

YANGON UNIVERSITY OF ECONOMICS
DEPARTMENT OF COMMERCE
MASTER OF BANKING AND FINANCE PROGRAMME

**FACTORS INFLUENCING ON IMPLEMENTATION OF
CORE BANKING SYSTEM IN AYEYARWADY BANK**

THET THET KHINE
MBF (DAY) 1ST BATCH

DECEMBER, 2019

**FACTORS INFLUENCING ON IMPLEMENTATION OF CORE BANKING
SYSTEM IN AYEYARWADY BANK**

A thesis submitted as a partial fulfilment towards the requirements for the degree of
Master of Banking and Finance (MBF)

Supervised by:

Daw Htay Htay

Associate Professor

Department of Commerce

Yangon University of Economics

Submitted by:

Thet Thet Khine

Roll No – 71

MBF Day (First Batch)

Yangon University of Economics

DECEMBER, 2019

ABSTRACT

This study intended to focus on the practices and implementation processes of core banking system in Ayeyarwady (AYA) Bank. The objectives of this study are to identify the processes of core banking system and to analyze the factors influencing implementation of core banking system in AYA Bank. To accomplish these objectives, primary data was collected from 110 respondents from branches and some departments from head office who were charged in core banking implementation project. This study was carried out by using a descriptive survey research design with the questionnaires raised by Five Point Likert Scale statistics method. The results were evaluated the linear regression by SPSS version 25 to focus on the factors presented in the study. The framework was constructed with independent variables as influencing factors which consisted human resources management, project scope and vendor selection and dependent variable that mentioned implementation of core banking. The research found that the quality of trainer from vendor side and the skills and experience of consultants and outsourcing trainers are the important factors to implement the core banking system. Moreover, the factor that required time management to meet timeline is the important task of project management team. The research discovered that the skill and capacity of implementation team members are also the important factor. The study suggests that banks have to discuss and analyze time and time internally to select a vendor. The implementation management team requires scheduling in project management and leading the team to execute the implementation effectively and efficiently. And the management needs to assign the employees to assign right person in right place with existing work and the core banking implementation team.

ACKNOWLEDGEMENTS

Firstly, I would like to thank to Yangon University of Economics, for allowing me to undertake this study. Secondly, I am deeply beholden to Prof. Dr. Tin Win, Rector and Prof. Dr. Daw Nilar Myint Htoo, Pro Rector of Yangon University of Economics and Prof. Dr. Daw Soe Thu, Head of the Department of Commerce.

My deepest thanks to Associate Professor, Daw Htay Htay, Department of Commerce, for her extensive and constructive suggestions, her supporting excellence lecturers and comments to complete this thesis. I am heartily grateful for her guidance, advice and encouragement in preparing to complete this study successfully.

I would like to express my sincere gratitude to all the teachers, and visiting lecturers who have made their grateful efforts in rendering knowledge sharing of MBF Programmed during these two years.

I would like to express my heartfelt indebtedness to all of the professors, associate professors and lecturers who provided supervision and fortitude to help me achieve the goals set out for this study. In addition, I would like to extend my appreciation to the faculty and all the staffs in the Department of Commerce who have provided me with any administrative support and strength during my academic years. Finally, I would like to express my gratitude to my beloved parents, family and friends from MBF 1st Batch for their continuous support and patience throughout the course of my study

TABLE OF CONTENTS

	page
ABSTRACT	i
ACKNOWLEDGEMENTS	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	v
LIST OF FIGURES	vi
LIST OF ABBREVIATIONS	vii
CHAPTER I INTRODUCTION	1
1.1 Rationale of the Study	2
1.2 Objectives of the Study	4
1.3 Scope and Method of the Study	4
1.4 Organization of the Study	4
CHAPTER II LITERATURE REVIEW	5
2.1 Core Banking System	5
2.2 The Reasons of Transforming from Legacy System to Core System	6
2.3 Core Banking Implementation	9
2.4 Factors Influencing of Core Banking Implementation	11
2.5 Previous Study of Core Banking Implementation	16
2.6 Analytical Framework of the Study	17
CHAPTER III PROFILE AND OVERVIEW OF CORE BANKING IMPLEMENTATION PROCESSES OF AYEYARWADY BANK	20
3.1 Profile of AYA Bank	20
3.2 Products and Services of AYA Bank	22
3.3 Overview of CORE Banking System in Myanmar	22
3.4 Overview of CORE Banking Practices and Implementation Processes of AYA Bank	23

CHAPTER IV	ANALYSIS OF THE INFLUENCING FACTORS ON THE IMPLEMENTATION OF CORE BANKING SYSTEM IN AYEYARWADY BANK.	27
	4.1 Research Design	27
	4.2 Demographic Information	27
	4.3 Analysis on Influencing Factors on CORE Banking Implementation	30
CHAPTER V	CONCLUSION	37
	5.1 Findings	37
	5.2 Suggestions	38
	5.3 Needs for Further Study	39
REFERENCES		40
APPENDIX		42

LIST OF TABLES

TABLE NO.	DESCRIPTION	PAGE
4.1	Age of Respondents	28
4.2	Gender of Respondents	28
4.3	Service Experience Years in Banking Industry of Respondents	29
4.4	Respondents by Department	29
4.5	Designation Level of Respondents	30
4.6	Human Resource Management	31
4.7	Project Scope	32
4.8	Vendor Selection	33
4.9	Analysis on CORE Banking Implementation	34
4.10	Overall Mean Values of Independent Variables	35
4.11	Model Summary and Anova Table	35
4.12	Coefficient of Influencing Factors on Implementation	36

LIST OF FIGURES

FIGURE NO.	DESCRIPTION	PAGE
2.1	Conceptual Framework of Factors Influencing Core Banking Implementation	17
2.2	Analytical Framework	18

LIST OF ABBREVIATIONS

AGM	-	Assistant General Manager
ATM	-	Automated Teller Machine
AYA	-	Ayeyarwady Bank
BRD	-	Business Requirement Document
BSDD	-	Business Solution Design Document
CBM	-	Central Bank of Myanmar
CBM-NET	-	Central Bank of Myanmar Financial Network System
CBS	-	Core Banking Software
CCT	-	Customer Credit Transfer
COB	-	Close of Business
CORE	-	Centralized Online Real-time Exchange/ Environment
EOD	-	End of Day
EOM	-	End of Month
EOY	-	End of Year
HOD	-	Head of Department
IFRS	-	International Financial Reporting Standard
IT	-	Information Technology
MBF	-	Master of Banking and Finance
PMI	-	Project Management Institute
PMO	-	Project Management Office
RTGS	-	Real Time Gross Settlement
SBA	-	Senior Banking Assistant
SIT	-	System Integration Testing
SME	-	Small and Medium Enterprise
SME	-	Subject Matter Expert
SOP	-	Standard Operation and Procedure
SWIFT	-	Society for Worldwide Interbank Financial Telecommunication
UAT	-	User Acceptance Testing

CHAPTER I

INTRODUCTION

Banking system of Myanmar's financial organization is moving towards changes in growth rapidly. The soundness of the banking system indicates the economic development of the country. Improvement and development of information technologies led to creating new software solutions within the banking area. Modern banking implies the application of information technologies with the aim to improve business and to provide all necessary services to the clients. New trends are developing in the recent years in Myanmar banking environment that are affecting banks to realize the earnestness of core-banking transformation.

Core banking system could be performed speedily with convenience and security for the international and domestic payment of customer's transaction. Core banking is a networked branch service that allows its customers to access their funds and to carry out quick and easy transactions anywhere. In a broader sense, it refers to the exchange, upgrade and outsource core banking system integrated into the package of software applications for processing and posting the transactions, as well as managing the accounting processes. In order to ensure their clients these transactions, banks use core banking applications. Every change reflects to the centralized data center, which contains all necessary data of clients and their accounts.

Nowadays, most banks use core banking applications to run their service smoothly. This system allows the entire bank's branches to access applications from centralized data centers. This basically means that the deposits made are reflected immediately on the bank's servers and the customer can withdraw or deposit money from any of the bank's branches throughout the whole Myanmar if there is no issue in downtime of connection. These applications now also have the capability to address the needs of corporate customers, providing a comprehensive banking solution, in order to collect all transactions from individual branches, e.g., EoD (End of the Day) performs at the end of the working day, i.e., COB (Close of Business); at the end of the month goes e.g., EoM (End of Month), and at the end of the year it is e.g., EoY (End of Year). (Marija Kreća¹, Dušan Barać², 2015)

These products are called CORE banking solutions, and some of the operations, they provide recording transactions, maintaining savings books,

calculating interest rates for loans and deposits, keeping the customer's data, balance of payments, etc. Shortly, the CBS (CORE Banking Solution) refers to connecting the branches, which allows clients to handle their funds, independently of the branch in which these are opened. Transformation of banking sector that is lead to be cashless society needs to be emerged and to emphasize CORE banking system. Also, the authority of Central Bank of Myanmar (CBM) encourages all private and foreign banks to conduct core banking system as soon as possible.

The implementation of the core banking system could involve challenges, parameters and other arrangements. The implementation is an important component of the project. However, the implementation stage must be planned well during project planning phase. This means having clear design, firm objectives, the choice of the right way to accomplish this objective, clear breakdown of the project into manageable units, clear definition of performance standards, and establishment of adequate timelines for delivery of each unit. (Kosura, 2000)

1.1 Rationale of the Study

The implementation stage of transformation to core banking system was emerged many issue in the infrastructure of a bank. Banks have been known to hold very sensitive yet important information. In the core banking system project, the complexity depends on the project scope, including the number of business functions affected and the extent to which the core banking system implementation changes business processes procedures and functionalities. Today's core banking systems are aimed at consolidating several stand-alone applications and optimizing existing costs associated with core application. Nowadays, the products of commercial banks are related with many integrated plans to other electronic platform and international payment platform.

AYA bank is one of the leading financial service providers in its target market through differentiated service delivery and innovation. In its quest for continuous improvement in its operations and flexibility, AYA bank is still making significant investments in technology, because the Bank's development is extremely dependent on modern banking transformations. In addition, studies on developing modern banks are scarce and there is no study carried out on core banking system development. Identifying and mitigating these challenges will definitely result in the smoother core banking system implementation and upgrading that will lead to higher, core banking

system performance and practically higher consumer system. There are many issues in the transformation period of core banking implementation.

The aim of this paper is to analyze the implementation of Core Banking System (CBS) solutions available on the AYA Bank. It is hoped that the study would be of significance to AYA bank by contributing to a better understanding and knowledge to the factors influencing the implementation of core banking system. This study can help in forming guidelines in regard to core banking system implementation. It is not a simple task to manage and coordinate a complex system like a core banking system. This is because effective and specific communication is required when leading and guiding all the stakeholders in an implementation. It is required to human resource management, establishing a standard and clear schedule to manage all the activities hence avoid any complexity and overlaps.

Designing proper staff organization and allocating each staff duties and responsibility for accountability, determining the cost involved, establishing need for training and ensuring staff, are adequately trained to safeguard the quality standards and establishing the necessary policies and procedures to guide the delivery of the implementation period. The purpose of this research is to identify the factors influencing core banking system implementation. The research has been informed that the literature is lacking in this field to inform industry on implementation challenges and areas in which core banking systems will be implemented. AYA bank successfully deployed its core banking system at the end of 2013. (Annual Report of AYA Bank, FY 2016-2017)

This success of AYA bank has led to the choice of first leading bank, this study earned from the deployment of a core banking system in Myanmar. It is hoped that the study is meaningful to organizations by contributing to a better understanding and knowledge to influence the implementation of the core banking system by commercial banks in Myanmar. The research is designed to provide a framework to enhance existing principles of implementation, its results may also be used as a guide and enriched project literature.

1.2 Objectives of the Study

The main objectives of the study are:

1. To identify CORE banking system processes of AYA Bank.
2. To analyse the influencing factors on the implementation of CORE banking system in AYA Bank.

1.3 Scope and Method of the Study

Scope of this study was analyzed on the influencing factors of AYA Bank's Core banking implementation. In this study, primary data was collected from 110 respondents who were responsible persons of core banking implementation process with 60 employees from the branches of down town area in Yangon Division and 50 employees from selected departments of headquarter who were involved in core banking system implementation.

In this study, both primary and secondary data were used. A descriptive statistic research method was used in this study. Each of the questions was employed five point Likert-scale statistics tools ranging from 1=least important to 5=very important and evaluated the linear regression by *Statistical Package for the Social Sciences (SPSS) version 25*. Secondary data were collected from several published sources as journals, articles, relevant text books, survey reports, and website. This study was analyzed by using appropriate framework with independent and dependent variables.

1.4 Organization of the Study

This research paper was organized with five different chapters at all. Chapter one mentions the introduction of the study, rationale of the brief study about its background, objectives, scope and method of the study, and organization of the study. Chapter two presents the review of the related literature, including the aspects for similar studies and the analytical framework used in the study were also stated. Chapter three showed profile of AYA bank, overview of core banking practices, and core banking implementation of AYA bank. Then, chapter four presented the analysis of the influencing factors on the implementation process of core banking system in AYA bank. Finally, chapter five was the conclusion of the study with findings, suggestions, and the needs for further study.

CHAPTER II

LITERATURE REVIEW

This chapter describes the core banking system, the reasons of transforming from legacy system to core banking system, core banking implementation, factors influencing of core banking implementation, previous study of core banking implementation, and analytical framework of the study with related theory and concepts from the global. The factors influencing on core banking transformation were mentioned with independent and dependent variables in the relevant framework.

2.1 Core Banking System

The CORE banking system is one of the very major incorporation to banking technology. CORE is short for “Centralized Online Real-time Exchange”. It is a central structure or a network that a bank and its branches create. This permits the customers of the bank to access, achieve and accomplish basic transactions from any branch of the bank they hold an account in, allowing the banks to create a centralized data center. CORE banking system is an essential part of the banking technology which purposes to oblige their clients and customer with the best services. (Ryan North, 2019)

Although core banking is closely related with the retail banking sector of the commercial banking system, banks have realized the convenience core banking services could bring to corporate banking solutions due to the increase number of corporate clients. With the help of core banking software, services such as deposit accounts, loans, payments are made accessible to the bank’s customers through ATMs, internet banking, mobile banking and digital banking and etc. The very first examination with core banking solutions was performed in the 1970s in the United States. (Ryan North, 2019)

Banks and third-party vendors designed a few applications for the big banks in the USA. It was in the 1980s when this system was introduced in other parts of the world like Europe, Australia, and Asia. Later, in the 1980s, package-based approaches were developed, with product alignment, but lack the ability to process large amounts of data. With the convergence of digital channels, the first customer-oriented systems

were significantly opened, flexible and scalable and appeared in the 1990s. (Ryan North, 2019)

The last waves of CBS technologies generally increase flexibility in the delivery of customer services, but with the goal of creating real-time processing and enhancing multi-channel deployment. Being a newly developed technology, the system, at first, failed to handle a large volume of data. However, starting from 1990s and three decades forward, there had been a fundamental change where most of the banks in the developed countries began transitioning to core banking systems and creating their centralized data centers. (Petri Korhikoski, 2017)

Finally, many branches of the bank had a common data system that is updated in real time and could be retrieved anytime and anywhere. The customers' transactions in their accounts are directly reflected when withdrawn from or deposit to their respective accounts from any branches. It is true that the banking sector has benefited extremely from always updating technology. The effect of core banking solutions has changed the way the business of money is controlled and how banks function.

Different banking platforms are run by banks as their separate functionalities. Banking services are varied and function according to the particular features of the banks. Basically, every division of the bank can have a specific process to represent its interests. However, the core banking technologies are the technologies that are used across the bank organization. As a foundation, the clients' accounting and their main resources are monitored in the main banking system.

2.2 The Reasons of Transforming from Legacy System to CORE System

This section presents the Legacy System, challenges of legacy technology and core banking system. Legacy banking systems are often decades old. Due to legacy technology, proprietary data models, and limited ability to interface with other systems, legacy system can restrict a bank's ability to rapidly deliver new experiences, products and services. Because established banks often feel cornered by their legacy core systems, many see investing in new core systems for digital services as a strategic priority.

Digital by design, new cores rely heavily on the cloud and associated services, introduce dynamic pricing to cut costs and reduce complexity by eliminating paper processes. In addition, banks use new platforms to implement digital channels,

enhance the customer experience, and launch new products and services faster than before. Traditionally banks have organized their operations in individual business silos with their own process models. Products and product lines like loans, deposits, and investments require a reassessment for building modular structures. Commercial Banks initiated their software system with Legacy System.

Legacy or ageing software is a wide perception and it is usually pragmatic to business grave software systems, which are challenging to modify and costly to keep (Bennett, K 1995). Legacy software systems are old, central systems, which disappointment could have a significant impact on business. The possibility to add new functionality or to enhance quality is important in highly competitive environment (Maria Raksi, 2017).

It is not so much an intelligent concept as a compulsory long-term sustainable approach. It is ironic now that banks were amongst the first to adopt new technology back in the “good old days” (Daniel Döderlein, Auka, 31 May 2017). Look at the key customer requirements and then adjust the bank's IT requires, by rights, should have happened back in the late 1990s and early 2000s. When the popularity of internet banking made the heading in the banking system, the majority of banks should have had made the right choice immediately and started to move away from the concrete system projects that are still getting struggled nowadays. (Gareth Jones, 2 Feb 2019.)

Kyle Ferguson, 2019 searched that almost half of bankers perceive legacy systems to be the biggest barriers to the growth of commercial banks. But, while legacy systems are indeed an obstacle to alter and development, they have been in operation for a long time, often offering flexibility, trustworthiness and safety without fail. This, along with risk-averse decision making and a sense of unconcern, has stuck the digital transformation projects of many financial institutions with this stalling leading to banks having to play fastening up.

Inherently, legacy systems have undergone many modifications and satisfied a wide range of demands. This development poses a range of problems for companies to update these technologies. 'Knowledge transfer', 'undocumented logic', 'technical debt' and a 'skills/desire gap' are all factors that are known to block organizations in their need to be alert when dealing with legacy systems (**Gareth Jones**, 27 Feb 2019). Older systems were not designed to provide 360-degree customer understandings or quick reconfiguration.

And also with a lack of skill, legacy systems are complex systems, for being built on monolithic architecture, so any change a bank needs to make is fearsome with a great deal of impact valuation needed to ensure a change to one system does not affect all of the others. This needs to call for considerable moment, manpower, and knowledge investment. Procedures have also been implemented to direct a changing environment built on a shortage of expectation and perceptibility. Legacy technology certainly presents banks with a number of real challenges; however, the technology environment has never been better placed to assist. (Petri Korhikoski, 2017)

Legacy systems are often very old and hence lack proper documentation of the original platform. Banks can overcome many of these issues by associating with FinTechs and implementing cloud services. By doing so, the services, knowledge and experience needed will become available to implement or update their product offerings. Due to compatibility issues and end-user preferences, legacy technology presents challenges to business interactions by introducing a gap between meeting customer demand and organization goals. The business' decision to remain tied to legacy systems often increases the need for work around solutions to meet the simple demands today's technology can do, without added complexity. (FNTS Blog, 11 Sept, 2018).

Ultimately, banks must modify and overhaul their software management to meet clients, governments and FinTechs' requirements. The banking sector has a long IT history, being an early adopter of information technology relative to many other industries, in part owing to the financial environment of its business (Legacy IT Transformation -Oracle). According to the Lafferty Group report 'Retail Bank 2020: A Roadmap to the Future', there are three pillars which will form the foundation for future connected banking services; smartphones, the internet and intelligent banking applications.

Daniel Döderlein, 2017 mentioned that the perfect example appeared in the form of projections which appeared in November 2010 about the potential mobile wallet facilities which may appear in iPhone5. Mobile money is an excellent model of an area which promises opportunity but also a huge challenge for banks with less than flexible information systems. Although digital transformation offers up a wide variety of time, cost and efficiency saving benefits, it is almost difficult to succeed business tasks. FinTech and cloud service providers are well positioned to help banks

recognize the perfect process of digital transformation, including how to prepare their societies, processes and data before even considering to implement new technology.

Through the implementation of FinTech and cloud service provider partnerships, banks will be able to overcome the very real challenges that are being encountered, not only in terms of legacy technology but also with concern to the internal barriers, struggle to change and other unsettling forces within the industry. To deliver the best customer experience, maintain a cutting-edge technology service and expose services that FinTech increasingly expect, the banks must move away from legacy systems and do it fast. The financial sector is facing serious threats from technology innovation, regulatory changes and non-traditional new entry companies.

The customer expectations are rising and more is requested from service providers all over the scale. Banks are competing against flexible and agile newcomers focusing on widely scalable services and high-margin products. Consequently, the financial institutions need to focus and invest in IT and agility to ensure competitiveness in the rapidly changing environment. A widely acknowledged problem in large institutions is the long legacy IT systems which have evolved over time due to mergers and company acquisitions. These systems are complicated and expensive to maintain and update which severely hampers the competition.

The Euro area banks are struggling with low profitability caused by cyclical and structural factors. The traditional banking activities are less lucrative because of the nominal growth and low interest rates. Banking industry is also at the edge of a digital revolution (McMillan, 2014; Brereton et al., 2014; Edwin, 2016). New efficient delivery channels are introduced alongside technology development. This makes opportunity to create new services and products for the banking industry.

2.3 Core Banking Implementation

Transformation governance is the decision-making process involved in modernizing a core banking system. Typically, transformation governance shares the rights and responsibilities of governance with the bank individuals participating in the modernization, especially management and stakeholders. Another element of the effective execution is top management commitment. Transformation governance entails leadership buy-in, commitment, collective ownership, and accountability in order to mitigate risks and deliver business benefits. (Saket Sinha, 2012)

From the adoption of core banking systems, not only banking and financial institutions have benefitted incredibly but also customers are satisfied with the aids of technology. Core banking has become an essential part in helping remove the need of performing tiresome and dismissed tasks manually, and make calculating, managing and upgrading the data a lot easier. Additionally, it has increased employee efficiency and productivity so that manpower and skills can now be put to better use.

Intangible advantages are advantages which do not immediately boost income, but can provide the companies with warmth and client allegiance. Opening up the core systems and making them more flexible will allow the bank to access core systems more easily from across the entire bank. Core banking systems have consistent performance, and response times are typically sub-second. As described previously, core banking facilities are linked to many of the IT systems of the bank and they need to be fully accessible during the service hours of the bank. (Alex Louwe Kooijmans, Rishi Balaji, Yasodhar Patnaik, Saket Sinha, 2012)

IBM's comprehensive experience in core banking development shows that the most effective transformation strategy is a progressive one in which modernization is a method that includes flexibility and company sensitivity and can adapt as demands change. The best approach is the potential of the vendor to understand the business needs and goals. Clarity of banks and vendors on both the new systems specifications and necessary business plans will reduce the risk of expectation and implementable failure and allow vendors to configure and identify the system in accordance with their specific needs.

A large and complex network of specialized software has been updated and expanded over time, replaced and personalized, especially if it is carried out without stable, organized corporate governance. A major business problem is becoming the inflexibility of core banking systems in adapting to new approaches. Customers and markets are focused more closely on business models. In most cases a transformation is required to establish a foundation that is sufficiently sustainable and flexible to accommodate current and future development in business. (Alex Louwe Kooijmans, Rishi Balaji, Yasodhar Patnaik, Saket Sinha, 2012)

A bank must meet various regulatory requirements, which vary from country to country many times and also change over time. Today, a bank needs efficiency in reporting and indicator calculation. The core systems contain lots of source data and metrics for these documents and should always be up-to-date and easily available.

After successfully implementation, the benefits of transforming an organization's technology platforms are many for commercial Banks and the customer that they serve, including time to market, customer service, operational efficiency, and compliance/risk mitigation factors.

2.4 Factors Influencing of Core Banking Implementation

Implementation management methodology is specifically designed based around a set of tools, methodologies and templates which intend to optimize control and minimizes risk. Built-in flexibility comes from own modular nature, allowing it to be adapted to suit the implementation. According to the solution is further developed in as much detail as possible and the steps necessary to meet the objective are planned. The implementation steps are the process which defined as the project. The tasks and resource requirements are identified, along with the strategy for creating them. A project plan is created outlining the activities, tasks, dependences, and time-frames. The implementation project manager harmonizes the preparation of a project budget by supplying cost estimates for the labor, equipment, and materials. (Adrienne Watt, 2012)

There are many written definitions of implementation project. The management is the application of knowledge, skills, tools, and techniques applied to project activities in order to meet the project requirements. Project management is a process that includes planning, putting the project plan into action, and measuring progress and performance. The team officer has to balance the needs of these constraints against the needs of the stakeholders and your project goals. Scope is what the project is trying to achieve. It entails all the work involved in delivering the project outcomes and the processes used to produce them.

It is the aim and the purpose of the project. Resources are required to carry out the project tasks. They can be people, tools, accommodations, funding, or anything else capable of definition (usually other than labor) required for the completion of the activity. A project has distinctive attributes that distinguish it from ongoing work or business operations. Projects are temporary in nature. The temporary nature of projects indicates a definite beginning and end. They are not an everyday business process and have definitive start dates and end dates. This characteristic is important because a large part of the project effort is dedicated to ensuring that the project is completed at the appointed time. The Project Management Institute (PMI) defines a

project as a temporary effort undertaken to create a unique product, service, or result. (Adrienne Watt, 2012)

The end is reached when the project's objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists. Projects have several characteristics: projects are unique, projects are temporary in nature and have a definite beginning and ending date, projects are completed when the project goals are achieved or it's determined the project is no longer viable. A successful project is one that meets or exceeds the expectations of the stakeholders.

There are some important factors to influence on implementation core banking system. Among them, managing human resources which includes managing motivation program for employee, managing training and awareness workshop, managing project scope which included managing documented scope, managing time/schedule, managing costs, managing quality, managing risk, managing communication and motivation, managing stakeholders, and selection vendor with specific criteria and managing integration. (Adrienne Watt, 2012)

2.4.1 Human Resource Management

Human Resource Management is the important factor that the project has access to sufficient number of resources with the right skill, experience and access to the true assets at the appropriate times. The managing human resources is a long-lasting job under the leadership building of organizations. The organization fulfills its duty to be a successful bank; aims to ensure employee engagement; and grows and operates employees in a way that helps to make its view and mission a reality. The need to react to evolving environments implies more than ever to manage personnel and a fresh emphasis on employee leadership gradually leads to the development of a client service-oriented society and efficiency. (Harris Nguu Musau, 2015)

It seeks to develop a more accessible, multitalented and careful leadership approach. Only then, the employees can do everything possible to help the tasks of activities. Management of Human Resource had been a matter of crucial determination of success for the transformation of banking industry. Peter Drucker, (1998) noted that management's lack of engagement is linked to bad management leadership of such organizations that lead to disappointment and shallow plan execution. The leaders and team members are inspired to guide such a large-scale

undertaking need to advance for implementation under their capabilities. (Harris Ngui Musau, 2015)

The group participants must know the complications of system leadership and project leadership expertise. Non-conformity disrupt is a safe route to destroy a scheme and intention group executives must request compliance in order to ensure achievement. Leaders need to comprehend and resolve the notion of deception before the design improves. The top managers should be very dedicated to the undertaking and supportive, being capable to ground its best employees from IT and business into the project and they should stay till the project is completed.

According to Todd, (2005), organizational culture is a set of norms, beliefs, symbols, and traditions that can be used to describe the affinity of respective members of any organization. There are some areas of expertise, bank should bring to the project team. They are knowledge of the project area and the standards and regulations in the industry, understanding of the project environment, general management knowledge and skills, and interpersonal skills.

All the concerned employees must be informed and well trained to accept the new system. Bankers have a predominant issue with the choice of the banking personnel for current procedures and their willingness to take fresh functional procedures from fresh alternatives out of the box. Organization culture engages in a vital role in system implementation. A supportive culture songs for staff in an organization easily accept transformation hence making new changes easy to integrate within the organization.

2.4.2 Project Scope

The project scope is a document that defines the parameters. (Adrienne Watt, 2012). It is fragment of the project planning that involves defining and recording a list of precise project goals, tasks, budget so as to provide the boundaries within the project. According to Eric Verzuh, (2005), success in the eyes of the beholder. The effective project manager will guarantee from the start that all participants understand precisely what can be done within a specified schedule and budget. If changes are introduced, such business as “managing stakeholder expectations” is a dynamic ongoing task throughout the project, not only knowing the original scope of the project, but also understanding any change in the scope.

A systematic method ought to be there for establishing realistic goals for cost, schedule, and quality, as well as techniques for keeping the goals consistent throughout the project. The procedures must be matched with the 'finest of race procedures' associated with the CBS when implementing the CBS. The project scope is an important job that must be properly worked out in the premature phase with feedback from all interested parties, its purpose being the main provider of acceptable information that is needed to identify the work to be performed in order to dodge major changes that may negatively affect project performance.

Appropriate front-end design project with a definite concept of the plan scale could reduce price. Nonetheless, overrun possibilities, insufficient design project and insufficient interpretation of range might result in costly modifications, costs, overruns, and collapse of the initiative. The effective execution of projects and attaining a satisfying design result are essential to a well-defined plan during the pre-project scheduling phase. Using each phase to build upon previous phases whilst delivering realistic and tangible business value is necessary. (Harris Ngui Musau, 2015)

Private sector projects should reflect the needs and requirements of investors or owners, and this cannot be done without involving all stakeholders in defining the project from early phases. Incomplete project definition can occur when the input of one or more stakeholder is intentionally or unintentionally omitted (Sharma & Lutchman, 2006), while at the same time inputs from others dominate. Controlling and automating the requirements can protect time and costs on a project. The task is carried out on median between 6 months to a year based on the necessary degree of customization.

A few locations will generally be selected and interconnected under fresh systems and will gradually extend to other divisions of the bank once all of the problems have been resolved. It could be feasible for a method to be completely dismantled in conjunction with another method and made into one, exchanging an initial method with a fresh one. This often leads to insufficient information transition, which in turn leads to demands and to important problems not being resolved correctly. Changes in design leadership at bank stage during the company life cycle.

2.4.3 Vendor Selection

This is the process of identifying and integrating a supplier of any kind of products and services. It includes experience, financial position, system support, pricing and ease of integration. Supplier selection is the process by which organizations identify, evaluate and contract with suppliers. (Weber, Current & Benton, 1991). The vendor selection process deploys an enormous amount of the financial resources of the organization. Vendor selection is one of buyers and organizations' most basic and crucial choices, because supplier selection and management can be applied to a variety of suppliers throughout a products' life cycle from initial raw materials acquisition to end-of-life service providers (Bai and Sarkis, 2010).

Globally, provider selection choices are complex owing to the reality that the decision-making method must take into account various requirements. Multi-criteria approach is used in selecting suppliers, (Weber & Current, 1991). Despite having numerous criteria used in selecting suppliers depending on organizations. The main goal of supplier choice is to reduce buyer risk, optimize buyer interest as a whole and create closeness between buyers and vendors and the long-term relationship. In general, vendors are providers of solutions and, in most cases, service providers who implement the method within the banks

Vendor selection mainly consists of four steps i.e. requirement gathering, vendor profile creation, request for information that vendor review process, and finally, vendor selection and solution implementation (PWC, 2011). As the bank and IT specifications are collected, they are integrated into a scoring matrix that can be used to rate suppliers on variables that are critical to your sound choice. There are countless criteria used in organizational selection of providers. Literature suggests that the most important are price, delivery and quality (Martin Mukabi Shiati* et al., 2014).

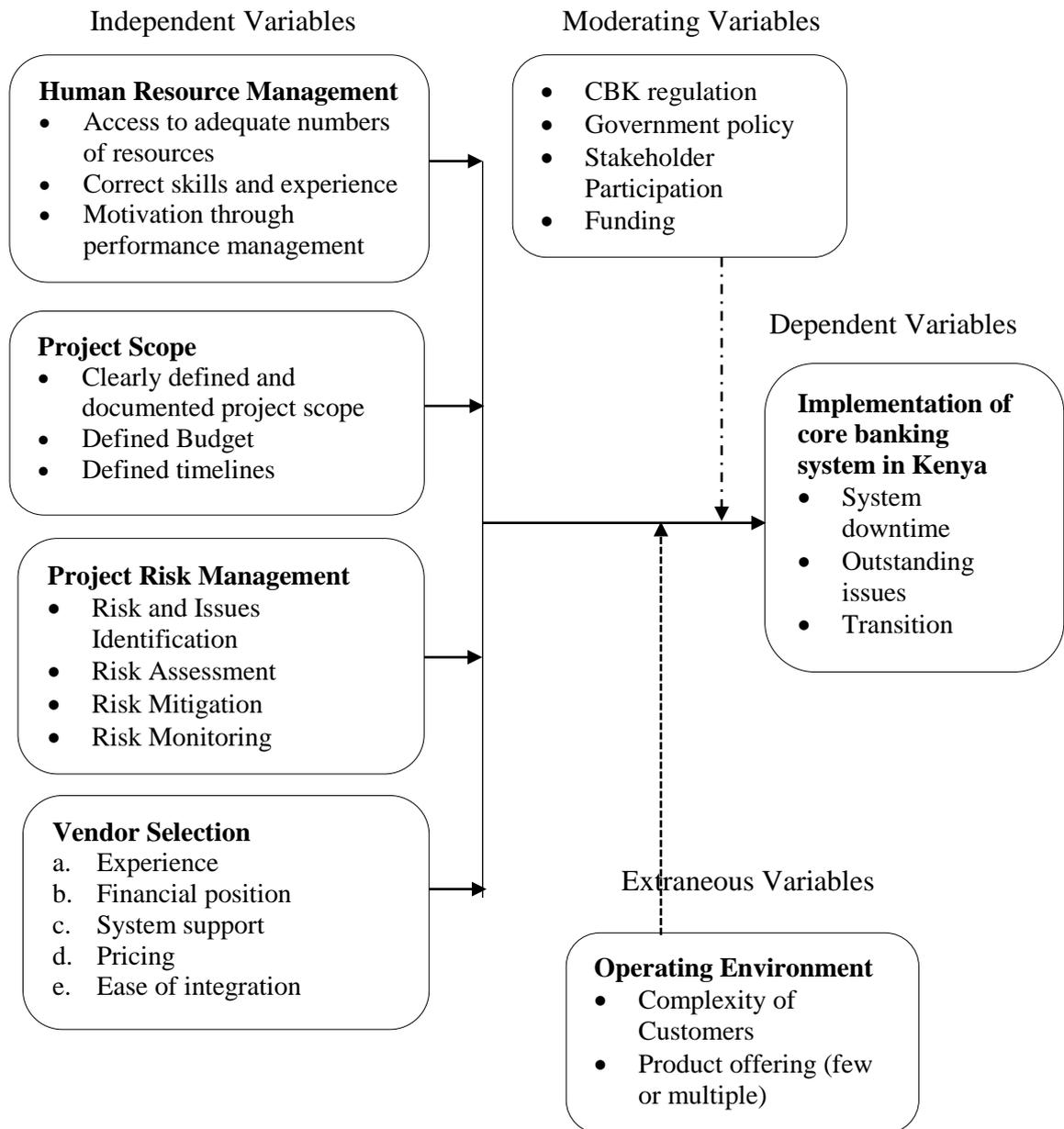
There are various vendors present off-the-shelf packages, each one of them claiming they have a long list of implementations across the globe, one needs to be careful that the solution fits the Bank's requirement, and this is not always easy. Banks need to understand their business requirements - both existing and upcoming, be it customer demands on products and services, or submission requirements for business operations. Certify that the requirements are constructed in detail. Requirements could be categorized as 'data' requirements (e.g. Customer information) or 'processing'

requirements (e.g. Interest Accrual). Requirements should also be defined in terms of technical parameters and vendor related parameters. Not all requirements are similarly vital, some are more serious and need to be prioritized. It is essential to classify requirements by their priority. This also certifies that final ranking of vendors is on the base of a Bank's well-defined criticality rating, not only on overall conformance of vendors.

2.5 Previous Study of Core Banking Implementation

Harris Ngui Musau (2015) studied with the research on factors influencing implementation of core banking system projects by commercial banks in Kenya. The case of NIC Bank Kenya limited. This results showed that human resources management seriously influenced on core banking implementation. The researcher constructed four variables with independent variables, moderating variables, extraneous variables, and dependent variables. The researcher collected the primary data from 45 staffs from commercial banks in Kenya. The result found that vendor selection, project management staffs skills, and system support mechanisms were positively influence on core banking implementation system.

Figure 2.1 Conceptual Framework of Factors Influencing Core Banking Implementation



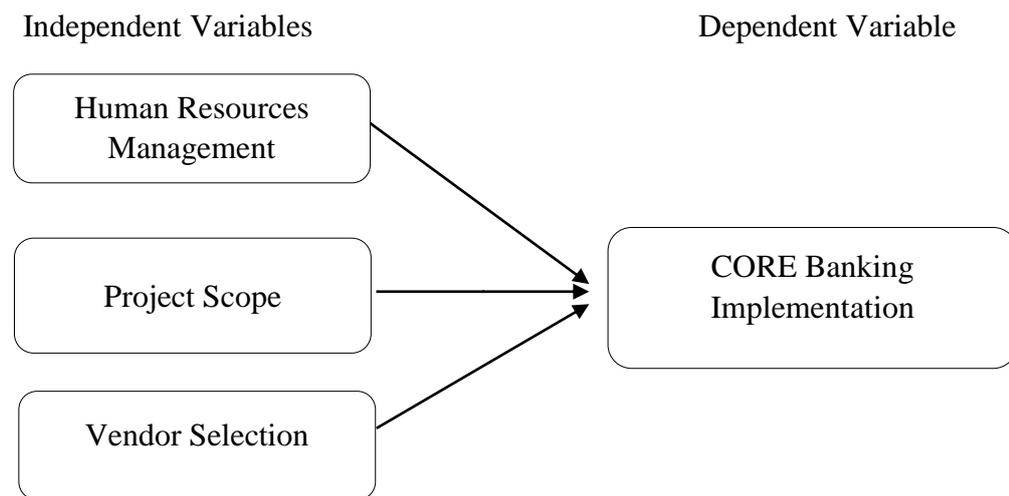
Source: Harris Ngui Musau (2015)

2.6 Analytical Framework of the Study

Based on the previous research, human resource management, project scope, and vendor selection were most influence independent variables on implementation of core banking system. The moderating variable and the extraneous variable were not considered in this study. Thus, the analytical framework of this study has been

adapted and structured with three independent variables which were human resource management, project scope, and vendor selection and only dependent variable of implementation of core banking system. The analyzing showed that the implementation of core banking system was influenced by human resource management, project scope, and vendor selection. Figure 2.2 showed that the analyzing on the factors of independent variables and the dependent variables.

Figure 2.2 Analytical Framework



Source: Adapted from Harris Ngui Musau (2015)

Under human resources management, this research analyzed whether resources are adequate, right skills and experience, competence and knowledge. Project Management Office (PMO) needs to motivate, train and develop the employees. Human resources department needs to empower employees to use the new system and assign current job and project specifically in right place and right person. Team building and skill development activities are as necessary as enough training and discussion program within the team. In the project scope, With respect to project scope whether this project clearly defines timelines, and cooperation with different department to reduce conflict.

Clearly defined and documented project scope boundaries are needed. Team members need to prepare SOP, test case, work instruction and training guideline for SIT, UAT and training. Data migration is a one of challenges to implement the core banking system. Product guideline books are required to distinguish clearly the gap

difference between current system and the expected system. Therefore, in this research, it is clear how core banking implementing related with human resource management, project scope and vendor selection. All those factors are aligned with frame work and project management theory.

CHAPTER III

PROFILE AND OVERVIEW OF CORE BANKING IMPLEMENTATION PROCESS OF AYA BANK

This chapter comprises the profile of the Ayeyarwady Bank (AYA) including mission, vision, core value and services. After describing that, overview of core banking system in Myanmar and presents emphasizing to the core banking system of AYA bank. And also describes the overview of implementation process in AYA bank.

3.1 Profile of AYA Bank

AYA received banking license from the Central Bank of Myanmar (CBM) on 2 July 2010 to operate as a full retail and commercial banking business and relicensed under the Financial Institutions Law 2016 as a full service universal bank. The bank commenced operations on 11 August 2010 with the opening of the Naypyitaw Head Office, and had grown rapidly since then. The founder of AYA Bank is U Zaw Zaw.

As a team member of the UN Global Compact (UNGC), AYA Bank is performed to implement global standards in Corporate Governance and compliance best practices in its management and operations. Consequently, since 2014-15, AYA Bank is the only bank in Myanmar to be IFRS compliant and the only one audited under International Standards of Auditing (ISA) by a big-four international firm. The bank has also attracted and retained capable staff with both local and international exposure and has invested significantly in learning and development as a way to ensure long-term maintainable growth for the communities it serves.

For the immediate years onward, the Bank will continue to extend its reach throughout Myanmar, establish relationships with new customers and foreign stakeholders and strengthen the Bank's capital and risk management controls. The Bank will also emphasize on improving our human capital, and foster a corporate culture of innovation through technology so as to provide new products and services for the customers. Be sure of this as Myanmar continues the reforms of the banking industry, AYA Bank will be well-placed to be the front-runner in terms of innovation and the range of products and services.

The bank also aims to additional build up its governance, risk and compliance structure as a measure to ensure balance and sustain growth. The bank has also

attracted and engaged skillful staffs with both local and international exposure and has invested significantly in Learning & Development as a way to ensure long-term sustainable growth for the communities it serves. AYA Bank is constantly improving its corporate governance, risk management and compliance measures by adopting global best practices. AYA Bank believe the effort will ensure sustainable long-term growth for the Bank and improve the returns of stakeholders and the lives of the people whom are served by AYA Bank.

AYA Bank has always strived to achieve international standards in its banking operations. For the years ahead, the bank will continue to extend its branch network throughout Myanmar while concurrently investing in state-of-the-art Core Banking, Digital Banking and Fintech platforms. AYA Bank aims to provide constant Omni-channel interface offering inventive products and services across all customer segments. AYA Bank will also continue to focus on deepening relationships with customers, providing best-in-class customer service, and leveraging technology as the enabler to speedily enlarge the customer base.

AYA Bank has engaged experts and consultants with broad international experience and invested significantly in employees, systems and technology in order to grow the business. The mission of the AYA bank is “To be recognized as the leading bank in Myanmar through pursuit of excellent and long term sustainable growth for the bank and its stakeholders”. The brand promise of AYA bank is “AYA Bank is the bank of choice for anyone who is looking for fast, reliable, honest banking relationships at a reasonable cost”.

AYA Bank offers the full range of retail and commercial banking products and services and is in tune with domestic customs and international standards in its governance and operations. For your long-term banking needs, AYA Bank is your trusted partner in Myanmar”. The corporate values of AYA Bank is “ETHICS-objectives with EXCELLENCE, progress as a TEAM, think and act in all HONESTY, maintain INTEGRITY, CARE for customers and colleagues and act with SINCERITY”.

Among 17 prizes within the year 2013 to 2019, AYA bank was awarded 11 prizes that are related with banking products and services. Especially, Best Private Bank Awards, Best Retail Bank Award, Fastest Growing Retail Bank Award, Most Innovative Banking Services (AYA iBanking) Award and Most Sustainable Bank Awards were significantly observe for the consideration to the customer. So, AYA

bank has invested in technology to fulfilled services, convenience and reliability. AYA Bank is the first bank in Myanmar to introduce Centralized Core Banking System, the first to introduce mobile and internet banking platforms (democratization of financial services), the first to adopt International Financial Reporting Standards (IFRS – standardized financial transparency) and to engage international audit (Deloitte).

3.2 Products and Services of AYA Bank

AYA bank intended to deliver as many products to provide the financial services with smooth and secure. All products require advanced technical assistant to provide the best services and convenience to the customer. If the customer want to withdrawal or deposit to their account from anywhere by CORE banking system. And the type of current deposit account can withdrawal the cash till after the bank has closed by ATM machine.

Nowadays, customer can transfer to their own account or other account, top up phone bill, cash management services and generating report of own account transaction details by using ibanking, mbanking with their mobile phone or computer. Recently, customers can operate domestic or international payment, foreign currency exchange after enhancing AYA mbanking in 2019. The customer can open any type of deposit account such as Savings account, Current account, Fixed Deposit, Premium Saving Deposit, Loyal account, Seafarer account, Interest Maximizer account, Foreign Currency account.

And Loan (Auto, Home and Education), Overdraft, Hire Purchase and SME products are conducted to the customer under the compliance of CBM regulation. AYA provides to the customer domestic and international payment via SWIFT, also local and international remittance services, cash management services, international card payment of both issuing and acquiring, international trade service, royal banking service, foreign exchange service and save deposit locker. Recently, AYA provides new service of Customer Credit Transfer (CCT) through CBM-NET of CBM software. CCT allow different accounts can be transferred from one bank to another.

3.3 Overview of CORE Banking System in Myanmar

In 2014, CBM deployed CBM-NET system by NTT Data with integrating all banks in Myanmar. Furthermore, CBM has urged all banks to develop core banking

system not later than the end of year 2019. CBM intended to integrate a real-time gross settlement (RTGS) system which permits the customer to be able to make the local payment across the bank. Many banks use the latest systems to become modern financial service companies, while the country develops its digital strategy to create channels that enhance the banking system in more general terms

Moreover, CBM will develop cheque clearing settlement, from having been manually and paper-basically cleared, to be cleared in RTGS through CBM-NET system, by scanning cheques at own bank without going to CBM and sending via respective channel to settlement with interbank. The hope is that the industry will make a leap from conventional paper-based banking to institutions that operate advanced integrated platforms.

Furthermore, CBM conducts with the electronic platform, named Thomson Reuters, to bid auction of foreign currency (USD) automatically generated to the report. Some members of Oxford business group highlight that the activities of some banks are more than just the use of technology to support performance. There have been worries as to whether banks will be able to use the system fully, as some lack the requisite core systems and whether cheques used by banks can be standardized (Oxford Business Group, 2018).

3.4 Overview of CORE Banking Practices and Implementation Processes of AYA Bank

Banks usually spend 10 to 20 percent of their total operating budget on information technology (IT). More than half of this amount is spent on maintaining old core banking systems, with approximately 90 percent spent on keeping business every day. AYA bank has also invested in IT infrastructural for efficiently provided to customer service. Legacy core banking systems' complexity issue is a top priority. A complete modification of the core application portfolio, the IT architecture and the infrastructure must be necessary for restructuring. Such an effort is costly, time consuming and risky, but if done successfully, it could benefit shareholders significantly and provide a lasting competitive market distinction as well.

AYA bank started to transform modernize core banking system. Then, AYA bank has expanded speedily to become the second largest in Myanmar with 258 branches within last nine years. The industry is growing through a new wave of finance innovation and providing greater and better customer satisfaction. AYA's

expectation is that this sparks a significant reevaluation of financial technology's ability to transform business models and a willingness to invest in real change. So, the decisions were set to improve return on investment as reducing complexity, risk in human error, and accuracy in operation.

Good preparation is the theme to change the new environment of core banking system and technology platform. For good preparation, AYA explores many of the requirement factors before a core banking implementation takes place. To do big changes needs to consider starting communicate with all the great leaders including top management, to know where the organization is going to and the current status and to believe the sense of urgency for the organization's goal.

The support of the bank's board and their alignment is the vision to be successful transformation project. One of the main issues in each transition program is the expression of the scope of the transformation goal, then transformed into more specific business needs. Management and members must also be actively interested with communities and must align themselves with what they want and why they are seeking to do where they need to go through the long way.

Firstly, AYA bank considered finding out what the application suite has to suggest and how to achieve maximum benefit from implementation. There are some basic requirements that AYA bank decided when selecting the best platform and applications

- Engaging and investing some time in Proof of Concept exercises have require to be achieving significantly when the project begins
- Spending some quality time for evaluating the current processes and wondering whether there is a better way to compromise outcomes enhances the program's effectiveness.
- Employing to invest in training and awareness programs for key personnel, who in turn will exert from the organization's side

After selecting the vendor, project management office (PMO) which is a new department within a business and bank agency defines and maintains standards for project management within a bank. PMO introduced project team, project scope, project structure and governance, high level timeline and presentation from vendor. PMO announced the participation members of project steering committee, product owners of respective departments, distinct technology team (Integration, network and

server, database admin, IT security, service oriented architecture), and control and support units.

The respective departments had to carry out their duties and responsibilities, such as providing direction on project strategies and priorities, making key decision for critical conflicts or issues, and approving baseline of project milestone of the steering committee, ensuring project aligned to bank's policy and providing support to project needs of control and support units, managing and executing end to end activities and schedule of PMO. After depth participation in CBS implemented, HOD needed to sign off the activities of SME. All SME had to perform system testing, prepare training for Train-The-Trainers, and support Post-Live helpdesk.

All the team members had awareness of project objectives, such as potential future business of customer growth, service quality to internal and external stakeholders and branches across Myanmar, process efficiency and minimizing operational risk by automating and controlling manual process, providing accurate and reliable reporting to support management in decision-making. All different modules were integrated and implemented into a core banking single platform. Business lines for Trade Service, Treasury Management Service, and other channel (eg. SWIFT, CBM-NET, Card Payment of Visa, Master and so on), were linked with each other.

Customization had to be made to package system by discussing many times among the teams. Project Timeline was set and separated into two phases. Phase one included Deposit Account, Loan Account, ATM and Card Interface, Risk Management, and Internet and Mobile Banking, which took the duration of within one and a half year. Phase 2 included Trade Finance, Treasury Management, and Internet Banking under Corporate Channel, which lasted one year. In Project Structure and Governance, Project Core Teams (SME, HOD and etc.) and IT Teams were under and reported to the Steering Committee through PMO.

Control unit and support unit independently existed as separate departments. According to Business Alignment Methodology, project initiation documents were received from vendor, and then, AYA organized business process workshops to set the plan, and walked through and reviewed vendor's best practice of business processes and functionality. After checking the documents, the gaps were noticed and AYA prepared Business Solution Design Document (BSDD) and Business Requirement Document to fulfill the necessities. All the requirements and

disqualification had to be registered in Delta Log. These stated logging factors needed approval to change under governing of controlled and monitored of risk associated with the Design Solution.

All the solutions of business alignment sector came out and the IT Leads started to design the infrastructure, security matrix, architecture, and interfaces. At the same time training team had started the training to Champions, Trainers and SME. Those Champions, Trainers, and SME were empowered their work to their colleagues and fully invested in the project. Meanwhile, they reviewed and discussed the BSDD, parameters, and BRD. IT team developed the System Integration Testing (SIT) with outside link (e.g., SWIFT, CBM-NET and so on) and core system, while the environment of User Acceptance Testing (UAT), Champions and SME started to test the UAT one environment.

Testing is to have a good, perfect strategy as shortly as possible in the UAT system. After testing by members, they understand well what will be done on this, and what is the likely resourceful. The tester are aware one main opinion that is often overlooked when testing. Testing is to find issues, not merely to go through an allotted with registered set of test scripts. The issues and requirements have been emerged that some were needed to reengineer, change the procedures, amend the accelerators, and add by testing time and time again. The designated tester should explore deeper if they think there may be something wrong even when a test case has been successful.

Overall testing is to check issues in production where things are much more critical to fix, so PMO team has prepared well planned, well-resourced and testing phase is a good investment. After migration and fixed the issues, in terms of completing, there is usually a tough start essential such as having the detailed design signed off for the new system, which will give a stable platform for designing the target datasets and business rules required for transformation. The experience is that on most projects, there are not enough environments to allow for multiple testing strands. Moreover, PMO also recommend harmonizing multiple technical fixes for all defects and changes required across verification and production environments.

CHAPTER IV

ANALYSIS OF INFLUENCING FACTORS ON THE IMPLEMENTATION OF CORE BANKING SYSTEM IN AYA BANK

This chapter analyzed the influencing factors on core banking implementation in AYA bank. The findings, interpretation, and presentation data in line with the objectives of the study. The data obtained is presented in tables by using Statistical Package for Social Science (SPSS) version 25. The data was collected from the staffs and offices of selected branches and departments. The chapter is divided into three parts which are research design, demographic information, and influencing factors on core banking system implementation.

4.1 Research Design

This study has intended to identify an understanding of implementation of core banking systems in AYA Bank. Descriptive research design method has been used to explain the questions presented in the paper. The analysis is mainly based on the primary data collected through analytically with settled questionnaires. General profile of age, gender, experience years in the banking industry, department or branch, and designation level are express in demographic information section. 47 questions are expressed in separate section. Each of the factors was asked with five point Likert Scale ranging from “1=Least Important” to “5=Very Important”. The research data are collected from the employees of selected branches and departments who are mostly participated in core banking implementation.

4.2 Demographic Information

The study of demographic characteristics such as age, gender, experience years in the banking industry, department or branch designation level of the respondents are collected and showed summarized.

4.2.1 Age Group of Respondents

The ages of respondents are classified into five groups as shown in the Table (4.1). According to the Table (4.1), 39 respondents fall in the age group between 31

and 35 years old, followed by 28 respondents fall in the age group of 26 to 30 years old. After that, 22 respondents are from 36 to 40 years old and 14 respondents are fall in below 25 years old and the least 7 respondents are from the age group above 40 years old. In terms of percentage result, it was found that the highest number of respondents are middle age of 31 to 35 years old group.

Table 4.1 Age of Respondents

Age	No. of respondents	Percentage
Below 25 years	14	13
26-30 years	28	25
31-35 years	39	35
36-40 years	22	20
Above 40 years	7	6
Total	110	100

Source: Survey Results, 2019

4.2.2 Gender of Respondents

Table (4.2) represents the results from the study of the gender respondents. As shown in Table (4.2), the research result consist of 42 (38%) males and 68 (62%) females. According to the results, female respondents are higher than the male respondents. Therefore, most of staffs working for banks in Myanmar are female.

Table 4.2 Gender of Respondents

Gender	No. of respondents	Percentage
Male	42	38
Female	68	62
Total	110	100

Source: Survey Results, 2019

4.2.3 Service Experience in Banking Industry of Respondents

The study tried to find out to know for how long the respondents had worked in the banking industry. In this study, there are five groups of banking service years such as less than 2 years, 3-5 years, 6-8 years, 9-11 years, and above 11 years. As

Table (4.3) shows, all the respondents were experienced with at least 2 years. This point mentioned that the contribution of 45%, includes of 49 in service between 3 to 5 years is the highest participant in core banking implementation.

Table 4.3 Service Experience in banking industry of Respondents

Experience years in the Banking Industry	No. of respondents	Percentage
Less than 2 years	17	25
3 - 5 years	49	45
6 - 8 years	31	28
9 - 11 years	7	6
Above 11 years	6	5
Total	110	100

Source: Survey Results, 2019

4.2.4 Respondents by Department

The data collected from the From the study results, most of the respondents were from the Branch, Treasury Department, Finance Department, IT Department and others department (Banking Operation, Marketing, Loan, Business Unit, Corporate International, Risk and Audit). According to Table (4.4), there are 60 respondents from branches who are using core banking system and supporting services to customer daily. And, the employee from IT department have the most engagement in the project. The other respondents were few amount of employee who were participated in core banking implementation from the other departments.

Table 4.4 Respondents by Department

Department	No. of respondents	Percentage
Branch	60	55
Treasury	6	5
Finance	9	8
IT	11	10
Other departments	24	22
Total	110	100

Source: Survey Results, 2019

4.2.5 Designation Level of Respondents

Respondents were further requested to answer for their designation level. In this study, there are five categories for designation level in questionnaires. There are SBA, AS or Super, AM or Dy, Manager or Senior Manager, and above AGM. In this survey result of Table (4.5), the highest number of 32 respondents were supervisory level and the second highest of 30 respondents were in managerial level. And, the minimum number of 6 respondents are above AGM level. Because the higher level designated to make a decision within project.

Table 4.5 Designation Level of Respondents

Designation Level	No. of respondents	Percentage
Senior Banking Assistance (SBA)	17	15
Assistant Supervisor/ Supervisor (AS/Super)	32	29
Assistant Manager/ Deputy Manager (AM/Dy Mgr)	25	23
Manager/ Senior Manager	30	27
Above Assistant General Manager (AGM)	6	5
Total	110	100

Source: Survey Results, 2019

4.3 Analysis on Influencing Factors of Core Banking System Implementation in AYA Bank

There are various factors that have been influenced on the core banking implementation of AYA bank. In this segment, there are separated into three section that the influencing factors of human resources management, project scope, vendor selection, and implementation of core banking system in AYA bank. The respondents were requested to answer to which factors were important and influenced during the project of core banking implementation.

4.3.1 Human Resources Management

The research indicated to what level of important for human resource management affects the implementation of the core banking system. It also required

to define the serious nature to which the achievement of core banking implementation is influenced by various human resources and valued functions.

Table 4.6 Human Resources Management

No.	Statement	Mean	Std. Deviation
1	Resources are sufficient.	3.85	0.93
2	Competence and knowledge of team member are enhanced.	3.84	0.97
3	Employees are empowered to use the new system	3.92	0.99
4	Team work and skill development activities are built.	4.20	0.91
5	Staff turnover is high in the transformation period.	4.07	0.83
6	Team members are reward and acknowledgement.	4.09	0.69
7	Employees are assigned the right place and right person to current job and core implementation.	4.16	0.85
8	Training and discussion program is conducted for the team.	3.95	0.85
9	Supporting required tools and equipment at training are provided.	3.94	0.72
10	Team members are provided training from vendor to achieve confidence in core banking system.	3.95	0.94
	Overall Mean	4.00	

Source: Survey Results, 2019

From the Table (4.6), there are ten statements of Human Resources Management Factor on implementation of core banking in AYA bank. One of the most factors is team building and skill development activities with mean 4.20 and standard deviation 0.91 which is very important. It mentioned that the project management office (PMO) need to build bonding within team member to promote more understanding for discussion meeting.

Team building is simply getting a diverse group of people to work together in the most efficient and effective manner possible. The training and awareness programs are required regularly not only within the team but also all the employees. These activities have to make is strongly ensured by the survey result. The overall mean score for the factor of human resources management is 4.00 and so it could be

concluded that this factor has to consider seriously to success smoothly for core banking implementation.

4.3.2 Project Scope

The study was found to know the importance to which Project Scope influences on core banking system implementation. The respondents were request to answer thirteen questions to explore the research.

Table 4.7 Project Scope

No.	Statement	Mean	Std. Deviation
1	The scope and objectives in initiation documents are clearly stated.	4.18	0.65
2	There is a timeline announcement for implementation steps.	4.21	0.76
3	The documented scope exclusions and project borders are clearly defined.	4.09	0.72
4	Time management is required to meet timeline.	4.36	0.76
5	Records of all modifications are kept during the transition and changes are resolved by authorized management.	4.30	0.68
6	Standard project plan is developed.	4.20	0.65
7	Data migration is one of the challenges for implementation.	4.33	0.71
8	Legacy integration is complex.	4.02	0.81
9	Conflict between team members is resolved by cooperation.	4.01	0.76
10	Business experts and technical experts involve in implementation.	4.25	0.73
11	SOP and test case for SIT, UAT are prepared.	4.31	0.69
12	Requirement of SOP and work instruction for new system are implemented.	4.28	0.68
13	Project Management Office (PMO) is well prepared by proving awareness workshop.	4.31	0.71
	Overall Mean	4.22	

Source: Survey Results, 2019

According to the Table (4.7), the maximum mean score 4.36 of time management to meet timeline is one of significant part in the core banking system implementation. All the data had to be successfully migrated to core banking system was one of the important factor out of influencing factors. It is observed that the

second highest mean 4.33 of data migration is a challenging part in the CORE Banking system implementation.

A project has distinctive features that separate it from ongoing work or business operations. Projects are temporary in nature. They are not an everyday business process and have definitive start dates and end dates. This is essential because a large part of the project effort is dedicated to ensuring that the project is completed at the appointed time (Adrienne Watt). As per mentioned, the failure timeline has been made the greater than before the cost.

4.3.3 Vendor Selection

A Study was carried out to recognize the influence of Vendor Selection on core banking implementation. This section consist of ten factors to find out which are influenced factors on core banking implementation.

Table 4.8 Vendor Selection

No.	Statement	Mean	Std. Deviation
1	Vendor is skillful and experienced	4.21	0.72
2	Vendor is selected by global standard.	4.29	0.76
3	Project implementation methodology has already been considered.	4.28	0.65
4	Staff from PMO are skillful for project management.	4.35	0.71
5	Skillful and experience consultants and trainers are hired from outsource.	4.37	0.74
6	Consultants from vendor are sufficient in implementing period.	4.30	0.75
7	Mechanisms for system implementation are supported.	4.22	0.86
8	Consultants from vendor help in post-implementation and in production.	4.35	0.69
9	User guide is provided as assistance materials.	4.28	0.71
10	Trainers from vendor are qualified.	4.37	0.76
	Overall Mean	4.30	

Source: Survey Results, 2019

Firstly, the two factors are found that the means for skills and experience of consultants and outsourcing trainers who are recommended by vendor and the quality

of trainer from Vendor are 4.37. It is essential that the capability of trainer from vendor could fulfill the stages without any difficulties. Despite the abilities of Vendor, it was almost impossible to accomplish the phases efficiently in timeline. The study observed that the unqualified expert from vendor could not train well and could not discuss perfectly to the whole current work scope and expectation scope.

4.3.4 Core Banking Implementation

This study is a research for analysis on core banking implementation. In this section, fourteen questions are used for analysis to growth and extend business could be arise after implementation.

Table 4.9 Analysis on CORE Banking Implementation

No.	Statement	Mean	Std. Deviation
1	Steering committee in core banking implementation is engaged.	4.32	0.64
2	End users satisfied to both theoretical guideline and practice.	4.44	0.62
3	Customers are fully concentrated as CBS.	4.22	0.64
4	Functions of CORE are meet expectations.	4.22	0.68
5	Customers are provided better service in post-implementation.	4.28	0.73
6	Awareness of customers is educated for accepting core banking system requirements.	4.42	0.66
7	Customers increase and grow in the various sectors.	4.18	0.81
8	Bank's business goals are fulfill.	4.18	0.88
9	Retail banking and corporate banking are focus on post-implementation.	4.35	0.74
10	Proper monitoring of risk and compliance are conducted in post-implementation.	4.27	0.80
11	Business of CBS are incorporated new and extended.	4.09	0.73
12	Customer service is more competitive.	4.40	0.70
13	External experts guide the gaps.	4.29	0.78
14	End users satisfy in the friendliness of user interface.	4.31	0.78
	Overall Mean	4.28	

Source: Survey Results, 2019

According to the research Table (4.9), the means for end users satisfaction both theoretical guideline and practice is 4.44. The second significant factor mean of more competitive for customer service than other banks is 4.40 and the mean of related factor which is greater focus on retail banking and corporate banking is 4.35. So, the research could be resolved that the expectation is so high beyond core banking implementation. The mean value is 4.32 for engagement of steering committee and stakeholder.

Table (4.10) Overall Mean Values of Independent Variables

No.	Statement	Mean	Std Deviation
1	Human Resources Management	4.00	0.87
2	Project Scope	4.22	0.72
3	Vendor Selection	4.30	0.73

Source: Survey Results, 2019

Table (4.10) represents the analysis on the three studies factors of influencing on core banking implementation of AYA bank. Based on result from analysis, the maximum mean was 4.30 with standard deviation 0.73 was observed in the factor of vendor selection. It can be assumed that vendor selection are the most important factor for implementation process. The minimum mean was 4.00 with standard deviation 0.87 was found in human resources management factor. Though, all those means are higher than the standard mean 3, it can be concluded that there are the significant factors of core banking implementation in AYA bank.

Table (4.11) Model Summary and Anova Table

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.993 ^a	0.986	0.986	1.16130

a. Predictors: (Constant), Vendor Selection, Human Resources, Project Scope

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10111.964	3	3370.655	2499.331	.000 ^b
	Residual	142.954	106	1.349		
	Total	10254.918	109			

a. Dependent Variable: CORE implementation

b. Predictors: (Constant), Vendor Selection, Human Resources, Project Scope

According to Table (4.11) of model summary and ANOVA table, the value of R square was 0.986 and adjusted R square was 0.986 which indicates that the independent variables can count for 98.6% of variance in dependent variable. According to above table, the value of F is 2499.331 and the probability value (0.000) is smaller than 0.01. It can be said that the test is significant at 1 percent level.

Table (4.12) Coefficients of influencing factors on implementation

Model				Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.929	0.925		3.167	0.002
	Human Resources	0.257	0.058	0.220*	4.436	0.000
	Project Scope	0.108	0.096	0.098	1.122	0.264
	Vendor Selection	0.949	0.081	0.688*	11.702	0.000

a. Dependent Variable: CORE implementation

Note: * Significant at 1% Level

As shown in Table (4.12), vendor selection and human resources management factors were significant in predicting variables with p value 0.000 each and which indicated that the regression analysis was statistically significant at 1% level. By the research result, p value of project scope was 0.264 and this independent variable was not significant with dependent variable. Thus, the two significant variables were influence on the core banking implementation. Project scope independent variable can be overcome smoothly if the other two variables were strongly firmed.

CHAPTER V

CONCLUSION

This chapter finalizes the research study summarizing key findings, suggestions and needs for further study of this study. The research was targeted in identifying the influence factors on implementation of core banking system in AYA Bank.

5.1 Findings

The implementation stage is the most challenging of all the phases of the core banking system. In implementing of a core banking system, personnel distribution would make the process challenging if there is no skills or resources to run core banking transformation. Defining and documenting these demands and range is essential for a vendor to have a definite knowledge of user requirements. It is also necessary to agree on all premises and limitations before initiating the execution of the scheme. This guarantees that customers and suppliers have obviously decided on the results to prevent any major changes that may occur during the execution of the scheme.

Teams have to try fulfilling their documents assigned by PMO in definite timeline. Team members need to understand the importance of test cases examined by UAT and pre-assigned SOP in order to accomplish the stages in project. Since the achievement or inability of the key finance scheme can often be attributed home to owing diligence attempts during evaluation and vendor selection is the most difficult. A bank that seeks to introduce a core banking system requires to view the methodology for implementing suppliers critically, which includes logically associated practices, techniques and procedures that determine how best to schedule and produce a venture to effective completion throughout the ongoing execution phase.

The organization must also be certain that after the scheme has been implemented either on-site or off-site, the vendor will be accessible to provide scheme assistance. The vendor and employees also need the abilities and knowledge necessary to execute the scheme. Simplicity of inclusion is critical as the core banking system will work with other devices. The implementation stage should be within the

authorized plan of the bank and the economic situation of the vendor should be strong.

Along the implementation period, HOD needs to examine and confirm the cases team members research and present thoroughly. The support from stakeholders and steering committees plays an important part when the decisions are needed to be made in those implementation stages. A good project manager can motivate and inspire the project team to see the visualization and worth of the project. After having succeeded the CORE Banking Transformation, HR management requires to reallocate the employees from former manual workplaces, to more suitable areas.

Customer service is recognized to be offered more by connecting other channels from CBS in IT technical routes, which is also found to be competitive to the services offered by other Financial Institutions. It is found in the research that abilities of users who will use in real life are also important after having accomplished in Implementation stages. It is also discovered that unless the users fully acquire the skills, there will be flaws in giving out customer services, therefore not reaching the target goal.

5.2 Suggestions

To be efficient, adequacy of resources and techniques were essential to maintaining the team's assistance and inspiration. It was related to the factors that included in human resources management of staff turnover is one of the factors to influence on implementation. Team and employees need to comprehend the complexities of system leadership as well as understanding of project management. Motivation helps people work more efficiently and produce better results.

The project members need the necessary resources to execute the scheme effectively. The project group requires to be motivated and endorsed by upper leadership through transparent performance management procedures, ensuring the consumers and the organization as a whole are acquiring and implementing a scheme that will make them useful.

Motivation is a constant process that the project manager must guide to help the team move toward completion with passion and a profound reason to complete the work. Motivating the team is accomplished by using a variety of team-building techniques and exercises. Team building is simply getting a diverse group of people to

work together in the most efficient and effective manner possible. Recognition and rewards are an important part of team motivations.

It is not simple to implement and coordinate a massive system such as a core banking system for a Bank. This is because efficient and accurate communication is needed if all stakeholders are to lead and guide a project. Banks are understood to keep data which is very sensitive but significant. This allows the implementation of a core banking system very vulnerable and yet large-scale projects that are based on different factors, including difficulty, design length, accessible resource and the required performance of the project.

If a bank succeeds in implementing the core banking system, the management team must have necessary resource and expertise support, have a clear project-based plan and mitigate the inherent risks to ensure that the institution is protected from potential losses. Once the system has been accepted, the involvement of vendors should also have a clear implementation strategy, capacity and assistance plan. Too much management can mean the slowing of a plan with overhead reports or committee, boards and action avoiding decisions that will eventually reduce the project's resources.

Not enough governance and the project would lose unity and break into cores of experts working on their agenda. The last remaining step is to conduct lessons-learned studies to analyze what went well and what didn't. Through this type of analysis, the knowledge of experience is transferred back to the bank project, which will help future advanced implementation of the core or other system.

5.3 Needs for Further Study

The study needs to research in enhancing and connecting for new products with CORE banking. And the collecting the data and concentrating on the influence factors which were occurred by bank side. Further study needs to be focused on the customer perceptive of how and what they encountered disappoint or satisfied after implementation of CORE banking. Banks need to further research for the effects of core banking system transformation on profitability and risk factors affecting the implementation of core banking.

REFERENCES

1. Adrienne Watt, 2012. *Project Management*. The Open University of Hong Kong
2. Alex Louwe Kooijmans, Rishi Balaji, Yasodhar Patnaik, Saket Sinha. 2012, Redguides for Business Leaders (IBM): “*A Transformation Approach to Smarter Core Banking*”
3. Axxiome, 2016. “The Keys to Success in Core-Banking Transformations” (<http://www.axxiome.com>)
4. AYA Bank Website, <https://www.ayabank.com>
5. Bennett, K 1995, 'Legacy systems: Coping with success', *IEEE software*, vol. 12, no. 1, pp. 19-23
6. Chunguang Bai and Joseph Sarkis. *Integrating sustainability into supplier selection with grey system and rough set methodologies*. [Volume 124, Issue 1](#), March 2010, Pages 252-264
7. Daniel Döderlein, Auka, (May 2017). Legacy IT is the least of a bank's problems. FinTech Futures
8. Devdatta A. Divekar, 2013. “Impact of Core Banking System implementation on Business performance and Profitability of selected Urban Cooperative Banks in Pune City”
9. Drucker, Peter F. (Peter Ferdinand), 1998. “Peter Drucker on the profession of Management. Harvard business review
10. Eric Verzuh, 2005. *The Fast Forward MBA in Project Management.*, Second Edition. John Wiley & Sons, Inc., Hoboken, New Jersey, Canada.
11. FNTS Blog Innovation, 11 Sept, 2018. “5 Common Business Challenges of Legacy Technology”. FNTS
12. Gareth Jones, Feb 2019. Legacy technology in banking: “A real issue or is it just perception?”
13. Harris Ngui Musau, 2015. *Factors influencing implementation of CORE banking System projects by Commercial Banks in Kenya : The case of NIC Bank Kenya Limited*. Master of Project Planning and Management. University of Nairobi
14. Khin Nandar Oo, 2017. *Challenges of core banking system in United Amara Bank*. Master of Banking and Finance. Yangon University of Economics

15. Kosura (Ed) in UNCRD (2000). Project Planning, Implementation and Evaluation: A Training
16. Kyle Ferguson, Feb 2, 2019. "Banks set to invest Legacy Systems to combat challenger bank threat"
17. Maria Raksi., July 25, 2017. Modernizing web application: case study. Master's programmed in Computer, Communication and Information Sciences. Aalto University School of Science
18. Marija Kreća¹, Dušan Barać²., 2015. "Comparative Analysis of Core Banking Solutions in Serbia" (10.7595/management.fon.2015.0019). 1,2 University of Belgrade, Faculty of Organizational Sciences, Serbia.
19. Martin Mukabi Shiati. (May 2014). *Determinants Of Supplier Selection On The Performance Of Public Institutions In Kenya: Case Of Kakamega County, Kenya*. IJMRR/ May 2014/ Volume 4/Issue 5/Article No-1/542-556
20. May Lin Thaw. 2018. *Challenges and issues of core banking transformation of private banks in Myanmar*. Master of Banking and Finance. Yangon University of Economics
21. Orbium. 2017. "The Core Banking Transformation Specialist"
22. Petri Korkiakoski. 2017. *Creating a generic service product structure in a banking system renewal project*. Degree Program of Mechanical Engineering. University of OULU
23. Ryan North. 2019. "Role of Core Banking Solutions in Banking System" (www.enterpriseedges.com)
24. Weber, Charles A., Current, John R., and Benton, W.C. 1991. *Vendor Selection Criteria and Methods*. [European Journal of Operational Research](#), Elsevier, vol. 50(1), pages 2-18, January.

APPENDIX
FACTORS INFLUENCING IMPLEMENTATION OF CORE
BANKING SYSTEM IN AYEYARWADY BANK
(QUESTIONNAIRES)

SECTION A: Demographic Information

Please Tick “√” the appropriate answer.

1. Your Age?

- Below 25years
- 26-30years
- 31-35years
- 36-40years
- Above 40years

2. Gender?

- Male
- Female

3. Service Experience years in the Banking Industry?

- Less than 2 years
- 3-5 years
- 6-8 years
- 9-11 years
- Above 11 years

4. Department/Branch within AYA Bank do you work in?

- Branch
- Treasury
- Finance
- IT
- Others department

5. Designation Level

- Senior Banking Assistance (SBA)
- Assistant Supervisor/ Supervisor
- Assistant Manager/ Deputy Manager (AM/ Dy Mgr)
- Manager/ Senior Manager
- Above Assistant General Manager

SECTION B

Human Resource Management

Please Tick (√) in the box that best describes you

1. Least important
4. Important

2. Not important
5. Very important

3. Not sure

Sr	Statement	1	2	3	4	5
1	Resources are sufficient.					
2	Competence and knowledge of team member are enhanced.					
3	Employees are empowered to use the new system					
4	Team work and skill development activities are built.					
5	Staff turnover is high in the transformation period.					
6	Team members are reward and acknowledgement.					
7	Employees are assigned the right place and right person to current job and core implementation.					
8	Training and discussion program is conducted for the team.					
9	Supporting required tools and equipment at training are provided.					
10	Team members are provided training from vendor to achieve confidence in core banking system.					

SECTION C

Project Scope

Please Tick (√) in the box that best describes you

1. Least important

2. Not important

3. Not sure

4. Important

5. Very important

Sr	Statement	1	2	3	4	5
1	The scope and objectives in initiation documents are clearly stated.					
2	There is a timeline announcement for implementation steps.					
3	The documented scope exclusions and project borders are clearly defined.					
4	Time management is required to meet timeline.					
5	Records of all modifications are kept during the transition and changes are resolved by authorized management.					
6	Standard project plan is developed.					
7	Data migration is one of the challenges for implementation.					
8	Legacy integration is complex.					
9	Conflict between team members is resolved by cooperation.					
10	Business experts and technical experts involve in implementation.					
11	SOP and test case for SIT, UAT are prepared.					
12	Requirement of SOP and work instruction for new system are implemented.					
13	Project Management Office (PMO) is well prepared by proving awareness workshop.					

SECTION D
Vendor Selection

Please Tick (√) in the box that best describes you

1. Least important 2. Not important 3. Not sure
4. Important 5. Very important

Sr	Statement	1	2	3	4	5
1	Vendor is skillful and experienced					
2	Vendor is selected by global standard.					
3	Project implementation methodology has already been considered.					
4	Staff from PMO are skillful for project management.					
5	Skillful and experience consultants and trainers are hired from outsource.					
6	Consultants from vendor are sufficient in implementing period.					
7	Mechanisms for system implementation are supported.					
8	Consultants from vendor help in post-implementation and in production.					
9	User guide is provided as assistance materials.					
10	Trainers from vendor are qualified.					

SECTION E

Analysis on CORE Banking Implementation

Please Tick (✓) in the box that best describes you

1. Least important

2. Not important

3. Not sure

4. Important

5. Very important

Sr	Statement	1	2	3	4	5
1	Steering committee in core banking implementation is engaged.					
2	End users satisfied to both theoretical guideline and practice.					
3	Customers are fully concentrated as CBS.					
4	Functions of CORE are meet expectations.					
5	Customers are provided better service in post-implementation.					
6	Awareness of customers is educated for accepting core banking system requirements.					
7	Customers increase and grow in the various sectors.					
8	Bank's business goals are fulfill.					
9	Retail banking and corporate banking are focus on post-implementation.					
10	Proper monitoring of risk and compliance are conducted in post-implementation.					
11	Business of CBS are incorporated new and extended.					
12	Customer service is more competitive.					
13	External experts guide the gaps.					
14	End users satisfy in the friendliness of user interface.					