



ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

PRACTICE OF PROJECT RISK MANAGEMENT IN NIB INTERNATIONAL BANK: THE CASE OF  
HEAD QUARTER AND HAWASSA BUILDING PROJECTS.

BY

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JUNE, 2018

ADDIS ABABA, ETHIOPIA

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## **DECLARATION**

I, the undersigned, declare that this study entitled “Practice of project risk management in Nib International Bank: the case of Head quarter and Hawassa building projects”. Is my original work and has not been presented for a degree in any other university, and that all sources of materials used for the study have been duly acknowledged.

Declared by:

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## **Abbreviations**

**HQ-** Head Quarter

**NIB-** Nib International Bank S.C

**RMP-**Risk Management Plan

**RMI-** Risk management index

**PMBOK-** Project Management Body of Knowledge

**PMI-**ProjectManagementInstitute

## TABLE OF CONTENT

Acknowledgement.....	i
Abbreviation.....	ii
Table of Content.....	iii
List of table.....	vi
Abstract.....	vii

### CHAPTER ONE ..... 1

#### INTRODUCTION..... 1

1.1 Background of the Study..... 1

1.2 Statement of the Problem ..... 2

1.3 Objective of the Study ..... 3

1.3.1 General objective ..... 3

1.3.2 Specific objective ..... 3

1.4 Research question..... 3

1.5 Significance of the study ..... 3

1.6 Scope and Limitation ..... 4

1.7 Definition of Terms ..... 4

1.8 Organization of the paper ..... 5

#### Chapter Two..... 6

#### Review of Related Literature ..... 6

2.1 Risk..... 6

2.2 Project Risk Management ..... 6

2.3 Risk Management Process .....	7
2.3.1 Risk Planning.....	7
2.3.2 Risk Identification .....	8
2.3.3 Risk Analysis.....	8
2.3.4 Risk Response.....	10
2.3.5 Monitoring and Controlling.....	11
2.4 Project Risk Management and project management .....	11
2.6 Risk in Construction Projects.....	12
2.7 Importance of project risk management.....	14
2.8 Conceptual Framework .....	14
<b>CHAPTER THREE.....</b>	<b>15</b>
<b>RESEARCH DESIGN AND METHODOLOGY .....</b>	<b>15</b>
3.1 Research Design and Approach .....	15
3.2 Type and Source of Data.....	15
3.3 Sampling Design .....	16
3.4 Sampling Technique.....	16
3.5 Target Population and Sample Size .....	16
3.6 Data Analysis .....	17
3.7 Validity and Reliability .....	17
<b>CHAPTER FOUR.....</b>	<b>18</b>
<b>DATA ANALYSIS AND PRESENTATION.....</b>	<b>18</b>
4.1 Response Rate .....	18
<b>CHAPTER FIVE .....</b>	<b>36</b>



<b>FINDINGS, CONCLUSIONS AND RECOMMENDATIONS</b> .....	36
5.1 Summary of Major Findings .....	36
5.2 Conclusions .....	38
5.3 Recommendations .....	39
REFERENCE.....	40
APPENDIX I.....	42
PART I: Background Information.....	43
PART II What do you know about risk management in general .....	43
Part III Methods of risk analysis .....	46
APPENDEX II; INTERVIEW.....	49

## List of Tables

TABLE 2.1 Some difference of risk and uncertainty according to different Authors

TABLE 3.1 Reliability Statistics

TABEL 3.2 No of Man Power in to projects

TABLE 4.1 Biographic Information of Respondents

TABLE 4.2 Respondents job Title

TABLE 4.3 General Knowledge of a Team about Risk Management and its Process

TABLE4. 4 General Risk Practices of Projects

TABLE 4.5 Risk Planning

TABLE 4.6 Risk Identification

TABLE 4.7 Methods of Prioritization and Risk Identification

TABLE 4.8 Risk Analyses

TABLE 4.9 Methods of Risk Analysis

TABLE 4.10 Risk Response

TABLE 4.11 Monitor and Control

## **Abstract**

Today many organizations are working in projects and in order for a project to be successful, project risk management is an essential part of project management. This study tries to identify the practice of project risk management in NIB Head Quarter and Hawassa Building projects.

The researcher has used descriptive

research method. The data collection tools were questionnaires and administrative interview. The sample size of the study was 42 individuals who were selected through purposive sampling. The response rate was 85.7%. the finding of the study showed there is a policy or guideline that is designed as to how to manage risks in the projects. Standard risk management process also does exist within the project. However, relevant stakeholders are not involved the planning process of the projects, and thorough planning is not performed further, the finding reveled that risk identification and analysis is performed for the projects and it is done based on expert

Judgment. Team members take into consideration factors such as resource, schedule and budget while responding to risks that occur and that might occur. There is a well-defined strategy that guides on how to respond to risks within the project. The practice of monitoring and control risks is applied within the projects by the team members without giving due attention to the goals and objectives that the projects aim to reach. Generally, the outcome of the research confirmed that risk management practice is implemented to some extent but there is a gap between the theory of project risk management which should be applied and the actual practice that is performed by the two building projects. Therefore, possible recommendations are outlined at the end of this project work on what actions should be taken to improve this practice.

*Key words: project management, Risk management, Risk management practice, and risk factors*

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

According to the project management Institute PMI (2009), project risk management is one of the nine project knowledge areas. All projects are unique in nature One project may vary from another project in terms of objective, schedule, budget, location, resource etc. One thing that is common in every project is that, all projects are subject to risk of one kind or another Robert and Wallace, (2004). Risk is an event that we all encounter

in our day to day live and is a situation that is associated with uncertainties Raymond (2005). Similarly, every situation that occurs in a given project cannot be known with complete certainty and every project encounters different type of risk. These uncertainties that arise in projects must be managed to enable the project get to where it wants to go and to avoid drawback and surprises along the way.

Applying principles of risk management supports the quality improvement and improves cost estimation by identifying and mitigating potential risks before a project begins. Risk management puts processes in place to ensure management receives organized risk information early enough to apply corrective actions that will allow realistic schedule and cost estimates and assure successful completion of the project (Tinnirello, 2000). Risk management principles increase team involvement by providing a mechanism for the reporting of potential problems and increasing the team's stake in the overall success of the project. The embedding of risk is a long-term exercise to ensure that risk consideration is at the heart of the decision-making process (Hodge, 2002). Failure to appreciate risk issues may give rise to serious consequences (Fraser & Henry, 2007).

Risk management has become a timely issue widely discussed across industries. However with regard to the construction industry, risk management is not commonly used Gray (2005). More construction companies are still not using models and techniques aimed for managing risks. This contradicts the fact that the industry is trying to be more cost and time efficient as well as have more control over projects. Risk is associated to any project regardless the industry and thus risk management should be of interest to any project manager. Risks differ between projects due to the fact that every project is unique, especially in the construction industry Gould and Joyce,(2002). However there are still many

professionals that have not realized the importance of including risk management in the process of delivering the project (Barry Benator, 2011).

## **1.2 Statement of the Problem**

All projects are associated with risk. The definition of risk used in this thesis is the one proposed by the Project Management Institute (PMI) (2013) as it considers both negative and positive aspects of risk; —an uncertain event or condition that, if it occurs, has a positive or negative effect on one or more project objectives such as scope, schedule, cost, and quality. Risk that is not given due attention or that is not managed well, can affect project objectives, cost, time, scope and even quality. This might lead to schedule expansion and even total project failure. Therefore, appropriate risk management process must be implemented within a project to achieve the final objective of the project.

Notably, projects are products of change implementation. However, every project is unique; The construction industry more than other sectors, is overcome with risks. Norman (1999) The industry is highly risk prone, with complex and dynamic project environments creating an atmosphere of high uncertainty and risk. The industry is vulnerable to various technical, socio-political and business risks. Deviprasad (2007) further stated that too often this risk is not dealt with satisfactorily and the industry has suffered poor performance as a result.

According to D.Cooper (2005) risks can be managed, minimized, shared, transferred or accepted but it cannot be ignored. It's common to see risks are dealt with on an emergency basis rather than being prepared for in a planned and measured manner. Different projects seem to identify and analyze risk in a random way than in an organized and systematic way. Many projects don't seem to make risk management as part of their project management plan too. From the articles and researches done by different practitioners we can see the importance of risk management in projects but there seems to be a problem in the approach projects are managing risk.

In the case of our country, lots of different projects are undertaking. It is also common to observe these projects achieving their objective or else see those facing difficulty in meeting schedule, cost and quality set at the beginning. According to a research done by Yimam (2014), the risk management maturity survey indicates that practically there is little or no risk management in Ethiopian projects. This shows that, risk management approach is not widely used. Therefore, this study will try to address the gap between theory of project risk management and the actual practice by focusing on NIB Head Quarter and Hawassa Buildign Projects.

Furthermore, regarding the topic of the study, no research has been done which focused primarily on the management of uncertainty and risk that are related to these construction projects. Thus, this research is undertaken to contribute, by knowing the current practice in the study's knowledge area and to identify the gap from the theory of project risk management.

### **1.3 Objective of the Study**

#### **1.3.1 General objective**

- The general objective of the study is to critically assess and identify project risk management practices of Nib International Bank Head Quarter and Hawassa Building projects.

#### **1.3.2 Specific objective**

- To identify if there is risk management plan in the projects.
- Identifying the risk management plans are practically in use
- To assess how the risks are identified and methods used to identify risk in the projects.
- To assess methods of risk analysis.
- To identify the options used to respond to risks that occur in the projects.
- To identify if risk monitoring and controlling mechanism is applied in the projects.

### **1.4 Research question**

1. How are risks and risk management processes practiced in NIB Head Quarter and Hawassa Building projects?
2. What are the risk management processes and how did they affect the project

### **1.5 Significance of the study**

The importance of this research stems from the essence of risk management itself, for the reason that risk management has been identified as one of the most important tools in determining any project success. The results of the study also provided an understanding on how to identify, analyze and manage risk to project employees. As a result, this research will drive the attention to the importance of a high level of awareness to risk management problems. In addition, studying risk management is important because most of projects are operating in a very dynamic and rapidly changing environment not always fixed circumstances and uncertainty factors are surrounding the firm, in such environment adopting changes very quickly is a must for the project overall to grow or even survive. Adopting overall project changes can't be applicable without the management ability to adapt model

in risk management and make the new changes. Accordingly, the results of this research may help the managers to better evaluate the risks around them and better respond to these risks, and present them methods that may enhances their projects risk management. In general the research study will attempt to provide better and effective risk management methods and processed it will also find possible solutions that is deemed to improve risk management planning and methods.

## **1.6 Scope and Limitation**

Due to the constraints of time, budget and complexity of the work the researcher selected only two projects of NIB which are Head Quarter and Hawassa Building Projects out of many ongoing building projects. currently which may be viewed as a restriction that limits the generalization of the result and also the scope of the study is delimited on one of the Project management Knowledge area out of the ten project knowledge areas which is only Project risk management. The limitation faced during the period of the research was lack of giving adequate time and attention by the respondents to fill in the questionnaires and return.

## **1.7 Definition of Terms**

**Risk:** Lack of knowledge of future events

**Uncertainty:** A situation in which a number of possibilities exists and which of them has occurred.

**Risk Planning:** is the systematic process of deciding how to approach, plan, and execute risk management activities

**Risk identification:** list risks which have potential to create problems

**Risk analyze:** deals with the cause and effects of events which cause have

**Risk Response:** Risk response planning is concerned with developing strategies to cope with risk events.

**Risk Control:** to prevent, to reduce the risks.

## **1.8 Organization of the paper**

The study organized under the five chapters. The First chapter deals with the introduction of the study which contains the background, statement of the problem, basic research questions, and objectives of the study, definition of terms, and significance of the study and delimitation of the study. The Second chapter deals with the review of related literature. The Third chapter presented methods of the study which described the type and design of the research, the source of data, the data collection tools and the methods of data analysis used. The Fourth chapter comes up with the results and discussion that summarize the findings and results of the study. The Fifth chapter presented the summary, conclusions and recommendations.



## Chapter Two

### Review of Related Literature

#### 2.1 Risk

In dictionary definition risk means the possibility of occurring misfortune or loss. An uncertain event or condition that, if it occurs, has an effect on at least one project objective.(Collins English dictionary, 1986).

According to Kerzner (2009), risk constitutes a lack of knowledge of future events. Typically, future events (or outcomes) that are favorable are called opportunities, whereas unfavorable events are called risks. Risk has two primary components for a given event a probability of occurrence of that event and Impact of the event occurring.

An effect is a deviation from the expected positive and/or negative; objectives can have different aspects (such as financial, health and safety, and environmental goals) and can apply at different levels (such as strategic, organization-wide, project, product and process)

Risk is not fate but a choice (Bernstein, 1996). All choices in life involve risk, and risk stems from uncertainty, which in turn is caused by a lack of information, knowledge or experience (Jannadi and Almishari, 2003). It was during the Renaissance when the study of risk started and since that time people and institutes have proposed various definitions for risk, some of which have been discussed below. However before discussing risk, it is required to define some other terms which may sometimes be used interchangeably: uncertainty, hazard, and vulnerability.

#### 2.2 Project Risk Management

According to PMI (2004) project risk is an uncertain event or condition that, if it occurs, has a positive or a negative effect on a project's objective. Project risk is the possible outcome that planned events on the project will not occur as planned or that unplanned events will occur that will have a negative impact of the project. The objectives of Project Risk Management are to increase the probability and impact of positive events, and decrease the probability and impact of negative events in the project (PMI, 2004)The definition of the term risk is by Hillson (2004,) defined as: —A risk is an event where the set of possible outcomes is known, and the probability of obtaining each outcome can be measured or estimated, but the Project risk management is the art and science of identifying, analyzing, and responding to risk throughout the life of a project and in the best interests of meeting project objectives. Project risk

management involves understanding potential problems that might occur on the project and how they might impede project success. (Pimchangthong and Boonjing, 2016)

Project Risk Management aims to identify and prioritize risks in advance of their occurrence, and provide action-oriented information to project managers. This orientation requires consideration of events that may or may not occur and are therefore described in terms of likelihood or probability of occurrence in addition to other dimensions such as their impact on objective (PMI, 2009)

Project Risk Management is not an optional activity: it is essential to successful project management. It should be applied to all projects and hence be included in project plans and operational documents. In this way, it becomes an integral part of every aspect of managing the project, in every phase and in every process group.

## **2.3 Risk Management Process**

Risk management process is the strategy of a project it enables to develop the structure of risk management. It helps us away out to execute the risk management process and also it helps to connect the project risk management with all other project management activities. Project risk management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project (PMI, 2013).

### **2.3.1 Risk Planning**

According A written Risk Management Plan is not required for all projects. It depends on the project size and complexity and the amount of risk management effort that will be required. The project manager and the PDT may decide if it is necessary.

Risk management planning is the systematic process of deciding how to approach, plan, and execute risk management activities throughout the life of a project. It is intended to maximize the beneficial outcome of the opportunities and minimize or eliminate the consequences of adverse risk events. The process involves a systematic approach to planning the risk management activity based on the premise that careful planning enhances the possibility of project success (Richardson, 2015). The key benefit of this process is it ensures that the degree, type, and visibility of risk management are proportionate with both the risks and the importance of the project to the organization. The risk management plan is vital to communicate with and obtain agreement and support from all stakeholders to ensure the risk management process is supported and performed effectively over the project life cycle (PMI, 2013). The other important aspect of risk planning is providing risk management training to project personnel. It is

important that risk management training be performed by individuals, whether inside or outside the project, with substantial real world experience in making risk management work on actual projects (Kerzner, 2009).

### **2.3.2 Risk Identification**

Risk identification determines what might happen that could affect the objective of the project and how those things might happen (Gray, 2005). It is an iterative process because new risks may become known as the project progress through its life cycle previously identified risks may drop out and other risks may be updated. It helps to develop a detailed checklist of potential risks based on the experience of several large construction companies executing major construction projects. These checklists can be helpful to the project manager and project team in identifying both specific risks on the checklist and expanding the thinking of the team. The past experience of the project team, project experience within the company, and experts in the industry can be valuable sources for identifying potential risk on a project. All identified risks are recorded. Ideally, a risk owner is designated for each identified risk. It is the responsibility of the risk owner to manage the corresponding risk through all of the subsequent Project Risk Management processes. The initiation point for this process is a clear definition of the project objectives. There are some tools and techniques which may be used in identification process such as checklists, brainstorming sessions, stakeholder discussions, review of historical records related to other similar projects, cold eyes reviews, collecting historical information available, strengths, weaknesses, opportunities, and threats (SWOT) analysis. Risk register, containing the risk ID, risk description, estimated impacts, risk probability, and risk score is the output of the risk identification process (Adams, 2008).

### **2.3.3 Risk Analysis**

Risk analysis is the second stage in the RMP where collected data about the potential risk are analyzed. Risk analysis can be described as short listing risks with the highest impact on the project, out of all threats mentioned in the identification phase Cooper et al. (2005). Although some researchers distinguish between terms risk assessment and risk analysis and describe them as two separate processes, for the purpose of this paper, this part of RMP will be consistent with the model provided by Smith et al. (2006) and described as one process. In the analysis of the identified risk, two categories of methods - qualitative and quantitative - have been developed. The qualitative methods are most applicable when risks can be placed somewhere on a descriptive scale from high to low level. The quantitative methods are used to determine the probability and impact of the risks identified and are based on numeric estimations Winch, (2002).

### **2.3.3.1 Qualitative Risk Analysis**

Qualitative methods for risk assessment are based on descriptive scales, and are used for describing the likelihood and impact of a risk. The Perform Qualitative Risk Analysis process assesses and evaluates characteristics of individually identified project risks and prioritizes risks based on agreed-upon characteristics. Assessing individual risks using qualitative risk analysis evaluates the probability that each risk will occur and the effect of each individual risk on the project objectives. As such it does not directly address the overall risk to project objectives that results from the combined effect of all risks and their potential interactions with each other. This can however be achieved through use of quantitative risk analysis techniques. One step in the analysis is to categorize risks according to their sources or causes. If several risks arise from a common source, sometimes called a root cause, risk responses may be more effective when they focus on addressing this root cause.

### **2.3.3.2 Quantitative Risk Analysis**

They are more suitable for medium and large projects due to the number of required resources such as complex software and skilled personnel (Heldman, 2005). The Perform Quantitative Risk Analysis process

provides a numerical estimate of the overall effect of risk on the objectives of the project, based on current plans and information, when considering risks simultaneously. Results from this type of analysis can be used to evaluate the likelihood of success in achieving project objectives and to estimate contingency reserves, usually for time and cost that are appropriate to both the risks and the risk tolerance of project stakeholders.

It is generally accepted that analyzing uncertainty in the project using quantitative techniques such as Monte Carlo simulation may provide more realism in the estimate of the overall project cost or schedule than a non-probabilistic approach which assumes that the activity durations or line-item cost estimates are deterministic. However it should be recognized that quantitative risk analysis is not always required or appropriate for all projects. For example, qualitative risk analysis may provide enough information for development of effective risk responses, especially for smaller projects. Therefore, during the Plan Risk Management process, the benefits of quantitative risk analysis should be weighed against the effort required to ensure that the additional insights and value justify the additional effort.

## **2.3.4 Risk Response**

RMP indicates what action should be taken towards the identified risks and threats. The response strategy and approach chosen depend on the kind of risks concerned (Winch, 2002). Other requirements are that the risk needs to have a supervisor to monitor the development of the response, which will be agreed by the actors involved in this risk management process. (PMI, 2004).

Winch (2002) claims that the lower impact the risk has, the better it can be managed. Most common strategies for risk response are: avoidance, reduction, transfer and retention (Potts,2008). Beyond those types of responses, Winch (2002) describes that sometimes it is difficult to take a decision based on too little information. This may be avoided by waiting until the appropriate information is available in order to deal with the risk. This way of acting is called „Delay the decision“ but this approach is not appropriate in all situations, especially when handling critical risks. Those need to be managed earlier in the process.

### **2.3.3.1 Risk Response Strategies**

The project manager should develop risk response strategies for individual risks, sets of risks, and project level risks PMI(2009). The affected stakeholders should be involved in determining the strategies. Once the strategies have been selected, they need to be agreed upon by the entity that approves those strategies. There are four strategies which address individual risks for threats and opportunities.

**Avoid a Threat or Exploit an Opportunity:** This strategy involves taking the actions required to address a threat or an opportunity in order to ensure either that the threat cannot occur or can have no effect on the project, or that the opportunity will occur and the project will be able to take advantage of it.

**Transfer a Threat or Share an Opportunity:** This strategy entails transference to a third party that is better positioned to address a particular threat or opportunity.

**Mitigate a Threat or Enhance an Opportunity:** Mitigation and enhancement are the most widely applicable and widely used response strategies. Here, the approach is to identify actions that will decrease the probability and/or the impact of a threat, and increase the probability and/or the impact of an opportunity.

Accept a Threat or an Opportunity: This strategy applies when the other strategies are not considered applicable or feasible. Acceptance entails taking no action unless the risk actually occurs, in which case contingency or fallback plans may be developed ahead of time, to be implemented if the risk presents itself.

### **2.3.5. Risk Monitoring and Controlling**

This final step of RMP is vital since all information about the identified risks is collected and monitored (Winch, 2002). The continuous supervision over the RMP helps to discover new risks, keep track of identified risks and eliminate past risks from the risk assessment and project (PMI, 2004). PMI (2004) also states that the assumptions for monitoring and controlling are to supervise the status of the risks and take corrective actions if needed. Tools and techniques used to risk monitor and control may be (PMI, 2004):

Risk reassessment identification of new potential risks. This is a constantly repeated process throughout the whole project.

Monitoring of the overall project status are there any changes in the project that can effect and cause new possible risks?

Status meetings discussions with risks owner, share experience and helping managing the risks.

### **Risk register updates**

By managing the whole RMP, the process can be evaluated. This is a method of creating a risk register where all risks and their management can be allocated in order to facilitate future projects (PMI, 2004). This is also a way to improve the project work, since the advantages and disadvantages will be brought up.

## **2.4 Project Risk Management and project management**

All projects are uncertain. Uncertainty is inevitable since projects are unique and temporary undertakings based on assumptions and constraints, delivering project results to multiple stakeholders with different requirements. Project management can be seen as an attempt to control this uncertain environment, through the use of structured and disciplined techniques such as estimating, planning, cost control, task allocation, earned value analysis, monitoring and review meetings, etc. Each of these elements of project management has a role in defining or controlling the uncertainty which is inherent in all projects.

Project risk management provides an approach by which uncertainty can be understood, assessed, and managed within projects. As such it forms an integral part of project management, and effective Project Risk Management is a critical success factor for project success. For project management to be fully effective, however, it is important that Project Risk Management is not viewed as an optional process or performed as an additional overhead task. Since many elements of project management address inherent uncertainty, the interface between structured Project Risk Management and the other processes of project management needs to be clear. The outputs of Project Risk Management should be taken into account within many of the project management processes.

## **2.6 Risk in Construction Projects**

“No construction project is risk free. Risk can be managed, minimized, shared, transferred, or accepted. It cannot be ignored”. (Latham, 1994)

Due to the nature of the construction sector, RM is a very important process here. It is most widely used in those projects which include high level of uncertainty. These types of risk investments are characterized by more formal planning, monitor and control processes. Construction is one of the most dynamic, risky, and challenging industries which has both a project-based and multi-organizational nature (Mills, 2001). Due to construction projects’ complexity and uniqueness, not only does the number of risks present invariably go beyond those found in other industries but the risks also change from one construction project to the next (Panthi et al., 2009).

Risk is an inevitable phenomenon in an industry as dynamic as construction, irrespective of the size of the project. It is subject to more risks because of distinctive characteristics of construction such as financial intensity, complex procedures, lengthy duration, offensive environment and dynamic a arrangements of organizations. Many other factors affect the level of risk including situation of market, level of competition, size of the project, political and economic variations, expertise of parties (Flanagan and Norman, 1993; Akintoye and MacLeod, 1997; Smith, 2003) (PMI, 2004)

These risks are distributed through the entire project life cycle and some of the risks may happen at more than one phase. There are arguments regarding the degree of risk in different phases of a construction project. Hayes et al. (1986) and Godfrey (1996) believe that the greatest degree of risk

exist in the earliest phase of the project when available information about the project is the least. This is in agreement with other people such as Chapman and Ward (1997) and Hassanein and Afify (2007) who have stated that risk is at its peak in the conceptual phase. However, it is in contrast with Zou et al. (2006) who consider the construction phase to be more risky phase than the feasibility (conceptual) phase. In addition to these, there are other theorists believing that risks of construction projects increase as the project progresses and this illustrates that each phase of the construction project includes more risks than the previous one (Wang et al, 2004).

However, the student researcher considers that this greatly depends on the type of the project, type of the contract and even type of the risks (the risks which are getting compared) that determine which phase may include more risks (especially since some risks may occur in more than one stage). Otherwise, this is not something precise and absolute to be measured, ranked and then allocated to different phases of the construction project for comparison.

Risk has also been broadly categorized as either subjective or objective. Subjective risk are the ones which are analyzed based on the experience and knowledge of the analyst (qualitative), whereas objective risks are analyzed by calculation of their impact and likelihood (quantitative) Admas (2008) believes that most of the construction project's risks are subjective because there are not sufficient historical data for their qualitative analysis and should be analyzed according to analysts judgment. Risks can be further subcategorized into smaller groups according to their type and impact. Examples are risk classifications of Wiguna and Scott (2006) into four categories: economic and financial risks, external and site condition risks, technical and contractual risks, and managerial risks; and the PMI (2004)'s one into another four categories: Technical risks, organizational risks, project risks and external risks (TOPE risks). As discussed earlier, similarities can be recognized in different classifications such as technical risks or external risks being presented in both of the recent examples.

Projects are unique and often complex involving a wide of resources, including people, finance and facilities. The unclear path ahead for the project is confusing for many organizations and many are looking to find for a solution. According to Hillson (2004) many are looking for a solution to this problem, wondering whether it is possible to find a safe path through the fog of an uncertain future. One way to achieve control and manage this uncertainty is through project risk management.



## 2.7 Importance of project risk management

- Project risk management delivers a number of values to the project, including:
- Recognizes uncertainty and provides forecasts of possible outcomes.
- Produces better business outcomes through more informed decision making.
- Has a positive influence on creative thinking and innovation.
- Creates better project control—reduces overhead and time, and enhances benefits.
- Contributes to project success (PMI, 2004)

## 2.8 Conceptual Framework



## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Research Design and Approach**

Based on the “purpose of research” dimension, there are at least three classes of research designs (most widely used) exploratory, descriptive and explanatory research designs the research design that is applied for this study is descriptive research design (Kenneth, 2013). It Concerned with describing the characteristics of a particular individual, or of a group, whereas diagnostic research studies determine the frequency with which something occurs or its association with something As the major purpose of descriptive research is description of the state of affairs as it exists at present (Kothari, 2004).

The research also adopted combination of both qualitative and quantitative research design in order to gain more insight regarding the study area. Therefore, this study tried to describe the practice of project risk management at NIB Head Quarter and Hawassa Building Projects.

#### **3.2 Type and Source of Data**

According to Hatt,( 2006) there are two types of data, primary and secondary. The primary data are those which are collected a fresh and for the first time, and thus happen to be original in character. Secondary data are defined as data that have been previously collected for some purpose other than the one at hand. For the purpose of this study in order to obtain relevant information both primary and secondary data are used as a source.

Close ended questionnaire and administrative interview are the tools implemented by the student researcher to collect all the necessary primary data through purposive sampling. Secondary data were collected through published works, the organization annual report and related articles that contribute to better understanding of the research topic.

### **3.3 Sampling Design**

According to Cooper, (2008) Non-Probability Sampling Technique items for the sample are selected deliberately by the researcher his choice concerning the items remains supreme. Therefore, The researcher used Non- probability sampling technique and from various types of non-probability sampling techniques purposive or judgmental sampling were in use because of the entire population has a particular set of characteristics, knowledge or experience e.tc. As Saunders et.al, (2009). It was required for the research will be selected based on their convenience to the research topic.

### **3.4 Sampling Technique**

As the numbers of respondents were limited who are appropriate and who have the expertise in the area being studied, the technique that was used in this research was purposive sampling from various types of purposive sampling Expert sampling were chosen This is used when your research needs to obtain information from individuals that have particular expertise. According to Saunders et.al (2009), purposive or judgmental form of sampling is often used when working with very small samples. This form of sampling enables to use judgment to select cases that will best enable to answer research question(s) and to meet the objectives. Similarly, Singh (2006), states that the idea of purposive sampling is to pick out the sample in relation to some criterion, which are considered important for the particular study. It involves the selection of a group from the population on the basis of available information.

### **3.5 Target Population and Sample Size**

As the purpose of this study is to describe the practice of project risk management at NIB head quarter and Hawassa building projects the target population of the study were the total population of skilled man power of the projects. According to April man power data 128 and 97 daily labor 88 and 57 Semi skilled labor and 21 and 15 Skilled Labor for Head quarter and Hawassa projects respectively and there are also 6 employees in the banks project office. the sample size of the research was selected through purposive sampling technique to select who are appropriate for the research and the sample size for the study are 42 individuals.

**TABEL 3.2 No of Man Power in to projects**

No	Projects Name	No of skilled Labor	No of Semiskilled Labor	No of daily Labor	Total	Sample size
1	NIB Project Office	6	0	1	7	6
2	NIB Head Quarter Building Projects	21	88	128	234	18
3	Hawassa Building Projects	15	57	97	167	13

### **3.6 Data Analysis**

The data were collected through different methods of data collection mechanism as mentioned above from that the questionnaire was analyzed using descriptive statistics of SPSS software version 25.0 to present the collected data in frequency, percentage, tables and charts. The data collected through interview was analyzed by combining and summarizing the results.

### **3.7 Validity and Reliability**

Validity is the principle that is used to judge the quality of the research (Goode, 2006). Reliability is concerned with demonstrating that the research procedures can be repeated with the same results. Reliability has to do with the accuracy and precision of a measurement procedure. Therefore, to ensure the validity of the data the research used reliable sources such as published books and recent articles written by different authors in the area of project risk management. Questionnaire that is close ended and an interview that is semi structured was developed so that the results of the data can be easily comparable.

The questionnaires reliability was checked by the Cronbach\_s-Alpha test coefficient using SPSS software according to Cronbach's alpha coefficient if the result becomes for a score of over .7 for high internal consistency and the gained result was .869 Therefore, based on the test, the results for the items are reliable and acceptable.

## CHAPTER FOUR

### DATA ANALYSIS AND PRESENTATION

This chapter deals with presentation, analysis and interpretation which were collected from respondents. To analyze the collected data in line with the overall objective of the research, statistical procedures were carried out using SPSS 25.0 software. To determine the actual practice of project risk management at NIB Head Quarter and Hawassa Building projects the researcher has collected the data through questionnaire and interview.

#### 4.1 Response Rate

The primary data that was collected through questionnaire consisted of 32 close ended items which was distributed to 42 individuals who are part of the project team and individuals participating in the projects to gather responses. An interview was also held with the project managers of Head Quarter and Hawassa Projects as a source of primary data. The response rate among the sample size of 42 participants of the projects, 36 questionnaires were properly completed and returned. Here below the data that was collected with its analysis and interpretation is presented.

**TABLE 4.1 Background Information of Respondents**

No	Variable	Frequency	Percentage	Valid percentage	Cumulative percentage
1	<b>Level of education</b>				
	Diploma	4	11.1	11.1	11.1
	BA/BSC	26	72.7	72.7	83.8
	MA/MSC	6	16.7	16.7	100
	Total	36	100	100	
2	<b>Respondents Total Years of experience</b>				
	Below 1 Year	0	0	0	0
	1-5 years	17	47.2	47.2	47.2
	6-10 years	5	13.9	13.9	61.1
	11 and above	14	38.9	38.9	100
	<b>Total</b>	36	100	100	

3	<b>Respondents Years of Experience in the Projects</b>				
	Less than a Year	17	47.2	47.2	47.2
	1-2 Years	15	41.7	41.7	88.9
	2-3 Years	4	11.1	11.1	100
	<b>Total</b>	36	100	100	

**Source; Own Survey, 2018**

The above table discusses the general background of the respondents which is related with the title like level of education, total years of Experience and year of experience in the projects.

Based on the level of education 72.7% of the respondents have BA/BSC Degree 16.7% of the respondents have MA/MSC Degree the remaining 11.1% have DIPLOMA it indicated that respondents have good educational preparation to the job so, it helps to change complexities in work in to simplicities.

The other biography is total years of experience of the respondents 47.2% of the respondents have 1-5 years of experience the other 38.9% have 11 years and above the remaining 13.9% are fall in the range between 6-10 Years. So, it implies that little experienced and more experienced work force together there become skill transferring. However majority of respondents have less than two years of experience into projects.fgfdyhtuturtuutyujyjjghjgretgfdgrfgrdhgryryreyryryryhryhryfyrtyetetettrtr

**TABLE 4.2 Respondents job Title**

	Variables	freq	Percent	Valid Percent	Cumulative Percent
Valid	project Manager	1	2.8	2.8	2.8
	Aide Engineer	1	2.8	2.8	5.6
	Site manager	2	5.6	5.6	11.1
	General Manager	1	2.8	2.8	13.9
	Assistant Site Manager	1	2.8	2.8	16.7
	Quality and Safety Engineer	1	2.8	2.8	19.4
	Quantity Surveyor	1	2.8	2.8	22.2
	Resident Engineer	3	8.3	8.3	30.6
	Structural Engineer	1	2.8	2.8	33.3
	Chief Engineer	1	2.8	2.8	36.1
	Construction Engineer	2	5.6	5.6	41.7
	Sanitary Engineer	1	2.8	2.8	44.4
	Construction Project Manager	1	2.8	2.8	47.2
	Project Auditor	1	2.8	2.8	50.0
	Deputy Project Manager	2	5.6	5.6	55.6
	Civil Engineer	2	5.6	5.6	61.1
	Office Engineer	3	8.3	8.3	69.4
	Structural Engineer	1	2.8	2.8	72.2
Building Engineer	2	5.6	5.6	77.8	

	General Forman	2	5.6	5.6	83.3
	Surveyor	1	2.8	2.8	86.1
	Electrical Engineer	1	2.8	2.8	88.9
	Site Engineer	4	11.1	11.1	100.0
	Total	36	100.0	100.0	

Hear in the above table there is respondent's job title all employees in the table are the skilled man powers in the projects.

**TABLE 4.3 General Knowledge of a Team about Risk Management and its Process**

No	Variables	Frequency	Percentage	Valid percentage	Cumulative percentage
1	Awareness of the project team about the concept of risks and risk management process				
	Yes	29	80.5	80.5%	80.5
	No	7	19.5	19.5%	100
	Total	36	100	100	

**Source; Own Survey, 2018**

As of table 4.3 80.5 % of the respondents have the concept of risk and its process therefore, they represent majority of respondents and it indicates that the respondents have an awareness about risk. And the remaining 19.5 % has an absence of knowledge about risk and its process.

**Table 4. 4 General Risk Practices of Projects**

No	Variables	Frequency	Percentage	Valid percentage	Cumulative percentage	Mean	Grand mean
1	<b>Is there a formal Documented Material to Manage Risks</b>					1.86	2.7
	Yes	29	80.5	80.5	80.5		
	No	7	19.5	19.5	100		



	Total	36	100	100		
2	<b>Is there a policy or guideline that recommend how to manage unexpected risks</b>					2
	Yes	36	100	100	0	
	No	0	0	0	100	
	Total	100	100	100		
3	<b>Responsible person or department is assigned to handle risk when it occurs</b>					1.75
	Strongly. D	12	33.3	33.3	33.3	
	Disagree	21	58.3	58.3	91.7	
	Neutral	3	8.3	8.3	100	
	Agree	0	-	-		
	Strongly A	0	-	-		
	Total	36	100	100		
4	<b>Team members within the project receive training or have enough knowledge about how to handle risk</b>					2.22
	Strongly dis	9	25	25	25	
	Disagree	17	47.2	47.2	72.2	
	Neutral	4	11.11	11.11	83.3	
	Agree	4	11.11	11.11	94.4	
	Strongly A	2	5.5	5.5	100	
	Total	36	100	100		

**Source; Own Survey, 2018**

The overall mean of the above Table 4.4 shows that Grand Mean = (2.7) therefore, it indicates the respondents show consensus regarding with the above four issues and the research analyses each question by their mean M= (3.86) the mean indicates that the projects have a documented material to

manage risks and its process. According to the Majorities of the respondents response there is a formal documented material to manage risks. M= (1.75) the table indicates also it implies that there is no responsible person or department assigned to handle risks as a major task. The other table indicates that M= (2.2) team members of the project didn't take any training related with risk management and its process. And the remaining table shows that M= (3.86) this table show about the effectiveness of the current risk practices in the projects therefore, the respondents indicates that the risk management and its process in the projects said to be effective.

**TABLE 4.5 RISK PLANING**

No	Variables	Frequency	Percentage	Valid percentage	Cumulative percentage	Mean	Grand mean
1	<b>Is there risk planning in documented form</b>						
	Yes	29		100			
	No	7	0	0			
	Total	36					
2	<b>Is there a responsible person or department assigned to handle risk planning?</b>						
	Yes	32	88.9	88.9	88.9		
	No	4	11.1	11.1	100		
	Total	36	100	100			
3	<b>Does the projects have budget planning to manage risks?</b>						
	Yes	31	86.1	86.1	86.1		
	No	5	13.9	13.9	100		
	Total	36	100	100			
4	Were the relevant stakeholders involved in the planning and performing of managing risk?						
	Yes						
	No						
	Total						
5	<b>Expert judgment and meetings considered during planning process</b>					3.31	
	Strongly disagree	0	0	0	0		
	Disagree	3	8.3	8.3	8.3		
	Neutral	8	22.2	22.2	30.5		
	Agree	15	41.7	41.7	72.2		
	Strongly Agree	10	27.8	27.8	100		

	Total	36	100	100			
6	<b>Does risk management plan Incorporated with the project plan</b>					3.58	
	Strongly dis	1	2.8	2.8	2.8		
	Disagree	5	13.9	13.9	16.7		
	Neutral	2	5.6	5.6	22.2		
	Agree	28	77.8	77.8	100		
	Strongly A	0	100	100			
	Total						

**Source; Own Survey, 2018**

The above table analyses about the risk planning of the projects indicates the overall mean of (2.82) it indicates that respondents have positive responses regarding with those risk planning questions. The M= (3.61) there is a formal risk planning on projects and it indicates that the projects fulfill one of the risk management processes. However, there is no responsible person or department assigned to perform risk planning majorly. As of the respondents response relevant stakeholders of the projects also not included in to the risk planning 30.6% and 27.8% of the respondents were strongly disagree and disagree respectively on the other hand 30.6% were agree with relevant stakeholders were involved the remaining were neutral. So, during the risk planning process the major stakeholders weren't involved therefore, there become an absent of proper planning. M=(3.31) it indicates that the team considered expert judgment and meeting to perform risk planning it helps to prepare good plan. The other issue on the above table is budget to manage risk M= (1.78) the mean indicates that the projects have no budget allocated to risk planning particularly. It indicates that the project didn't give due attention to project risk planning because tasks couldn't be performed without budget. The project risk plan is incorporated with the overall project plan as of the majority of respondents view around 80% of the respondents agree with the integration of the project plan and risk management plan the remaining. Therefore, the table indicates that there will be strong bond of integration between the project plan and risk management plan.

**TABLE 4.6 RISK IDENTIFICATION**

No	Variable	Frequency	Percentage	Cumulative(%)	Mean	Grand. M
1	<b>Did the Team Members Play a significant Role in Identify Risk In the Projects</b>					
	No	10	27.8	30.6	3.78	
	Yes	26	72.2	69.4		
				100.0		
	Total	36	100.0			
2	<b>Did projects Identify Risks as Standard Activity</b>					
	No	12	33.3	33.3	3.33	
	yes	24	66.7	66.6		
				100.0		
	Total	36	100			
3	<b>Risk identification takes place throughout each Phase of the Project</b>					
	Disagree	3	8.3	8.3	3.81	
	Neutral	6	16.7	25.0		
	Agree	22	61.1	86.1		
	Strongly Agree	5	13.9	100.0		

	Total	36	100.0			
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**Source Own Survey, 2018**

The above table overall mean is (3.64) and it indicates that respondents have significant role of the team identify major risks on the projects. Risks identify as standard activity and the team identify the projects throughout the project phases until the close out phase of the projects respondents risk identification in the projects it indicates that the risk identification is not one time activity.

**Table 4.7 Methods and Prioritization of Risk Identification**

<b>1</b>	<b>Method used to identify the project risks</b>					
	Brainstorming	5	13.9	13.9	<b>4.1</b>	
	Checklists	10	27.8	41.7		
	Examination of Previous Similar Projects	9	25.0	66.7		
	Specialist Techniques	12	33.3	100.0		
	Total	36	100.0			
<b>2</b>	<b>Prioritize an Identified Risks</b>					
	By Probability and Impact on Specific Objective	13	36.1	36.1	<b>1.64</b>	
	By Probability and Impact on Overall Projects	23	63.9	100.0		
	Total	36	100.0			

Source Own Survey, 2018

The above table illustrates about the methods of risk identification 33.3% of the respondents were identify risks through specialist techniques 27.8% were identified though checklists the other 25% identified through examination of previous similar projects and the remaining 13.9% were by brainstorming. So, it indicates that there are different methods of risk identification.

An identified risks were prioritize through two methods the majority 63.9% of respondents respond that prioritize by probability and impact on overall projects and the remaining 36.1% were by probability and impact on specific objectives.

**TABLE 4.8 RISK ANALYSES**

No	Variable	Frequency	Percentage (%)	Cumulative Percentage	Mean	Grand Mean
1	<b>The Team Identified risks by their Characteristics Before Analyzing</b>					
	Disagree	4	11.1	11.1	3.78	3.45
	Neutral	8	22.2	33.3		
	Agree	16	44.4	77.8		
	Strongly Agree	8	22.2	100.0		
Total	36	100.0				
2	<b>Systematic Risk Analysis</b>					
	Disagree	6	16.7	16.7	3.61	
	Neutral	8	22.2	38.9		
	Agree	16	44.4	83.3		
	Strongly Agree	6	16.7	100		
Total	36	100.0				

3	<b>The Project Team Makes Assessment by Impact on the project and Probability of Occurrence</b>				3.19
	Strongly Disagree	2	5.6	5.6	
	Disagree	6	16.7	22.2	
	Neutral	4	11.1	33.3	
	Agree	24	66.6	100.0	
	Total	36	100.0		
4	<b>Project Documents were Update After Assessment of the Risk</b>				3.25
	Strongly Disagree	2	5.6	5.6	
	Disagree	10	27.8	33.3	
	Neutral	7	19.4	52.8	
	Agree	11	30.6	83.3	
	Strongly Agree	6	16.7	100.0	
Total	36	100.0			

Source Own Survey, 2018

Based on the above table the overall mean is (3.42) so it indicates that respondents have positive reaction regarding with risk analysis of the respondents. As of the respondents response regarding with risk analysis they analyze risks by their character like qualitative and quantitative through systematic risk analysis method 66.6% of the respondents agree with the project team makes an impact assessment for each identified risk by its probability of occurrence and its impact on project objectives the other 16.7% and 11.1% were agree and strongly agree respectively by the characteristics of the risk were identified before proceeds to the analysis process and the remaining 22.2 and 11.1% of the respondents neutral and disagree respectively in addition to this 44.4% and 16.7% were carry out systematic risk analysis and the remaining 22.2% and 16.7% of the respondents were neutral and disagree about the systematic risk analysis. Finally the project documents were update after assessment of the risk. The

above table indicates that 30.6% and 16.7% of the respondents agree and strongly agree with project documents.

**TABLE 4.8 Methods of Risk Analysis**

No	Variable	Frequency	Percentage (%)	Cumulative Percentage	Mean	Grand Mean
1	<b>Methods of Risk Analysis</b>					1.91
	Qualitative Risk Analysis Method	11	30.6	30.6	2.39	
	Both were in Use	25	69.4	100.0		
	Total	36	100.0			
2	<b>Quantitative Method of Risk Analysis</b>					1.28
	Monte Carlo Simulation	28	77.8	77.8		
	Decision Tree Analysis	6	16.7	94.4		
	Sensitivity Analysis	2	5.6	100.0		
	Total	36	100.0			
3	<b>Qualitative Method of Risk Analysis</b>					2.06
	Risk Probability and Impact Assessment	19	52.8	52.8		
	Risk Categorization	5	13.9	66.7		
	Risk Data Quality Assessment	3	8.3	75.0		
	Risk Urgency assessment	9	25.0	100.0		
	Total	36	100.0			

Source Own Survey, 2018

The above table illustrates about the methods of risk analysis 69.4% of respondents responds that both qualitative and quantitative risk analysis methods were in use whereas the other 30.6% of the respondents responds that only qualitative method of risk analysis in use 77.8% of the respondents were used Monte Carlo simulation quantitative risk analysis method and the 16.7% of respondents choose decision tree analysis and the other 5.6% were sensitivity analysis.



52.8% of the respondents selected that risk probability and impact assessment method were in use the other 25% were used risk Urgency assessment and the remaining 13.9% and 8.3% risk categorization and risk data quality assessment were in use respectively.

**TABLE 4.9 RISK RESPONS**

No	Variable	Frequency	Percentage (%)	Cumulative Percentage	Mean	Grand Mean
1	<b>Teams have Strategy to Respond Project Risks</b>					<b>3.55</b>
	Disagree	7	19.4	19.4	<b>3.39</b>	
	Neutral	12	33.3	52.8		
	Agree	13	36.1	88.9		
	Strongly Agree	4	11.1	100.0		
	Total	36	100.0			
2	<b>Teams have a Well-Developed Strategy to Respond Project Risks</b>					<b>3.24</b>
	Disagree	7	19.4	19.4		
	Neutral	10	27.7	47.1		
	Agree	13	36.1	83.2		
	Strongly Agree	6	16.7	100.0		

	Total	36	100.0			
<b>3</b>	<b>Budget, Schedule and Resources are Considered Before Risk Response</b>					
	Disagree	2	5.6	5.6	<b>4.03</b>	
	Neutral	9	25.0	30.6		
	Agree	11	30.6	61.1		
	Strongly Agree	14	38.9	100.0		
	Total	36	100.0			

Source; Own Survey, 2018

The above table overall mean is (3.55) it indicates that the team have its own strategy to risk response there are factors considered before the team responds to each risks occur. That 36.1 5 and 11.1% of the respondents agree and strongly agree with the strategies of risk response disagree upon the issue beside majority of the respondents agree with the factors consider to respond risks and the other were neutral.

**TABLE 4.10 Risk Response Strategies**

No	Variable	Frequency	Percentage (%)	Cumulative Percentage	Mean	Grand Mean
<b>1</b>	<b>Risk Response Strategies</b>					
	Avoid a Threat or Exploit an Opportunity	4	11.1	11.1	<b>2.44</b>	<b>2.34</b>
	Transfer a Threat or Share an Opportunity	12	33.3	44.4		

	Mitigate a Threat or Enhance an Opportunity	20	55.6	100.0		
	Total	36	100.0			
<b>2</b>	<b>What Method Did the Team Used to Mitigate Risks</b>					
	Risk Avoidance	16	44.4	44.4	<b>2.25</b>	
	Risk Sharing	1	2.8	47.2		
	Risk Reduction	13	36.1	83.3		
	Risk Transfer	6	16.7	100.0		
	Total	36	100.0			

Source; Own Survey, 2018

According to Table 4.10 the majority 55.6% of respondents risk response strategy were mitigate a threat or enhance an opportunity and the other 33.3% of the respondents were transfer a threat or share an opportunity and the remaining 11.1% of the respondents were avoid a threat or exploit an opportunity.

Table 4.10 shows that the majority of teams risk response strategies were mitigate a threat or enhance an opportunity for this reason the respondents also categorize from different kinds of mitigation. The majorities of the team mitigate risks through risk Avoidance 44.4% and the other 36.1% of respondents were use Risk Reduction and the remaining 16.7% of the respondents use Risk Transfer.

**TABLE 4.11 PROJECT RISK MONITORED AND CONTROLLED**

No	Variable	Frequency	Percentage (%)	Cumulative Percentage	Mean	Grand Mean
<b>1</b>	<b>Project Risks Monitored and Controlled well</b>					
	Disagree	12	33.3	33.3		
	Neutral	14	38.8	72.2		
	Agree	6	16.7	88.9		
	Strongly Agree	4	11.1	100.0		
	Total	36	100.0			
<b>2</b>	<b>Evaluating the Effectiveness of Monitoring and Controlling to Risk Response Plan in the project</b>					
	Disagree	21	58.3	58.3		
	Neutral	8	22.2	80.5		
	Agree	4	11.1	91.6		
	Strongly Agree	3	8.3	100.0		
	Total	36	100.0			
<b>3</b>	<b>The project monitor and control to ensure that meet with the Standard and procedures</b>					
	Strongly Disagree	8	22.2	22.2		
	Disagree	21	58.3	80.5		
	Neutral	4	11.1	91.6		
	Agree	3	8.3	100		
	Total	36	100.0			
<b>4</b>	<b>Risks are Controlling in the Projects to Meet the Projects Goal and Objective</b>					
	Disagree	18	50	50		
	Neutral	10	27.7	77.7		
	Agree	5	13.8	91.5		
	Strongly Agree	3	8.3	100.0		
	Total	36	100.0			

The grand mean of the above table 4.11 is (2.25) and it indicates that the projects overall monitoring and evaluation is less than expected and let's interpret each questions in accordance with the respondent response. M=(2.7), implies that the projects weren't monitored and controlled well therefore, the projects couldn't evaluate the effectiveness of monitoring and evaluation to risk response plan M=(2.2). the other question on the above table is project monitor and control to ensure that meet with the standard and procedures stating with the respondents response majority of the respondents disagree and it implies on the 1<sup>st</sup> place there is no proper monitoring and controlling so, the monitoring and controlling couldn't meet its standards M=(2.7) from the mean we can indicate that majority of the respondents were neutral on risks are controlling in the project to meet the projects goal and objectives. It might be they don't have enough knowledge about the question or they don't want to answer it.

**TABLE 4.11 Risk Re-Assessment**

No	Variable	Frequency	Percentage (%)	Cumulative Percentage	Mean
5	<b>Reasons of Risk Re-Assessment</b>				
	Project Re- Planning	2	5.6	58.3	
	Occurrences of Major or Unexpected Risk	21	58.3	63.9	
	Need to Analyze a Complex Change Request	5	13.9	77.8	
	Periodic Review	8	22.2	100.0	
	Total	36	100.0		

Source; Own Survey, 2018

58.3% of the respondents responds that one of the major reason of risk re- assessment is occurrences of major or unexpected risk and the 22.2% of respondents believes that because of periodic review the others were need to analyze a complex change request.

Finally, according to the interview result that was held with the project managers, it was revealed that some of the problems that the projects are facing due to an absence of defined risk management process therefore majority of problems takes place during the planning phase because there is no assigned person to perform the risk planning process and also the risks were not monitored and controlled according to the standard unmanaged uncertainties are failure to met the requirements that were agreed upon with the client and are unable to meet the demands of the end users or beneficiaries of the final result of building projects which occurred due to wrong management of the events and situations that the projects encountered after implementation begun. The respondent of the interview also responded that the mismanagement of risks that occurred in the projects has affected the outcome and success of projects and creating an impact on schedule and budget.

## CHAPTER FIVE

### FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Summary of Major Findings

Based on the analysis of chapter four, the following findings were established and are outlined here under:

- According to the response of the respondents on the general questions on project risk management practice on the projects, project team members have enough awareness regarding with the risk concept and its process to manage risks properly. There is a formal documented material prepared to manage risks other policies and procedures also exist to manage risks. The findings of the result also showed that a standard and defined risk management process does not exist within the projects and that there isn't any person or department specifically assigned to manage uncertainties within the projects. Team members also didn't take any training regarding with the risks.

Major risks occurred during the planning and implementation phases of the project but it lasts until the close out phase of the project.

- In response to the practice of project risk planning process respondents replied that there is no responsible person to plan risk of projects and also there is no allocated budget in to the planning document to manage risks in the project. The project plans were emanates from the overall project plan. While the majority of the respondents responded that during the planning process relevant stakeholders are involved and environmental factors that could create an impact on the projects considered through expert judgments and held meetings.
- The majority of the respondents identify risks as a standard activity<sup>26599</sup>. As of the respondents response Project risks could be identified in each phase of the projects. There were different methods to identify risks in the project from those methods specialist technique, checklist and examination of similar projects take 1<sup>st</sup>-3<sup>rd</sup>. the respondents prioritize an identified risks through probability and impact on the overall projects.
- The response of respondents carry out systematic risk analysis. After the project team making an impact assessment of the risk document update. Majority of the respondents use both qualitative and quantitative methods of risk analysis. From various methods of

quantitative risk analysis the respondents were used Monte Carlo simulation, decision tree analysis and sensitivity analysis respectively.

On qualitative side there are also several methods of qualitative risk analysis regarding with the respondents response Risk Probability and impact assessment, Risk Urgency assessment and Risk Categorization Methods were in use respectively.

- In the analysis of responses of respondents to figure out if there is a well-developed strategy to respond to uncertainties if they occur they disagree that, such a strategy exists. Whereas, majority of them agreed that budget, schedule and resources are put into consideration while taking action to respond to uncertainties but the interview that was held with the project manager showed that even though these inputs are considered while responding to risk required attention is not given to all factors equally especially regarding schedule. Control or reduction is the action taken to minimize and mitigate risks that occur in the projects according to the response of the majority of the respondents.
- The findings on risk monitoring and controlling practice on the projects revealed that according to the response of the respondents the majority believe that based on the current result of the project risks are not monitored and controlled well and they also disagree the controlling mechanism that is implemented to control risk complies with the objective and goal of the projects. Information that exist within the projects and history of the projects are used as an input to take an action to control risks.
- The interview result also showed that the projects faced problem to meet the requirements that were agreed upon with the client and are unable to meet the demands of the end users or beneficiaries according to schedule which according to the respondent, occurred due to risk related issues that occurred after the implementation of the project has begun.



## 5.2 Conclusions

As the major aim of the study is to identify the actual risk management practice at NIB Head Quarter and Hawassa Building projects, the following conclusions are forwarded based on the findings mentioned above about the practice followed in these projects.

- ✚ The study concludes that the project team have sufficient awareness regarding with overall risk management concepts and its process.
- ✚ The study findings have shown that the two projects have formally documented material to manage risks but there is no formally assigned person or department to handle risk management activities as □its major task. The project team members also didn't acquire enough training in order to manage risks properly.
- ✚ As the study mentioned above both projects have planning document emanated from the risk management plan but there is no person or department to lead risk planning. However, there is no or less involvement of stakeholders during the planning process of project risk, meeting and expert judgments were involved and considered. There is no allocated budget for risk planning process in the projects.
- ✚ Regarding the practice related to identifying risks, the findings showed that judgment of experts is used as a tool to figure out the uncertain events that could impact the projects and all team members take part in identifying risks as standard activity on each phase of a project. They identify risks through specialist technique, checklists and examination of previous projects and prioritize
- ✚ Depending on subjective assessment the risks are analyzed based on their characteristics within the projects and also through systematic risk analysis methods therefore, it can be concluded that the team use both qualitative and quantitative risk analysis methods. For quantitative one the team used Monte Carlo simulation, and Decision Tree Analysis and for qualitative risk analysis risk probability impact assessment and risk urgency methods were in use
- ✚ There is a well-developed strategy with in the projects on how to act in response to uncertainties that the projects encounter. factors such as schedule, budget and resources are considered even though appropriate attention is not evenly given to them. The team used mitigating a treat or enhancing an opportunity and transfer a threat or enhance an opportunity were in use and for mitigating risks risk avoidance and risk reduction techniques were in use.

- ✚ Regarding the practice of risk monitoring and control, based on the findings it can be concluded that risks that the projects face are not monitored and controlled properly in a mode that fits with the goal of the projects. Therefore, as a whole it can be concluded that the practice of project risk management is implemented to some extent at NIB Head Quarter and Hawassa Building projects but complete theory and process that must be implemented within project risk management are not practiced in the management of these projects.

### 5.3 Recommendations

- ✚ In order to improve the practice of risk management and to minimize the problem of the gap between the actual theory of project risk management and implementation of NIB Head Quarter and Hawassa Building projects, the following possible recommendations are provided by the researcher.
- ✚ Since an essential prerequisite to manage risks is to have a procedure and a standard process that guides on how to deal with risks, the stakeholder and the management who are part of the projects should set out a standard process and guideline that enables team members within to carry out risk management well and in a defined manner. In addition, the strategy that is implemented to handle risks should be continuously addressed throughout the projects life cycle starting from the conceptual stage up to the close out stage.
- ✚ A great concern must also be given while planning for uncertainties since, an appropriate
- ✚ planning process will enable to make decisions regarding how to formulate, plan and execute risk management activities for the projects. As plan that is designed well will enable to guide team members with providing information on the goal and objective of applying a risk management process and will also let them know the techniques and tools they should use while taking an action to respond to risk.
- ✚ Training should also be provided to the team members within the project so that their knowledge on the area of risk management in projects could improve as it will enable them to make a better effort in managing risks so that the project can meet its intended goal.
- ✚ Response strategies should also be planned within the projects, as the action taken to respond to risks that occurred within the projects can have an impact on the projects as a whole and can also influence the condition of the risk. Therefore, in order to select the appropriate response strategy whether it is reduction, avoidance, transfer or acceptance a plan should be established to select one of these mechanisms.

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**St. Mary's University**  
**School of Graduate Studies**  
**Master of Art in project Management Program**  
**Sample Questions (English Version)**

**Dear Respondents**

My name is Israel. I am a Master of project management student at St. Mary's University. The purpose of this questionnaire is to collect data in order to study risk practices of Nib International Bank construction projects in the case of Head quarter and Hawassa building projects. Kindly cooperate in filling the questionnaire as your genuine, complete, and timely responses are crucial for the success of my study. Besides, I would like to assure that the data collected using this questionnaire is purely for academic requirement and your responses will be held confidentially and anonymously. Hence, the researcher kindly requests you to respond each item carefully.

With best regards,  
Israel Sisay

**Note:**

- No need of writing your name
- please fill the answer by putting —√ mark

## APPENDIX I; Questionnaire

### PART I: Background Information

1. Educational Qualification

- A) Diploma                      B) BA/BSC                      C) MA/MSc                      D) Other

2. Total Years of experience (**in year**)

- A) Below 1 years                      B) 1-5                      C) 6-10                      D) 11 and above

5. Years of Experience in the project

- A) Less than a Year                      B) 1-2                      C) 2-3                      D) 3 and Above

6. Job title \_\_\_\_\_

### PART II What do you know about risk management in general

- Please Indicate your answer by putting a tick mark (✓) at the appropriate number for all yes or no type of questions. Please indicate your answer as follows

Statement	Code
Yes	1
No	2

- For all of questions which demand those answers and please indicate your answer by putting a tick mark (✓) at the appropriate number. Please indicate your answer as follows

Statement	Code
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly Agree	5

S/no	Question	Yes	No
<b>About Risk</b>			
1	Are you familiar with the concept of risk management and the Risk Management Process?		
2	Is there a formal documented material how to manage uncertainties within the project?		
3	Are team members within the project aware on how to manage risk in a way that doesn't affect the objective or goal of the project?		
4	Is there a policy or guideline that recommends how to manage unexpected risks?		
<b>About Risk Planning</b>			
5	Is there risk planning in documented form?		
6	Is there a Responsible person or department assigned to handle risk planning?		
7	Does the project have a dedicated budget for risk management		
8	Were the Relevant stakeholders are involved in the planning and performing of managing risk?		
<b>Risk Identification</b>			
9	Do you identify risks/threats in the project?		
10	Do you identify risks as a standard activity?		
<b>Risk Analysis</b>			
11	Do you carry out systematic risk analysis		
<b>Risk monitoring and Control</b>			
12	Is there any contingency Reserve to cover time-related and cost-related risks?		

S/No	Questions	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Responsible person or department is assigned to handle risk when it occurs.					
2	As of the project reaches its final phase Risk management is treated as a continuous process in the project.					
3	Team members within the project receive training or have enough knowledge about how to handle risks.					
<b>About Risk Planning</b>						
4	An expert judgment or meetings are considered while planning for risks that might occur in the project.					
5	Risk management plan is incorporated with the project plan.					
<b>Risk Identification</b>						
6	All team members within the project play a role in identifying risk					
7	Risk identification occurs throughout each phase of project development.					
<b>Risk Analysis</b>						
8	Characteristics of the risk are considered before analyzing the identified risk.					
9	Project documents are updated after assessment of the risk that might occur.					
10	The project team assesses each identified risk for its probability of occurrence and its impact on project objectives.					



<b>Risk Response</b>						
11	There is a well-developed strategy within the project to respond to risk.					
12	Factors such as budget, schedule and resources are considered while responding to risk.					
<b>Risk monitoring and Control</b>						
13	Based on the current result of the project are risks monitored and controlled well					
14	Monitor and control helps to risk response plans are executed at the appropriate time, and evaluate their effectiveness throughout the project life cycle.					
15	The Project monitor, control and review the process for risk management to ensure that it complies with standards and procedures					
16	Risks that occur within the project are controlled in a way that goes with the goal and objective of the project					

### Part III

1. How do you identify risks/threats in the project

- A) Brainstorming
- B) Checklists
- C) Questionnaires circulated to a range of personnel;
- D) Examination of previous similar projects; and
- E) Specialist techniques.

2. Assuming that you have identified a number of risks in the project, how would you prioritize them?

- A) By Probability and Impact on Specific Objectives.
- B) By Probability and Impact on Overall Project.

3. What kind of risk analysis method does the project use?

- A) Qualitative risk analysis method
- B) Quantitative risk analysis method
- C) Both were in use

4 If it's used quantitative method then what kinds of quantitative risk analysis methods were in use?

- A) Monte Carlo simulation
- B) Decision tree analysis
- C) Sensitivity analysis
- D) Other

5 If it's used qualitative method then what kind of qualitative risk analysis method is in use?

- A) Risk probability and Impact Assessment
- B) Risk categorization
- C) Risk data quality assessment
- D) Risk urgency assessment
- E) Other

6. What kind of Risk Response strategy did you use?

- A) Avoid a Threat and Exploit an Opportunity
- B) Transfer a threat or Share an Opportunity
- C) Mitigate a Threat or Enhance an Opportunity
- D) Accept a Threat or an Opportunity

7. How did the Project Team Mitigates Risks?

- A) Risk avoidance
- B) Risk sharing
- C) Risk reduction
- D) Risk transfer

8. What are the Reasons for Risk Re-Assessment?

- A) Project Re- Planning
- B) Occurrences of Major or Unexpected Risk

- C) Need to Analyze a Complex Change Request
- D) Phase End Review
- E) Periodic Review

## APPENDIX II; INTERVIEW

1. What is the nature of the projects you are doing and their sizes?

2. What do you consider as —risk in construction projects?

3 Is there a standardized or formal documented process on how to manage uncertainties within the project?

What is the current practice of risk management within the project?

4 Are team members within the project aware on how to manage risk in a way that doesn't affect the objective or goal of the project?

5 Is there a special department or assigned person to handle uncertainties that occur within the lifecycle of the project? At which stage of the project are risks managed in the projects?

6 Is planning done carefully on how to manage risk at your project? If yes, how do you plan and who is involved in planning process?

7 Are risks that might occur identified early while the project is at startup phase? And what methods are used to identify them?

8 Within the project are risks analyzed to assess its probability of occurrence and level of impact?

9 How do you develop the contingency plans? In which phase? And who is responsible for evaluation of the effectiveness of the contingency plans? What challenges until now has the project faced due to unmanaged risk?

10 Do you think managing risk and project success are related? If yes, how?



