ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

Assessment of Risk Management Practices on Success of High-rise Building Construction Projects: The Case of Banks in Ethiopia

A Research Project Submitted to Addis Ababa University School of Commerce in Partial Fulfillment of the Requirements for the Award of Master of Arts in Project Management

By: Mieraf Yitagesu

July, 2023

Addis Ababa

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ID No: GSE/6763/13

Advisor: Dr. Dakito Alemu

July, 2023

Addis Ababa, Ethiopia

Statement of Declaration

I, the undersigned, declare that this project work titled "Assessment of Risk Management Practices on Success of High-rise Building Construction projects: The case of Banks in Ethiopia" is my original work. I have acknowledged all sources of information which have been used in the project work. I also declare that this work has not been previously submitted for any degree or examination at any other institution.

Mieraf Yitagesu		17-7-2023
Name	**Signature**	**Date**

Statement of Certification

This is to Certify that Mieraf Yitagesu has completed her project work entitled: 'Assessment of Risk Management Practices on Success of High-rise Building Construction projects: The case of Banks in Ethiopia' under my supervision. This work is original in nature and it is sufficient for submission for the partial fulfillment for the award of Degree of Masters of Arts in Project Management.

Advisor: Dr. Dakito Alemu **Signature**: _____ **Date**: 17-7-2023

Addis Ababa University

This is to Certify that the Project work prepared by Mieraf Yitagesu, entitled: 'Assessment of Risk Management Practices on Success of High-rise Building Construction projects: The case of Banks in Ethiopia' submitted in partial fulfillment of the requirements for the Degree of Master of Arts in Project Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Internal Examiner: Dr. Tenkir Seifu **Signature**: _____ **Date**: 17-7-2023

External Examiner: Dr. Lakew Alemu **Signature**: _____ **Date**: 17-7-2023

Advisor: Dr. Dakito Alemu **Signature**: _____ **Date**: 17-7-2023

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Acronyms

PMI: Project Management Institute

PS: Project Success

RA: Risk Assessment

RI: Risk Identification

RMC: Risk Monitoring and Control

RMP: Risk management planning

RR: Risk Response

Abstract

High-rise building construction projects are complex endeavors that involve numerous risks and uncertainties. Effective risk management practices are essential to mitigate these risks and ensure the successful completion of such projects. This study aims to assess these risk management practices on the success of high-rise building construction projects, with a specific focus on the case of banks in Ethiopia, Addis Ababa. The research methodology employed consists of a comprehensive literature review, followed by a quantitative research methodology. Primary data was gathered through questionnaire distributed to clients, consultants and contractors whom were involved in the high-rise building construction projects. The responses were then analyzed using SPSS version 27 and findings indicate that risk management practices significantly influence the success of high-rise building construction projects. It was observed that Risk management and control had the highest influence while Risk analysis, Risk Identification, Risk Response and Risk management planning followed. Based on the research findings, recommendations are provided for high-rise projects to enhance their risk management practices in constructions. These recommendations development of comprehensive risk management procedures, the provision of adequate resources, time and training for project teams and the utilization of modern technologies to support risk management activities. This study contributes to the existing body of knowledge and provides valuable insights for project managers, practitioners, and policymakers, enabling them to adopt effective risk management practices and improve the overall success rates of high-rise building construction projects.

Keywords: ***Risk Management; High-rise Building Construction Projects; Project Success; Project Management.***

Chapter One

1. Introduction

The construction of a multi-story building is a complicated and multi-disciplinary field that includes structural engineering, architecture, mechanical engineering, civil engineering and construction management. These multi-story structures are known as a "tall building" if the majority of occupants use escalator to get to their desired destination. For majority of countries, the highest structures are known as "high-rise buildings," whereas in Britain and several other European states they are known as "tower blocks". The terms lack a universal definition. (Challinger, 2008). Most Building experts define a high-rise building as one that is at least 23 meters, while the tallest high-rise structures/skyscrapers are at least 100 meters tall which is about 20 floors above the ground.

As population densities rise and land becomes scarcer, the construction of high-height buildings has become more popular in many urban centers around the world. One of the most difficult challenges associated with high-rise building design is guaranteeing structural stability and safety. Wind loads, seismic forces, soil conditions, and the weight of the building itself are some elements that could influence the structural design of high-rise buildings. The selection of proper materials and construction procedures is another critical part of high-rise structure development. Given the height of these structures, the materials and construction techniques employed must be able to withstand the forces generated by wind, earthquakes, and other natural disasters. In addition, they must also be able to withstand the building's weight, and resist the effects of aging, corrosion, and environmental degradation. In order to guarantee that the projects started are carried out in a way that addresses time and expense difficulties caused by lack in management of risk, a functional management of risk is needed.

Risk management has evolved into an important component of the project management process. According to research on the effects of risk management on project performance, effective risk management improves project performance by increasing productivity (Voetsch, cioffi and Anbari, 2004). Risk management involves identifying risks, risk planning, building risk response strategies, analyzing risks and monitoring and controlling risks to assess how they have changed

(Kerzner, 2009). Practices of Risk management must be implemented in the project's life cycle, from beginning of the project through project completion.

According to Abdul, Ayub, Nordiana Mohd, and Ilias (2007), if project risks are not managed throughout their lifecycles, they would perform inadequately and fail. Kululanga and Kuotcha (2010) added evidence to this claim by stating that poor project risk management practice implementation results in delays, exceeded budgets, and poor quality results. To accomplish performance of project in ICT and place emphasis on responsibilities, Effective risk management techniques are increasingly being used and recently this has received attention (Chacko and Harris, 2006). Risk management strategies have a significant impact on project success (Jin and Yean, 2005). This is true because there is a close connection between effective project performance and effective risk management techniques. Risk identification for example discovered possible threats that could affect the goals of the project (Baloi and Price, 2003). Therefore, if risk is not correctly recognized, it will materialize at the start, middle, or finish of the project and have an impact on it. According to Sundararajan (2004), failure to properly handle and manage risk events can have a number of negative effects, including increased financial costs, a different capital structure, delays in building or facility operations, budget overruns, a reduction in cash inflow, claims for liquidated damages, the production of subpar final products, and project rework after completion.

However, risk management techniques are increasingly dependent on instinct, common sense and based on previous encounter instead of understanding the concept of risk management. This study used dependent and independent factors to assess their association. Dependent variable corresponds to the project success indicators, which include whether the project was completed on schedule, within budget, and with acceptable quality. Project Risk management planning, adequate risk identification, solutions to the various hazards faced during the project and risk analysis was examined as an independent variable of Project risk management practices. Overall, this paper evaluates the nature of risk management techniques on the success of high-rise building construction projects of Banks.

1.1. Statement of the problem

Risk management is a critical aspect of project management, aimed at identifying, assessing, and mitigating potential risks that may impact project outcomes. It's imperative to use successful strategies for risk management for ensuring success of project, as they enable project managers to anticipate and proactively address potential threats and uncertainties. However, despite its significance, the relationship between risk management practice and project success remains an area of concern and requires further investigation.

One of the primary challenges in understanding risk management's importance for success lies in the lack of consensus regarding the most appropriate strategies and methodologies for risk management planning, identification, assessment, and mitigation. Various industries and organizations adopt different approaches, and the effectiveness of these practices may vary considerably. Consequently, it becomes crucial to examine how different risk management practices influence project success across diverse domains. Furthermore, the importance of risk management practice for the project success may be influenced by several factors, including project complexity, organizational culture, stakeholder involvement, and the project team's skills and expertise. Understanding the interplay between these factors and the effectiveness of risk management practices is vital for developing comprehensive frameworks that can guide project managers in implementing appropriate risk management strategies. Although several research investigations have looked at the significance of risk management, it needs empirical research that specifically investigates the challenges and opportunities faced by banks in Ethiopia regarding risk management in high-rise building construction projects.

Addressing these gaps in knowledge is essential for enhancing project success rates across various industries. By investigating how risk management procedures influence project success, the observer can provide valuable insights into best practices, develop standardized frameworks, and recommend strategies that can help project managers effectively manage risks and improve project outcomes. Ultimately, such research can contribute to the overall advancement of project management theory and practice, benefiting organizations and society as a whole.

1.2. Research Questions

The research in this study was directed by a set of specific research questions, which served as guiding principles throughout the investigation

1.2.1. General Research Questions

What are the current risk management practices employed in high-rise building construction projects within the headquarter banks and how do these practices contribute to project success?

1.2.2. Specific Research Questions

- To what extent does project risk planning contribute to the project success of high-rise building construction projects?
- To what extent does risk identification contribute to the project success of high-rise building construction projects?
- To what extent does project risk analysis contribute to the project success of high-rise building construction projects?
- To what extent does risk response contribute to the project success of high-rise building construction projects?
- To what extent does a monitoring and control practice contribute to the project success of high-rise building construction projects?

1.3. Objectives of the study

The study is driven by a set of general and specific objectives that it aims to achieve. These objectives provide a clear direction and purpose for the research, guiding its focus and outcomes. By delineating both general and specific objectives, the study ensures a comprehensive and targeted approach towards its intended goals.

1.3.1. General Objective

The main objective of the study is to assess Project risk management practices on construction project success of high-rise building projects of banks.

1.3.2. Specific Objective

The specific objectives of the study are:

- To assess risk management planning in reference to project success of high-rise building construction projects.
- To assess risk identification in reference to project success of high-rise building construction projects.
- To assess risk analysis in reference to project success of high-rise building construction projects.
- To assess risk response in reference to project success of high-rise building construction projects.
- To assess risk monitoring and control in reference to project success of high-rise building construction projects.

1.4. Significance of the study

The outcome of this paper can be useful in illustrating how risk management practices can enhance the execution of projects. That is, efficiently and successfully achieving the project's objectives within the allotted timeframe, within the allocated money, and at the agreed-upon or desired level of product quality meeting the goal and satisfaction of the members. This research can aid in the identification of the applicable stages within the project risk management process for building construction projects. The outcomes and suggestions of this study would be highly beneficial for a range of people whom are included in the project working on various tasks. The academic and professional community would also gain a comprehensive understanding of the elements involved in risk management and its application across different projects. In conclusion, this study would be a reference for additional research done on the topic.

1.5. Scope of the study

There is a wide variety of construction projects focused on high-rise buildings undertaking in Ethiopia. The type of constructions are mostly for Residential and commercial purposes. This study is solely focused on the High-rise building constructions that were built by different Banking centers of Ethiopia, which fall under the category commercial buildings.

All high rise buildings built by the banks were constructed in Addis Ababa. The banks are listed here according to their storey height, starting from the highest and progressing to the lowest: Commercial Bank of Ethiopia, Bank of Abyssinia, Nib International Bank, Hibret Bank, Zemen Bank, Wegagen Bank, Dashen Bank and Awash Bank.

1.6. Limitation of the study

One of the constraints or drawbacks associated with this study is that the data collection included only few participants from clients, consultants and contractors. Another limitation is that the study only focuses on risk management practices and does not consider other factors that might influence construction project success for the high-rise buildings, such as project team characteristics or project complexity. The study also looks into the topic only from the employees and clients of the organizations perspective.

1.7. Organization of the study

The study was structured into five distinct chapters. In Chapter One, an overview of the study's background, problem statement, research questions, objectives, significance, scope, definition of terms, and overall organization of study was presented. Moving forward, Chapter Two conducted review of relevant literature encompassing the role of project risk management practices in achieving project success. The comprehensive review incorporated diverse scholarly sources such as literature, publications, articles, and various other resources. Additionally, this chapter introduced a conceptual framework that delineated the interrelation between the dependent variable and the independent variables identified in the study. Chapter Three, explains about the research methodology employed throughout the study. This entailed a thorough examination of the research design, research approach, target population, sampling procedure, data collection tools and techniques, data analysis, and ethical considerations adhered to in the research process. Subsequently, Chapter Four undertook a comprehensive analysis of the gathered data, focusing on its presentation, interpretation, and insightful discussions. Lastly, Chapter Five culminated the study by presenting the key findings, drawing conclusive insights, providing practical recommendations based on the research findings, and proposing potential areas for further investigation.

1.8. Definition of Key terms

High rise building: refers to a structure with multiple floors that reaches a significant height, requiring the inclusion of an elevator or other mechanical means to access its upper levels (Britannica, 2013).

Project Risk Management: The activities undertaken to strategize project risk management, identify potential hazards, and analyze project risks to minimize their consequence on project, along with the risk control and response techniques employed by the project (PMBoK, 2008).

Project Success: The completion of task in the permitted duration, resource, and standard level established is how the project's success is determined in this study (PMBoK, 2008).

Project: is a collection of unique, complicated, and interdependent activities which must be accomplished in a certain amount of time, on a specified budget, and in accordance with specific requirements (Wysocki, 2011).

Risk: is a hypothetical future event that, if it occurs, will have an influence on the project, either favourably or adversely. (Wysocki, 2011).

Chapter Two

2. Review of Related Literature

2.1. Introduction

This particular segment of the study examines the existing literature pertaining to project risk management practices on the success of high-rise construction projects. Throughout the course of the research, it became evident that there is a wide range of literature addressing management of risk strategies for success. Numerous publications focus on business organizations and fields such as construction and software development. A conceptual framework for the study was subsequently created at the end.

2.2. Theoretical Literature

2.2.1. Project Risk Management

Risk management refers to the combination of expertise and methodology employed to identify, assess, and address risks throughout the project lifecycle, with the ultimate aim of achieving project objectives (Schwalbe, 2016). Risk management, as used in the context of construction management, also refers to a thorough and organized process for identifying, evaluating, and minimizing risks in order to achieve project goals (Banaitiene and Banaitis, 2012). El-Karim et al.'s definition of risk management interpret it as a standardize approach to recognizing, evaluating, and addressing the risk that is raising or lowering the likelihood and impact of favorable and unfavorable characteristics respectively. In addition, Serpell et al. (2015) explained risk management is a planned, proactive strategy aimed at reducing the possibility of unsatisfactory results during the various phases of a construction project, such as design, construction, and operation. Various authors also mention that risk management is identified as the most significant contributing factor to failure of a project (Whittaker, 1999; Kutsch, 2008). It is seen as a crucial procedure that all project managers recognize of as being necessary for effective project management (Serpella et al., 2014). Project managers may control and prevent unanticipated project outcomes with the use of risk management, which also helps to ensure the success of projects (Fakharet et al., 2013; Roy, 2004; Sarigiannidis and Chatzoglou, 2014; Tesch

et al., 2007). Its goal is to increase the likelihood and impact of prospective opportunities while decreasing the frequency and magnitude of adverse impacts, keeping Management in control of its result of the project (Roy, 2004; Tesch et al., 2007). Not being able to manage the risks may have serious effects on projects and can lead to their total disintegration (Sanchez et al., 2009; Ward & Chapman, 2003).

Many businesses frequently include risk management into their projects in order to increase its output, generate profits, and enhance business performance (Ahmadi et al., 2017). The scope and nature of the project in hand also determine the risk management strategies that are employed. All risks need to be identified at each stage of the task and the entire team, including vendors and clients, should be involved in prioritizing and creating action plans to mitigate risks. Therefore, it is necessary to plan for all eventualities, whether positive or negative and have a risk response strategy in place to minimize their impact on the project's goals.

2.2.2. Risk management process

Risk management has been described in other publications (PMI, 2008; Keelling, 2006) as a collection of related procedures incorporating a variety of methods and technologies. Cooper et al.(2005) claim that the risk management process entails the systematic application of management rules, processes, and procedures to the activities of establishing the context, risk identification, analysis, assessment, respond, monitoring, and communicate risks. The examination of process models providing risk management guidelines has garnered the interest of researchers in the field of risk management. These models often encompass different iterations of the four core processes: risk identification, risk assessment, risk response planning, and risk monitoring (Taylor, Artman, & Woelfer, 2012). According to Schwalbe (2016), who was cited by Pimchangthong and Boonjing (2017), there are six stages involved in the management of risk process: planning, identification of risk, qualitative risk analysis, quantitative risk analysis, planning risk response and monitoring & control of the risk. Finally, according to the PMI (2013) Project risk management refers to the set of procedures involved in planning, identifying, analyzing, planning responses to, and controlling risks within a project.

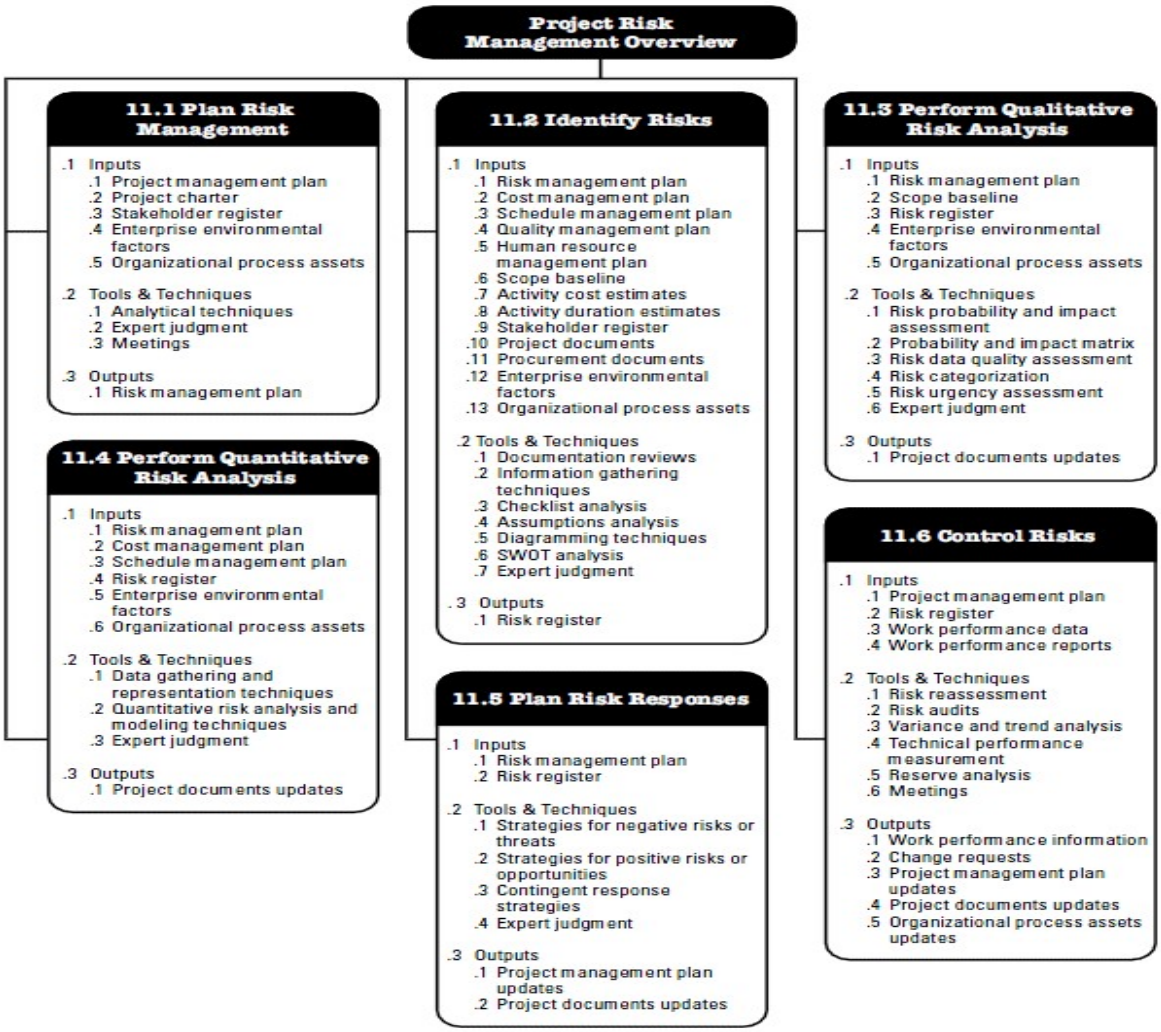

Figure 1 Project Risk Management Overview (PMI, 2013)

2.2.2.1. Plan Risk Management

The stage in project planning that involves determining the approach for conducting risk management activities is referred to as risk management planning, as defined by PMI (2013). Similarly, Kerzner (2009) characterizes it as the process of formulating and documenting a well-structured and inclusive risk management strategy, along with the allocation of sufficient resources. This planning stage entails making decisions on the methods, planning, and implementation of risk management activities for the project. The method employs a systematic planning process for risk management activities with the underlying assumption that good preparation increases the likelihood of project success (Richardson, 2014).

This ensures that risk management practices are employed in a manner that aligns with the level of risks associated with the project and the overall importance of the project to the organization. Giving project staff training in risk management is another crucial part of risk planning. It is essential that risk management coaching be delivered by specialists who have had significant hands on involvement by implementing risk management into practice for practical tasks, whether they are project participants or not (Kerzner, 2009).

Various techniques and tools such as analytical approaches, professional judgment, and meetings can be employed to formulate risk management plans. The risk management plan is considered the output of planning in risk management process (Callahan & Brooks, 2004). It serves as a comprehensive plan outlining the steps and strategies required to navigate the program from its current state to the desired future state as envisioned by the program manager (Kerzner, 2009). Additionally, the risk management plan serves as a documented guide for executing and overseeing risk-related activities throughout the project (Richardson, 2014). RMP should contain the proper definitions, guidelines, and notions for carrying out risk management on the project. It should also include potential risk categories, methodologies for identifying and analyzing risks, an organizational structure for implementing risk management, and comprehensive record for risk management activities (Kerzner, 2009).

Effective planning is crucial to allocate sufficient time and resources for risk management operations. It also enables the establishment of a common framework for evaluating risks. According to the Project Management Institute PMI (2013), the Risk planning process should start when a project is in mind and should be finished early on during project planning. Despite the fact that preparing for and managing risk may not simple, thorough plan increases likelihood of other risk management procedures to be successful (PMI, 2013). This guides the group in the project of their actions and responses when a particular event arises at a later stage (Richardson, 2014). Moreover, based on the previous discussions regarding risk management planning, it can be deduced that it involves the proactive identification of potential risks and the development of corresponding response strategies to enhance the likelihood of project success throughout its duration.

2.2.2.2. Risk Identification

Identifying the risk is particularly challenging part of project risk management process. It involves carefully determining all potential hazards and recording possible threats of the project in order to recognize what issues and dangers arise (Callahan & Brooks, 2004). In the same manner, the (PMBOK, 2013) defines identification of risk as the method of identifying hazards that could have an impact on the project and recording their characteristics. According to Kerzner (2009), identification of risk should go on throughout each phase of project and it's crucial that the activity focuses on source of risk rather than the actual occurrence. This is due to the fact that the individual or entity taking on the risk has more control over mitigating the origins or causes of the risk, but has relatively less control over the occurrence of the specific event or its resulting consequences (Roberts et al., 2003). As there might be further danger along the course of its existence, it should be a continual iterative process (Richardson, 2014). The complete planning team is gathered together during this stage of the procedure to go over and recognize the unique risks of the existing task (Wysocki, 2014).

The team that identifies the risk should be made up of experts that have the necessary and industry knowledge. The project manager, members of the team, clients, customers, stakeholders, and technical specialists all take part in the identification. Purpose of enrolling the team in the process is to enable them establish and uphold a felling for obligation and ownership for threats in corresponding to their feedback (Richardson, 2014). Main advantage in the procedure is keeping records of risks that occurred, as well as being capable to predict situations (PMI, 2013). It also equip the person when making choices to be able to respond in a well-informed manner while taking into account all pertinent situations of threats that happened and the ones that follow (Roberts et al., 2003). The procedure of identifying risks may emphasize on internal and external risks, predictable and unpredictable risks, risks that are somewhat under our control and risks that are largely beyond our control, as well as technical and nontechnical risks (Conboy and Coyle, 2009). Additionally, Richardson (2014) adds that it is possible to identify potential risks by evaluating the scope statement, work breakdown structure, considering the surrounding circumstances, conceptualizing and further difficulties in addition to having an overall awareness of common risk sources.

2.2.2.3. Risk Analysis

According to Kerzner (2009), risk analysis is a methodical process that determines the degree of risk for risks that have been recognized and approved. For the identified threat or opportunity, it entails determining qualitative and quantitative rating values. These two procedures are intended to quantify the risk events that have been identified (Richardson, 2014). According to Cervone (2006), in the assessment and estimation of project risks, project managers employ a specific model that categorizes tasks into essential and support functions. Subsequently, the tasks are prioritized based on their necessity or its possibility.

2.2.2.4. Risk Response

Planning for risk response involves establishing methods to deal with risk events. The issue of how to respond remains after the risk has been discovered and examined (Roberts et al., 2003.). Risk response planning discusses how each threat will be handled individually (Callahan and Brooks, 2004). In contrast with risk identification and analysis, it comes up with the action to take in order to minimize its result (Frame, 2002). One of the main advantages of risk response is that it prioritizes risks and manages them accordingly, adding resources and activities as necessary to the budget, schedule, and project management plan (PMI, 2013). Risk conditions are impacted by a variety of different and distinctive risk response tactics. These tactics must be selected based on the probability of the risk and its possible impact on the project's final goals.

The Project Management Institute PMI (2013) states that, risk response is contingent upon various factors including the nature of the risk, the depth of analysis conducted, and the mindset of the individual or entity assuming the risk. The usual responses usually taken are avoidance, transfer and mitigation (Kerzner, 2009; PMI, 2013). The suggested solutions to handle hazards that may have favorable effect in the goal of project are to exploit, share, enhance, or accept them as part of the risk management strategy. The latter one is applied to both positive and negative risks.

2.2.2.5. Risk Monitor and Control

In order to oversee risk, projects must develop a way to respond to the risk, track known hazards, recognize, keep an eye on and assess the efficiency of the procedure in risk management (Richardson, 2014). The main advantage of this procedure is that it increases the effectiveness of the risk strategy across the project life cycle to constantly optimize risk responses PMI (2013). Risk control, according to Callahan and Brooks (2004), entails a number of steps, including keeping track of the outcomes for indications where problems might surface or it already done so, checking risk response measures and check if it is successful, examining the main purpose making sure they are still relevant, and revising the project context to determine whether there is an impact on the project. Although risk control aims to lower risk, it does not try to remove the risk's source. It involves managing the risk in a way that lessens the likelihood and impact of its happening on the project (Kerzner, 2009). It is the procedure in leveraging the knowledge gained from a project to aid in its further development (Roberts et al., 2003).

2.2.3. Project Success

Due to the temporary nature of projects, their success is typically evaluated based on the achievement of project objectives within the defined parameters of scope, time, cost, quality, and resource constraints agreed upon by project managers and senior management. According to the PMBOK (2013) degree of customer satisfaction, the timeliness, the adherence to the budget, and the quality of the project and its output are the key indicators of project success. Despite the fact that "project success" pertain as a fundamental notion in project management, various researches indicate that there is no agreed-upon meaning of the term (Frefer et al., 2018). Many different possibilities are available in this area; the sole point of consensus appears to be the debate over what defines “project success” (Prabhakar, 2008).

The impact of risk management on success of project has been thoroughly evaluated in a number of studies. In their analyses of the risk management procedure, studies propose that managing risk activities contribute to the timely completion of projects (Ropponen and Lyytinen, 1997; McGrew and Bilotta et al., 2000). A more precise projection of materials required to complete a work is also a result of risk management efforts and fewer tasks fail as a result (Ropponen and Lyytinen, 1997; McGrew and Bilotta, 2000). Ropponen and Lyytinen (1997) discovered evidence that experience matters, implying that project managers' regular and ongoing adoption

of risk management practices in diverse projects over time has a positive impact on enhancing the management of risk in projects. The organization must be aware of potential risks in order to assess them quantitatively and systematically, expecting potential causes and effects, and select appropriate mitigation strategies (Mobey and Parker, 2002). Incorporating these measures enhances the probability of successful project execution. The success of the project is considered by project management methodology to be a result of the measures done as a result of risk management.

The application of risk management principles, through the identification and mitigation of potential risks prior to project initiation, contributes to quality improvement efforts and facilitates more accurate cost estimation. To guarantee the information reaching the management in time, procedures are put in place (Tinnirello et al., 2000). Risk management concepts improve engagement of its members offering a means for conveying possible concerns and increasing the team's investment in the project's ultimate achievement. A continuous attempt to make sure about risk awareness is at the core of process of decision making is known as risk integration (Hodge, 2002). Failure to understand risk issues can have catastrophic repercussions (Fraser and Henry, 2007).

Elkington and Smallman (2002) discovered a substantial relationship with relation to the risk management quantity conducted in a project and its success level where they indicated as the project is close to success there is greater levels of risk management. The early implementation of risk management in a project correlates with its higher likelihood of success. When risk management practices are initiated at the early stages, potential risks can be identified and addressed proactively, allowing for effective risk mitigation strategies to be implemented in a timely manner. By taking early action, project teams can better anticipate and manage risks, leading to improved project outcomes. Timely risk management implementation enables a proactive approach, minimizing the negative impacts of risks and increasing the overall chances of project success. The listed risks here will not only help with project product manufacture but will also raise the likelihood of overall project success. Sometime in the life cycle of project, if there is significant risk that is yet not been acknowledged and mitigated it causes problems.

2.3. Review of Empirical Studies

There are different Project risk management processes that were described in different researches throughout the years. Boehm (1991) suggested an approach with two primary phases of risk assessment (risk identification, analysis, and prioritization), and risk control (risk management planning, risk resolution, and risk monitoring planning, tracking, and corrective action). According to Fairley (1994), there are about seven steps: Identifying the risk variables, assessing probabilities of the risks and consequences, developing measures to reduce identified risks, monitor risk factors, activate a contingency plan, manage the crisis and recover from the crisis. Chapman and Ward (1997) also provided the nine phases of the general PRM approach which are defining the project's key components, focusing on a strategic approach to risk management, identifying potential risk areas, structuring information about risk assumptions and relationships, assigning risk and response ownership, estimate the extent of uncertainty, evaluating the relative magnitude of the various risks, planning responses, and managing by monitoring and controlling execution. Keeping this in mind, empirical review on the topic is discussed as follows.

A study done by Pimchangthonga and Boonjing (2017) explores the organizational factors and risk management practices that influence IT project success in Thailand. They conducted a quantitative research and performed regression analysis on the topic. The independent variables they identified were the organizational types, sizes, risk identification, risk analysis, risk response planning, monitoring and control. The dependent variable was IT project success in response to the product performance and process performance. Their findings show that risk identification and risk response planning did influence the success of the project and process performance while identification scored the highest effect, risk response followed next in a similar manner. It was also noted that risk analysis had a negative effect on the performance. The differences on organizational types also affected the success while the organizational sizes didn’t affect it at all in the process performance angle.

Similarly, study on the effect of risk identification on the execution of software projects in IT businesses in China was conducted (Addison and Vallabh, 2002). The study discovered that software project risks such as subcontracting risk, ambiguous scope of work or objectives, unattainable deadlines and budgets, insufficient expertise or abilities, and poor project management practices are all common dangers in software projects. These risks have a constant

impact on management's choice to implement suitable mitigation strategies, affecting the timely completion of software projects. Based on the same context, Vujović et al. (2020) provided a research on project planning and management of risk in the context of IT in Serbia agriculture school. As a result it was seen that planning is indeed important for the outcome of the project as well.

Obondi (2022) states that risk monitoring and control is mostly neglected for studies. Thus, the paper only focuses on the impact of monitoring and control on success in construction sector of United States. It applied Spearman rho correlation and looked into the topic and gave out the conclusion all of the monitoring and controlling practices did indicate success of the industry but it was suggested that the same study should be done in underdeveloped nations to discover if the findings are consistent and applicable to other areas.

Tahir O., Tahir I. and Shujaat (2019) investigated the effect on success based on a study in Pakistan in the field of construction industry. They looked into the relationship of risk management practices and project success by implying the risk management practices have four components but the three components help enforce and reaffirm the fourth. The first three elements are the independent variables while the fourth was taken as a mediator. The independent variables were namely risk identification, risk assessment and risk response while the mediator variable is the control of risk. Consequently, dependent variable is taken as the project success. The research conducted a survey and came into a discovery were the degree of identification didn’t have significant relationship with the success. Nevertheless, risk assessment and risk response were significant among the dependent variable. In addition, the last hypothesis mentioned earlier, were control of risk that mediate the relationship between the dependent and independent variable, was valid. Mishraa and Mallik (2017) looked into the influence among risk management practice and success of projects in Kathmandu valley based on housing projects. They proposed ten dependent variables for success while the independent variables are risk identification, assessment and risk response. Their study concluded that there is significant impact among project risk management and project success.

Based on a research done in construction Kallow et al. (2022) mentions that risks success is seen by how much risk is managed in the project. They put forward identification, monitoring and prevention as their independent factor that influences the outcome while risk coping mediates and risk transparency moderate among the independent and dependent. After conducting the research it was found that all assumptions were accurate and the independents did really result in the success of project along with the moderating variables.

Mudau and Pretorius's (2009), A South Africa investigation, states about the topic and performed a qualitative research. The paper tries to look into how much project control and risk management influence the project towards success and the way it is done properly to make sure of the outcome and to find the elements that led to the outcome as well. The data collected from the questionnaire underwent processing and analysis utilizing a spreadsheet software tool. Findings revealed that project control and risk management have a significant influence on the outcome of projects and, therefore, the success of the organization. Another discovery about the topic also mentions good earned value management leads to project success. The performance of projects should increase by enhancing and placing greater emphasis on project controlling and risk management methods and procedures.

Previous researches in Ethiopia show that, Risk management practice is limited and underdeveloped (Yimam, 2014). Getachew (2014) also studied the topic on road projects and came to realize managing risk is not effectively conducted. "There is no formal risk management system in place for road construction risks." However, there are routine risk management practices in place. Although these traditional practices might be useful in managing risks help with risk management, they do not adhere to the approved risk management procedures. There might be risks in road projects, and these risks might affect the projects' time, cost, and quality goals. Without a defined framework, responding to risks does not significantly improve risk management. Frezewed (2016) conducted a survey on projects involving water supply and looked into the topic of risk management were the findings showed that this particular domain of expertise is not widely used. Additionally it revealed information in which there isn't any common practice to designate a risk manager whose main duty is controlling risks. According to the report, other studies conducted in the nation and in the relevant regions have also produced results on project risk management that are similar.

Turner (1993) discovered that risk management of project does have a beneficial impact on success when it is based "on time, within budget delivery" of the previously laid out result. Cooke-Davies (2000) wrote that management of risk has a favorable influence on the capacity to anticipate length of project based on empirical evidence. The aim is to document the features of a project's risk management procedure. It addresses questions such as who will be involved in risk identification, which tools will be utilized, how risks should be reported, who will receive this information, and what will be anticipated in return. Every project, according to Ward and Chapman (2003), requires a broader view on managing uncertainty, and this approach should make it easier to integrate the management in the beginning.

Elkington and Smallman (2002) discovered a significant correlation across the level of management of risk applied alongside the level of project success. Higher supervision of risks is utilized in higher-performing activities while the main components of the procedure in risk management are identification, assessment, analysis, reduction and/or mitigation, and monitoring (Kohlmeyer and Visser, 2004). Benta et al. (2011) states that good management of risk practices are a crucial success factor for completing projects within the expected budget, timeline, and quality. When project risk management is implemented in accordance with good practice guidelines and with organizational commitment to making judgments and acting in a fair and impartial manner, benefits can be obtained. According to Kuhn and Visser (2014), team members employed just a portion of the risk identification and risk analysis instruments and methods available. They concluded that it is a sign that project uncertainties are not properly recognized or handled. They suggested that projects employ project management of risks as a combined effort in management method to cope with project uncertainty.

Overall, it is seen clearly that risk management practices affect the success but it is important to discover which part of the practice really relates to the success. The results may vary according to the context and geographical area of the matter. Thus it is imperative to look into the topic.

2.4. Conceptual Framework

In this research, five factors of practice in risk management were used as the independent variables and consequently the dependent variable was project success. This conceptual model was established on the basis of a review of the literature to determine the relation among the two variables.

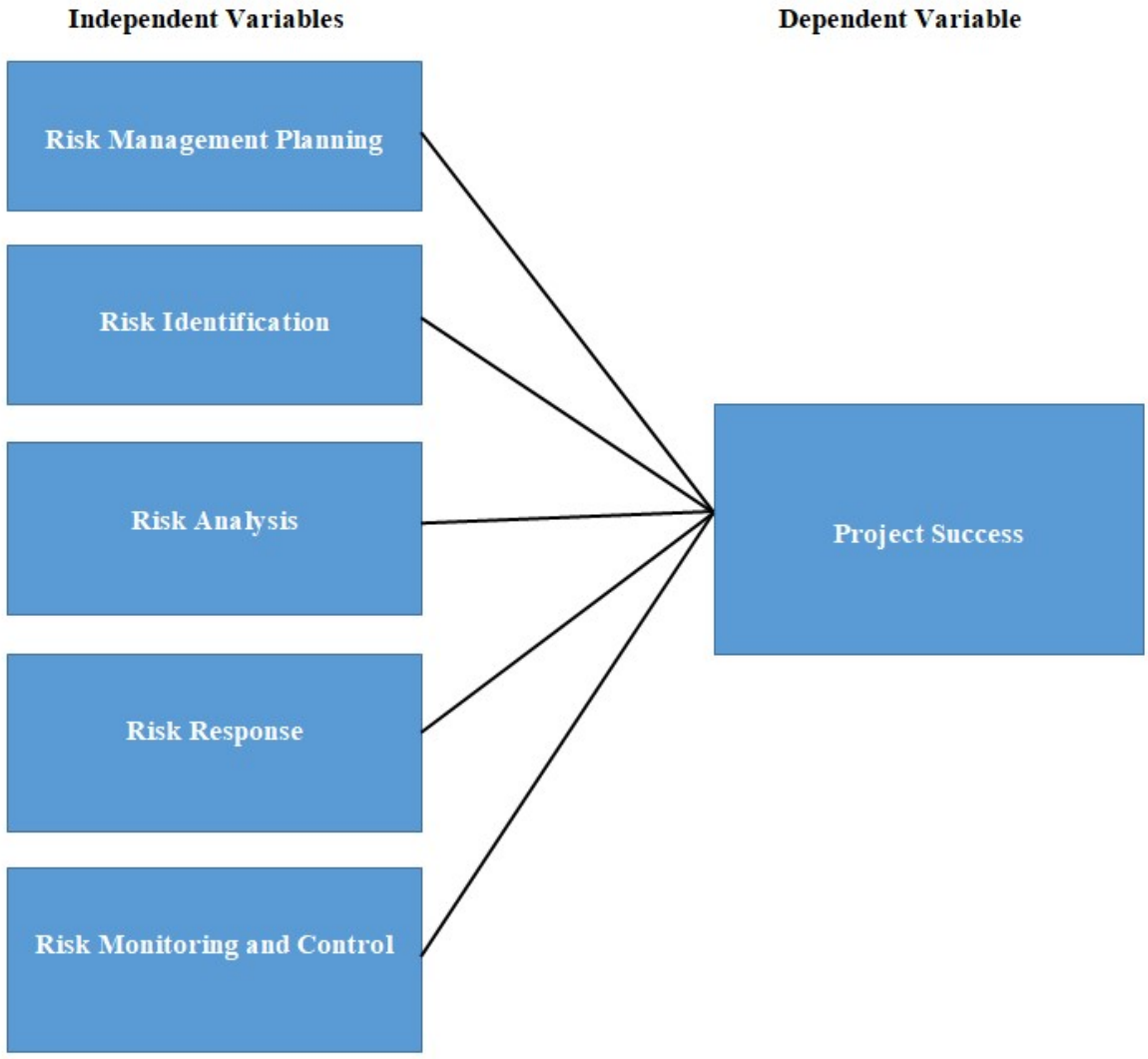

Figure 2 Conceptual Framework

2.5. Variables

Through an examination of relevant literature and a conceptual framework, the study was able to state both the independent and dependent variables. The independent variables consist of risk management practices, which encompass dimensions such as Planning, Identification, Analysis, Response, and Monitoring and Control of risks. The dependent variable, on the other hand, is project success.

Chapter Three

3. Research Methodologies

3.1. Introduction

This chapter explains how the research was conducted and discusses in detail about the research approach, design, Collection of data, population, sampling size, data analysis and ethical consideration used in the study.

3.2. Research Approach

In a variety of investigations, researchers often use the quantitative, qualitative, and mixed methods as a research approach (Taherdoost, 2022). This study employs a quantitative research approach to investigate and analyze the variables. A quantitative research offers a robust and systematic methodology to comprehensively examine and describe the variables of interest. This research approach aims to collect numerical data through questionnaires to capture a broad range of information. By employing statistical techniques like descriptive statistics, researchers can objectively summarize and analyze patterns, frequencies, and distributions of the variables. This quantitative approach enables researchers to quantify and present accurate measurements, allowing for a clear and detailed depiction of the phenomenon under investigation.

3.3. Research Design

The research design chosen for this study is descriptive in nature, which focuses on providing a comprehensive and detailed analysis of the topic at hand. This design enables a thorough examination of the characteristics, behaviors, or conditions of the target population or a specific subset. Through the utilization of observations, surveys and other suitable methods, the research aim to gather data that accurately portrays the subject matter. The primary objective of this study is to objectively describe and document the variables of interest without manipulating or controlling them. By employing a descriptive study design, the researchers can obtain valuable insights into the current status, patterns, and relationships within the given context. This, in turn, contributes to a deeper understanding of the phenomenon under investigation and paves the way for potential future research endeavor.

3.4. Data type and source

Primary and secondary data are used in this research. Members of the project teams and key members who took part in the study's sample projects provided the primary data. These data were gathered through a questionnaire to learn about project risk management practices and its relation to project success. A five point Likert scale, with "strongly disagree" described as 1 and "strongly agree" was described as the number 5, were used for categorizing the questions. Other data was gathered from journals, dissertations and literatures to back up our primary data. Total of 56 questionnaires were distributed.

3.5. Population and Sampling Design

3.5.1. Target population

The study area is taken upon eight different high-rise building constructions of Ethiopian banks. All high rise buildings of the banks are located in Addis Ababa. These selected projects were the headquarter buildings of Commercial Bank of Ethiopia, Bank of Abyssinia, Nib International Bank, Hibret Bank, Zemen Bank, Wegagen Bank, Dashen Bank and Awash Bank. Total populations include clients, consultants and contractors whom participated in the High-rise buildings of banks listed above.

3.5.2. Sample Design

The selection of a stratified sampling design in this study is well-justified based on several factors. Stratified sampling involves dividing the target population into distinct subgroups based on specific characteristics. By utilizing this sampling technique, the researchers can ensure proportional representation of each subgroup in the sample, thereby enhancing the accuracy and precision of the study's findings. The primary rationale for employing stratified sampling is to capture the diversity present within the population. By stratifying the population based on relevant variables, such as age, gender, or location, the researchers can account for the variability among different subgroups. This approach provides a more comprehensive understanding of the research phenomenon by including a range of perspectives.

Additionally, stratified sampling improves the efficiency of data collection by focusing efforts on specific subgroups of interest. Rather than randomly selecting participants from the entire population, the researchers can concentrate their resources within each stratum. The sub population is classified into three as follows: group one are the clients of each bank sector, group two are the consultants for each construction and group three are the contractors of the building construction project. Overall, the utilization of stratified sampling as the chosen sampling design is justified due to its ability to provide proportional representation of diverse subgroups, increase the efficiency of data collection, and facilitate subgroup-specific analyses. By employing this sampling technique, the researchers enhance the validity and reliability of their findings and generate insights that account for the variability within the target population.

3.5.3. Sampling size

A sample frame is a group of individuals from the population of interest (Rubin & Babbie, 2009). Total sample for the study was 56. The small sample size in this study is justified by the utilization of stratified sampling, a technique that involves dividing the target population into distinct subgroups based on relevant characteristics. Each subgroup is then independently sampled, ensuring representation from all strata. This approach optimizes data collection efficiency and precision, especially when resources are limited.

By employing stratified sampling, this study focuses on specific subgroups within the population of interest. Selecting smaller sample sizes from each stratum allows for adequate representation of the population's variability and diversity. Additionally, it enables the exploration of unique characteristics or patterns within each subgroup, facilitating a more nuanced understanding of the research phenomenon. While the small sample size may limit the generalizability of findings, stratified sampling helps address this concern by ensuring representation from different strata. Moreover, the emphasis on data quality compensates for the small sample size, enabling in-depth exploration and analysis within the selected subgroups. Overall, the use of a small sample size justified by stratified sampling allows for a focused and efficient study, offering valuable insights into specific subgroups and contributing to a comprehensive understanding of the research topic.

3.6. Data type & Source of data collection

3.6.1. Procedure of data collection

Data was collected in two ways for the study. One is by using online survey (Google Forum), which can be accessed through a web browser on a computer or on their mobile phone. By using this method required time to finish the form can be reduced which gives quick results for analysis. Second method used is the questionnaire. Most of the data collection is done by obtaining information in person, by visiting the site in which respondents get to fill the questionnaires on paper and consequently ensuring the return rate of questionnaire.

3.6.2. Questionnaire design

The questionnaire was used and adjusted to acquire trustworthy quantitative data in nature. The questions are classified in section to answer each aspect of the variables accordingly. To elaborate, close-ended questionnaire survey was carried out on the selected eight banking building projects to look into the effect of risk management practice on project success. The contents of the questionnaire survey focus on the client, consultant and contractor by identifying the availability of risk management practices and evaluate construction risk on the project performance in terms of time, cost and quality. The questions were categorized into two parts were demographic profile of the respondent as well as interval rating scale measure of participants feedback is assessed about the topic in hand.

3.7. Method of Data analysis

In this study, a descriptive method of analysis was employed to summarize and examine the collected data. The main aim of the analysis was to provide a comprehensive description of the study variables and respondents' responses. To accomplish this, the study utilized the SPSS software, which facilitated the computation and presentation of descriptive statistics. Specifically, the SPSS version 27 was used to calculate the mean and standard deviations, providing information about the average values and variability of the variables. Additionally, percentages and frequencies were computed to illustrate the distribution and patterns of responses among participants. The utilization of SPSS allowed for a systematic analysis and presentation of descriptive statistics, enabling a clear and concise understanding of the study variables and respondents' responses.

3.8. Validity and Reliability of data

Pilot test was done to assess questionnaire's true authenticity and trustworthiness. This pilot study provided an opportunity for the person conducting the inquiry to become acquainted about the topic and notice that part that needed to be improved. The results helped the researcher rectify instrument inconsistencies and ensure that the instrument measured what it was designed to measure. After gathering the questionnaires, Cronbach's alpha was calculated using SPSS 27 and the result show increased credibility.

Table 3-1 Cronbach Alpha

Reliability Statistics		
Variables	**Cronbach's Alpha**	**N of Items**
Project Success	.852	8
Risk Management Planning	.768	5
Risk Identification	.835	5
Risk Analysis	.863	4
Risk Response	.768	3
Risk Monitoring and Control	.777	3

3.9. Ethical Consideration

Prior to giving the respondents the questionnaire, the researcher properly briefed them and then secured their consent. The respondents were not obliged to give their names during data collection, and anonymity and confidentiality were guaranteed by the study. Without any type of assistance, respondents were able to fill out their response.

Chapter Four

4. Data Presentation, Analysis and Discussion

4.1. Introduction

This chapter displays the discussion of the final results and the process through which the results were obtained. In addition to this, background information of respondents will be presented. Finally, the statistical methods of analysis were discussed, which included a descriptive analysis and a statistical analysis through SPSS version 27.

4.2. Demographic characteristics of the respondents

In this section, comprehensive details about the participants of the study are presented, including their gender, age, educational background, level of experience, time allocated to the project, and occupation within the selected banking sectors. These factors contribute to creating a holistic profile of the participants and provide a deeper understanding of their characteristics and demographics. The information gathered is then organized and presented in a structured manner, allowing for clear and concise representation of the data. By presenting this data in an organized format, readers can easily grasp the general characteristics of the study's participants, fostering a solid foundation for subsequent data analysis and interpretation.

Table 4-1 Frequency table for Gender

Gender	Frequency	Percent
Male	50	89.3
Female	6	10.7
Total	56	100.0

The sample consisted of 50 (89.3%) male and 6(10.7%) female respondents (*N*=56).

Table 4-2 Frequency table for Age

Age	Frequency	Percent
20-30 years	20	35.7
31-40 years	19	33.9
41-50 years	15	26.8
51-60 years	2	3.6
Total	56	100.0

As shown in table 4-2, the participants are mostly 20-30 years with 35.7% followed by 31-40 years old respondents with 33.9% of response rate. The remaining respondents were between 41-50 (26.8%) and 51-60 years old (3.6%).

Table 4-3 Frequency table for Level of Education

Education	Frequency	Percent
Degree	43	76.8
Masters	11	19.6
PHD	2	3.6
Total	56	100.0

The educational backgrounds of participants were 43 (76.8%) Degree holders while 11 (19.6%) and 2 (3.6%) are Masters and PHD graduates respectively.

Table 4-4 Frequency table for years of Experience on their profession

YR. of exp.	Frequency	Percent
0-5 years	11	19.6
5-10 years	19	33.9
10-15 years	8	14.3
15-20 years	9	16.1
20 and above	9	16.1
Total	56	100.0

As it is seen on table 4-4, the members included in the study had a variety of persons with varying levels of experience. The highest year of experience were 19 (33.9%) while the lowest is 9(16.1%) of the population sample.

Table 4-5 Frequency table for years of participation on the specified project

Years	Frequency	Percent
Less than 1yr	9	16.1
1-2 year	3	5.4
2-3 years	6	10.7
3-4 years	10	17.9
>4 years	28	50.0
Total	56	100.0

As seen on table 4-5, 28(50%) participants were approximately involved more. The other half respondent held 10(17.9%) rate for 3-4 years of participation, 6(10.7%) for 2-3 years of participation, 3(5.4%) for 1-2 years of participation and 9(16.1%) at a less than a year of experience on the projects.

Table 4-6 Frequency table for Profession (occupation)

Profession	Frequency	Percent
Client	16	28.6
Consultant	16	28.6
Contractor	24	42.9
Total	56	100.0

Since the sample target were two clients, two consultants and three contractors per project, the percentage shown (see table 4-6) is that there are 16(28.6%) respondent rate both for clients and consultants. The other 24(42.9%) were contractors.

4.3. Project risk management practices and project success

This study focuses on assessing project management planning, risk identification, risk analysis, risk response, risk monitoring and control for the success of projects. Planning and Identification are the first stage of the risk management practices. From the gathered data, the mean value of project planning is 3.8 with standard deviation of 0.473. Similarly, project identification scored mean of 3.89 with a 0.476 value for standard deviation. This shows that majority of participants agree that the project practices planning and identification. Table 4-7 and table 4-8 shows the results of these values.

Table 4-7 Descriptive Statistics for Risk Management planning

	RMP1	RMP2	RMP3	RMP4	RMP4	Overall RMP
N Valid	56	56	56	56	56	56
Mean	3.80	3.46	3.91	3.95	3.91	3.8
Std. Deviation	.644	.631	.695	.616	.695	.473

Table 4-8 Descriptive Statistics for Risk Identification

	RI1	RI2	RI3	RI4	RI5	Overall RI
N Valid	56	56	56	56	56	56
Mean	3.91	3.73	3.66	4.29	3.87	3.89
Std. Deviation	.514	.587	.640	.653	.662	.476

Table 4-9 Descriptive Statistics for Risk Analysis

	RA1	RA2	RA3	RA4	Overall RA
N Valid	56	56	56	56	56
Mean	3.84	3.84	3.77	4.45	3.97
Std. Deviation	.496	.496	.539	.685	.47

Table 4-10 Descriptive Statistics for Risk Response

	RR1	RR2	RR3	Overall RR
N Valid	56	56	56	56
Mean	3.79	3.73	4.18	3.89
Std. Deviation	.594	.587	.508	.46

Table 4-11 Descriptive Statistics for Risk monitoring and control

	RMC1	RMC2	RMC3	Overall RMC
N Valid	56	56	56	56
Mean	3.84	3.77	4.45	4.02
Std. Deviation	.496	.54	.685	.48

In table 4-9 up to table 4-11, standard deviation and mean is also described for the rest of the variables. The Standard deviation shows how much the data is distributed. If there is a large standard deviation it indicates data are from the mean and if the standard deviation is small it indicates they are close around the mean. In the tables above for the independent variables, all of the standard deviations were between 0-1 which indicates the data is close to the mean. The mean values for risk monitoring control was the highest of all variables having a 4.02 score of mean. Following risk analysis had 3.97 while risk response was 3.89.

Lastly, Questionnaire was also set up to answer the practices that guides to the success in terms of meeting delivery deadlines, budget, quality requirements, meeting the project purpose, satisfaction of client and teams. Following table 4-12 is a discussion of responses for this particular question.

Table 4-12 Descriptive statistics for Project Success construct

	PS1	PS2	PS3	PS4	PS5	PS6	PS7	PS8	PS Overall
N Valid	56	56	56	56	56	56	56	56	56
Mean	3.61	3.25	4.32	3.98	3.7	3.98	4.30	4.21	3.919
Std. Deviation	.755	.815	.606	.700	.737	.674	.570	.594	.481

Descriptive statistics for Project Success(PS) gives an total mean score of 3.919 (*SD*=0.481) which indicates a promising perception of PS. PS3 had the highest mean value, indicating that meeting the quality is highly related to project success. The result of standard deviation for PS is below 2 and positive which is the acceptable range. As seen on table B-7 on appendix B, the relative importance of each variable was also measured to rank the results accordingly.

The relative index is calculated by dividing the total weight and multiplied result of maximum weight with total respondents. The result informs about which risk management practices are implemented in the project and also which influence success more in rank order. As seen on appendix B Table B-1 up to Table B-5 level of agreement of each independent variables are stated. When we further look into the specific measures, none of the measures is reported to be not practiced. Most of respondents agree or strongly agree to each question. The respondents also agreed to the concept that each variables do contribute for success of project. Similarly table B-6 shows the level of agreement for project success. The study looked upon success in regards of time, budget, quality, whether the client/team member needs and satisfaction were addressed, project purpose and project goal was met. As a result the projects were found successful in most of these factors while only meeting the budget requirement was found to be inadequate.

4.4. Discussion

This research aimed to assess risk management practices for success of high rise building construction projects, focusing on the building constructions of banks in Ethiopia. This includes investigating each risk management practices of risk management planning, identifying, responding, analyzing, monitoring and control. Quantitative research methodology was applied and the result is as follows.

From the demographic profile of the study, the minimum mean score of 3.25 on Likert scale is observed and 50% of the participants spent more than 4 years in the project with years of experience which in overall shows that participants are aware about the topic to some extent. Additionally, as seen from Table B-1 up to table B-5, most of the respondents either agree or strongly agree in respect to the implementation of risk management planning, identification, analysis, response, monitoring and control. This indicates that majority of participants agree to the statement of risk management practices were implemented at each project. When it comes to project success, seen on Table B-6, the respondents led to the idea that these projects were considered successful in respect to the project being implemented within the specified quality, being managed efficiently, meeting its project goal and maintained the satisfaction of client, team members and lastly on time. But most of the respondents also choose either disagree and neutral to the idea of project being completed on budget. Relative importance index also proved that the projects scored less in that area. Nevertheless, the results show that all of the risk

management practices did contribute to the success of the project which can be ranked in the following order of significance: Risk management and control, Risk analysis, Risk identification, Risk response and Risk management planning.

The present study's findings mostly align with previous research in the field, which has consistently emphasized the importance of risk management practices in improving the success of construction projects. For instance, Awoke (2020) suggested that the whole risk management practice including risk identification , risk analysis , risk response planning and risk monitoring and control, are essential for product success, process performance and IT project success. Pimchangthong and Boonjing (2017) also conducted a study on risk management in IT projects and identified risk identification and risk response as crucial practices that significantly influenced project success. This consistency in findings across studies strengthens the validity of the results and highlights the robustness of these risk management practices. There are also other studies on similar industries but different geographical locations. For example Addison and Vallabh (2002) argue that there needs to be proper project management practices and identification is critical for success. On similar context Vujović et al. (2020) states that project planning management on IT is found to be of great importance for the success. Furthermore, Mishraa and Mallik (2017) conducted a comprehensive review of risk management practices in the construction industry and identified risk identification, risk assessment and risk response as key factors affecting project success. Their study showed the importance of risk identification was highlighted, emphasizing the need for accurate risk identification to develop appropriate risk responses. The significance of risk response in enhancing project success was also emphasized, reinforcing the findings of the present study.

In conclusion, this study contributes to the existing knowledge by shedding light on the assessment of risk management practices for the success of high-rise building construction projects, specifically within the headquarter buildings of the banks in Ethiopia. The results highlight that risk management practices are critical in enhancing project success. These findings provide practical insights for project managers and stakeholders to prioritize and allocate resources effectively towards these key risk management practices. Further research is recommended to explore the effect of risk management practices on the success.

Chapter Five

5. Summary, Conclusions and Recommendations

5.1. Introduction

This study was primarily concerned with assessment of project risk management practices for project success of the high rise building construction projects executed by the Ethiopian Banks. The previous four chapters examined various parts of the study's background; diverse literatures connected to the study's issue; preferred methodology was implemented to gather and analyze data. This portion of the unit includes a summary and conclusions based on the study findings of previous chapters including recommendations.

5.2. Summary of Findings

The research took sample projects undertaken by different Banks of Ethiopia that constructed a high rise buildings for their headquarter office and assessed their Risk Management Practices on Project Success in building constructions. Questionnaires were distributed to different professions of individuals whom were involved in the project and based on the data the following conclusions were made. Finding revealed that the risk management practices did contribute to project success.

5.3. Conclusion

The present study focused on assessing the impact of risk management practices on project success. The findings demonstrate that all variables associated with risk management practices are crucial for achieving favorable project outcomes. This discussion will delve into the importance of each variable, including risk management planning, identification, analysis, response, and risk monitoring and control.

Firstly, risk monitoring and control emerged as an integral aspect of risk management practices. Continuous monitoring allows project teams to track identified risks, assess their evolving nature, and implement necessary control measures. By actively monitoring risks, project stakeholders can identify warning signs, enabling them to take corrective actions in a timely manner. The absence of effective risk monitoring and control may result in unaddressed risks, leading to project delays, cost overruns, or even project failure.

Secondly, risk assessment plays a pivotal role in prioritizing risks and allocating resources efficiently. Through a systematic evaluation of identified risks, project teams can gauge their likelihood of occurrence and potential impact on the project. This allows them to focus their attention on high-priority risks, developing targeted mitigation plans and contingency strategies. The absence of a comprehensive risk assessment may result in misallocated resources and inadequate response strategies, ultimately jeopardizing the project's success.

Risk identification also emerged as a fundamental component of effective risk management. The ability to identify potential risks allows project teams to anticipate and prepare for challenges that may arise during the project lifecycle. By actively seeking out risks, project stakeholders gain valuable insights into vulnerabilities, enabling them to develop proactive strategies and allocate appropriate resources. Neglecting risk identification can lead to unexpected issues that may derail the project, underscoring the importance of this variable in ensuring project success. Furthermore, risk response planning is a critical variable that determines the effectiveness of risk management practices. Once risks have been identified and assessed, project teams must develop appropriate response plans. These plans outline the specific actions and measures to be taken in response to each risk. By proactively addressing risks, project teams can minimize their impact and increase the likelihood of project success. Neglecting to formulate robust risk response plans may leave projects vulnerable to potential disruptions, hindering progress and jeopardizing project objectives.

Lastly, Risk management planning encompasses defining roles and responsibilities, establishing communication channels, and setting clear guidelines and procedures for identifying, assessing, and addressing risks. By establishing a well-structured risk management plan, project teams can ensure a consistent and systematic approach to risk management. This facilitates effective coordination, collaboration, and decision-making among team members and stakeholders, ultimately enhancing the overall success of the project. Neglecting proper risk management planning may lead to ad-hoc and reactive approaches, leaving projects vulnerable to unanticipated risks and diminishing the chances of achieving desired outcomes. In conclusion, since all variables associated with risk management practices are essential for project success they collectively contribute to proactive risk management, facilitating informed decision-making, efficient resource allocation, and timely response to potential challenges. Neglecting any of these

variables may undermine the effectiveness of risk management practices, increasing the likelihood of project setbacks and failure. Therefore, it is crucial for project stakeholders to recognize and prioritize the importance of each variable in order to maximize the chances of project success.

5.4. Recommendation

- The study included a small sample group and it was limited to the high rise buildings of banks. Further research could be done on a larger sample group in a variety of high rise buildings to obtain more general results.
- By allocating resources, time, and effort towards these key aspects of risk management, project stakeholders can improve decision-making, enhance project performance, and ultimately achieve the desired project objectives while minimizing the impact of unforeseen events.
- Risk management must be exercised on a regular basis across the entire project lifespan, and individuals from the project team should be engaged.

5.5. Areas of Further Research

The study's conclusion exclusively depends on the unique responses provided by participants that had an active role in the research. It is suggested to conduct another study with a larger sample size with different sampling techniques. In addition, more investigation can be done on the topic by evaluating the risk management practices and exploring its effect on success utilizing projects from various sectors.

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Appendix A

Addis Ababa University School of Commerce

Masters of Arts in project management

Dear Respondent,

My name is Mieraf Yitagesu and I am a post graduate student at Addis Ababa University School of Commerce. I am conducting a survey on the topic of "Effect of Risk Management Practices on Project Success of High-rise Building Projects" as part of my academic requirement. I am kindly requesting for you to take a few minutes of your time and fill the questionnaire for study purposes, as your response will certainly be helpful for the study. The answer you will be providing is strictly confidential and will only be used for the study. This questionnaire includes two parts where Part I defines respondents demographic characteristics and Part II contains questions about the topic in hand. Please attempt to answer all the questions provided in both sections, by making a simple '√' remark in the boxes. Thank you for your time.

Part I: Demographic Profile of respondents						
1	Gender	Female ☐			Male ☐	
2	Age	20-30 Years ☐	31-40 years ☐	41-50 years ☐	51-60 years ☐	Above 61 years ☐
3	Level of Education	Diploma ☐	Degree ☐	Masters ☐	Other ☐	
4	Years of experience of work	0-5Years ☐	5-10 Years ☐	10-15 years ☐	15-20 years ☐	Above 20 years ☐
5	Years spent on the project	Less than 1 Year ☐	1-2 Years ☐	2-3 years ☐	3-4 years ☐	More than 4 years ☐
6	Occupation	Client ☐	Consultant ☐	Contractor ☐	Other ☐	

Part II. These are Questions Based on project risk management practices. Please Indicate your level of agreement with each statement by selecting a number from the rating scale below.
(1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)

	Questions related to project success	**1**	**2**	**3**	**4**	**5**
7	The project is implemented within the scheduled time					
8	The project is implemented within the estimated budget					
9	The project is implemented within the specified quality					
10	The project is efficiently managed					
11	Client and project teams needs were satisfied in relation to the project management					
12	The project meet the project owners strategic organizational objectives (project goal)					
13	Project purpose was meet					
14	Satisfaction of stakeholders needs were meet in relation to the end result					
	project Risk management Planning	**1**	**2**	**3**	**4**	**5**
15	The implementation of risk management planning occurred prior to the initiation of the project					
16	The process of risk management planning includes the active participation of relevant stakeholders					
17	During the risk planning phase, careful consideration is given to environmental factors					
18	The risk management planning in your project effectively communicates the planned actions to be taken					
19	To what degree do you concur that the success of projects is influenced by the implementation of effective risk planning at the project's inception?					
	Project Risk Identification	**1**	**2**	**3**	**4**	**5**
20	The project team has identified the potential risks that could occur during the construction					

21	The identified risk have been classified based on the impact and likelihood of happening					
22	The project team possesses a risk management plan to address and manage risks encountered during the project					
23	Do you think that risk identification contributes to the success of the project?					
24	The project team has established communication mechanisms to keep stakeholders informed of identified risks and management					
Project risk Analysis		**1**	**2**	**3**	**4**	**5**
25	Risks undergo a formal analysis that considers their probability of occurrence and the potential impact they may have on the overall success of the project.					
26	The effects of identified risks were promptly assessed to gauge their potential impact on the success of the project.					
27	After conducting a risk assessment, the project documents and risk register are promptly updated to reflect the identified risks that may occur					
28	To what degree do you agree with the assertion that effective risk analysis plays a role in contributing to the success of a project?					
Project risk Response		**1**	**2**	**3**	**4**	**5**
29	A well-developed strategy was established within the project to effectively respond to risks that could potentially impact the success of the project					
30	A strategic response plan is in place to address risks effectively. (Example: mitigation, avoidance, transfer or acceptance)					
31	did the risk response taken contribute on the success of project					
Project risk monitoring and control		**1**	**2**	**3**	**4**	**5**
32	Project risk is monitored and controlled well in the project					
33	An effectively designed strategy was implemented within the project to monitor and control the risks that have an impact on the project					
34	To what extent do you believe that risk monitoring and control contribute to the success of a project?					

Questionnaire was adapted and modified from related research studies (Kuma, 2018).

Appendix B

Table B- 1 Level of agreement on Risk management planning

Risk Management Planning	SD	D	N	A	SA
The implementation of risk management planning occurred prior to the initiation of the project	-	1 1.8%	15 26.8%	34 60.7%	6 10.7%
The process of risk management planning includes the active participation of relevant stakeholders	-	3 5.4%	25 44.6%	27 48.2%	1 1.8%
During the risk planning phase, careful consideration is given to environmental factors	-	1 1.8%	13 23.2%	32 57.1%	10 17.9%
The risk management planning in your project effectively communicates the planned actions to be taken	-	1 1.8%	9 16.1%	38 67.9%	8 14.3%
To what degree do you concur that the success of projects is influenced by the implementation of effective risk planning at the project's inception?	-	1 1.8%	13 23.2%	32 57.1%	10 17.9%

Table B- 2 Level of agreement on Risk Identification

Risk Identification	SD	D	N	A	SA
The project team has identified the potential risks that could occur during the construction	-	-	10 17.9%	41 73.2%	5 8.9%
The identified risk have been classified based on the impact and likelihood of happening	-	-	19 33.9%	33 58.9%	4 7.1%
The project team possesses a risk management plan to address and manage risks encountered during the project	-	1 1.8%	21 37.5%	30 53.6%	4 7.1%
Do you think that risk identification contributes to the success of the project?	-	-	6 10.7%	28 50.0%	22 39.3%
The project team has established communication mechanisms to keep stakeholders informed of identified risks and management	-	-	16 28.6%	31 55.4%	9 16.1%

Table B- 3 Level of agreement on Risk Analysis

Risk Analysis	SD	D	N	A	SA
Risks undergo a formal analysis that considers their probability of occurrence and the potential impact they may have on the overall success of the project.	-	-	12 21.4%	41 73.2%	3 5.4%
The effects of identified risks were promptly assessed to gauge their potential impact on the success of the project.	-	-	12 21.4%	41 73.2%	3 5.4%
After conducting a risk assessment, the project documents and risk register are promptly updated to reflect the identified risks that may occur	-	-	16 28.6%	37 66.1%	3 5.4%
To what degree do you agree with the assertion that effective risk analysis plays a role in contributing to the success of a project?	-	-	6 10.7%	19 33.9%	31 55.4%

Table B- 4 Level of agreement on risk response

Risk Response	SD	D	N	A	SA
A well-developed strategy was established within the project to effectively respond to risks that could potentially impact the success of the project	-	-	17 30.4%	34 60.7%	5 8.9%
A strategic response plan is in place to address risks effectively. (Example: mitigation, avoidance, transfer or acceptance)	-	-	19 33.9%	33 58.9%	4 7.1%
did the risk response taken contribute on the success of project	-	-	3 5.4%	40 71.4%	13 23.2%

Table B- 5 Level of agreement on Risk monitoring and control

Risk Monitoring and Control	SD	D	N	A	SA
An effectively designed strategy was implemented within the project to monitor and control the risks that have an impact on the project	-	-	16 28.6%	37 66.1%	3 5.4%
Project risk is monitored and controlled well in the project	-	-	12 21.4%	41 73.2%	3 5.4%
To what extent do you believe that risk monitoring and control contribute to the success of a project?	-	-	6 10.7%	19 33.9%	31 55.4%

Table B- 6 Level of agreement for Project success

Project Success	SD	D	N	A	SA
The project is implemented within the scheduled time	-	2 3.6%	25 44.6%	22 39.3%	7 12.5%
The project is implemented within the estimated budget	-	10 17.9	25 44.6%	18 32.1%	3 5.4%
The project is implemented within the specified quality	-	-	4 7.1%	30 53.6%	22 39.3%
The project is efficiently managed	-	-	14 25%	29 51.8%	13 23.2%
Client and project teams needs were satisfied in relation to the project management	-	2 3.6%	20 35.7%	27 48.2%	7 12.5%
The project meet the project owners strategic organizational objectives (project goal)	-	-	13 23.2%	31 55.4%	12 21.4%
Project purpose was meet	-	-	3 5.4%	33 58.9%	20 35.7%
Satisfaction of stakeholders needs were meet in relation to the end result	-	-	5 8.9%	34 60.7%	17 30.4%

Table B- 7 Relative importance index

Variable	SD	D	N	A	SA	total	weight	RII
RMP								
1		1	15	34	6	56	213	0.760714
2		3	25	27	1	56	194	0.692857
3		1	13	32	10	56	219	0.782143
4		1	9	38	8	56	221	0.789286
5		1	13	32	10	56	219	0.782143
RI								
1			10	41	5	56	219	0.782143
2			19	33	4	56	209	0.746429
3		1	21	30	4	56	205	0.732143
4			6	28	22	56	240	0.857143
5			16	31	9	56	217	0.775
RA								
1			12	41	3	56	215	0.767857
2			12	41	3	56	215	0.767857
3			16	37	3	56	211	0.753571
4			6	19	31	56	249	0.889286
RR								
1			17	34	5	56	212	0.757143
2			19	33	4	56	209	0.746429
3			3	40	13	56	234	0.835714
RMC								
1			16	37	3	56	211	0.753571
2			12	41	3	56	215	0.767857
3			6	19	31	56	249	0.889286
PS								
1		2	25	22	7	56	202	0.721429
2		10	25	18	3	56	182	0.65
3			4	30	22	56	242	0.864286
4			14	29	13	56	223	0.796429
5		2	20	27	7	56	207	0.739286
6			13	31	12	56	223	0.796429
7			3	33	20	56	241	0.860714
8			5	34	17	56	236	0.842857