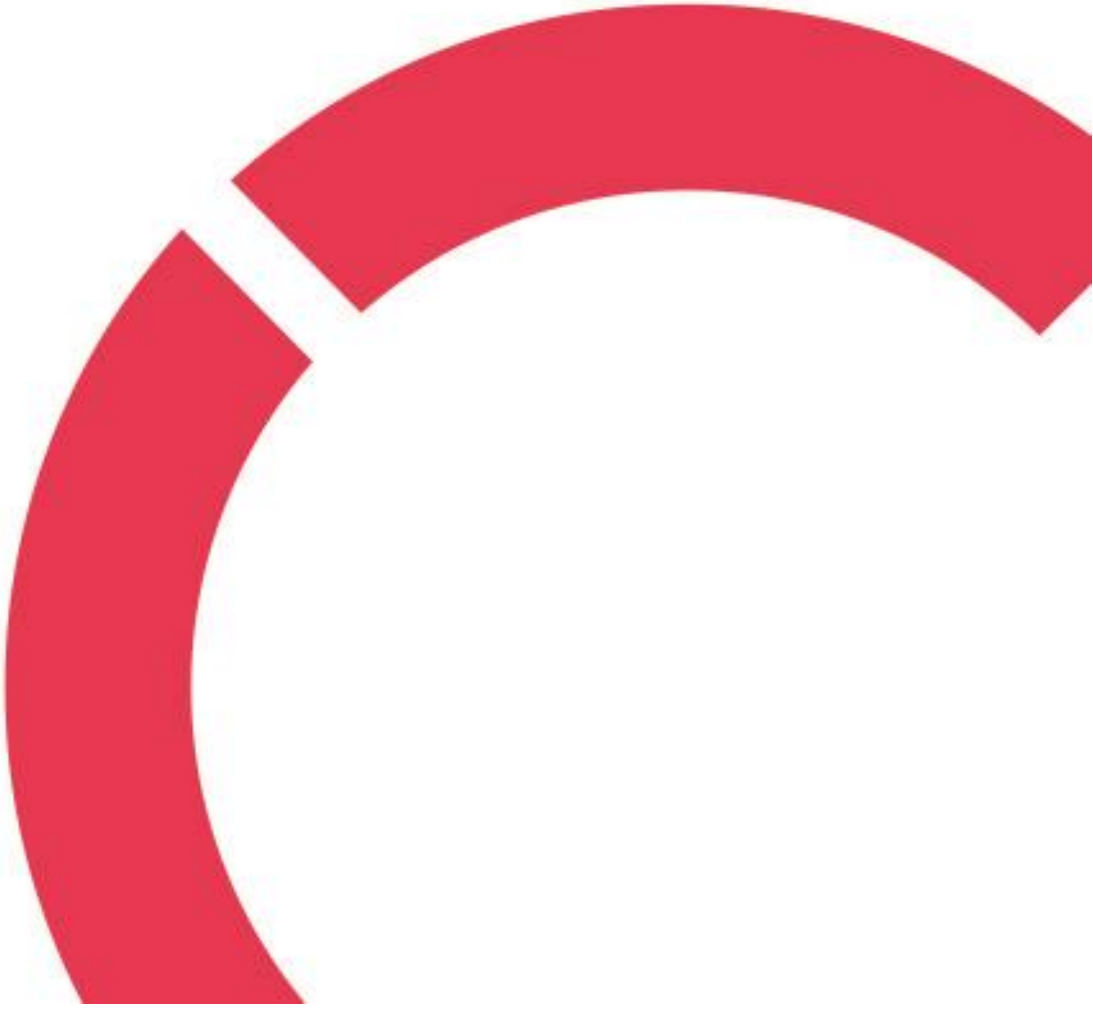

ABSTRACT

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Understanding of managing risk is a crucial part of the business. This leads to better decision-making and safeguards organizational values when conducting business and acting as employees locally and globally. New challenges that have not been encountered before can be opened during the daily tasks and new implementations. Therefore, a coherent and spacious understanding of how to manage risk is required by companies and their employees.

This thesis focuses on an assessment of the adoption of risk management frameworks by publicly listed companies in the Kokkola region to assess the practicability of the subject. Furthermore, a subsequent measurement of the understanding of risk management among students in the same region who will be a part of the company's workforce in the future or start their own business.

The theoretical framework comprises an explanation of the research objectives, a briefing about basic concepts, an explanation of the research methods, data collection techniques, and data analysis methods.

The purpose of this thesis is to assess the level of understanding regards risk management which includes, risk identification, prioritization, prevention and mitigation, commonly used risk management framework, and tools among the students that become a part of the future workforce.

According to the findings of the study, the students possess a basic understanding of risk management, particularly regarding the concept of risk and its significance for organizations. However, there were certain gaps in their knowledge when it came to applying the optimal risk management strategies. Additionally. participants had a lack of familiarity with the frameworks and risk management tools used in the commercial sector. Further, no connection was found between the knowledge of the participant regarding risk management and their educational background, country of origin, current degree program (full-time or part-time), or working experience.

Risk management is widely practiced across various companies, especially publicly listed companies. Therefore, gaining a comprehensive understanding of risk management frameworks and tools would greatly benefit students to add value to the economy as the future workforce.

Keywords

COSO Framework, Cybersecurity Risk, Health & Safety Risk, Internal Controls, ISO 31000, Reputational Risk, Risk Management, Risk Identification, Risk Prioritization, Risk Mitigation, Risk Frameworks, Risk Likelihood, Risk Significance, Three Lines of Defence Model.

CONCEPT DEFINITIONS

COSO Framework

(Committee of Sponsoring Organizations) The COSO framework, developed by the Committee of Sponsoring Organizations of the Treadway Commission, provides a comprehensive approach to internal control and enterprise risk management.

ISO

(International Organization for Standardization), is an independent, non-governmental international organization that develops and publishes voluntary international standards. These standards cover a wide range of industries and sectors, including technology, food safety, healthcare, agriculture, and manufacturing, among others.

NIST

(National Institute of Standard and Technology), is a physical sciences laboratory and a non-regulatory agency of the United States Department of Commerce. NIST's mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve quality of life.

ACCA

(Association of Chartered Certified Accountants), is a global professional accounting body that offers the Chartered Certified Accountant qualification. Founded in 1904, ACCA is headquartered in London, United Kingdom, and operates in over 180 countries.

ERM

(Enterprise Risk Management), is a comprehensive and integrated approach to managing all types of risks that an organization faces, intending to maximize opportunities and minimize potential negative impacts on objectives.

ERP

(Enterprise Resource Planning), refers to a type of software system that organizations use to manage and integrate important parts of their business processes. ERP software typically covers various

functions such as finance, human resources, supply chain management, manufacturing, procurement, and more.

IIA

(Institute of Internal Auditors), is an international professional association dedicated to advancing the internal audit profession. The IIA provides guidance, certification, education, research, and networking opportunities for internal auditors worldwide.

COVID

(Coronavirus Disease), is an infectious disease caused by the novel coronavirus SARS-CoV-2. The disease was first identified in December 2019 in Wuhan, China, and has since become a global pandemic, affecting millions of people worldwide.

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1 INTRODUCTION

The introduction included the background information of the thesis, an explanation of the objective of the thesis with the research questions. Further, the introduction also contains a briefing of the overview of the thesis.

1.1 Background

When companies operate in their daily routines and attempt to implement new strategies such as expanding their existence beyond national borders, they are exposed to a variety of micro and macro environment challenges that generate risk to the companies and employees work within. These challenges might consist of different economic, cultural, climate, regulations, political, language, technological, and social factors, etc. In addition to the identification of challenges, companies are required to implement the best-suit strategy to manage the challenges to survive in the market and acquire growth potential. The employees of the companies specifically at the management level, have a greater responsibility to lead the companies through these challenges and ensure the survival and growth in the market.

The applicability of certain risks could be significant to all employees of an organization as well as specific to certain levels and characteristics of employment. For example, workplace safety, environmental disasters, job security, work-life balance, workplace discrimination and harassment, market changes, pandemic situations, fraud risks, etc., can be taken as risks that impact every employee. Furthermore, specific risks to each employment can be divided based on the level of the employment (Top, Middle, Low), the division of the employment (Finance, Operations, Sales and Marketing, Research and Development, Legal and Compliance, Customer Service, Human Resources, IT and Technology, etc.). It is more common for employees to be exposed to risk during their employment with or without their awareness. Therefore, a general understanding of the common and specific risk factors and the ability to implement strategies for managing the risk is a crucial part of every employment.

According to a risk assessment done by NHI-USA (National Library of Medicine 2021), Finnish companies have a higher commitment to assess the risk of occupational safety and it leads to almost 20% savings in the gross national product. Furthermore, according to the Floman (2018), women working in social care roles in Finland have a high likelihood of experiencing the risk of violence. These factors

also underscore the importance of risk management awareness as an international or local student who is willing to enter the Finnish workforce.

1.2 Objective and Research Questions

The objective of this thesis is to emphasize the importance of awareness about risk management and assess the level of awareness among the students who will be part of the future workforce including decision-makers. The assessment mainly focuses on understanding the concepts of risk, understanding the risk management process that basically includes, risk identification, risk prioritization, risk transfer and strategies to prevent and mitigate risks. Further, this study focuses of the students' understanding of the risk management framework and tools that are widely used in the commercial sector.

The research question aims to assess the extent of students' awareness of risk management and its components which is connected with the research objective,

I. What is the practicability of learning about risk management?
II. How does the level of awareness about risk management among students, who will be a part of the future workforce, especially as decision makers?
III. What are the possibilities for the current students to work in the future workforce?
IV. What are the improvements required to add value to the student?

The research primarily involves the analysis of the adoption of risk management frameworks or strategies by listed Finnish companies in the Kokkola region. The information for this will be gathered as secondary data published by the companies in the past few years (Annual Report 2022/23, if 2022/23 was not available 2021/22 publication, Company websites). The secondary data analysis is intended to demonstrate the importance of being aware of risk management as a part of the future workforce. As the second step, a survey will be distributed among the business studies students in the same region with relevant questions. Students who study Master of Business Administration (MBA) at the Centria University of Applied Sciences were selected as the sample for the study. The reason for selecting the master's level student is the wide opportunities for those students in the future workforce at the management level as well as the companies' seniors. Students enrolled in the full-time and part-time courses of 2022 & 2023 were selected due to the convenience of the contact. Additionally, the thesis

will focus on the concepts of risk management, such as risk identification, risk prioritization, risk mitigation, and the advantages associated with proactive risk preparation.

1.3 Overview of the Thesis

This thesis contains five main chapters: Introduction, Concept of Risk Management, Research Methodology, Findings, and Discussion & Conclusion.

Chapter 1 included with the background information of the thesis, Explanation of the research objective and research questions as well as the overall summary of the structure of the thesis. Chapter 2 contained five sub-chapters: An explanation of risk management, a briefing about the benefits of risk management, Clarification of risk management framework and guidelines widely used in the commercial sector (COSO Framework, ISO 31000, Three Line of Defence Model), The utilization of risk management. Also, as the last subchapter of Chapter 2, a briefing about the general risk factors (Occupational Health & Safety Risk, Cybersecurity Risk, and Reputational Risk.

Further, Chapter 3 consists of the research methodology: Approach of data collection, Ethical consideration of thesis, and Data analysis method. The Chapter 4 includes the findings of the thesis and this has divided in to two sub-chapters as outcome of primary data collection and the outcome of secondary data collection. Finally, the last Chapter (Chapter 5) discuss the overall result of the thesis with Summary of discussion and Conclusion & recommendations.

2 CONCEPT OF RISK MANAGEMENT

Risk management is a fundamental discipline that plays a critical role in the success and sustainability of organizations across all industries. It encompasses a systematic approach to identifying, assessing, prioritizing, and mitigating risks that could potentially impact an organization's objectives and operations. In today's dynamic and interconnected business environment, understanding and effectively managing risks have become imperative for organizations to thrive amidst uncertainty and change.

2.1 Understanding Risk Management

When discussing about risk management, a general understating of “risk” and “management” is required at first. The risk is a common concept all over the world. Risk refers to the likelihood of unforeseen or disadvantageous occurrences that could influence financial results and goals, it embodies the uncertainty surrounding future events and the possibility of outcomes differing from what is expected (Hull 2015). It applies not only to the corporate world but also to individuals. Risk is the potential of undesirable or adverse outcomes or events that may occur in the present or future. In various contexts, risk can be financial, operational, strategic, reputational, environmental, or related to health and safety, and it is often characterized by the likelihood of occurrence and the severity of impact. Managing and mitigating risk is a fundamental aspect of decision-making and planning in many fields, including business, finance, insurance, and safety management.

The management also impacts both corporate and individual life. As per the Cambridge dictionary, “management is the activity of controlling something, or of using or dealing with something in the way that is effective”. The strategy involves the management of risk through various approaches, encompassing risk avoidance, risk reduction, risk transfer, and risk retention applied by utilizing risk assessments, either in an absolute context or in relation to other factors (Aven 2016).

Risk management is the systematic process of identifying, analyzing, assessing, and controlling risks to minimize the adverse effects of uncertain events on an organization or individual. It involves evaluating potential risks, determining the likelihood and impact of those risks, and implementing strategies to reduce or transfer the risks. Risk management aims to protect assets, optimize opportunities, and

enhance decision-making by effectively managing uncertainties and promoting resilience in the face of adversity (Rejda & McNamara 2020).

The identification of the concept of risk management has different views. The assessment and management of risk as a scientific field has started in recent centuries, which generated initial written scientific discussion and evidence about risk management by companies. The risk assessment and management practices that have been observed since 1970 and 1980, can be identified as the foundation elements of current risk management practices (Aven 2016.)

The understanding of Enterprise Risk Management (ERM) as a concept is required when managing the risk. This engages with identifying, assessing, and managing the risk across the entire organization. This focuses on coordinating and aligning risk management practices throughout the entire organization. The adoption of Enterprise Risk Management increases the level of corporate risk management, and this framework surpasses the limitation of the conventional “siloed” approach to corporate risk management, where each risk is addressed in isolation. Further adoption of ERP has a significant impact on the hedging practice of the companies (Yun 2023.)

Certain studies highlight two main tasks within the field of risk management. The initial task involves employing risk assessment and risk management to study and manage the risk associated with specific activities while the second task pertains to conducting research and development in the broader realm of generic risk (Aven 2016). The mentioned two tasks are managed by certain companies through separate divisions or employees. For instance, the Audit, Finance, and Strategy divisions engage with the first task while the second task is overseen by a distinct Research and Development division. However, in some cases, both tasks are consolidated within a single overarching for example corporate strategy division or risk management division.

2.2 Benefits of Risk Management

Companies intend to manage their risk because they want to minimize the potential negative impact on the business from uncertain internal and external factors. Effective risk management empowers organizations to make informed decisions and strategically prioritize resources by identifying potential risks and their impacts on objectives. This proactive approach extends to project management, where risk mitigation enhances project outcomes, minimizes disruptions, and ensures goals are met within

constraints. Additionally, risk management plays a crucial role in safeguarding an organization's reputation and brand by preventing negative incidents, thereby building trust with stakeholders. By addressing risks early, organizations optimize resource allocation, reduce costs, and comply with regulations, ensuring legal and financial stability. Stakeholders are also reassured by robust risk management practices, fostering confidence and encouraging innovation within acceptable boundaries. Ultimately, integrating risk management into organizational processes not only ensures business continuity and resilience but also provides a strategic advantage by enhancing adaptability and responsiveness in dynamic environments (Hillson & Murray 2007).

Effective risk management practices safeguard the company’s reputation. Negative occurrences within the company will impact the company name in public and this will create a long-term impact on the public in today's interconnected world. Legal and compliance requirements applicable to companies are getting stronger day by day and by having an effective risk management framework, the possible legal and compliance issues can be reduced. According to Eccles and Newquist (2007), there is a link between the effective risk management and company reputation, due to reputation has become a strategic asset that requires careful management to protect against risks and uncertainties in the business environment.

In addition to the legal requirements, effective risk management will demonstrate one aspect of the company's corporate social responsibility by creating a positive corporate image. As one example, companies are encouraged to reduce their carbon footprint because of negative changes in the climate. The changes in the climate influence the company’s risk landscape by introducing both physical risks and transitional risks (Dumrose & Maurice 2023; Hock & Andre 2023). Well-handled climate risk is one way to prove the effort of corporate social responsibility.

Proactive risk management strategies can lead to enhanced operational efficiency, improved decision-making, and ultimately, competitive superiority in the marketplace (Khan & Saeed 2018). This will promote innovation and growth opportunities for the company by opening portals to new markets or products. The stakeholders such as customers, employees, shareholders, supplies, etc will have a greater confidence level in companies that demonstrate the commitment to managing their risk.

2.3 Risk Management Frameworks & Guidelines

In the current context, various frameworks are available to bolster the common goal of systematically managing risk. Each frame represents the steps, and process of managing risk in their own way. The framework of the Committee of Sponsoring Organizations (COSO) and guidelines issued by the International Organization for Standardization - ISO 31000 are a few of the most commonly used risk frameworks by organizations.

2.3.1 COSO Framework

The Committee of Sponsoring Organization (COSO) was established in 1980 and the current mission of the organization is to “help organizations improve performance by developing through leadership that enhances internal control, risk management, governance, and fraud deterrence (COSO 2023). This organization has been provided a framework that is not mandatory but is a guideline for the organizations to manage risk and internal controls (ACCA 2023).

Originally, COSO introduced an enterprise risk management (ERM) model in 1992 in the form of a control-focus pyramid, however in 2013 this model evolved into the COSO cube (Figure 1) by emphasizing the creation and implementation of the risk management framework. The COSO cube gained widespread acceptance and became a globally applicable model for organizations across various environments (ACCA 2023.)

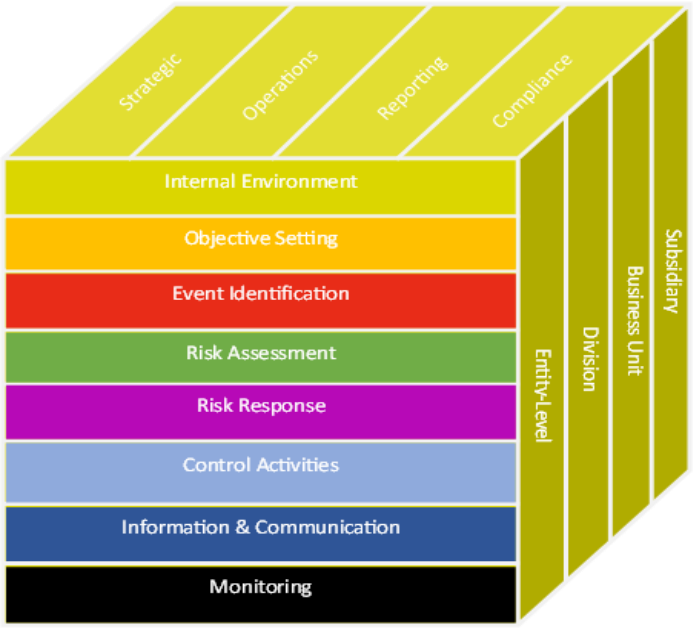

FIGURE 1. COSO's Framework (ACCA 2023)

This model is a three-dimension model that upper dimension includes the objectives categories of organization (Strategic, Operational, Reporting and Compliance) while the front- facing indicate the path of achieving those objectives (Internal Environment, Objective setting, Event Assessment, Risk Assessment, Risk Response, Control Activities, Information, and Communication and Monitoring). The third dimension includes the main units of the organization (Subsidiary, Business units, Divisions, Entry-level) which emphasize the capacity to focus.

The internal environment plays a pivotal role in shaping organizational risk appetite, approach to risk management, and ethical values. The top management is involved with establishing the corporate strategy of the company and objectives that support to achievement of the vision and mission (ACCA 2023.)

The third step of the COSO framework is “Event Assessment”, which is the identification of external and internal factors that affect the company. The likelihood and impact of the identified individual and accumulated risks asses in the fourth step. After, appropriate action on the identified risks should be aligned by considering the risk tolerance and risk appetite which include four main responses (reduce, accept, transfer, or avoid) (ACCA 2023.)

The sixth step is to implement control activities such as internal controls to ensure the effectiveness of the risk response. Next, the information system should ensure the proper identification, capture, and

communication of data in order to provide support to the individuals to perform their responsibilities including decision-making. The final step of the COSO framework is monitoring and modifying the management system (ACCA 2023.)

2.3.2 ISO 31000 Risk Management Guidelines

They are guidelines issued by the International Organization for Standardization to assess organizations to achieve their objectives. Further, this provides guidelines on internal and external audit programmes. However, this is not a certificate that companies can obtain (ISO 31000 2018). This framework was initially introduced in 2009 and reviewed every five years. Companies can customize this guideline based on their organizational context (ISO 31000 2018).

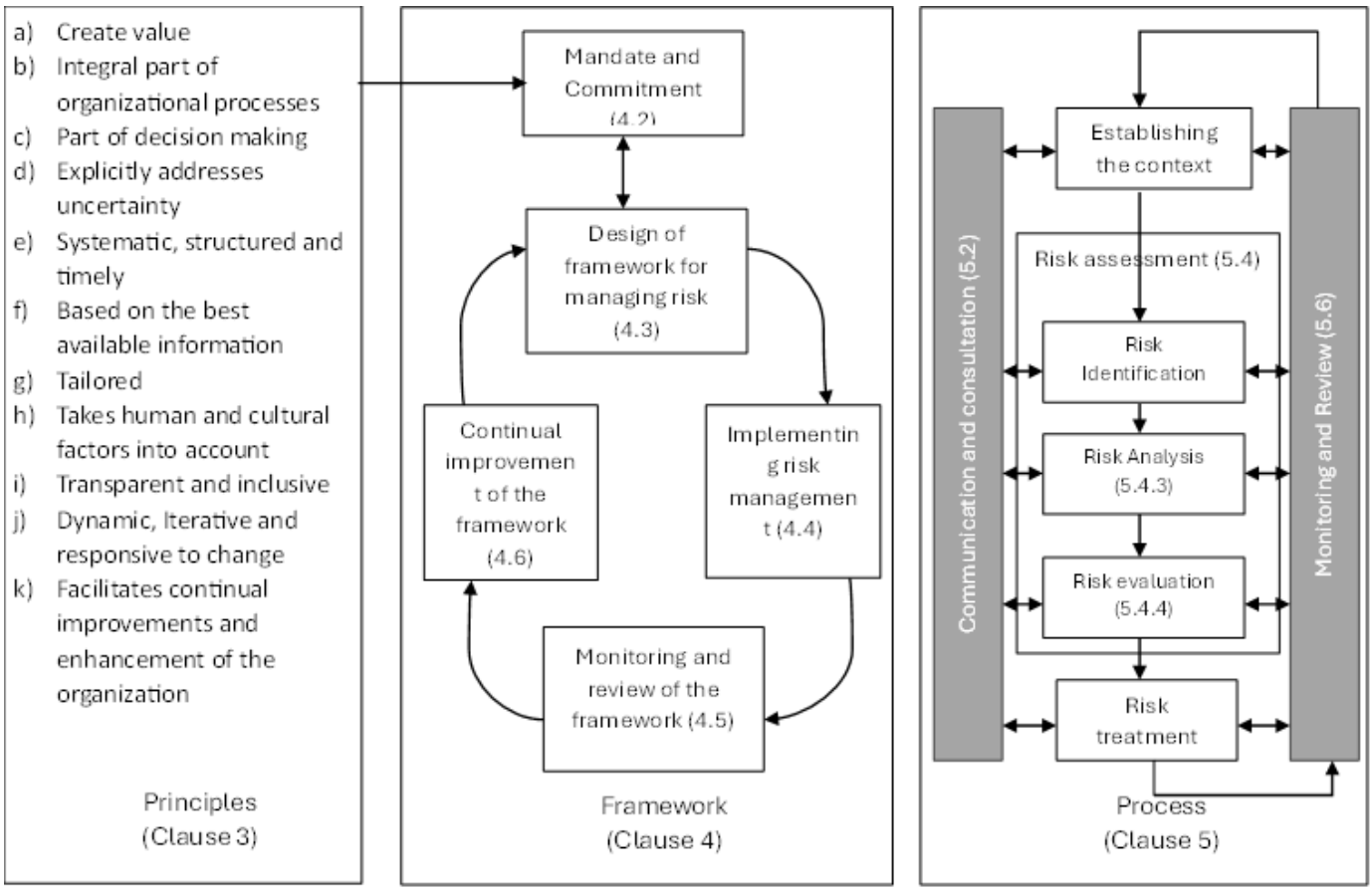

FIGURE 2. ISO 31000-2018 Risk Management (ISO 2018)

2.3.3 Three Lines of Defense Model

This model assists companies in managing the risk effectively. The main purpose of discussing about three lines of defense in this thesis is that the high possibility for the current student to work in one of these line in their future career.

Ensuring the effective of risk and control goes beyond their mere existence; the key lies in defining specific roles, fostering efficient coordination, and avoiding both control gaps and redundant coverage. It is crucial to clearly outline responsibilities to ensure that each group of professionals comprehends their boundaries and how their roles contribute to the overall risk and control structure within the organization (IIA 2013).

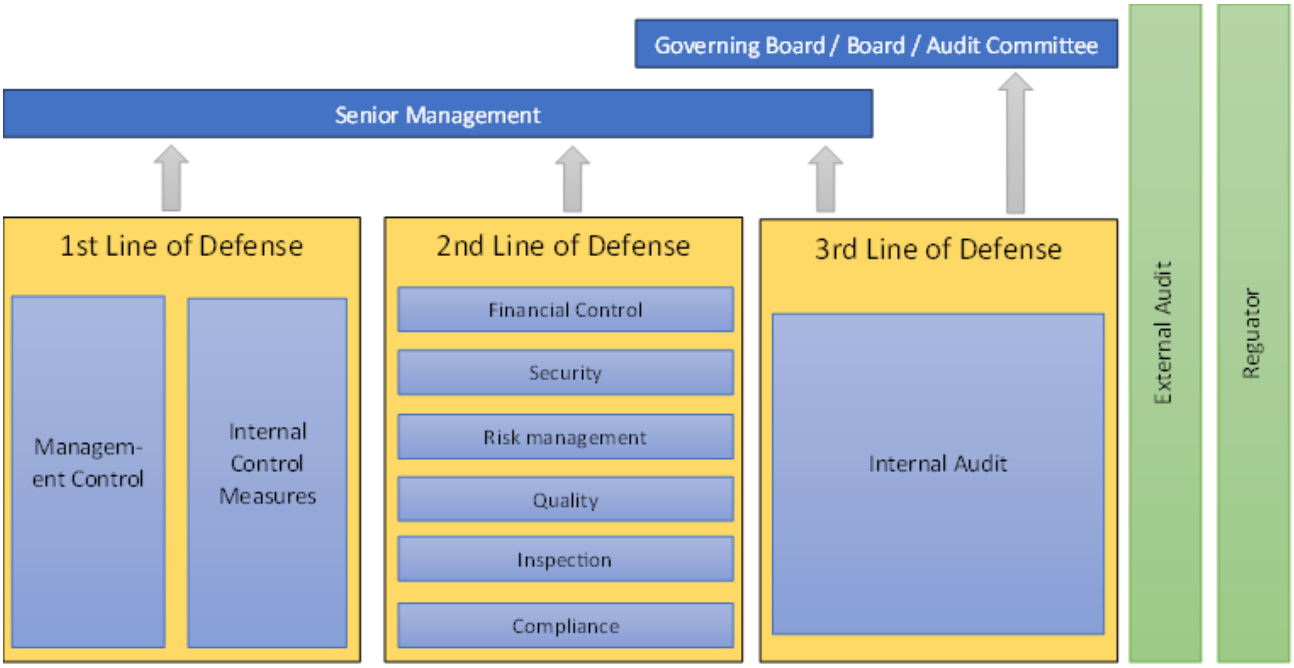

FIGURE 3. Three Lines of Defense Model (IIA 2013)

As per Vousinas (2021), the main characters of each three lines can be respectively described as, operational units that own and manage risks, oversight units that supervise risks, and independent assurance units which responsible for providing unbiased assessment.

The management in the primary line of defense is primarily accountable for conducting business operations, which entails addressing daily operational risks and managing control procedures. The main

objective of this line is to enhance the likelihood of achieving the company's business objectives by ensuring that the necessary risk management procedures and control mechanisms are effectively implemented by the relevant staff (Vousinas 2021, 96).

Management creates different risk management and compliance functions within the second line to support the controls implemented by the first line. This consists of compliance and risk management control mechanisms, aiming to ensure the effectiveness of the controls established by the first line in addressing the company's risks (Vousinas 2021, 97). The third line and ultimate line of defense is an independent assurance that functions to report to the Senior Management and the Board of Directors. Its role is to assess whether the operations of both the first and second lines align with the company's & governing body's expectations by assuring the effectiveness of internal controls and risk mitigation practices (Vousinas 2021, 98).

2.4 Utilization of Risk Management Frameworks

Organizations are utilizing different risk management frameworks in different stages of their operations. According to Mullner (2016), when entering to a new market specifically international market, the entities should have the capabilities to diversify, transfer or mitigate the identified risks. Further, Mullner (2016) explained how resources-based management deviated from a risk management framework to assist in penetrating foreign markets without incurring the expenses linked with the hierarchical methods of international expansion.

Furthermore, according to the study conducted by Kozioł & Pitera (2020) in the Polish food industry, the usefulness of early warning models such as risk management frameworks provided a 70% confirmation on the reliability of using risk management frameworks to prevent bankruptcy. According to Gul and Ak (2018), hazardous-based risk assessment, risk rating, and risk management precautions have been assisted in mitigating health and safety risks and preventing harm.

The listed companies in Finland are required to comply with the Finnish Limited Liability Company Act and the Finnish Corporate Governance Code (2020). According to *Volume VI - Other Governance* (2020), the companies are required to follow and report risk management practices. Therefore, publicly listed companies can follow the risk management framework as a guideline and a source of transparent public reporting. In addition to the listed companies, any other companies can follow this risk

management framework and concepts associated with risk management for the success of the business and as a better management tool.

2.5 General Risk Factors – Over Employment & Organizations

Many risk factors impact employment and organizations. Most of them have an impact on every employee and organization and certain risk factors can be specific according to the employment and micro and macro environment factors of the organizations.

2.5.1 Occupational Health and Safety Risk

As per the brochures of the Ministry of Social Affairs and Health in Finland (2016), ensuring meaningful work that prioritizes both physical and mental health, as well as social well-being is essential for overall quality of life and wellness. Furthermore, good working conditions not only assist employees to manage their work effectively but also enhance productivity and competitiveness.

Risk assessment involves evaluating workplace safety to determine if adequate precautions have been implemented to prevent harm and reduce potential losses and damages from activities related to work, worksites, and workers, thereby fostering a more productive and competitive business environment (Gul & Ak 2018). Further, certain studies highlighted the growing focus on the health and safety of migrant workers, and the language barrier has been identified as the primary safety concern for on-site migrant workers (Guan et al. 2024).

According to Tilastokeskus (2024), in year 2021 nearly 40% of accidents resulting in disability lasting over four days occurred during physical activity. Additionally, over 41% of all work-related accidents causing disability of over four days involved injuries to the lower extremities. In addition to this, in 2019 Finland recorded 137,000 workplace accidents, with 126,400 affecting wage and salary earners and 10,500 involving self-employed individuals. The majority of these accidents which is 113,100 happened at the workplace or during work-related travels (Tilastokeskus 2024).

Successful risk management requires a structured approach that involves identifying, assessing controlling, and reviewing risks systematically (Gul & Ak 2018). Therefore, awareness about occupational

health and safety is a valuable management tool to protect own self, other selves, and the organization's properties.

Health and safety risk awareness among company employees is paramount for maintaining a safe work environment and protecting the well-being of all personnel. Proactive risk management practices contribute to reducing workplace accidents, improving employee well-being, enhancing productivity, and minimizing operational disruptions (Pinder & Wilkins 2015). When employees understand the potential hazards and how to mitigate them, workplace accidents and injuries are significantly reduced. Furthermore, heightened awareness fosters a culture of vigilance, where employees actively identify and address potential risks before they escalate. Ultimately, prioritizing health and safety risk awareness not only ensures compliance with the regulations but also enhances employee morale and productivity.

2.5.2 Cybersecurity Risk

According to the Helsinki Times (2023), cybersecurity threats in Finland remain elevated, with a rise in targeted cyber-attacks on Finnish organizations and these attacks are becoming more sophisticated and carefully chosen.

During the COVID-19 pandemic, cyberattacks have surged, with instances more than doubling. Although companies typically faced minor losses from such attacks in the past, some are now enduring significantly greater damage. This escalating risk of severe losses poses potential funding challenges and threatens the financial stability of companies (Natulucci, Qureshi & Suntheim 2024)

As businesses speed up their transaction to digital technologies, ensuring cybersecurity has become a critical aspect of managing enterprise risks. Enhancing cybersecurity not only fosters greater customer trust and opens up more revenue possibilities but also challenges due to constantly evolving data protection and privacy regulations (Lee 2021).

Authorities need to create a robust national cybersecurity strategy including regular evaluations of the cybersecurity environment to pinpoint potential risks, supported by strong regulations and supervision as well as the third-party service providers. Further, the companies should ensure they can maintain essential business services during disruptions. Therefore, the companies required to create and regulate test response and recovery procedures. (Natulucci, Qureshi & Suntheim 2024)

Investors' perception of the advantages offered by the cybersecurity risk framework directly impacts their willingness to invest. The quality of information and awareness regarding cybersecurity also play a positive role in shaping how investors perceive the benefits of the risk framework and their inclination to invest. (Yang, Lau & Gan 2020)

Therefore, risk management of cybersecurity threats is a crucial part of business management, because it will reduce financial losses from data breaches, enhanced protection of intellectual property and customer information, improved regulatory compliance, and increased stakeholder trust and confidence (Rosenzweig, Rothfeder & Silva 2018). Effective measures ensure business continuity by preventing disruptions from cyber-attacks. Robuts protocols demonstrate commitment to customer privacy, enhancing trust and credibility. Proactive strategies help organizations stay ahead of evolving threats, reducing the likelihood and cost of successful attacks. Prioritizing risk mitigation ensures compliance with regulations and fosters a culture of security awareness and resilience.

2.5.3 Reputational Risk

The strategic importance of corporate social and environmental responsibility in bolstering a company's strategic standing is bolstering and safeguarding its corporate reputation (Roehrich, Grosvold & Hoejmose 2014, 697). Reputational risk can be impacted and generated by different organizations and different operational stages of the organizations as well as the employees.

Reputational damages impact on the identity of organizations and the stakeholders of the organization by the opinion of stakeholders about the organizations becoming less favourable. (Mariconda, Zamparini & Lurati 2019, 1). Research on reputational damages primarily focuses on three main factors, 1. Organizational reputation before something bad happens, 2. How responsible stakeholders perceive the organization to be for the bad occurrence, 3. The credibility of the sources of the reporting (Mariconda et al 2019, 2).

Various factors and advancements emphasize the increased significance of managing reputation risk, particularly due to the prevalence of social media, social media's rapid dissemination of news enables stakeholders to share information quickly and interact with each other by bypassing traditional filters (Aula 2010).

The analysis carried out by Heidinger and Gatzert (2018) indicated that annual reports serving as an indicator of a firm's awareness of reputation and reputation risk, reveal that companies mentioning these terms frequently tend to have a higher recognition of reputation-related risk and are more concerned about their reputation. As a result, it has anticipated a positive correlation between the frequency of these mentions and the adoption of reputation risk management programs.

Decision-makers are encouraged to adopt strategic approaches that prioritize transparency, ethical practices, and long-term sustainability goals to protect the reputation of their organizations amidst the complexities of bounded rationality (Roehrich et al. 2014). Therefore, awareness of reputational risk among company employees, especially the management team is crucial for safeguarding the company's image and managing stakeholder's trust. Employees who understand the impact of their actions on the company's reputation are more likely to make informed decisions and uphold organizational values. Furthermore, heightened awareness can empower employees to identify and mitigate potential risks, contributing to a proactive approach to reputation management. Ultimately, a culture of reputational risk awareness fosters accountability and strengthens the company's resilience in the face of challenges.

3 RESEARCH METHODOLOGY

This chapter details a brief explanation of the methodology of the research. The research was conducted in a mixed method. The data collection consists of main two parts (secondary and primary data). Further, the secondary data collection was again consisted with two sub-parts (Survey & Interview).

3.1 Research Design

Existing studies about the risk and understanding level of it has been conducted in both quantitative and qualitative manner. Based on the objective of this thesis, which is to assess the level of risk understanding about the concept of "risk" among the business studies students. Therefore, a mix method of quantitative and qualitative was decided as the best-suited methodology for the study.

The quantitative approach statistically describes and analyses the subject matter using numbers and this method uses various classification, comparison, exploration, and explanation methods, as well as different analysis methods (Lähdesmäki et al. 2010). The relationship between variables can be examined by this method using numbers. Many businesses and management research are expected to incorporate numeric data or information that could be quantified (Saunders, Lewis & Thornhill 2012, 472). This method assists in investigating the subject matter by employing mathematical and statistical techniques to collect and analyse data while understanding, describing, and examining phenomena by quantifying variables and establishing relationships between them.

Quantitative research prioritizes empirical evidence, valuing the testing of beliefs or logical propositions against real-world experience. This empirical orientation means that positivists, who emphasize empirical evidence, must acknowledge and consider critiques, even those that challenge positivism itself (Zyphur & Pierides 2020).

Further, quantitative research aims to create and utilize mathematical models, theories, and hypotheses related to phenomena and measurement plays a crucial role in this method, as it establishes the essential link between empirical observation and the mathematical representation of quantitative relationship. This method finds extensive application in various fields including the business and management

field. (Wikipedia 2023). Quantitative research is required to select a sample from a population that includes a wide scope of cases and elements and the data gathering focus on the selected sample. The selected sample should be sufficient when compared to the population and the margin of error method assists in selecting this sufficient level. The researcher should have the capability to explain the nature and the reason for selecting the population and the target population (Saunders et al. 2012, 54).

Quantitative research and qualitative research can be distinguished by the type of data its deal with (Numeric data – quantitative & non-numeric data-Qualitative). Quantitative methods typically involve techniques like questionnaires and statistical analysis, while qualitative methods involve approaches such as interviews and categorizing data. However, in practice, many research designs in business and management combine elements of both approaches. For instance, a questionnaire might include open-ended questions or qualitative data might be analysed quantitatively. This suggests that quantitative and qualitative research are not always distinct but rather exist on a continuum and are often mixed in practice (Saunders et al. 2012, 161).

Researchers have to select a sample without collecting data from the entire population due to the impracticability of surveying the entire population, budget constraints to surveying a large population, and time constraints (Saunders et al. 2012, 260). In addition, when selecting a sample, the level of confidence in the data, types of analysis that willingness to perform, and minimum threshold level should be considered.

A multiple-methods research design can incorporate either a deductive or inductive approach and often integrates both. For instance, it can begin with quantitative or qualitative research to test theoretical propositions, followed by additional research of the same type to deepen theoretical understanding. Alternatively, a theoretical framework can guide the research by offering a focus and scope. These theories can shape research direction and focus (Tashakkori & Teddlie 2010).

3.2 Data Collection Methods

The risk, which focused on this study is the risk impact on the business and companies itself and its stakeholders. Students are considered as the future workforce and owners of those business and companies. The mixed method of quantitative and qualitative was followed to collect data from the selected sample. When conducting the quantitative method both primary and secondary data was

gathered and analysed. To do an in-depth analysis, qualitative data was gathered from the random sample selected from the same sample from which the quantitative data was gathered.

Secondary data was collected as the first step to assess the practicability of the risk management concept, tools, and frameworks in the real business world. Further, by following the secondary data, primary data was gathered from the selected sample to evaluate the understanding of the main subject (risk management).

3.2.1 Secondary Data Collection

The objective of conducting a secondary data collection was to assess and determine the usefulness and practicability of the understanding of the concept of risk and risk management as a candidate of the future workforce.

Secondary data means the data that has already been collected by someone for their purposes (Saunders et al. 2012, 304). After the acquisition, these data can undergo further analysis to yield supplementary or alternative insights, understanding, or detections (Bulmer, Sturgis & Allum. 2009).

As the first step, secondary data collection was conducted by analysing the listed companies in Finland that operate in the City of Kokkola. The reason for selecting the city of Kokkola for secondary data collection was that the sample for primary data collection was derived from the same region and the assumption of the high career opportunity in the same region for the students.

The reason for selecting only the listed companies for the analysis was the easy accessibility of the information about risk management. The listed companies in Finland are required to comply with the Finnish Limited Liability Company Act and the Finnish Corporate Governance Code (2020).
As per Volume VI - Other Governance (2020), the companies are required to follow and report risk management practices. Further, recommendations 24,25 and 26 are guided by Internal Control, Risk Management, and Internal Audit respectively.

Therefore, as per the Finnish Corporate Governance Code- Recommendation 25 (2020), “risk management is a part of the company’s control and monitoring system. The purpose of risk management is to ensure that the risks related to the business operations of the company are identified, evaluated, and

monitored. Well-functioning risk management requires that the principles of risk management are specified. To evaluate the operations of the company, sufficient information on risk management must be provided. Risk management principles relating to financial reporting processes shall be reported in the Corporate Governance Statement.

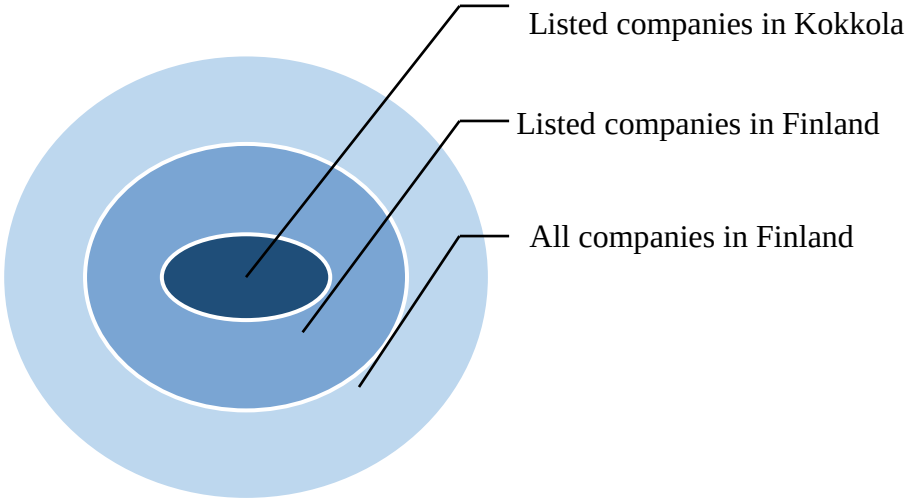

FIGURE 4. Secondary data collection of this thesis

Overall, 11 listed companies were operated in the city of Kokkola (KOSEK 2023). Many of these companies operate in other cities in Finland as well. The sources for the data were recently published company reports on their official websites, such as Annual Reports, Corporate Social Responsibility Reports, Sustainability Reports, and separately published Financial Statements. The main source of publication was the company Annual Report, however, if the company annual reports are unable to be accessed, the other sources were studied.

The most recent publications were taken into consideration which was the 2022 or 2023 financial year (The companies that the financial year ended on 31st December, the annual report of 2023 was taken, and the companies that the financial year ended on 31st March, the annual report of 2022 was taken). However, when we studied the 11 companies, only 9 companies' information was able to be accessed because of the limitation of language and availability (Table 1).

TABLE 1. Company Data Sources

	Name	Web Address	Source
01	Anvia Oyj/ Viria OYJ/Loihde PLC	https://www.loihdetrust.com/	Group Annual Report 2022
02	Cramo Oyj	http://www.cramo.fi/	No Publication about the Risk Management- No Analysis
03	If Casualty Insurance Oyj, Finnish branch	http://www.if.fi/	Annual Report 2022
04	Kesko Oyj	http://www.kesko.fi/	Annual Report 2023
05	Lassila & Tikanoja Oyj	https://www.lt.fi/fi/	Annual Report 2023
06	OP Retail customers Oyj	http://www.op.fi/	Corporate Governance Report 2022
07	Outokumpu Oyj	http://www.outokumpu.com/	Annual Report 2022
08	Oyj Ahola Transport Abp	http://www.aholatransport.com/	Corporate Governance Report 2022
09	Posti Oyj / Kokkola Branch	http://www.posti.fi/	The reports are only in the Finnish Language - No Analysis
10	Telia Finland Oyj / Kokkola Branch	http://www.sonera.fi/	Annual Sustainability Report 2022
11	UPM Kymmene Oyj	http://www.upmmetsa.fi/	Annual Report 2022

3.2.2 Primary Data Collection

Primary data refer to the information gathered exclusively for the current research endeavour (Saunders et al. 2012). According to Hirsjärvi, Remes, and Sajavaara (1998), researchers should select the method they believe will yield the most accurate data for their research goals. Therefore, this research was conducted using a mixed method of quantitative and qualitative approaches, which are effective for documenting prevalence (Bowling 2014).

A survey was conducted among MBA students at Centria University of Applied Sciences, with 14 close-ended questions relevant to risk management. The sample selected was the business management studying master students who belong to the 2022 and 2023 groups. According to the Table 2, the student numbers were confirmed via the university student services.

TABLE 2. Sample for Survey

Group	Programm - Full Time/ Daytime Studies	Batch	No of Students
YYBSF23K	Masters of Business Administration- International Business Management- Full-time	2023 Autumn	25
YYBSF22K	Masters of Business Administration- International Business Management- Full-time	2022 Autumn	20
YYBS23K	Masters of Business Administration- International Business Management- Part-time	2023 Autumn	40
YYBS22K	Masters of Business Administration- International Business Management- Part-time	2022 Autumn	29
			114

Before approaching the students, a "Research Permit" was obtained from the Director of Education at Centria University of Applied Sciences. The Research permit was submitted with the "Data Protection Notice". The planned duration to collect data from the students was March 2024. According to the granted Research Permit, the questionnaire was distributed among every student in the sample in March 2024, through email.

The questionnaire was constructed through the Webropol Service. The 14 questions were divided into main 3 segments for a better understanding of the responses. The first 4 questions were constructed to get a better understanding of the participant, such as the educational background, cultural deviations, and working experience. All questions except the question number 4 were marked as mandatory. Question number 4 was marked as non-mandatory because the question is more personalize in nature.

The second segment of the questions (Questions 5 – 9) was constructed to measure the level of general understanding of the research subject. The last segment, which is questions 10 to 14, was designed to assess the understanding about specific risk factors and the importance of internal controls. These risks

are more common or general risks in the corporate world which is cybersecurity, health and safety, and reputation. All questions are market as mandatory in these two segments. Therefore, options of answers were included in the range from 0 levels, as everyone could answer (Table 3).

TABLE 3. Segments of the Survey

Question Number Range	Segment	Type of the questions
1 - 4	1	To understand the Respondent
5 - 9	2	To assess the general understanding of the research subject
10 -14	3	To assess understanding of specific risk factors and internal controls

As the second step of primary data collection, in-depth interviews were conducted among 5 randomly selected students who answered the questionnaire. Separate 14, open-ended questions were constructed for the interview.

As represented in Table 4, these 14 open-ended questions are also divided into main 2 segments as the questionnaire. The first 3 questions were developed to understand the participant with few personal questions. The second segment, which was question number 4 to 14, was constructed to get the idea about the research topic from the participant.

TABLE 4. Main Segments of the Survey

Question Number Range	Segment	Type of the questions
1 - 3	1	To understand the Respondent
4 - 14	2	To measure the understanding of the research subject

When conducting interviews, background materials can be distributed in advance to the respondent, which might in the best case bring more comprehensive results (Tiainen 2014). Before conducting the interview, permission to the interview was obtained from the selected students and the list of questions was sent to that student who granted their willing to participate in the interview.

Therefore, five separate interviews were scheduled via commercial Zoom with Centria credentials. The interview was scheduled for 30 minutes. However, certain participants were given more detailed explanations while the other participants gave brief explanations. Therefore, the interview time was different for each participant with a range of 10 minutes to 30 minutes as presented in the “Table 5”.

TABLE 5. Details Interviews

Participant	Mode	Time (Approxi: Minutes)
1	Video	29
2	Video	13
3	Audio	16
4	Video	19
5	Audio	18

When starting the meeting, permission was requested to record the meeting from all participants. According to the granted permission to record the meeting, all interviews were recorded. More time was given to the participants to explain their ideas about the questions and the host asked the questions according to the pre-distributed questions. Furthermore, to get a better understanding of the discussion the caption mode of the Zoom as well as the Microsoft Transcript facilities were utilized.

3.3 Data Analysis Methods

Secondary data was gathered and analysed by using Microsoft Excel 365. All companies’ information according to the sample was directly gathered to MS Excel 365 and created a brief table for advanced analysis.

The survey of primary data was collected through Webropol data and raw data was transferred and analysed through the MS Excel 365. Excel was extracted from the Webropol, both as detailed and summary versions. Both detailed and summaries of the data were analysed to obtain a clearer output and performed descriptive analysis. Further, the answers for the questions were analysed individually and comparatively with other answers to find any connections between answers.

Interviews were conducted through Zoom and the recorded audios were transcribed to Microsoft Word 365. After transcribing, the summary of information was prepared in Microsoft Excel 365 for further analysis.

3.4 Ethical Consideration

There has been significant increase in concerns regarding research ethics in recent years and it is essential to carefully consider how to gain access to conduct the research and anticipate potential ethical issues that may arise. Further, failing to address these concerns could result in challenges or impracticalities when attempting to carry out the research (Saunders et al. 2012, 108).

The researcher in this study adheres to ethical guidelines from National Advisory Board on Ethics (Finnish Advisory Board on Research Integrity TENK). The research work and data analysis were conducted ethically, ensuring it was beneficial and not harmful to society or participants. Given the sensitive nature of the survey, covering topics like understanding of risk management. Therefore, it was of utmost importance to make sure that the informants clearly explained the content of the study (Vilkka 2007)

Therefore, the consents of students were obtained to perform the interview and record the interview and the questions of the interview were distributed before the interview. Both video and audio interviews were conducted according to the preference of the participant. Further, when constructing the questionnaire, personal questions such as job experience were marked as non-mandatory. When collecting the secondary data, only the published information on companies' official websites was utilized to maintain trustworthiness and ethical adherence.

4 FINDINGS

This study has been conducted in both quantitative and qualitative manner, employing a mixed method. Therefore, to collect primary data, both a survey and interviews were conducted. To maintain the gravity of the research, secondary data sources were also gathered. The outcomes collected data from these methods are presented in this Chapter.

4.1 Outcome of Secondary Data Analysis

As the secondary data, risk management declarations or reports were analysed in the companies operates in the city of Kokkola.

Out of a total of 11 companies, 9 company information was able to be collected and no published information were founded for two companies. The sources of the information can be presented in "Table 6" as follows,

TABLE 6. Sources of Information

Source of Information	Sub-sections	No: of companies
No published information	-	2
Annual Report	Corporate Governance Report & Financial Statement Notes	3
	Financial Statement Notes	1
	Corporate Governance Report	2
Separate Corporate Governance Report	-	2
Separate Sustainability Report	-	1
Total Companies		11

Further analyses were conducted out of the 9 companies where the information was publicly available. Companies that published their risk management practices have included the frequency of their risk assessments in addition to continuous risk management strategies (Figure 5).

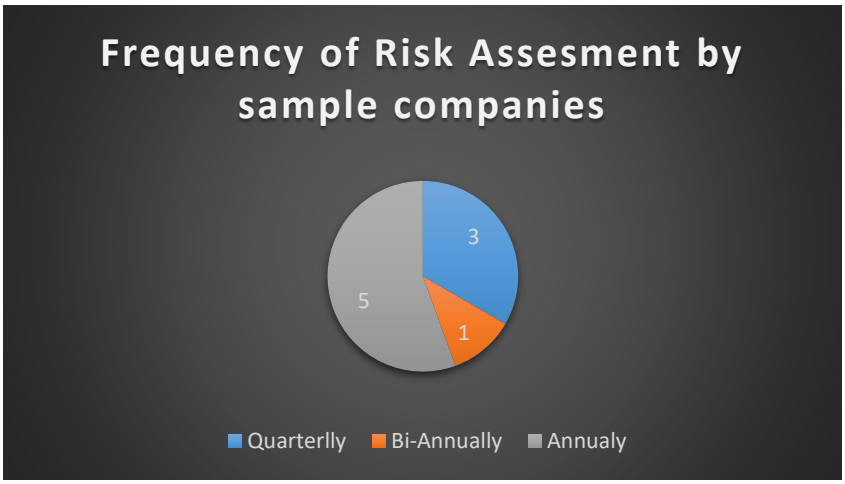

FIGURE 5. Secondary Data Collection

Three companies have directly mentioned that they are following the COSO framework, and the other 6 companies have not directly mentioned the risk framework they are following. However, all 9 companies have mentioned the following concepts and tools relevant to risk management in the reporting:

- Risk management steps
- Risk management strategies
- Internal controls
- Main risks factors

In addition to the above, 8 companies mentioned their main risk owners and the three-line of defense as follow “Table 7”,

TABLE 7. Main risk owners for Three Lines of Defense

Main Risk Owners	Three-Lines of Defenses			No: of Companies
	First Line	Second Line	Third Line	
Board of Directors & Company Heads (CEO, President, Chairman)	Division/Unit Heads	Risk Manager/ Risk Officer	Internal Audit	1
			External & Internal Audit	1
		Internal Audit	External Audit	1
		Compliance Team	Not Mentioned	1

	Management Team	Internal Audit	External Audit	1
		Risk Manager/ Risk Officer	External & Internal Audit	1
	Senior Manage-ment	Risk Manager/ Risk Officer	Internal Audit	1
		Internal Audit	Not Mentioned	1
Total				8

Business management students are eligible to work as a part of the above four levels, which are the "Main risk owners", "First line of defense", "Second line of defense" or "Third line of defense". Furthermore, each level of job role contained specific responsibilities relevant to risk management which the current students have to manage when they enter the future workforce and build career growth.

Even though, this analysis includes information on the listed companies, many organizations are function with at least one of the above levels. Therefore, the knowledge of risk management can be decided as a vital part of every organization.

4.2 Outcome of Primary Data Analysis

4.2.1 Outcome of Survey

As the first step of primary data collection, 114 students were invited to participate in the survey and 25 responses were received. According to the results of the survey, the general information of the participants is as follows (Figure 6 – Degree program), (Figure 7 - Country of origin) & (Figure 8 – Educational background)

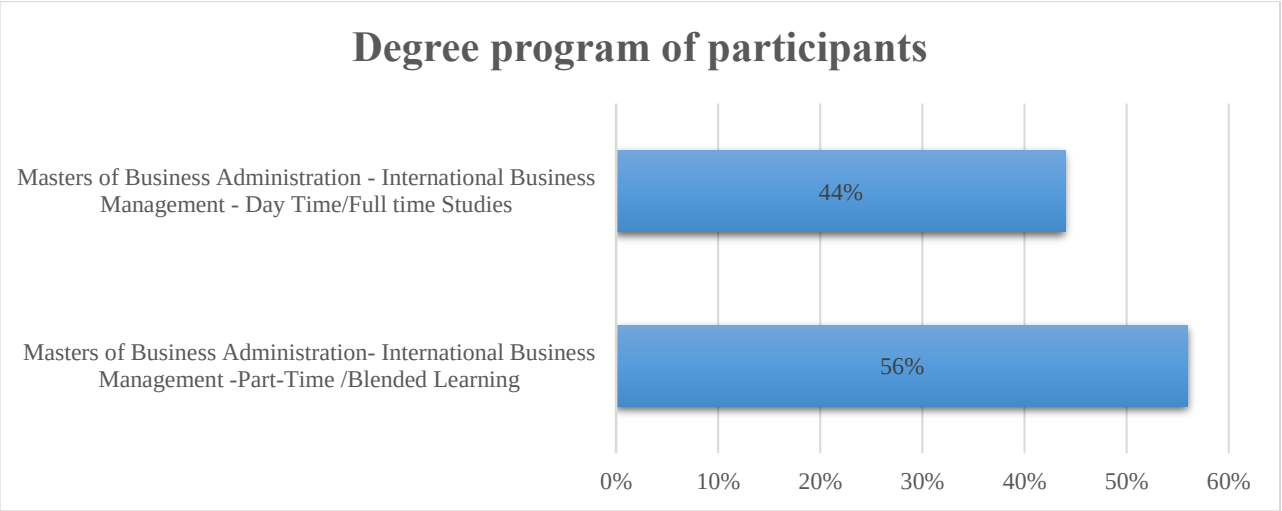

FIGURE 6. Degree program of Participants

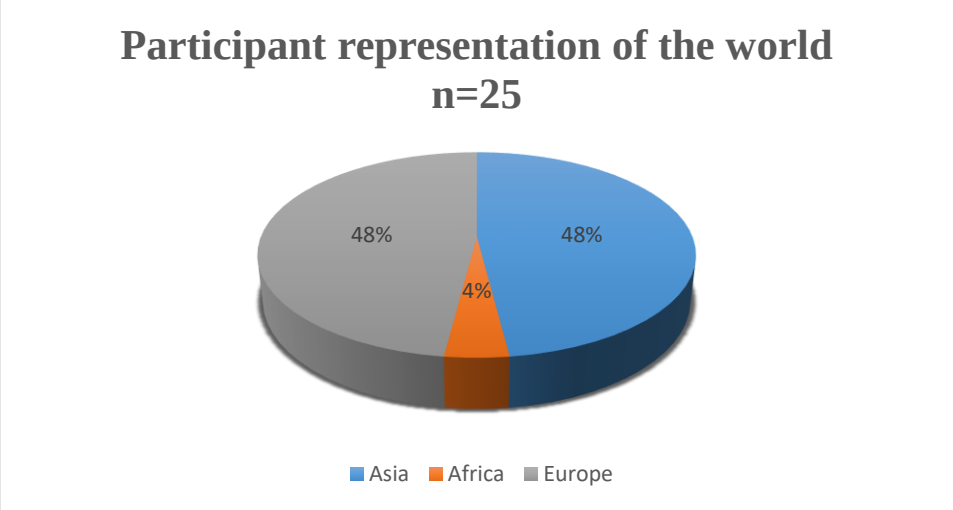

FIGURE 7. Participant representation of the world

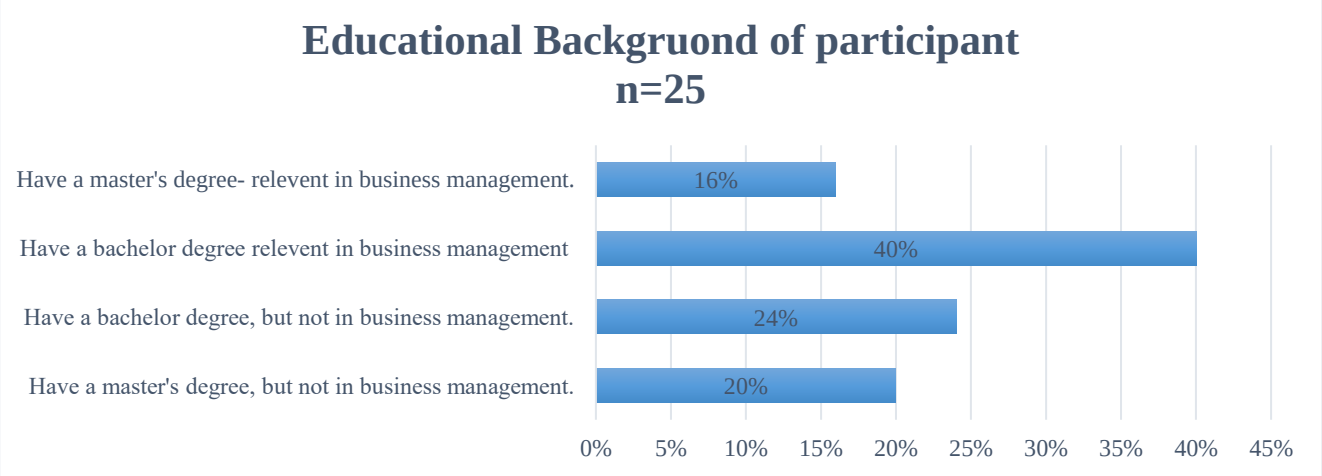

FIGURE 8. Education background of participants

24 participants answered about their previous experience level of business management and were. Based on the answers presented in the “Table 8”, the participant has multiple layers of experiences that vary based on the level of the job (Non-executive & Executive) as well as the background of the job (Self-employed & employed)

TABLE 8. Previous experience duration of participants

	Below 2 years	2-4	5-7	8-10	Over 10	Average	Median
Executive/Above Executive level relevant to business management	25.0%	20.0%	30.0%	10.0%	15.0%	2.7	3.0
Non-Executive Level relevant to business management	33.3%	38.9%	5.5%	5.6%	16.7%	2.3	2.0
Executive/Above Executive level but not relevant to business management	54.5%	9.1%	27.3%	9.1%	.0%	1.9	1.0
Non-Executive Level but not relevant to Business Management	23.1%	23.1%	30.7%	15.4%	7.7%	2.6	3.0
Self-employed relevant to business management	70.0%	.0%	20.0%	.0%	10.0%	1.8	1.0
Self-employed but not relevant to business management	63.6%	27.3%	.0%	9.1%	.0%	1.5	1.0
Total						2.2	2.0

Questions 5 to 9 were designed to explore the understanding level of risk management with general questions. These questions were designed with options to select. Question number 5,6,7 & 8 had one option as the most desirable answer.

Question number 5: What do you think is Risk Management?

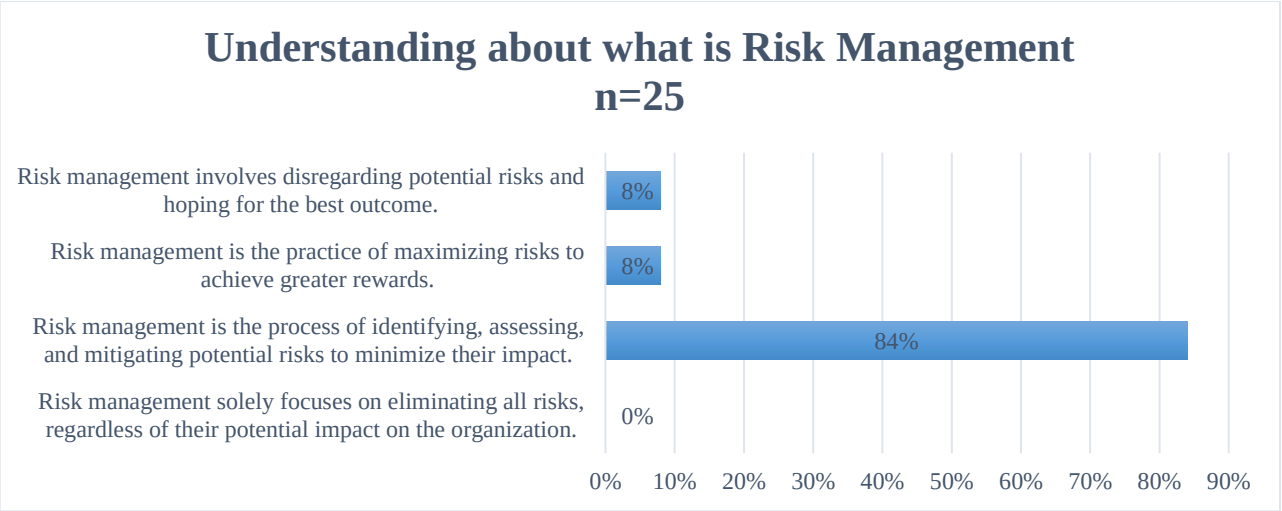

FIGURE 9. Understanding about what is risk management

Therefore, according to "Figure 9" presented above, 21 participants have been given the most appropriate answer. However, 4 students have been given the incorrect answer. When further analysing these 4 participants, it was noted the students are following full-time studies.

Question number 6: Let's assume you are a manager of a company, or you own your own company. What are your best actions relevant to managing the risk associated with your work?

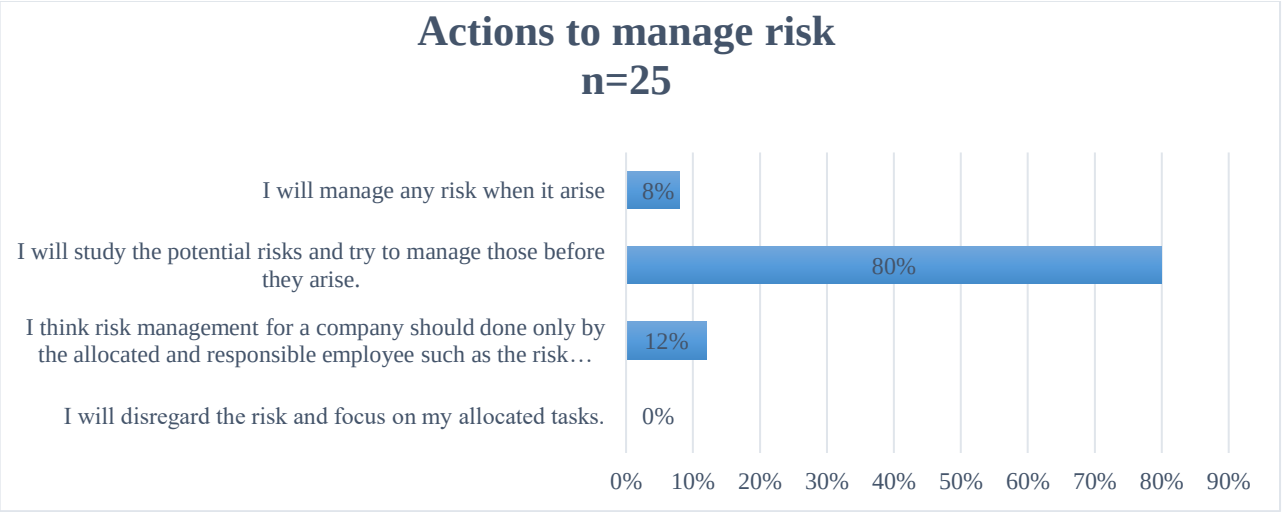

FIGURE 10. Actions to manage risk

20 students have been given the most appropriate answer for this question (Figure 10). 5 students' answers are inaccurate. However, 3 participants of these 5 participants have been given the correct answer for question number 5 which is relevant to the definition of risk management.

Question number 7: What is the most appropriate action you want to implement; in case you identify a pool of risks that have a negative impact?

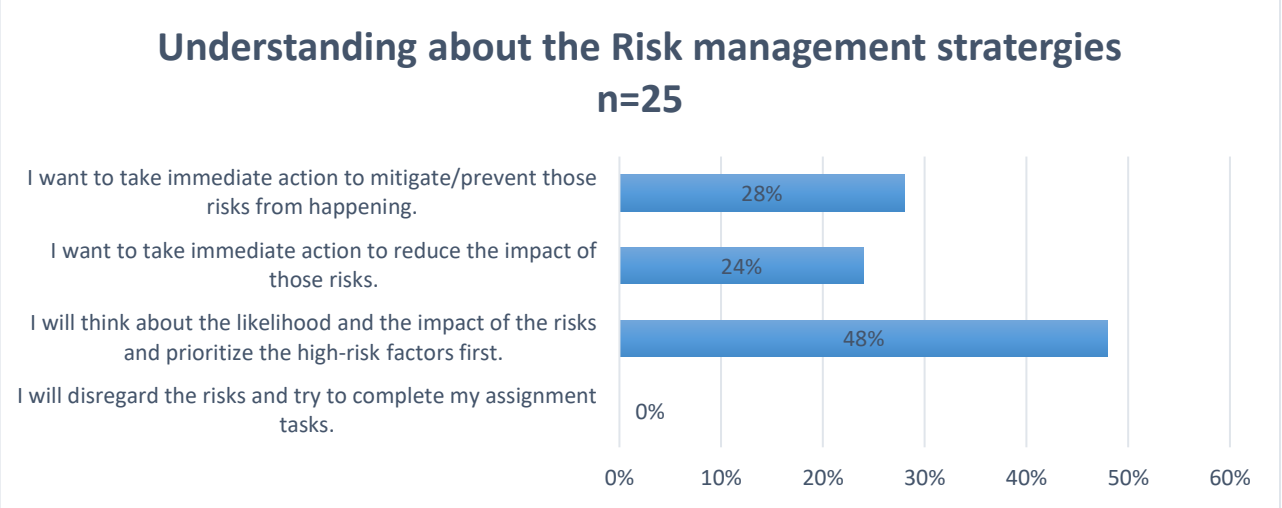

FIGURE 11. Understanding of the risk management strategies

As represented in “Figure 11”, only 12 (48%) students out of a total of 25 have been identified most appropriate answer about risk management 11 participants among these correct respondents had previous experience in the business management field. A total of 13 students were given wrong answers even though 12 participants had experience in the business management field. In addition to that, they belong to both full-time and part-time studies as well as they belong to different regions of the world (Asia, Africa, Europe).

Question number 8: Rate your understanding of the following (1-I Have No Idea, 5- I have a good understanding) – (Three Line of Defense Model, COSO Framework, ISO 31000, NIST Cybersecurity Framework, Internal Controls & Corporate Governance)

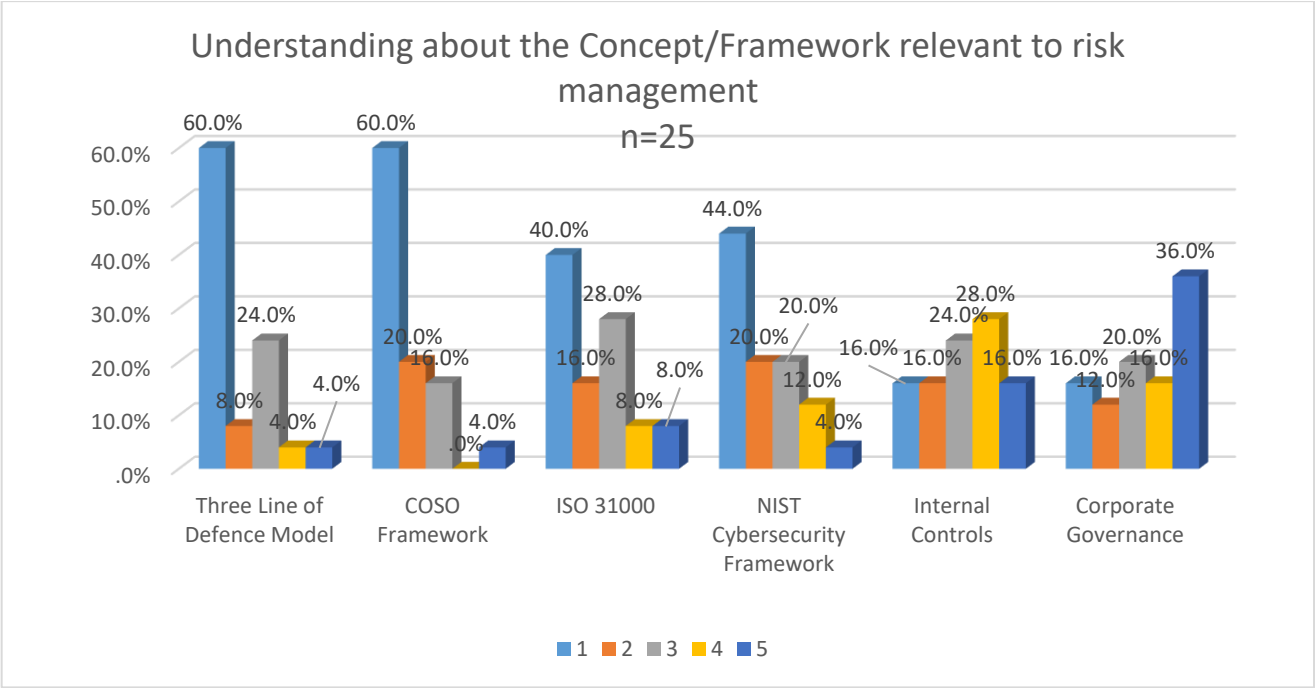

FIGURE 12. Understanding about the concept/ framework relevant to risk management

The majority of participants were not aware of the 3 lines of defense model and COSO framework. The average awareness of the Three Lines of Defense Model among the participants is 1.8 out of 5. These students belong to both full-time and part-time studies as well as they belong to different regions of the world (i.e. Asia, Africa, Europe). 13 participants out of 15 participants gave 1 rating for awareness about COSO framework and the Three Line of Defense Model has experience in business management filed (Figure 12).

Further, 9 students have marked their understanding between 2-4 range and only 1 student has been given the highest rating. Then moving to the main risk management framework in the business world, which is the COSO framework, the average understanding is 1.7 out of 5. Furthermore, 15 students were marked as unaware of this framework, and only 1 student was marked as totally aware of this framework. The rest of the 9 students marked their understanding between 4-3 levels (Figure 12).

In addition to the above, the majority is not aware of ISO 31000 and the NIST Cybersecurity Framework which is used by certain companies as a risk management framework, but not as popular as COSO framework. The average understanding of these frameworks is respectfully, 2.3 and 2.1 out of 5.

However, the majority of participants have a certain level of understanding about internal control and corporate governance. The average understanding of these was respectively 3.1 and 3.4 out of 5. A total of 4 participants were fully aware of the internal controls and 9 were fully aware of the corporate governance. 11 participants were given a rating of 4-5 about understanding internal control and all of these participants have previous experience in business management. Further, 13 participants were given a rating of 4-5 about understanding internal control and all of these participants have previous experience in business management. All of these participants have been given the correct answer for questions number 5 and 6 which discuss the most appropriate actions on risk management (Figure 12).

Question number 9: What is the importance of the following activities for better management? Rate your thoughts here (1-Low& 5-High)- (Well-established control environment, Proper risk assessment, Control activities over the identified risks, Information & communication of the risks, Monitoring and Follow-up over the implemented strategies)

FIGURE 13. Understanding about better risk management tools

According to the information represented in the above “Figure 13”, none of the participants gave these tools as low importance by giving a 1 rating. However, the rating given for each management tool was variate among the participants. According to the principles of COSO framework, all these tools are highly and equally important for establishing a better risk management environment.

As per the participant responses, the average rating given for the well-established control environment, proper risk assessment, control activities over the identified risks, information & communication of the risks, and monitoring and follow-up over the implemented strategies were respectively, 3.7, 4.4, 3.9, 4.5 and 4.4. Therefore, it seems the majority of participants see these tools as important even though they didn't give the highest rating.

Question numbers 10 to 14 are constructed based on more specific questions with practical examples. A total of 25 participants responded to these questions. The questions had 4 options to select, and one option is the most appropriate answer according to the risk management tools and concepts.

Question number 10: Imagine you are working on your office laptop, and you get an email from an unknown recruitment company. They have sent an email about a better job opportunity for you with a link to apply. What will be your action about this?

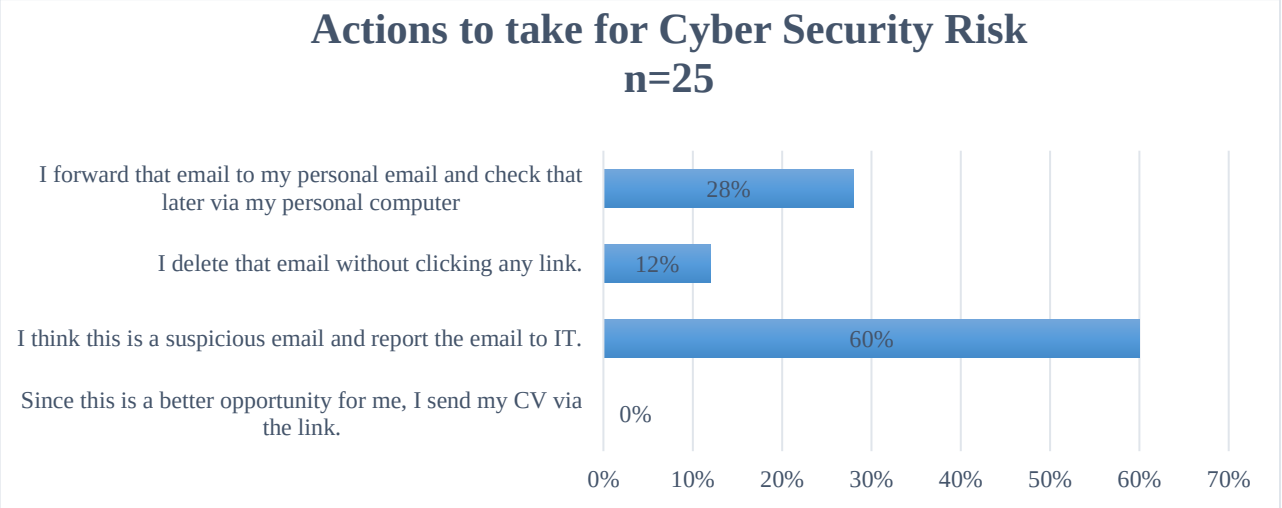

FIGURE 14. Actions to take cyber security risk

According to the answers presented in "Figure 14", the majority of participants have been given the most appropriate action to take which is 60% of the participants (15 students). However, 7 students have transferred this corporate risk to their risk by forwarding a risky email to their personal computer. 3 students have deleted the email by not getting better action to manage the risk. When further analysing the participants who submitted the incorrect answer, it was noted that they belonged to both full-time and part-time studies at the campus with different educational backgrounds. Furthermore, they belong to different regions of the world (Asia, Africa & Europe) and everyone has experience in the business management field.

Question number 11: Imagine you are the manager in the finance department, while you are going to the meeting room you see one employee belonging to the maintenance department repairing something in the ceiling and he is not wearing his safety helmet. What will be your action?

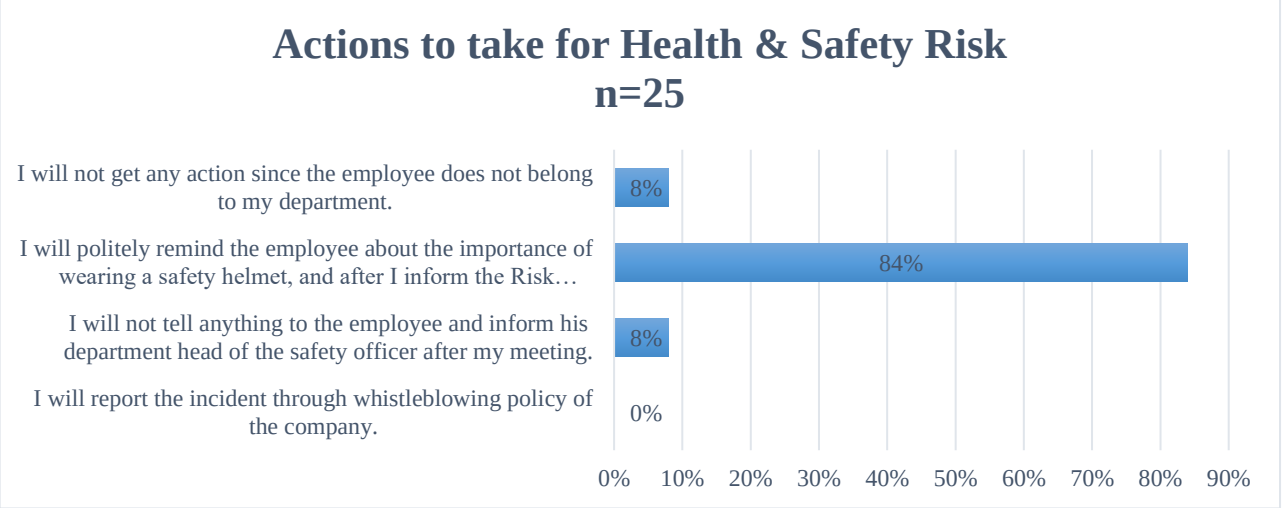

FIGURE 15. Actions to take for health & safety risk

84% of the participants which is 21 students have been given the most appropriate answer for this question. However, 4 students have disregarded the risk by not taking immediate action (Figure 15).

Question number 12: Assume you are working in a supermarket located in Kokkola and you visit a supermarket belonging to the same company in Helsinki. While shopping in the supermarket you see a product on a shelf with damaged packaging, what will be your action?

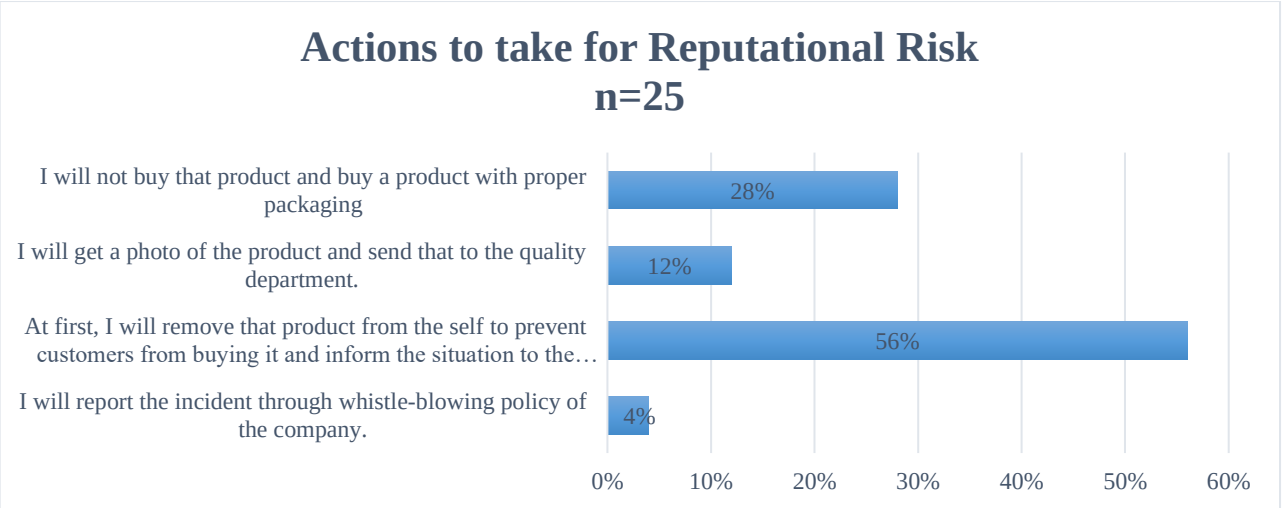

FIGURE 16. Actions to take for reputational risk

According to “Figure 16”, 56% of participants (14 students) have submitted the most correct answer for this question. However, 28% of participant have disregarded their responsibility for managing the risk. 12% and 4% of participants have failed to take immediate action to manage the risk.

When further analysing the 11 participants who submitted incorrect answers, it was noted that they belong to both part-time and full-time studies, represent different parts of the world (Asia, Africa & Europe) and 9 participants had experience in the business management field. However, only 3 respondents had a previous education background in business management.

Question number 13: You are in a rush to complete a work-related report and suddenly you hear the company fire alarm, what would you do in this situation?

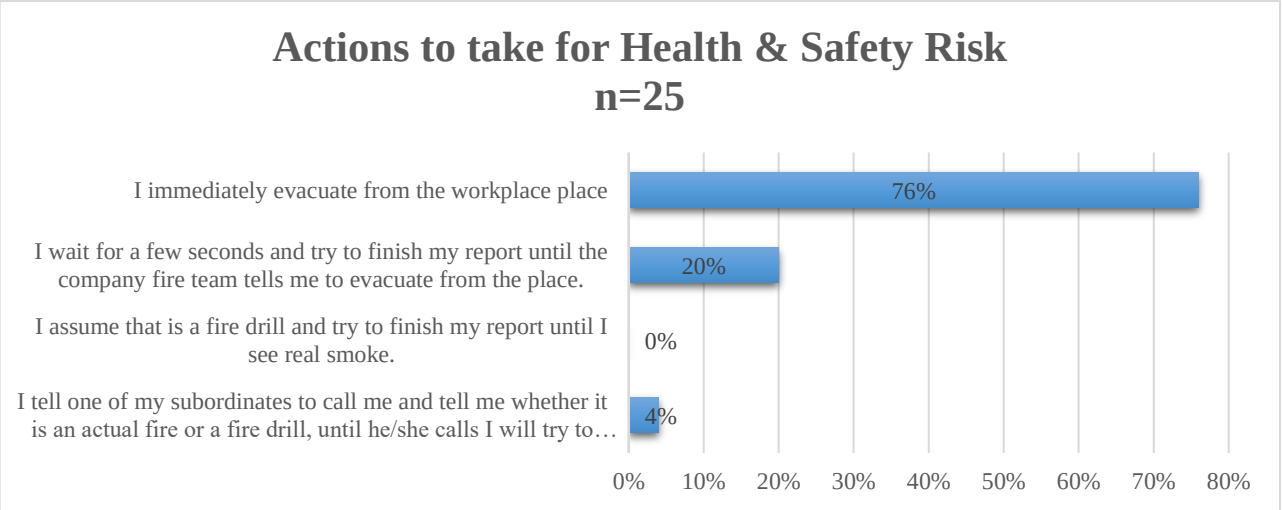

FIGURE 17. Actions to take for health & safety risk

According to the participants’ responses presented in “Figure 17”, most participants have been given the most appropriate answer (76% response rate, 19 students). However, 24% of participants have been reluctant to take immediate action to manage the risk.

When further analysing both incorrect and correct answers, no connection was identified between the degree program, region of the participant, educational background, and working experience.

Question number 14: As an internal control of your division, you want to check the existence of systematically generated samples of Fixed Assets every quarter you have been doing this for the past 3 years and no issues have been found. You want to perform this verification in this quarter as well, what will be your action?

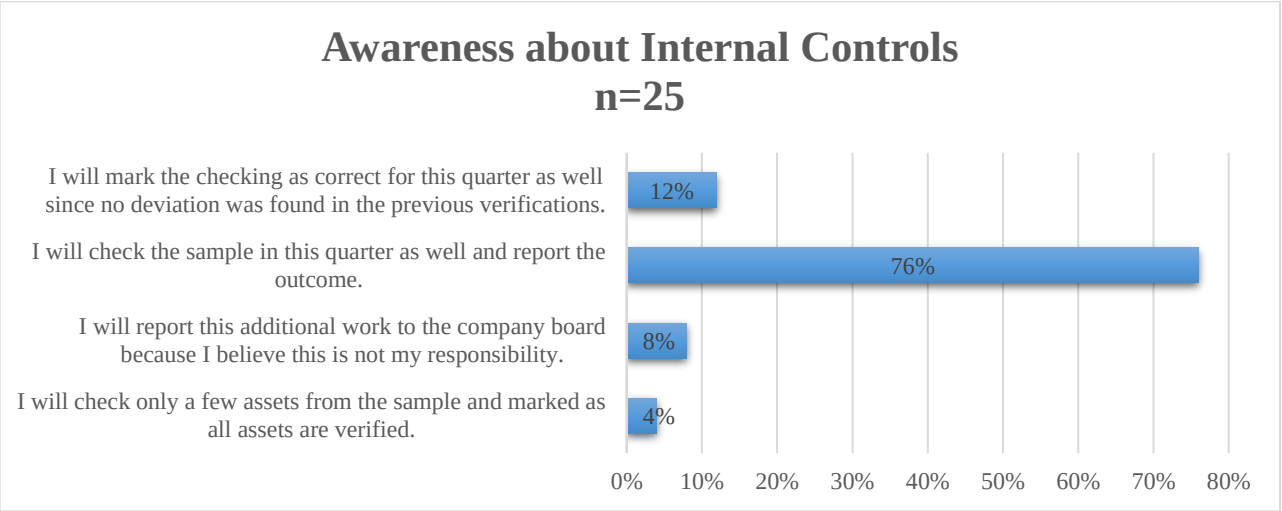

FIGURE 18. Awareness about Internal Controls

76% of participants have been adhering to the proper internal controls. However, 12% & 4% of participants have tried to escape from their responsibility by providing inaccurate information. Further, 8% of participants have been trying to overcome the existing responsibilities (Figure 18). When further analysing the owners of both incorrect and correct answers, no connection was identified between the degree program, region of the participant, educational background, and working experience.

Overall, when analysing the answers with one correct option to select by the respondents, the following summary (Table 9) can be presented.

TABLE 9. Accuracy of respondents' answers

Question No	About	Total Responses (A)	Correct answers (B)	Correct % (B/A*100)
5	Understand the concept of risk management	25	21	84%
6	Action to manage risk- General	25	20	80%
7	Action to manage risk after occurrence - General	25	12	48%
10	Action taken to manage cybersecurity risk	25	15	60%

11	Action taken to manage health & safety risk	25	21	84%
12	Action taken to manage reputation risk	25	14	56%
13	Action taken to manage health & safety risk	25	19	76%
14	Understanding about the importance of internal controls	25	19	76%

4.2.2 Outcome of Interviews

Data gathered from 5 participants from the interviews was analysed in this study, in addition to the data collected from the survey (Table 10). All participants made their contribution to the survey as well and all of them are immigrants to Finland. All participants are studying in the full-time MBA program at the university, one participant is from the African region and four participants are from Asia. In addition to these data, during the self-introduction of the participants, their previous employment background was asked and recorded. The introduction included the participants' names as well, however, the names are not disclosed in this thesis due to ethical requirements. Therefore, participants will be named by numbers. These questions were asked from the participants to get a clearer understanding of the current status of the participants.

TABLE 10. Previous experience of interviewee

Participant	Region	Degree	Field- Previous experiences
1	Africa	Full-time MBA	Marketing – Non-Executive
2	Asia	Full-time MBA	Self-employed- Family business
3	Asia	Full-time MBA	HR - Executive
4	Asia	Full-time MBA	Self-employed – Own Business
5	Asia	Full-time MBA	Self-employed – Own Business

As question number 7, the career goals in Finland were asked. These questions were asked by the participant to decide their role of contribution to the "Three Line of Defense Model".

TABLE 11. Future career goals of participants

Participant	Future career goals
1	First work in a company, later start own business
2	Start own business
3	Work in Finland as an employee
4	Start own business
5	Expand business to Europe or work in a company

The future carer goals of the participant are almost connected with the previous experiences that they had in their own country. Based on their expectations presented in "Table 11", they must manage and face risks when working or handling their own business as employees, managers, or owners of the business.

Question No. 04 & 05: Idea about "What is risk" & "How important is risk management to a business?".

TABLE 12. Participant's idea and importance of risk management

Participant	The idea about what is a risk?	Is risk management important to business management?
1	Identified as a broader thing, anything leads to loss	Very Important
2	Identify as every work is related to some risk	Very Important
3	Problems occur when doing something	Very Important
4	Potential events or circumstances have adverse effects	Very Important
5	Negative things happen	Very Important

Four participants identified risk as a negative effect (Participant 1,3,4,5) and the other participant 2 identified risk as a general fact. All comments received from the participants relate to the definitions and explanations of the risk. Therefore, it can be decided all participants have an idea about the concept of risk. Furthermore, all participants identified risk management as a crucial part of business management to succeed in the business world.

Participant 1: "What I see as the is anything that would lead to a loss. it could be a loss of life. It could be a loss of properties. It could be loss of money, anything."

Participant 2: “Every work-related risk there is also risk gives service. There is also risk and when you give honor to business, all are related”.

Question No. 06: Previous experiences in exposure to any risk

TABLE 13. Previous experience in exposure to any risk

Participant	Experiences in exposure to any risk
1	Yes - Marketing fields relevant to credit customers
2	Yes - Supply chain risk in COVID time
3	Yes - Credit risk when handling customers
4	Yes - Different risk factors
5	Yes - Market risk during COVID-19

Every participant has experienced exposure to different risks during their employment and handling their businesses. Most of the risks are directly impacted and connected with their job duties except for Participant 3 who worked in the HR field in a company. A credit risk has impacted the company and it has indirectly impacted every company employee, especially when deciding employees' salaries and compensations.

Participant 3 mentioned, “Sometimes in my company, we work as a service provider company. So, we have so many contracts with some other suppliers. Sometimes it's very difficult because the supplier couldn't give us the delivery in time. So, then it makes us our company losses that you know we have to collect the supplies and then we have to provide our clients. So, when we can't make it. we got some loss. You know, we didn't get the full payment from our clients.”

Participant 1 was also directly exposed to credit risk and explained how they handled this risk by implementing necessary risk management strategies. (“A management order not to sell the company goods on credit. Then when I go to my customers and give me the money immediately. So, I had to take a risk. Because I wanted to meet my targets, I wanted the company to. I wanted to make money for the company. Now, do you know what happened when this worked out and then made enough money for the company? They were clapping for me.”

Participant 2,4 & 5 who are involved with operating their own businesses have to manage various risks, especially during the COVID-19 pandemic. Based on their answers, it was noted they were not prepared for these unexpected risks and therefore they had to face various courses of negative outcomes such as loss of customers.

Question 08: Idea about the most responsible person to manage the risk.

TABLE 14. Idea about who should manage the risk

Participant	The most responsible person for managing the risk
1	All employees
2	Managers
3	All employees, especially the management
4	Risk Manager
5	All employees

Participants 1,3 & 5 thought that risk management is everyone's responsibility. This answer can be accepted as the most accurate answer in general. However, participant 2 thought, that managing risk is the responsibility of company managers and Participant 4 thought it is the responsibility of the company risk manager. The answers of the participants 2 & 4 are also acceptable. The most responsible person for managing the risk in an organization can be decided based on the organizational structure and the decisions of the highest controlling power positions of the company such as the director board. However, everyone working in a company has a general responsibility to manage the risk risks that have an impact on their own life and the overall company.

Questions numbers 9 & 10 were decided to get a brief explanation from participants about the cybersecurity risk, their experiences with this risk, and ideas about the risk with mitigation practices.

Question No. 9: Experiences relevant to being exposed to cybersecurity risk.
Question No. 10: Idea about the importance of IT risk controls in an organization.

TABLE 15. Idea and previous exposure to cybersecurity risk

Participant	Exposed to cybersecurity risk	Idea about the importance of IT risk controls
1	Yes- Hacking of personal phone	Very Important
2	No self-experiences	Very Important
3	No self-experiences	Very Important
4	No self-experiences	Very Important
5	No self-experiences	Very Important

Participant 1 explained experiences relevant to the persona phone hake including social media because of the lack of risk prevention actions and how to prevent future occurrence of such scenarios based on the experiences. Therefore, participant 1 thinks the risk management of cybersecurity is really important to every organization as well as in their personal lives.

Participant 1: “I have had experience or like two or three experiences where people try to hack my personal account”.

Other participants had zero experience relevant to exposing to any kind of cybersecurity risk, however, they still think having a strong IT risk controlling in an organization is important to prevent losses.

Participant 5: “I think that it's really important because in a big organization they have many, many critical things. Many important information that they don't want to spread in the society and they have to put some limitation.”

Questions 11,12 & 13 were developed to explore the understanding of the participants about the Health and Safety regulations in Finland to manage the health and safety risks.

Question No: 11: Knowledge about Finish health & safety regulations.
Question No: 12: Experiences in exposure to health & safety risks.
Question No: 13: Idea about action when someone is exposed to health & safety risks.

TABLE 16. Knowledge, previous exposure and idea about action to any health & safety risk

Participant	Knowledge about Finish health & safety regulations	Exposed to any health & safety risk	Idea about action when someone is exposed to health & safety risk
1	Moderate	No	Low
2	Low	No	Low
3	Moderate	No	Low
4	Moderate	No	Low
5	Moderate	No	Moderate

Every participant has an understanding of the importance of health and safety in the workplace as well as in their personal lives. Participant No: 2 explained the low level of knowledge about Finnish health and safety regulations because of recent immigration to the country as a student. Everyone accepted that Finland has advanced and structured regulations and guidelines about the health and safety tan their own countries.

Participant 2: “I know something not at all because, I came here last year. Employee is also responsible to maintain the rules and regulations about work and keep safety”.

According to the participants’ personal experiences, no one has ever been exposed to health and safety risks. However, these answers indicate the lack of risk identification ability among the participants. For example, the COVID-19 pandemic was a health and safety risk for everyone in the whole world and the participant could not be able to identify that risk as a health and safety issue.

The next question was decided to explore the understanding of managing health and safety risks through an example question. Every participant explained their actions after some sort of accident occurrence. For example, calling for emergencies, assisting the person to recover from the accident. Participant 5 explained about assisting mental to the person to recover from the accident. It was noted the actions they are taking are slightly related to the previous working experiences of the participants. However, no one was discussing preventing health and safety risks from occurring which is an important part of risk management.

Participant 4: “If a working college is exposed to a health and safety problem, I can offer immediate assistance. First, by providing relevant information or emergency procedures. I can help facilitate communication between the affected calling and relevant personnel and sharing.”

Participant 5: “I should call the emergency to help them in this situation. I can support them, Psychology to become calm”.

The last question of the interview was decided to explore the understanding of reputation risk. The question was constructed based on the reputation risk that might occur through social media. With the rise of active social media platforms, both good and bad news can be spread that have various impacts on companies.

Question No. 14: What will be your action if some of your working colleagues spread negative comments about the company you work, in social media?

TABLE 17. Idea about reputation risk via social media

Participant	Idea about managing reputation risk via social media
1	Ready to take actions
2	Ready to take actions
3	Ready to take actions
4	Ready to take actions
5	Ready to take actions

Every participant believed the risk from social media is high because of the worldwide availability, and high usage of the platform. Certain participants explained how fast the negative news spread through social media and how it affects people’s lives, based on examples in their own countries. Participants explained how they politely addressed the person who spread the negative comments via social media as a colleague. Further, they explained how they are acting as a manager or owner of the business in the same situations. Such as giving advice, giving warnings to the employee, and firing employees from the organizations.

Even though most of the actions are similar to each other, certain disparities between the actions of the participants based on their way are noted. For example, certain participants are trying to fire people directly while others are initially discussing the situation with the employees before firing. However, participants have not discussed the prevention actions to these incidents from happening or precautions to do others from the same negative actions.

5 DISCUSSION AND CONCLUSION

This chapter consists of an overall summary of the thesis with its outcome. The outcomes of the thesis are explaining about the outcomes of each research question.

5.1 Summary of Discussion

The objective of this thesis was to assess the general risk management understanding among MBA business studies students at Centria University of Applied Sciences. The thesis explored the basic concept of risk, its usefulness, and practicability in the commercial sector as well as basic tools of risk management such as the COSO Framework, the Three Lines of Defense Model that company management has to play a vital role in, ISO 31000. Further, this thesis reviewed the most general risks that a company and its employees have to manage which are cybersecurity risks, reputational risks and health and safety risks.

The research was conducted through a mixed method to achieve the research objective in more detail. Further, to highlight the practicability of the thesis topic, a secondary data analysis was conducted. Secondary data were gathered by referring to the published reports of publicly listed companies that operate in the city of Kokkola. Therefore, based on the secondary data analysis, it can be summarized that the understanding of risk management as a part of the future workforce, especially as company management and other senior positions (Owners, CEO, Directors, etc.) is a value addition due to the extensive usage of the risk management in the commercial sector.

Primary data was collected through both a survey and in-depth interviews. A survey was conducted among 114 MBA students who are studying business management at the university and 25 responses were received (22% response rate). The low level of response rate was identified as the main limitation of the study. According to the survey, the majority of the respondents can identify risk. However, certain respondents have slight issues with applying the most suitable risk management strategies.

Further, the majority of participants were not aware of frameworks and concepts that assist in managing the risk in a better way. The average knowledge of the Three-Lines of Defense Model, COSO Framework, ISO 31000 & NIST Cybersecurity Framework was respectively, 1.8, 1.7, 2.3 & 2.1 which

is below 50% from the full 5 points. However, the average knowledge of the Internal Controls and Corporate Governance was 3.1 & 3.4 which is over 50% from the full 5 points.

In order to develop strong leadership within organizations can lead to improved performance by enhancing internal control, risk management, governance, and fraud prevention (COSO 2023). An understanding of these concepts is not necessary for a manager or an owner of a company, however, the understanding of these will assist in managing the risk effectively and will be a value addition. For example, the COSO framework provides guidelines about risk management with the identification of the risks before their occurrence.

When analysing the accurate and inaccurate responses with the participant's degree program, country of origin, educational background, and working experiences, no connection was noted. Therefore, it can be described as a participant having certain knowledge gaps about the risk management strategies disregarding their educational, cultural background, and working experiences.

The in-depth interviews were conducted among 5 randomly selected students who answered the same survey to get a better understanding of the idea of risk management. During the interview, the idea of risk management as an overall concept and as an individual risk that affects generally many people (Cybersecurity, Health & Safety, Reputation) was discussed. Every participant thought risk management is highly important for an organization to succeed.

According to the interviews, everyone accepted the importance of risk management as an organization and every participant wants to be a part of the future workforce in Finland. Participants had a moderate level of understanding about managing the risks after the occurrence of those incidents, such as assisting someone who was injured in a workplace accident. However, they were not fully aware of the precautionary actions to prevent the risky incidents from occurring by identifying those risks on time. The actions of the participants were lightly variated based on their previous career backgrounds. Further, when analysing the information from the in-depth interviews, it was noted all of the participants required to know about risk management according to their future career goals who are company employees and business owners.

5.2 Conclusion and Recommendations

Overall, the students have a certain level of understanding about risk management, especially about the concept of risk and the importance of managing risk in organizations. However, it was noted certain gaps of knowledge in applying the best risk management strategies to identify, transfer, prevent and mitigate the risks. Further, participants had a knowledge gap regarding the framework and risk management tools that are used in the commercial sector.

Risk management is practically used in every company, especially in publicly listed companies and can be able to use disregarding the size and status of the company. According to Hillson & Murray (2007), risk management not only guarantees continuity and resilience in business but also offers a strategic benefit by improving adaptability and responsiveness in dynamic settings. Therefore, understanding risk management with the framework and tools will be a valuable addition to the students who are studying business management and expected to be combined with the future workforce in Finland and all over the world.

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APPENDIX 1.

Cover Letter for the Survey

Hello,

I hope this email finds you well. My name is Sanduni Sinhala Pedige and I am currently a student at your university. I am reaching out to invite you to participate in a crucial aspect of my final thesis - a questionnaire that aims to gather valuable insights.

Your input is immensely valuable to me, and I genuinely appreciate your time and effort in assisting with this endeavour. The questionnaire will only take approximately 5-10 minutes to complete.

If you agree to participate, please click the below link to be directed to the questionnaire,

https://link.webropolsurveys.com/S/B1CD7EC41C7DD55C

Your responses will be kept confidential and will only be used for my academic thesis. If you have any questions or require further clarification regarding the questionnaire or my thesis, please do not hesitate to reach out to me.
Thank you very much for considering my request. I am looking forward to your participation and the insights you will share.

APPENDIX 2/1

Survey Questionnaire

General Risk Management Understanding

☐ Mandatory questions are marked with a star (*)

Welcome to my thesis questionnaire! I am a student pursuing a Master's degree at the Centria University of Applied Science and this questionnaire is relevant to my final thesis. Your honest responses will contribute to advancing knowledge in this field and shaping future directions. Thank you for dedicating your time and sharing your valuable perspectives.

1. Please select your degree program *

- ◯ Masters of Business Administration - International Business Management - Day Time/Full time Studies
- ◯ Masters of Business Administration- International Business Management -Part-Time /Blended Learning

2. Which part of the world you are originally from? *

- ◯ Asia
- ◯ Africa
- ◯ America
- ◯ Australia
- ◯ Antarctica
- ◯ Europe

3. Select if you already have a degree in business management *

- ◯ Yes, I have a master's degree.
- ◯ Yes, I have a bachelor degree.
- ◯ Yes, I have a bachelor degree, but not in business management.
- ◯ Yes, I have a master's degree, but not in business management.

APPENDIX 3/2

4. What kind of employed/self-employed experience (In years) do you have?

	Below 2 year	2>4	4<8	8<12	Over 12
Executive/Above Executive level relevant to business management	○	○	○	○	○
Non-Executive Level relevant to business management	○	○	○	○	○
Executive/Above Executive level but not relevant to business management	○	○	○	○	○
Non-Executive Level but not relevant to Business Management	○	○	○	○	○
Self-employed relevant to business management	○	○	○	○	○
Self-employed but not relevant to business management	○	○	○	○	○

5. What do you think is Risk Management? *

- ○ **Risk management involves ignoring potential risks and hoping for the best outcome.**
- ○ **Risk management is the practice of maximizing risks to achieve greater rewards.**
- ○ **Risk management is the process of identifying, assessing, and mitigating potential risks to minimize their impact.**
- ○ **Risk management solely focuses on eliminating all risks, regardless of their potential impact on the organization.**

6. Let's assume you are a manager of a company or you own your own company, What are your best actions relevant to managing the risk associated with your work? *

- ○ **I will manage any risk when it arise**
- ○ **I will study the potential risks and try to manage those before they arise.**
- ○ **I think risk management for a company should done only by the allocated and responsible employee such as the risk manager since it is not my responsibility.**
- ○ **I will ignore the risk and focus on my allocated tasks.**

7. What is the most appropriate action you want to implement, in case you identify a pool of risks that have a negative impact? *

- ○ **I want to take immediate action to mitigate/prevent those risks from happening.**
- ○ **I want to take immediate action to reduce the impact of those risks.**
- ○ **I will think about the likelihood and the impact of the risks and prioritize the high-risk factors first.**
- ○ **I will ignore the risks and try to complete my assignment tasks.**

APPENDIX 4/3

8. Rate your understanding of the following (1-I Have No Idea, 5- I have a good understanding) *

	1	2	3	4	5
Three Line of Defence Model	◯	◯	◯	◯	◯
COSO Framework	◯	◯	◯	◯	◯
ISO 31000	◯	◯	◯	◯	◯
NIST Cybersecurity Framework	◯	◯	◯	◯	◯
Internal Controls	◯	◯	◯	◯	◯
Corporate Governance	◯	◯	◯	◯	◯

9. What is the importance of the following activities for better management? Rate your thoughts here (1-Low& 5-High) *

	1	2	3	4	5
Well-established control environment	◯	◯	◯	◯	◯
Proper Risk assessment	◯	◯	◯	◯	◯
Control activities over the identified Risks	◯	◯	◯	◯	◯
Information & Communication of the Risks	◯	◯	◯	◯	◯
Monitoring/Follow-up over the implemented strategies	◯	◯	◯	◯	◯

10. Imagine you are working on your office laptop and you get an email from an unknown recruitment company. They have sent an email about a better job opportunity for you with a link to apply. What will be your action about this? *

- ◯ **I forward that email to my personal email and check that later via my personal computer**
- ◯ **I delete that email without clicking any link.**
- ◯ **I think this is a suspicious email and report the email to IT.**
- ◯ **Since this is a better opportunity for me, I send my CV via the link.**

APPENDIX 5/4

11. Imagine you are the manager in the finance department, while you are going to the meeting room you see one employee belonging to the maintenance department repairing something in the ceiling and he is not wearing his safety helmet. What will be your action? *

- ◯ I will not get any action since the employee does not belong to my department.
- ◯ I will politely remind the employee about the importance of wearing a safety helmet, and after I inform the Risk Officer or the Department head of the employee.
- ◯ I will not tell anything to the employee and inform his department head of the safety officer after my meeting.
- ◯ I will report the incident through whistleblowing policy of the company.

12. Assume you are working in a supermarket located in Kokkola and you visit a supermarket belonging to the same company in Helsinki. While shopping in the supermarket you see a product in a shelf with damaged packaging, What will be your action? *

- ◯ I will not buy that product and buy a product with proper packaging
- ◯ I will get a photo of the product and send that to the quality department.
- ◯ At first, I will remove that product from the self to prevent customers from buying it and inform the situation to the manager or any staff at the place.
- ◯ I will report the incident through whistle-blowing policy of the company.

13. You are in a rush to complete a work-related report and suddenly you hear the company fire alarm, what would you do in this situation? *

- ◯ I immediately evacuate from the workplace place
- ◯ I wait for a few seconds and try to finish my report until the company fire team tells me to evacuate from the place.
- ◯ I assume that is a fire drill and try to finish my report until I see real smoke.
- ◯ I tell one of my subordinates to call me and tell me whether it is an actual fire or a fire drill, until he/she calls I will try to complete my report.

14. As an internal control of your division, you want to check the existence of systematically generated samples of Fixed assets every quarter and you have been doing this for the past 3 years and no issues have been found. You want to perform this verification in this quarter as well, what will be your action? *

- ◯ I will mark the checking as correct for this quarter as well since no deviation was found in the previous verifications.
- ◯ I will check the sample in this quarter as well and report the outcome.
- ◯ I will report this additional work to the company board because I believe this is not my responsibility.
- ◯ I will check only a few assets from the sample and marked as all assets are verified.

APPENDIX 3

List of Interview Questions

1) Personal background

   Name
   Country
   Degree Program

2) What do you think is a risk?

3) Do you think Risk Management is an important part of business management? Could you explain your answer?

4) Have you ever been at any risk in your previous employment or business? You can explain what those are if you like.

5) Can I know your future career goals (eg: Are you looking to start your own business, are you looking for work in a company, etc.)

6) As you think, who is the most responsible person to manage the risk in an organization?

7) Have you ever been exposed to any kind of Cybersecurity/IT threats?

8) Do you think having good IT security is important to you and your organization? Please explain.

9) Tell me What do you know about the Finnish Health and Safety regulations.

10) Have you ever been exposed to health and safety problems in your work?

11) What can you do if your working colleague is exposed to a health and safety problem?

12) What do you think about the reputation of a company? As you think what is the importance of having a good reputation?

13) What do you think about spreading negative things about your organization via social media?