INDRA GANDHI NATIONAL OPEN UNIVERSITY

CAUSES AND EFFECTS OF ATM DOWN TIME ON FOREIGN CURRENCY GENERATION PERFORMANCE (THE CASE OF NAZARETH ARADA DASHEN BANK)

By

Rahel Ali Mohammed (ID.No.ID1050387)
Advisor- T/Giorgis Assefa (Asst.Prof)

A Thesis Submitted to the Coordinator (Projects) School of Management Studies, IGNOU, Maidan Garhi, New Delhi-110068, in Partial fulfillment of the requirements for the Degree of Master of Art in Business Administration

May 2013

Acknowledgement

I am highly indebted to all people who helped me to successfully finalize this case study. I am particularly thankful to Asst. Prof T/Giorgis Assefa for his guidance during the due course of this project paper. He shared his knowledge in research with me along with his time to help ensure successful completion of my academic Journey; he was very kind to the extent to come by my office to get the draft for review. My dear husband Michael Kebede has been there for me in every aspect, he helped me with editing, inputting and organizing the final output of the study. My appreciation also goes to the management and staff members of Nathreth Arada Dashen Bank for their valuable comments and their support while organizing customers to participate in filling questionnaires. My family and friends have also proved time and again their willingness to lend a hand when needed. My last but not the least humble thanks is for the almighty God. God helped me in all walk of my life. I could not be where I am today with out his grace, his guidance and unfailing love.

Table of Contents

Topic **Page No**

ACCRONYMS

ATM:- **Automatic Teller Machine**

AVR: - **Automatic Voltage Regulator**

DB:- **Dashen Bank**

EPG: - **Electric Power Generator**

ETC:- **Ethiopian Telecommunication Corporation**

FCY:- **Foreign Currency**

NADB:- **Nazareth Arada Dashen Bank**

PCD:- **Payment Card Department**

POS:- **Point Of Sale**

ITD:- **Information Technology Department**

List of Tables

Page

List of Figures

Page

List of Anexes

Abstract

Automatic Teller Machines (ATMs) provide a critical service to bank customers and an increasingly important source of revenue to the banks themselves. ATM Transactions have become an essential component of the banking industry. The downside of this vital role of ATMs is that downtime in ATM machines can result in major headaches for financial institutions and cause customers to be dissatisfied, eventually leading to lost revenues and decreased profitability.

This study investigates significant dimensions of ATM downtime, its causes and effect on FCY generation performance of Nazareth Arada Dashen Bank. Questionnaire was used to collect the data from a convenience sample of 40 customers who are foreign electronic card holders who consistently uses the branches ATM. An interview was also made with 3 key personnel of the branch and 4 payment card department (PCD) supervisors, who are directly involved in the service.

The results of this study indicate that efficient operation, cut down in ATMs downtimes, and increase the reliability of Dashen Bank and responsiveness to these potential problems. Consequently a significant dimension of ATM service quality positively and significantly contributes toward customer satisfaction, which ultimately contribute for high revenue and increases foreign currency gain.

The study makes a significant contribution to the effective monitoring and management of an ATM down time, literature because few empirical studies are available dealing with this new segment of electronic banking, the Automatic Teller machines (ATM) in Ethiopia.

CHAPTER ONE

1. INTRODUCTION

1.1. Project Introduction

Automated Teller Machines (ATMs) also called 24-hour tellers are electronic terminals which give consumers the opportunity to bank at almost any time. To withdraw cash, make deposits or transfer funds, a consumer needs an ATM card and a personal identification number. Some ATMs charge a usage fee for this service, with a higher fee for consumers who do not have an account at their institution. If a fee is charged, it must be revealed on the terminal screen or on a sign next to the screen. (Indiana Department of Financial Institutions, Indianapolis, Electronic Banking, March 1997)

The traditional banking service is currently being aided by a modern electronic banking. An electronic banking service uses latest technologies such as automatic teller machines (ATMs) and point of sales (POSs). The ATMs apart from local banking services they also play a greater role on generating foreign currencies (FCYs). Especially developing countries such as Ethiopia, which has FCY shortages needs all possible ways of generating FCY.

Electronic banking is a newly introduced technology in Ethiopia, a country used to the traditional banking systems for decades. In order to provide efficient ATM service or to minimize ATM down times, banks should have a well-organized system, good infrastructures with qualified team of help desk service and technicians.

ATM being one of the segments of electronic banking service, it is used in a local and foreign banking service. Especially, for Ethiopia, one of the developing nation ATM as one of the tool in generating FCY needs a close eye. Below are some points to be considered to curb ATMs downtimes and increase customer satisfaction:

- ✓ A proper infrastructure, good networks, an electric power generator, automatic voltage regulator (AVR), UPS to prevent power breakdowns.
- ✓ Dedicated staff members who can help speedy maintenance during downtime.
- ✓ A continuous communication from branch to the payment card department (PCD) and vice versa.
- ✓ Upgrading PCD staffs and those operating in branches through trainings.
- ✓ Providing technical centers with qualified technicians.
- ✓ Proper channel to collect customers' feedback, opinions for improvement.

1.2. Project Description

The major theme of the project is to look in to the performance of Nazareth Arada Dashen Bank in providing quality service for ATM customers which is one source of foreign currency generation for the bank. The focus is to look in to the causes and effects of ATM down time in the FCY generation performance of the branch under consideration.

The major components of the payment card department will also be studied. The confidence of foreign card holders on the ATM service is the determinant factor on the performance of the branch in terms of FCY generation.

The capacity and the follow up of the bank in maintaining good relation with the service providers will also be looked up on. The final result of the study can be used as a reference material for further studies in the field and by Dashen Bank S.CO. as an input to improve the performance of their FCY generation capacity by reducing the ATM down time of branches.

1.3. Background of the Study

With more than 1.5 million terminals in service worldwide, financial institutions recognize that the ATM is a key customer touch point and have attached increased value to it beyond simple cash dispensing. Intensified economic and business forces have placed extraordinary pressure on banks to remain competitive, increase customer loyalty, and improve the efficiency and profitability of their ATM networks. These pressures are compounded by the fact that, given ageing legacy systems and rapid consolidation in recent years, banks now manage an increasingly complex mixture of vertically siloed technologies. (BankNews Media: http://www.banknews.com/Single-News-Page.51)

To get the most from their ATM channel, business owners must look to maximize the investment they have made in hardware and infrastructure; this has to be done alongside the ongoing challenge of addressing key pressures that affect the maintenance and control of ATM networks.

Banks are under more pressure than ever to prove the profitability of the ATM network by extending their core ATM capabilities but are still struggling with other factors such as reducing the cost of ATM network maintenance and maximizing availability. While ideally any fault at an ATM terminal should be raised as soon as it occurs in order to be promptly fixed, the reality is that there is often a significant time-lag from when a fault occurs to when the network operator is made aware of it or identifies it - in some cases, hours or even days.

ATM downtime creates brand risk with both customers and within the highly competitive banking industry as a whole. Customers have come to expect ATMs to be available 24/7 and to provide a high quality, stable service. Low network availability and bad service can also be an embarrassing prospect for financial institutions.

A survey conducted by ICM research on behalf of Level Four in July 2007 indicated that 38 percent of respondents (UK cardholders) would consider moving their main bank account if their bank's ATMs were constantly out of service or unable to dispense cash.

1.4. Statement of the Problem

Automatic Teller Machines (ATMs) provide a critical service to bank customers and an increasingly important source of revenue to the banks themselves. ATM transactions have become an essential component of the banking industry. The downside of this vital role of ATMs is that downtime in ATM machines can result in major headaches for financial institutions and cause customers to be dissatisfied, ultimately leading to lost revenues and decreased profitability.

As it has been observed significant decline in foreign electronic card can be observed in number as well as in amount of transaction. The ATM service providing capacity of NADB has lag behind from what was planned in the approved budget of the branch and on quarter reports of the bank, moreover an escalated request for an improvement on ATM service from card holders has been observed from summarized suggestion reports of customers. (Source: Quarter reports and customers suggestion summery)

Currently it is common to watch ATMs which are not operational due to different reasons. Mostly the reasons that the ATMs displays might be off line is, out of service status, in any case if the ATM is in such a status it will not be operational.

This situation resulted in eroding foreigner's confidence on ATMs service, as a result will force them to find other means of collecting funds from abroad. Moreover, this bottle neck will affect the flow of FCY to the underground economy known as black market.
Being aware of the consequence of the matter Dashen Bank Share Company has set a 24 hour ATM service since the commencement of the project. The successes of the banks endeavor depend on effective payment card management system. However, it is obvious that a 24 hours ATM service is unfeasible in the real scenario as there exist several factors for the interruption of the service.

1.5. Objective of the Study

1.5.1 General Objectives:

The general objective of the study is to assess the cause and effect of ATM down time on foreign currency generation performance of Nazareth Arada Dashen Bank.

1.5.2. Specific Objective

The study has the following specific objective:

- ✓ To determine the causes of ATM down time.
- ✓ To pin-point the consequences or effect of delay in tackling of ATM down time and its impact on FCY generation performance of Nazareth Arada Dashen Bank.
- ✓ To assess the measures taken by Dashen Bank Share Company to eliminate ATM interruption time.
- ✓ To illustrate potential recommendations for successful management of ATMs so as to exploit all possible benefits involved.

1.6. Significance/ Expected Contribution of the Study

This study will be expected to:

- ✓ Uncover the extent of delay to embark upon ATM stoppage of NADB and the possible measures that could have been undertaken by the Bank.
- ✓ Identify the strengths and weaknesses of Dashen Bank Share Company in giving technical assistance to branches in case of ATM interruptions.
- ✓ Provide a solid inputs to aid policy formulation at DB and elsewhere as the research output will be a relevant reference material.
- ✓ Provide an input for other individuals who are interested in the subject matter to undertake similar or related studies.

- ✓ Last but not least, the researcher believed that this assessment will lead to identification of the possible causes of the problem and in turn contribute in eliminating ATM down time of NADB.

1.7. Scope and Limitation of the Study

Scope of the Study

Regarding the scope of the study, the core payment card process of the Bank is carried at a head office level, these includes selection and contractual dealings with electronic service providers process, help desk process, ATM installation process, ATM follow-up process and ATM maintenance process. However, the study will exclude head office and other branches data and will rely mostly on data of the branch under consideration i.e. NADB. Moreover, assessment will be made on the status of ATM of the branch, the number of foreign ATM transactions and the performance of the branch in terms of generating FCY. The study will consider 3 years data from the inception of the branch.

Limitation of the Study

Time was a significant constraint for the researcher. Since the technology of electronic payment card was recently adopted by Ethiopian banks, it is difficult to find books and reference materials written on the subject area. Yet another limitation was the cost associated to the research as the branch on which the research conducted is situated 100 Km from the capital. Most importantly, the financial industry is highly competitive any most of the data are considered confidential; the researcher has put great effort in convincing the respective body on contribution of the research for the bank.

1.8. Organization of the Paper

The entire project will contain five chapters organized as follows. Chapter one will incorporate an introduction consisting of the background, the statement of the problem, objective, scope, expected contribution and limitation of the study. Chapter two will contain an extensive but selected review of related literature on the subject. Chapter three will explain the methodology used in conducting the study which incorporates the type of and source of data and the method of data analysis used in the study. Chapter four will contain the finding or results, discussions and analysis of the study. Chapter five will consist of conclusion and possible recommendations made based on the finding.

CHAPTER TWO

2. REVIEW OF RELATED LITRATURE

Automated Teller Machine is a computerized telecommunications device that provides the customers of a financial institution with access to financial transactions in a public space without the need for a human clerk or bank teller. On most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stripe or a plastic smartcard with a chip that contains a unique card number and some security information, such as an expiration date. Security is provided by the customer entering personal identification number (PIN). (Journal of Internet Banking and Commerce, August 2010, vol. 15, no.2)

The developments of technologies have enabled organizations to provide superior services for customers' satisfaction (Surjadjaja et al., 2003). The number of bank customers preferring to use self-service delivery systems is on the increase. This preference is attributed to increased autonomy in executing the transactions. Banks are increasing their technology-based service options to remain competitive. The ATM is an innovative service delivery mode that offers diversified financial services like cash withdrawal, funds transfer, cash deposits, payment of utility and credit card bills, cheque book requests, and other financial enquiries. Researchers have stated that users' satisfaction is an essential determinant of success of the technology-based delivery channels (Tong, 2009; Wu & Wang, 2007).
Use of ATM has become extremely popular among customers as convenient mode of transactions. The technological innovation has transformed the banking business. Banks are aggressively adopting this mode. The advantages of using ATM have given new impetus in dimensions of service quality and banks are offering new choices to customers Cabas (2001).

The changing business environment offers challenges and opportunities to the organizations. The Changing customers' perception of quality poses unique challenge. Excellence in quality has become an imperative for organizational sustainability (Lewis et al., 1994).

THE BENEFITS OF ATMS

According to Brain (2000), the benefits that can be derived from ATM usage are so numerous, some are outlined below:

- Flexible account access allows clients to access their accounts at their convenience
- MFI personnel are not required to be present for transactions and have more time to serve clients.
- Increased hours of operation fit client schedules.
- More clients can be reached beyond the branch network, such as in smaller
- Population centers.
- More low-cost funds are available because ATMs make it easier for clients to deposit savings

Although ATMs were originally developed as just cash dispensers, they have evolved to include many other bank-related functions. In some countries, especially those which benefit from a fully integrated cross-bank ATM network, ATMs include many functions which are not directly related to the management of one's own bank account, such as: Paying routine bills, fees, and taxes (utilities, phone bills, social security, legal fees, taxes, etc.), Printing bank statements, Updating passbooks, Loading monetary value into stored value cards, Purchasing and so on. (Journal of Internet Banking and Commerce, August 2010, vol. 15, no.2 pp 4.)

Christoslav et al (2003) in a research asserted that ATM services are highly profitable for banks, and banks aggressively market the use of ATM cards. ATMs that are off bank premises are usually more profitable for banks because they attract a higher volume of non-bank customers, who must pay service fees.

An organization called, Level Four collected information for its survey during the ATM Industry Association's European conference. Level Four says banks should look to improved management and ATM-network through intelligent ATM monitoring to cut down-time. According to Level Four, network availability is one of the most pressing ATM issues facing banks today, primarily a result of the migration to the Windows and the introduction of multivendor software. Level Four's ATMIA delegate survey reveals that 22 percent of the banks represented at the European conference still see 'reducing ATM downtime' as their top priority, while 21 percent see 'rolling out new customer services' as a next top ATM priority.

"Talk within the ATM industry has focused on visionary multivendor strategies and the role of the ATM in multichannel banking, which we fully support," said Ian Karr, chief executive of Level Four. "But our delegate survey highlights the real problem that banks face today with regards to their ATM networks. Banks are still struggling to get their basics right; if they can't successfully tackle ATM-network availability, they will find it increasingly difficult to introduce any new revenue-generating services that will retain and attract new customers." (http://www.atmmarketplace.com/article/129564/SURVEY-Banks-top-priority-is-reducing-ATM-downtime accessed on April 20,2013)

As successful as ATMs are in the business model, they remain challenging for information technology (IT) administrators who must manage them. Scheduled maintenance of ATMs and software or hardware problem resolution are two of the primary challenges for administrators. Since the ATM is an important interface between a bank and its customers, problems that can bring down an ATM during business hours can be costly. (Source: The Shinhan Bank 2009 deployment of ATMs with Embedded Intel® Core™2 processor with vPro™ technology, conducted in 2009, at the bank's distributed sites in South Korea.)

Researchers have divergent views about the use and effectiveness of ATMs. Stemper (1990) stressed the positive dimension of ATMs based on freedom of transaction. Effective service delivery in ATM system guarantees quality excellence and superior performance and provide autonomy to the customers (Lovelock, 2000). Yavas etal., (2004) argued that customers' focused ATM delivery system that fulfills their needs and maximize operational performance are essential dimensions for bank to achieve and

sustain competitive advantage. Dilijonas et al., (2009) examined the essential aspects of ATM service quality in Baltic States. They identified essential resources (adequate number of ATMs, convenient and secure location and user-friendly system); important dimensions of operation of ATM (maximum speed, minimum errors, high uptime, cash backup); and value-based aspects (quality service at reasonable cost, and maximum offering to cover maximum needs of customers) as vital facets. Based on the prior studies, Al-Hawari et al. (2006) compiled a list of five major items about ATM service quality that include convenient and secured locations, functions of ATM, adequate number of machines and user-friendliness of the systems and procedures. An empirical study found that these items constitute important aspects of ATM service quality.

CHAPTER THREE

3. ORGANIZATION BACKGROUND AND METHODOLOGY OF THE STUDY

3.1. ORGANIZATION BACKGROUND

3.1.1. Establishment of Dashen Bank Share Company

Dashen Bank Share Company was established on September 20, 1995 by 11 share holders with a capital of birr 14.9 million. It started its service by opening 11 area banks in the capital Addis Ababa and other major towns of Ethiopia.

Vision

"In as much as mount Dashen excels all other mountains in Ethiopia, Dashen Bank continues to prove unparalleled in banking services"

Mission

"Provides efficient and customer focused domestic and international banking services, by overcoming the continuous challenges for excellence through the application of appropriate technology"

Major activities

The major activity includes:

- Undertake banking and monetary exchange business
- Mobilize various types of deposits
- Extend loan and credit facilities
- Render international banking services
- Handle domestic and international fund transfers
- Opening branches in and outside Ethiopia
- Other activities related to banking and finance

Currently Dashen bank has 90 branches. Nazareth Arada Dashen is one of the branch started its operation in November 2008. Nazareth Arada Dashen bank operates in the city of Adama which is located 100km from the capital, Addis Ababa. There are three ATMs in city of Adama and one of the machines is placed in the branch itself. An ATM can render service to local and foreign electronic cards in both case the machine conducts payment with a local currency as the NBE directive states so. When a foreign card transaction is conducted the system will deduct the customer FCY account resulting in a FCY earning but effects payment with a local currency. This will result in retention of foreign currency for the bank on particular and for the country in general.

3.1.2. Organizational Structure of Dashen Bank

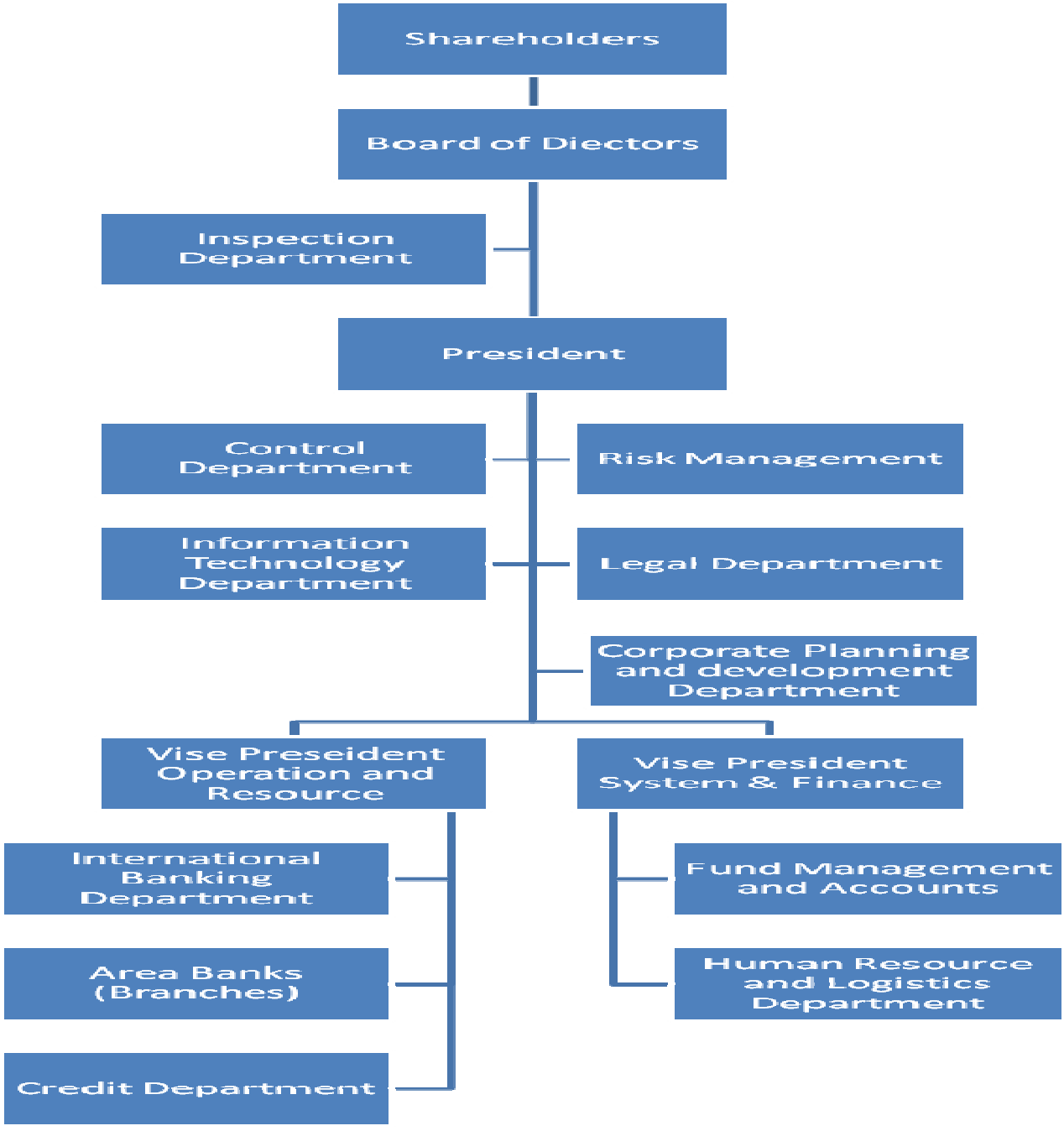


Figure 3.1 Organization Chart of Dashen Bank S.Co.

3.2. METHODOLOGY OF THE STUDY

3.2.1. Introduction

This study is designed to investigate the causes and effects of ATM downtime on foreign currency generation of NADB. The study was conducted in NADB bank .The data were obtained using a three-part questionnaire. The first part requested background information about the respondents. The second part of the questionnaire obtains respondents view on their knowledge of ATM in Ethiopia,their confidence on the service and feed back and the general overview of ATM service. Third part of the questionnaire is an open question which demands respondents for an additional view related with ATM service.

3.2.2. Selection of Target Organization

Dashen Bank Share Company was selected for the study since it is the first bank to start a full- fledged segment of electronic Banking Service, the ATMs. Furthermore, the branch under consideration was willing to provide information for my study.

3.2.3. Sample Size Determination

Data were collected from foreign card holders who are customers using the Nazareth Arada branch ATM. According to the data available in the branch the sample size is determined proportionally by taking in to account the number of foreign card holders from the four brands as listed in the table below.

Table 3.1 sample determination of the study

S. no	Foreign Electronic Card brands	No. of Customers	Sample size
1	VISA CARDS	40	16
2	MASTER CARDS	28	10
3	MAESTRO CARDS	20	8
4	UNION PAY CARDS	18	6
Total		**106**	**40**

3.2.4. Data Collection Procedures

Each participant who participated in this study received a questionnaire. Out of the 40 distributed questionnaires 36 completed or partially completed were returned, four were unreturned. Data was also collected through interview questions and document review. An interview was made with 3 key personnel of the branch and 4 PCD staffs at a supervisory level who are directly involved in the service.

3.2.5. Analysis of Data

The data were analyzed according to the objectives of the study that is, to determine the cause and to show the effect of ATM down time on the foreign currency performance of Nazareth Arada Dashen Bank. The individual analysis of each objective is presented in the following section.

Demographic characteristics were summarized using frequencies and percentages for all variables including: age; sex; reason of travel to Ethiopia; years of owning the card/type of card.

Frequencies, percentages, and graphs were used in analyzing data regarding the attitude of foreign card holders towards the major components of ATM service.

CHAPTER FOUR

4. RESULTS OF THE STUDY

The major focus of the study is to determine the cause and show the effect of ATM down time on the foreign currency performance of Nazareth Arada Dashen Bank.

4.1. Demographic characteristics of respondents

Out of the 40 questionnaires distributed to the foreign card holding customers of the branch 36 (90%) of the questionnaires were returned with satisfactory information required. Below are the demographic characteristics of the respondents classified in terms of: -

- Years of owning electronic banking card
- Type of card
- Account currency type
- Brand of electronic banking card
- Years of using Nazareth Arada branch ATM
- Age
- Sex
- Reason of stay

About 78% (n=28) of the sample size of N=36 constitutes credit electronic banking card. The remaining n=8 (22%) of the respondents were debit electronic banking cardholders. Regarding the respondents account currency type maintained the larger goes to USD which accounts to n=16 (about 44%) which is composed of 75% and 25% credit and debit cards respectively. The second largest group is the EURO account currency type, which amounts to (25%, n=9) of the sample size. The third largest is the GBP account currency type. The difference between the second and third is not significant

amounting just above (2%,n=1). Last but not least below 10% of the respondents indicated another currency type namely japans yen. See table 4.1 below for your kind of reference.

Table 4.1 Type of electronic banking card and account currency type of respondents

		Account Currency type				
		USD	**EURO**	**GBP**	**Others**	
Type of electronic banking card	**Debit**	4	1	2	1	8
	Credit	12	8	6	2	28
Total		16	9	8	3	36

(Source: own survey, 2013)

The largest group of the respondents (n=18, 50%) states that they have owned an electronic banking card for more than ten years. (n=7,19%) each responded that they have owned their electronic card for 4-6 years and 1-3 years respectively. Only n=3 reported they have owned their card for a period between 6 to 9 years. Just 1 of the respondent answered owning an electronic card for less than a year.

Regarding the foreign card owners and the customer relation with Nazareth Arada branch most of the respondent indicated that they have used the branches ATM service for 2-3 years, their portion accounts to 64%/n=23. Out of the 36 respondents (n=7, 19.4%), (n=6, 17%) said that they have used the ATM for less than a year and 1-2 years.

Summarizing the above data, 1/3 of the respondents, are cardholders more than 10years and they are customers of NADB and have used the branches ATM for 2-3 years. Respondents owning their cards for more than 10 years and who have used the Nazareth Arada ATM for years ranging less than a year and 1-2 accounts to about 6% and 11% respectively.11% of each category are customers of the bank for 2-3 years and owning their card for 1-6 years, see Table 4.2 below .

Table 4.2 Years of owning electronic banking card and years of using the ATM of Nazareth Arada branch

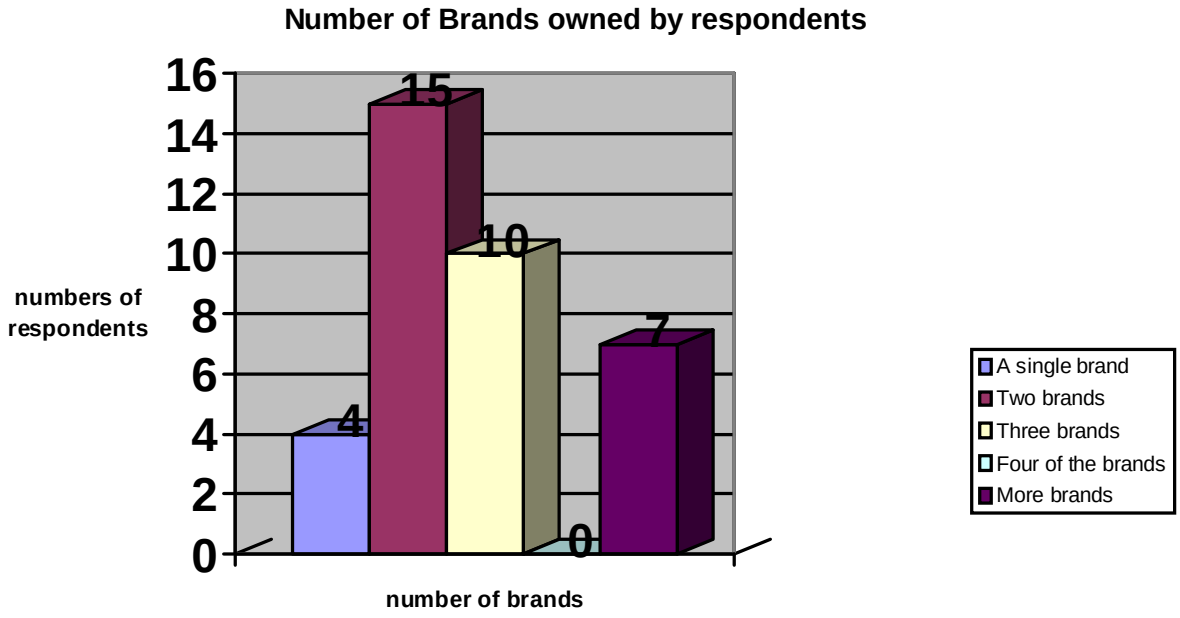
		Years of owning an electronic banking card					*Total*
		Less than 1 year	*1-3 years*	*4-6 years*	*6-9 years*	*More than 10 years*	
Years of using Nazareth Arada bank ATM	*Less than 1 year*	1	2	2	0	2	7
	1-2 years	0	1	1	0	4	6
	2-3 years	0	4	4	3	12	23
Total		1	7	7	3	18	36

(Source: own survery,2013)

Table 4.3 Number of Electronic card Brands

Position of electronic banking cards	
A single brand	4
Two brands	15
Three brands	10
Four of the brands	0
More brands	7
Total	36

(Source :own survey,2013)



A single brand	4
Two brands	15
Three brands	10
Four of the brands	0
More brands	7

Figure 4.1 Number of brands owned by respondents

As can be seen from the above graph from the total respondents the majority said that they have two different brands of cards they are almost 42%. About 28% and 19% said that they own three and more than the ones under consideration respectively. A single brand of one of the brands under consideration is owned by 11% of the sample and none of them own four of the bands namely (Visa, Master, Maestro and Union pay card).

Table 4.4 Respondents reason of Stay in Ethiopia

Respondents stay in Ethiopia	Business	Pleasure	Others	Total
	22	6	8	36

(Source: own survey, 2013)

Concerning their stay in the country (n=22, 61%) constitute individuals who are staying in Ethiopia for business purpose. Pleasure amounts 17% and others sums to 22%.

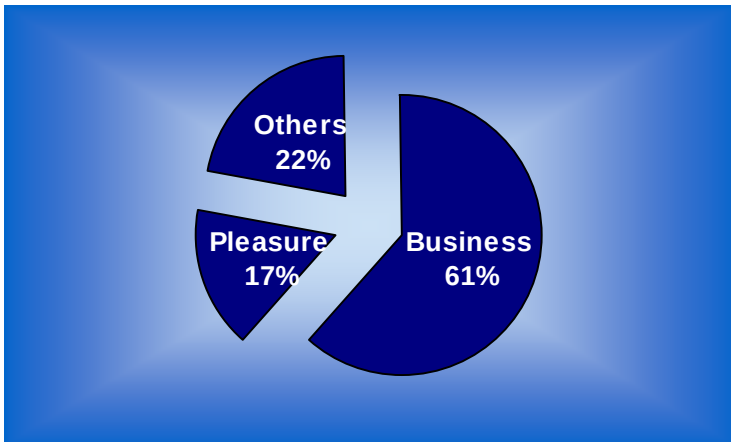


Figure 4.2 Reason of stay in Ethiopia

Table 4.5 Respondent sex and age category

		Age category				Total
		18 – 30 years	**31 – 40 years**	**41 – 50 years**	**50 years & above**	
Sex of respondents	**Male**	4	8	6	2	20
	Female	3	9	4	0	16
Total		7	17	10	2	36

(Source: own survey, 2013)

Forty four percent (n=16) of the respondent were female. The remaining 54% (n=20) of the respondent were male. Regarding the age of the study participants, the largest of all (n=17, 47.2%) was in the 31-40 years age group. The second largest (n=10, 27.8%) and the third largest (n=7, 19.4%) of the group in their particular order were in the age groups 41-50 and 18-30 years. a very small portion (n=2, 5.6%) indicated that they were in the age group of 50 years (refer table 4.5) above.

Sex and age group

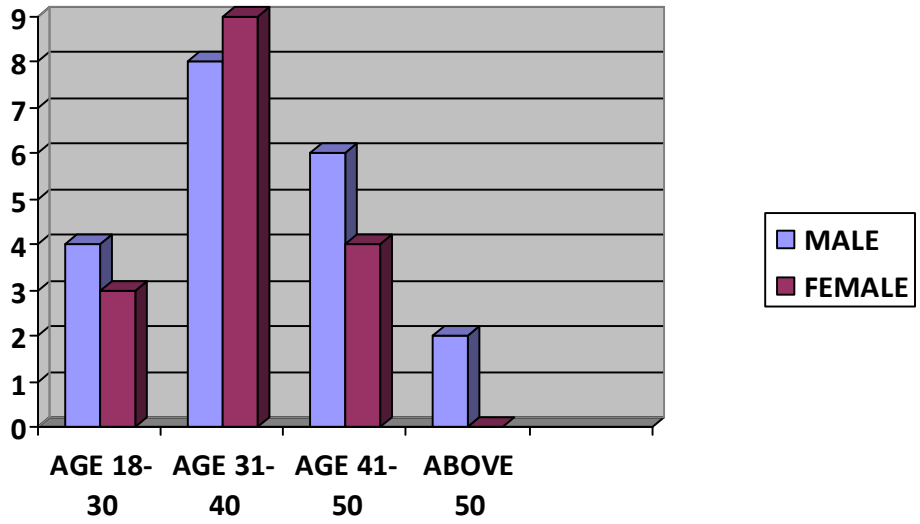


Figure 4.3 Sex and age group

4.2. Attitude of foreign card holders towards the major components of ATM service

The first question was whether if they use their electronic card frequently or not and the response is summarized below.

Table 4.6

Frequent usage of electronic cards

		Frequency	Percentage	Cumulative
Validity	**Yes**	34	94.4	94.4
	No	2	5.6	100
Total		36	100	100

(Source: own survey, 2013)

As we can see from the table 4.6 above almost all respondents (n=34, 94.4%) agreed that they use their electronic banking card frequently. Only (n=2, 5.6%) said that they will not use the electronic card frequently. According to the interview with four senior supervisors of payment card department (PCD), two branch based payment card supervisors and one dedicated staff at Nazareth Arada branch there are frequent foreign card customers who uses their ATMs.

4.2.1. Attitude of foreign card holders towards information in relation to the ATM service and problem fixing

The basic tool in any kind of business engagements is relevant information which aids the overall service. This section will clearly quantify the attitude of customers towards their knowhow on an ATM service, ATM locations, the ability of the bank in disclosing exact problems and information on what causes the service interruption at the spot and at the head office (HO) level. The degree of agreement or disagreement of respondents will be measured as:

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

4.2.1.1. Attitudes of respondents towards on ATM service and ATM interruption information provided by Dashen Bank

Table 4.7 **Attitude of respondents on ATM service location and reason of interruption**

	Knowhow on ATM service in Ethiopia		**Information on ATM locations**		**Reason of ATM service interruption will be provided at the spot**		**Reason of ATM service interruption will be provided at the HO**	
	Count	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Strongly agree	23	64%	5	14%	0	0%	16	44%
Agree	10	28%	2	6%	2	6%	9	26%
Neither agree nor disagree	0	0%	6	17%	2	6%	1	2%
Disagree	2	6%	15	41%	10	26%	6	17%
Strongly disagree	1	2%	8	22%	22	61%	4	11%
TOTAL	36	100%	36	100%	36	100%	36	100%

(Source: own survey, 2013)

For a successful ATM service the basic platform is the awareness in regards to whether if the service is available or not. According to the respondents a total of 92% strongly agree and agree to the question whether if they are well informed that an ATM service is available in Ethiopia. According to the interview conducted with the marketing supervisor of Payment Card Department (PCD) of the bank indicated that foreigners are informed about means of getting funds and exchanges as soon as they arrive in Ethiopia.

- *I was well informed about electronic banking in Ethiopia*

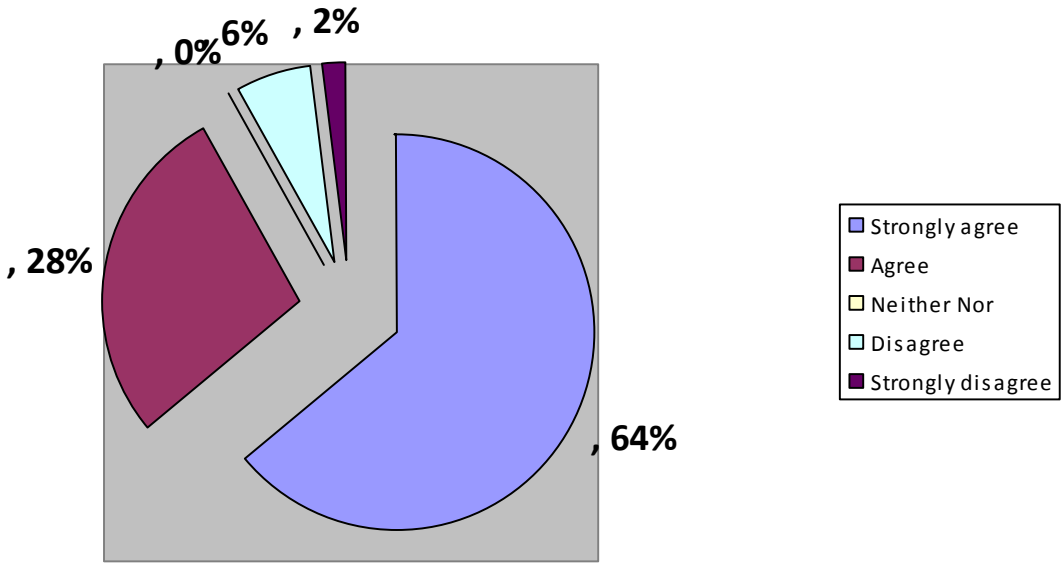


Figure 4.4 Information on electronic banking in Ethiopia

Concerning their information regarding Dashen Bank ATM locations only 20% strongly agreed and agreed that the bank has made enough effort in marketing the service. 62% strongly disagreed and disagreed, the issue under consideration. According to the interview conducted with individuals engaged in payment card activities in order to aware customers regarding ATM locations the bank uses brochures and the ATM screens. However, the bank finds it difficult to update the information's on a regular basis due to the fact that branches are opened rapidly and due to cost of printing.

- *Dashen Bank has informed where exactly to get ATMs.*

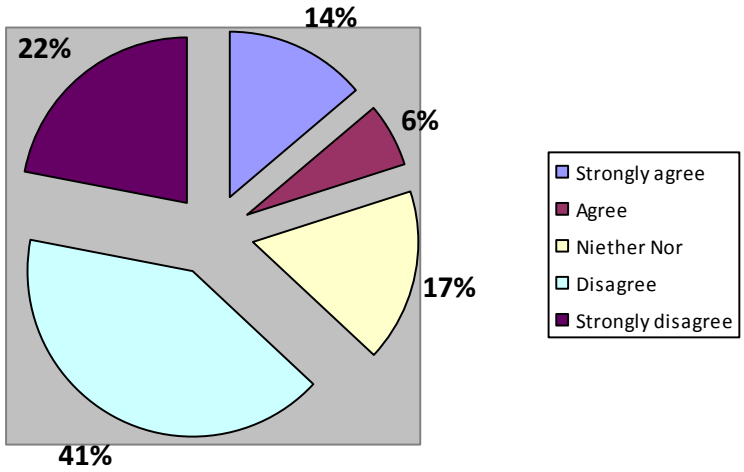


Figure 4.5 Information on ATM access from Dashen Bank

Sixty two and twenty six percent of the questionnaires reveled that they strongly disagree and disagree respectively on the fact that ATM service interruption is explained at the spot. The interview conducted with the banks personnels indicated that customers will be directed into the bank during working hours and the bank guards will attend them if the bank is closed. Out of working hour when guards attained customers request there is no means of getting an additional help from the head office.

- *Reason of ATM service interruption will be provided at the spot*

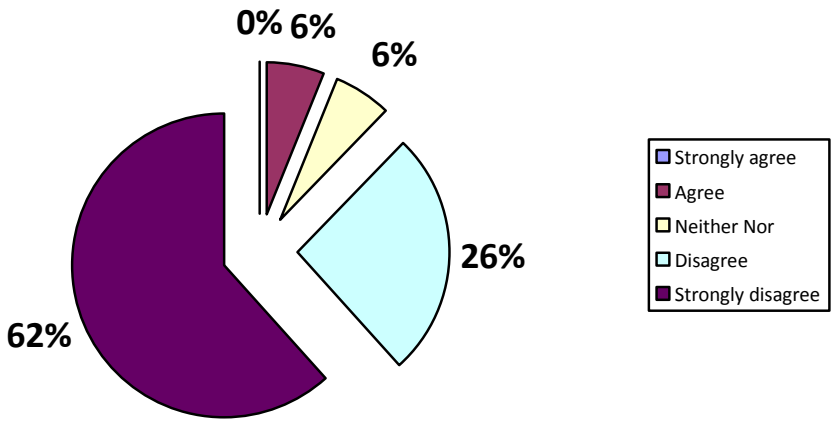


Figure 4.6 Reason of ATM interruptions

ATM interruption information providing capacity of the head office personnel shows a positive sign showing a total of 70% in favor. A total of 28% disagreed to the issue under consideration. The interview demonstrates that information can be obtained by a branch over the telephone line and that there are payment card help desk units. These help desk staffs gives a 24 hour service and are composed of individuals equipped with basic software skills.

- *When I demand for further information on an interruption of ATM service it will be provided by head office.*

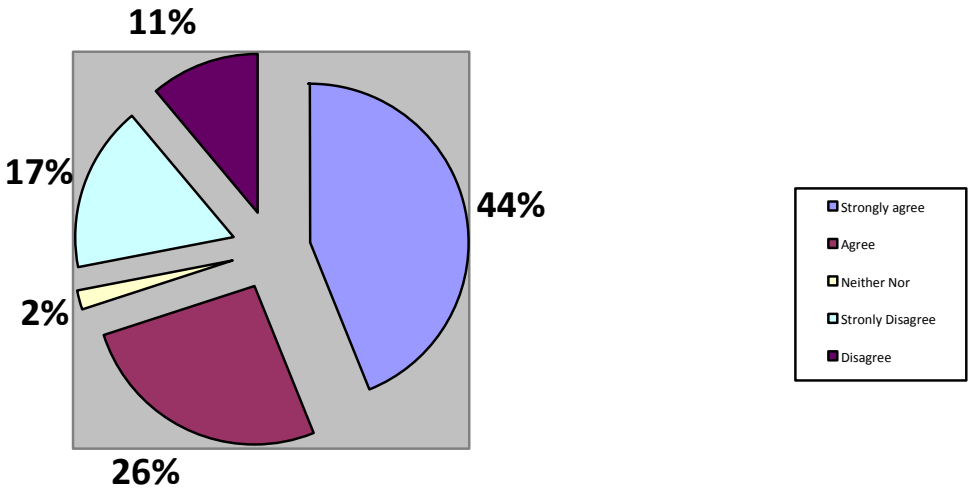


Figure 4.7 Head office information provision on ATM interruption

4.2.1.2. Attitudes of respondents towards access of helpdesk service of Dashen Bank during ATM downtimes

Table 4.8 **attitude of respondents, accessibility, ability of helpdesk staffs and the banks relation with foreign banks**

	There are more than enough telephone numbers provided to get the help desk staffs		The help desk staffs at head office are easily reachable		The help desk staffs ability of understanding problem and assistance is quick		The bank relation with foreign banks is strong		The help desk staffs are able to deliver a full-fledged information on demand		The problem solving capacity of help desk staffs is satisfactory	
	Count	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Strongly agree	4	11%	5	14%	6	17%	4	11%	2	5%	0	0%
Agree	6	17%	4	11%	6	17%	6	17%	0	0%	4	11%
Neither nor	2	5%	0	0%	2	5%	0	0%	0	0%	1	3%
Disagree	20	56%	21	58%	16	44%	14	39%	20	56%	10	28%
Strongly disagree	4	11%	6	17%	6	17%	12	33%	14	39%	21	58%
TOTAL	36	100%	36	100%	36	100%	36	100%	36	100%	36	100%

(Source: own survey, 2013)

Figure 4.8 represents respondents' reaction towards the availability of telephone numbers provided by the bank to aid customers through the help desk staffs. The majority share i.e. about 67% disagreed while 5% of them neither agree nor disagree. The remaining 28% was in favor agreeing the fact that there are enough telephone lines available to use.

There were a couple of questions raised during the interview session and one of them was how the bank provides telephone numbers to its customers. According to the supervisors in the PCD telephone numbers are displayed on the ATM screen itself and through broachers. The other question was regarding the numbers of telephone lines available and I was told that there are four lines available 24/7.

- *Ther are more than enough telephone lines provided to get the help desk staffs at the head office*

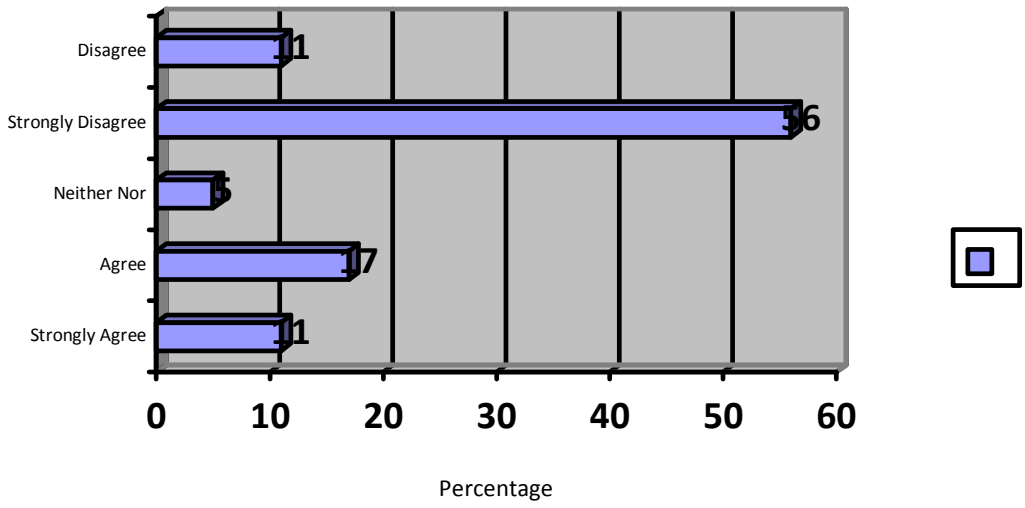


Figure 4.8 Access of head office helpdesk staff

The head office help desk staffs are not easily reachable that is according to the majority of respondents accounting to 58% and 17% for strongly disagreeing and disagreeing respectively none abstained from giving answers and only ¼ was in favor.

Why are the help desk staffs unreachable? According to the Marketing division of PCD staffs this is unacceptable. I was told that there are enough staff members working on a three shift basis. They are provided a direct and mobile phones for their means of communication. However, sometimes there might be an incident which forces the help desk staffs to attain quite a numerous calls which makes them busy.

- *The help desk staffs are easily reachable*

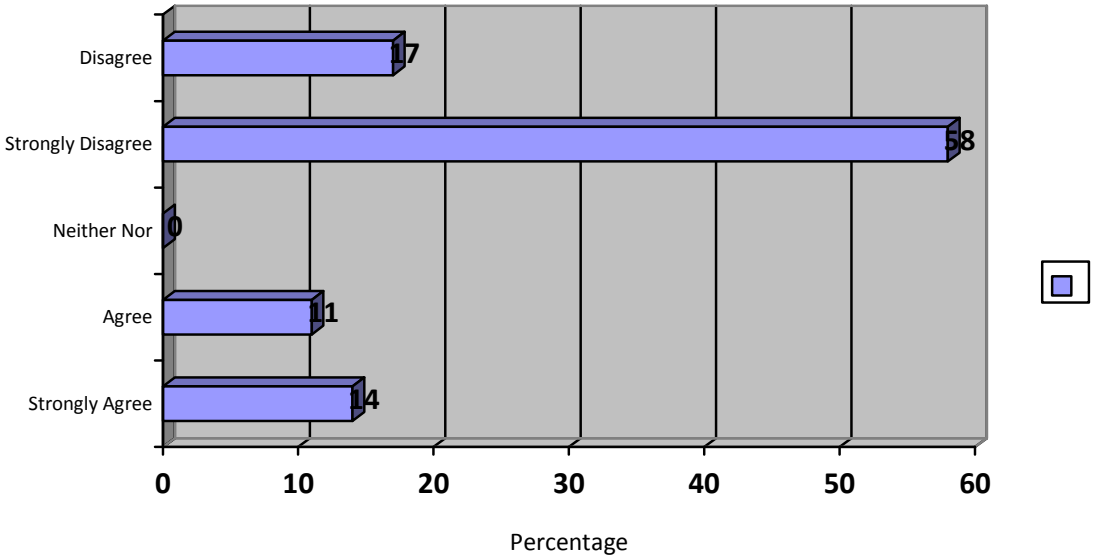


Figure 4.9 Access of head office helpdesk staff

- *The help desk staffs can easily understand my problem and assists me as soon as possible*

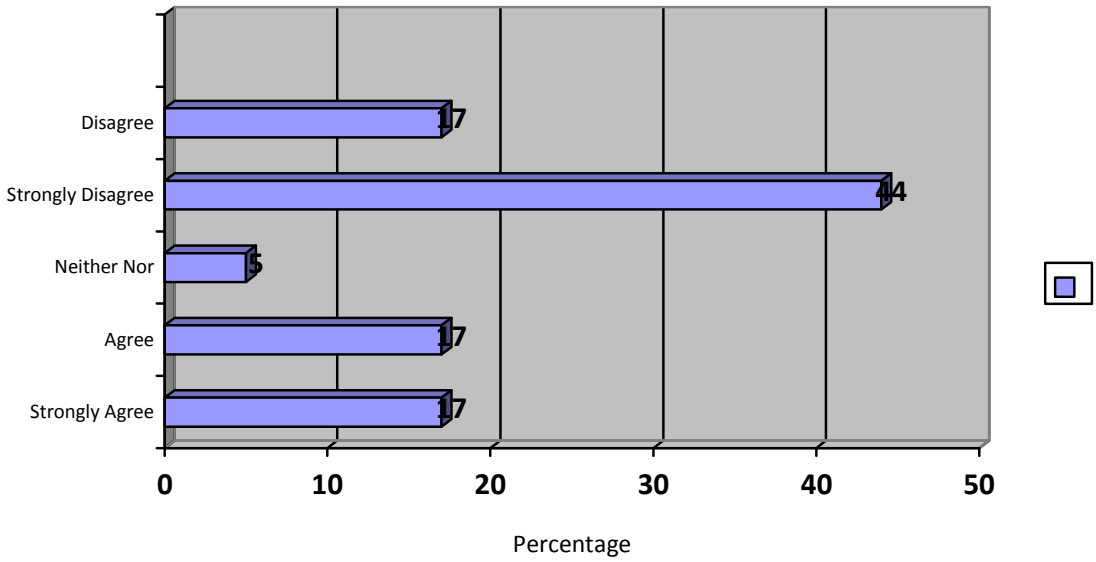


Figure 4.10 Understanding problems when reported to help desk staff

The interview suggested that there are qualified help desk staffs working on a shift basis. These help desk personnel has been trained on various areas starting from telephone handling to that of using the available system in solving customers enquiry as soon as possible.

The actual data states otherwise with a huge figure of 61% disagreed towards the swift response of the help desk staffs and their understanding capacity. (n=6, 17%) each agreed and strongly agreed towards the issue at hand.

- *I believe the help desk staffs are well linked to my bank so as to forward my doubts*

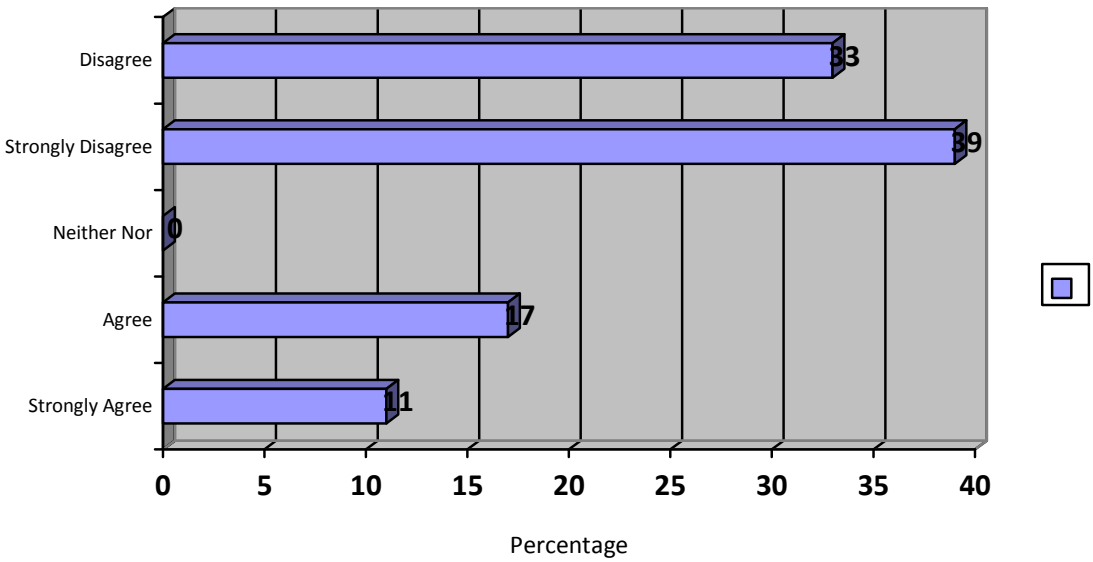


Figure 4.11 Link with foreign card users Banks

(n=26, 72%) showed their reaction in a negative way for the good relationship between Dashen Bank S. co. and their bank abroad. Only (n=10, 28%) were positive to the good relationship.

The interview suggested that there is a strong relationship between the bank and other foreign banks. The marketing division of PCD added that the bank has an online communication with different international banks such as Citibank bank, Barclays bank, HSBC bank and others.

- *The help desk staffs of the bank are professionals who delivers full fledged information on demand*

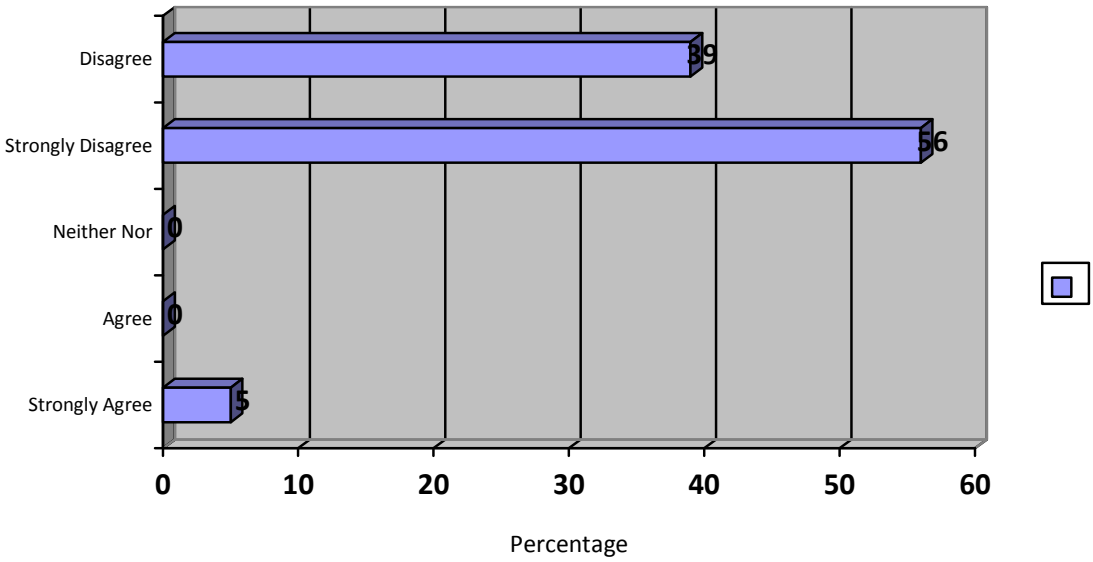


Figure 4.12 Getting full fledged services

According to the above figure almost all i.e. a total of 95% do not have the confidence on the help desk staff in delivering full pledged information up on demand only 5% voted otherwise.

This is yet another suggestion denied by the banks officials. According to one of the PCD supervisor the bank has provided the PCD help desk staffs enough resources to help them offer an excellent service for those who needs it. In addition, the help desk staffs have got full rights/access on the computer system which the bank installed that helps them to answer customer's request. The on line foreign bank contact will also help the help desk staffs to provide answers for inquest on foreign doubts of customers. An example may be an external decline; this is a situation when a card is blocked for various reasons, expired or when the electronic card service is disconnected temporarily.

Concerning most of the soft ware related problems will be solved by the help desk staffs. However, a part from a soft ware problem an ATM service is interrupted due to different reasons like a disconnection of network from the network service provider (ETC), the other is due to technical defects on the machine itself. The above problems are external and beyond the capacity of our help desk staffs said the deputy manager of PCD. In addition, he suggested that when a network interruption exists and when an ATM is technically damaged the help desk staffs will communicate the matter to the concerning body.

The figure below shows a considerable share of 86% disagreement and strong disagreement in total towards the help desk problem solving capacity of the help desk staffs whereas, 11% agreed. 3% voted neutral.

- *The problem solving capacity of the help desk staffs is outstanding*

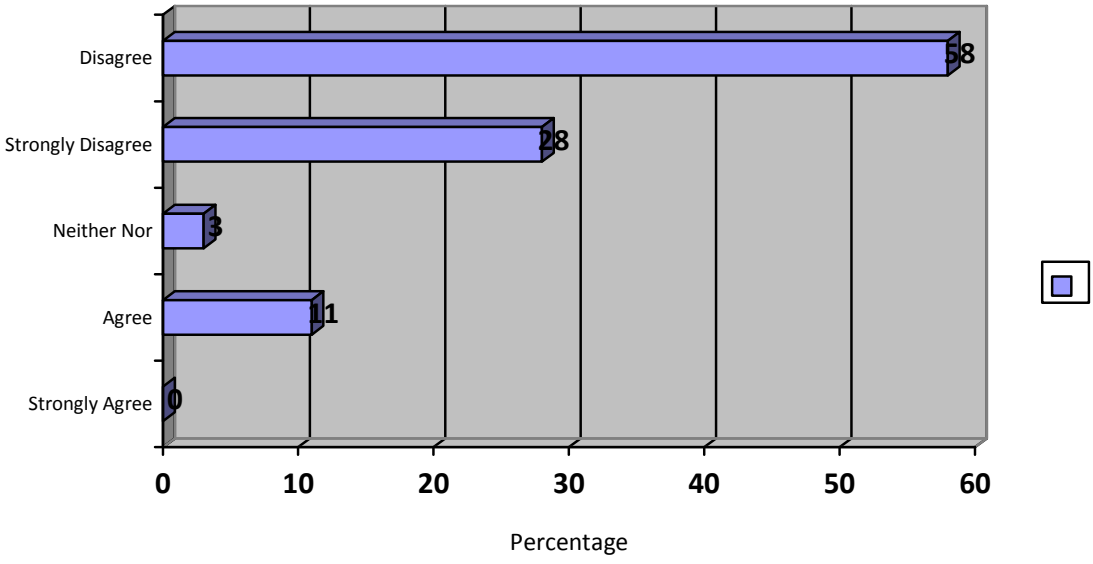


Figure 4.13 Problem solving capacity of help desk staff

4.2.1.3 Confidence of respondents on ATM service of NADB and their knowledge on alternative machines

Table 4.9 **Confidence of respondents on NADB ATM and knowledge on alternative machines**

	I am strongly confident that I will get a working ATM at Nazareth Arada Branch		It won't take long for the ATM to be back on a working state even if it is down		I feel safe even if the ATM of Nazareth Arada is not working since I will get the service else where		I prefer to use the ATM of Nazareth Arada branch		I have not seen the ATM service interrupted more than an hour for a network problem		I have not seen the ATM service interrupted more than an hour for a technical problem on the machine	
	Count	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Strongly agree	4	11%	1	3%	6	17%	12	33%	1	3%	3	8%
Agree	2	5%	2	5%	6	17%	8	22%	1	3%	3	8%
Neither nor	0	0%	1	3%	2	5%	0	0%	0	0%	2	5%
Disagree	24	67%	10	28%	10	28%	10	28%	22	61%	15	42%
Strongly disagree	6	17%	22	61%	12	33%	6	17%	12	33%	13	37%
TOTAL	36	100 %	36	100 %	36	100 %	36	100 %	36	100 %	36	100 %

(Source: own survey, 2013)

- *I am strongly confident that I will get a working ATM at NADB*

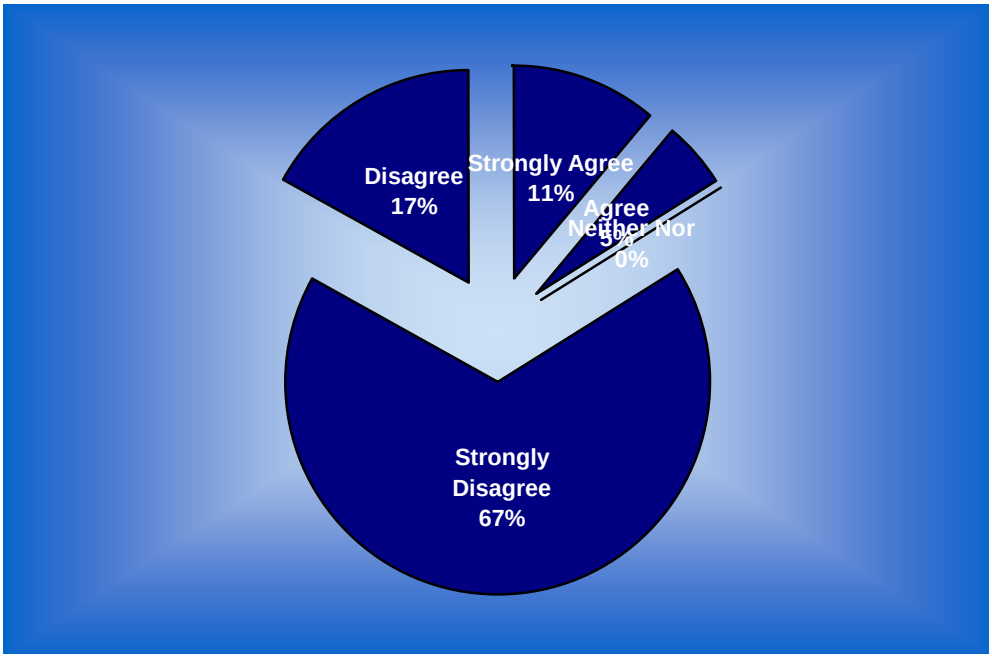


Figure 4.14 Confidence on finding working ATM

The confidence of respondents in getting a working ATM when they visit Nazareth Arada Dashen Bank is represented in the above figure. 67% of the respondents strongly disagreed and 17% disagreed. 11%, 5% of the questionnaires revealed that they strongly agreed and agreed while none are neutral.

According to my interview, the branch has one dedicated staff engaged in all payment card activities and the ATM is continuously followed by the Assistant Manager of the branch. However, there are no technical persons available nearby. I was told that the bank has outsourced all its technical supports to two different companies. The companies giving the technical supports to the bank are situated in capital Addis; more over I came to understand that the outsourced company does not have branch in Nazreth. In relation to network failure there exist systems which will inform the help desk staffs of the PCD to take further action in order to communicate the network provider (ETC).

- *It wont take long for the ATM to be back on a working state even if it is down*

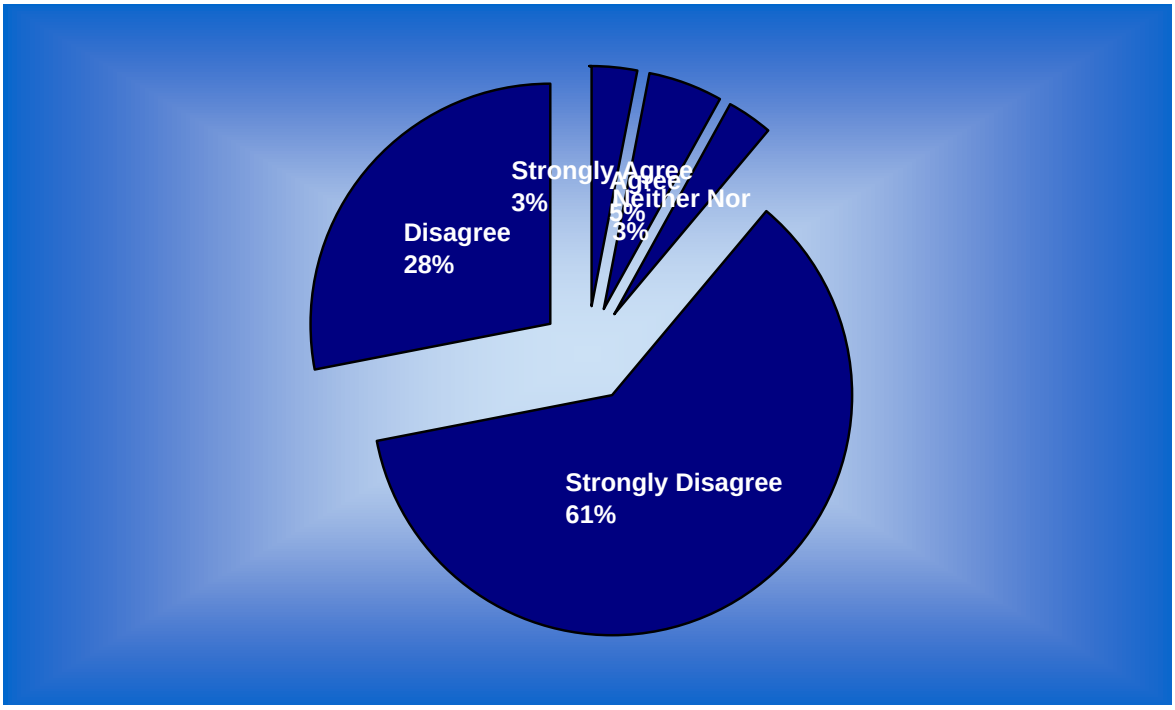


Figure 4.15 Getting down ATM to start working again

According to the pie chart in figure 4.15 89% of the respondents in total disagreed the fact that an offline ATM will be back into a working state quickly. The issue was supported by 8% of the respondents.

The deputy manager of the PCD during my interview session told me that when an ATM is not working the head office help desk staffs will automatically know the situation and the following steps is taken.

a. If problem is related network

First the issue is reported to the network unit which is under the information technology department (ITD). Then the unit will make its contact with the network provider (ETC). Finally, the network provider (ETC) will solve the problem.

b. If the problem is a technical

The help desk staffs will first make their contact with the outsourced company. Finally, the out sourced company will visit the branch and fix the damage.

- *I feel safe even if the ATM of NADB is not working since I will get the service else where*

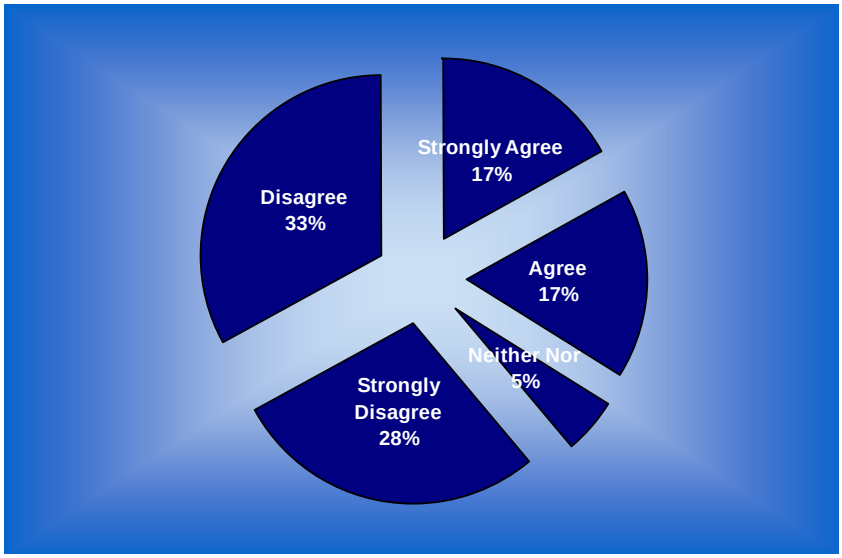


Figure 4.16 Finding alternatives ATM when NADB ATM is down

Out of the 36 sample size more than half i.e. (33% + 28%) = 61% said that they don't know that there are other ATM's other than that of Nazareth Arada branch in Adama town. But a total of 34% know the availability of other ATM's in the town. (See figure 4.16)

The marketing department division said that there are three ATM's in Adama town. The two ATM's are installed in the two branches of the bank namely Nazareth Adama and Nazareth Arada branch whereas, the other is at Adama Science and Technology University (ASTU). I have been informed that currently all the three ATM's are operational.

- *I prefer to use the ATM of NADB*

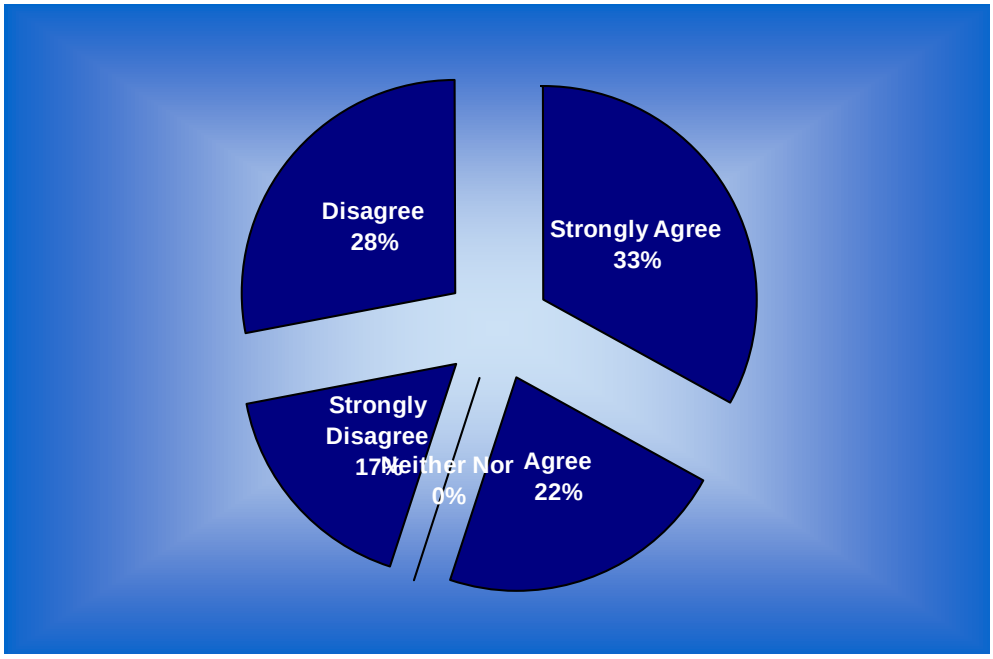


Figure 4.17 Preference of using NADB's ATM

The figure above represents customer's preference of using Nazareth Arada branch ATM this is justified by a total of 55% agreement and the remaining 45% suggested that they don't.

"I have not seen the ATM service of Nazareth Arada branch interrupted more than an hour for a network problem" and the reaction towards the statement was that almost all disagreed (n=34) an equivalent of 94% there were only 2 who were in favor.

The interview made with the Nazareth Arada payment card responsible staffs I have learnt that they closely follow the smooth working of the ATM machine. When a network error interrupts the service the head office has an automated system, which informs them the problem. Although the head office is solely responsible to fix the problem the branch also contributes to a greater deal by following the matter.

- *I have not seen the ATM service interrupted more than an hour for a network problem*

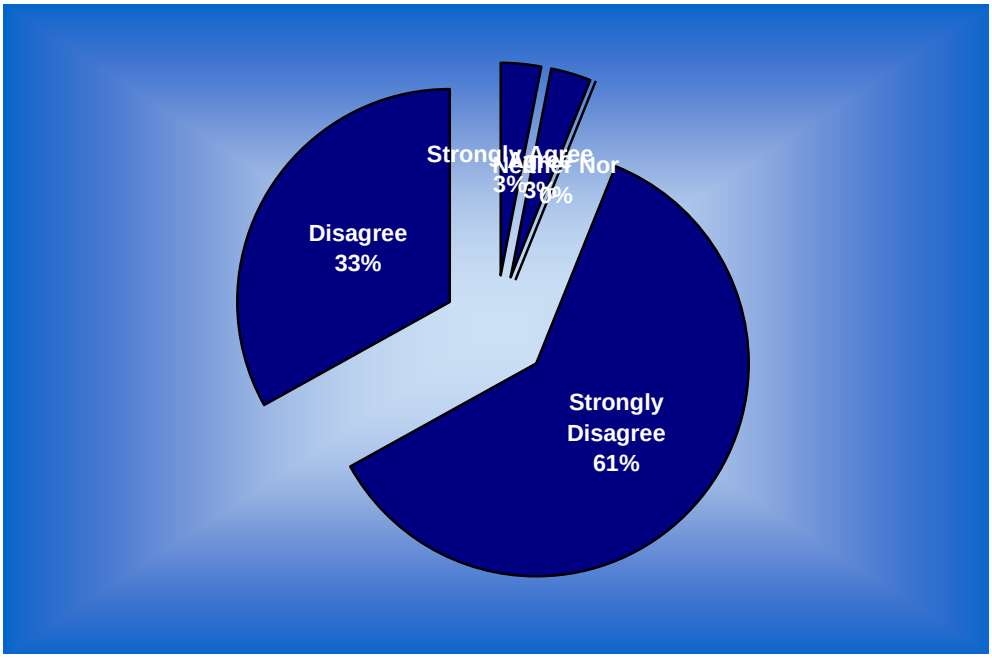


Figure 4.18 Duration of ATM interruptions due to network problem

For the statement "I have not seen the ATM service interrupted more than an hour for a technical problem on the machine" the larger share of 42% disagreed, the second larger 37% strongly disagreed and only a total of 16% supported the idea. 5% were neither in favor nor against.

The branch indicated that they have faced numerous break ups in their ATM. They also told that it takes a considerable time for maintaining most of the time.

Why did the bank outsource the technical works of its ATMs? According to the deputy manager of PCD the bank outsourced the technical works was because the cost of out sourcing is considerable low than that of having it.

- *I have not seen the ATM service interrupted more than an hour for a technical problem*

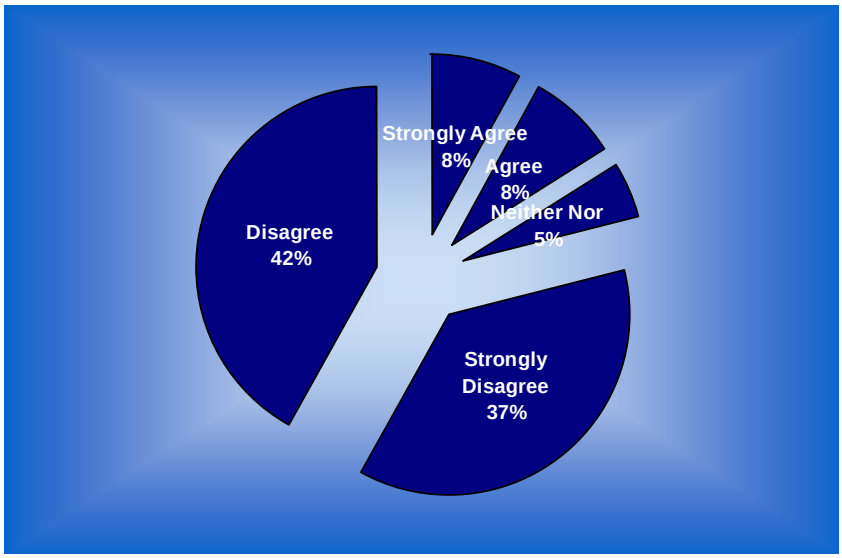


Figure 4.19 Duration ATM interruptions due to technical problem

4.2.1.4. General overview on ATM service and customers suggestions by respondents

Table 4.10 Overview on the ATM service and customer suggestions

	Over all I am pleased with the ATM service of Nazareth Arada Branch		There is a suggestion box available to ATM customers of the bank		I believe the bank has done its best in implementing customers suggestions		I think the bank has to change certain procedures regarding its ATM service	
	Count	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Strongly agree	2	5%	0	0%	0	0%	18	50%
Agree	4	11%	0	0%	0	0%	14	39%
Neither nor	1	3%	0	0%	1	3%	4	11%
Disagree	12	33%	16	44%	25	69%	0	0%
Strongly disagree	17	48%	20	56%	10	28%	0	0%
TOTAL	36	100%	36	100%	36	100%	36	100%

(Source: own survey, 2013)

(n=2, 5%) and (n=4, 11%) has strongly agreed and agreed respectively to the fact of being pleased by the ATM service of Nazareth Arada branch. However, a huge share disagreed with a total of (n=29, 81%).

All have suggested that there is no suggestion box for ATM users in the bank. To quantify 56% strongly disagreed and the remaining 44% disagreed the issue under consideration.

During my stay at the Nazareth Arada Dashen Bank I have made my observation that there is no suggestion box available outside the branch where the ATM is located. However, the branch has a suggestion box in the bank and it will only be available during working hours. As ATM gives 24 hours service customers being served off working hours has no means of making their voice heard.

There is a negative attitude reflected by all the respondents regarding the availability of a suggestion as stated above and the implementation of suggestion as well.

During my interview with the branch Assistant manager I was told that the bank uses its single suggestion box in collecting customer's opinion. He and the branches internal auditor will open the suggestion box at the end of every month. After being arranged a summery will be prepared and it will be dispatched to the head office particularly to the corporate planning and development department (CPDD). As per the Assistant managers view there are quite a number of suggestions made on their ATM services.

Finally 89% of the respondents of the study suggested that a change is required on the ATM service of Nazareth Arada branch.

- Quarter reports of foreign currency generation performances of NADB from ATM transactions for the period running(2010-2012)

Table 4.11 FCY generation of NADB (2010-2012)

YEAR	2010				2011				2012			
Quarters	July 01, to Sep, 30	Oct 01 to Dec 31	Jan 01 to Mar 31	Apr 01 to June 30	July 01, to Sep, 30	Oct 01 to Dec 31	Jan 01 to Mar 31	Apr 01 to June 30	July 01, to Sep, 30	Oct 01 to Dec 31	Jan 01 to Mar 31	Apr 01 to June 30
USD in '000'	264	246	230	225	232	224	164	214	124	104	84	52

Source: Dashen bank quarter performance report (2010-2012)

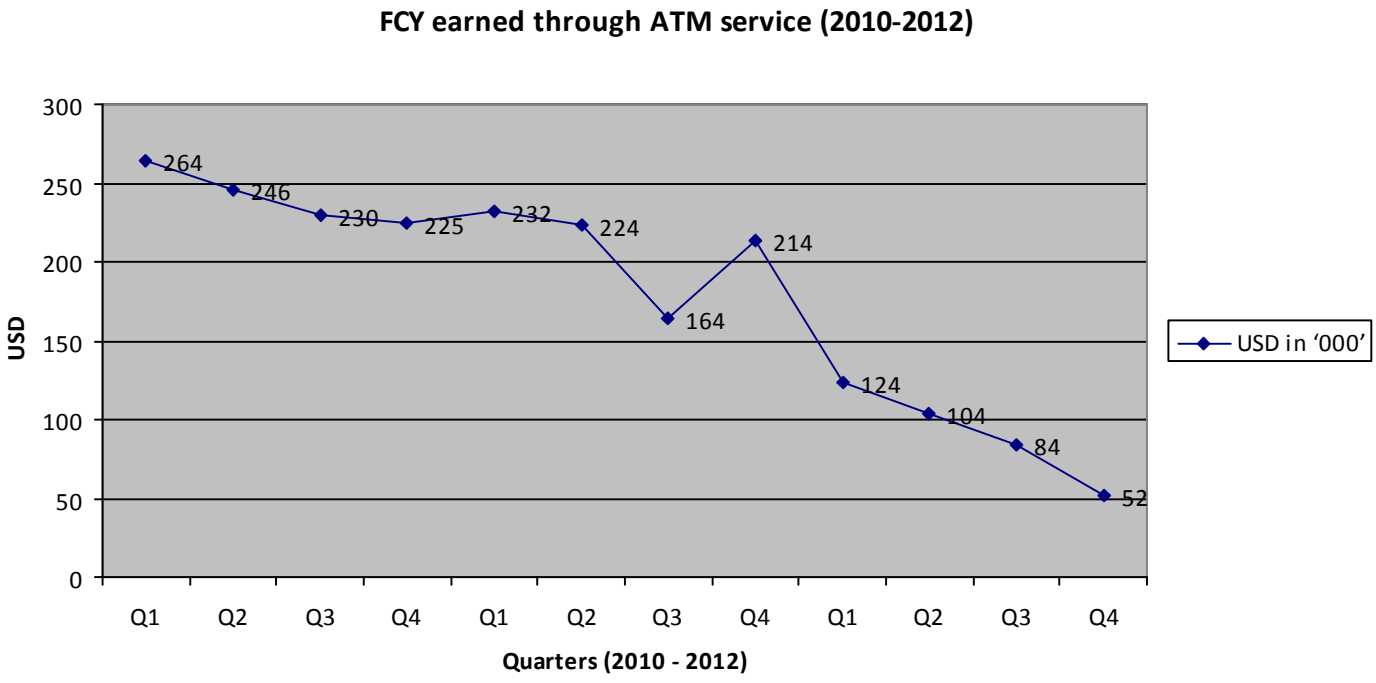


Figure 4.20 FCY earned through ATM service (2010-2012)

- *Quarter reports on ATM down time of NADB for the period running (2010-2012)*

Table 4.12 ATM down time of NADB (2010-2012)

YEAR	2010				2011				2012			
Quarters	July 01, to Sep, 30	Oct 01 to Dec 31	Jan 01 to Mar 31	Apr 01 to June 30	July 01, to Sep, 30	Oct 01 to Dec 31	Jan 01 to Mar 31	Apr 01 to June 30	July 01, to Sep, 30	Oct 01 to Dec 31	Jan 01 to Mar 31	Apr 01 to June 30
ATM down time in hours	120	133	141	138	125	131	153	132	186	201	296	402

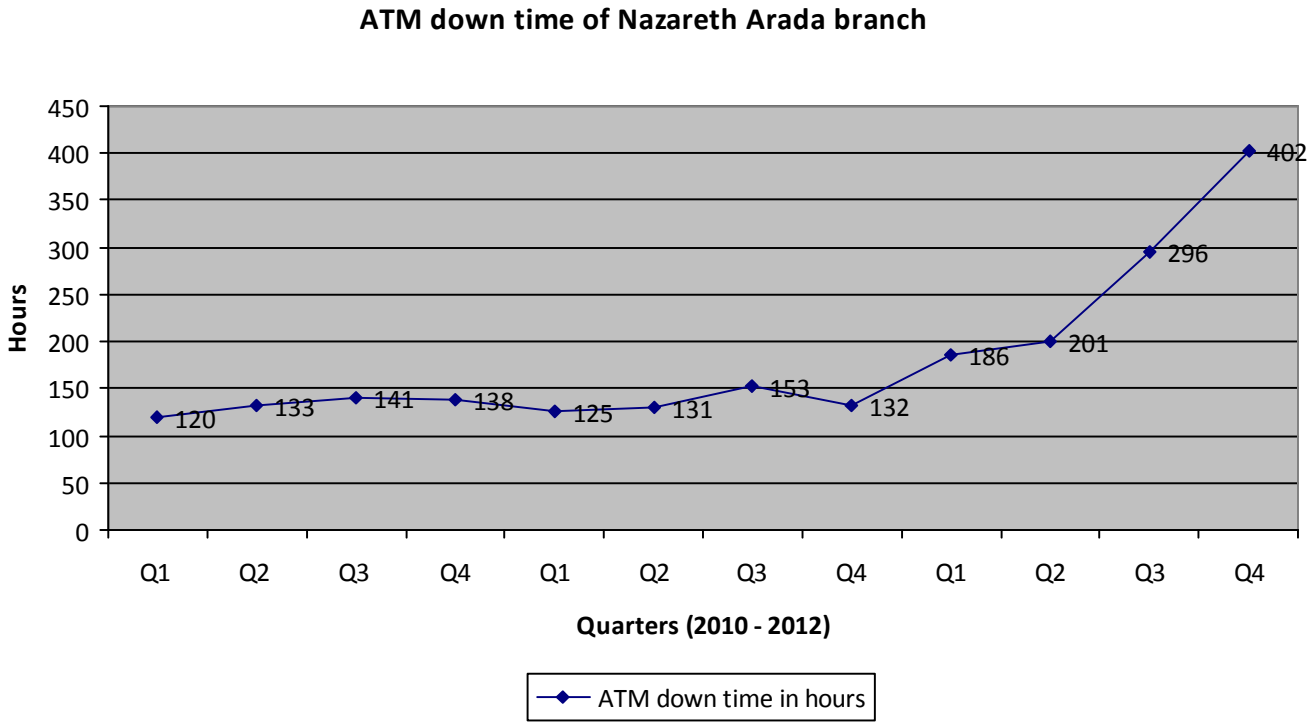


Figure 4.21 ATM down time of NADB (2010-2012)

The above table 4.9 shows foreign currency (FCY) generated by Nazarth Arada branch trough its ATM activities for the period July 01, 2010 up to June 30, 2012. The bank uses United States Dollar (USD) for reporting purpose therefore all generated currency types are converted to USD as per the exchange rate of the day. As can be seen from the table all amounts are listed in USD currency type and thousands. The second table 4.10 represents the ATM down time of the same period running July1, 2010 up to June 30, 2012.

The branch has generated the highest FCY of USD 264,000. - , through its ATM from foreign card transaction in the first quarter (July 01, up-to Sep, 30 2010) at that time the ATM down time was 120 hours per quarter. A quarter is equivalent to three months (i.e.720 hours) this means that the ATM has worked for 600 hours without interruption. In the second quarter of the year 2010 (i.e. Oct 01, up-to Dec 31, 2010) for an increase in 13 hours in ATM down time, which has grown to 133 hours, there is a decrease of USD 18,000 in the earning from ATM activity. The ATM down time still shows a growth of 8 additional hours in the third quarter running from January 1, until March 31, 2011. In the same quarter the FCY has shown a decline of USD 16,000 compared to the second quarter and a total USD 34,000 when evaluated against the first quarter of the year. In the final quarter the ATM was interrupted for a period of 138 hours showing a decline by only 3 hours the USD amount has also decreased by 5,000.

In the first quarter of 2011 (July 01, up-to Sep 30) the un-operational ATM hour counts to 125 hours decreased by 13 hours, for the same period the FCY shows an increase by USD 7,000. Quarter two (i.e. Oct 01, up-to Dec 31, 2011) ATM down time was 131 hours and that of FCY generated USD 224,000 this shows an increase in down time by 6 hours and a decrease in USD by 8,000. In the third quarter a considerable ATM down time has been registered a total time of 153 hours grater by 22 hours, in this quarter the branch has scored an FCY amount of USD 164,000. The last quarter of the year 2011 which is (Apr, 01 until June, 30) shows a reduction in down time by 21 hours, the FCY performance of the branch has also increased to USD 214,000 (a difference of USD 50,000 while compared with the previous quarter).

The final year under consideration is the year 2012. This is the year in which the branch has faced various ATM service interruptions and also scored its worst FCY performance compared to past years. The ATM down time was 186, 201, 296 and 402 hours in the first, second, third and fourth quarters respectively. In addition, the FCY score of the branch in the year 2012 was USD 124,000, 104,000, 84,000 and 52,000 in quarter 1, 2, 3 and 4 respectively. The comparison between the various quarters revealed that ATM down time in quarter one was lesser by 15 hours than that of quarter two of 2012. Moreover, the FCY generated has declined by USD 20,000 between the same quarters. There was an almost four days (95 hours) difference between the third and second quarters and a FCY decline of USD 20,000. In the fourth quarter of 2012 the ATM had worked for only 81% of the hours available in a quarter (2160 hours less 402 hours = 1758). The FCY earned in the quarter was only 52,000 USD, which is less by USD 72,000, 52,000 and 32,000 when being compared to the first, second and third quarter respectively.

According to the interview with head office organs they consider foreign electronic card transaction is considered as one of the major foreign currency-generating tool of the bank next to export activities. Therefore, the bank has expanded the service by strengthening the payment card department (PCD). The PCD is headed by, a department manager directly responsible to the vice president of the bank. Beneath the department manager there is the deputy who controls the reconciliation and marketing divisions who controls the payment department's staff members.

The deputy manager of PCD noted that ATM down time is a closely watched phenomenon that has a negative impact on the operational profit of the bank but most of all it is inversely related with FCY generation performance of the bank in general. Thus, he believes that the ATM down time has been minimized as much as possible. However, he added that it might be possible to further decrease the interruption time but under the existing situation the attainment is satisfactory. Concerning the challenges in order to reduce ATM down time he said that external factors have imposed a great deal, these factors are network problems and technical difficulties.

Technical difficulties of ATMs are the major reasons for the interruption of most of the ATMs accounting to almost 82% the remaining is due to network failure. When we face technical difficulties on our ATM the PCD will inform our partners and follow thereafter the completion of the maintenance. If the problem is related to network our help desk unit collaborates with the Information Technology Department (ITD) will be involved to address the issue to Ethiopian Telecommunication Corporation (ETC). The help desk unit has 9 staff members working in three shifts a day (i.e. three staffs each working 8 hours). The deputy manager continued that ETC will provide them there helping hands when ever is required. There are some instances when the international fiber optics is damaged which delays the fix but most of the local problems are solved quickly.

What is the tolerable ATM down time within a quarter? The deputy manager replied that it will depend on the number of transactions which the ATM serves; this is because the ATM will have more will be spent in loading cash, in cleaning the machine, servicing and the likes. Hence, the more the transaction load the more the ATM will be down for the above reasons. But said that for an average ATM the down time if the ATM has no technical errors it should not exceed a total of 20 hours in a quarter.

About the availability of a technical support in the bank itself the deputy responded otherwise all the technical activities are outsourced. In order to reduce the time taken to fix technical problems the bank provides automobiles when the ATMs are situated in remote areas.

Finally, I had asked the assistant manager of the branch about the decline in FCY generating capacity of the branch and asked him what efforts have they done to improve it. The assistant replied that the branch has done its part by promptly informing the head office organ when a problem occurs on the ATM of the branch. According to him they conduct their communication through both formal (memo's) and informal (telephone conversation). Not only that but also the branch exerts a maximum effort in the follow-ups as well. Regarding the suggestion box the branch assistant confirmed the unavailability of a separate suggestion box for ATM users. He further explained that the bank users a single suggestion box in all of its branches available only during working hours. ATM suggestions are collected using the box and he summarized that most of the suggestions are related with ATM interruptions.

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATION

Based on the finding of the study, the following conclusion, implications and recommendations are presented below.

5.1. CONCLUSION

- Respondents have a strong know how about the availability of ATM service in Ethiopia (agreement of 92%). However, (n=23, 63%) do not have the information regarding where exactly the ATM are located in the country. Here we can infer that the bank has not done as expected to market its ATM service.
- Eighty three percent of the respondents have a negative perception towards the explanations that they receive at the branch regarding ATM interruptions. Nevertheless, they are confident of getting the right reason for ATM interruption at the head office through the help desk staffs and it was agreed by 69%. This suggests that staffs available in the branch do not have the required information to know what the cause of ATM interruption is.
- The respondents have doubt on the service rendering capacity of the help desk staffs of PCD

    - ❖ Their reachable aspect: - 2/3 of the respondents reply that they are unreachable. From this we can conclude that there is a lack of communication media.
    - ❖ Their problem understanding and quick response: - More than half (61%) reacted that the help desk team cannot understand easily and slow to respond.
    - ❖ Their capacity in delivering full fledged information upon demand: - almost all (34 out of 36) said the help desk staffs deliver unsatisfactory information.
    - ❖ The problem solving capacity of help desk staffs: - 86% replied that they cannot solve my problem.

Hence, we can conclude that the banks help desk employees are not efficient in helping customers whenever they are being communicated.

Respondents lack confidence towards the ATM service of the bank. Their confidence was measured based on various aspects such as:

- ❖ Their confidence of finding a working ATM upon their visit: - 5/6 of the respondents indicated that they wouldn't expect a working ATM when they plan to visit the branch.
- ❖ Their confidence of short interruption period: - 8/9 of them suggested that the ATM would not be back online within a short period of time.
- ❖ Their confidence of getting an ATM service elsewhere: - this is related with their information regarding the service availability. 11/18 answered that they don't have another option.

There is a slight degree of loyalty observed from the respondents with an upper hand of 5%.

From this we can draw a conclusion that electronic card customers of the bank lacks confidence towards the ATM service of the bank. Lets see below summary of responses:

- Respondents reacted that they have not seen an ATM back on line from a network error within an hour. This accounts to 94% of the sample size.
- Respondents said that an ATM wouldn't be fixed within an hour of time when a technical error occurred. 79% of the questionnaires showed an agreement to the statement under consideration.
- The entire respondents replied that there is no suggestion box available to ATM users.
- Respondents perceived the customer suggestion process negatively. 97% believed that the bank has a poor performance in implementing customer's suggestion.

From the above points we can conclude that the ATM machine is not expected to run soon from an inactive mode and that the customer opinions are only collected during the banks working hour. Finally, more than one third of the respondents were not pleased by the overall ATM performance of the branch and majority expects changes in the service process.

There is an inverse relationship between the ATM down time and FCY generation performance of the branch. This conclusion is drawn by a close look at the time series analysis on the three consecutive years (2010 – 2012).

- There is a continuous decline in FCY earning of the branch through out the quarter for the year 2010. The highest FCY generated by the branch is on the first quarter amounting USD 264,000 during this period the down time was 120 hours (the smallest down time of all the quarters in the light of the study). The ATM down time increased further to 133 and 141 hours for the second and third quarter of 2010 leading to a decline in FCY by USD18, 000 and 16, 000 respectively.
- The trend continued in the second year 2011 where the ATM interruption increased from 125 hours to 131 hours between the first and second quarter of 2011, which led to a FCY lost of USD 8,000. The USD earned by the branch further decreased by a huge margin of USD 60,000 for an increased ATM down time of 21 hours. In the last quarter of 2011 the ATM interrupted hour shows an improvement reduced by 21 hours which intern resulted in an increased FCY of USD 50,000.
- In the final year under consideration the bank has registered its worst performance of generating FCY through its ATM service. The FCY generated is USD 124,000 in the 1st, USD 104,000 in the 2nd, USD 84,000 in the 3rd and USD 52,000 in the forth quarter. During this time the ATM down time has increased considerably by 54, 15, 95 and 106 hours in the first, second, third and fourth quarters respectively.

To conclude, the increased ATM down time through out the three years resulted in the poor FCY generating performance of Nazareth Arada branch.

5.2. RECOMMENDATION

Taking into account the above conclusions the following recommendations are forwarded

- The bank has to market it product using an updated instruments. Customers need to be informed about the current ATM locations from time to time. The banks aim of providing such data using the ATM screen is appreciated but the researcher suggests the continuous update of the data. Moreover, the bank has to provide brochures and different fliers as well.
- Proper communication and interaction is one of the factors smoothing the ATM service of the bank, therefore; the bank has to provide telephone line for the bank guards. This helps them to make a proper connection with the help desk staff members in the aim of answering ATM customer's inquest.
- The help desk staffs should be couched continuously so as to help them understand customers request and provide a swift reply.
- The bank has chosen to out source its technical works to an external organization. However, the outsourced companies that it is working are fully based in the capital city. This will make it difficult to give a quick service to branches located far from Addis Ababa. In order to improve matters the bank should look for other companies having units/branches outside Addis.
- Minor repairs should be conducted by the bank itself. Therefore, the bank needs to have a hardware unit consisting a supervisor and technicians, and major technical repairs can be outsourced.
- The bank needs to give a basic technical training to help the ATM machines maintain a good condition. Blowing the machine using a blower, cleaning some of the internal parts, and the likes are some of the preventive measure that can be undertaken with a basic technical training.
- Concerning the structure of the payment card department (PCD) the help desk is responsible to the marketing section head instead we recommend the creation of another section named the ATM operation section. As its name indicates the section should be composed of a section head and a supervisor. The creation of the new section will help the smooth handling and controlling of ATM operation.

- When there is network error the payment card department (PCD) and information technology department (ITD) departments in collaboration addresses the network provider ETC about the interruption. Instead of involving the ITD the PCD must maintain a direct relationship with the network provider ETC. This will reduce the additional paper work and time taken when the two department interact.
- The policy states that there is a single suggestion box for each branch. However, the bank seems to ignore the voice of ATM customers served out of working hours. Therefore, the bank should either change the location of its suggestion boxes in order to accommodate all customers 24/7 or there provide an additional suggestion box for ATM users.

References

- **Electronic Banking,** Indiana Department of Financial Institutions, Indianapolis March **1997**
- **Journal of Internet Banking and Commerce**, August 2010, vol. 15, no.2 pp 4.
- BankNews Media: http://www.banknews.com/Single-News-Page.51
- (http://www.atmmarketplace.com/article/129564/SURVEY-Banks-top-priority-is-reducing-ATM-downtime
- Mohammed Al Hawari, Nicole Hartley and Tony Ward :**Measuring Banks' Automated Service Quality**: A Confirmatory Factor Analysis Approach, Marketing Bulletin, 2005,16,Article 1

- Wong C (1998). Consumers: the driving force in strategies and spending. Banker's Journal Malaysia, December/January, 9-13.

- Yang Z & Jun M (2002). **Consumer perception of e-service quality**: from internet purchase and Non-Purchase Perspectives. Journal of Business Strategies, 19(1), 19-41.

- Zenithal V (2002). Service-excellence in electronic channels. Managing Service Quality, 12(3), 135-138.
- Surjadjaja H, Ghosh S & Antony J (2003). Determining and assessing the determinants of e-service operations. Managing Service Quality, 13(1), 39-53.

- Lang & Colgate M (2003).relationship quality, on-line banking and the information technology gap. International Journal of Bank Mareting, 21(1), 29-37.

- C. Joanna Lee (2011). Understanding Bank Service Quality in Customers 'Terms :An Exploratory Analysis of Top-Of-Mind Definition International Journal of Business and Social Science Vol. 2 No. 21

- Hoehle, H. & Huff, S. (2009). Electronic Banking Channels and Task-Channel Fit. In ICIS 2009 Proceedings (paper no. 98). http://aisel.aisnet.org/icis2009/98

- Dashen Bank S.CO quarterly progress report year (2010-2012), quarter 1-4.

Annex 1

Questionnaire

Indra Gandhi National Open University
Masters Degree in Business Administration
MBA Program

To be filled by Foreign Electronic Card Holders.

This questionnaire is designed to collect information about foreign electronic card activities on a functioning Bank in Ethiopia. This information can only be used as a primary data in my case research, which I am conducting as a partial requirement of my study at the Indra Gandhi National Open University for completing my MBA.

The research is to be evaluated in terms of its contribution to the newly introduced electronic banking in Ethiopia and its contribution to improve the service. I promise to issue the copy of my final paper when it is ready.

As the project is a case study, I will be willing to get your permission for the release of information even if it is required for an academic use if such permission is a requirement of your Bank.Therefore, your genuine, honest and prompt response is a valuable input for the quality and successful completion of the project.

General instructions:

There is no need to indicate your name

For the selection part please put a tick mark in the box provided ☑

For questions demanding your opinion please try to describe as per the instructions in the space provided.

Thank you in advance, for your co-operation and timely response

Rahel Ali

Section one-Demographic information

1. Years of owning electronic cards
   - ☐ Less than a year
   - ☐ 1-3 years
   - ☐ 4-6 years
   - ☐ 6-9 years
   - ☐ More than 10 years

2. Type of Electronic Cards
   - ☐ Debit card
   - ☐ Credit card

3. Account currency type
   - ☐ USD
   - ☐ EURO
   - ☐ GBP
   - ☐ Others _____

4. Brand of your Electronic Banking Card
   - ☐ Visa Card
   - ☐ Master Card
   - ☐ Maestro Card
   - ☐ Union Pay Card

5. Years of using Nazareth Arada Area Banks ATM
   - ☐ Less than a year
   - ☐ 1-2 years
   - ☐ 2-3 years
   - ☐ More than three years

6. Age
   - ☐ 18-20 years
   - ☐ 21-30 years
   - ☐ 31-40 years
   - ☐ 41-50 years
   - ☐ Above 50 years

7. Sex
   - ☐ Male ☐ Female

8. Your stay in Ethiopia
   - ☐ Business
   - ☐ Pleasure
   - ☐ Others _____

Section two

Please state the level of your agreement corresponding to the statement in the space provided.
Abbreviations:

FCY – foreign Currency
ATM – Automatic Teller Machines

Do you frequently use an Electronic Banking card?

- ☐ Yes
- ☐ No

Section two- Questions

	strongly agree	Agree	Neither agree nor Disagree	Disagree	Strongly disagree
1. I was well informed about electronic banking in Ethiopia.	☐	☐	☐	☐	☐
2. Dashen Bank has informed where exactly to get ATMs	☐	☐	☐	☐	☐
3. When I face difficulties while withdrawing cash from An ATM I will be informed the exact problem on the spot	☐	☐	☐	☐	☐
4. When I demand for further information on an Interruption of an ATM service it will be provided by HO	☐	☐	☐	☐	☐
Providing feedback					
5. There are more than enough telephone numbers provided To get the help desk staffs at the head office	☐	☐	☐	☐	☐
6. The help desk staffs are easily reachable	☐	☐	☐	☐	☐
7. The help desk staffs can easily understand my problem And assists me as soon as possible	☐	☐	☐	☐	☐
8. I believe the help desk staffs are well linked to my Bank So as to forward my doubts	☐	☐	☐	☐	☐
9. The help desk staffs of the bank are professional who delivers full pledge information on demand	☐	☐	☐	☐	☐
10. The problem solving capacity of the help desk staffs is outstanding	☐	☐	☐	☐	☐
Service confidence					
11. I am fully confident to find the ATM working whenever I am planning of withdrawing cash at Nazareth Arada DB	☐	☐	☐	☐	☐
12. I feel safe even if the ATM doesn't work because it does not take that long to be back online	☐	☐	☐	☐	☐
13. I feel safe even if the ATM at Nazareth Arada DB does Not work because I can get the service else where	☐	☐	☐	☐	☐

14. I prefer to use the ATM of Nazareth Arada DB ☐ ☐ ☐ ☐ ☐
15. I have not seen the ATM service of Nazareth Arada DB been interrupted more than an hour due network Break down ☐ ☐ ☐ ☐ ☐
16. I have not seen the ATM service of Nazareth Arada DB been interrupted more than day due technical difficulties on the machine ☐ ☐ ☐ ☐ ☐

Reaction towards the overall performance of ATMs

17. Over all I am pleased with the ATM service of Nazareth Arada DB ☐ ☐ ☐ ☐ ☐
18. There is a suggestion box available to ATM customers of the bank ☐ ☐ ☐ ☐ ☐
19. I belive the bank has done its best in implementing customers Suggestions ☐ ☐ ☐ ☐ ☐
20. I think the bank has to change certain procedures regarding its ATM service ☐ ☐ ☐ ☐ ☐

Section Three

Please add any additional comment or suggestion related to the topic on the below space provided:

Annex 2
Interview Questions

1. Do you have frequent foreign card customers?
2. Is there a centralized ATM control unit in your bank?
3. How many staff members are involved in the unit?
4. What is the qualification of your help desk staffs?
5. How long are your help desks staffs are expected to work in a day?
6. Is your help desk or help unit 24 hours available?
7. How do you identify when a technical problem exists?
8. How do you identify when a network / connection problem exists?
9. Is there a technical department in the bank responsible of fixing ATMs?
10. Why did you choose to outsource the technical works of you ATMs?
11. Isn't there a possibility to establish a unit that gives a basic technical aid?
12. Do you have a strong bondage with the internet provider ETC?
13. How do you contact with ETC when there is a network interruption?
14. Does ETC react promptly when you demand their services?
15. Is there a mechanism of collecting customer's suggestions in relation to your ATM services?
16. Do you summarize and act up on the suggestions?
17. Can you give ATM services When an ATM is down?
18. Have you noticed the rise in of your ATM down times?
19. What measures have been taken to reduce ATM down times due to:
    a. Technical reasons
    b. Network interruption
20. Do you think the considerable ATM down time contributes to the reduced performance of FCY generation in Nazareth Arada Dashen Bank?
21. Are there any measures taken from the side of the branches regarding the increased down time of ATM?
22. What is the structure of your Payment Card Department?

23. How well is your contact/communication with the different Electronic banking card service providers?
24. Is there any commitment, which you have entered with these Electronic banking service providers?
25. What is the tolerable ATM down time within a quarter?
26. How does the head office know when an ATM is down?
27. How many steps and paper works are required to take an action when an ATM is down?
28. Is the same unit at the head office which aids uptown branches when a problem occurs on their ATMs?
29. Do you have a person with basic technical skills in each of your branches?
30. What is the average time taken to give a technical support for uptown branches?
31. Has the organization tried to reduce the time taken to aid uptown branches?
32. Do you train your help desk staffs?
33. How often do you upgrade the skills of your Electronic banking related staffs?
34. Can an ATM be considered as a major foreign currency source for the bank?