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

**ASSESSING MONITORING AND EVALUATION PRACTICE**  
**OF E-BANKING PROJECTS:**  
**THE CASE OF ZEMEN BANK S. C.**

**BY**  
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**JUNE 2017**  
**ADDIS ABABA, ETHIOPIA**

**ASSESSING MONITORING AND EVALUATION PRACTICE  
OF E-BANKING PROJECTS:  
THE CASE OF ZEMEN BANK S. C.**

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**A Project Based Research Work Submitted to Addis Ababa  
University, School of Commerce in Partial Fulfillment of the Award of  
Masters Degree in Project Management/MAPM/**

**JUNE 2017**

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**APPROVED BY BOARD OF EXAMINERS**

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**Signature**

## DECLARATION

I hereby declare that the research entitled "*Assessing Monitoring and Evaluation practice of e-banking projects, The case of Zemen Bank S.C.*" is the outcome of my own effort. The information presented in this project based work is true and original as far as my knowledge and understanding is concerned. Information and Sources used have been known and the work had not been submitted to any other academic institutions for the requirement of any degree or diploma to the best of my awareness.

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Martha Tilahun

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Date

## **CERTIFICATE**

This is to certify that this project work, “**Assessing Monitoring and Evaluation Practice of E-banking projects, The case of Zemen Bank S.C.**” undertaken by Martha Tilahun for the Partial fulfillment of the award of Master’s degree in Project Management at Addis Ababa University, School of Commerce, is an original work and not submitted earlier for any degree either at this University or any other University.

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Woubshet Bekalu (PhD)

Research Advisor

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## ACRONYMS AND ABRIVIATIONS

ATM	Automated Teller Machine
FDG	Focused Group Discursion
IFRC	International Federation of Red Cross and Red Crescent Societies
ICT	Information Communication Technology
M & E	Monitoring and Evaluation
OECD	Organization for Economic Co-operation and Development
PIN	Personal Identification Number
POS	Point of Sale
RTE	Real Time Evaluation
SMS	Short Message
SWIFT	Society for Worldwide Inter-bank Financial Telecommunication
UAT	User Acceptance Test
UNDP	United Nation Development Program
Z-Club	Zemen Club

## **ABSTRACT**

*The objective of the study was to assess the Monitoring and Evaluation practices of e-banking projects in Zemen Bank S.C. There are indications that there are problems in the existing monitoring and evaluation practice of e-banking projects of Zemen Bank S.C. The research design used was one with a qualitative research approach. Both primary and secondary qualitative data were collected for the purpose from IT department directors, managers and officers at the head office level and the banks different documentations. The data collection techniques were through interview and Focus Group Discussion with key professionals to e-banking projects. Form the analysis of the collected data, the findings revealed that the major types of e-banking services that are currently functional are divided into two, Card Banking, which includes ATM and POS, and Online banking which includes Internet banking and Mobile Banking. The different challenges encountered in the management of e-banking projects are technical errors that emanate from interfacing problems of the hardware with the application software, failure of ATM machines due to recurrent power interruptions which upset their functions, low level of internet penetration and poorly developed telecommunication infrastructure, which impede smooth development, improvements and functioning of e-banking services. In conclusion, Zemen Bank S.C. has different problems in placing effective monitoring and evaluation system for e-banking projects and a number of improvements are needed in the future. The Bank should do an organizational restructuring in order to organize the IT department under a Vice-President Leadership level and should assign IT Project Manager, investing on extensive trainings for IT professionals is also recommended, and the Bank should incorporate in its policy a monitoring and evaluation framework which properly guide the process. So far, no study under this topic was conducted; hence, this research is of significant value to the bank and for future researcher.*

Key words: Monitoring and Evaluation, E-banking service, framework

# CHAPTER ONE

## 1 INTRODUCTION

### 1.1 Background of the Study

In modern economy a strong financial system is a pillar of economic growth and development. The availability of banking facilities and unfolding banking service outreach are the major facilitators of developmental and expansionary activities. In this regard, information technology plays a key role in promoting inclusive financial system as it is the only way to reduce the cost significantly and reach the masses.

The Financial services industry has recently been opened to a historic transformation where e-developments are imagined rapidly in all areas of financial intermediation and financial markets: e-finance, e-money, e-banking, e-insurance, e-exchange, etc. Advancements in ICT have enabled a lot of commercial banks globally to adopt electronic banking so as to remain a significant player in this technological age. Nowadays, the banking industry is making use of new online communication platforms to offer its customers value added services conveniently (Zimucha et al., 2012). Many organizations in the banking industry have quickly implemented internet proficiencies, and are making use of technology as a worthwhile opportunity for interface between financial service firms and their clients. A lot of financial institutions have invested in e-banking tools to avail to their customers various services with increased accessibility of information and efficiency for carrying out transactions (Rotchanakitumnuai and Speece, 2004).

In practice, banks conduct surveys about their customers and provide them with a possibility to express their opinions, as well as positive and negative experiences regarding bank's products and services (Jankovic, Markovic and Brnad, 2014) and this information is useful for monitoring and evaluation of e-banking projects in order to meet customer requirements. Thus, monitoring and evaluation (M & E) is an important aspect of result-oriented management and creates a basis for correct and clear reporting on results attained by an involvement in a program or a project.

Monitoring and evaluation is an orderly process, which measures the development of ongoing tasks and identifies limitations for prompt remedial action (WHO, 2008). Mainly, the aim of M&E is to propose trustworthy choices grounded on data that can be collected to aid in decision making. It permits ongoing learning and feedback during all the stages of project development such as designing, planning and proper implementation. It also includes critically assessing the results achieved and relating them to the initial objectives set out for the project in question (Wagner et al., 2005).

The rapid growth of ICT has made some bank related tasks more cost effective and generally efficient, investments in technology are using up a big portion of bank's resources. Currently, other than employee costs, technology is typically one of the main items in banks budgets, and also the fastest rising one (Aduda and Kingoo, 2012). Application of e-banking necessitates investment in information technology by service providers taking the internet banking route. For such investment to do well, customers need to appreciate its worth, or show their reluctance to utilize it well (Rotchanakitumnuai and Speece, 2004).

Thus, Monitoring and evaluation is a vital part of e-banking projects' design and implementation and the outcomes from them comprise of summaries of performance from a retrospective viewpoint considered to date, and also update on making decisions prospectively to enhance program or institutional performance (GAVI Alliance, 2011). Therefore, it is essential to examine the practice of monitoring and evaluation on e-banking projects in the banking industry in order to enhance the quality of service through identifying problems and recommend possible solutions respectively.

So far, no concrete study has been carried out in Zemen bank S.C. regarding neither the management of e-banking projects in general, nor on the practice of monitoring and evaluation system of these projects, which successively has a negative effect on the success and overall image of the bank. No tangible framework is set by the bank for monitoring and evaluation practice of e-banking projects. Therefore, there is a need to conduct a profound study to identify key challenges and problems for proper implementation of monitoring and evaluation process. This research is intended to investigate the existing practice of monitoring and evaluation process of Zemen Bank S.C. and recommend on the problems that are currently observed.

### **1.1.1 Background of the bank**

Zemen bank S.C., that is one of the private banks in our country, was established in June 2008 and launched operation in October 2008 according to the monetary and banking proclamation No. 83/1994, the licensing and supervision of banking business proclamation no. 84/1994 and the commercial code of Ethiopia 1960.

Zemen's banking operations has registered a strong performance with respect to many of its innovative banking systems. One of the innovative banking services provided by Zemen bank is that it provides its deposit banking operations by broadly categorizing its products as Consumer Banking, Business Banking, Packaged account, Overdraft Protection, and Alternative Banking. The Consumer Banking category includes the personal banking operation, prestige banking operation and Z-Club banking operation. All the three categories of operations are for saving as well as checking account owners. The bank was one of the early adopters of e-banking services in Ethiopian, hence the reason for being selected for this study.

### **1.1.2 E-Banking operations in Zemen Bank S.C.**

The major types of electronic banking (e-banking) services available in Zemen Bank are:

#### **❖ Internet Banking**

According to Booz, Allen & Hamilton (1999), "Internet Banking" refers to systems that enable bank customers to access accounts and general information on bank products and services through a personal computer (PC) or other intelligent device. Internet banking products and services can include wholesale products for corporate customers as well as retail and fiduciary products for consumers.

Examples of retail and fiduciary products and services include balance inquiry, fund transfer, downloading transaction information, bill presentment and payment, loan applications, investment activity, other value-added services. Based on the levels of access granted, internet-banking products are divided into 3 types:

Zemen bank's internet facilities are utilized by around 1,636 registered users and they have transacted more than Br. 190 million in 2015-16, providing a very convenient channel to its corporate and personal clients.

### ❖ **Mobile Banking**

Mobile banking (also known as M-banking or SMS banking) is a term used for performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone. Mobile banking is most often performed via SMS or the Mobile Internet but can also use special programs called clients downloaded to the mobile device.

### ❖ **ATM**

ATM is an electronic banking outlet, which allows customers to complete basic transactions without the aid of a branch representative or teller. Anyone with a credit card or debit card can access most ATMs. There are two primary types of ATMs; basic units allow customers to withdraw cash and receive reports of their account balances only. The more complex machines accept deposits, facilitate line of credit payments and report account information. To access the advanced features of the complex units, a user must be an account holder at the bank that operates the machine.

Zemen's ATMs continue to be a highly valued banking channel for many of its customers with about Br. 1.66 million in cash withdrawals on a typical day. For the last year as a whole, the number of ATM users reaches 313,830, and around Br. 606 million has been withdrawn from our ATMs, or an average of Br. 50.54 million in cash withdrawals per month, up 21 percent from the previous year.

### ❖ **SWIFT**

SWIFT stands for the Society for Worldwide Interbank Financial Telecommunications, founded in Brussels, Belgium in 1973. It is a messaging network that financial institutions use to securely transmit information and instructions through a standardized system of codes.

Zemen Bank is directly connected to S.W.I.F.T. headquarter to facilitate its cross-border trading activities like money transfers to individuals, organizations, and banks, foreign exchange transactions, Letters of Credit, documentary collections, cheque clearances, etc.

## 1.2 Statement of the Problem

As the banking industry expands, the competition among various banks become intensive; as a result, the implementation of innovative banking services and the adoption of technological systems is mandatory for their sustainability. Despite the growth of technological adoption worldwide, Ethiopian banks were to conduct most of their banking transactions using traditional methods. However, the financial services industry has recently been opened to historic transformation that can be called e-development or e-banking services such as SWIFT system, Internet banking, mobile banking, phone banking, ATM, and others which facilitate customers demand, liberalization and consolidation of financial markets.

E-banking has distinctive characteristics that may escalate organization's total risk portfolio and the levels of risk typical with traditional banks, predominantly operational, reputation, legal, and strategic risks (Nicoleta, 2009). Various factors including customer service, demographic considerations and competitive costs encourage banks to appraise their existing technology and evaluate their e-banking and e-commerce methods. The main undertaking for banks is to maximize the benefits of e-banking technology and ensure that they are higher than the risks and cost associated with carrying out business on the internet (Internet Banking Comptroller's Handbook, 1999). Thus, in absence of proper monitoring and evaluation of these projects it is challenging to pinpoint if indeed the envisioned outcomes are being achieved as per plan, the level of remedial action needed to guarantee completion, and determine if the outcomes are creating a positive influence (UNDP, 2009).

On the other hand, monitoring and evaluation assists organizations in extracting pertinent data from the historical and current undertakings such that they may be useful as the foundation for programmatic future planning, reorientation and adjustment (UNDP 2009). Recently, growth in the study of monitoring and evaluation has been rapid, moving away from conventional methods to result-based methods. However, monitor and evaluation programs have developed into a large business in the development industry, however, are less established in the profit-making sector like banks.

Besides, no empirical evidence was found by the researcher to support the proper application of this element of the project management lifecycle on e-banking projects; hence, this research is intended to study the existing monitoring and evaluation practices of e-banking projects, in the case of Zemen bank through answering the following three basic research questions and will recommend solutions for them:

### **1.3 Research Questions**

- How does the practice of Monitoring and Evaluation look like?
- What are the challenges of monitoring and Evaluation?
- How effective is the practice of Monitoring and Evaluation of e-banking projects in Zemen Bank S.C.?

### **1.4 Objective of the Study**

#### **1.4.1 General Objective**

The purpose of this research is to assess the Monitoring and Evaluation practices of e-banking projects in Zemen Bank S.C.

#### **1.4.2 Specific Objectives**

1. To explore the current practice of monitoring and evaluation
2. To find the challenges of monitoring and evaluation
3. To check the effectiveness of the monitoring and evaluation practice of Zemen Bank S.C. regarding e-banking projects
4. To investigate the factors that facilitate Monitoring and Evaluation process

### **1.5 Scope of the Study**

The study is confined to assess the monitoring and evaluation practice of e-banking projects of Zemen Bank S.C. only and it does not investigate the practice of other commercial banks who implement e-banking services.

### **1.6 Limitation of the Study**

Lack of cooperation was also anticipated since some respondents considered research as an invasion to their privacy or an investigation into their work life. However, the researcher guaranteed the respondents of privacy, and informed them of the nature of the study, being

only for academic purposes, thereby seeking support from the bank's officials. Since the study is focused only on one bank and it does not include the practice of other banks that also render similar electronic banking services to their customers, the representativeness of the study and the findings can be taken as a limitation of this study. Besides, owing to the initial stage of e-banking services available in Ethiopia, it was very difficult to get secondary data as well as literature in this area from our country's banking industry perspective.

### **1.7 Significance of the study**

The findings of the study would be of significance to the bank as it may increase emphasis on the role of monitoring and evaluation on electronic banking project implementation. The study would also add on to the existing knowledge on monitoring and evaluation of e-banking projects, since, especially "Project Evaluation" is taken only as a "Controlling" activity in the PMI standards instead of all the tangible dimensions and application of Project Evaluation. In addition to this, since there is no concrete study conducted under this topic, the study would be of significant value to scholars and researchers who may use the findings of the study for further research.

### **1.8 Organization of the Study**

This research project work has five chapters. The first chapter; deals with introduction, which incorporates, Background of the study, Background of the Bank, Statement of the problem, research questions, research objectives, scope of the study, limitation of the study, , significance of the study, and Organization of the Study. The second chapter addresses the Review of literature to the topic of the study. The third chapter deals with the Rresearch design and Methodology, sources of data, target population and sampling technique, and tools of data collection and analysis. Under chapter four, Result and Discussions have been presented. And finally, (Chapter five) contains Conclusion and recommendations. In addition to this, there is a last part to present references, Interview questions and FGD guiding questions and other relevant documents.

# CHAPTER TWO

## 2 LITERATURE REVIEW

### 2.1 Theoretical Review

#### 2.1.1 Project

A project is a temporary endeavor in that it has a defined beginning and end in time, and therefore defined scope and resources. And a project is unique in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal.

Tayntor (2010) describe a project as a unique, finite set of multiple activities intended to accomplish a specific goal and can be differentiated from other activity by its uniqueness. When PMBOK® Guide (2013) justifies uniqueness of a project, “although repetitive elements may be present in some project deliverables and activities, this repetition does not change the fundamental, unique characteristics of the project work”. Secondly, projects have time bound by nature. i.e. a project by definition has a beginning and a scheduled end. Even when target dates are missed, the project is still time-bound. The third nature is its goal specificity; to make a project truly a project, the purpose of the activities to be undertaken must be defined. And it is specific, since the description includes enough information to determine whether the goal has been met.

Project management is therefore the art of directing a project. It is important to note that while there are similarities between projects and general management, what distinguishes project management from general management is the emphasis on a schedule and the temporary nature of both the organization and the work being performed.

Managing a project is often described as a juggling act with the project manager attempting to keep all aspects of the project in the air at the same time. Another way to illustrate this concept is the use of the project constraint triangle. a project is normally both characterized and constrained by three elements: time, resources, and scope. Time is the schedule; resources are people and budget; scope is the functionality to be delivered (Tayntor, 2010).

## 2.2 The Meaning of Monitoring and Evaluation

### 2.2.1 Monitoring

**Monitoring** is the routine collection and analysis of information to track progress against set plans and check compliance to established standards. It helps identify trends and patterns, adapt strategies and inform decisions for project/program management, according to Herzberg B. (2007)

Monitoring is an internal project activity designed to provide constant feedback on a project, the problem it is facing, and the efficiency with which it is being implemented. It is a continuous assessment of gathering information on all aspects of the project.

### 2.2.2 Dimensions of Monitoring and Evaluation

#### 2.2.2.1 Dimension of Monitoring

**Results monitoring:** tracks effects and impacts. This is where monitoring merges with evaluation to determine if the project is on target towards its intended results (outputs, outcomes, impact) and whether there may be any unintended impact (positive or negative).

**Process (activity) monitoring:** tracks the use of inputs and resources, the progress of activities and the delivery of outputs. It examines how activities are delivered – the efficiency in time and resources.

**Compliance monitoring:** ensures compliance with donor regulations and expected results, grant and contract requirements, local governmental regulations and laws, and ethical standards.

**Context (Situation) monitoring:** tracks the setting in which the project operates, especially as it affects identified risks and assumptions, but also any unexpected considerations that may arise. It includes the field as well as the larger political, institutional, funding, and policy context that affect the project/program.

**Financial monitoring:** accounts for costs by input and activity within predefined categories of expenditure. It is often conducted in conjunction with compliance and process monitoring.

**Organizational monitoring** tracks the sustainability, institutional development and capacity building in the project/program and with its partners. It is often done in conjunction with the monitoring processes of the larger, implementing organization.

### 2.2.3 Evaluation

According to Organization for Economic Cooperation and Development (OECD), Evaluation is an assessment, as systematic and objective as possible, of an ongoing or completed project, program or policy, its design, implementation and results to determine the relevance and fulfillment of objectives, developmental efficiency, effectiveness, impact and sustainability.

### 2.2.4 Dimension of Evaluation

Major evaluation types that are categorized by approaches:

#### **Approach 1: Evaluation Timing**

**Formative evaluations** occur during project/program implementation to improve performance and assess compliance.

**Summative evaluations** occur at the end of project/program implementation to assess effectiveness and impact.

**Midterm evaluations** are formative in purpose and occur midway through implementation. For secretariat-funded projects/ programs that run for longer than 24 months, some type of midterm assessment, evaluation or review is required. Typically, this does not need to be independent or external, but may be according to specific assessment needs.

**Final evaluations** are summative in purpose and are conducted (often externally) at the completion of project/program implementation to assess how well the project/ program achieved its intended objectives. All secretariat-funded projects/programs should have some form of final assessment, whether it is internal or external.

**Ex-post evaluations** are conducted sometime after implementation to assess long-term impact and sustainability.

**Internal or self-evaluations** are conducted by those responsible for implementing a project/program. **External or independent evaluations** are conducted by evaluator(s)

outside of the implementing team, lending it a degree of objectivity and often technical expertise.

**Participatory evaluations** are conducted with the beneficiaries and other key stakeholders, and can be empowering, building their capacity, ownership and support.

**Real-time evaluations (RTEs)** are undertaken during project/program implementation to provide immediate feedback for modifications to improve ongoing implementation.

**Meta-evaluations** are used to assess the evaluation process itself.

**Thematic evaluations** focus on one theme, such as gender or environment, typically across a number of projects, programs or the whole organization.

**Cluster/sector evaluations** focus on a set of related activities, projects or programs, typically across sites and implemented by multiple organizations (e.g. National Societies, the United Nations and NGOs).

**Impact evaluations** focus on the effect of a project/ program, rather than on its management and delivery.

Monitoring and Evaluation as IFRC (2011) can help an organization getting relevant information from past and current ongoing activities that can be used as the basis for project fine-tuning, reorientation and future planning. "Without effective planning, monitoring and evaluation, it would be impossible to judge if work is going in the right direction, whether progress and success can be claimed, and how future efforts might be improved"(UNDP, 2009). Janus (2016) has said "Both monitoring and evaluation assesses achievements, but the emphases differ". So that it is better to define both Monitoring and evaluations.

The Macmillan English dictionary (2007) Defines Monitoring as regularly checking something or watch someone in order to find out what is happening whereas, evaluation as to think carefully about something before making a judgment about its value, importance or quality. Having this in mind let us see what other scholars say about the concept.

Monitoring can be defined as the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals and objectives and Evaluation is a rigorous and independent assessment of either completed or ongoing activities to determine the extent to which they are achieving stated objectives and contributing to decision making.(UNDP, 2009).

Monitoring is generally an ongoing process of information collection primarily for program management and it tends to focus on activities. Evaluation takes a wider and long term view of the entire program and involves less frequent programmatic reviews. It tends to concern itself with outcomes (Janus, 2016).

All the above definitions emphasize on periodic follow up of ongoing activities and judging the worth of a project based on clear information and empirical evidences. So that M &E should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision making process of all project stakeholders.

IFRCs (2011) described a well-functioning M&E system as a critical part of good project/program management and accountability. Additionally Timely and reliable M&E provides information to:

- Support project/program implementation with accurate, evidence- based reporting that informs management and decision-making to guide and improve project/program performance.
- Contribute to organizational learning and knowledge sharing by reflecting upon and sharing experiences and lessons so that we can gain the full benefit from what we do and how we do it.
- Uphold accountability and compliance by demonstrating whether or not our work has been carried out as agreed and in compliance with established standards.
- Provide opportunities for stakeholder feedback, especially beneficiaries, to provide input into and perceptions of our work, modeling openness to criticism, and willingness to learn from experiences and to adapt to changing needs.
- Promote and celebrate our work by highlighting our accomplishments and achievements, building morale and contributing to resource mobilization.

### **2.2.5 Planning, Conducting and Communicating Monitoring and Evaluations**

Monitoring and Evaluation planning should begin during or immediately after the project design stage. Early planning will inform the project design and allow for sufficient time to arrange for resources and personnel prior to project implementation. M&E planning should also involve those

using the M&E system. Involvement of project staff and key stakeholders ensures feasibility, understanding, and ownership of the M&E system. Here a clear understanding of the log frame's hierarchy of objectives is essential for M&E planning (Chaplowe, 2008).

A comprehensive Monitoring & Evaluation plan includes a Monitoring & Evaluation framework, indicators, guidance on how to collect and analyze the indicators, a data quality assurance plan, a data use and reporting summary, an evaluation summary, and a budget (PATH, 2013). Peersman, (2014) adds baseline data on these planning components that initially collected data which serves as a basis for comparison with data which is acquired at a later stage. For example, data collected before an intervention is implemented for later comparison with data collected after the intervention is implemented. Peersman also justified data collection and analysis, a conducting process in Monitoring & Evaluation which involves the collection of data by different collection tools and analyzing with different models.

An indicator matrix is a critical tool for planning and managing data collection, analysis, and use. It expands the log frame to identify key information requirements for each indicator and summarizes the key Monitoring & Evaluation tasks for the project (Chaplowe, 2008).

Communicating Monitoring and evaluation results Zarinpoush (2006) explained three major things in communicating monitoring and evaluation results; preparing reports, presenting result in person and using the media to communicate results.

Producing a report is one way to communicate the results with our stakeholders such as project funders, decision makers, planners, project managers, or those who act or modify their actions based on the evaluation results. The report should include those aspects of the project and its evaluation that are, based on our knowledge, important to the readers. The report should also encourage them to use the information and recommendations. Presenting evaluation results to some project stakeholders in a face-to-face, two-way method gives our audience an opportunity to ask questions. It also provides us an opportunity to directly communicate with our audience and receive direct feedback not only on the project evaluation and its report but on the other needs, expectations, and concerns that they may have (Zarinpoush, 2006).

The overall purpose of the Monitoring & Evaluation system is to provide useful information. Therefore, information utilization should not be an afterthought, but a central planning

consideration. For this reason, identifying stakeholder informational needs has been a recurring topic throughout all Monitoring & Evaluation planning steps. (IFRC, 2011)

Using the media is another way to communicate all or part of the results to external stakeholders. By getting your results published, you can increase the visibility of your organization and contribute positively to the way its work is perceived by the public. Target the audience who may be most interested in and find potential benefits from the results (Zarinpoush, 2006).

### **2.2.6 Monitoring and Evaluation challenges**

Despite all of the Monitoring & Evaluation resources that are available, project managers still face numerous practical Monitoring & Evaluation challenges. Within the real-life context of implementing Monitoring & Evaluation, there simply may not be enough funding, staff, time, or political condition will to support all of the Monitoring & Evaluation activities a project wants to implement (PATH, 2013).

Accordingly PATH, (2013) identified lack of baseline data, Budget, little time available for evaluation, weak political will to support comprehensive evaluation as a challenge for Monitoring & Evaluation and listed their practical field-tested ideas to overcome them. Peersman (2014) agrees on the common challenges in data collection and analysis can relate to poor choices of methods as well as poor implementation of methods.

Additionally Costa (2012) explained the challenge in communicating Monitoring & Evaluation in harnessing new communications tools and applications (such as social media, blogs and video) to optimize the engagement with the public to share evaluation evidence.

## **2.3 Electronic Banking**

According to Mohammed Shamsuddoha (2008), electronic Banking is transforming the financial services industry through various innovations. It has been made possible by technology, particularly information technology to generate, collect and process information about bank operation and bank customers efficiently and effectively. It provides the ability to create more effective systems of controls in individual institutions and in the market themselves. Compared to the paper based operation, Electronic Banking Systems, in their most

proficient form, offer instant verification and transfer and reduces the flow of costly paper in the record keeping process. Application of technology in banking offers opportunity for reduction of both paper work and the number of people. Banks have developed electronic banking service for three main reasons:

- To increase market share
- To reduce operating cost by substituting physical capital and technology for labor
- To generate new revenue

Electronic banking allows banks to expand their markets for new products and services or strengthen their competitive position in offering existing payment services. In addition, electronic banking could reduce operating costs for banks. More broadly, the continued development of electronic banking and electronic money may contribute to improving the efficiency of the banking and payment system and to reducing the cost of retail transactions nationally and internationally. Although many financial instrument and systems are now considered as “Electronic Banking” came into the terminology of the financial world in the late 1980s, with the possibility of emergence of true electronic money. All sorts of back-office information management technology and financial services using electronic devices can be included into the term “Electronic Banking”. The development in information technology has contributed positively to economic growth through several channels. ICT has led to a productivity growth through the impact on activity processes. Banks have been increasing their own size and financial strength and expanding the scope of their products lines to meet the growing demand of their customers.

According to Singh & Malhotra (2004), E-banking can be defined as the deployment of banking services and products over electronic and communication networks directly to customers. These electronic and communication networks include Automated Teller Machines (ATMs), direct dial-up connections, private and public networks, the Internet, televisions, mobile devices and telephones. Among these technologies, the increasing penetration of personal computers, relatively easier access to the internet and particularly the wider diffusion of mobile phones has drawn the attention of most banks to e-banking. E-banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet or mobile phone. Customers access e-banking services using an intelligent electronic device, such as a personal computer (PC), personal

digital assistant, automated teller machine (ATM), kiosk, or Touch Tone telephone. Or e-banking refers to the provision of retail and small value banking products and services through electronic channels. Such products and services can include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money.

### **2.3.1 E-Banking Channels:**

#### **a. Internet banking**

According to Booz, Allen & Hamilton (1999), "Internet banking" refers to systems that enable bank customers to access accounts and general information on bank products and services through a personal computer (PC) or other intelligent device. Internet banking products and services can include wholesale products for corporate customers as well as retail and fiduciary products for consumers. Ultimately, the products and services obtained through Internet banking may mirror products and services offered through other bank delivery channels. Some examples of wholesale products and services include: Cash management, wire transfer, automated clearinghouse transactions, Bill presentment and payment. Examples of retail and fiduciary products and services include Balance inquiry, Funds transfer, Downloading transaction information, Bill presentment and payment, Loan applications, investment activity, other value-added services.

Based on the levels of access granted, internet-banking products are divided into 3 types.

They are:

- i. Information Only System:** General purpose information like interest rates, branch location, bank products and their features, loan and deposit calculations are provided in the banks website. There exist facilities for downloading various types of application forms. The communication is normally done through e-mail. There is no interaction between the customer and bank's application system. No identification of the customer is done. In this system, there is no possibility of any unauthorized person getting into production systems of the bank through internet.
- ii. Electronic Information Transfer System:** The system provides customer- specific information in the form of account balances, transaction details, and statement of accounts. The information is still largely of the 'read only' format. Identification and

authentication of the customer is through password. The information is fetched from the bank's application system either in batch mode or off-line. The application systems cannot directly access through the internet.

- iii. **Fully Electronic Transactional System:** This system allows bi-directional capabilities. Transactions can be submitted by the customer for online update. This system requires high degree of security and control. In this environment, web server and application systems are linked over secure infrastructure. It comprises, technology covering computerization, networking and security, inter-bank payment gateway and legal infrastructure.

### **Growth in Internet Banking**

Numerous factors including competitive cost, customer service, and demographic considerations are motivating banks to evaluate their technology and assess their electronic commerce and Internet banking strategies. Many researchers expect rapid growth in customers using online banking products and services.

### **Some of the market factors that may drive a bank's strategy to use internet banking include the following:**

- **Competition** — Studies show that competitive pressure is the chief driving force behind increasing use of internet banking technology, ranking ahead of cost reduction and revenue enhancement, in second and third place respectively. Banks see internet banking as a way to keep existing customers and attract new ones to the bank.
- **Cost Efficiencies** — banks can deliver banking services on the internet at transaction costs far lower than traditional brick-and-mortar branches. The actual costs to execute a transaction will vary depending on the delivery channel used. For example, according to Booz, et.al, as of mid- 1999, the cost to deliver manual transactions at a branch was typically more than a dollar, ATM and call center transactions cost about 25 cents, and internet transactions cost about a penny. These costs are expected to continue to decline. Banks have significant reasons to develop the technologies that will help them deliver banking products and services by the most cost-effective channels.

- **Geographical Reach** — Internet banking allows expanded customer contact through increased geographical reach and lower cost delivery channels. In fact some banks are doing business exclusively via the internet — they do not have traditional banking offices and only reach their customers online. Other financial institutions are using the internet as an alternative delivery channel to reach existing customers and attract new customers.
  
- **Branding** — Relationship building is a strategic priority for many banks. Internet banking technology and products can provide a means for banks to develop and maintain an ongoing relationship with their customers by offering easy access to a broad array of products and services. By capitalizing on brand identification and by providing a broad array of financial services, banks hope to build customer loyalty, cross-sell, and enhance repeat business.
  
- **Customer Demographics** — Internet banking allows banks to offer a wide array of options to their banking customers. Some customers will rely on traditional branches to conduct their banking business. For many, this is the most comfortable way for them to transact their banking business. Those customers place a premium on person-to-person contact. Other customers are early adopters of new technologies that arrive in the marketplace. These customers were the first to obtain PCs and the first to employ them in conducting their banking business. The demographics of banking customers will continue to change. The challenge to banks is to understand their customer base and find the right mix of delivery channels to deliver products and services profitably to their various market segments.

## **b. Mobile Banking**

Mobile banking (also known as M-banking or SMS banking) is a term used for performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone. Mobile banking is most often performed via SMS or the Mobile Internet but can also use special programs called clients downloaded to the mobile device. The standard package of activities that mobile banking covers are: mini-statements and checking of account history; alerts on account activity or passing of set thresholds; monitoring of term deposits; access to loan statements; access to card statements; mutual funds/equity statements; insurance policy

management; pension plan management; status on cheque, stop payment on cheque; ordering check books; balance checking in the account; recent transactions; due date of payment (functionality for stop, change and deleting of payments); PIN provision, change of PIN and reminder over the internet; blocking of (lost/stolen) cards; domestic and international fund transfers; micro-payment handling; mobile recharging; commercial payment processing; bill payment processing; peer to peer payments; withdrawal at banking agent and deposit at banking agent (Rahman, 2006).

### **c. Tele Banking**

Tele banking refers to the services provided through phone that requires the customers to dial a particular telephone number to have access to an account, which provides several options of services (Rahman, 2006).

### **d. Home Banking**

Home banking frees customers from visiting branches and most transactions will be automated to enable them to check their account activities, transfer funds and to open L/C sitting in their desk with the help of a personal computer and a telephone (Rahman, 2006).

### **e. Point of Sale Terminal**

An advanced payment system, which enables customers to use an ATM card to pay for goods and services, electronically debiting the cardholders account and crediting the account of the merchant (Rahman, 2006).

### **f. SWIFT**

SWIFT is a global member-owned cooperative and the world's leading provider of secure financial messaging services. It provides its member community with a platform for messaging, standards for communicating and it offers products and services to facilitate access and integration; identification, analysis and financial crime compliance. The messaging platform, products and services connect more than 11,000 banking and securities organizations, market infrastructures and corporate customers in more than 200 countries and territories, enabling them to communicate securely and exchange standardized financial

messages in a reliable way. As a trusted networking serviceprovider, SWIFT facilitates global and local financial flows, support trade and commerce all around the world; it relentlessly pursue operational excellence and continually seek ways to lower costs, reduce risks and eliminate operational inefficiencies. Headquartered in Belgium, SWIFT's international governance and oversight reinforces the neutral, global character of its cooperative structure. SWIFT's global office network ensures an active presence in all the major financial centers.

## **2.3.2 Types and Benefits of Electronic Payment Methods**

### **2.3.2.1 Types of Electronic Payment**

Cheques and drafts have replaced the traditional payment system with money as a medium of settlement and further development in the field has been with the advent of electronic cards.

The most commonly used electronic cards include ATM cards, Debit cards, Credit cards and Smart cards. ATM card is a kind of plastic card, which allows a cardholder to withdraw money from his bank account through automated teller machine. This card can be used also for other banking services like deposit and transfer to any other account by using the ATM machine. Credit card is the modern electronic plastic card that may be used repeatedly to borrow money or buy products and services on credit. VISA, Master Card, American Express and Discover is commonly known and widely used credit cards throughout the world. The decision with which card to go depends on the comparison of the features of the specific card (not the brand). The most important features, of course, are Interest rate and Annual fees. Debit cards are electronic plastic cards directly tied to bank account and the amount of money the cardholder can spend with it is limited to the amount of money he/she has in the bank. It is called debit card because when cardholder uses a debit card, the transaction debits (withdraws) the amount of the transaction from cardholders' account, usually on the same day (Murthy, 2004).

### **2.3.2.2 Benefits of E-Cards**

According to (Murthy, (2004), E-cards offer a number of benefits to the issuing banks and customers of the bank including:

- Dramatically reduce printing, mailing, and financial handling costs associated with processing transaction.

- Enhance payment security by minimizing theft or loss.
- Prevent fraud through automated controls
- Increase customer satisfaction and enhance service to constituents.
- Ensure continuity of service to cardholders in emergency or disaster situations
- Improve operational efficiency and profitability of the issuing banks.

### 2.3.3 Importance of E-Banking

Understanding e-banking services is important for several stakeholders, since it helps them to derive benefits from it. Many banks and other organizations have already implemented or are planning to implement e-banking because of the numerous potential benefits associated with it. Some of these major benefits according to Shah & Clarke (1997) are briefly described below.

#### i. From the Banks Point of View

**Attracting High Value Customers:** E-Banking often attracts high value i.e. in terms of profit customers with higher than average income and educational backgrounds, which helps to increase the size of revenue streams. For a retail banking, e-banking customers are therefore of particular interest, and such customers are likely to have a higher demand for banking products. Most of them are using online channels regularly for a variety of purposes, and for some there is no need for regular personal contacts with the bank's branch network, which is an expensive channel for banks to run (Berger & Gensler, 2007). Some research suggest that adding the Internet delivery channel to an existing portfolio of service delivery channels results in nontrivial increases in bank profitability (Young, 2007). These extra revenues mainly come from increases in noninterest income from service charges on deposit/current accounts. These customers also tend to be of high-income earners with greater profit potential.

**Enhanced Image:** E-banking helps to enhance the image of the organization as a customer focused innovative organization. This was especially true in early days when only the most innovative organizations were implementing this channel. Despite its common availability today, an attractive banking website with a large portfolio of innovative products still enhances

a bank's image. This image also helps in becoming effective at e-marketing and attracting young/professional customer base.

**Increased Revenues:** Increased revenues as a result of offering e-channels are often reported, because of possible increases in the number of customers, retention of existing customers, and cross selling opportunities. Whether these revenues are enough for reasonable return on investment (ROI) from these channels is an ongoing debate. It has also allowed banks to diversify their value creation activities. E-banking has changed the traditional retail banking business model in many ways, for example by making it possible for banks to allow the production and delivery of financial services to be separated into different businesses. This means that banks can sell and manage services offered by other banks (often-foreign banks) to increase their revenues. This is an especially attractive possibility for smaller banks with a limited product range. E-banking has also resulted in increased credit card lending as it is a sort of transactional loan that is most easily deliverable over the internet. Electronic bill payment is also on rapid rise (Young, 2007) which suggests that electronic bill payment and other related capabilities of e-banking have a real impact on retail banking practices and rapidly expanded revenue streams.

**Easier Expansion:** Traditionally, when a bank wanted to expand geographically it had to open new branches, thereby incurring high startup and maintenance costs. E-channels, such as the Internet, have made this unnecessary in many circumstances. Now banks with a traditional customer base in one part of the country or world can attract customers from other parts, as most of the financial transactions do not require a physical presence near customers living/working place.

**Load Reduction on Other Channels:** E-Channels are largely automatic, and most of the routine activity such as account checking or bill payment may be carried out using these channels. This usually results in load reduction on other delivery channels, such as branches. This trend is likely to continue as more sophisticated services such as mortgages or asset finance are offered using e-Banking channels. In some countries, routine branch transactions such as cash/cheque deposit related activities are also being automated, further reducing the workload of branch staff, and enabling the time to be used for providing better quality customer services.

**Cost Reduction:** The main economic argument of e-banking so far has been reduction of overhead costs of other channels such as branches, which require expensive buildings and a staff presence. It also seems that the cost per transaction of e-banking often falls more rapidly than that of traditional banks once a critical mass of customers is achieved. The research in this area is still inconclusive, and often-contradicting reports appear in different parts of the world. The general consensus is that fixed costs of e-banking are much greater than variable costs, so the larger the customer base of a bank, the lower the cost per transaction would be. Whilst this implies that cost per transaction for smaller banks would in most cases be greater than those of larger banks, even in small banks it is seen as likely that the cost per transaction will be below that of other banking channels.

**Organizational Efficiency:** To implement e-banking, organizations often have to re-engineer their business processes, integrate systems and promote agile working practices. These steps, which are often pushed to the top of the agenda by the desire to achieve e-banking, often result in greater efficiency and agility in organizations. However, radical organizational changes are also often linked to risks such as low employee morale, or the collapse of traditional services or the customer base. In addition, Electronic banking has also helped banks in proper documentation of their records and transactions.

## **ii. Benefits from the Customers' Point of View**

The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of e-banking for corporate customers as per (BankAway, 2001; Gurău, 2002) are as follows:

- Reduced costs in accessing and using the banking services.
- **Increased comfort and timesaving** — transactions can be made 24 hours a day, without requiring the physical interaction with the bank.
- **Quick and continuous access to information:** Corporations will have easier access to information as, they can check on multiple accounts at the click of a button.

- **Better cash management:** E-banking facilities speed up cash cycle and increases efficiency of business processes as large variety of cash management instruments are available on internet sites. For example, it is possible to manage company's short term cash via internet banks (investments in over-night, short- and long term deposits, in commercial papers, in bonds and equities, in money market funds). Private customers seek slightly different kind of benefits from e-banking. In the study on online banking drivers Aladwani (2001) has found, that providing faster, easier and more reliable services to customers were amongst the top drivers of e-banking development.

The main benefits from e-banking for private customers are as per BankAway(2001) are as Follows:

- **Reduced costs:** This is in terms of the cost of availing and using the various banking products and services.
- **Convenience:** All the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to.
- **Speed:** The response of the medium is very fast; therefore customers can actually wait till the last minute before concluding a fund transfer.
- **Funds management:** Customers can download their history of different accounts and do a "what-if" analysis on their own PC before affecting any transaction on the web.

This will lead to better funds management.

In addition,

- Beside withdrawing cash customers can also have mini banks statements, balance inquiry at these ATMs
- Through Internet Banking, customers can operate their accounts while sitting in their office or home. There is no need to go to the bank in person for such matter.
- E- Banking has also greatly helped in payment of utility bill. Now there is no need to stand in long queues outside banks for such purpose.

- All services that are usually available from the local bank can be found on a single website.
- The Growth of credit card usage also owes greatly to E-banking. Now a customer can shop worldwide without any need of carrying paper money with him and
- Banks are available 24 hours a day, seven days a week and they are only a mouseclick away.

### **iii. Benefits to General Economy**

Electronic Banking as already stated has greatly serviced both the public and the banking industry. This has resulted in creation of a better enabling environment that supports growth, productivity and prosperity. Besides many tangible benefits in the form of reduction of cost, reduced delivery time, increased efficiency, reduced wastage, banking electronically controlled and thoroughly monitored environment and discourage many illegal and illegitimate practices associated with banking industry like money laundering, frauds and embezzlements. Further E-banking has helped banks in better monitoring of their customer base. This is a useful tool in the hand of the bank to device suitable commercial packages that are in conformity with customer needs. As e- banking provide opportunity to banking sector to enlarge their customer base, a consequence to increase the volume of credit creation which results in better economic condition. Besides, E-banking has also helped in documentation of the economic activity of the masses (Mahdi Salehi, 2004).

### **2.3.4 E-Banking Risks**

Although e-banking has bright prospects, it involves some financial risks as well. The major e-banking risks according to FSA (2010) include:

**Operational risks:** Banks faces three main types of operations risk: such as volume forecasts, management information systems and Outsourcing.

Accurate volume forecasts have proved difficult - One of the key challenges encountered by banks is how to predict and manage the volume of customers that they will obtain. Many banks going on-line have significantly misjudged volumes. When a bank has inadequate systems to cope with demand it may suffer reputational and financial damage, and even compromises in

security if extra systems that are inadequately configured or tested are brought on-line to deal with the capacity problems. The second type of operations risk concerns management information systems. Again, this is not unique to E-banking. Banks may have difficulties in obtaining adequate management information to monitor their eservice, as it can be difficult to establish/configure new systems to ensure that sufficient, meaningful and clear information is generated. Such information is particularly important in a new field like e-banking. Finally, a significant number of banks offering e-banking services outsource related business functions, e.g. security, either for reasons of cost reduction or, as is often the case in this field, because they do not have the relevant expertise in-house. Outsourcing a significant function can create material risks by potentially reducing a bank's control over that function

**Security risk:** Security issues are a major source of concern for everyone both inside and outside the banking industry. E-banking increases security risks, potentially exposing hitherto isolated systems to open and risky environments. Security breaches essentially fall into three categories; breaches with serious criminal intent (e.g. fraud, theft of commercially sensitive or financial information), breaches by 'casual hackers' (e.g. defacement of web sites or 'denial of service' - causing web sites to crash), and flaws in systems design and/or set up leading to security breaches (e.g. genuine users seeing / being able to transact on other users' accounts). All of these threats have potentially serious financial, legal and reputational implications.

**Reputational risk:** This is considerably heightened for banks using the Internet. For example, the Internet allows for the rapid dissemination of information, which means that any incident, either good or bad, is common knowledge within a short space of time. Internet rumors can easily become self-fulfilling prophecies. The speed of the Internet considerably cuts the optimal response times for both banks and regulators to any incident. Banks must ensure their crisis management processes are able to cope with Internet related incidents (whether they be real or hoaxes).

Any problems encountered by one firm in this new environment may affect the business of another, as it may affect confidence in the Internet as a whole. There is therefore a risk that one rogue e-bank could cause significant problems for all banks providing services via the Internet. This is a new type of systemic risk and is causing concern to e-banking providers. Overall, the Internet puts an emphasis on reputational risks.

In addition, legal risks (e.g. without proper legal support, money laundering may be influenced); Strategic risks; credit risks; market risks; and liquidity risks are also e-banking

risks. Therefore, identification of relevant risks, and formulation and implementation of proper risk mitigation policies and strategies are important for banks while performing e-banking. Among these security risk that affects the network system is the major one FSA (2010).

### **2.3.5 Typical Security Technologies Applicable to Control System Networks**

According to Juniper (2010), the following are among the major typical security technologies applicable to control System Networks:

**Firewalls:** A firewall is simply a program or hardware device that filters the information coming through the Internet connection into the private network or computer system. If an incoming packet of information is flagged by the filters, it is not allowed through. A firewall limits a control system's network access to specific ports and protocols from specified networks. It can also provide the ability to create distinct security zones using Network Address Translation (NAT), which enables multiple areas of a private network to access the Internet using a single public IP address and Virtual Private Networks). The firewall's main task is to regulate traffic between network segments at different trust levels—for example, between the Internet, as a zone with no trust, and the internal control network, a zone of higher trust.

**Intrusion Detection and Protection:** its appliance provides a more advanced layer of defense. Such defense (known as intrusion prevention system) can be deployed to help prevent attacks, or simply to detect attacks using intrusion detection systems. Information is sent through the network in small blocks of data known as packets. It goes deeper than a firewall by assessing each packet based on the network protocols, the context of the communication, and its tracking of each session (the time the user spends communicating on the network). Akin to antivirus software on a desktop, it contains a large repository of signatures that help to identify potential attacks by matching attempts to exploit known vulnerabilities.

**Authentication/Authorization Systems:** Authentication and authorization systems protect applications by verifying user identity, providing access to devices based on that user's role and privilege level, and logging all access attempts in order to audit any infringement or misuse of critical plant functions. The use of passwords alone is not a secure enough

mechanism, yet it is still the norm to find devices in the field that rely on the manufacturer's default password. Most security standards require two-factor authentication, which requires the combination of two methods of identification, such as a password and a certificate.

**Network Access Control:** This might include ensuring those users and their laptops or other devices meet a minimum baseline of security in order to gain access. Such policies can be based on various criteria, such as user identity, device identity, device health, and device and/or network location. A solution including it ensures that both user and device properly make the appropriate connection to the appropriate network. It also ensures that users and their devices meet all authentication and security policies. Since network access control applies to users as well as devices, this can become a reliable method for rogue device mitigation over wireless or wired networks.

**Encryption of Critical Data:** Encryption is the process of transforming information, such as a document or important message, by using an algorithm or cipher to make it unreadable to anyone who does not have the key to the cipher. It is a standard method for protecting highly confidential information. However, as heavily encrypted messages can slow network performance unless managed effectively, its use is often restricted to non-real-time messaging and data.

**Monitoring for Administration and the Audit Trail:** An increasingly important aspect of today's security solutions is the ability to monitor and administer the entire network to keep it at optimum performance, identify weaknesses, maintain consistent security policies, track a constant history of activity, and assure the complete safety of information.

**Secure Remote Access:** on top of these security capabilities, contractors, engineers and managers may remotely communicate via remote access virtual networks enabled by the secure socket layer (SSL) based security protocols. Found in all standard web browsers, SSL provides a more secure, efficient and effective way to access control networks from an outside location or even outside the organization. This set of protocols allows secure communications via the Internet for gathering sensor data, sending instructions to field devices, performing remote maintenance and administrative data transfer task

## **Empirical Literature**

Monitoring and Evaluation should be integral components of the management cycle including project planning and design. Passia (2004) and Gyorkos, (2003) notes that project planners should include a clearly delineated monitoring and evaluation plan as an integral part of the overall project plan that include monitoring and evaluation activities , persons to carry out the activities, frequency of activities, sufficient budget for activities and specification of the use of monitoring and evaluation findings.

Evaluation is the tool for proving knowledge for continued implementation. Ex-post evaluation may be used for impact assessment, Michelson, (1995). Jody and Ray (2004) identify the complementary roles of the two functions. Information from monitoring feeds into evaluation in order understand and capture any lessons in the middle or at the end of the implementation with regard to what went right or wrong from learning purposes. This could lead to redesigning the project.

## **CHAPTER THREE**

### **3 RESEARCH DESIGN & METHODOLOGY**

This chapter describes how the research was conducted. It presents the research design, target population, sampling technique, data source, data collection tools and techniques, and data analysis that were used in this study.

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

Research design is a plan and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell, 2009).

In this research a qualitative research approach which makes the descriptive method more reliable has been used. The primary argument for qualitative research design is that the issue under study doesn't require any means of quantitative measurement or statistical procedure with small sample size.

#### **3.2 Target Population and Sample Size**

The sampling method is Census, since the target population and the sample size are the same as members of the e-banking projects department are very few, and a total of 12 professionals were expected to participate in the group discussion and responding the interview questions.

#### **3.3 Sampling Method**

The samples of this research, which are responsible for-banking projects, were selected using purposeful or judgmental sampling. Members sampled are key informants on the topic under investigation because people who are actively involved in e-banking project management were selected. The advantage of the sampling method is that the participants have knowledgeable and professionals about the topic and they can give reliable information which helped to reach on the objectives of the study.

### **3.4 Data Source and Collection Methods**

The major sources of data in this study were categorized into primary and secondary data sources. The primary data were collected from focused group discussion participants and respondents to the interview questions. The secondary sources of data were obtained from the bank's policies, procedure manuals, reports from the IT project officers, section heads and directors of the multichannel banking and IT projects.

According to Wanjiru (2013) for descriptive type researches primary data can be obtained either through observation or through direct communication with respondents in one or another form or through personal interviews, questionnaires, observation method etc. The following data collection methods were incorporated in this study.

### **3.5 Focused Group Discussion**

Saunders et al (2009), refers that focused group discussion provides information to great extent at a particular time due to the interactive discussion between participants chosen using non-probability sampling which are 'information rich' on the topic under study. Saunders also agrees on the precise number of participants depending upon the nature of the participants, the topic matter and the skill of the interviewer. Hence this research conducted a focused group discussion with 8 IT and project management professionals.

### **3.6 Interview**

Based on Saunders et al (2009), this research conducted a semi structured interview that there were a list of themes and questions covered based on the responsibility and role of the interviewee. Hence Director IT projects, Director Multichannel department, Head for Online banking Section, Head for Card Banking Section and IT project Officers from Head office, a total of 12 professionals were interviewed using different interview question list.

### **3.7 Document Analysis**

In addition to the primary data, documentary evidence such as policies, minutes of meetings, project planning records, published and unpublished documents, books, articles and other related resources were used to supplement and triangulate the study.

### **3.8 Validity and Reliability**

Creswell (2009) states that employing multiple data collection instruments help the researcher to combine strengthen and amend some of the inadequacies and for triangulation of the data. Triangulation means compensating the use of single data collection methods and a simple study design with the use of several information sources and different methods simultaneously, to generate information about the same topics.

### **3.9 Data Analysis and presentation**

Endaweke Y. (2011) refers qualitative data analysis allows describing a phenomena from different direction through holistic approach. The features of qualitative data indicate its diverse nature and there is no standardized procedure for analysis. Saunders, et al ( 2009) also explained the data analysis process in the form of summarizing (condensation) of meanings; categorization (grouping) of meanings; Structuring (ordering) of meanings using narrative groups in analysis process.

The analysis has been done by summarizing or condensing of meanings; categorizing or grouping of meanings and structuring or ordering of meanings. And due to the small sample size, developing statistical data was difficult and no advanced statistical analysis was performed in this study. Instead descriptive analysis and conclusion were drawn from the analysis of specific monitoring and evaluation practices to general or over all Monitoring & Evaluation processes through inductive approach. Therefore, based on Creswell (2009) the results were presented in descriptive and narrative form.

In this study the data obtained from interview and Focused Group Discussion triangulated by document analysis; the key points of the interview are documented and sent back to the interviewees for approval so that the researcher didn't misunderstand and misinterpret anything, and finally summary of the findings were discussed with key project officials.

## **CHAPTER FOUR**

### **4 RESULT AND DISCUSSION**

As discussed in the Research design and Methodology chapter, Interview and Focused Group discussions were the qualitative data collection methods used in this study. The study tried to review different documents like the bank recent strategy and policy, procedure manual, work order to cross check and validate the findings by using multiple sources and from the literature review. The interview conducted is in-depth, though, the questions were few and could enable the researcher to raise relevant issues for triangulating and crosschecking the findings.

The objective of this chapter is to provide the findings and results from the interview and focused group discussion by analyzing information obtained which were expected to achieve the research objective and obtain feed-back on the monitoring and evaluation practices of e-banking projects of Zemen Bank S.C.

#### **4.1 General Information about the Participants**

##### **Focused Group Discussion**

For confidentiality purpose, the names of the participants are not presented on this analysis. The researcher has taken the participants as they are categorized into two, e-banking operational part responsible persons and e-banking technical part responsible persons based on the bank's organizational structure. Accordingly, four higher level professionals, i.e. one from Multichannel banking center who is responsible for the management of operational part of the e-banking projects, one recently recruited project manager for IT department, one from Card banking Division, who is responsible for technical processes and one from Online banking center who is responsible for similar technical processes and two officers were selected.

The participants are assigned letters from A to F to prepare them for the discussion questions as participant A, participant B, etc.

## **Interview**

The number of respondents for the interview was six and their position in the bank is both from management and IT department who can provide important information regarding the projects monitoring and evaluation processes under study.

From the above analysis we can see that the participants have enough knowledge and experience to impart the information needed for the study. However, according to the information received from them, all of the respondents have no specialization in project management.

### **4.2 Analysis of Semi-Structured Interview**

The interviewees responded that's since its establishment, Zemen Bank S.C. was pioneer, among private banks, for implementing e-banking projects as alternative channel for rendering its banking services, which in turn increased its accessibility to the society. The major types of e-banking services that are currently functional are divided into two, Card Banking and Online Banking. The Card banking projects includes Automated Teller Machine (ATM) services and Point of Sale services while the Online Banking Project includes Internet Banking and Mobile Banking

From the interviewees' responses, the bank has broadly categorized the technical part of e-banking projects and the operational part of e-banking projects under two different departments which are responsible to two different Vice presidents. The Multichannel Banking Department, which is responsible for the operational aspects of e-banking services are under the supervision of Vice-president Operation whereas the E-channel department, and the IT Project management Department, which are governed by Directors, are under the supervision of Vice-President IT. And the issues under this study, e-banking projects, are organized under E-channel department for its technical and IT processes and Multi-channel banking department for its operational processes. The E-channel Department is further divided into two divisions, Card Banking Service Division and Online Banking Service Division under the lead of two managers who have two IT Officers each.

From the respondents, the technical part for both Card banking and On-line banking projects have a system monitoring tool which was continuously assessed by the Division manager for assurance of proper functioning of , especially the ATM machines. When problems related to technical failure encountered, the officers and/or the division manager involve in fixing them in time so that minimum down time is always maintained. Similarly, the Online system has also a monitoring or administration tool that alerts during failures and maintenance is done as fast as possible. In both cases, if the problem is beyond the Card banking center and Online banking center team, the problem is escalated to vendors and support is requested.

The Interviewees believe that the major problem regarding lack of proper monitoring and evaluation system regarding the e-banking projects is due to insufficient organizational structure. This implies that the bank does not have properly structured IT department units for the management of electronic banking services at project levels. For instance, the bank did not assign a project manager in the IT department who could manage such projects since recent times. The Project Manager, currently, employed, is a new comer and it is too early to establish a proper monitoring and evaluation of the electronic banking projects.

The Interviewees responded that the major challenges so far encountered due to lack of proper monitoring and evaluation system can be seen in different aspects.

The first is technical errors that emanate from interfacing problem of the physical machines and the application software. When such problems exist the IT e-banking service team tries to fix the problem either by themselves or through escalating the issue to the vendors.

The second problem is the failure of the ATM machines due to recurrent power interruption which upset its functioning, and through time it causes the application to worn out or damaged before giving service for its expected life time.

Regarding Online banking, especially Internet banking services, the major problem is the infrastructure failure or interruption or the broadband line tardiness problem that causes the instantaneous accessibility of the service difficult for customers. This is due to our country's Internet service provider problem in which the leased band width is not fully open for utilization.

The other problem is regarding pass word reset problem. So far customers repeatedly contact head office for pass word reset due to forgetting it or erroneously input it more than three times. So the technical team would be very busy in resetting pass codes instead of solving other more sensitive issues. However, the bank is recently working on a product that can enable customers to reset their passwords by themselves when locks occur.

The last but not the least problem is that when problems are encountered, sometimes the physical presence of a professional may be required, however, and there might not be a vehicle for transportation. And the down time of the ATM machines may be long and customers may get dissatisfied due to wasting their time or going to other banks for servicing.

The respondents revealed that there is no IT governance framework or documentation for monitoring and evaluation of e-banking projects, however, in the new strategy the bank has organized a project management department and hopefully will compile relevant documents for such purpose.

### **4.3 Analysis of Focused Group Discussion**

Participant A is a management professional who has an MA degree in Business Administration and has served a total of 23 years in different organization, including bank is from operational level to management level.

Participant B is a project professional who has an MA degree in Management Information system and has served for more than 25 years in different organizations and two government banks. He has worked in a range of responsibilities related to different operational projects and now assigned as an IT project responsible.

Participant C is an IT professional who has an MA degree and has served for 13 years in two different banks in IT area.

Participant D is also an IT professional with an MA degree in computer science and has served for more than 15 years in two banks.

Participant E and Participant F are IT officers with almost similar work experience and they are doing their Master degree in Computer Science.

The Focused Group participants raised several issues regarding monitoring and evaluation of e-banking projects in general and they argue that it is poorly implemented in Zemen bank projects due to lack of expertise. For instance, they mentioned that the CR2 who is the Bank world software provider give certification and there is no such certified professional in Zemen Bank as the cost of training is expensive. Moreover, the bank's organizational structure has never included a project management department and the relevant professional since its incorporation. IT projects are done in isolation through task assignments and all the deliverables and reporting was not systematized. These and other problems caused the monitoring and evaluation process unorganized, unstructured and there were no clear latitude between duties and responsibilities so far; this implies that when a e-banking projects were initiated, a number of assignees were involved from the technical requirement process to the implementation process without any permanent assignments, which make the monitoring and evaluation process difficult.

However, in general terms the Focused Group participants believe that monitoring and evaluation process is an essential element of the project management discipline and is highly practical on Traditional projects like construction projects rather than IT projects.

Generally the group discussed over the importance of Monitoring and Evaluation practice and came to a consensus that its essentiality from avoiding delays in project completion, and delay on getting User Acceptance Testing (UAT) signoffs. Besides, Process (activity) monitoring which is required for controlling the progress of activities and the delivery of outputs i.e. monitoring used to examine how activities are delivered – the efficiency in time and resources, Compliance monitoring, which ensures compliance with donor regulations and expected results, grant and contract requirements, local governmental regulations and laws, and ethical standards, Context (Situation) monitoring which is used to track the setting in which the project operates, especially as it affects identified risks and assumptions, but also any unexpected considerations that may arise, Real-time evaluations (RTEs) which are used to provide immediate feedback for modifications to improve ongoing implementation are all important dimensions of Monitoring and Evaluation processes.

The Focused group discussion participants unanimously agree that the existing monitoring and evaluation process on e-banking projects is not properly implemented. However, they impart their ideas as to how each and every project is managed as follows: both the Card banking service system and Online banking service system, have their own System Administration tool to facilitate the timely monitoring process for both technical and operational failures.

For both technical and operational failures there is a message alert that can be observed each and every time, and the concerned organs, especially the division managers and the technical Officers assess the problem and try to fix it. The message alert shows each and every activity on the machines (particularly on ATM), or from the operational aspect cash insufficiency or minimum required balance that need replenishment.

The effectiveness of the monitoring and evaluation system of Zemen bank is in doubt for the focus group attendants, because they believe that there is no evaluation system at all in all IT projects, let alone on e-banking projects in particular. The system is only assessed when failure is encountered and through contacting vendor companies to solve hard problems.

As it can be learned from the discussion, Zemen bank has been committed to build up a very strong set of information Technology capabilities and the associated Electronic Banking service offerings. Reflecting the heavy investments and commitments to a multi-channel approach, it has deployed and put in use several e-banking services, like ATM, Visa and Master card usage, Internet banking and mobile banking services. However, the monitoring and evaluation system of those projects have the following challenges:

“The leadership of the bank’s IT department has been handled by two department managers overseen by the president as the previous IT-Vice President has left the bank for good. As a result, several agreed that this structure does not provide for dedicated oversight for all IT activities and may have contributed to slow execution of and limited attention to monitoring and evaluation of IT projects in general which also incorporates E-banking projects.”

“The bank never assigned or recruited a Project Manager for appropriate management of its IT projects, though; it has conducted many projects from its very beginning of banking service. This has cost the bank in terms of delays in technology innovations, monitoring and evaluation processes in certain IT areas, like e-banking projects.”

“Problems that cannot be solved by internal IT professionals on e-banking projects result either in huge amount of cost and or delay in the execution of services to customers which in turn has an impact on the bank’s profitability and customer retention. For instance, one of the Card Banking service, ATM machines fail to function for unknown reason and the internal IT professionals were unable to trace the problem and escalated it to the vendor, NCR. The response of the vendor company was just a recommendation to upgrade the Operating system from Win XP to 7 or 8. However, the IT responsible persons did so and were waiting for the solution without knowing the root cause of the problem and without any knowledge sharing from the Application software providers. Such kinds of incidents are due to lack of proper monitoring and evaluation system after the implementation of the e-banking projects.”

“Late or incomplete e-banking services offerings have entailed substantial forgone income and notable gaps that result in customer switch to other banks. This creates bad image on the performance of the bank and affects its profitability in the long run.”

“Absence of financial networks (automated system) that links different banks which would enable the use of credit and debit cards supplied by Visa and MasterCard, hence, during conducting e-banking projects, those cards requires the need for specialized system which is not currently available.”

“Cyber security issue which is a global challenge that require global and multi-dimensional response with respect to policy, socio-economic, legal and technological aspects. E-banking applications represent a security challenge as they highly depend on critical ICT systems that create vulnerabilities in financial institutions, businesses and potentially harm banking customers. It is imperative for banks to understand and address security concerns in order to leverage the potentials of ICTs in delivering e-banking applications. In the deployment of e-banking application, attention should be drawn to the prevention of cybercrime (i.e. the use of ICTs by individuals to commit fraud and other crimes against banking transactions). This is of course in general terms, not only in the case of Zemen Bank S.C. as there is no such attacks encountered so far. However, the bank has not yet organized an IT security unit that handles security issues.”

#### **4.4 Document Analysis**

In this study, the bank's policy, IT procedure manuals and the new strategy documents are scrutinized to check whether monitoring and evaluation processes of e-banking projects are properly set, communicated and conducted to the relevant organs. However, there is no such framework that facilitates the appropriate IT project monitoring and evaluation system. This analysis coincides with the results of the research.

## **CHAPTER FIVE**

### **5 CONCLUSION AND RECOMMENDATIONS**

#### **5.1 CONCLUSION**

This chapter presents the conclusion remarks for the major findings from the Result and Discussion chapter and important recommendations according to the main problems investigated in this study respectively.

Based on the analysis made in chapter four, Zemen Bank S.C. was pioneer, among private banks, for implementing e-banking projects as alternative channel for rendering its banking services, which in turn increased its accessibility to the society. The major types of e-banking services that are currently functional are divided into two, Card Banking, which includes ATM and POS, and Online Banking which includes Internet banking and Mobile Banking.

The bank organized e-banking projects under E-channel department for its technical and IT processes and Multi-channel banking department for its operational processes. The E-channel Department is further divided into two divisions, Card Banking Service Division and Online Banking Service Division under the lead of two managers who have two IT Officers each. The different challenges encountered in the management of e-banking projects are technical errors that emanate from interfacing problems of the hardware with the application software, failure of ATM machines due to recurrent power interruptions which upset their functions, low level of internet penetration and poorly developed telecommunication infrastructure, which impede smooth development, improvements and functioning of e-banking services, repeated requests of password rest from customers due to forgetting or erroneous trials which consume the technical officers work times.

On the other hand lack of expertise, especially in the hardware, software and applications of the e-banking projects area is another challenges that result in poor monitoring and evaluation processes.

In conclusion the monitoring and evaluation system of Zemen Bank S.C. is not effective as the bank has not given due attention in restructuring the IT department leadership in senior management level which would make a difference in the proper placement of monitoring and evaluation process of e-banking projects; the bank has not recruited a project manager for IT projects, late completion of e-banking projects and Cyber-attack issues, which is a global challenge but Zemen has not yet given attention in assigning a responsible organ that work on protecting the different e-banking services.

## **5.2 RECOMMENDATIONS**

According to the findings from the analysis of the collected information, the following recommendations are forwarded in order to run viable monitoring and evaluation processes on e-banking projects:

The Bank should do an organizational restructuring in order to organize the IT department under leadership level a Vice-President instead of having isolated two Directors. This strengthens the proper management and functioning of each unit, in which monitoring and evaluation of e-banking projects would be part of the whole processes.

The Bank should assign IT Project Manager who can manage, monitor, evaluate and be responsible for the whole processes and human resources management aspect.

The Bank should invest on extensive trainings for IT professionals which are being provided by hardware, software and application system vendors and certification organs in order to have efficient professionals in e-banking projects.

The Bank should incorporate in its policy a monitoring and evaluation framework and establish procedure manuals for IT projects in general and e-banking projects in particular for the assessment of their proper function.

The Bank, as one of the existing few commercial banks in Ethiopia, should play its role in insisting on the Ethio-telecom's service to expand the ICT infrastructure which is the backbone for e-banking projects.

Again, as one of a financial institutions member, the bank should address the negative impact of recurrent power interruptions to the government and to the Electric and Power Authority, as uninterrupted power supply is mandatory for proper functioning of e-banking projects and has role on their monitoring and evaluation.

Security risk is one of the major challenges of e-banking projects. Hence, Zemen should assign a responsible professional person for such projects in order to maintain a secured system in the area of e-payments. This may be in collaboration with the National Bank of Ethiopia and with all banks in our country through arranging a typical security technology in order to control system networks, which will be part of monitoring and evaluation process.

### **5.3 Suggestions for Further Research**

This study tried to investigate the monitoring and evaluation practice of e-banking projects, taking a case study in Zemen Bank S.C. and strictly scrutinized other studies in the area in order to compare, contrast and add value on them if they exist. However, no concrete study were done on monitoring and evaluation of e-banking projects so far, hence, the researcher believes this study be a road show for further studies and recommends other researchers to carry out more investigations.

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## **Appendix I**

### **Semi-Structured Interview**

Dear Respected Participants,

I am a post-graduate student of Addis Ababa University, School of commerce, in the field of Project Management. As a graduating student, I am conducting an action research under the topic “Monitoring and Evaluation Practices of e-banking projects, A case study in Zemen Bank S.C.”

As purposely selected IT professionals and project manager in IT department of Zemen bank, it is expected that you have a valuable experience and insight in the area of e-banking projects, and hence in their monitoring and evaluation processes. Therefore, your response and participation in the interview and focus group focused group discussion will contribute a lot on the achievement of the objective of this research. In line with this, you are assured as to the confidentiality of your responses and they will be used only for the purpose of this study. For this, the names and specific positions of the respondents are not recorded and published and disclosed to others in any ways. I thank you in advance for your willingness to participate sacrificing your precious time.

Best Regards,

Martha Tilahun

1. What type of electronic banking projects are currently implemented in Zemen Bank S.C.?

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2. How are the e-banking projects are structured and being managed in the IT department?

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3. How monitoring and evaluation practice of e-banking project looks like in Zemen bank?

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4. What are the problems that exist regarding placement of proper monitoring and evaluation on e-banking projects?

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5. What kind of challenges and gaps do exist as a result of lack of proper monitoring and evaluation processes?

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6. Is there any IT framework and documentation as to how the bank manages the monitoring and evaluation process of e-banking projects?

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## **Appendix II**

### **Focus Group Discussion**

Dear Respected Participants,

This research is conducted as a fulfillment for the Master of Arts in Project Management at Addis Ababa University, School of Commerce graduating student. You are invited to participate in full attention as your opinion is of utmost valuable to realize the research.

I would like to assure you that your information to the focus group discussion will be kept confidential to be used only for this academic purpose. Hence, your voluntarily participation is highly appreciated.

Kind Regards,

Martha Tilahun

## **Focus Group Discussion Points**

1. What do you think about the practicality of monitoring and evaluation on e-banking projects in general and in the case of Zemen Bank in particular?
2. What is your opinion about the importance of monitoring and evaluation process of project management regarding e-banking projects?
3. Do you think the existing e-banking projects are properly managed, monitored and evaluated as required by any other IT projects?
4. How do you see the effectiveness of monitoring and evaluation practice of Zemen bank regarding e-banking projects?
5. What kind of challenges have you encountered during and after the implementation of e-banking projects?