Assessment of Project Management Maturity Level of Commercial Bank of Ethiopia

By:

Abraham Ejigu

June, 2017

Addis Ababa, Ethiopia

Assessment of Project Management Maturity Level of Commercial Bank of Ethiopia

By:

Abraham Ejigu

Advisor:

Abdurezak Mohammed (PhD)

A Research Project Paper Submitted to the School of Graduate Studies of AAU in Partial Fulfillment of the Requirement for Award of Master of Arts in Project Management (MAPM)

June, 2017

Addis Ababa, Ethiopia

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
MASTER OF ARTS IN PROJECT MANAGEMENT

Assessment of Project Management Maturity Level of Commercial Bank of Ethiopia

By:

Abraham Ejigu

Approved By Board of Examiners

Afework Getachew (PhD) Signature_____Date_____

External Examiner

Teklegiorgis Assefa (Asst. Prof.) Signature_____Date_____

Internal Examiner

Abdurezak Mohammed (PhD) Signature_____Date_____

Advisor

DECLARATION

I hereby declare that the research project work entitled "Improving Project Management Practice through Assessing the Project Management Maturity Level: The case of Program Management Office of Commercial Bank of Ethiopia" is my own work. Materials and Sources used have been duly acknowledged. The work had not been submitted to any educational institutions for the requirement of any award.

_____ _____

Abraham Ejigu Date

CERTIFICATE

This is to certify that this project work, "Improving Project Management Practice through Assessing the Project Management Maturity Level: The case of Program Management Office of Commercial Bank of Ethiopia" undertaken by Abraham Ejigu in Partial fulfillment of the award of Master's degree in Project Management at Addis Ababa University graduate school, is an Original work and not submitted earlier for any degree either at this or any other University.

_____

Abdurezak Mohammed (PhD)

Project Work Advisor

ACKNOWLEDGEMENT

Praise be to almighty God who gifted me with this wonderful life and helping me in my study and project work. My sincere gratitude goes to my advisor Abdurezak Mohammed (PhD) whose lectures on research methods enlightened me and suggestions and comments on the research project helped me a great deal in maneuvering through the project work.

My heartfelt gratitude is due to my wife Hebron Tadesse who is my beacon of strength and hope. I always thank my God for blessing me with such a lovely person. I am also indebted to my parents, who are my heroes, and my family for the continued moral support throughout my life.

I am also grateful for the help extended by my friends and staffs throughout my study and project work. CBE's project managers and PMO staff have been of a great help for the success of this project by providing me with information and documents as well as taking their time to fill my questionnaire and clarifying things for me. I owe all of them the heartiest gratitude.

ABSTRACT

In today's dynamic and complex business environment, organizations find themselves in a need to manage projects whether they are project driven or non-project driven organizations. However the practice of project management has to be improved to realize its benefits. The main purpose of this research project was to assess the project management maturity level of PMO of Commercial Bank of Ethiopia. The maturity assessment was based on a five level project management maturity model devised by PM Solutions. To assess the project management practice of the projects, nine knowledge areas were selected from the project management body of knowledge guide. The research employed both qualitative and quantitative research methods to realize the purpose of the study. Hence, a questionnaire was devised based on reviewed literature to assess the practice of the knowledge areas. The collected data was triangulated with data obtained from other secondary sources and analyzed. Based on the analysis, the researcher concluded that most of the knowledge areas were being practiced informally. The knowledge areas also have lower maturity levels. Relatively some of the knowledge areas have higher maturity as compared to the others. This difference was traced back to already established processes and practices the bank uses in its operations. But lack of proper integration of these practices with project management practice has lowered the maturity level of the project management practice at the bank. Developing and practicing project management knowledge areas; devising procedures; carefully collecting, compiling and disseminating lessons learned from past project implementation; creating project management standards; and creating awareness among all stakeholders towards projects; strengthening the PMO's human and other resources; and providing trainings have been recommended as a means of improving project management practice and attaining higher maturity.

Key words: project management, project management practice, project management maturity

Table of Contents

List of Abbreviations

APM	Association for Project Management
CBE	Commercial Bank of Ethiopia
CMM	Capability Maturity Model
CMMI	Capability Maturity Model Integrated
OGC	Office of Government Commerce
OPM3	Organizational Project Management Maturity Model
P3M3	Project, Program, Portfolio Management Maturity Model
PM	Project Management
PM2	Project Management Process Maturity
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMM	Project Management Maturity
PMMM(s)	Project Management Maturity Model(s)
PMO	Program/Project Management Office
SEI	Software Engineering Institute

List of Figures

List of Tables

CHAPTER ONE

INTRODUCTION

1.1 Background of The study

In today's dynamic business environment, organizations find themselves in a need to manage different projects for the success of their strategies or their mere survival (Kerzner, 2009; Callahn and Brooks, 2004; Larson and Gray, 2000). Now a days Non-Project driven organizations have also embarked in project management since projects have become a common phenomenon for many businesses according to Kerzner (2009) and Wysocki (2014). However, according to Gray and Larson (2000), project management is not without problems. Because projects have different characteristics than ongoing operations, they pose a brand new set of challenges according to Verzuh (2005).

Since its establishment in 1942, Commercial Bank of Ethiopia (CBE), the then State Bank of Ethiopia, has been going under different reforms. The bank has gone through a major expansion both in its size and operation in recent years. This is in line with its vision of becoming "a world class bank by 2025." Towards this end, the bank has devised various strategies and is undertaking various initiatives. Although there are a multitude of initiatives undertaken by CBE, most of the initiatives are related with adoption of various information technology tools to improve its service delivery and automate internal operations. The initiatives are each being undertaken as individual projects with their own project teams and overseeing the implementation of these projects is the bank's PMO.

Linking an organization's strategies to its projects helps to focus and reinforce its strategies (Grundy & Brown, 2002). Callahan and Brooks (2004) also stated that strategic projects are essential for the success of an organization's overall strategies. Hence the success of these strategic projects being undertaken by the bank is vital for the success of the bank's overall strategies and hence its vision. The success of these projects largely depends on successful project management which in turn depends on the proper overseeing and integration of the specific project objectives to the bank's overall strategy (Grundy & Brown, 2002).

With low organizational experience in previous project undertakings due to its nature of operation, the problems that haunt the success of projects may be exacerbated when the bank tries to implement multiple projects at once. Hence the establishment of PMO will have a significant importance for the success of the projects. This is due to the fact that PMO is assigned various responsibilities related to the centralized and coordinated management of those projects under its domain (Munyoki and Njeru, 2014; PMBOK, 2013).

Given the challenges posed by the nature of projects and experience of the bank, establishing a PMO seems a prudent decision since, according to Callahn and Brooks (2004) PMOs are becoming a very popular cure for the firm's project management ills. According to Pemsel & Wiewiora (2013) and Spalek (2013) the PMO is a key organizational element in a company's performance because it can influence specific project outcomes. Verzuh's (2005) review, stating that by 2004 nearly every Fortune 500 company had attempted to implement a PMO in one or more parts of their organization, further strengthens the importance of PMOs for project success.

Project Management Offices currently are associated with functions such as project support; consulting and mentoring project managers and project teams; devising methods and standards for project management; providing software tools; provision of training; and management of both human and material resources of projects (Crawford, 2010). The responsibility of PMOs towards developing standards, processes, and methods is also stated by Desouza & Evaristo (2006) and Hurt & Thomas (2009) as well. Hill (2008) classified these and other functions of PMOs as practice management. Practice management, according to Hill (2008), includes functions of Project Tools; Project Management Methodology; Standards and Metrics; and Project Knowledge Management. All PMOs and a PMO through time will practice these functions with a varying degree (Wysocki, 2014).

The development and implementation of increasingly more complete and comprehensive project management processes and practices is brought by increased project management maturity (Hill, 2008). An insight towards increasing maturity levels of the PMO will help envision what increments the PMO can bring towards the project management practice and finally project success. As stated by various researchers, the maturity level of project management has a huge impact on the success of projects (Brookes and Clark, 2009; Grant and Pennypacker, 2006). The

more mature the organizations, the more benefits the organizations realize due to their project portfolio management practices according to PM Solutions (2014a).

Hence various means of assessing the project management maturity level of an organization were formulated and are being implemented. Mateen (2015) stated that various models are in use to assess maturity levels in project management and the models are also being improved through time. According to Brookes and Clark (2009), the current experience of the use of project maturity management models highlights a number of differences in the ways in which they are currently used.

In light of availability of various models to assess project management maturity level of organizations, this research project tried to measure the project management maturity level of CBE's PMO. It also attempted to look into possible ways of improving project management practice and forward recommendations as a means of improvement.

1.2 Statement of the Problem

In order to achieve its vision of becoming a world class bank, Commercial Bank of Ethiopia is undertaking various projects to enhance its service delivery and equip its operations in state of the art technology. Therefore the success of such projects becomes vital for the achievement of the bank's vision. In line with this, the bank has established a Program Management Office to oversee the successful undertaking of its projects. In order to oversee the implementation of the projects and provide assistance a Program Management Office was established by the bank. According to Wysocki (2014) the responsibility of supporting these projects and project teams that undertake specific projects is mandated to Project Management Offices.

Hurt and Thomas (2009) argued that PMOs are able increase value for the organization by focusing on the purpose of improving project management. One of the means of improving project management is by instituting project management practice according to Hill (2008). Wysocki (2014) also stated that through the establishment and enforcement of project management standards and practices, the PMO can have a positive impact on efficiency and productivity. This establishment and enforcement of project management standards and practices

and their continuous development is brought by a maturing project management practice (Hill, 2008 and Wysocki, 2014).

Maturity in organizational context is a state that creates perfect condition for an organization to achieve its desired objectives (Mateen, 2015). Mateen (2015) also quoted Andersen and Jessen (2003) who stated that maturity, when applied to projects of organization, provides perfect condition to handle projects. According to Ferreira and Pereira (2015) maturity models used in the diagnosis of Project Management culture in organizations are helpful to define a set of actions and measures to better its performance as an organization.

Based on this fact, various researches were conducted and the studies found out that organizations with a more established project management practice such as engineering based organizations exhibit a more mature project management practice as compared to organizations in other industries (Cooke-Davies and Arzymanow, 2003; Mullaly, 2006; Simangunsong and Da Silva, 2013). Assessment of project management maturity of Ethiopian construction sector by Abadir (2011) found out that the overall maturity level of the sector was low. The research also showed that project management practices are largely informal.

However, despite an increase in number of project undertakings by multitude of organizations in Ethiopia, project management is being practiced informally (Abadir, 2011). Availability of studies related to assessment of project management maturity is also scarce. Given the low level of project management maturity and gap in literature, this research tried to assess the project management maturity of the PMO of Commercial Bank of Ethiopia. Furthermore, the study is an attempt to contribute to fill the gap in current literature and forward possible recommendations to enhance the maturity of PMOs.

1.3 Research Questions

By assessing the maturity of PMO of Commercial Bank of Ethiopia, the research tried to answer the following research questions.

1. What is the level of project management maturity at CBE's PMO?
2. How are PMBOK's Project Management knowledge areas being practiced by the bank's PMO?

1.4 Objective of the Study

1.4.1 General Objective

The general objective of this study is to assess the project management maturity level of Program Management Office of Commercial Bank of Ethiopia.

1.4.2 Specific Objectives

Specifically, the study tried to

1. Measure the level of project management maturity at CBE's PMO.
2. Assess the practice of the PMBOK's Project Management knowledge areas by the bank's PMO.

1.5 Significance of the Study

Results of this study could be valuable for Commercial Bank of Ethiopia and other organizations, with similar project overseeing offices, in fine tuning their practices to enhance the value they get from the PMO. It could also be helpful for organizations for benchmarking, who aspire to establish PMOs or such organizational structures to oversee their projects. It could also be used by academicians and researchers as an input to carry out in-depth measurement of project management maturity of various organizations. The researcher has also used the research project as an opportunity to see how the theoretical knowledge acquired during the duration of the course is being implemented in reality.

1.6 Scope/Delimitation of the Study

Project Management Offices can be set up to handle many activities related with projects undertaken and they can be established by any organization with internal and external projects. For the sake of quality of the research and time as well as resource constraints, this study focused on measuring project management maturity of Project Management Office of Commercial Bank of Ethiopia towards the projects of the bank.

1.7 Limitations of the Study

Any research project like any other project endeavor could not be without shortcomings. Hence the researcher faced some limitations in the course of the research project. The first and most critical pitfall was time constraint since the time given for the research project is quite short. Since some of the projects were at very early stages, the respective project managers were not taken as a sample which limited the data obtained. The researcher used other sources of data (such as operational procedures, project plans, monitoring and periodical reports and other relevant sources related with the projects) to obtain secondary data and strengthen the analysis.

1.8 Organization of the Research Report

The study is organized into five sections. The first chapter introduces back ground of the study. In the second chapter, different related literatures are presented to create an in depth understanding towards the subject under study. Under this chapter, theoretical frameworks on which the study is founded are also discussed. The third chapter is concerned with the methodological part of the study. The analysis, discussions of major findings and summary of results is indicated in the fourth chapter. In the fifth and final chapter conclusions, recommendations and implications of the study are stated. List of references used and appendices are also attached at the end of the research report.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

In this part of the research work, literature related to the concepts of projects and project management, Project and Non-Project organizations, and Project Management Maturity are discussed in detail. Previous empirical studies regarding Project Management Maturity are reviewed, analyzed and compared.

2.2 The Concept of Project

A variant of definitions have been given to projects by different authors. The definition given by PMI for a project is a temporary endeavor undertaken to create a unique product, service, or result (PMI, 2013). A more elaborate definition states a project is a sequence of unique, complex, and connected activities that have one goal or purpose and that must be completed by a specific time, within budget, and according to specification (Wysocki, 2014). Likewise, Kerzner (2009) stated that a project can be considered to be any series of activities and tasks that have a specific objective to be completed within certain specifications, have defined start and end dates, have funding limits (if applicable), consume human and non-human resources, are multifunctional (i.e., cut across several functional lines). Project has also been defined as a unique set of co-ordinated activities, with definite starting and finishing points, undertaken by an individual or organization to meet specific performance objectives within defined schedule, cost and performance parameters' (British Standard 6079: 2000 in Maylor, 2010).

The common theme of these definitions revolves around some important features of projects. The features include a defined time frame (temporary), an objective from the inception, resources and their limitations, and specifications and others.

According to PMI (2013), a project has a definite beginning and end. But this does not necessarily mean the duration is short, it does not also apply to the product, service, or result created by the project. The project comes to an end at the end of the duration (when the project's

objectives have been achieved) or prior to the scheduled duration (when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists). Wysocki (2014) also stated that Projects have a specified completion date. This date can be self-imposed by management or externally specified by a client or government agency. Being able to give a firm completion date requires that a start date also be known.

The task of the project is to deliver a particular product, service or result (Maylor, 2010). Projects must have a single goal. However, very large or complex projects may be divided into several subprojects, each of which is a project in its own right (Wysocki, 2014). Nicholas and Steyn (2012) also stated that, a project involves a single, definable purpose and well-defined end-items or deliverables.

According to PMI (2013), although repetitive elements may be present in some project deliverables and activities, this repetition does not change the fundamental, unique characteristics of the project work. In the words of Maylor (2010), a project is unique because the exact project has not been performed before. The project has a degree of novelty, in terms of time, place, and team carrying out the task, product or service being provided. However, something like it has almost certainly been done by someone somewhere before.

Like any other organizational activity projects utilize resources. Projects consume human and nonhuman resources (i.e., money, people, and equipment) (kerzner, 2014). But these resources are limited for projects. Projects have resource limits, such as a limited amount of people, money, or machines that are dedicated to the project (Wysocki, 2014).

Moreover, a project comprises a number of activities that must be completed in some specified order, or sequence (Wysocki, 2014). The sequence of the activities is based on technical requirements, not on management prerogatives. To determine the sequence, it is helpful to think in terms of inputs and outputs. The output of one activity or set of activities becomes the input to another activity or set of activities.

2.3 Project Management

The foundation of the project management can be traced back to as early as beginning of civilization. But the modern project management has its roots in the Second World War and is developed in construction and defense industry during the industrial revolution (Ali, 2010; Kerzner, 2009). Since then, the concept of project management has been showing improvement and associations and institutions focused on project management have contributed a lot.

Definition of Project Management

According to the Project Management Institute, project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements (PMI, 2013). Likewise the Association for Project Management also defined project management as the application of processes, methods, knowledge, skills and experience to achieve the project objectives (APM, 2012). These two definitions are oriented towards application of various means to achieve project objectives.

On the other hand, project management has been defined from management functions perspective by Kerzner (2009). Kerzner (2009) stated that, project management is the planning, organizing, directing, and controlling of company resources for a relatively short-term objective that has been established to complete specific goals and objectives.

Kleim and Ludin (1998) defined project management in a way that combines the above two, stating that Project management is the tools, techniques, and processes for defining, planning, organizing, controlling, and leading a project as it completes its tasks and delivers the results.

Project management is accomplished through the appropriate application and integration of project management processes, which are categorized into five Process Groups (PMI, 2013). These five Process Groups are: Initiating, Planning, Executing, Monitoring and Controlling, and Closing.

2.4 Program and Program Management

According to Wysocki (2014) a collection of related projects is called a program. A program is a group of related projects, subprograms, and program activities managed in a coordinated way to obtain benefits not available from managing them individually (PMI, 2013).

Program management is the co-ordinated management of related projects, which may include related business-as-usual activities that together achieve a beneficial change of a strategic nature for an organization (APM, 2012).

2.5 Project Management Process Groups

According to PMI (2013), in order for a project to be successful, the project team should select appropriate processes required to meet the project objectives. These processes ensure the effective flow of the project throughout its life cycle. The processes encompass the tools and techniques involved in applying the skills and capabilities described in the project management knowledge areas. There are five process groups in the life cycle of any project.

The initiating process group: This process group consists of those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase. Within the Initiating processes, the initial scope is defined and initial financial resources are committed (PMI, 2013). In this phase no actual project activity is not performed (Wysocki, 2014).

The planning process group: This process group consists of those processes performed to establish the total scope of the effort, define and refine the objectives, and develop the course of action required to attain those objectives (PMI, 2013). Definition of the work requirements, definition of the quality and quantity of work, definition of the resources needed, scheduling the activities, evaluation of the various risks are activities included in this group according to Kerzner (2009).

The executing process group: According to PMI, this consists of those processes performed to complete the work defined in the project management plan to satisfy the project specifications. This process group involves coordinating people and resources, managing stakeholder

expectations, as well as integrating and performing the activities of the project in accordance with the project management plan (PMBOK, 2013).

The monitoring and controlling process group: This process group consists of processes required to track, review, and orchestrate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes (PMI, 2013). Under this group, activities that relate to tracking progress, comparing actual outcome to predicted outcome, analyzing variances and impacts, and making adjustments are performed by the project team (Kerzner, 2009).

The closing process group: Processes performed to conclude all activities across all project management process groups to formally complete the project, phase, or contractual obligations come under the closing process group. This process group, when completed, verifies that the defined processes are completed within all of the process groups to close the project or a project phase, as appropriate, and formally establishes that the project or project phase is complete (PMI, 2013).

2.6 Project Management Knowledge Areas

Knowledge Area represents a complete set of concepts, terms, and activities that make up a professional field, project management field, or area of specialization and they are used on most projects most of the time (PMI, 2013). The ten PM Knowledge Areas are discussed below.

Project integration management: It includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups (PMI, 2013). This Knowledge Area addresses the glue that links all of the deliverables from the Process Groups into a unified whole (Wysocki, 2014).

Project scope management: This knowledge area includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. Generally, managing the project scope is primarily concerned with defining and controlling what is and is not included in the project (PMI, 2013).

Project time management: Project time management includes the processes required to manage the timely completion of the project (PMI, 2013). It provides time estimates for both the duration of a project task and the actual effort or labor time required to complete the task. It also involves comparing estimated times to actual times as well as managing the schedule and cost variances (Wysocki, 2014).

Project cost management: Project cost management includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget (PMI, 2013).

Project quality management: Project Quality Management includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken (PMI, 2013).

Project human resource management: Project human resource management focuses on actions related to the human aspect of the project and, according to PMI (2013), it includes the processes that organize, manage, and lead the project team.

Project communication management: Project communications management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information (PMI, 2013).

Project risk management: Project risk management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. Its objectives are to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project (PMI, 2013).

Project procurement management: The processes necessary to purchase or acquire products, services, or results needed from outside the project team are included under project procurement management according to PMI (PMI, 2013).

Project stakeholder management: Project stakeholder management includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the

project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution (PMI, 2013).

2.7 Project Management Maturity

The trend of using maturity models for increasing organization's performance have been increasing in recent years (Crawford, 2010). Maturity in organizational context is a state that creates perfect condition for organization to achieve its desired objectives (Mateen, 2015). Mateen (2015) also quoted Andersen and Jessen (2003) who stated that maturity, when applied to projects of organization, provides perfect condition to handle projects. The use of maturity models in the diagnosis of Project Management culture in organizations; especially aim to identifying weaknesses and strengths in their project management processes, so that it can then define a set of actions and measures to better its performance as an organization (Ferreira and Pereira, 2015).

2.7.1 Project Management Maturity Models

In order to measure project management maturity of a project organization, one can use a variety of models, some of which include:

1. Capability Maturity Model Integrated by Software Engineering Institute (SEI-CMMI)
2. Project Management Maturity Model by H. Kerzner
3. Project Management Maturity Model by PM Solutions
4. Organizational Project Management Maturity Model by Project Management Institute
5. Project, Program, Portfolio Management Maturity Model (P3M3) by Office of Government Commerce (OGC)
6. Project Management Process Maturity $(PM)^2$ by Kwak and Ibbs
7. PMO maturity cube by Pinto, Cota and Levin
8. PMO maturity model (PMO Continuum) by Hill

Capability Maturity Model Integration (CMMI)

The first ever version 1.0 of Capability Maturity Model (CMM) was first presented by Software Engineering Institute (SEI) division of Carnegie Mellon University in 1991 (Mateen, 2015). This model was later replaced by its successor, the Capability Maturity Model Integration (CMMI) in 2002, the year of publication of the first version 1.1 (SEI, 2006).

According to SEI (2006), the latest version of CMMI (2.1), released in 2006, comprises a framework that allows the generation of multiple models. CMMI for development is one of those models: it provides guidance for managing, measuring, and monitoring software development processes and help organizations to improve their software development processes for both products and services by describing characteristics of best practices. CMMI offers five maturity levels that can only be reached one after the other in order to stage the process improvement effort (SEI, 2006).

Level 1- Initial: In this level processes are unpredictable, poorly controlled and reactive to situations.

Level 2- Managed: Processes are planned, documented, performed, monitored and controlled at the project level. This stage is often reactive.

Level 3- Defined: During this maturity level, processes are well characterized and understood. Processes, standards, procedures, tools, etc. are defined at the organizational level. This stage is a proactive level.

Level 4- Quantitatively Managed: In this stage, processes are controlled using statistical and other quantitative techniques.

Level 5- Optimizing: Once an organization reaches this level, process performance is continually improved through incremental and innovative technological improvements.

Project Management Maturity Model (PMMM by H. Kerzner)

According to Kerzner (2014), models can be used to assist corporations in performing strategic planning for project management and achieving maturity and excellence in a reasonable period of time. The foundation for achieving excellence in project management can best be described as the project management maturity model (PMMM) that can be used as a foundation for achieving excellence in project management. The model is comprised of five levels, each level representing a different degree of maturity in project management.

Level 1- Common Language: In this level, the organization recognizes the importance of project management and the need for a good understanding of the basic knowledge on project management, along with the accompanying language/terminology.

Level 2- Common Processes: In this level, the organization recognizes that common processes need to be defined and developed such that successes on one project can be repeated on other projects. Also included in this level is the recognition that project management principles can be applied to and support other methodologies employed by the company.

Level 3- Singular Methodology: In this level, the organization recognizes the synergistic effect of combining all corporate methodologies into a singular methodology, the center of which is project management. The synergistic effects also make process control easier with a single methodology than with multiple methodologies.

Level 4- Benchmarking: This level contains the recognition that process improvement is necessary to maintain a competitive advantage. Benchmarking must be performed on a continuous basis. The company must decide whom to benchmark and what to benchmark.

Level 5- Continuous Improvement: In this level, the organization evaluates the information obtained through benchmarking and must then decide whether or not this information will enhance the singular methodology (Kerzner, 2014).

According to Kerzner (2014), these levels do not need to be performed sequentially, rather, some of the above levels can and do overlap. Although overlapping does occur, the order in which the

phases are completed cannot change. For example, even though Level 1 and Level 2 can overlap, Level 1 must still be completed before Level 2 can be completed (Kerzner, 2014).

Project Management Maturity Model (PMMM by PM Solutions)

Like the CMM and PMMM by Kerzner, the model also follows the five levels of process maturity and PM knowledge areas from the Project Management Institute's PMBOK guide. The model is helpful to measure an organization's project management maturity and to direct organizations towards important PM capabilities that organizations should acquire in order to achieve project management growth and excellence. The five levels of PM Solutions (2014b) are depicted below

Level 1: Initial Process - Not established practices or standards. Metrics and project documentation are informally collected.

Level 2: Structured Process and Standards - Basic metrics and project documentation are present but no organizational standard is set.

Level 3: Organizational Standards and Institutionalized Process - All projects use organizationally institutionalized formal standards.

Level 4: Managed Process - Metrics are used to manage projects, and integrated into other corporate systems to maximize overall organizational performance.

Level 5: Optimizing Process - Lessons Learned is routinely studied to improve PM processes.

Organizational Project Management Maturity Model (OPM3)

Developed by PMI, the Organizational Project Management Maturity Model (OPM3) is a framework that provides an organization-wide view of portfolio management, program management, and project management to support achieving best practices within each of these domains (PMI, 2008).

An OPM3 assessment evaluates the degree of an organization’s ability to meet their strategic objectives through successful delivery by using recognized Best Practices to manage portfolios

of programs and projects (PMI, 2008). An OPM3 Maturity Assessment is flexible enough to be used to assess maturity in these different focus areas:

1. Specific domains (project, program, and/or portfolio),
2. Organizational Enablers, or
3. Specific stages of process improvement (standardize, measure, control, or continuously improve).

OPM3 framework cycle constitutes following steps for measuring maturity: Acquire Knowledge, Perform Assessment, Manage Improvements, and Repeat the process.

Acquire Knowledge - this component of OPM3 cycle requires preparation for assessment of project management maturity. A good understanding of OPM3 contents is developed before carrying out assessment. Also, understanding of organization for project management practices is developed (PMI, 2008).

Perform Assessment - involves gathering all the data required for measurement of maturity assessment. For this purpose, the PMI has devised a set of self-assessment method (SAM) questionnaire that enables an organization perform a high-level and a comprehensive assessment of its project management practice. The results of data are formulated in a form of graph which depicts organization's maturity level for project, program and portfolio management (PMI, 2008).

Manage Improvements - the results from perform assessment stage are compared against best practices standard of project, program and portfolio management. This best practice standard defined by PMI provides basis of improvement. The outcome of comparison between existing practices and best practices allows recommendation for improvement (PMI, 2008).

Structure of Organizational project management maturity model (OPM3) has five steps as discussed below.

OPM3 is conducted using an online tool (Product Suite) that includes: forms to start assessments, database of best practices, and electronic version of OPM3 knowledge foundation book and improvement plans based on completed assessments.

The OPM3 Knowledge Foundation book is used as the first step of OPM3 process. It includes an explanation of how OPM3 should be conducted and the best practices related to it.

The second step is performing the assessment using OPM3 Product Suite or performing an online self-assessment. The scope of the assessment is defined in the beginning and it can cover detailed assessment of best practices and capabilities of an organization.

The third step is putting the plans to improve best practices and capabilities that were weak according to the performed assessment in order to get a higher maturity level. The improvement path is extracted from the Product Suite through a report.

The fourth step is to execute the improvement plans to increase the organizational project management maturity level. And finally the fifth step is to redo the assessment again and go through the same process to determine if the improvements affected the maturity of the organization or not (OPM3 Online, Executive guide to OPM3 by PMI).

Project, Program, Portfolio Management Maturity Model (P3M3)

The Portfolio, Program & Project Management Maturity Model (P3M3) is an enhanced version of the Project Management Maturity Model, based on the process maturity framework that evolved into the Capability Maturity Model (CMM) (OGC, 2006). Like CMM and PMMM, this model has a five-level maturity, each depicting different maturity levels. The Portfolio, Program & Project Management Maturity Model (P3M3) can be used as the basis for improving portfolio, program and project management processes (OGC, 2006).

Later on another version of the P3M3 was developed by the OGC (OGC, 2008). The latest P3M3 is an overarching model containing three individual models:

- Portfolio Management Maturity Model (PfM3)
- Program Management Maturity Model (PgM3)
- Project Management Maturity Model (PjM3) (OGC, 2008)

Although connected, there are no interdependencies between these models, which allows for independent assessment in any of the specific disciplines (OGC, 2008). The P3M3 recognizes

not only the program and project management activities being carried out at the individual program and project level, but also those activities within an organization that provide focus and help sustain effort to build a program and project infrastructure of effective program and project approaches and management practices (OGC, 2006).

The structural components constituted under the five levels and that comprise the P3M3 can be characterized as follows

Maturity	Project	Programme	Portfolio
Level 1 - initial process	Does the organisation recognise projects and run them differently from its ongoing business? (Projects may be run informally with no standard process or tracking system.)	Does the organisation recognise programmes and run them differently to projects? (Programmes may be run informally with no standard process or tracking system.)	Does the organisation recognise programmes and projects and run an informal list of its investments in programmes and projects? (There may be no formal tracking and reporting process.)
Level 2 - repeatable process	Does the organisation ensure that each project is run with its own processes and procedures to a minimum specified standard? (There may be limited consistency or co-ordination between projects)	Does the organisation ensure that each programme is run with its own processes and procedures to a minimum specified standard? (There may be limited consistency or co-ordination between programmes)	Does the organisation ensure that each programme and/or project in its portfolio is run with its own processes and procedures to a minimum specified standard? (There may be limited consistency or co-ordination)
Level 3 - defined process	Does the organisation have its own centrally controlled project processes, and can individual projects flex within these processes to suit the particular project?	Does the organisation have its own centrally controlled programme processes and can individual programmes flex within these processes to suit the particular programme?	Does the organisation have its own centrally controlled programme and project processes and can individual programmes and projects flex within these processes to suit particular programmes and/or projects. And does the organisation have its own portfolio management process?

Level 4 - managed process	Does the organisation obtain and retain specific measurements on its project management performance and run a quality management organisation to better predict future performance?	Does the organisation obtain and retain specific measurements on its programme management performance and run a quality management organisation to better predict future programme outcomes?	Does the organisation obtain and retain specific management metrics on its whole portfolio of programmes and projects as a means of predicting future performance? Does the organisation assess its capacity to manage programmes and projects and prioritise them accordingly?
Level 5 - optimised process	Does the organisation run continuous process improvement with proactive problem and technology management for projects in order to improve its ability to depict performance over time and optimise processes?	Does the organisation run continuous process improvement with proactive problem and technology management for programmes in order to improve its ability to depict performance over time and optimise processes?	Does the organisation run continuous process improvement with proactive problem and technology management for the portfolio in order to improve its ability to depict performance over time and optimise processes?

Table 2.1: The structural components constituted under the five levels of the P3M3 (OGC, 2006; OGC, 2008)

Project Management Process Maturity $(PM)^2$

The $(PM)^2$ model is developed by Kwak and Ibbs (2002) by integrating previous maturity models that measure the PM levels of different companies and industries. The model becomes the basis to evaluate and position an organization's current PM maturity level. It illustrates a series of steps to help an organization incrementally improve its overall PM effectiveness (Kwak and Ibbs, 2002). The $(PM)^2$ model breaks PM processes and practices into nine PM knowledge areas and five PM processes by adopting PMI's PMBOK. Each PM maturity level contains key PM processes, organization's characteristics, and focus areas as depicted in the following table.

Maturity level	Key PM processes	Major organizational characteristics	Key focus areas
Level 5 Continuous Learning	PM processes are continuously improved	Project-driven organization	Innovative ideas to improve PM processes and practices
	PM processes are fully understood	Dynamic, energetic, and fluid organization	
	PM data are optimized and sustained	Continuous improvement of PM processes and practices	
Level 4 Managed at Corporate Level	Multiple PM (program management)	Strong teamwork	Planning and controlling multiple projects in a professional matter
	PM data and processes are integrated	Formal PM training for project team	
	PM processes data are quantitatively analyzed, measured, and stored		
Level 3 Managed at Project Level	Formal project planning and control systems are managed	Informal training of PM skills and practices	Systematic and structured project planning and control for individual project
	Formal PM data are managed	Team oriented (medium)	
Level 2 Planned	Informal PM processes are defined	Team oriented (weak)	Individual project planning
	Informal PM problems are identified	Organizations possess strengths in doing similar work	
	Informal PM data are collected		
Level 1 Ad-hoc	No PM processes or practices are consistently available	Functionally isolated	Understand and establish basic PM processes
	No PM data are consistently collected or analyzed	Lack of senior management support	
		Project success depends on individual efforts	

Table 2.2: Key PM processes, organization's characteristics, and focus areas of $(PM)^2$ model (adapted from Kwak and Ibbs, 2002)

The primary use of the $(PM)^2$ model is as a reference point or yardstick for an organization applying PM practices and processes. The $(PM)^2$ model and its assessment methodology have been applied successfully to different organizations and industries and are proven to be very effective (Ibbs and Kwak 1997 in Kwak and Ibbs, 2002).

The PMO Maturity Cube (a Project Management Office Maturity Model)

Pinto, De Matheus Cota, and Levin developed a maturity model that focuses on PMOs maturity named The PMO Maturity Cube. The PMO Maturity Cube, as its name suggests has three dimensions and their own categories. The dimensions are Scope of the PMO (Enterprise, Departmental or Program/Project PMO); Approach (Operational, Tactical or Strategic PMO) and Maturity (Basic, Intermediate or Advanced) (Pinto et al, 2010).

The proposal of this model sums up the main standard ways of typifying PMOs in essentially two principal dimensions: scope and approach (Pinto et al, 2010).

The scope of a PMO comes from how wide reaching its actions within the organization are. Basically, there are three mutually exclusive possibilities: the project-program PMO, the scope of which covers just one of the organization's projects or programs; the departmental PMO, which covers an area, department, directorship, or business unit, i.e., just a part of the organization; and finally the corporate or enterprise PMO, which covers the organization as a whole (Pinto et al, 2010).

Approach has to do with how the PMO operates. This may be strategically, tactically, or operationally, or it may operate with all three simultaneously (Pinto et al, 2010). The authors also suggested that the driver of the approach of a PMO must be its mission, which will define how strategic, tactical, or operational it should be.

The third dimension is the maturity of the PMO in which the authors define as the degree of sophistication it provides to each service for which it is responsible (Pinto et al, 2010). By considering the twenty seven roles of PMOs put forward by Hobbs and Aubry (2007), the authors analyzed as to their possible different levels of sophistication for carrying them out, from

the most trivial way to the most complicated. This determines the degree of maturity when carrying it out (Pinto et al, 2010).

The PMO Maturity Cube results from unifying these three concepts, which have all been consolidated into one specific model for evaluating the maturity of PMOs for any type of organization.

Project Management Office (PMO) Continuum

According to Hill (2008), a project management methodology provides a standard, repeatable process to guide project performance from concept to completion. This "project management methodology" function enables the Project Management Office (PMO) to:

- Establish the standard approach to project management that is to be used by all project managers within the relevant organization.
- Introduce project management practices incrementally, beginning with those that have the greatest impact on project and business success.
- Achieve consensus for implementing a common project management life cycle across the relevant organization's technical and business areas.
- Provide for collection of pertinent project data used in individual and aggregate analyses of project performance.
- Identify and incorporate technical and business processes into the project management methodology (Hill, 2008).

Hill (2008) stated that the PMO and the project management methodology evolve through five stages. He called these PMO stages "PMO competency continuum". Along these stages, the project management methodology of the PMO is characterized by:

- Development and implementation of increasingly more complete and comprehensive project management processes and practices
- Increased integration of technical and business process activities

- Wider cross-functional influence at advanced stages of the continuum, in association with the broader oversight authority and responsibility for project management prescribed by the methodology

The five stages are listed below with their respective project management methodology.

Project Office	Basic PMO	Standard PMO	Advanced PMO	Center of Excellence
- Applies effective practices for project performance and oversight; and employs standard lifecycle processes when available	- Introduces critical processes and practices of project management - Identifies and develops critical processes - Manages cross-project critical process use - Identifies best and preferred practices	- Establishes and monitors use of a complete project management methodology - Provides full project life-cycle coverage - Integrates technical processes - Conducts methodology user training	- Enhances content and monitors use of a comprehensive methodology - Integrates business processes - Optimizes automated tool alignment - Facilitates methodology use across relevant business units	- Conducts project management methodology analyses - Examines process variation in business units - Assesses methodology use and ongoing process improvement

Table 2.3: Range of Project Management Methodology Activities across the PMO Continuum (Hill, 2008)

2.7.2 Uses and benefits of Project Management Maturity Models

Maturity models are designed to provide a framework that an organization needs to develop its capabilities, in order to deliver projects successfully in the long term (Jugdev & Thomas, 2002; Mittermaier & Steyn, 2009 cited in Backlund et al, 2014). Backlund, et al (2014) also stated the following points as importance of using PM maturity models and assessment:

- To set direction, prioritize actions, and begin cultural change rather than primarily identifying the current level at which an organization is performing.
- To compare project capability between organizations, or between a specific organization and industry norms as a means to benchmark their maturity relative to others.
- PM maturity assessment can be utilized as a "checkup" tool to measure progress and to identify the next logical steps forward and hence support organizations to view PM as a strategic enabler.

2.7.3 A critical review of applying Project Management Maturity Models

A criticism of using Project Management Maturity Models include

- The focus on explicit PM knowledge areas and not on intangible assets, which are not measurable but can contribute to a mature PM capability;
- The comprehensive and complex frameworks may prevent potential users to apply the model;
- The models are inflexible when a flexible model is required for managing change and improvements;
- The models are overly disciplinary, impractical, and overwhelming as methodologies;
- The models focus on the work processes and some ignore the human resource or organizational aspects. (Jugdev & Thomas, 2002 in Backlund et al, 2014)

2.8 Choosing a Model for Project Management Maturity Assessment

According to Man (2007), the evaluation of maturity models for PMMMs could be developed along three dimensions:

a. structure,
b. applicability and
c. usage

Using the above three criteria and other characteristics of the models, the researcher has chosen to apply the Project Management Maturity Model (PMMM) that was presented by PM Solutions to assess the project management maturity of the PMO of Commercial Bank of Ethiopia. The model is well structured with a two-dimensional framework which is based on accepted industry standards. The first dimension reflects the level of maturity. It is based on the structure of the SEI Capability Maturity Model. The second dimension depicts the key areas of project management addressed. It adopts the structure of the PMI's nine knowledge areas. The model has been used by many researchers in assessment of project management maturity of various organizations. It is relatively easy to use and the outcomes of the model are applicable to enhance the maturity of organizations towards project management.

In addition, using the model has the following advantages:

- Has well defined knowledge areas and processes devised by the PMI.
- Has well defined maturity levels.
- Integrates various project management maturity models.
- It illustrates a series of steps to help an organization improve its overall PM effectiveness.
- Up to date knowledge areas and processes can be included.

2.9 Empirical Literature Review on Project Management Maturity

Grant and Pennypacker (2006) performed a benchmarking study of 126 organizations across 17 different industries. They conducted a web-based survey and their approach used 9 PMI knowledge areas and studied 42 components of maturity by devising 5 levels of maturity. They concluded that the surveyed organizations had a median level of project management maturity at level 2. They also found that project management maturity had no significant difference across the industries they studied.

Grant and Pennypacker (2006) also referred a study by Levene, et al (1995) in their research. According to Grant and Pennypacker, Levene et al, (1995) reviewed 13 organizations across 3 business sectors. They used competence interviews at three organizational levels and found out Information Technology (IT) project practices found to be similar across all business sectors (Grant and Pennypacker, 2006).

Cooke-Davies and Arzymanow (2003) conducted a benchmarking study that explored variations in project management practice in 21 organizations across six industries. The empirical research was based on in-depth interviews conducted with "knowledgeable project management practitioners" according to the researchers. They represented the data as maturity profiles plotted on a spider web instead of determining the maturity level of an organization with a single number. This is valuable as it identifies the differences across the nine domains used by the researchers. The domains represent the groups of the interview questions. A score was given to each organization for each domain and the overall maturity level can be calculated from these scores. These individual domain results are important as they will direct where effort is needed to improve practice. The authors also concluded that more established users of project management such as the engineering-based industries demonstrate a higher level of maturity.

The longitudinal analysis of project management maturity conducted by Mullaly (2006) covered 550 international organizations over a period of 6 years. He used an unpublished maturity model that uses five maturity levels and 12 capability areas. The 12 capability areas are decomposed into a number of capabilities and these are in turn broken down into identified practices. Data was collected using a multiple choice survey with some limited verification using interviews and reviews of practice. Over the 6 year period of the survey, the number of organizations at level 1

increased (from 30% to 72%), that of organizations at level 2 and at level 3 decreased (from 64% to 28% and from 6% to 0% respectively). No organizations were assessed to be at levels 4 or 5 in the study. The main reason for this decline in maturity offered by Mullaly was that the organizations participating in the study varied from year to year. According to Mullaly's analysis organizations in the engineering industry exhibited higher maturity levels. This result comes in consistency with the conclusion of Cooke-Davies and Arzymanow - the engineering industry showing the highest maturity level.

Young and Zapata (2011) also conducted maturity assessment using P3M3 model on Australian government agencies. The three perspectives of the model were used to assess the maturity level in project, program and portfolio management. According to their study, project management processes were mainly at level 2 maturity (repeatable), although some functions were at lower maturity level. For example, Benefits Management was at level 1 (awareness only) and Risk Management was at level 3 (defined). Program management processes were between level 1 and level 2. Portfolio management processes were between level 2 and level 3, (the highest of the three perspectives).

They also conducted analysis to assess whether there was any significant difference between small and large agencies. The results suggest that portfolio management may be performed better in small agencies, project management may be performed better in large agencies and program management performed poorly whatever the size of the agency. However, according to the researchers, this may simply be reflecting the scale of the projects being undertaken by the different sized Agencies. Smaller agencies will probably be undertaking fewer smaller projects that can be managed at an agency level as one overall portfolio. Larger agencies probably have more and larger projects requiring much more effort to manage at a portfolio level and they may have chosen instead to focus their effort to manage at the project level. The results showed that these three disciplines are actually practiced completely independently of each other.

An empirical research has been conducted by Simangunsong and Da Silva (2013) to assess project management maturity level. The survey included 127 respondents from different industries including construction, services, manufacturing, oil and gas and others. The researchers concluded that construction is the only industry that has maturity level 3

(Normalized). They also stated that in the construction industry management of projects and formalization of project management process is widely implemented. This conclusion is consistent with the finding of Cooke-Davies and Arzymanow (2003) and Mullaly (2006). Lack of proper project management training and certification is one major issue identified in this study as determinant of the overall project management maturity level of the organizations.

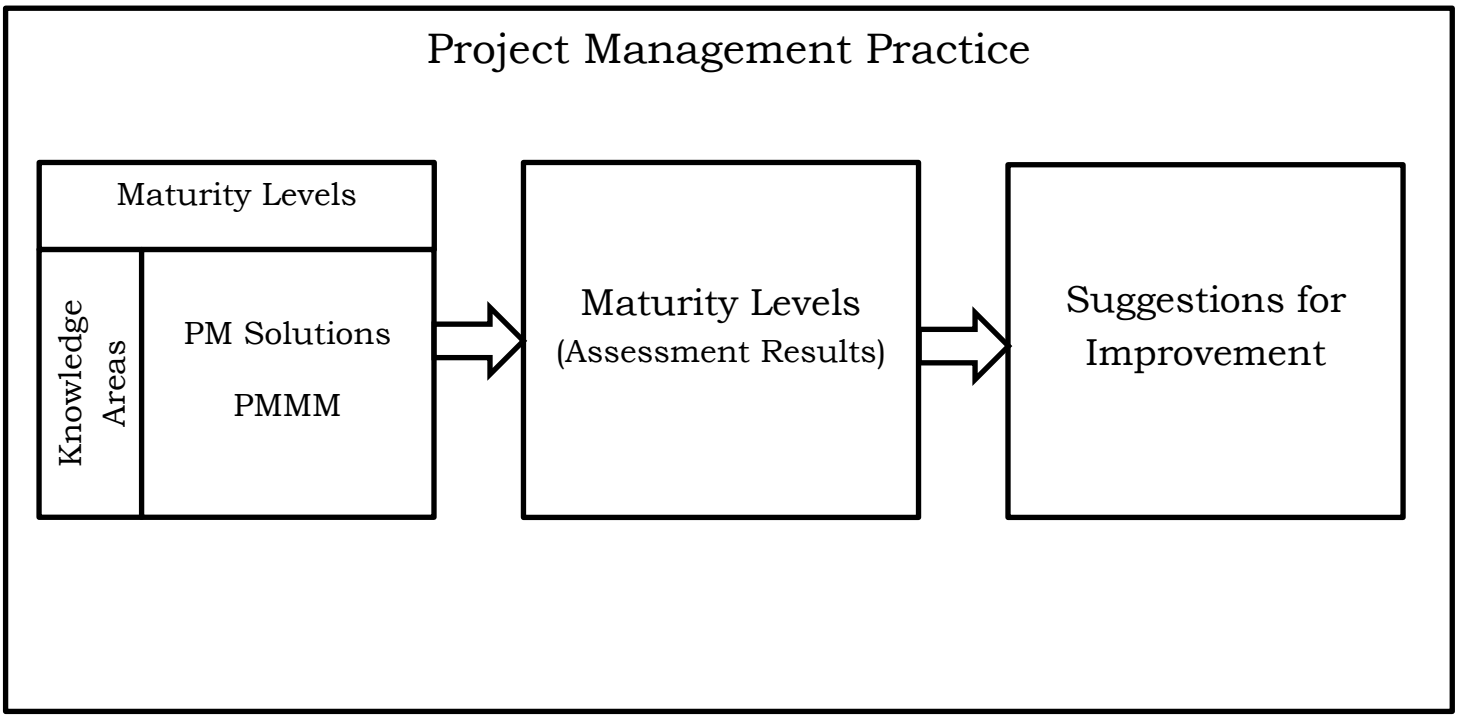
The study by Abadir (2011) tries to assess project management maturity in the construction industry of developing countries by taking Ethiopian contractors as a case. The study surveyed a total of 40 contractors of which 32 of them were local and 8 of them were international contractors. According to the researcher the construction PM process maturity and practices maturity of the contractors found to be at low level at average maturity of 1.30. The research also showed that much of the knowledge areas of the PMBOK guide are implemented informally. It also concluded that contractors that had certifications or are on the way of certification showed higher maturity. Another comparison by the researcher is between contractors that are involved in road construction and building construction, the former group showing higher maturity.

The above reviewed studies were conducted by focusing on the project management maturity of various organizations. According to these studies, project management maturity of various organizations shows difference through time and most studies concluded it differs from one industry to another according to the reviewed literature. From these industries, those with established project management showed higher maturity than the others.

2.10 Conceptual Model

Based on reviewed literature, the researcher has developed a conceptual framework to put the research process in to perspective.

Fig. 2.1 Conceptual model of the research



Source: Developed by the researcher based on literature, 2017

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter of the research report provides an outline of the research methodology that is employed in the measurement of the Project Management Maturity level and project management practices of the Program Management Office for the success of internal projects of Commercial bank of Ethiopia. This part describes the research design, Source of Data, Sampling and sampling techniques, Instrument of data collection and methods and procedures of data analysis. Ethical considerations are also described in this chapter.

3.1 Research Design

Research design is a blue print for selecting the sources and types of data relevant to the research questions and provides the basic direction for carrying out a research project to obtain answers to research questions (Zikgmund et al., 2010). One of the types (classifications of research) is descriptive research, and according to Kothari (2004) descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group. Since this study tries to describe the project management maturity level, it employs a descriptive study research design.

The research work is conducted by taking the PMO of Commercial Bank of Ethiopia as a case. The idea of case studies is strengthened by Aubry, et al. (2008) who suggested that PMO is a complex phenomenon that could be understood as part of a historical process within an organizational context, as it is embedded into the host organization and both evolve simultaneously. Thus, case study method is considered to be more appropriate for the research, because it allows collecting highly detailed data about the subject issue. Moreover, case study gives the researcher the following advantages; the research questions can be modified during the research process if the original questions are found to be less relevant or salient, derive richer, more contextualized, and more authentic interpretation of the subject under study (Bhattacherjee, 2012). The drawback often associated with case studies are lack of rigor and fairness, as well as

they give little basis for scientific generalization while their goal is to expand and generalize theories (Yin, 2009).

3.2 Source of Data and Instrument of Data Collection

To collect all pertinent information for the research, both primary and secondary data sources were used. To collect relevant primary data for the study, questionnaire was used as an instrument of data collection. The questionnaires were administered to a sample of project managers who are selected from the fifteen projects being undertaken currently by Commercial Bank of Ethiopia. In addition, review of relevant documents, personal observation of the PMO's and projects' working environment was carried out.

The questionnaire was developed based on reviewed literature and tailored to the case under investigation based on observation of operational activities and documents. Researches by Abadir (2011), Mateen (2015), Simangunsong and Da Silva (2013) and Tahri and Drissi-Kaitouni (2006) and others were also used to reshape the questions as appropriate. The questionnaire was validated by reviewing these and other literature that are both empirical and theoretical. The questionnaire was divided into two parts. The first part is designed to capture general data about the respondents. The second part has questions developed from literature. The questions are grouped into nine knowledge areas set by PMI in the project management body of knowledge (PMBOK) guide. Under these knowledge areas were various questions devised to measure the degree of maturity of the project management practice.

Other secondary data sources including operational procedures, project plans, monitoring and periodical reports and other relevant sources related with projects were reviewed as well. Secondary data obtained from such sources were helpful to triangulate the data and further strengthen the analysis.

3.3 Validity and Reliability

The validity of the data collection instrument is checked against available literature. The reliability of the data collected is also checked by using different methods. Creswell (2009) stated that using different data collection tools helps to crosscheck information. Hence the

secondary data obtained through various methods helped for triangulation of the data and ensured reliability of the data.

3.4 Sampling and sampling techniques

Since the bank is undertaking fifteen projects currently, the population of the study is the fifteen managers of the projects. From the fifteen managers, a sample of twelve managers was selected using purposive sampling. Purposive or judgmental sampling enables to use judgment to select cases that will best enable to answer the research question(s) and to meet the research objectives, according to Saunders, et al (2009). The researcher believed that taking the twelve project managers as a sample would provide the necessary information regarding project management practice of the case under survey. Furthermore, the selected projects are currently fully operational (are in implementation phase) and have well established project teams. The rest of the projects are currently in initiating (bidding phase) and planning phases making gathering of relevant data regarding project management practice difficult. Hence, twelve project managers from current projects were located and provided with the questionnaire. Therefore selecting project managers that are knowledgeable about the project activities and the PMO gave the researcher a chance to capture relevant data. Once the samples were drawn, the questionnaires were distributed to the respondents (project managers) in person at their respective project offices and collected in similar fashion.

3.5 Data Analysis Methods

In order to evaluate the PM maturity level of the PMO both qualitative and quantitative analysis were employed. The responses from the questionnaires were summarized and analyzed categorically against the five levels of the selected project management maturity model by PM Solutions. The answers from part one of the questionnaires helped in providing general information about project managers and their exposure towards project management discipline. The first category of the second part of the questionnaire provided information regarding general project management practice that was used together with the first part and other secondary sources to analyze the general project management environment. The second part of the questionnaire provided data that was used to conduct the analysis which in turn was carried out in relation to nine knowledge areas set by PMI in the project management body of knowledge

(PMBOK) guide. Descriptive statistics were used to analyze the data obtained from the questionnaires.

3.6 Ethical Considerations

According to Saunders, et al (2009) there are key ethical issues that arise across the stages and duration of a research project. They stated that the issues relate to privacy and consent of participants, maintenance of the confidentiality of data and their anonymity. The researcher has obtained the consent of selected respondents orally before delivering questionnaires. Since the researcher used questionnaires to gather data from respondents, their privacy is not compromised and confidentiality of the data they provided is protected and used for the purpose of the research project only. Furthermore, the researcher recused himself from any interference when respondents fill the questionnaires except for the purpose of clarifying questions.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation and Analysis

Relevant data were gathered through questionnaires distributed to project managers, from various reports and project documents, as well as personal observation. All of the twelve distributed questionnaires were filled and returned rendering a 100% response rate. Data obtained through the distributed questionnaires were analyzed using 20th version of SPSS and interpreted using descriptive statistics. Data gathered through document review has been analyzed qualitatively. Then major findings have been summarized and presented as follows.

4.1.1 Data Obtained from Questionnaires

Demographic Profile of Respondents

This section summarizes the demographic characteristics of the respondents, which includes education level, work experience, project management experience and project management trainings. The main purpose of the demographic analysis in this research is to describe the characteristics of the respondents so that the analysis could be more meaningful for readers.

Table 4.1: Demographic Profile of Respondents

Characteristics	Responses	Frequency	Percentage
Educational Level	MA Degree	5	41.7
	BA Degree	7	58.3
Work Experience (Overall)	< 5 years	-	-
	5 – 10 years	-	-
	10 – 15 years	2	16.7
	15 – 20 years	9	75.0
	> 20 years	1	8.3

Work Experience (in Project Management)	< 1 year	2	16.7
	1 – 5 years	7	58.3
	> 5 years	3	25.0
Received training in PM by the bank	Yes	4	33.3
	No	8	66.7
Received training in PM outside the bank	Yes	2	16.7
	No	10	83.3
Prior exposure to project environment	Yes	3	25.0
	No	9	75.0

Source: Own survey, 2017

Table 4.1 describes the demographic profile of the respondents. In terms of educational level, seven respondents (58.3%) were holders of BA degrees with five of the respondents having MA Degree (41.7%). Regarding the work experience of respondents, most of them (75%) have 15 to 20 years of overall work experience; two respondents (16.7%) have 10 to 15 years of work experience, whereas one (8.3%) had more than twenty years of work experience. Majority of the respondents (58.3%) have one to five years of work experience in project management. 16.7% of the respondents have less than one year experience working in project environment and 25% have more than five years of experience in projects. Respondents with more than five years of experience in project environment were found to be those who have been involved in other projects prior to their current assignment. Majority of the respondents have not received project management training whether provided by the bank of other institution (66.7% and 83.3% respectively). When it comes to prior exposure to project environment only three respondents (25%) had such type of experience.

General Project Management Practice

Questions intended to capture the general project management practice were provided for respondents. The results obtained are discussed below.

Table 4.2: Respondent answers for PM practice questions

	Project Management Practice-General	Yes		No		I Don't know	
		Freq	%age	Freq	%age	Freq	%age
1	Is the need and benefit of Project Management recognized by the bank management?	12	100.0	-	-	-	-
2	Does the management of the bank provide support for Project Management development?	12	100.0	-	-	-	-
3	Does the bank have standard Project Management processes and methodologies?	3	25.0	9	75.0	-	-
4	Does the bank provide Project Management training for its Project Management team?	4	33.3	8	66.7	-	-
5	Do Project Managers of the bank have solid knowledge base of Project Management?	4	33.3	7	58.3	1	8.3
6	Are Project Management processes, methodologies and procedures applied formally in managing projects in the bank?	3	25.0	9	75.0	-	-

Source: Own survey, 2017

As shown on the table all respondents agreed that the bank recognized the need and benefit of project management and the bank's management provides support for project management development. When it comes to standard project management processes and methodologies 75% of the respondents replied that the bank has no standard for PM processes and methodologies and 25% replied there are standards for PM processes and methodologies. Similarly, majority (66.7%) of the respondents replied that the bank is not providing training for its PM team and 33.3% replied trainings are provided. As depicted on the above table 33.3% of the participants replied that there is solid knowledge base of Project Management with project managers, 58.3% of the respondents replied that Project Managers of the bank do not have solid knowledge base of

Project Management whereas one (8.3%) replied they don't know. 25% of the respondents replied that Project Management processes, methodologies and procedures are formally applied in managing projects in the bank whereas 75% replied the application is informal.

Project Scope Management

Table 4.3: Respondent answers for Project Scope Management questions

		Yes		No		Not Applicable		I don't Know	
	Project Scope Management	Freq	%age	Freq	%age	Freq	%age	Freq	%age
1	Is there awareness about the need or importance of project scope management in the PMO and Project Management team?	12	100.0	-	-	-	-	-	-
2	Is there any effort of managing project scope in the bank/project?	12	100.0	-	-	-	-	-	-
3	Is the effort of scope management formal?	9	75.0	3	25.0	-	-	-	-
4	Are standardized tools used in scope management process?	2	16.7	10	83.3	-	-	-	-
5	Is WBS (work breakdown structure) prepared in defining scope in your project?	12	100.0	-	-	-	-	-	-
6	Is a WBS Dictionary prepared? (Document providing description of work, responsible department, resource required etc.)	5	41.7	7	58.3	-	-	-	-
7	Is there any effort of monitoring and controlling scope in your project?	4	33.3	8	66.7	-	-	-	-

Source: Own survey, 2017

According to the responses obtained from the sample respondents, there is awareness about the need or importance of project scope management and there is effort of managing project scope. 75.0% of the respondents replied that the effort of managing scope is formal but only 41.7% replied there are standardized tools used in project scope management process. All of the respondents replied Work Breakdown Structure (WBS) was prepared for the projects, whereas only 41.7% replied WBS Dictionary was prepared for the projects and 58.3% replied WBS dictionary was not prepared for their projects. 4 respondents (33.3%) replied yes to the question

"Is there any effort of monitoring and controlling scope in your project?" and 8 respondents (66.7%) replied no indicating that there is minimal effort of monitoring and controlling scope in most of the projects.

Project Time Management

Table 4.4: Respondent answers for Project Time Management questions

	Project Time Management	Yes		No		Not Applicable		I don't Know	
		Freq	%age	Freq	%age	Freq	%age	Freq	%age
1	Is there awareness about the importance of project time management in the PMO and project management team?	12	100.0	-	-	-	-	-	-
2	Is there any effort of managing time in your project?	12	100.0	-	-	-	-	-	-
3	Is the effort of time management formal?	12	100.0	-	-	-	-	-	-
4	Is a schedule (plan) prepared for the project?	12	100.0	-	-	-	-	-	-
5	Is the schedule base lined? (start and finish date are approved and fixed)	12	100.0	-	-	-	-	-	-
6	Is Work Breakdown Structure used when defining the schedule activities?	12	100.0	-	-	-	-	-	-
7	Are relationships among activities identified and the activities sequenced?	12	100.0	-	-	-	-	-	-
8	Is activity duration estimate prepared?	12	100.0	-	-	-	-	-	-
9	Are the PMO historical data used in estimating activity duration?	4	33.3	8	66.7	-	-	-	-
10	Is progress of project activities continuously monitored and controlled?	12	100.0	-	-	-	-	-	-
11	Is the project schedule updated regularly?	12	100.0	-	-	-	-	-	-

Source: Own survey, 2017

The respondents all agreed that there is awareness about the importance of project time management and there is a formal effort of project time management according to the respondents. All projects also have project schedules (plans) (12 responses) with approved start and finish dates (12 responses). The respondents also replied that relationships among activities are identified and the activities sequencing performed during project time management. Activity duration estimate is also prepared according to the respondents. Historical data are not used when projects are scheduled as per 66.7% of the respondents and 33.3% replied historical data of the PMO were used during activity duration estimation indicating lack of uniformity from project to project. All respondents also replied that monitoring and controlling of project schedule is performed and project schedule updated regularly.

Project Cost Management

Table 4.5: Respondent answers for Project Cost Management questions

	Project Cost Management	Yes		No		Not Applicable		I don't Know	
		Freq	%age	Freq	%age	Freq	%age	Freq	%age
1	Is there awareness about the importance of project cost management in the PMO and Project Management team?	12	100.0	-	-	-	-	-	-
2	Is there any effort of managing cost in your project?	12	100.0	-	-	-	-	-	-
3	Is the effort of cost management formal?	12	100.0	-	-	-	-	-	-
4	Is estimate of the project cost prepared?	12	100.0	-	-	-	-	-	-
5	Is a budget prepared for the project?	12	100.0	-	-	-	-	-	-
6	Is the PMO historical actual cost data consulted in preparing the budget?	2	16.7	9	75.0	-	-	1	8.3
7	Is the budget base lined? (allocated to work packages and resources)	8	66.7	4	33.3	-	-	-	-
8	Is the budget updated regularly?	9	75.0	3	25.0	-	-	-	-
9	Is there any effort to monitor and control the project cost?	12	100.0	-	-	-	-	-	-

Source: Own survey, 2017

All of the respondents indicated that the bank has a formal process of managing project costs and project cost estimates and budget are prepared for all projects. Only two respondents (16.7%) replied that historical data of the PMO was used while budget was prepared and 75.0% of the respondents replied that historical data was not consulted and one (8.3%) replied "I don't know". 66.7% of the respondents replied that the budget is base lined and 33.3% replied the project budget was not base lined. 75% of the sample project managers replied that the project budget is updated regularly and 25% replied the budget is not updated regularly. All respondents also agreed that an effort is made to monitor and control project costs.

Project Quality Management

Table 4.6: Respondent answers for Project Quality Management questions

	Project Quality Management	Yes		No		Not Applicable		I Don't Know	
		Freq	%age	Freq	%age	Freq	%age	Freq	%age
1	Is there awareness about the importance of Project Quality Management in the PMO and project management team?	12	100.0	-	-	-	-	-	-
2	Is there any effort of managing quality in your project?	12	100.0	-	-	-	-	-	-
3	Is the project quality management effort formal?	2	16.7	10	83.3	-	-	-	-
4	Is quality planning performed for your project? (requirements and quality standards are determined and strategies are devised)	1	8.3	8	66.7	3	25.0	-	-
5	Are Quality Assurance activities implemented in your project? (these are processes, procedures and standards defined/developed to assure quality objectives are met)	2	16.7	9	75.0	1	8.3	-	-
6	Is a review to determine whether project activities comply with policies, processes, and quality requirements performed?	2	16.7	9	75.0	1	8.3	-	-

7	Is quality control process implemented in your project? (determining whether project products and activities comply with relevant quality plans)	2	16.7	9	75.0	1	8.3	-	-

Source: Own survey, 2017

All of the respondents replied that there is awareness about importance of Project Quality Management and there is an effort of managing quality in projects. But only 2 respondents (16.7%) stated that the effort of project quality management is formal and 10 respondents (83.3) replied the effort of project quality management is performed informally. Likewise only one respondent (8.3%) replied that quality planning is performed for projects where 66.7% replied quality planning is not performed and 25% replied not applicable. Majority (75%) of the respondents also replied that there are no quality assurance activities being implemented in their projects whereas 16.7% replied the activities are being performed and 8.3% replied not applicable. Quality reviews and control processes are also not implemented in majority (75%) of the projects. 16.7% of the respondents replied the processes are being implemented whereas 8.3% replied not applicable.

Project Human Resource Management

Table 4.7: Respondent answers for Project HR Management questions

	Project Human Resource Management	Yes		No		Not Applicable		I don't Know	
		Freq	%age	Freq	%age	Freq	%age	Freq	%age
1	Is there awareness about the importance of Project Human Resource management in the PMO and project management team?	12	100.0	-	-	-	-	-	-
2	Is there any effort of Human resource management in the project or project?	12	100.0	-	-	-	-	-	-
3	Is the effort of Human resource management formal?	12	100.0	-	-	-	-	-	-
4	Is there any planning for acquisition and management of human resource?	11	91.7	1	8.3	-	-	-	-
5	Is skill requirement, roles and responsibilities defined for all project positions?	12	100.0	-	-	-	-	-	-
6	Is training (formal/informal) provided to project team members?	9	75.0	3	25.0	-	-	-	-
7	Is human resource cost and time formally tracked, and monitored in your project?	6	50.0	6	50.0	-	-	-	-

Source: Own survey, 2017

All 12 respondents replied that the importance of project human resource management is recognized and a formal effort is in place for this purpose. Almost all (91.7%) of the respondents replied planning is performed for acquisition and management of human resources for projects. Skill requirement, roles and responsibilities are also defined for all project positions as per the responses of all respondents (100% response). Regarding provision of formal and informal training for project team members, 75% of the respondents replied such trainings were provided and 25% replied that the trainings were not provided. Concerning formal tracking and monitoring of human resource cost and time, the responses are equally divided (50% response for both yes and no)

Project Communications Management

Table 4.8: Respondent answers for Project Communication Management questions

	Project Communication Management	Yes		No		Not Applicable		I don't Know	
		Freq	%age	Freq	%age	Freq	%age	Freq	%age
1	Is there awareness about the importance of project Communication management in the PMO and Project Management team?	12	100.0	-	-	-	-	-	-
2	Is Communication management performed?	12	100.0	-	-	-	-	-	-
3	Is Project Communication requirement analysis performed in your project?	12	100.0	-	-	-	-	-	-
4	Is a plan/strategy prepared to address identified communication needs?	11	91.7	1	8.3	-	-	-	-
5	Does your project have a system/procedure for handling project documents?	3	25.0	9	75.0	-	-	-	-
6	Does your project have a system for collecting and distributing information?	10	83.3	2	16.7	-	-	-	-
7	Are performance reports prepared and provided to relevant stakeholders?	12	100.0	-	-	-	-	-	-
8	Does your project have a standard format for preparation of project reports?	11	91.7	1	8.3	-	-	-	-
9	Does project manager share lessons learned with project members?	7	58.3	5	41.7	-	-	-	-

Source: Own survey, 2017

100% of the respondents replied that there is awareness about the importance of project Communication management and communication management is performed. All respondents also agreed that Project Communication requirement analysis is performed in their respective projects. When it comes to project communication plan, 91.7 (eleven projects) had a plan and 8.3% (one project) had no project communication plan. From the twelve samples taken, only 3 (25%) replied yes to having a system/procedure for handling project documents while 9 (75%) replied no. Majority of the projects (83.3%) have a system for collecting and distributing information and the remaining 16.7% have no system. All of the respondents have agreed that

performance reports are prepared and provided to relevant stakeholders of the projects. According to the respondent information, 91.7% of the projects have a standard format for preparation of project reports and the remaining 8.3% have no such format. From twelve project managers 7 (58.3%) replied that they share lessons learned with project team members and the remaining 5 (41.7%) they do not share lessons learned with their team members.

Project Risk Management

Table 4.9: Respondent answers for Project Risk Management questions

	Project Risk Management	Yes		No		Not Applicable		I don't Know	
		Freq	%age	Freq	%age	Freq	%age	Freq	%age
1	Is there awareness about the importance of project risk management in the PMO management & project management team?	12	100.0	-	-	-	-	-	-
2	Is there any effort of managing risks in your project before they cause adverse effect?	12	100.0	-	-	-	-	-	-
3	Is risk management performed formally in your project?	12	100.0	-	-	-	-	-	-
4	Is there any effort of identifying and documenting risks in your project?	12	100.0	-	-	-	-	-	-
5	Are identified risks analyzed to determine their potential impact?	11	91.7	1	8.3	-	-	-	-
6	Is a detailed risk response plan prepared for risks that warrant action/attention?	3	25.0	8	66.7	-	-	1	8.3
7	Is the risk response plan and strategy continuously updated?	-	-	8	66.7	-	-	4	33.3
8	Is risk monitoring and control performed in your project? (Is there any effort of identifying and documenting new risks, closing those outdated and tracking those already identified)	-	-	11	91.7	-	-	1	8.3

Source: Own survey, 2017

All of the twelve respondents replied yes regarding awareness about the importance of project risk management. Likewise all of the respondents agreed that there is an effort of managing risks in their respective projects before the risks cause adverse effect. According to the respondents (100%) risk management is performed formally and risks are identified and documented in their projects. When it comes to analyzing risks in order to determine their potential impact twelve (91.7%) of the respondents replied yes whereas one (8.3%) respondent replied no. Only three (25%) participants replied their projects have detailed risk response plan prepared for risks that need attention of the management, 66.7% replied detailed risk response plan is not prepared and 8.3% replied they don't know. 66.7% of the respondents replied risk response plan and strategy is not updated continuously and 33.3% replied they don't know. 91.7% of the respondents replied that risk monitoring and control is not performed in their projects and 8.3% replied they have no knowledge of the issue.

Project Procurement Management

Table 4.10: Respondent answers for Project Procurement Management questions

	Project Procurement Management	Yes		No		Not Applicable		I don't Know	
		Freq	%age	Freq	%age	Freq	%age	Freq	%age
1	Is there awareness about the importance of project Procurement management in the PMO or Project Management team?	12	100.0	-	-	-	-	-	-
2	Is there any effort of managing project procurement to ensure delivery of procured items/services as agreed in the contract?	12	100.0	-	-	-	-	-	-
3	Is the effort of managing project procurement formal?	-	-	1	8.3	11	91.7	-	-
4	Is planning done for procurement of goods and services needed for your project?	12	100.0	-	-	-	-	-	-
5	Does your project have standard procurement documents?	5	41.7	7	58.3	-	-	-	-
6	Does your project have a documented contract administration processes?	3	25.0	-	-	9	75.0	-	-
7	Does your project have a staff trained in contract/procurement management?	-	-	-	-	12	100.0	-	-

Source: Own survey, 2017

All twelve respondents replied that there is awareness about the importance of project Procurement management. All of the respondents also replied that there is an effort of managing project procurement to ensure delivery of procured items/services as agreed in the contract. Regarding formality of the project procurement management, 11 respondents (91.7%) replied as "not applicable" and one respondent (8.3%) replied the project procurement management is informal. 100% of the respondents replied planning is performed procurement of goods and services needed for the projects. 41.7% of the respondents replied that there are standard project procurement documents and 58.3 replied the project procurement documents are not standardized. Only 25% of the respondents replied their projects have a documented contract management/administration processes and 75% replied the question is not applicable to their projects. All respondents replied "not applicable" regarding availability of staff trained in contract/procurement management. This is largely due to the fact that the procurement management process is conducted separately from the project management process. The bank's available formal guideline dictates the project procurement management. The procurement process (excluding project procurement planning) is undertaken by the procurement sub-process of the bank which is mandated with procurement for all processes and sub-processes of the bank.

Project Stakeholder Management

Table 4.11: Respondent answers for Project Stakeholder Management questions

	Project Stakeholder Management	Yes		No		Not Applicable		I don't Know	
1	Is there awareness about the importance of stakeholder management in the PMO and project management team?	12	100.0	-	-	-	-	-	-
2	Is there any effort of identifying stakeholders and responding to their need?	12	100.0	-	-	-	-	-	-
3	Is stakeholder management performed formally in your project?	7	58.3	5	41.7	-	-	-	-
4	Is stakeholders' analysis done for your project?	7	58.3	5	41.7	-	-	-	-
5	Is a stakeholder management plan prepared (is there a devised strategy on how to handle the stakeholder's needs and expectations)?	3	25.0	9	75.0	-	-	-	-
6	Is there any continuous effort of communicating and working with stakeholders to influence their expectation, address their concern and resolve issues?	12	100.0	-	-	-	-	-	-
7	Is a strategy developed for managing each key stakeholder's expectation?	3	25.0	9	75.0	-	-	-	-

Source: Own survey, 2017

100% of the respondents agreed that there is awareness about the importance of stakeholder management. All twelve respondents also replied yes that there is an effort to identify stakeholders and responding to their need. Whereas only seven respondents (58.3%) replied that stakeholder management is performed formally and five of them (41.7%) replied the stakeholder management is informal. Likewise 58.3% replied stakeholders' analysis is done for their projects and 41.7% replied the analysis is not performed. When it comes to stakeholder management plan only three respondents (25%) replied there is a plan for stakeholder management and the remaining 75% replied there is no plan. all twelve respondents (100%) replied yes that there is a continuous effort of communicating and working with stakeholders to influence their

expectation, address their concern and resolve issues. According to the data obtained, a strategy is developed for 25% of the projects for managing each key stakeholder's expectation whereas such strategy is not developed for 75% of the projects.

4.1.2 Data Obtained through Document Analysis and Observation

Based on the data obtained from document analysis and personal observation the project management knowledge areas are analyzed qualitatively. The description of maturity levels of the PMMM being used are used together with the analysis of bith primary and secondary data to evaluate the maturity levels of each knowledge areas. The five maturity levels of the Project Management Maturity Model (PMMM) that was presented by PM Solutions and used to classify the maturity levels are:

Level 1: Initial Process

- ✓ Ad hoc processes
- ✓ Management awareness
- ✓ Not established practices or standards
- ✓ Metrics and project documentation are informally collected.

Level 2: Structured Process and Standards

- ✓ Basic processes; not standard on all projects; used on large, highly visible projects
- ✓ Basic project documentation are present
- ✓ Management supports and encourages use
- ✓ Mix of intermediate and summary-level information
- ✓ Estimates and schedules based on expert knowledge and generic tools
- ✓ Project-centric focus

Level 3: Organizational Standards and Institutionalized Process

- ✓ All processes standard for all projects and repeatable
- ✓ Management has institutionalized processes
- ✓ Summary and detailed information

- ✓ Baseline and formal collection of actual data
- ✓ Estimates and schedules may be based on industry standards and organizational specifics
- ✓ Organizational focus
- ✓ Informal analysis of project performance

Level 4: Managed Process

- ✓ Metrics are used to manage projects
- ✓ Processes integrated into other corporate systems to maximize overall organizational performance.
- ✓ Management mandates compliance
- ✓ Management takes organizational entity view
- ✓ Solid analysis of project performance
- ✓ Estimates and schedules normally based on organization specifics
- ✓ Management uses data to make decisions

Level 5: Optimizing Process

- ✓ Processes to measure project effectiveness and efficiency
- ✓ Processes in place to improve project performance
- ✓ Management focuses on continuous improvement
- ✓ Lessons learned is routinely studied to improve PM processes.

(Source: PM Solutions, 2014a)

Project Scope Management

According to the PMBOK (PMI, 2013), project Scope Management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. The processes that are included under the scope management process are not being implemented effectively in CBE's PMO. The plan scope, collect requirements, define scope, create work breakdown structure, validate scope and control scope processes are included under project Scope Management (PMI, 2013). Most of these processes are not performed formally for all projects with exception of few projects. The PMO does not

also have a developed methodology designed to scope projects effectively across the board, rather projects are scoped on ad hoc basis. Hence the project scope management practice of the PMO is at level one or Initial Process level.

Project Time Management

According to PMI (2013), Plan Schedule Management, Define Activities, Sequence Activities, Estimate Activity Resources, Estimate Activity, Develop Schedule and Control Schedule are processed included under project time management. Project time management is given emphasis in CBE's PMO and the process is supplemented by a project plan (schedule) prepared for each project. Although not in the prescribed steps and processes by PMI, the PMO uses tools such as analytical techniques, expert judgment, and meetings to set project schedule. The statement of work, activity list, work breakdown structure, activity resource requirements, activity duration estimates and requirements analysis are the major inputs used in the process. Despite having a project schedule for all projects, the project time management process does not produce critical paths and lead and lag times for effective time controlling. There is also an effort of project time controlling in all projects based on the project schedule. For schedule controlling purpose, the project schedule is compared against periodic and milestone status reports and variance analysis is performed followed by updating of project schedule if necessary. Hence with a relative uniformity of the project time management process in all projects, its maturity is at level three or Organizational Standards and Institutionalized Process level.

Project Cost Management

Project cost management involves the processes of Plan Cost Management, Estimate Costs, Determine Budge and Control Costs according to PMI's (2013) PMBOK. The project cost management of the CBE's projects is guided by the bank's budget guideline. This has provided a uniform process for all projects. A contingency budget is also maintained in case of rise of cost of projects. For controlling purpose, only variance analysis is performed other methods such as earned value analysis are not performed upon completion of milestones. The project cost management practice maturity, therefore can be classified as level three since defined and

documented cost management process is available for the projects and it is standard to the organization.

Project Quality Management

Project Quality Management includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken (PMI, 2013). In addition Project Quality Management works to ensure that the project requirements, including product requirements, are met and validated (PMI, 2013). In this regard the PMO does not perform quality planning and efforts of managing project quality are informal. In order to ensure whether product requirements are met or not, results of pilot test of deliverables are used. On the other hand, there is no stipulated process to ensure quality of project requirements. This puts project quality management practice of the PMO at level one or Initial Process level

Project Human Resource Management

According to PMI (2013), Plan Human Resource Management, Acquire Project Team, Develop Project Team and Manage Project Team are the processes that should be observed under Project human resource management. The planning step of the project human resource management process focuses on identifying and documenting project roles, responsibilities, required skills, reporting relationships, and creating a staffing management plan (PMI, 2013). These planning processes are being implemented in the projects that were surveyed. The process is supported by the human resource policy and guidelines of the bank. Once the human resource planning is performed and project organizational chart is prepared, project team staffing is performed as per the plan. When it comes to managing project teams, the projects and PMO are not performing an organized and regular performance tracking of project team members and do not provide feedback. In addition, human resource cost and time is not formally tracked and monitored in the projects. Hence the project human resource management practice is found at level three (Organizational Standards and Institutionalized Process level) of the PMMM.

Project Communications Management

The PMO sets a communications requirement for projects which is used for planning communications. The manage communications stage, which is the process of creating, collecting, distributing, storing, retrieving and the ultimate disposition of project information in accordance with the communications management plan according to PMI (2013), is also performed in the projects. The overall project communications management of the PMO is project based and lacks a standardized system for handling project documents. Since a standardized system for handling project documents is lacking, various project documents including closing project reports and lessons learned are not maintained in a structured manner and made available for consumption of future projects. The project communications management hence is at level two maturity level.

Project Risk Management

The project risk management practice of the bank does not have a formal guideline and a standard methodology for all projects. The processes stipulated by the PMI (2013), Plan Risk Management, Identify Risks, Perform Qualitative Risk Analysis, Perform Quantitative Risk Analysis, Plan Risk Responses and Control Risks, are included under project risk management. From these processes the risk identification, qualitative analysis and risk response plans are the only processes applied by CBE's projects and when applied, they are not applied uniformly across all projects. This puts the project risk management practice of the projects at level two maturity since no organizational standard is set for project risk management despite availability of basic project risk documentation for other processes of the bank.

Project Procurement Management

The procurement management process of CBE's projects is conducted separately from the project management process. Procurement is conducted through the procurement sub-process based on the bank's procurement guideline. The bank's available formal guideline dictates the project procurement management. The PMO's role is limited to providing expert judgment and estimation on ad-hoc basis. The project procurement management practice maturity at the PMO can be said at level one or initial process level based on the current practice.

Project Stakeholder Management

Project Stakeholder Management includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution (PMI, 2013). Project stakeholder management involves the Identify Stakeholders, Plan Stakeholder Management, Manage Stakeholder Engagement and Control Stakeholder Engagement processes according to PMI (2013). In CBE's PMO there is a process of identifying stakeholders and analyzing their expectations. But the identification of stakeholders is not accompanied with a formal stakeholder management plan and a strategy to engage stakeholders and manage their expectations. The overall process, however, is not guided by a predefined methodology for all projects. Basic processes are only applied in few of the projects only. The overall project stakeholder management maturity of the projects is at level two or Structured Process and Standards level maturity.

4.2 Maturity level of the knowledge areas

Based on both primary and secondary data analysis obtained through questionnaires, document analysis and personal observation, maturity level of project management practice at the PMO has been analyzed in the previous section. The maturity level of the knowledge areas obtained is presented below against each knowledge area and the result is plotted on a spider web diagram..

Table 4.12: Maturity level of the knowledge areas

Knowledge Areas	Maturity Level
Project Scope Management	1
Project Time Management	3
Project Cost Management	3
Project Quality Management	1
Project HR Management	3
Project Communication Management	2
Project Risk Management	2
Project Procurement Management	1
Project Stakeholder Management	2

Source: Own Survey, 2017

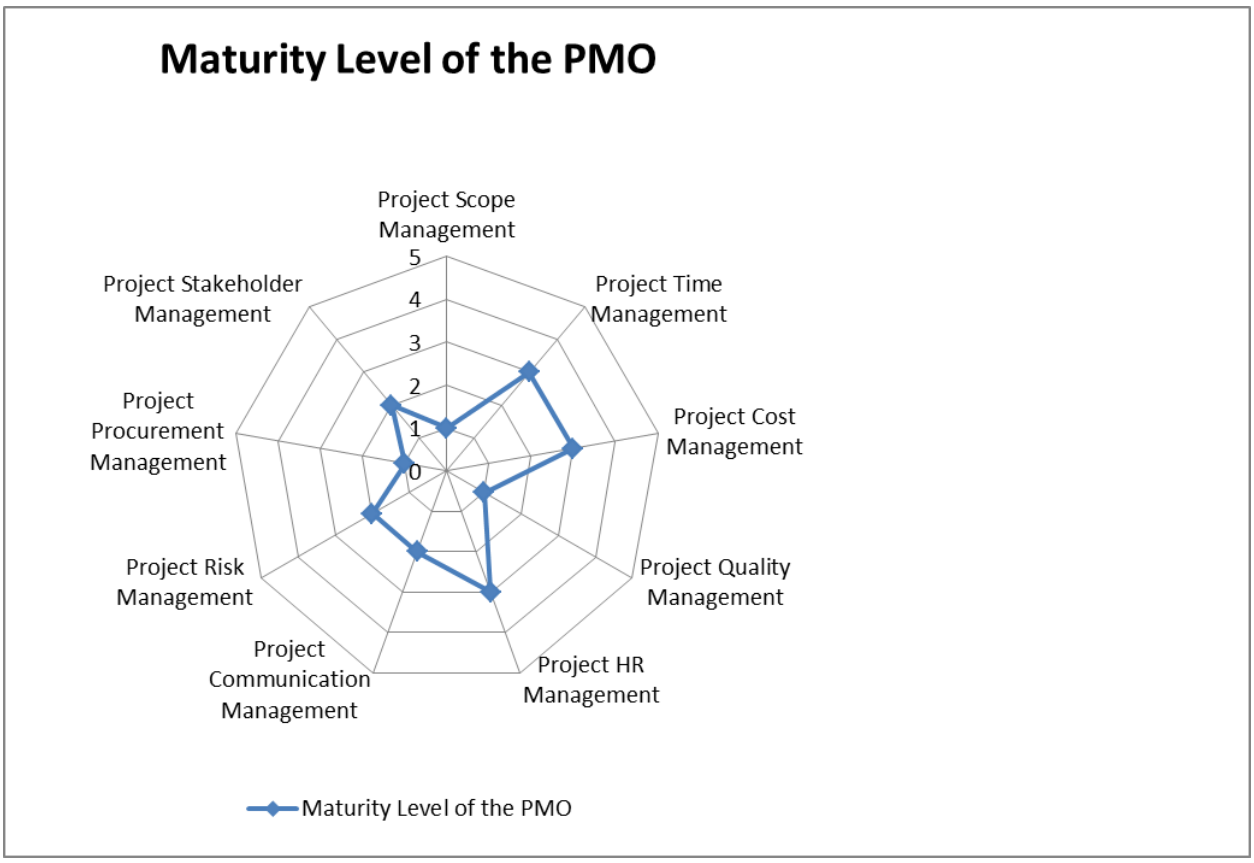


Fig 4.1: Maturity level of the knowledge areas (Source: Own Survey, 2017)

Studies conducted by Grant and Pennypacker (2006); Cooke-Davies and Arzymanow (2003); Mullaly (2006); and Simangunsong and Da Silva (2013) concluded that organizations that are project based and practice project management more often showed higher maturity. They also found out that there are no organizations at maturity level four or five. This conclusion concurs with the findings from this study. Commercial Bank of Ethiopia is not a project based organization and began practicing project management recently and this has put pressure on maturity of the bank's PM practice.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

Based on a qualitative descriptive study, the researcher has tried to measure the project management maturity level of Program Management Office of Commercial Bank of Ethiopia. The aim of the research was to contemplate possible ways in which the maturity assessment can be used to improve the project management practice at CBE's PMO. To measure the project management maturity at the PMO, a project management maturity model devised by PM Solutions was used. The model follows five levels of progressive process maturity and uses PM knowledge areas from the Project Management Institute's PMBOK guide. The model is important to measure an organization's project management maturity and to direct organizations towards important project management practices that are important to achieve project management growth and excellence. As discussed on the literature review part of the study, organizations that practice project management in a formal and structured way tend to exhibit higher maturities and witness better achievement in project management.

5.1 Conclusion

Based on the data gathered and analyzed, all of the knowledge areas have lower maturities. The maximum level obtained was maturity level three assessed on three knowledge areas. Three knowledge areas had a maturity level of two and the remaining areas had the lowest maturity level (level one). The PMO's project management practice is generally characterized by no established practices or standards; but basic and non-standard processes that are practiced on projects. This signals a need for improvement in project management practices.

From the knowledge areas practiced by the projects, those areas that have established processes that were used for a long time in the operations of the bank exhibited higher maturity. These areas are project time, cost and human resources management areas. Although the three areas exhibited a higher maturity as compared to the rest of the knowledge areas, their integration into the PMO/project environment was not as per the prescribed practices of the knowledge areas. This has limited their maturity to level three only.

Other practices that also had already established processes and practices in the bank's operations also exhibited lower maturity. The bank has a well-established communication, risk and procurement management practices. However the maturity level in these areas was lower since the management areas were not integrated well to the project environment. Other new concepts that came with project undertakings such as project scope management and project stakeholder management also have lower maturity indicating the need to enhance the project management practice in these and other areas as well.

5.2 Recommendations

The low level of project management maturity exhibited in CBE's program management office (PMO) shows how poor the project management practice is. To enhance the project management practices and bring effectiveness in project management, improvement efforts need to be under taken to improve the current conditions. In this regard the researcher recommends the following:

- It will help in increasing project management maturity in the bank if project management methodologies in project management knowledge areas are developed and practiced effectively in management of all projects.
- Knowledge areas that are new to the bank should be carefully studied and procedures designed to help project managers.
- The program management office would contribute in supporting project managers and project teams by carefully collecting, compiling and disseminating lessons learned from past project implementation; creating project management standards; and creating awareness among all stakeholders towards projects.
- It is also imperative to enhance the capacity of the PMO by strengthening its human and other resources and by providing trainings about project activities for team members.
- Project management should clearly be delineated from banking and other operations management.
- The bank should design and deliver different trainings that could solve skill gap of project managers in relation to project management and project management knowledge areas.

- The bank should also encourage its project managers to obtain certifications from various institutions in project management.

5.3 Suggestions for Further Research

Since the idea of project management maturity is relatively new and not practiced in Ethiopia, it would be valuable to conduct further research in the topic. Since this research is based on one case, further study can be conducted on many organizations and sectors. This will allow for greater reliability to provide important statistical generalizations. A study on similar case will also be interesting since it will help to visualize the progress made in project management maturity and practices by the bank.

References

Abadir H.Y. (2011). Project Management Maturity in the Construction Industry of Developing Countries (The Case of Ethiopian Contractors). University of Maryland. MA Thesis. Available online at pdqtopen.proquest.com

Aubry, M., Hobbs, B., and Thuillier, D. (2008). Organisational project management: an historical approach to the study of PMOs. *International Journal of Project Management*, 26 (1), pp. 38-43.

Backlund, F., Chronéer, D. and Sundqvist, E. (2014). Project Management Maturity Models - A Critical Review A case study within Swedish engineering and construction organizations. *27th IPMA World Congress, Proceedings,* 119 (2014), pp. 837-846. Available online at www.sciencedirect.com

Besner, C. & Hobbs, J. B. (2006). The perceived value and potential contribution of project management practices to project success. *Project Management Journal*, 37(3), pp. 37—48.

Bido, J. (2014). An Assessment of Project Monitoring and Evaluation Practice in Oromia Pastoral Area Development Commission: The Case of Pastoral Community Development Projects at Fentalle and Mieso Districts. Ababa: Addis Ababa University. MA Thesis.

Bhattacherjee, A. (2012). Social Science Research: Principles, Methods, and Practices. Textbooks Collection. Book 3. Available online at http://scholarcommons.usf.edu/oa_textbooks/3.

Brookes, N. and Clark, R. (2009). Using Maturity Models to Improve Project Management Practice. *Proceedings of the POMS 20th Annual Conference*, Orlando: USA

Callahn, K.R. and Brooks, L.M. (2004). Essentials of Strategic Project Management. New Jersey: John Wiley & Sons.

Cooke-Davies, T.J. and Arzymanow A. (2003). The maturity of project management in different industries: An investigation into variations between project management models. *International Journal of Project Management*, 21 (2003), pp. 471-478

Crawford, J. K. (2010). The Strategic Project Office (2nd ed.). Baca Raton: CRC press.

Creswell, J.W. (2008). Research Design: Qualitative, Quantitative and Mixed Methods Approaches. (Third Edition). California: SAGE Publications.

Creswell, J.W. (2014). Research Design: Qualitative, Quantitative and Mixed Methods Approaches. (Fourth Edition). California: SAGE Publications.

Cynthia, H. (2007). How to Choose the Right Project Management Office Structure for Your Organization's Culture. Collegiate Project Services. Available online at pmomaster.files.wordpress.com

Desouza, K. C., and Evaristo, J. R. (2006) Project management offices: a case of knowledge-based archetypes. *International Journal of Information Management*, 26 (5), PP. 414-423.

Ferreira, H. and Pereira, L. (2015). Maturity Evaluation in Project Management and Implementation of a PMO– Case Study. The International Journal of Business & Management, 3(11), pp. 338-347.

Getayawkal A. (2016). Project Implementation Challenges and Conceivable Means of Resolution in the Lower Omo Valley, Kuraz. Addis Ababa: Addis Ababa University. MA Thesis.

Godbole, S. (2014) PMO: Its Impact on Project Success and Measuring Its Performance. *Proceedings of The 2014 IAJC/ISAM Joint International Conference*.

Gorshkova, K. (2011). Improving project management capability with assistance of PMO in a technology company. Göteborg: Chalmers University of Technology. MSc Dissertation.

Grant, K.P. and Pennypacker, J.S. (2006). Project Management Maturity: An Assessment of Project Management Capabilities Among and Between Selected Industries. *IEEE Transactions on Engineering Management*, 53(1), PP. 59-68

Gray, C.F. and Larson E.W. (2000). Project Management: The managerial Process. (International Edition). Singapore: McGraw-Hill.

Grundy, T. and Brown, L. (2002). Strategic Project Management: Creating Organizational Breakthroughs. London: Thompson Learning.

Hassina, O.M. (2016). Analysing the Planning and Scheduling of 40/60 Saving Houses Development Enterprise. Addis Ababa: Addis Ababa University. MA Thesis.

Hill, G. M. (2008). The Complete Project Management Office Handbook. (Second Edition) USA: Taylor and Francis Group.

Hindi, M.B. (2013). The Project Management Office (PMO): Its Responsibilities and Structure. Dubai: The British University. MSc Dissertation.

Hobbs, B. and Aubry, M. (2007). A multi-phase research program investigating project management offices (PMOs): the results of phase 1. *Project Management Journal*, 38 (1), pp. 74-86.

Hobbs, B. and Aubry, M. (2008). An empirically grounded search for a typology of project management offices. *Project Management Journal*, 39 (1), pp. 69-82.

Hobbs, B., Aubry, M. and Thuillier, D. (2008). The project management office as an organisational innovation. *International Journal of Project Management*, 26(5), pp. 547-555.

Hurt, M. and Thomas, J.L. (2009). Building Value Through Sustainable Project Management Offices. Project Management Journal, 40 (1), pp. 55-72.

Iqbal, A. (2013). The Project Management Office (PMO): The Missing Secret Sauce. *International Project Management Association*, published at www.IPMA.ch, Accessed on March 15, 2017.

John, W. and Elizabeth, D. (2013). The role of project management offices (PMOs) in IS project success and management satisfaction. *Journal of Enterprise Information Management*, 26(3) pp. 316-336.

Kefyalew, M. (2015). Causes of Failure of Projects Under Universal Electricity Access Program of Ethiopian Electric Power: The Case of Projects Financed By Ethiopian Government. Addis Ababa: Addis Ababa University. MA Thesis.

Kerzner, H. (2001). Strategic Planning For Project Management Using a Project Management Maturity Model. New York: John Wiley & Sons

Kerzner, H. (2009). Project management: A systems approach to planning, scheduling and controlling. (Tenth Edition). New Jersey: John Wiley & Sons.

Kleim, R.L. and Ludin, I.S. (1998). Project Management Practitioner's Hand Book. AMACOM Books.

Kothari, C.R. (2004). Research Methodology: Methods and Techniques. (Second Revised Edition). New Delhi: New Age International

Kutsch, E, Ward, J, Hall, M and Algar, J (2015). The Contribution of the Project Management Office: A Balanced Scorecard Perspective. Information Systems Management, 32(2), pp. 105-118.

Kwak, Y.H. and Ibbs, C. W. (2002). Project Management Process Maturity Model. *Journal of Management in Engineering*, 18(3), pp. 150-155

Larson E.W. and Gray, C.F. (2000). Project Management: The managerial Process. (Fifth Edition). New York: McGraw-Hill.

Linde, J. and Steyn H. (2016). The Effect of A Project Management Office On Project And Organisational Performance: A Case Study. *South African Journal of Industrial Engineering*, 27(1), pp. 151-161.

Mateen, M. (2015). Measuring Project Management Maturity - A framework for better and efficient Projects delivery. Göteborg: Chalmers University of Technology. MSc Dissertation

Maylor, H. (2010). Project management. (Fourth Edition). Harlow: Pearson Education

Man, T. (2007). A framework for the comparison of Maturity Models for Project-based Management. Thesis number: INF/SCR-07-07, Utrecht University. Available online at http://www.pmwiki.nl/sites/pmwiki.nl/files/Thesis_Tjman_2007.pdf.

Meisner, R. (2007). MINCE®-A Framework for Organizational Maturity. (First Edition). Van Haren.

Mirza, M.N., Pourzolfaghar, Z. and Shahnazari, M. (2013). Significance of Scope in Project Success. *Procedia Technology*, 9, pp. 722-729.

Misner, J. (2008). The Role of the Project Management Office in a Multi-Project Environment: Enhancing Governance for Increased Project Success Rates. Portland: University of Oregon. MSc Thesis.

Monteiro, A., Santos, V., and Varajão, J. (2016). Project Management Office Models – a review. *International Conference on Project Management*, Proceedings, 100 (2016), pp. 1075-1094. Available online at www.sciencedirect.com

Morris, P.W.G., Pinto, J.K., Söderlund, J. (2012). The Oxford Handbook of Project Management. New York: Oxford University press.

Mullaly, M. (2014). If maturity is the answer, then exactly what was the question? *International Journal of Managing Projects in Business*, 7(2), pp. 169-185.

Munyoki , K.M. and Njeru, A.W. (2014) The Effect of Project Management Office Role in the Delivery of Technology Projects in Mobile Communication Companies in Kenya. *International Journal of Humanities and Social Science*, 4 (3), pp. 211-215.

Nenni, M.E., Arnone, V., Boccardelli, P. and Napolitano, I. (2014). How to Increase the Value of the Project Management Maturity Model as a Business-oriented Framework. *International Journal of Engineering Business Management*, 6(8), pp. 1-7

Nicholas, J.M. and Steyn, H. (2012). Project management for engineering, business and technology (Fourth Edition). London: Taylor & Francis Group

Office of Government Commerce. (2006). Portfolio, Programme & Project Management Maturity Model (P3M3). (Version 1.0).

Office of Government Commerce. (2008). Portfolio, Programme & Project Management Maturity Model (P3M3). (Version 1.0).

Pemsel, S. & Wiewiora, A. (2013). Project management office: A knowledge broker in project-based organizations. *International Journal of Project Management*, 31 (2013), pp. 31-42

Pennypacker, J. S. & Grant, K. P. (2003). Project management maturity: an industry benchmark. *Project Management Journal*, 34(1), pp. 4–11.

Pinto, A., De Matheus Cota, M.F., Levin, G. (2010). The PMO Maturity Cube, a Project Management Office Maturity Model. PMI Research and Education Congress 2010, Washington D.C., USA

Project Management Institute. (2013) A Guide to the Project Management Body of Knowledge. (Fifth Edition). Pennsylvania: PMI.

Project Management Institute. (2008). Organizational Project Management Maturity Model (OPM3®). (Second Edition). Pennsylvania: PMI.

Project Management Solutions. (2014a). Project Management Maturity & Value Benchmark. Available online at www.pmsolutions.com

Project Management Solutions. (2014b). The State of the Project Management Office (PMO) 2014. Available online at www.pmsolutions.com

Project Management Solutions. (2016). The State of the Project Management Office (PMO) 2016: Enabling Strategy Execution Excellence. www.pmsolutions.com

Richardson, G.L. (2015). Project Management Theory and Practice (Second Edition). CRC Press Taylor and Francis Group.

Salamah, H. and Alnaji, L. (2014). Challenges in Establishing, Managing, and Operating a Project Management Office. *International Conference on Economics, Management and Development,* pp. 182-197.

Saunders, M., Lewis, P., and Thornhill, A. (2009). Research Methods for Business Students. (Fifth Edition). Harlow: Prentice Hall.

Simangunsong, E. and Da Silva, E.N. (2013). Analyzing Project Management Maturity Level in Indonesia. *The South East Asian Journal of Management*, 7 (1), pp. 72–84.

Software Engineering Institute (SEI). (2006). CMMI® for development, version 1.2, Improving processes for better products.

Spalek, S. (2013). Improving Industrial Engineering Performance through a Successful Project Management Office. Engineering Economics, 24(2), pp. 88-98.

Tahri, H. and Drissi-Kaitouni, O. (2006). New design for calculating Project Management Maturity (PMM). 3rd International Conference on Leadership, Technology and Innovation Management, proceedings, 181(2015), pp. 171-177. Available online at www.sciencedirect.com

Tasic, V. (2014). Project Management Office – Typology and Benefits. *Business Informatics* 1(31), PP. 173-182.

Tekalign, L. (2014). The Role of Project Planning on Project Performance in Ethiopia. Addis Ababa: Addis Ababa University. MA Thesis.

Unger, B.N., Gemünden, H.G., and Aubrey M. (2012). The three roles of a project portfolio management office: Their impact on portfolio management execution and success. *International Journal of Project Management*, 30, pp. 608-620.

Verzuh, E. (2005). The Fast Forward MBA in Project Management. (Second Edition). New Jersey: John Wiley & Sons.

Wysocki, R.K. (2014) Effective Project Management: Traditional, Agile, Extreme. (Seventh Edition). Indianapolis: John Wiley & Sons.

Yin, R. K. (2009). Case Study Research: Design and Methods. (Fourth Edition). California: SAGE Publications.

Young, M. and Zapata, J.R. (2011) A Critical Assessment of P3M3 in Australian Federal Government Agencies: Project, Programme and Portfolio Maturity Levels. ANZSIG Insight, University of Canberra.

Zikmund, W.G., Babin, B.J., Carr, J.C. and Griffin, M. (2010). Business Research Methods. (Eighth Edition). Nashville:South-Western Pub.

Appendix – Survey Questionnaire

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

DEPARTMENT OF PROJECT MANAGEMENT

Research Questionnaire

Dear Sir/Madam,

I am undertaking a research titled **"Assessment of Project Management Maturity Level of Commercial Bank of Ethiopia"** for the partial fulfillment of the requirement of Master of Arts (MA) degree in Project Management. This survey is part of academic research that aims to assess the current level in project management maturity of CBE's PMO and assess how project management knowledge areas are being practiced. The achievement of the research's aim depends on your cooperation in filling out this survey questionnaire.

I am grateful for your time and responses. If you have questions or seek clarifications, please contact me on **091 1 17 55 44**. I thank you in advance, for your invaluable cooperation.

You are NOT expected to write your Name. All the information you provide will be kept in strict confidentiality and it will be only used for this academic research only.

Sincerely,

Abraham Ejigu

Part I. Personal Information

1. Your service year in the bank: _____years.
2. Your service year since assigned to the PMO/Project _____ (please specify as Months or Years).
3. Please state your current position _____
4. Please state your educational level _____
5. Do you have a formal training, outside the bank, in project management?
   a. Yes ☐
   b. No ☐

If yes, please specify the type and level of training you received _____

_____

6. Have you taken trainings related to Project Management provided by the bank?
    a. Yes ☐
    b. No ☐

If yes, please specify the type of training you received _____

_____

_____

7. Have you ever been involved in project management or project teams prior to your current assignment (it can also be in another organization)?
    a. Yes ☐
    b. No ☐

If yes, please specify the type of company and project you were involved with _____

_____

_____

Part II Project Management Process and Knowledge Areas

General Direction: Answer all the Questions that follow based on your knowledge of practice of Project Management in the project you are participating. Please Choose:

Yes: If the description approximates the condition in your project.

No: If the description does not come close to the condition in your project.

Not applicable: If you think the practice or the description is inapplicable for your case.

I don't Know: If you do not have information/knowledge about the question.

	Project Management Practice-General	Yes	No	Not Applicable	I don't Know
1	Is the need and benefit of Project Management recognized by the bank management?				
2	Does the management of the bank provide support for Project Management development?				
3	Does the bank have standard Project Management processes and methodologies?				
4	Does the bank provide Project Management training for its Project Management team?				
5	Do Project Managers of the bank have solid knowledge base of Project Management?				
6	Are Project Management processes, methodologies and procedures applied formally in managing projects in the bank?				

	Project Scope Management	Yes	No	Not Applicable	I don't Know
1	Is there awareness about the need or importance of project scope management in the PMO and Project Management team?				
2	Is there any effort of managing project scope in the bank/project?				
3	Is the effort of scope management formal?				
4	Are standardized tools used in scope management process?				
5	Is WBS (work breakdown structure) prepared in defining scope in your project?				
6	Is a WBS Dictionary prepared? (Document providing description of work, responsible department, resource required etc.)				
7	Is there any effort of monitoring and controlling scope in your project?				

	Project Time Management	Yes	No	Not Applicable	I don't Know
1	Is there awareness about the importance of project time management in the PMO and project management team?				
2	Is there any effort of managing time in your project?				
3	Is the effort of time management formal?				
4	Is a schedule (plan) prepared for the project?				
5	Is the schedule base lined? (start and finish date are approved and fixed)				
6	Is Work Breakdown Structure used when defining the schedule activities?				
7	Are relationships among activities identified and the activities sequenced?				
8	Is activity duration estimate prepared?				
9	Are the PMO historical data used in estimating activity duration?				
10	Is progress of project activities continuously monitored and controlled?				
11	Is the project schedule updated regularly?				

	Project Cost Management	Yes	No	Not Applicable	I don't Know
1	Is there awareness about the importance of project cost management in the PMO and Project Management team?				
2	Is there any effort of managing cost in your project?				
3	Is the effort of cost management formal?				
4	Is estimate of the project cost prepared?				
5	Is a budget prepared for the project?				
6	Is the PMO historical actual cost data consulted in preparing the budget?				
7	Is the budget base lined? (the budget allocated to work packages and resources)				
8	Is the budget updated regularly?				
9	Is there any effort to monitor and control the project cost?				

	Project Quality Management	Yes	No	Not Applicable	I don't Know
1	Is there awareness about the importance of Project Quality Management in the PMO and project management team?				
2	Is there any effort of managing quality in your project?				
3	Is the project quality management effort formal?				
4	Is quality planning performed for your project? (requirements and quality standards are determined and strategies are devised)				
5	Are Quality Assurance activities implemented in your project? (these are processes, procedures and standards defined/developed to assure quality objectives are met)				
6	Is a review to determine whether project activities comply with policies, processes, and quality requirements performed?				
7	Is quality control process implemented in your project? (determining whether project products and activities comply with relevant quality plans)				

	Project Human Resource Management	Yes	No	Not Applicable	I don't Know
1	Is there awareness about the importance of Project Human Resource management in the PMO and project management team?				
2	Is there any effort of Human resource management in the project or project?				
3	Is the effort of Human resource management formal?				
4	Is there any planning for acquisition and management of human resource?				
5	Is skill requirement, roles and responsibilities defined for all project positions?				
6	Is training (formal/informal) provided to project team members?				
7	Is human resource cost and time formally tracked, and monitored in your project?				

	Project Communication Management	Yes	No	Not Applicable	I don't Know
1	Is there awareness about the importance of project Communication management in the PMO and Project Management team?				
2	Is Communication management performed?				
3	Is Project Communication requirement analysis performed in your project?				
4	Is a plan/strategy prepared to address identified communication needs?				
5	Does your project have a system/procedure for handling project documents?				
6	Does your project have a system for collecting and distributing information?				
7	Are performance reports prepared and provided to relevant stakeholders?				
8	Does your project have a standard format for preparation of project reports?				
9	Does project manager share lessons learned with project members?				

	Project Risk Management	Yes	No	Not Applicable	I don't Know
1	Is there awareness about the importance of project risk management in the PMO management and project management team?				
2	Is there any effort of managing risks in your project before they cause adverse effect?				
3	Is risk management performed formally in your project?				
4	Is there any effort of identifying and documenting risks in your project?				
5	Are identified risks analyzed to determine their potential impact?				

6	Is a detailed risk response plan prepared for risks that warrant action/attention?				
7	Is the risk response plan and strategy continuously updated?				
8	Is risk monitoring and control performed in your project? (Is there any effort of identifying and documenting new risks, closing those outdated and tracking those already identified)				

	Project Procurement Management	Yes	No	Not Applicable	I don't Know
1	Is there awareness about the importance of project Procurement management in the PMO or Project Management team?				
2	Is there any effort of managing project procurement to ensure delivery of procured items/services as agreed in the contract?				
3	Is the effort of managing project procurement formal?				
4	Is planning done for procurement of goods and services needed for your project?				
5	Does your project have standard procurement documents?				
6	Does your project have a documented contract management/administration processes?				
7	Does your project have a staff trained in contract /procurement management?				

	Project Stakeholder Management	Yes	No	Not Applicable	I don't Know
1	Is there awareness about the importance of stakeholder management in the PMO and project management team?				
2	Is there any effort of identifying stakeholders and responding to their need?				
3	Is stakeholder management performed formally in your project?				
4	Is stakeholders' analysis done for your project?				

5	Is a stakeholder management plan prepared (is there a devised strategy on how to handle the stakeholder's needs and expectations)?				
6	Is there any continuous effort of communicating and working with stakeholders to influence their expectation, address their concern and resolve issues?				
7	Is a strategy developed for managing each key stakeholder's expectation?				