

Report On
**The Impact of Information System on General banking and Foreign
exchange a case for AL ARAFAH ISLAMIC BANK**

By

Student Name: Zunaid Kashem Chodhury
Student ID: 17304024

An internship report submitted to the Business department in partial fulfilment of the requirements for
the degree of
Bachelors in business

Business Department
Brac University
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Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

Student's Full Name & Signature:

Zunaid Kashem Chodhowry
17304024

Supervisor's Full Name & Signature:

Supervisor Full Name: Md Shamimul Islam, PhD
Assistant Professor

, BRAC BUSINESS SCHOOL
BRAC UNIVERSITY

Letter of Transmittal

Md Shamimul Islam, PhD
Assistant Professor

BRAC BUSINESS SCHOOL,
BRAC University
66 Mohakhali, Dhaka-1212

Subject: submission report based The Impact of Information System on General banking and Foreign exchange a case for AL ARAFAH ISLAMIC BANK

Dear Sir,

It is with great pleasure, here I present you “The Impact of Information System on General banking and Foreign exchange” as my internship report on Al-Arafah Islami Bank limited (Gulshan Branch) under your supervision.

It brings me great joy to successfully complete my report and submit my report on the study and analysis that I completed throughout my internship time.

Accepting my report would be quite helpful, and I would be delighted to answer any of your questions or concerns.

Sincerely yours,

Zunaid Kashem Chowdhury

Student ID :17304024

BRAC Business School

BRAC University

Date: 18-12-2022

Acknowledgement

As I've finished writing this internship report, I've realized how many people have supported me along the way. First off, I want to thank my supervisor DR.Md Shamimul Islam, for guiding me to put this report together. He gave me all the assistance I required to finish this report properly. My internship organization supervisor, Abdullah Mommin, deserves a particular thank you. He is the Principal officer of Al-Arafah Islami Bank Limited. He assisted me during my internship by providing information about my project and directions on how to finish it, therefore I want to thank him for that.

Executive Summary:

Management information system utilizes and effectively maintains information technology to improve business decision-making processes and obtain a competitive edge in the marketplace. Management Information System (MIS), as defined by the World Bank, is a system that aids management in formulating, carrying out, and managing decisions. A program monitoring system effectively functions as a management information system that gives management information for decision-making.

MIS has typically been seen by its practitioners as just having a supporting role, however, has recently changed from its traditional role as an application of backroom support to one offering opportunities for significantly increasing competitive advantage as a result of a significant decline in the cost of information technology (IT) and significantly improved speed and power of computers. It is being seen as having the potential to change fundamental organizational philosophies, refocus business strategy, and restructure industry structure. Recently, firms have become more conscious of the potential of IT and the use of MIS to fully realize that potential. There is little doubt that numerous prosperous local financial institutions have shown how effective information systems and technologies can be as a tool for competition that can be used for increase market share, enhance customer service, lower operational costs, and develop new goods and services.

Table of Contents

Declaration	2
Letter of Transmittal.....	3
Acknowledgement & Executive Summary.....	4
Table Of Content.....	5
CHAPTER 1.1 Student Information.....	7
Chapter 1.2 Internship Information.....	7
Chapter 1.2.3 Job scope	8
Chapter 1.3 Workplace Outcomes.....	9
1.3.1 Student’s Contribution.....	9
1.3.2 Benefits to the student.....	10
1.3.3 Problems/Difficulties	13
1.3.4 Recommendations (for and suggestions to the corporate on future internships) Recommendations.....	14
Chapter 2: Organization Overview, Operations, and a Strategic Audit	
2.1 Introduction (Objective, Methodology, Scope, Limitation, and Significance)	15
2.2 summary of the corporate.....	15
Vision of AIBL	16
Mission of AIBL.....	16
2.3 Practices	16
2.4 Management system of AIBL.....	17

2.5- SWOT analysis of AIBL	18
2.6 -ORGANOGRAM OF AIBL.....	19
2.7-FINANCIAL PERFORMANCE OF AIBL	20
2.8-ECONOMIC VALUE-ADDED STATEMENT.....	21
2.9. Functional Areas of Information System in AIBL	22
2.9.1- Mobile Banking	22
2.9.2Information System IN GENERAL BANKING	23
2.9.3 Use of Information System in General Banking	23
2.9.4Electronic Cheque Clearing	23
2.9.5 (BEFTN)	25
2.9.6 RTGS	26
2.9.7 Difference between BEFTN and RTGS	27
2.9.8 Remittance collection in General Banking.....	28
2.9.9 Other activities of General Banking that rely on the use of Information system	28
2.10. Information System IN Foreign Exchange	29
2.10.1 Overview of Impact of Information system in Foreign Exchange	30
2.10.2 Letter of Credit	30
2.10.3. Import Financing	31
2.10.4 Export Financing	32
2.10.5 Foreign Currency Account Facilities.....	33
2.10.6. Bank Guarantee.....	33
2.10.7 S.W.I.F. T.....	33
2.10.8 ABABIL	34

3.0	Technical difficulties associated with Information System	35
3.1	Introduction	35
3.1.2.	Overview	36
3.1.3.	How do database servers work.....	37
3.1.4	Objectives	37
3.1.5	Significance.....	38
3. 2.	Literature Review:	38
3.3	How to measure Server performance:	39
3.4	Method and Data:	39
3.5.	Limitations	39
3.6	Questions that were asked:	40
3.7.	Results and Discussions	41
3.8.	Summary.....	44
3.9.	Recommendations.....	45
3.10.	Conclusion.....	45
References	46

CHAPTER 1

1.1 STUDENT INFORMATION:

Name: Zunaid kashem Chowdhury

ID:17304024

Program: Summer 2022

Department: BBS

Major/specialization: MIS

1.2 Internship Information:

1.2.1 Period: I have done my internship session for 12 weeks.

Company Name: Al-Arafah Islami bank LTD, Gulshan Branch.

Department/Division: I have worked on General Banking department and Foreign Exchange department.

Address: South Breeze Square,90(New)522(old),Gulshan Avenue
Gulshan, Dhaka-1212

1.2.2 Internship Company Supervisor's Information:

Name and Position: Abdullah Momin

Principal officer, Gulshan Branch

1.2.3 Job Scope – Job Description/Duties/Responsibilities:

I have worked on 2 divisions of Banking, General Banking and Foreign Exchange, I initially started my work in General banking division after joining as an intern. I was Initially taught the processes that needed to be followed to open a bank account, and the 3 main category of accounts: 1. Individual, 2 Institutional 3. Fixed Deposit. After Learning them myself I was assigned to help new clients open bank accounts and make them aware of the offerings each type of account gives. I used to help them by guiding them filling up the forms.

Besides I used to fill the know Your customer (KYC) page of the account opening book as it can be either complicated or tedious for many clients. Then the officials checked the files and if there was no problem, they signed that. On top of that I used to tick mark the account opening books for the New clients in places where they needed to sign so that they were able to easily identify where to sign. Besides some customers were not able to fill their own form. I used to write down their Information's and deposit books. In addition, I also worked on Printing important pages and sorting out remittance files.

Although initial thought is remittance is purely a job of foreign exchange, however it is a bit more complicated, in order to make things more convenient for the client remittance collection can be done from General banking department. As such money was sent via different financial companies like money gram, small world etc. My job was to sort out these files and arrange them accordingly based on the financial company the money was sent from.

I also worked in foreign exchange department

In foreign exchange department I was responsible for sorting out LC files based on their time and date, besides that I also did menial work like stapling printing and assisting co-employees to look for a discrepancy in LC documents

Besides that, I also worked in creating reminders forms for Foreign exchange, which was sent to the companies to remind them to make their due payments.

1.3 Workplace Outcomes:

1.3.1 Student's contribution to the company:

My contribution to my place of employment was devoted to the bank, where I made an attempt to lend my diligence and attention to couple of department. Here, I've divided mine into three categories, as indicated by the figure below.

Contribution closer to

1) Clearing phase

2) foreign exchange

3) General Banking

1. Contribution in the direction of Clearing section:

My responsibility for the clearing of the Cheque was:

- I) Cheque crossing.
 - II) correct approval and clearing seal of the Cheque.
 - III) setting apart cheques from a deposit slip.
2. Contribution in the direction of foreign exchange:
- I) Assisting co-employees to look for a discrepancy in LC documents turned into a tough activity.
 - II) Sending reminders for due payments to the clients
 - III) Sorting out files based on time and date.

3. Contribution in the direction of General Banking section:

- I) helped clients open accounts.
- II) Guide Clients on the various different account types
- III) Filled KYC (Know Your Client) forms
- IV) Printed necessary files

1.3.2-Benefits to the student

The BBA program at BRAC university (BRACU) allows c students to excel at office. It's been an intensive experience for me to recognize the banking sector and how extremely exhausting that work is. So, it's was a significant opportunity to learn. It's considerable experience to gather knowledge about the banking enviroment, its standard procedures, and the activities of particular departments. I set my getting to know information into three instructions. these are:

expertise development

non-public private development

Studying experience:

During my learning curve, I gathered information about one of the most important aspects of the economy; banking, which will be good for my future, and I discovered something new in my recent expertise that everywhere I go, I simply have to manage any suitable issue. My learning expertise is given below. My studying know-how is given under:

- getting to know banking culture
- Technical know-how
- the Islamic banking industry
- Workplace management
 - Team Work

Now I'll discuss my learning knowledge concisely that is given under:

Learning Bank working Culture: Banking has its own work culture at the same time each bank will have its own niches and subtle differences. I had no intentions for corporate culture when I first started at the office. Before joining as an intern I did not know about the different roles each sector had in banks and their responsibilities.

Gather know-how: it is a great for me to learn about the works of bankers from sensible understanding employees, before this experience all my knowledge on banking was reliant on books. As a result, the office offers a chance to get experience a corporate setting.

Learning about the Islamic Banking System: Al-Arafah Islami bank Ltd. it is a reputed organization that maintains Islamic rules for banking. That's why I've grown to be privy to the "Sharia" based banking and its difference from traditional banking model banking

Workplace management: My experience has taught me important social skills that will benefit me in my future profession. Throughout this internship program, I followed the standards and procedures of Al-Arafah Islami Bank Limited.

Team Work: Banking is a demand intensive profession and it can be an intense environment for workers to handle but they work as a team. And if an employee went on leave, other staff would finish up any unfinished business. This coordination helps the institution function smoothly

There were few other things that I learned that were not exactly related with banking rather professional work environment which I will discuss briefly below:

Time Management: Time management is one of the great insights I took away from the experience. How to divide time to focus on particular work at once and how to divide work based on urgency and importance. This significantly improves productivity and performance while decreasing time wasted. My ability to manage my time well really enabled me to get by with meeting targets and deadline

Professionalism Skill: Working in AIBL taught me professionalism. it is also one of the requirements to meet requirements. They are in a necessity to come on time, handle emotions and keep promises, follows requirements, and performs as conditions demands

Grooming: Employees at AIBL, preserve neat and smooth formal code, they are well mannered and deals very sincerely with customers. They maintain sensible manners with each other and conjointly with the clients all the time. The greetings and etiquette also the way to complete necessary deals over phones were things I learned while interning in Al-Arafah Islami bank limited,

Interaction with management and co-workers: My manager and all of my co-workers respected the corporate ideals. I had a meeting with my supervisor and other substitute interns on the first day. I learned the sense of taking responsibility and working with enthusiasm.

Communication Skills: As an intern, I have been able to interact with various types of people while working at the bank, I dealt with big money clients, the average customer, the office manager, supervisor and the clerks. I understood the power dynamics in such situations and deal wih people according to their needs and expectations

1.3.3 Problems/Difficulties

Though I haven't noticed major downside throughout my internship time there were few issues I'm mentioning below:

Files & Documents do not appear to be organized correctly: There were organizing task that I had to perform checking out files of a specific party and if the documents were at right place.

Many items documents and files of varied clients were mixed and scattered such that persistently spent time and effort sorting out thousands of files.

Writing Mistake: Typically writing errors manifest on the export check in, pay order, FDD, and many others. normally errors in quantity of USD to BDT. one error can take place which might complicate a lot of work. So, such that it creates confusion and kills lots of time.

No personal table for interns: Personal table is important of each worker, to work efficiently it is important to have own desk which were not available at aibl

No remuneration: There is no remuneration for the work and effort of an intern which can be very demotivating at times because when an intern works so hard it can sometimes feel very depressing to not get any financial reward

1.3.4 Recommendations (suggestions to the corporate on future internships)

- Interns should be allocated certain desks where they can seat and keep their work files, in AIBL there is no permanent seat for the interns and in time they have to roam around or seat among the clients, this as a result decreases work intensity and effectiveness
- There should be a permanent employee whose sole purpose should be guiding interns, there are times when some officers are not inclined to help the interns and such that interns are deployed to do menial work which are supposed to be done by the office clerks as a result interns might not actually learn much of the banking related work
- There should be a minimum remuneration provided to the interns, which will as a result boost the intern's motivation and provide a sense of responsibility

Chapter 2

Organization Overview, Operations, and a Strategic Audit and Evaluation of the functional activities of Information System in AIBL

2.1 Introduction (Objective, Methodology, Scope, Limitation, and Significance):

Objective:

The general objective of the report is to describe Alarafah Islami Bank's different functional areas, and undertake thorough assessment of its performance and a strategic analysis.

Methodology:

For achieving the precise objective of this study, I have even collected connected knowledge both from primary and secondary sources.

Scope:

As I wrote this report, I was captivated by the investigation of the Al-Arafah Islami bank. It is not generally monetary trading, and I principally include the many items of the AI-Arafah Isami lbank operations such as

1. Management and knowledge System Practices.
2. Financial Performance & Accounting activities
3. Bussiness and Competitive Performance

Limitations:

This file is being mainly written from the point of view of the bank officials such that most of the topics described are presented from the ideal scenario and might lack a bit of practicality. All limitations area units are indexed below:

- Confidentiality of facts became a barrier as some employees were not willing to discuss their client's company's position.
- Dependence on the first sources, thus there could be biasness. This could result in negligence of certain data
- Lack of time could be considered another limitation as I had to focus in specific work which were allocated to me, such that some minute details could be forgotten

2.2 Summary of the Corporate

Al-Arafah Islami Bank begin its journey in 1995 to serve banking needs of clients on the economic framework directed by Islam. The preliminary offal-Arafah Islami bank which sets itself apart from most of their counter parts is the "Sharia Banking" model which follows Islamic principles of banking, such that major differences could be observed when it comes to fields like interest payment towards the clients, while most banks have a fixed interest rate Al-Arafah Islami Bank follows a "Profit" system and not the rate of interest system such that rate of "Profit changes every few months " and there is no fixed interest rate . Al-Arafah Islami Bank began its journey in 1995 with the above ideals in mind, as well as the intention of introducing a contemporary financial system based on Al-Qur'an and Sunnah. The bank's Board of Directors is made up of a group of 20 devoted and well-known Islamic celebrities from Bangladesh. To suit the needs of its customers, the financial institution offers several displays of products and services. The financial organization has a never-ending desire to promote banking innovation for the client's convenience. Presently AIBL is a torch bearer for Islamic banking in Bangladesh.

Currently it seats on the sixth spot in “Camel’s “International Bank ranking in Bangladesh and 119 branches across 38 districts in Bangladesh

Vision of AIBL:

Their vision is to be a leader in Islamic banking in Bangladesh and to significantly contribute to the growth of the Bangladesh's economy.

Mission Of AIBL:

- Development of Shariah-compliant banking practices.
- High-quality economic products based on cutting-edge technology.
- Quick and environmentally friendly customer service.
- Upholding high general commercial enterprise ethics.
- A well-balanced boom.
- Cutting-edge banking at an affordable price.
- Recruit and retain nice employees.
- Making aggressive repayment plans available to workers.
- Unwavering commitment to the country's economic growth.

2.3 Practices:

- The financial institution conducts its activities based on the principles of Islamic Sharia, AIBL, its constant desire to promote banking innovation for the client’s convenience has made it one of the best banks of the country
- There is no fixed interest rate in Al-arafah Islami Bank rather a fluid flexible “Profit” system in line with the principles of Islam
- Investment developed in a particular way that is sanctioned by Islamic Sharia.
- Investment profits of financial institutions are shared with the depositors which is called “Munafa”(Profit)

- The financial institution is committed to establishing welfare-oriented industries, recruiting low-profit individuals financially, and generating job possibilities.
- The bank funds many Islamic institutions like mosques and madrasas and also funds the “Al-Arafah English Medium School” and a Library.

2.4 Management system of AIBL

A fourteen-member Board of administrators are in charge of designing the policies of the bank. Besides there are governance Committee of nine people to frame and discard imperative strategic plans. Plus, there's an Audit Committee within the board to administer consistency of basic body and operational troubles. The board's Role: The application of various sharia provisions within the bank is governed by the ruling and sharia supervision Board ensures that everyone in the trades is acting with uniformity and has the added benefit of negating any disregarding behaviours, just in case they are discovered. A fourteen-part Board of Administrators comprises on high issues of the composition and customarily associated regulations of the bank makes up the management structure. Additionally, there is a government committee with an associate's degree that discards sincere strategic proposals. With the aid of nine participants, the well-respected Committee is compiled. The bank's board of directors is made up of fourteen individuals. Eleven of them talk due to the patrons and general populace, one senior well-regarded as the company secretary, and each distinct due to the company policy

SHARIAH SUPERVISION:

Since the bank's foundation, the Shariah council has played a critical role in directing and monitoring the execution and compliance with Islamic shariah principles in all of the bank's activities.

The council, which has a high prominence in the Bank's structure, is made up of notable ulemas, reputable bankers, recognized lawyers, and eminent economists. Members of the Shariah council meet on a regular basis to discuss various Shariah-related problems affecting the Bank.

They also conduct shariah inspections of branches on a regular basis to verify that the shariah principles are scrupulously applied and followed by the branches. Investment Director. The former respectable Director of the Board system is the overseeing director.

Employees Record: All employees in Al-Arafah Islami bank at gulshan branch have to manually sign in at an attendance copy once they enter the office at the same time when they are leaving they have to sign their name once they leave the office. There are no automated system for attendance record at AIBL gulshan Branch

2.5- SWOT analysis of AIBL:

Strengths

- Capital adequacy ratio: According to Bangladesh bank requirements, banks must have a capital adequacy ratio of 11.4% by March 2022. AIBL has a CAR ratio of 14.4% on average for the year.
- Islamic banking software: AIBL uses ABABIL software, which is ranked ninth in the world for Islamic banking software.
- Business network: AIBL has a vast network of branches throughout Bangladesh. At this point, the bank has 148 branches spread over Bangladesh.
- Goodwill: AIBL has already established consumer loyalty. AIBL consumers are extremely loyal to the bank.

Weakness

- Centralized Management: The highest authority in AIBL makes significant decisions without consulting with lower-level management.
- Lack of ATM booths: Because AIBL lacks a sufficient number of ATM booths throughout Bangladesh, customers are dissatisfied with the bank's ATM service..
- Lack of promotional activities: In comparison to other Islamic banks in Bangladesh, AIBL lacks marketing operations.

OPPORTUNITIES

- Customer service: In line with Islamic Sharia, AIBL can strengthen its customer service. It has the potential to develop more creative Islamic banking practices in Bangladesh.
- Increasing the number of ATM booths: Despite increasing client demand, AIBL, a famous Islamic bank in Bangladesh, still lacks a sufficient number of ATM booths.
- Increase the amount of promotional activities: AIBL should increase their promotional activities, such that they always remain in client's conscious

Threats

- Hefty tax rate: The government of Bangladesh has the authority to levy a high tax on banking activity.
 - Increasing Rivalry: Because banking is a valuable sector, it draws new rivals, hence competition between existing and newcomer competitors is increasing. Everyone wants to grow their market share.
 - Political insecurity: Political insecurity is a serious issue in Bangladesh, causing significant disruption in the financial industry.
- Overall Financial Condition: If the country's overall financial condition deteriorates and the economy enters a downward spiral, AIBL, like many other institutions, will suffer.

2.6 -ORGANOGRAM OF AIBL

Managing Director

Additional Managing Director

Deputy Managing Director

Vice President

Assistant Vice President

First Assistant Vice President

Senior Principal Officer

Principal Officer

Senior Executive Officer

Professional Executive Officer

Executive Officer

Professional Officer

Officer

Probationary Assistant Officer

Trainee Officer

2.7-FINANCIAL PERFORMANCE OF AIBL

5 YEAR FINANCIAL HIGHLIGHTS

Figure in Million

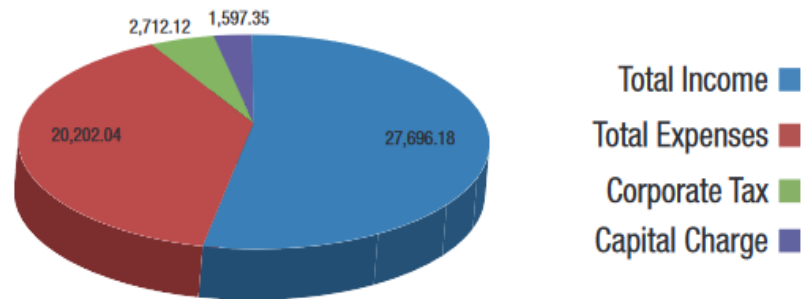
Particulars	2017	2018	2019	2020	2021	Growth%
Income Statement						
Investment Income	20,491.03	24,956.81	28,811.65	26,331.28	23,446.01	(10.96)
Profit paid on Deposit	11,784.20	16,256.61	18,604.42	16,556.64	13,072.79	(21.04)
Net Investment Income	8,706.83	8,700.20	10,207.23	9,774.64	10,373.22	6.12
Non Investment Income	3,557.36	3,769.39	4,037.57	3,655.46	4,250.17	16.27
Non Investment Expenses	5,308.42	6,160.70	6,384.18	6,742.33	7,129.25	5.74
Net Non Investment Income	(1,751.06)	(2,391.31)	(2,346.61)	(3,086.87)	(2,879.08)	(8.85)
Profit Before Tax & Provision	6,955.77	6,308.89	7,860.62	6,687.77	7,494.14	12.06
Provision For Investment	1,354.89	2,177.98	2,867.66	1,887.90	2,655.58	40.66
Profit Before Tax	5,600.88	4,130.91	4,992.96	4,799.87	4,838.56	0.81
Provision For Tax (Including Deferred Tax)	2,431.38	1,674.11	2,565.33	2,228.06	2,712.12	21.73
Profit After Tax	3,169.50	2,456.80	2,427.63	2,571.81	2,126.44	(17.32)
Balance Sheet						
Authorized Capital	15,000.00	15,000.00	15,000.00	15,000.00	15,000.00	-
Paid up Capital	9,943.06	10,440.22	10,649.02	10,649.02	10,649.02	-
Reserve Funds & Other Reserves	8,556.96	9,365.62	10,318.64	11,418.96	11,733.35	2.75
Shareholders' Equity (Capital & Reserve)	22,520.68	23,483.22	24,148.24	25,455.85	25,900.33	1.75
Deposits	244,806.26	266,205.48	297,241.81	326,023.41	353,287.97	8.36
Investment	235,905.23	261,874.13	288,486.02	308,620.66	336,890.72	9.16
Investment in Shares & Securities	10,145.49	12,214.67	16,170.52	21,563.67	30,156.14	39.85
Fixed Assets	3,260.38	4,494.61	4,351.93	5,833.88	5,470.27	(6.23)
Total Assets (Excluding off-balance sheet items)	319,255.29	338,465.30	381,051.81	418,298.65	462,687.05	10.61
Foreign Exchange Business						
Import Business	156,700.00	168,573.80	171,611.70	169,378.90	261,566.10	54.43
Export Business	104,540.00	114,481.90	108,967.10	104,939.40	135,786.90	29.40
Guarantee Business	6,443.41	7,096.02	8,274.25	10,511.21	13,673.41	30.08
Inward Foreign Remittance	20,700.00	36,917.20	37,713.40	43,807.00	52,662.10	20.21

2.8-ECONOMIC VALUE-ADDED STATEMENT

Economic Value Added (EVA) represents the company's genuine economic profit. The amount by which profits surpass or fall short of the required minimum return for shareholders at similar risk is calculated as EVA. The bank's EVA was BDT 3,184.67 million on December 31, 2021, up from BDT 2,862.36 million in 2020.

(BDT in million)

Particulars	2021	2020
Shareholders' Equity	25,900.33	25,455.85
Total Income	27,696.18	29,986.74
Total Expenses	20,202.04	23,298.97
Corporate Tax	2,712.12	2,228.06
Capital charge	1,597.35	1,597.35
Economic Value Addition	3,184.67	2,862.36



* Capital Charge = Paid up Capital x Percentage of Dividend

Economic Summary

It can be observed that shareholder's equity has increased from 2020 to 2021 while both income and expenses have both declined from the past year however the overall economic valuation have certainly increased over the year. However, Net profit (After Tax) have dropped over the years which has to do with increased rate of corporate tax from 2020 to 2021.

2.9. Functional Areas of Information System in AIBL (Gulshan Branch)

2.9.1- Mobile Banking

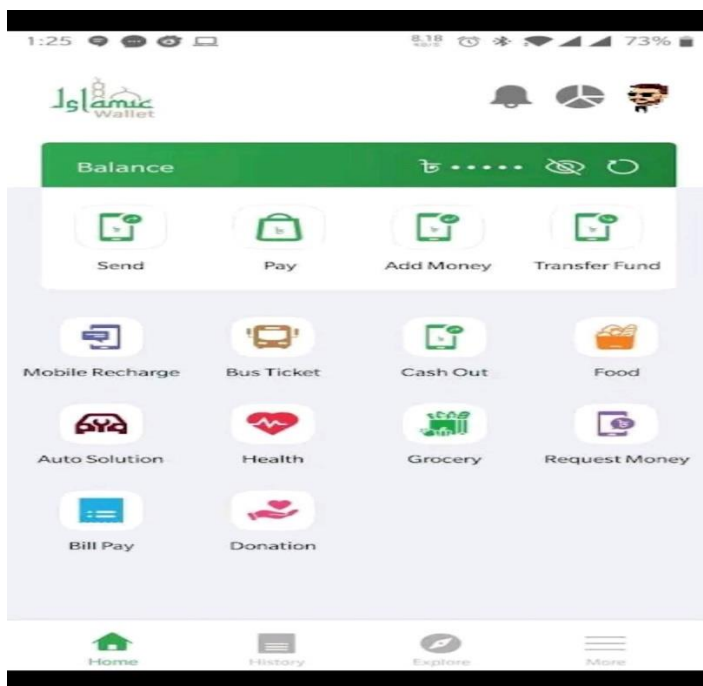
Islamic Wallet:

Al-Arafah Islami Bank Limited's Shariah-compliant Mobile Financial Services are known as Islamic Wallet. Islamic Wallet adheres to the most stringent security, compliance, and regulatory requirements.

The Shariah Board also regulates this wallet in order to conform with Islamic norms. Islamic wallets offer the most cutting-edge services in Bangladesh's mobile financial services sector. Money may be sent and received quickly, securely, and affordably from any location at any time. A complete eco-system where individuals may make the greatest use of money is provided in addition to the ability to "transfer and receive money. "This wallet will be regarded as a brand-new, cutting-edge method of payment to meet all banking demands and provide clients with the greatest level of ease, especially those without access to financial services.

This is very similar to Bkash mobile banking system

Islamic Wallet interface given below:



2.9.2 Information System IN GENERAL BANKING

There is wide range of use of Information system in General banking, to begin with let me point out the technological gadgets used in General Banking:

- Computers
- Printers
- Scanning Machine
- Network Cable
- WIFI
- Bluetooth
- Magnetic Ink Character Recognition Machines

Computers are widely used in banking sector each officer is dedicated a specific computer, they use computers to record, complete and begin every transaction. Due to security Issues most computers are not connected to the internet rather the computers are connected with one another via network cable besides that printers are connected to computers via Bluetooth technology.

Scanning Machines are used for scanning important files and are also connected via Bluetooth technology Checks and other paper documents are checked for authenticity or originality using magnetic ink character recognition (MICR) devices. Certain characters are printed on the original papers using special ink that reacts to magnetic fields. (MICR) machines are connected to a specific computer with cable.

2.9.3 Use of Information System in General Banking

IP MSG- IP MSG is a messaging app where employees can communicate with one another and send each other files and messages it is very similar to other messaging applications but it is very exclusive to the employees of Bank

Exclusive Domain – Due to security reason most of the computers are not connected to wifi rather they are connected on their own server. Their domain address is:

Logsystem.aibl.com/aiblapps/

Their domain was designed by Millennium Software.

2.9.4 Electronic Cheque Clearing

Basically, cheque clearing is the process of processing interbank checks for settlement. Processes for clearing and settling checks make financial transactions between institutions easier.

Electronic cheque clearing is an online image based cheque clearing system where cheque images are scanned with a scanner and Magnetic Ink Recognition (MICR) data are captured with a (MICR) machine at the collecting bank branch and transmitted electronically without the actual cheque movement of physical cheques It entails the process of electronically recording bank checks and sending them to other banks without moving the checks physically. Inter-bank check settlement is done utilizing both scanned and electronic records for the checks in question. The scanned copy of the check is sent to the paying bank through the central bank after it has been received by the teller at the bank of first deposit (BFD) for technical and financial clearance via high-speed secure connection lines. The reply for whether to pay or reject the check is generated from the paying bank to the central bank and is then sent back to the bank of first deposit. In cheque clearing, Cheques from an account holder instructs their banks to pay specified sums of

money to specific beneficiaries When clients submit their checks at collecting banks, a scanned copy is sent to the paying bank via the central bank so that it may be cleared technically and monetarily across high-speed secure connection lines. A data link can also be used to transport the digital image. As part of the transfer of the digital pictures, the collecting bank electronically records and transmits the transaction. The clearing house functions as the process's hub for clearing checks., (BANGLADESH BANK). Bangladesh Bank's responsibility is to check the cheque clearing process and enforce financial rules, regulations, and laws, as well as monitor and follow up on their application on shortened cheques, which will then be electronically handed to the drawee's bank for verification. The reply for that action to pay or reject the check is created by the paying bank and transmitted to the central bank for ultimate payment to the customer. The collecting bank keeps the actual checks.

- This entire process is conducted by one officer and the computer through which the entire transaction is completed is connected to the internet

There are two main fund transfer method:

1. BEFTN (Bangladesh Electronic Fund Transfer Network)
2. RTGS (Real time gross settlement)

2.9.5 Bangladesh Electronic Fund Transfer Network (BEFTN)

The Bangladesh Electronic Funds Transfer Network (BEFTN) serves as a processing and delivery hub to disperse and settle electronic credit and debit instructions across all involved institutions. Real-time batch processing is the mode of operation for this network. During a clearing cycle, all transactions received by the central system are aggregated into a single multilateral netting figure for each bank. The accounts that each bank has with Bangladesh Bank are used for the final settlement. Scheduled Banks can exchange debit and credit payment instructions using the multilateral electronic clearing system known as BEFTN. At the conclusion of each processing cycle, the system transmits, reconciles, and calculates each participant's net position.

The participants with this system are:

- a) Sender.
- b) Sender's Bank (SB)
- c) Bangladesh Electronic Funds Transfer Network (EFT Operator)
- d) Receiving Bank (RB)
- e) Receiver

In order to finish the payment instruction, the actual transfer of money between the banks is known as settlement. A deferred-net basis is used for BEFTN Settlement. At the completion of each processing cycle, the transactions handled by the BEFTN will have an impact on the

accounts of the relevant participating banks that have accounts with the Bangladesh Bank. Settlement and processing sessions will be communicated to member banks by Bangladesh bank from time to time

2.9.6 Real Time Gross Settlement (RTGS)

With the RTGS system, funds are transferred on a gross basis and in "real-time" between banks. It is the quickest way to transfer money when utilizing the banking method. Real-time refers to a payment transaction that doesn't require any waiting time. The money transfer will be finished on a one-to-one basis without clustering with other transactions as soon as the processing is complete, which is known as gross settlement. The transaction is treated as final and irrevocable as the money transfer occurs in the books of the Bangladesh bank. This system is available during working days from 10am to 2 pm and is supervised by Bangladesh Bank. To launch RTGS, banks employing it must have core banking capabilities. RTGS is a real-time interbank big value electronic funds transfer technology that may be used for both domestic and foreign currency operations. Participating banks will be able to transmit funds in both "real time" and "gross" methods. When a transaction is settled in 'real time,' it indicates there is no waiting period. 'Gross settlement' indicates that the transaction is recorded in the central bank's account one to one, without any netting with other transactions. Only credit transfers from participating banks will be accepted through RTGS, although Bangladesh Bank and other payment system operator(s) may be permitted to settle both credit and debit transactions. The participants with this system are:

- a) Sender.
- b) Sender's Bank (SB)
- c) Bangladesh Real Time Gross Settlement (BD-RTGS) System
- d) Receiving Bank (RB)
- e) Receiver

2.97. Difference between BEFTN and RTGS

Sl.	Function	RTGS	BEFTN
1	Full Form	Real Time Gross Settlement	Bangladesh Electronic Fund Transfer
2.	Definition	Transactions are managed and cleared in real time, on a gross basis.	Transactions are normally handled and settled in batches at the end of the day.
3..	Suitable for	Large Money Transfer	Small Money Transfer
4.	Money Transfer System	Swifter	Comparatively slow
5.	Lowest Amount of Money Transfer	One Lac	No Lowest Amount required
6.	Highest Amount of Money Transfer	No Limit	Actually No Limit. But some Bank encourages to RTGS for high value transaction.
7.	Transactions	Concentrate on large transactions.	Typically, any transaction
8.	Inter-bank Payment	Participating banks only pay the difference between debit and credit.	In most cases, each transaction is paid independently.
9.	Charges	Nominal Charge required for RTGS Transfer.	Its free

As Both RTGS and BEFTN are done electronically and via the internet through the uses of computers, scanners and Magnetic Ink Character Recognition (MICR) Machines and information system plays and intrinsic role for completing both the transactions

2.9.8 Remittance collection in General Banking

A remittance is money that is transferred from one party to another. Remittances are defined generically as any payment made in response to an invoice or bill. However, the word is now most commonly used to refer to a person sending money to their family back home while working abroad. The person who sends the money and requests payment to the recipient's bank

account at the bank is the remitter. Before approving the transaction, the remitter's bank may ask for the following details:

- Remitter's name and address
- Nationality of bank
- Bank branch details
- Bank account number
- Bank swift code

The sender's bank updates the recipient once the transfer is complete. The recipient of the cash might then receive a piece of deposit slip from the sender. They might receive word from this that an invoice has been paid. After receiving the funds, the bank of the receiver (Alarafa Islami Bank) retains them to verify compliance before correctly completing the transaction. The recipient then gets in touch with their bank and submits the necessary paperwork.

- This entire process is completed through the help of information system like the use of computer to store data and the use of internet for transferring of the funds

2.9.9 Other activities of General Banking that rely on the use of Information system

There are few other activities of General Banking that have reliance on the use of Information system and those are noted below:

1. Data collection
2. Record keeping
3. Verification

Data Collection – Whenever any new transaction occurs the result of the transactions is stored on the computers of the Bank, whether it's an account opening, an account closing, money deposits, Money transfer, Money withdrawal, account closing etc. all these data are stored on computers. There are possibilities that these records might be needed in the future and storing them physically will take a lot of space and resources, besides sorting out physical files are very time consuming and difficult rather storing these data digitally saves space and resources along with making it easy to identify and access

Record Keeping- All financial activities and transactions are recorded on computers and there are automated software's designed to complete basic accounting, if a client withdraws money from any bank account this transaction will be recorded and the software will automatically

credit the amount of money from the client's bank account. Besides that, there is a software for digital ledger where at the end of every workday all financial transactions that occurred throughout the day are recorded and calculated; This is the last job at the end of every work day.

Verification: In banking a lot of files and information are needed to be verified, for example when it comes to opening a bank account there needs to be NID verification, or some may need to verify an individual's current residence which are done through the help of Information System; Through the computers and Internet the officers verify the clients NID or passport in order to recognize or accept a client's request

2.10. Information System IN Foreign Exchange

There is wide range of use of Information system in Foreign Exchange, to begin with let me point out the technological gadgets used in Foreign Exchange:

- Computers
- Printers
- Scanning Machine
- Network Cable
- WIFI

Computers are widely used in banking sector as each officer is dedicated a specific computer, they use computers to record, complete and begin every transaction. Due to security Issues most computers are not connected to the internet rather the computers are connected with one another via network cable besides that printers are connected to computers via Bluetooth technology. Scanning Machines are used for scanning important files and are also connected via Bluetooth

2.10.1. Overview of Impact of Information system in Foreign Exchange

All foreign trade transactions of the bank are process from a centralized unit at the Head Office. This processes are done via the uses Information system i.e. Computers and Internet. AIBL is one of the leading partners in International Trade activities of the country and has been maintaining correspondent banking relationship with more than 338 reputed Banks all over the world

The Functional activities of Alarafa Islami bank (Gulshan branch) under which this paper is reported on are:

- Letter of Credit (L/C)
- Import Financing
- Export Financing
- Foreign Currency Account Facilities
- Bank Guarantee

2.10.2. Letter of Credit

A Letter of Credit contract is a request from a customer to the bank to issue, advise, or confirm an LC for a commercial transaction. As a result, the bank verifies the client's capacity to complete the transaction. Following the completion of compliance checks and validations, the bank requires an acceptance instruction from the customer. In a nutshell, a letter of credit is a document that guarantees that the buyer will pay the seller in full. If the buyer is unable to pay, the bank assumes responsibility for fulfilling the debt. For its part, the bank also collects a fee.

- The two parties reach an agreement on the terms and conditions.
- AIBL issues the letter of credit (LoC).
- The following stage is the actual transaction (say, a shipment of goods); once accomplished, the bank pays the money at the seller's end; and finally, the buyer may take ownership of the things acquired.
 - This entire process is conducted through the help of information system

Picture given Below:

2.10.3 Import Financing

Post import finance is essentially what is meant by import financing. Letter of Credit is pre import services. The process of trade flow involves at least three parties: the buyer of the products (importer), the seller of the goods (exporter), and the Bank. The Bank releases the funds for the transaction to proceed once the two parties that are purchasing and selling achieve a sales agreement. The type of loan will determine where the money goes and how it is distributed.

When it comes to import financing, the bank of the importer(AIBL) pays the exporter, and the importer pays back the Bank the principle sum plus interest.

- The entire payment of the bank to the exporter happens online through the help of Information System

2.10.4. Export Financing

Suppliers who do business internationally usually provide deferred payment terms, which can occasionally extend above 120 days. As a result, there is a finance gap between the time the items are sent and when they are paid for. As per the terms of the LC, suppliers still require operating capital throughout this time. In order to address this, suppliers decide to send unpaid bills to the bank, (AIBL) which pays a portion of the invoice's value in advance and the remaining amount (without a service charge) After the buyer pays the bills.

A typical export factoring agreement works in the following way:

An exporter sends products to an international buyer and issues an invoice with a long payment period, like 90 days..

However, in order to get access to operating cash right away, the exporter submits the unpaid invoice to a bank (AIBL) as collateral for a trade finance loan.

The Bank (AIBL) agrees to advance most of the invoice value as an immediate payment. Within the predetermined interval, the Importer pays the Bank(AIBL) the invoice amount along with service fees.

The Bank(AIBL) then pays the remainder of the money to the Exporter, minus any pre-agreed service fees.

- The Bank makes the entire payment electronically through the help of the elements of Information system

Remittance Service:

While remittance by principal is a role of Foreign exchange however due to the convenience of the clients this responsibility is deferred to the general banking department

2.10.5 Foreign Currency Account Facilities

Clients can use foreign currency accounts to make and receive payments in foreign currencies, making international transactions considerably easier and more comfortable. Clients may use these accounts to conveniently transfer currencies and take advantage of favorable exchange rates. Thus, a simplified account saves time and money by eliminating the hefty costs associated with conversions.

- The transactions and supervision of these accounts are done through the help of Information System
- 2.10.6. Bank Guarantee

This result of this action is quite similar to Letter of Credit where the bank verifies a client's ability to pay for a certain product which is being imported similarly in terms of Bank Guarantees Alarafa Islami Bank guarantees on behalf of the client to pay the fees to the exporter

- This is communicated digitally and the money is transferred electronically thus it can be said this activity is done through the help of Information system

2.10.7. S.W.I.F.T

The Society for Worldwide Inter-Bank Financial Telecommunication (SWIFT) is a cooperative that is owned by banks and provides services to the world's financial sector. The SWIFT Transport Network (STN) is a worldwide network devoted to secure communication between clients. This application is widely used by Alarafa Islamic Bank in order to complete financial transaction with foreign entities

SWIFT is used by financial organizations like Alarafa Islami bank and other banks-and money brokers to communicate with each other using predefined messages and instructions put it simple swift is just working like a social network in which the users are all financial institutions each user will have a unique swift id and they can securely send and receive information between each other for their daily business such as money transfer etc. this will enable the payee to transfer money to an account located in another bank in other countries to uniquely identify a financial institution swift assigns every financial organization a unique code which usually has eight or eleven characters as for the eleven character swift code the first eight characters will be the same as the eight character swift code and the last three codes are usually used to identify individual branches in the classical eight character swift code the first four characters are the institute code which is used to identify the financial institution the next two characters indicate the country code and the last two characters represent the location or city code

SWIFT addresses financial institutions' financial data communication and processing needs through a variety Financial messaging services and value-added processing, as well as connectivity via the STN and interface and application software, are all available.

SWIFT FIN is a financial communication that is sent from one financial institution to another. A three-digit number is assigned to each SWIFT communication. The first number defines the message category, while the second and third digits indicate the message type.

Let's use an example to identify the activity of SWIFT:

let's assume that A client wants to transfer one hundred dollars from his Alarafa Islami bank account to an exporter's bank account in Australia then Alarafa Islami bank will send a swift message or payment instructions to exporter's bank within a few minutes then Alarafa Islami bank will deduct 100 dollars from the client's account and exporter's bank will credit one hundred dollars in its commercial account and the last step is to credit one hundred dollars to exporter's personal account minus any fees charged for the transfer

- This program is accessed through computers and the communication is done through the internet along with that the money is transferred electronically thus it can be said this activity is done through the help of Information system

2.10.8. ABABIL Software

Ababil is a database software which, through its Core, Retail, Corporate, and Trade Finance modules, offers a whole Islamic banking solution. Ababil is not a result of any normal banking system; it was created specifically for Islamic Shariah-based institutions.

Ababil provides a comprehensive range of software solutions to Islamic banks and Islamic financial institutions to meet all of their operational needs. Ababil's cutting-edge technology, highly integrated front and back office system includes a full solution package as well as the capacity to deliver modular Islamic banking solutions that handle all business functions of client banks and financial institutions. Corporate & Retail Banking, Investment Banking, Financing Origination System, Customer Information File (CIF), Trade Finance, Treasury Management, Agent Banking, Offshore Banking, Profit Distribution, Accounting & MIS, Payroll, Drilled Down Reporting, and other functions are fully supported by Ababil's solution suite.

Chapter 3

Exploring Technical difficulties associated with Information System

3.1 Introduction

As we have discussed throughout this paper how integral the role of information system is in the smooth functioning of banking activities in AIBL (Gulshan Branch). However, as information system has become so ingrained into the processes and activities of everyday banking, from communications with each other to transferring of funds, or collection of data, information systems play a key role in everyday functions of the bank. AN extremely important aspect of modern banking network is their servers, since they complete all their transactions and communications through digital network such that servers become an absolute vital part of everyday banking. It is evident in practical life to notice how server disruption put complete halt in banking activities, such the purpose of this part is to investigate the causes in disruptions of database servers, how it effects banking activities

This section looks into such problems to understand the details of database server failures such that server disruptions could be avoided in the future and highlight the significance of network servers in banking sector along with that this paper will try to answer how server slowdowns effect the banking activities. Along with how to deal with such slowdowns and failures.

Research Questions

What are the root causes of server slowdowns?

How frequent are server slowdowns?

How Server slowdowns effect banking activities?

How to deal with the problem of server Failure?

3.1.2. Overview

At first it is important to define what is a database server

A database server is a machine that is specifically intended to deliver database services and runs database software. It is a vital component of the client-server computer ecosystem, providing client systems with the critical information they require. A database is run by hardware and software that make up a database serve

Uses for a database server

- Access business data through multiple devices - A database server allows businesses to easily access company information or digital processes across several devices linked to their network. A database server, for example, can offer several users of a company's PCs simultaneous access to all of the company's contents.
- Authorize specific users to view or edit certain files- Provides multiple users on database servers particular access privileges. For instance, it may opt to let all team members access to client files for the business, but only allow firm supervisors to view or alter financial information.

3.1.3How do database servers work?

Database servers function by housing the memory and storage for the databases as well as a database management system (DBMS). Clients utilize the DBMS program to access their digital data via the database server. The application then performs the client's desired action when the database server client issues a specified command to the DBMS. Commands from a client to a database server include updating access permissions, adding new data to the database server, retrieving current data from the server, and making changes to data stored on the server. Clients often use an online database service provider to connect to database servers. If a firm has

database servers on its property, it can immediately access those servers over the corporate intranet.

3.1.4. Objectives

The objective of this project is to find out the root causes that effects the banking activities. The paper tries to identify the root causes that results in banking server failures, along with that the paper also tries to answer the question of exactly how banking activities are hampered due to server failures. On top of that the paper also gives an idea about how frequent server failures are. Along with that it aims to answer a realistic method of dealing with this problem

I have used qualitative method of research and thematic analysis to evaluate the data's.

3.1.5 Significance

The findings of this study will surely benefit the banking sector, as modern banking as impossible to imagine without database servers. This paper aims to provide information about factors that lead to server failures in banks, how it effects the banking activities and how to deal with the problems.

3.2. Literature Review:

First in 2003 David Oppenheimer, Archana Ganapathi, and David Patterson suggested in their paper ' *Why do Internet servers fail, and what can be done about it?* That in two out of three services, operator error is the leading cause of failure. Improving maintenance tools and systems used by service operations personnel would reduce the time required to diagnose and repair problems. More comprehensive online testing, as well as more thorough exposing and identifying component faults, might lower failure rates in at least one service. Then in 2011 Phillipa Gill, Navendu Jain and Nachiappan Nagappan wrote in their paper ' *Understanding network failures in data centers: measurement, analysis, and implications* ' that data center networks are quite reliable, and load balancers dominate in terms of failure incidence. Failure can result in the loss of a large number of tiny packets, such as keep alive messages and ACKs. Only 40% of network redundancy is useful in minimizing the median impact of failure. Along with that Po-Han Tseng; et al in 2011 published ' *On the battle between lag and online gamers* ' that Today, online games are a popular Internet pastime. Due to the Internet's non-QoS-guaranteed design, players may likely experience latency from time to time. Lastly in 2014 Peter Bailis & Kyle Kingsbury Suggested in their paper ' *The Network is Reliable: An informal survey of real-world*

communications failures that It is critical to account for and comprehend the consequences of network behavior while creating strong distributed applications.

Authors	Year	Publications
David Oppenheimer, Archana Ganapathi, and David Patterson	2003	Why do Internet services fail, and what can be done about it ?
Phillipa Gill, Navendu Jain and Nachiappan Nagappan	2011	Understanding network failures in data centers: measurement, analysis, and implications
Po-Han Tseng; Nai-Ching Wang; Ruei-Min Lin; Kuan-Ta Chen	2011	On the battle between lag and online gamers'
Peter Bailis & Kyle Kingsbury	2014	The Network is Reliable: An informal survey of real-world communications failures

3.3 How to measure Server performance

Server performance can be measured through various ways however from my circumstances, I was able to use certain evaluation process which were:

1. Requests per second (RPS): The fundamental role of a web server is to receive and process requests; however, if server becomes overburdened with requests, performance might suffer. RPS is a measure that counts the number of requests received within a certain monitoring period, which is typically one to five minutes. RPS counts each request without regard for the nature of the request.

Formula for Requests per second (Memory / Memory required for an instance) * (1 / Task time)

For an organization like AIBL it needs around 4000 rps

2. Uptime: The availability of a server is ultimately the most crucial component of any business. Both application and end users will suffer if the server is unreliable. Uptime indicates how long a server has been operational; 100 percent is ideal, although many web hosting packages advertise 99.9 percent or higher.

Uptime can be checked via opening Task Manager on windows and after that going to the Performance Tab. In the bottom left corner of the CPU window

3.4 Method and Data

This study mainly uses qualitative method for research and uses semi structured interviews with open ended questions to gather information from the bankers at AIBL (Gulshan) branch. There was option to remain anonymous which helped to get honest feedbacks from the interviewees. Later the data was examined and evaluated through thematic analysis with Inductive approach

3.5. Limitations

Since the data were collected from interviewing the bank employees of AIBL gulshan branch some of them were unaware about certain technical questions about database servers. Such that some of their responses were not beneficial for analysis besides some of them were unaware or had no idea about certain issues. Besides since the interviews were done in business hours' employees were not able to discuss the issues at length rather had brief discussions. Besides as the choice of topic was very niche for the bank employees there were not much room to ask a great variety of questions relating to the subject.

3.6 Questions that were asked:

As it was a semi structured interview the questions were not in any particular order, however the theme of the discussion remained on the server networks

1. How often does server's slow down?
2. Does it happen at particular times?
3. How does server lag effect banking activities?
4. Has this issue been brought up in board meetings?
5. What are the causes of server failures and slowdowns?
6. How to deal with server failures?

List of Interviewees

Department	Designation	Time at AIBL
Foreign Exchange	Principal Officer	10
Foreign Exchange	Senior Executive officer	10
GENERAL Banking	Officer	5
Foreign Exchange	Management Trainee Officer	2
General Banking	Officer	2
General Banking	Officer	4

3.7. Results and Discussion:

The paper uses Thematic analysis with Inductive approach to come to the conclusions which were extracted from the data that were collected via semi structured interviews with the open ended questions

Answers and Codes

The data were collected from these answers which were later transformed into codes and from the codes theme was generated, the paper follows inductive approach research methods

Answer to question 1

How often does server's slow down?

Answers	Codes
Every Other day	Once every 2 days
Weekly	Often
Every couple of days	Once every 2 days
Sometimes	Often
Weekly	Often
Once or twice weekly	Once every 2 days

Answer to question 2

Does it happen at particular times?

Answers	Codes
Mostly at peak times	Intense workload
Mostly between 12 pm to 4 pm	Intense workload
When There is High work pressure	Intense workload
When weather is bad	Weather related issues
At Rush Hours	Intense workload
When there is a significant amount of pressure at work	Intense workload

Answer to question 3

How does server lag effect banking activities?

Answers	Codes
Stalls activities	Halts working activities
Effects workflow	Halts working activities
Wastes time, have to redo work sometimes	Time loss and Halts working activities
Effects work flow	Halts working activities
Network Malfunctions, leading to halt in work	Halts working activities
Effects working procedures	Halts working activities

Answer to question 4

Has this issue been brought up in board meetings?

Answer	Codes
No idea	Uncertainty
I don't know	Uncertainty
We are not involved in board meetings	Lack of communication
Not aware of this issue	Uncertainty
No idea	Uncertainty
Informed supervisors , now it's up to them	Lack of communication

Answer to question 5

What are the causes of server failures and slowdowns?

Answers	Codes
Lack of Professional IT department	Lack of IT worker
No Idea	Uncertainty
Lack of IT workers at the branch	Lack of IT worker
Too much load in the server	Server pressure
Don't know	Uncertainty
Server load is too high.	Server pressure

Answer to question 6

How to solve server failures?

Answers	Codes
Hiring dedicated IT team	Need of IT department
Specialized employees to look after the issue	IT specialist
Reporting the issue in board meetings	Inform higher officials
Buying brand new server	Need for updated server
No idea	Uncertainty
Checking the server by professionals fixing any problem if there is any	repairing

Thematic analysis:

- From the 1st Answer it is evident that the server slows down approximately every other day
- From the 2nd Answer it is evident that work overload is the primary reason for server lag
- From the 3rd Answer it is evident that server lags kill time and disrupts workflow
- From the 4th Answer it is evident that the employees lack clear communication with the higher board members
- From the 5th Answer it is evident that the Branch needs IT professionals and current server can't handle the peak pressures
- From the 6th Answer it is evident that there needs to dedicated work done to evaluate and solve the failures

From the thematic analysis it is evident that server lags and failures occurs due to over load of servers and lack of IT professionals in AIBL gulshan branch. On top of that server lags and failure halts work progress and kills valuable time for the bank. Such that the existing device needs evaluation or improvement along with dedicated server specialists.

3.8. Summary

The goal of this graduation project was to look at one of the common technical problem that banks face, which is Database server slowdowns and server failures. The part also tried to find out the root causes of server slowdowns along with it the frequency of server slowdowns and have also tried to report on the effects of server slowdowns on banking activities and tried to find out ways to deal with the problem of server failures. I have conducted qualitative research based on the data which I collected via setting up semi structured interviews to gather information from the bank employees.

3.9. Recommendations

AIBL 's server issue falls in line with the problems highlighted by David Oppenheimer ET al on their paper *Why do Internet servers fail, and what can be done about it?* and in Light of the thematic analysis on the answers given by the employees and based on the solutions given by David Oppenheimer ET al it can be advised that Server operations employees can improve their

maintenance and processes to reduce the time it takes to discover and resolve problems and increased online testing as well as more thorough exposing and diagnosing component issues would reduce failure rates.

3.10. Conclusion

In conclusion it can be said that Information System have tremendous impact on the overall output and daily activities of AIBL (Gulshan Branch). From powering their Mobile banking system to cheque clearing, fund transfer or Gross settlements, data collection or remittance collection Information system makes all these possible. On top of that Information System is essential in all activities of Foreign exchange department. It would be hard to discuss the functioning of foreign exchange without considering the role of information systems, since information systems remain an entirely integral and vital aspect of the activity of foreign exchange. However, one essential aspect of AIBL's Gulshan branch that has to be looked into is the sever issues, from the qualitative research I have done where I used semi structured interviews to gather data. With thematic analysis with inductive approach I came to the conclusion that It is obvious that server delays and failures occur owing to server overload and a shortage of IT personnel at the AIBL Gulshan branch. Furthermore, server slowness and failures hinder job progress and waste critical bank time. And it is recommended that AIBL should upgrade its present server and employe IT specialists, as well as establish an IT department in each branch, and it should also establish a stronger communication framework between Board members and workers.

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