



An Internship report submitted in partial fulfillment of the requirement for the degree of

Bachelor of Business Administration (BBA) Program

Topic: “*An analysis of BD-RTGS process*”

Of

Agrani Bank Limited”



Agrani Bank Limited

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LETTER OF TRANSMITTAL

April 30, 2019

Md. Shezanur Rahman

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Subject: Submission of Internship report

Dear Sir,

It is a great pleasure for me to submit my internship report titled “An Analysis of BD-RTGS of Agrani Bank Limited” that has been prepared as an essential part of my degree requirement.

I have completed my whole internship program at Agrani Bank limited (Mohakhali Corporate Branch), where I got the chance to prepare my report on the mentioned topic. During the period of making this report, all the assessments and discussion with the bank officials improved my understanding and enhanced my knowledge in banking sectors which increased my professional skills.

I pray and hope that I could fulfill and meet your expectations in this report. Also, I want to thank you for your support and guidance that you gave to me. Therefore, I am requesting you to accept this report and oblige thereby.

Sincerely,

Nusrat Zahan Mukta

Student ID: 12104203

BRAC Business School

BRAC University

Letter of Endorsements

This internship report on “An analysis of BD- Real Time Gross Settlement (Mohakhali Branch An Analysis of BD-RTGS of Agrani Bank Limited)” has been submitted to BRAC Business School .This internship is mandatory for successfully complement of my BBA program. To fulfill this requirement, this report has been prepared by Nusrat Zahan Mukta (Id: 12104203, Major in Finance and Human Resource Management) from the three month experience in Agrani Bank Limited.

The report has been accepted and will be presented to the internship defense committee for evaluation.

All The Best!!

Md. Shezanur Rahman

Lecturer

BRAC Business School

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Student Declaration

I am Nusrat Zahan Mukta hereby state that this report of internship titled “ An Evaluation of Bangladesh RTGS of Agrani Bank Ltd” is entirely done by me after the three-month internship program at Agrani Bank Ltd, Mohakhali Corporate Branch.

I can assure you that the report is completely prepared following the requirement of BBA program at BRAC University not for any other purpose.

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Acknowledgement

First of all, I want to thank Allah for helping me to complete this report successfully. Also, I want to thank all the people who were involved directly and indirectly while making this report. I want to apologize to those people whose name I didn't mention here but their contribution is highly appreciated by me.

I want to thank my academic supervisor **Md. Shezanur Rahman**, lecturer of BRAC Business School first. I would love to thank him for guiding me and giving me all the possible feedback in writing this report. Most importantly, I am grateful to him for giving me his valuable time and support.

Then, I would like to thank all the officials of Agrani Bank Limited who were involved with this report. I want to thank my supervisor Md. Moniruzzaman, AGM of ABL at Mohakhali corporate Branch, Md Asifur Rahman (officer), Sharmin Nahar (officer) and Reza Rahman (officer) and the bank as a whole. Without their support it would not be possible to complete this report. Thank you all for providing me with all the possible information that I needed for making this report more informative.

Lastly, I want to thank all my family members who support me physically, mentally and economically for completing my BBA program from this reputed university.

Executive Summary

This report is about the implementation of the Real Time Gross Settlement (RTGS) system in the banking sector of Bangladesh. The bank which has been focused on investigating this topic is government owned Agrani Bank Limited (AB). Agrani Bank Limited was a nationalized commercial bank in 1972 after the independence of Bangladesh. It started functioning as a going concern basis through a Vendors Agreement signed between the ministry of finance and Government of the People's Republic of Bangladesh on behalf of the former Agrani Bank.

There are three areas of Agrani Bank Ltd. (Mohakhali Corporate Branch). They are- General Banking, Foreign exchange and loan & Advance section. The General Banking section deals with- collecting cash, clearing check, account opening, NFT, BEFTN, RTGS, security and bank Pay Order. Foreign exchange section deals with import and export cash payments. Lastly, loan & advance section deals with Staff loan, Cash Credit and Project loan.

Agrani Bank has implemented the Real Time Gross Settlement system as a part of their financial transaction process after Bangladesh Bank introduced it in 2015. This report investigates the full impact of this integration in the bank in question.

The findings from the report show that, RTGS system has been significantly impactful for the bank and gave their clients a very useful option of conducting their day to day one off important transaction instantly. It has been a better upgrade from its previously used system as the new system adds a lot of benefit for both the bank and their clients. However, the system still faces some challenges from technical issues and lacks skilled operators who can solve them.

All in all, RTGS helped Agrani Bank Limited to keep up with the technological changes in the financial sector of the country.

Table of Contents

Chapter-1: Introduction.....	9
1.1 Current Structure of Banks in Bangladesh.....	10
1.2 Overview of Agrani Bank Limited	10
1.3 The Job Nature of Agrani Bank Limited	11
1.4 Corporate Slogan	12
1.5 Vision and Mission Agrani Bank Ltd	12
1.6 Values of Agrani Bank Limited.....	12
1.7 The Description of the total business of the organization.....	13
1.8 Agrani bank limited, Mohakhali corporate Branch	13
1.9 Operational Network Organogram	14
Chapter -2: My job responsibility	15
Chapter-3: Introduction of the project	16
3.1: Rationale of the study	16
3.2 Statement of the problems or Limitations.....	16
3.3 Scope and Delimitations of the Study.....	16
3.4 Objectives of the Project.....	17
3.4.1 Broad Objective	17
3.4.2 Specific Objective.....	17
3.5 Different aspects of job performances	17
Chapter-4: Methodology of the Study	19
4.1 Data Processing and analyzing	19
Chapter-5 An Analysis of Real Time Gross Settlement (RTGS) of Bangladesh	20
5.1 Literature Review.....	20
6. Findings of the Study.....	23
6.1 The Process of real-time gross settlement (RTGS).....	23

6.1.1 Real Time Gross Settlement (RTGS) payment procedure.....	24
6.1.2 Transaction reference.....	26
6.1.3 The payment processing methods.....	26
6.2 How ABL Run their Real Time Gross Settlement (RTGS) software.....	28
6.2.1 RTGS Inward.....	28
6.2.2 RTGS Outward.....	30
6.2.4 Bank to Bank Posting Sub Menu.....	34
6.2.5 Admin Menu.....	38
6.3 To identify the limitation of previous software.....	38
6.4 Additional benefits that clients and employees are getting from the new RTGS software-38	
6.5 Challenges faced to implement RTGS-BD system.....	40
6.6 The difference between Real Time Gross Settlement and Bangladesh.....	42
Electronic Fund Transfer Network (BEFTN).....	42
Chapter-7: Recommendation.....	43
Chapter-8: Conclusions.....	44
Chapter-9: What I have learned from my Internship program.....	45
Works Cited.....	46
Amplification of the short forms.....	47

Chapter-1: Introduction

Modern banking system plays a vital role in a nation's economic development. Over the last few years, the banking world has been undergoing a lot of changes due to deregulation, technological innovations, globalization etc. These changes have brought revolutionary changes in our country's economy. The present world is changing rapidly to face the challenge of a competitive free market economy. It is well recognized that there is an urgent need for better, qualified management and better-trained staff in the dynamic global financial market. Bangladesh is no exceptions to this trend. Banking Sector in Bangladesh is facing challenges from different angles though its prospect is bright in the future.

Real Time Gross Settlement (RTGS) is a transaction system where the transactions are settled between two entities without bundling any other transaction processes. The transfers made using this system is usually final and irrevocable. RTGS systems are primarily used for one-off immediate money transition. Bangladesh Real Time Gross Settlement system (BD-RTGS) is launched in 2015. In this report, Agrani bank's Real Time Gross Settlement will be mentioned as BD-RTGS or just RTGS.

The main focus of this report is the nature of the RTGS system's integration with the Agrani Bank's financial payment structure. This report will discuss this topic deeply.

The report is organized in the following way-

Chapter -1 mentioned the organization's introduction, its history, products and services that AB is providing, lastly, the visions for the future.

Chapter- 2&3 covered about the job responsibility, the nature of the job, the specific responsibilities of my job, Different aspects of the job performance and lastly some critical observation and recommendation for the organization.

Chapter-4 is contains the methodology, the processing of analyzed the report.

Chapter –5&6 contains literature reviews, findings, recommendation, suggestions of the report and bibliography and learning“s.

1.1 Current Structure of Banks in Bangladesh

In today's world, not only the companies and industrial organizations but also every general people want to secure their money and want to increase their income by hook or by crook. Banking services help to meet their dream by saving and increasing their money as well as giving higher security. To ensure all their expectations into reality, different types of local as well as multinational banks are coming up with dynamic corporate banking services.

Bangladesh Bank is the central bank of Bangladesh since the country“s independence. Its main job is to issue currency, to maintain foreign exchange rate and to act as a reserve bank. Also, it is responsible for maintaining and implementing monetary and fiscal policy.

At present Bangladesh Bank have nine members with the Governor as its chief. Its head office is in Dhaka. There are also nine more branches. Two of the branches are in Dhaka and one each in every district in Bangladesh- Chittagong, Rajshahi, Khulna, Sylhet, Rangpur, Bogra and Barishal.

All other banks in Bangladesh are bound to follow the Bangladesh Bank's regulations by law. There are mainly three types of banks based on ownership here; they are – government-owned banks, privately owned banks and multinational banks whose management operates from abroad.

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1.2 Overview of Agrani Bank Limited

Agrani Bank Limited (ABL) is one of the highly performed banks in Bangladesh. It is a state-owned commercial bank from 17th May 2007. Its previous name was Habib bank limited then commercial bank after that Agrani Bank limited in 2007. Agrani Bank Limited now has 952 outlets strategically located in almost all the commercial areas throughout Bangladesh, overseas Exchange Houses and hundreds of overseas Correspondents. It became as a Public Limited Company on May 17, 2007, to take over the business, assets, liabilities, rights, and obligations of the Agrani Bank which grown as a nationalized commercial bank in 1972 immediately after the independence of Bangladesh. Agrani Bank Limited started functioning as a going concern basis through a Vendors Agreement signed between the ministry of finance, Government of the

People's Republic of Bangladesh on behalf of the former Agrani Bank and the Board of Directors of Agrani Bank Limited on November 15, 2007, with the past effect from 01 July, 2007.

According to ABL website, Agrani Bank Limited is governed by a Board of Directors consisting of 10 members headed by a Chairman. The Bank is headed by the Managing Director & Chief Executive Officer; Managing Director is assisted by Deputy Managing Directors and General Managers.

The bank has 11 Circle offices, 36 Divisions in head office, 53 zonal offices and 952 branches including 34 corporate, 42 AD (authorized dealer) branches and 6 subsidiary companies, 4 of the subsidiary companies are in foreign countries which include- Singapore, Malaysia, Australia and Canada and 2 in Bangladesh.

Currently, ABL has 200 agent booths that are operating Agent Banking activities around the rural areas of Bangladesh. In Agrani Bank Limited, Islamic Banking system is operated under 'Islamic Banking Unit' since February 28, 2010, through 5 Islamic Banking Windows.

1.3 The Job Nature of Agrani Bank Limited

I have joined as a finance intern in Agrani Bank limited on 13th of January, 2019. Though I was a finance intern, I was given all the facilities and the opportunity to work in a different sector of banking. As a result, I got the full exposure to learn how Agrani bank does their job. There are several desks for several tasks. I was being shifted one desk to another desk for getting knowledge about banking.

In the grand bank Mohakhali corporate branch, there are four sectors that they are operating.

- General banking
- Loan and advance and
- Cash department
- Security department

I worked with general banking the most and a little with loan and advances but not in the cash department and security department since the responsibility of those sections are crucial and risky. A short description of general banking and loan and advance sector is given below-

General banking deals with several activities that ABL is providing. Such as-

- Digital banking (they handle EFT, RTGS, Foreign Remittance, and Inter Branch Transaction),
- Clearing transaction of customers, BEFTN
- Negotiable instruments, they handle pay order to check and demand draft (DD)
- Accounts (they deals with fund transfer and account maintenance, FDR, ABS, DPS, and miscellaneous works)
- And loan and advances

Loan and Advance department is basically deals with loan sector. Verifying are the people are eligible for getting the loan, following terms and condition, as well as are all the requirement matches with the ABL terms and condition. They also provide loans when companies need to pay workers or meet other obligations.

1.4 Corporate Slogan

"Committed to serve the nation"

1.5 Vision and Mission Agrani Bank Ltd

Agrani Bank plans to achieve the status of the best state-owned commercial bank in Bangladesh. They want to reach this goal by achieving international standard of efficiency, quality and service to its customer. It also aims to increase its liquidity value.

Agrani bank is also determined to operate in accordance with a solid regulatory framework designed on ethically strong fundamentals. They wish to promote transparent policy and procedure while running the bank

1.6 Values of Agrani Bank Limited

Agrani bank has these following values:

- Integrity
- Transparency
- Accountability
- Diversity
- Growth and
- Professionalism.

The bank expects every of its personnel to maintain these values at all time specifically while dealing with their customers and stakeholders.

1.7 The Description of the total business of the organization

There are two types of products that ABL is providing currently are deposit and loan products. Under deposit product, there are several schemes which include Senior Citizen savings, savings pension scheme, AB wages earners deposit scheme, trimonthly income scheme, AB millionaire deposit scheme, AB double benefit scheme, AB lakhpoti deposit scheme, AB pro bash deposit scheme, and AB Nari Amanot scheme. And there are also some renowned loan products which Personal loan are, Any purpose loan, Freedom fighter loan, Loan against pension scheme of retired Govt. officer/staff, AB loan for the overseas worker –ALOW, Green Banking Finance, Short term SME loan.

Not only products but also ABL is providing a different kind of services that help the people in various ways. Foreign remittance, Cash services, Fund transfer, and Value-added services are an example of them.

1.8 Agrani bank limited, Mohakhali corporate Branch

According to Moniruzzaman, Agrani Bank Limited, Mohakhali Corporate Branch is situated in Mohakhali TB gate, Dhaka-1212 and started its journey on 15th of November 1990. Now it is running under the supervision of Md. Moniruzzaman is the General Manager of this branch.

1.9 Operational Network Organogram

Hierarchy Of Agrani Bank



Figure-1: This picture is taken from the ABL website

Chapter -2: My job responsibility

The core responsibility was during my three-month internship program-

- Rechecking account opening forms that clients had filled for opening a bank account. As every opening account forms are required seven signatures in different place of the form my responsibility was to check if they have given their signatures all the places especially in the signature card, mobile number, their NID cards, and lastly give seals where officers and managers give their signs. I had to write all the account names, account numbers when they open their account (date) in a diary on a daily basis.
- Rechecking clearing check (date, check number, amount), then post it to those accounts via computer very carefully. As every transaction of the bank doesn't complete in one step, it requires authorization from other bankers. Sometimes I authorized another banker's transaction. They do that authorization process in order to avoid mistakes.
- Entering all the transaction's data in their statement software at the end of the week (digital bank) as the need to send the transaction statement to the head office Thursday.
- Print and scan documents of loan and advance department
- I wrote vouchers for some pay orders such as Bangladesh Insurance Academy, BRAC, etc.

A table is bellowing the banking activities that were done by me along with the number of weeks-

Department	Number of weeks
Account Opening	5 Weeks
Clearing Cheque/ Cheque Issue	3 Weeks
Pay Order	1 Week
Loan and Advance	2 Week
Foreign exchange	1 week

Chapter-3: Introduction of the project

The purpose of doing this report is to know about RTGS process of Agrani Bank limited and how it works. We know that RTGS is a fund transfer system where the transaction is done instantly. Most of the bank has introduced this system due to having a high demand for this system. As we know that through RTGS system we can now transfer money from one bank to another bank which was quite impossible if we look at a few years back.

3.1: Rationale of the study

The report titled “An evaluation of BD-RTGS process of Agrani Bank Limited” is prepared to meet the essential part which is the internship program of my degree in BRAC Business School, BRAC University. We know that RTGS is almost new for Bangladesh fund transfer system. As this report is about BD-RTGS, so it will be helpful to understand about it and readers will get a clear picture of BD-RTGS system.

3.2 Statement of the problems or Limitations

The Limitations of a study means mentioning the parts uncovered by the scope of the study.

These parts are described below-

- This study analyzed the BD-RTGS system from the perspective of a singular bank and central bank only. It did not analyze the state of the system in other banks that are in competition with ABL.
- Due to insufficient data, deeper numeric analysis of the effect of BD-RTGS system on ABL in terms of efficiency could not be done.
- The average timings for all the transactions occurring in the system were not taken.
- This study did not cover the impact of the BD – RTGS system on the financial industry of Bangladesh in a macroeconomic level.

Accepting these limitations, I have tried to complete the research to the best of my ability.

3.3 Scope and Delimitations of the Study

The primary focus of this report is the about RTGS system implemented in Agrani Bank Limited. By extension, this report also covers some broader focus of RTGS usage policy in Bangladesh finance sector. This report also includes a description of the common banking industries trends and histories of Bangladesh.

3.4 Objectives of the Project

The objectives of these reports are divided into two parts, broad objectives and specific objectives.

3.4.1 Broad Objective

The broad objective of this report is to analyze the RTGS process of Agrani Bank Limited. In order to achieve this objective, some more specific objectives have been set up.

3.4.2 Specific Objective

- To describe the RTGS process and how it works.
- To identify the limitation of previous RTGS software used by ABL.
- To identify the additional benefits that clients / employees are getting from the new RTGS software.
- To know the challenges, those are faced with introducing the new RTGS software in ABL.
- To know the difference between BD-RTGS and Bangladesh Electronic Fund Transfer Network (BEFTN) system.

The first objective of this report is to know about RTGS process of Agrani Bank limited and how it works. The second objective is a review of the previous software that has been used previously before the implementation of BD-RTGS. The third objective will cover the benefits BD-RTGS is providing to the bank and its clients. The fourth objective is to explore the challenges that were faced after the implementation of this system and lastly, the fifth objective is to outline the differences between BD-RTGS and another payment system with the acronym of BEFTN.

3.5 Different aspects of job performances

The main aspects of better job performances of a corporate person are to develop and to maintain good communication with employees and colleagues. This will help to avoid any kind of communication gap among them as well as any sort of misunderstanding.

Another important aspect of job performance is to have a positive attitude towards the job. And also, that person needed to show the dedication to do any task and follow the organizational

instruction properly. That person should be attached to his job, and care for what he is doing should be accurate.

When we use or mention the word "bank", we can understand that it is a formal place. So, formal and professional attitude is required from the employees who provide services to their clients. Also, they need to maintain a fair procedure of providing services to their clients so that they can earn a positive attitude and goodwill from them.

My instructors were always being so nice to me and taught me very well about my job. That is why I was able to do my job very correctly and never had made such a big mistake so that I had to face any difficulties or punishment in my workplace.

Chapter-4: Methodology of the Study

In order to fulfill my objectives and prepare my report unique, I have applied several methods to collect necessary data. I have mainly accentuated on observation by my own during the period of my internship at Agrani Bank Limited rather than only relying on the Books.

In order to prepare my complete report of my internship on ABL, I have taken information from two types of sources. The **primary source** behind this report is the collected data through conducting interviews with relevant personnel and the **secondary sources** from various journals sites and relevant information web pages.

- To collect data, I tried to ask questions to know more about RTGS to my supervisor. He was very helpful and gave me some information about RTGS which was unknown about it. I also tried to conduct a face to face discussion session with the personnel who are handling the process first hand. Moreover, I took feedback from the users asking their take on the performance of the RTGS process. I personally also used the information gained from my own experience using the system itself.
- I also did elaborate research by looking into secondary sources like online journals, newspapers and relevant knowledge sources, annual reports of ABL, general reports, banking related books, some selected books and journals, manual of RTGS of Bangladesh and few other publications which are related to my report.

4.1 Data Processing and analyzing

After collecting both the primary and secondary data, it processes in various ways. Data has been computerized and processed by using MS Word, MS Excel. To analyze the data, it has presented in tabular form, percentage form with necessary chart and graphs. After computerized processing, the data are analyzed for making the report.

Chapter-5 An Analysis of Real Time Gross Settlement (RTGS) of Bangladesh

This following report is going to cover about Real Time Gross Settlement (RTGS), its function as a process for payments and its limitations.

5.1 Literature Review

According to Dent and Dison (2012), electronic payments are becoming part of the mainstream modern economy. In the United Kingdom, "over 98% of sterling payments, by value, are made electronically." In this new reality, the concept of „settlement agent“ has become a new reality to make these transaction processes safer and easier. Dent and Dison (2012) defined the term settlement agent as a facility that helps its customers to transfer funds with other accounts regardless of the bank entity. The settlement agent facilitates a common transfer platform between different banks so that complications that arise from the interbank transactions can be avoided. Settlement agents use a form of assets that is known as settlement asset (usually electronic money) to settle interbank obligations between two banks. In this case, both banks keep a joint account to the settlement agent. (Dent and Dison, 2012) “Settlement agents could either be a commercial or a central bank.” (Dent and Dison, 2012)

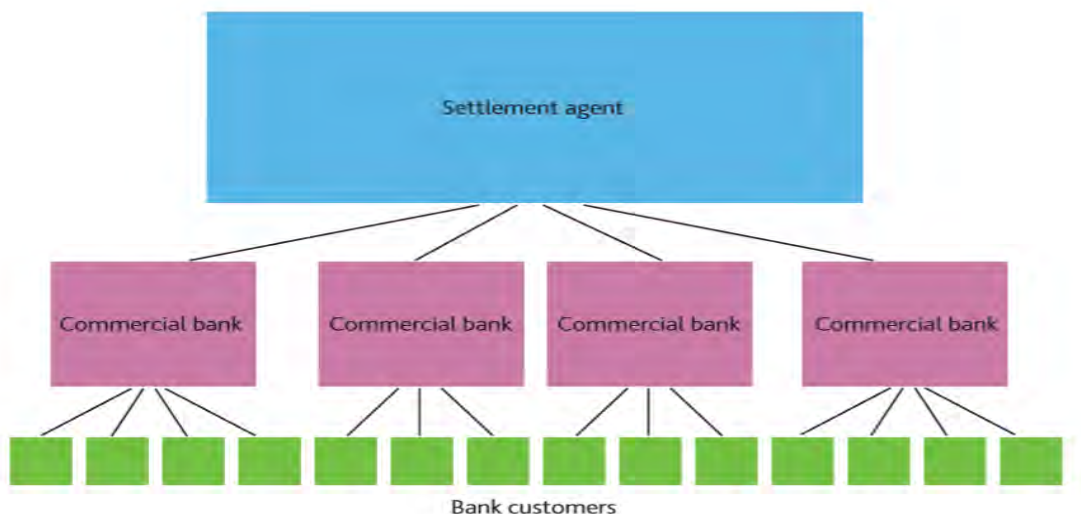


Figure-5.1: Pyramid Account Structure (taken from Dent and Dison,2012)

There are two types of settlement models to implement this pyramid account structure facilitated by the settlement agent. They are Deferred Net Settlements (DNS) and Real Time Gross Settlement (RTGS). (Dent and Dison, 2012)

In this paper, primarily the Real Time Gross Settlement system will be focused on. “Under the RTGS model, payment instructions are exchanged and settled individually on a gross basis throughout the business day.” RTGS model is comparatively safer in terms of potential settlement risk as all the payments within this system are processed on an individual basis. Also, RTGS provides an intuitive easy to implement the logical link between cash asset and securities asset. (Dent and Dison, 2012)

Due to these reasons, RTGS has become a popular settlement system throughout the world. This system has also faced some challenges over the previous years. In 2009, the European debt crisis triggered a controversy that the system had failed to be flexible enough in dealing with the real-time crisis properly. (Eichengreen et al., 2015) To eliminate this risk, several countries including the United Kingdom currently also use an improved version of the RTGS system to conduct settlements; it is known as Clearing House Automated Payment System (CHAPS). (Bank of England Quarterly Bulletin, 2016) This decision was from an investigation done by Bank of England on the technical glitch that caused a mass backlog. (Walker, 2014)

According to Mudenda (2016), the banking industry has a very uncertain environment, where changes in certain conditions affect each operation. RTGS systems are, therefore, not above falling into the pitfall of potential risks. The primary potential risks that RTGS system faces are possible errors in the settlement phase, human error and replacement risks. These potential risks could have a catastrophic impact on the bank business.

The most vulnerable window during a settlement process is the delay between payment initiation and completing of the transfer. This window's time-length is directly proportional to the amount of the risk. Secondly, human error is another most likely risk that could cause a severe negative impact. RTGS process is very involved, and therefore, it is significantly prone to human error. The third most significant threat of operating the RTGS system is the replacement risk meaning the inability to replace used funds could lead to a liquidity crisis for the bank. (Mudenda, 2016).

Apart from the risk as mentioned earlier, RTGS also classified other probabilistic risks of using the RTGS system. They are given below-

ID	Date Raised	Raised By	Risk	Description of Risk	Priority Rating
A	Mar-16	Kombe and Collins	Settlement	Delay between payment initiation and final transfer	1
B			Human	Error of entry by operator	2
C			Replacement	Inability to replace used funds	3
D			Legal	Litigation by bank client	4
E			Fire	Damage of RTGS hardware due to fire	5
F			Credit	Inadequacy of available funds	6
G			Technology	RTGS system internal and external failure	7
H			Hacking	Intruder accessing and commanding RTGS instructions	8
ID			Liquidity	remitting bank or institution unable to meet its obligation	9
J			Theft	Absolute loss of funds due to theft	10
K			Fraud	Indiscriminate move of funds	11
L			Systematic	Interbank transfer failures	12
M			Operation	Failures in internal control system	13

Figure-5.2: Potential Risks of using the RTGS System (taken from Mudenda,2016)

Having said that, RTGS is still considered to the first settlement systems in the developed economies. Willison (2005) stated that the main reason behind the trend of using this system is the perceived need to reduce the potential risk found in other hybrid payment systems like deferred net settlement system.

Lastly, this system was introduced in Bangladesh in November of 2015. This system uses the Society for Worldwide Interbank Financial Telecommunication (SWIFT) network rather than using the Virtual Private Network (VPN) in its first phase of implementation. (SWIFT Newsletter,2015)

6. Findings of the Study

The findings according to the stated objectives of the report are discussed below-

6.1 The Process of real-time gross settlement (RTGS)

A Real Time Gross Settlement is an electronic fund transfer mechanism for domestic as well as the foreign transaction in real time. RTGS system is linked with Bangladesh bank and by the help of RTGS payment system transferring funds has become easier, safer and more convenient. More importantly, the settlement for a transaction has zero waiting periods. Through the RTGS process, the funds are transferred from one bank account to another bank. The funds which depend on the beneficiary bank's internal procedures have their own software to run RTGS payment software. According to (Hobijin, 2007), RTGS was first introduced in 1970, in the USA. After that in 1984, the United Kingdom and France both independently developed RTGS type systems. The French system was called SAGITTAIRE, and The UK system was developed by the Bankers Clearing House which was called CHAPS. Following their process all over the world are introduced this payment method and the system is developing day by day.

In October 2015, Bangladesh bank also introduced RTGS in Bangladesh for the first time. Now, like other countries, Bangladesh also does not need to wait for the transaction. It only takes thirty minutes maximum (according to the RTGS software operator). But the transaction should be more than one Lac not less or equal to one Lac of local as well as foreign currency transaction. According to (BangladeshBank) there are more than seven thousand online branches of 55 scheduled banks are connected to the RTGS system out of total eleven thousand bank branches of Bangladesh. At present, RTGS-BD is currently allowed to handle local currency, but domestic foreign currency transaction is expected to be launched very soon.

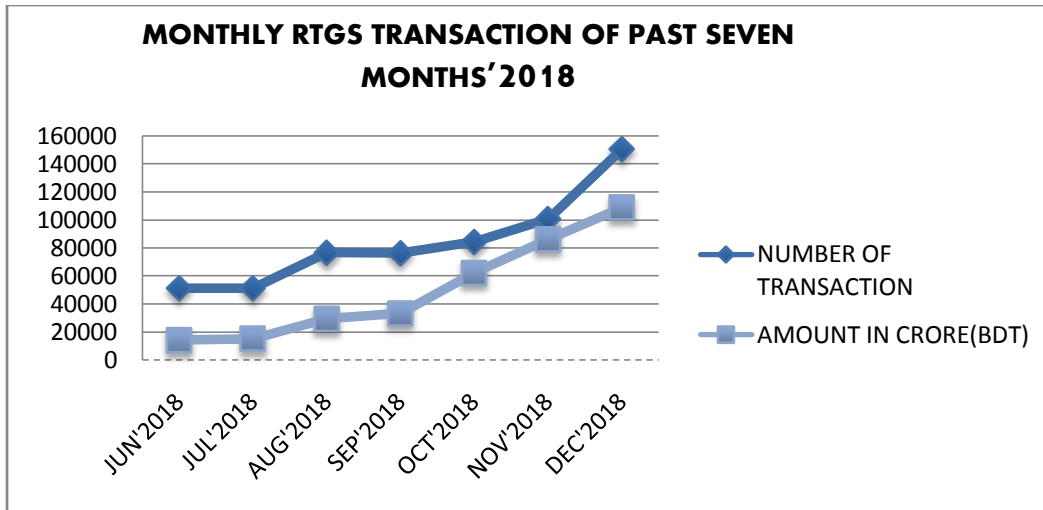


Figure 6.1: Transactions history of RTGS system of ABL

6.1.1 Real Time Gross Settlement (RTGS) payment procedure

The most of the RTGS systems is owned by the Bangladesh bank and direct participant (by whom the software is running). The whole system of RTGS is linked with the Bangladesh bank's internal real-time accounting system. But policies of accessing and running the system might vary. If the participant wants to get access directly in the RTGS system, they need to hold their account by the central bank.

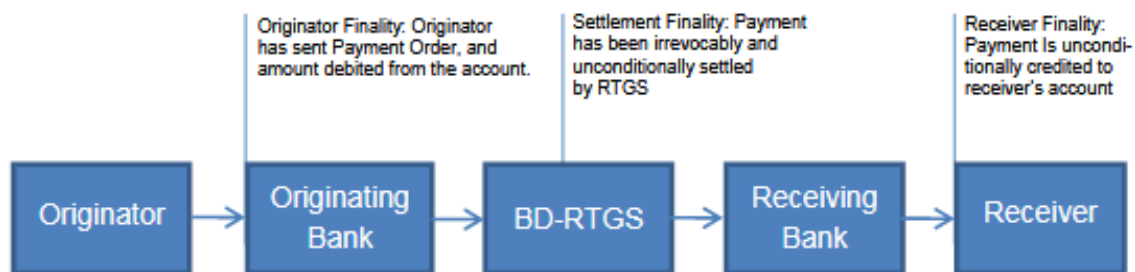
BD-RTGS provides only credit transfers from participating banks when Bangladesh bank allows settling the transaction. According to Bangladesh Bank there are several participants in BD-RTGS, and they are-

1. The **Originator** is the bank itself who works with Bangladesh bank and will agree to make the payment for the applicants through the RTGS system. Sometimes Bangladesh bank also can act as an originator and can tell the participants which account and what amount should be debited or credited.
2. The originating bank is a **Mediator** between clients and originator. The originating bank gets the instruction from the clients or applicants and then they sent the instruction

through RTGS process for the payments to the central bank and forwarded the instruction to the system.

3. **Bangladesh real-time gross settlement system (BD-RTGS):** This system is run by the central bank itself. When BD-RTGS receives the instructions from the originating bank for the payment then it checks all the information of the clients then does the settlement.
4. **Receiving Bank:** they get the instruction from BD-RTGS and actually in which bank the fund will be transferred and inform that recipient bank.
5. The **Receiver:** the person or the organization under which name or account number the fund will be transferred and get the payment.
6. The **Approver:** The fund transfer is done by three individual ID. Firstly, **Maker** input the total data and creates the information, secondly, **Checker** check and input the amount of the money that will be transfer again. Lastly, the **Approver**, he will approve and finalize the fund transfer.

A screenshot which is taken from Bangladesh bank's guideline on BD-RTGS process is given below for better understanding about the payment system of BD-RTGS-



The entire system is running through a messaging process. Bangladesh Real Time Gross Settlement accepts messages from the participants for the purpose of money transfer from one bank to another bank. The content of the message is formatted in a technical way. This definition follows a specific code of a protocol, and by seeing these codes, operators understand the meaning of the message.

Examples of some of the protocols and messaging types are giving below-

Message Type (MX)	MT Equivalent	Description	Message directions
camt.003	MT985/STAT	Get account	Participant→RTS/X
camt.004	MT986/STAT	Return account	RTS/X→Participant
camt.004	MT986/PCPR	Notification for Participants having not enough funds to cover their Net Debit position	RTS/X→Participant
camt.005	MT985/SQDC	Request for RTGS payments queue summary information	Participant→RTS/X

Figure-6.1.1- The protocols and messaging types of RTGS

Here for example in this box MT985 is a code which means participants will get the account. And then participants input the recipients' account number.

Also, STAT means the code that participants will put should be unchangeable and statically secured. So, every MT equivalent or MT protocols have different meaning and different tasks. The messaging system of RTGS is through participants to the system or the system to participants.

6.1.2 Transaction reference

The reference should be within sixteen digits which should be provided by the originating bank after getting RTGS payment instruction. First three digits are the bank code, the next six digits are for value date, e.g. DDMMYY, and the last seven digits are the transaction serial number. Also, the applicant's name, their national ID card number is also required to avoid risk issues.

6.1.3 The payment processing methods

All the participants (operator) have their separate settlement account for each currency in Bangladesh RTGS system, and each of them has a separate account number.

As mentioned earlier, the limitation of transferring money through the RTGS system starts with one Lac and acceptable up to 17 digits in the case of transferring BDT. All the mechanism and

process of BD-RTGS is run on the working days only, not on Friday or Saturday. But the process will be continued by the next working days except for the government holidays.

The most important thing of doing the transaction through BD-RTGS is the payment priority codes, and they vary from zero to 99. For example – if the transaction type is under exceptional and urgent circumstances only then they will get the top priorities. And if the payment is settled or rejected mode will be considered as very low priority mode. But the entire situation may be modified under Bangladesh bank's observation. It doesn't mean that the bottom rated which was less or low priority transaction type cannot become top-rated transaction type. And also the priority can be changed by the participant's web access.

6.2 How ABL Run their Real Time Gross Settlement (RTGS) software

6.2.1 RTGS Inward

Inward transaction means that some other bank has send money in Agrani Bank Limited. When we open the RTGS software, first thing we see that is a graphical representation of Inward and Outward transaction on the Dashboard. This graph will clearly show you how much transaction you did in the month. It shows following- 1) Total Receive file 2) Monthly Inward success file 3) Monthly Inward success Amount.

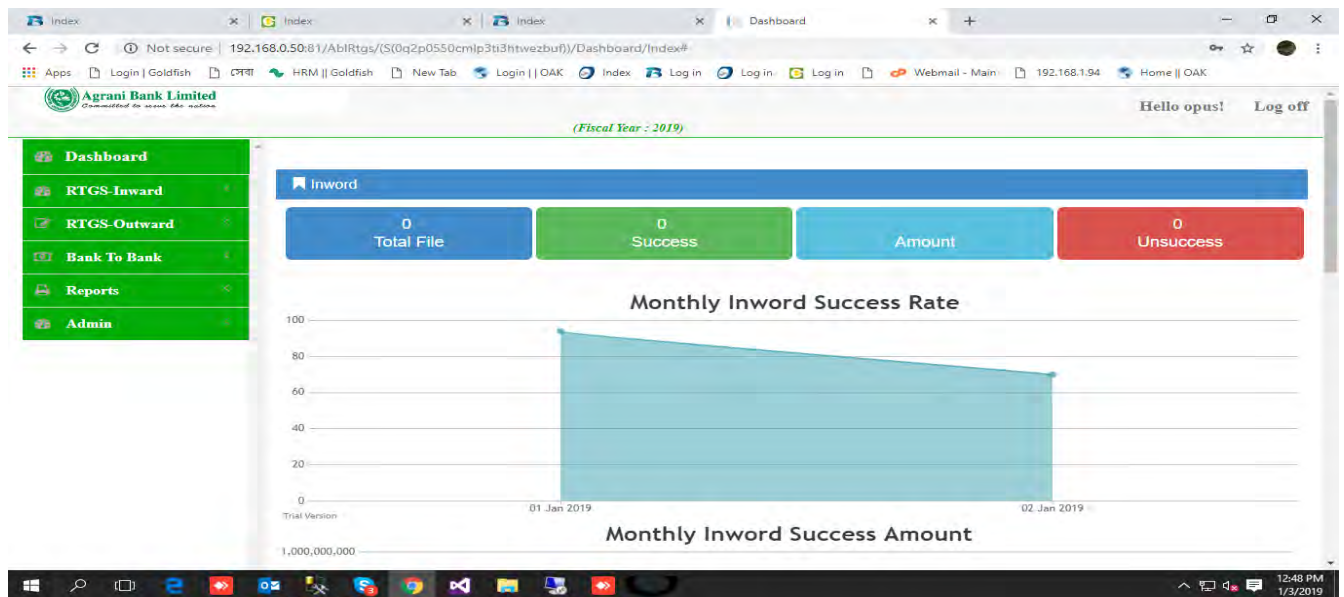


Figure1: Dashboard for Inward RTGS

RTGS Inward Report Submenu

In RTGS report submenu is print all the reports of transactions by a specific message type and data range. Here you can see all the details of inward transaction.

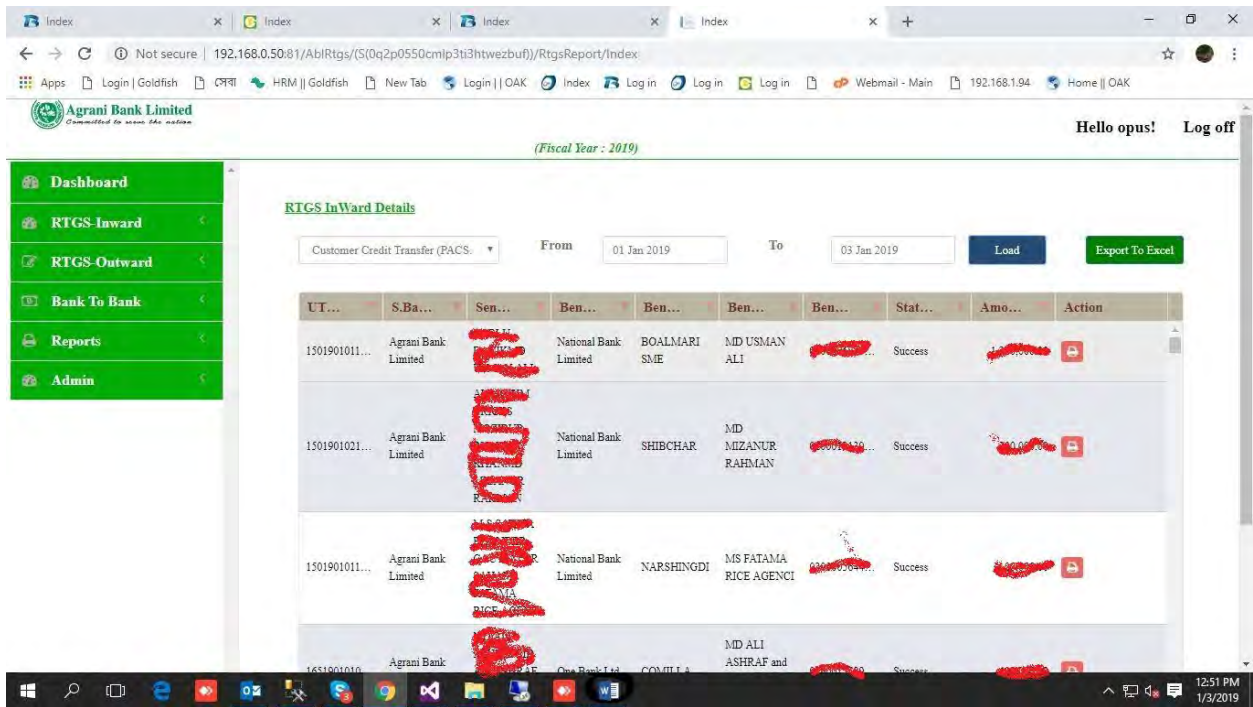


Figure6.2.2: RTGS Inward Report

Inward Success List Submenu

All the uploaded successful RTGS Inward transaction files are displayed.

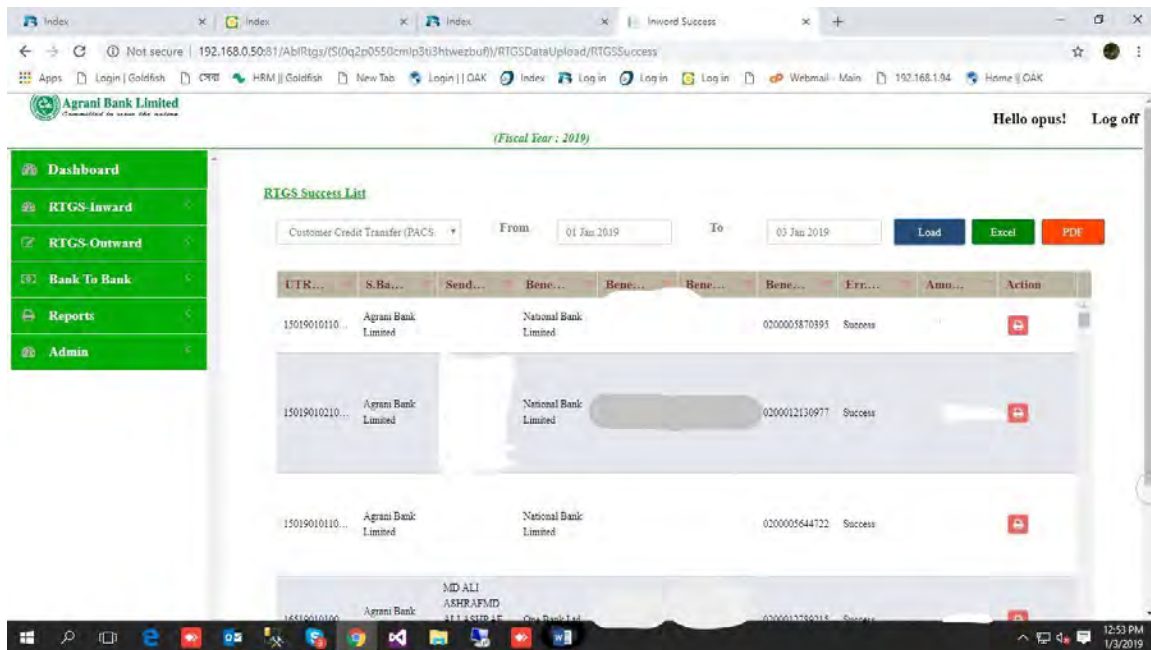


Figure6.2.3: RTGS Inward Success List

Inward RTGS Return List Submenu

All the uploaded returned RTGS Inward transaction files are displayed here. Only failure/invalid RTGS Inward transaction data detail list are shown here. Return or rejection can be happen because of having insufficient funds of the bank. It can be placed when bank has sufficient balance of their account.

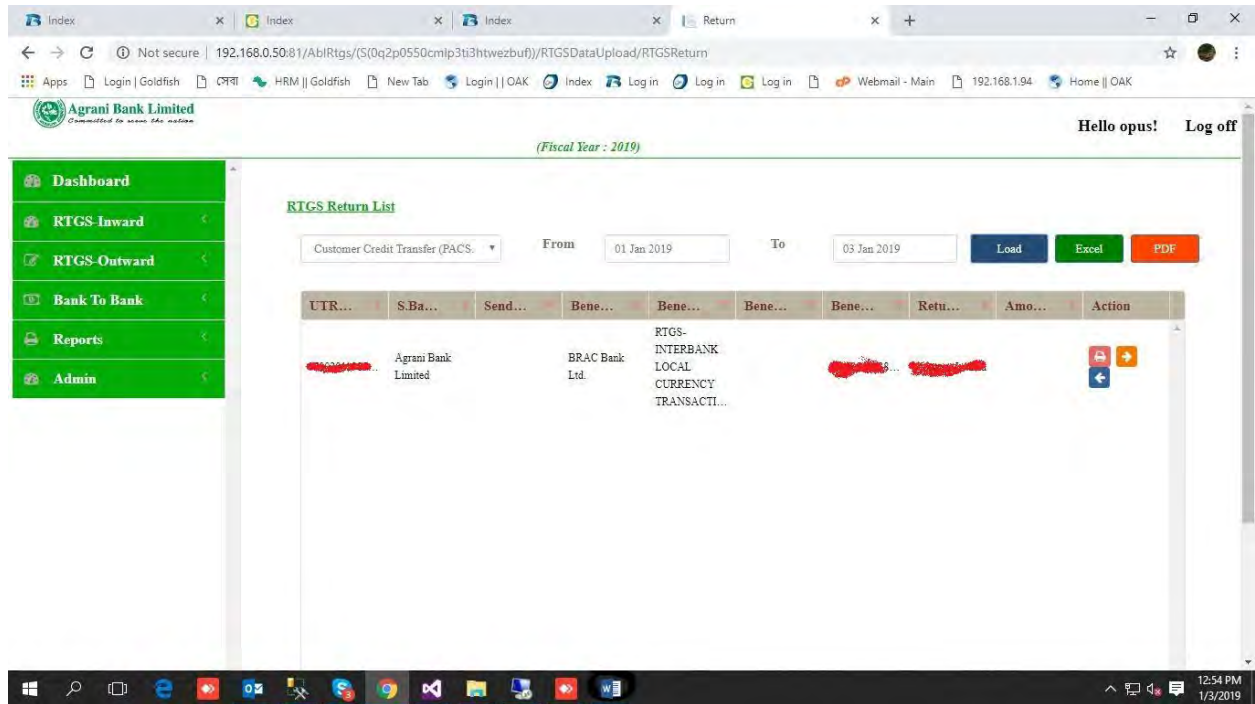


Figure 6.2.4: RTGS Inward Return list

6.2.2 RTGS Outward

Outward transaction means Agrami Bank has sent fund through RTGS software to other banks. Here graphical representation of Outward transaction for the last one month is shown. It has three sections: 1) Total receiving file 2) Monthly Outward success file 3) Monthly Outward success Amount. Here you can get the whole outward transaction of last one month.

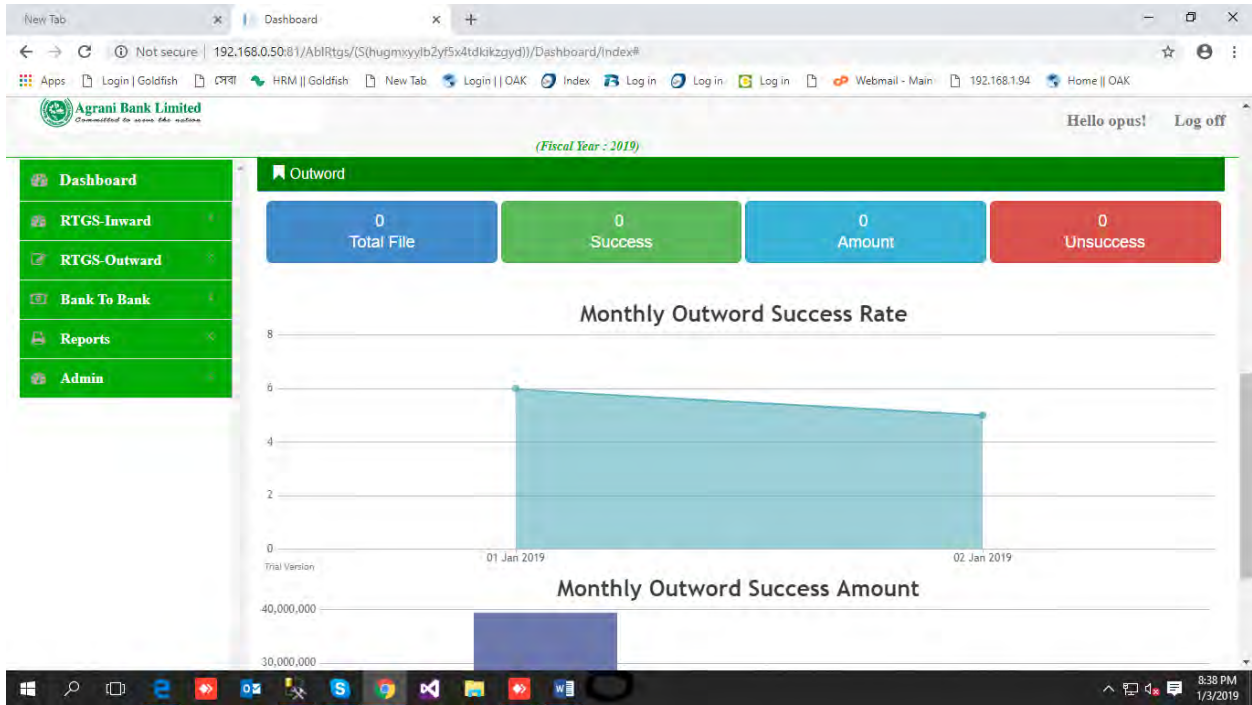


Figure 6.2.2: Dashboard for Outward RTGS

Outward Success List Sub Menu

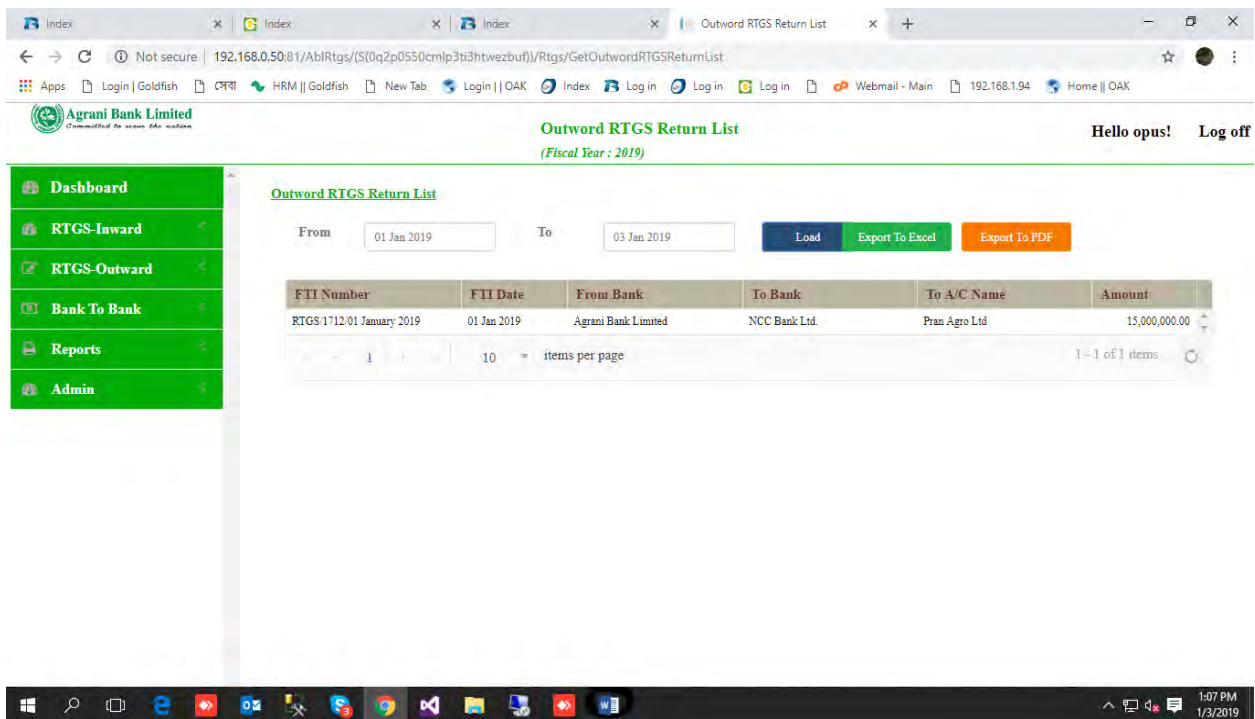
RTGS Outward successful transaction files are shown this page.

FTI Number	FTI Date	From Bank	To Bank	To A/C Name	Amount
RTGS 1723 02 Jan 2019	02 Jan 2019	Agrani Bank Limited	Nanonal Bank Limited		
RTGS 1722 02 Jan 2019	02 Jan 2019	Agrani Bank Limited	Islami Bank Bangladesh Limited		
RTGS 1721 02 Jan 2019	02 Jan 2019	Agrani Bank Limited	Islami Bank Bangladesh Limited		
RTGS 1720 02 Jan 2019	02 Jan 2019	Agrani Bank Limited	Islami Bank Bangladesh Limited		
RTGS 1719 02 Jan 2019	02 Jan 2019	Agrani Bank Limited	HSBC		
RTGS 1718 01 January 2019	01 Jan 2019	Agrani Bank Limited	HSBC		
RTGS 1717 01 January 2019	01 Jan 2019	Agrani Bank Limited	United Commercial Bank Ltd.		
RTGS 1716 01 January 2019	01 Jan 2019	Agrani Bank Limited	HSBC	TVS Auto(BD) Ltd	1,000,000.00
RTGS 1715 01 January 2019	01 Jan 2019	Agrani Bank Limited	National Bank Limited	Uttara Motors Limited	1,475,000.00
RTGS 1714 01 January 2019	01 Jan 2019	Agrani Bank Limited	Pubali Bank Ltd.	Pran Agro Ltd	21,500,000.00

Figure 6.2.1: RTGS Outward success list

Outward Return List Sub Menu

RTGS Outward Returned transactions records are shown in this page. The failure or invalid RTGS Outward transaction data detail lists are shown when the users press the “Load” button. . Return or rejection can be happen because of having insufficient funds of the sender bank. It can be placed when bank has sufficient balance of their account.



The screenshot displays the 'Outward RTGS Return List' page for Agrani Bank Limited. The page features a green sidebar menu with options: Dashboard, RTGS-Inward, RTGS-Outward, Bank To Bank, Reports, and Admin. The main content area shows the title 'Outward RTGS Return List (Fiscal Year : 2019)' and a 'Hello opus! Log off' notification. Below the title, there are filters for 'From' (01 Jan 2019) and 'To' (03 Jan 2019), along with buttons for 'Load', 'Export To Excel', and 'Export To PDF'. A table lists the transaction details:

FII Number	FII Date	From Bank	To Bank	To A/C Name	Amount
RTGS 1712 01 January 2019	01 Jan 2019	Agrani Bank Limited	NCC Bank Ltd.	Pran Agro Ltd	15,000,000.00

At the bottom of the table, there are pagination controls showing '1' items per page and '1 - 1 of 1 items'.

Figure 6.2.2: RTGS Outward Return List

Outward RTGS Approve Sub Menu

In the outward RTGS approve Sub menu, all the outward RTGS Transactions are filed with a list with the details of sender and beneficiary information for approval.

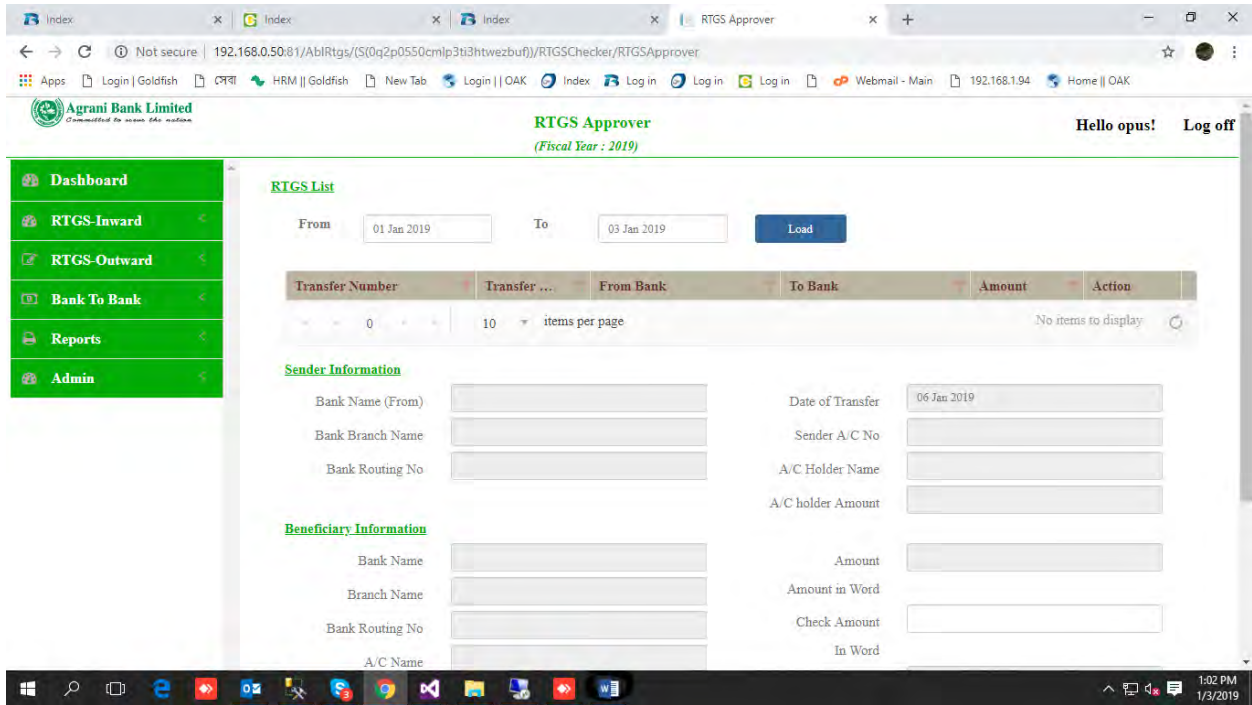


Figure 6.2.3: RTGS Outward Approver

6.2.4 Bank to Bank Posting Sub Menu

Operator uses this menu when one bank is facing for fund crisis. They ask another bank for loan based on call money rate. It is basically for one day loan.

The final RTGS Transaction list shows with specific data range when you press the “Load” button.

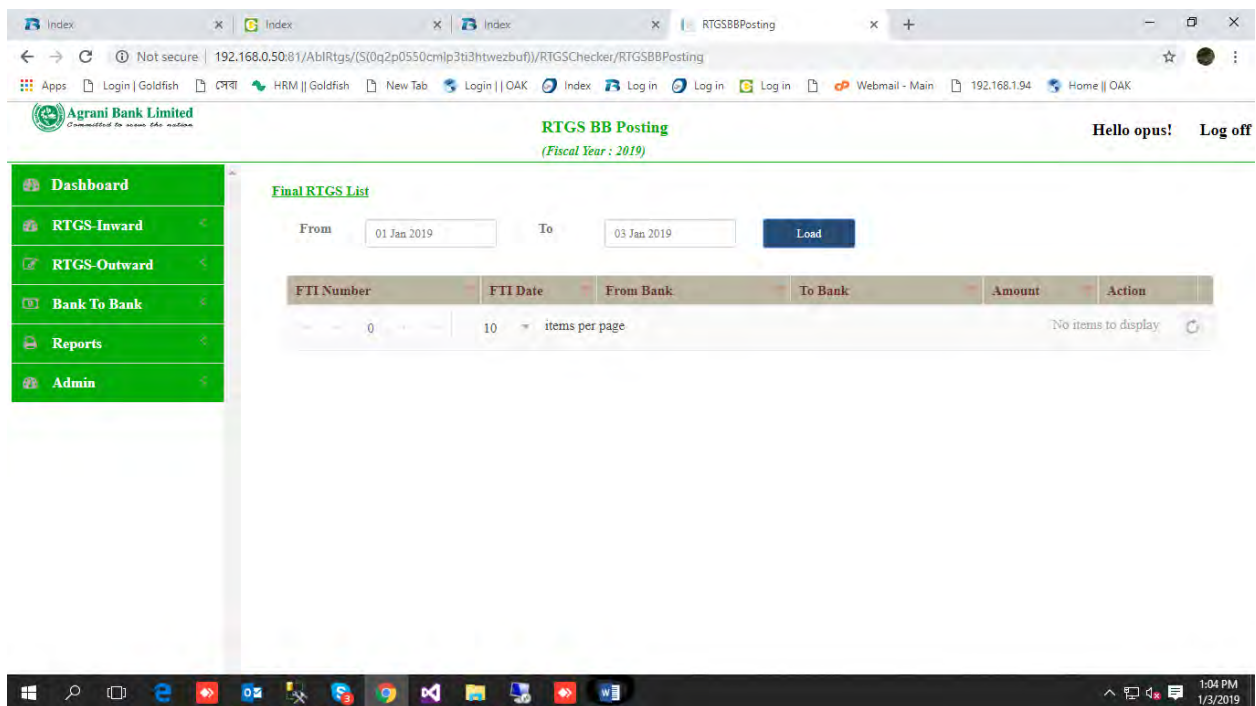


Figure6.2.1 RTGS Bank to bank Posting

Bank to Bank Multiple RTGS Sub Menu

In the Bank to Bank Multiple RTGS transaction, Banks can send money in multiple banks at a time.

In this page all necessary information should be filled and then press ADD button. Information's are displayed in grid. Multiple RTGS can be created by pressing „Save“ button.

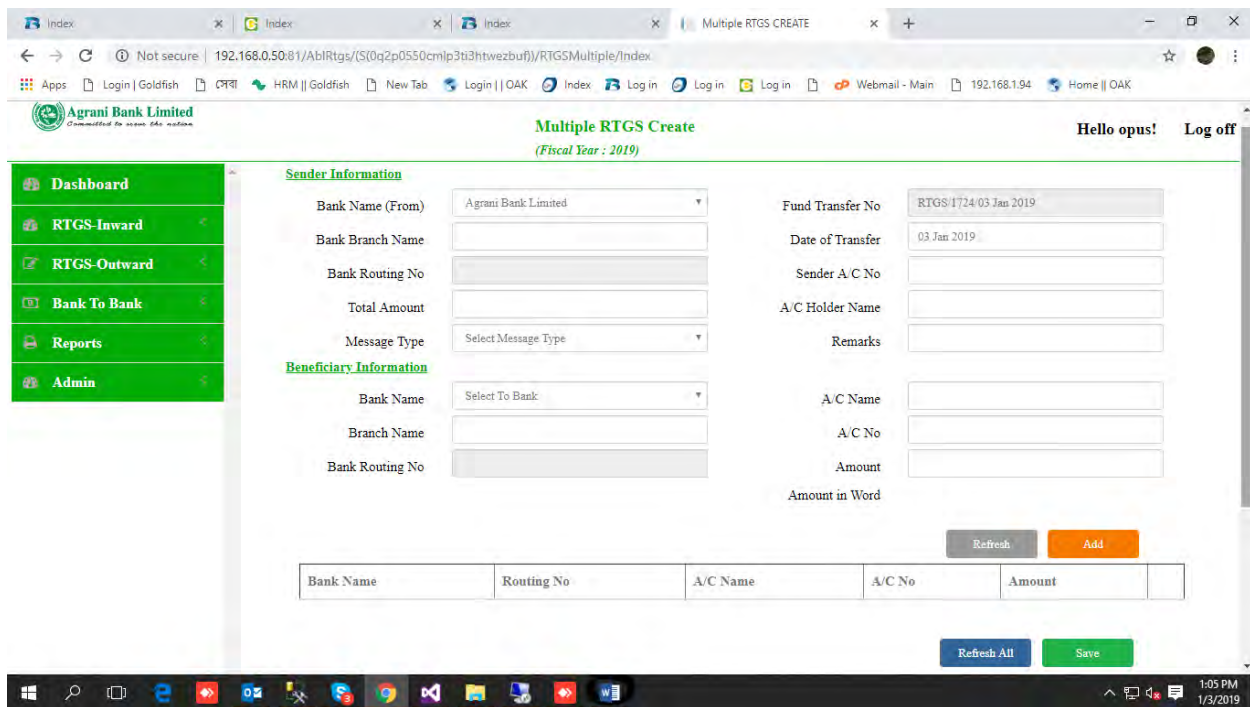


Figure 6.2.2 Multiple RTGS Create

Bank to Bank Multiple RTGS Check Sub Menu

In the Bank to Bank Multiple RTGS check sub menu, all the transactions are checked or approved with specific date range.

In this page RTGS transaction files are displayed in grid and all the information are shown in text the box. User can approve or Reject the RTGS file by pressing „APPROVE“ or „REJECT“ button.

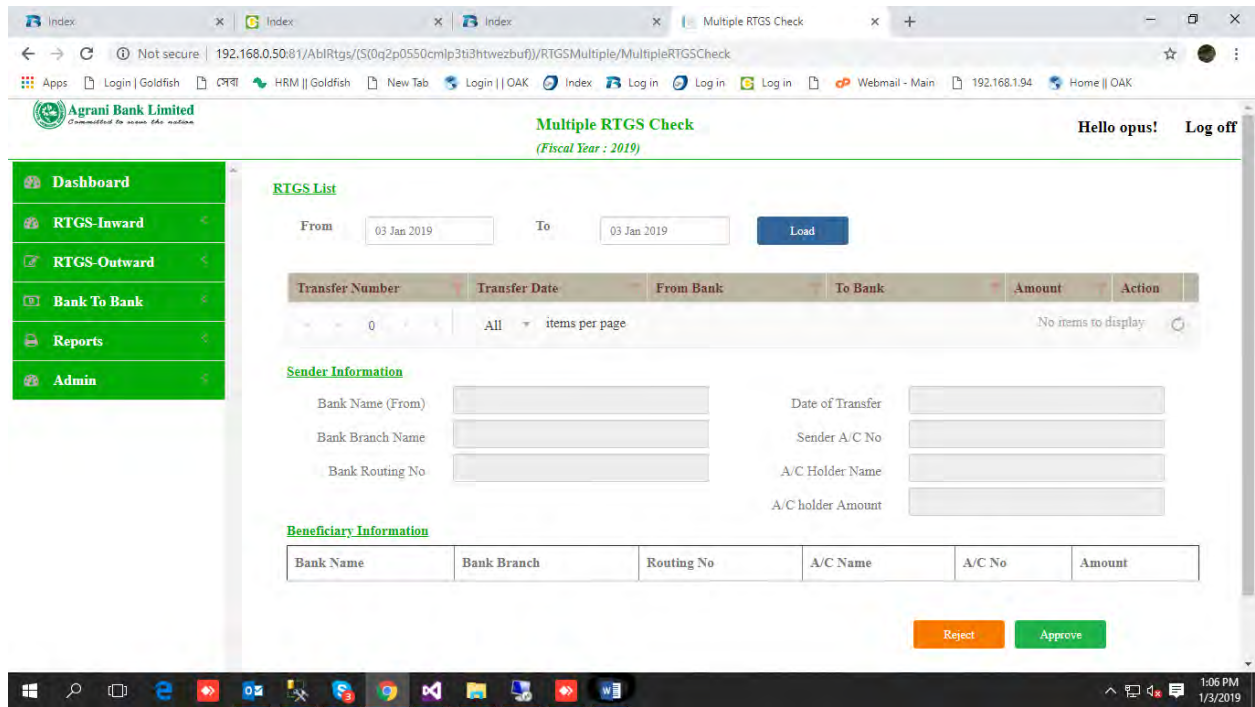


Figure: Multiple RTGS Check

Bank to Bank Multiple RTGS Approve Sub Menu

Here the Multiple RTGS transaction files are approved. In this page RTGS transaction file are displayed in grid and the information's are shown in text box. User can approve or Reject the RTGS file by pressing „APPROVE“ or „REJECT“ button. User can print any inward or outward report from this page. Different types of Inward and Outward report are generated here. User also can upload Bulk or the size of data from excel sheet.

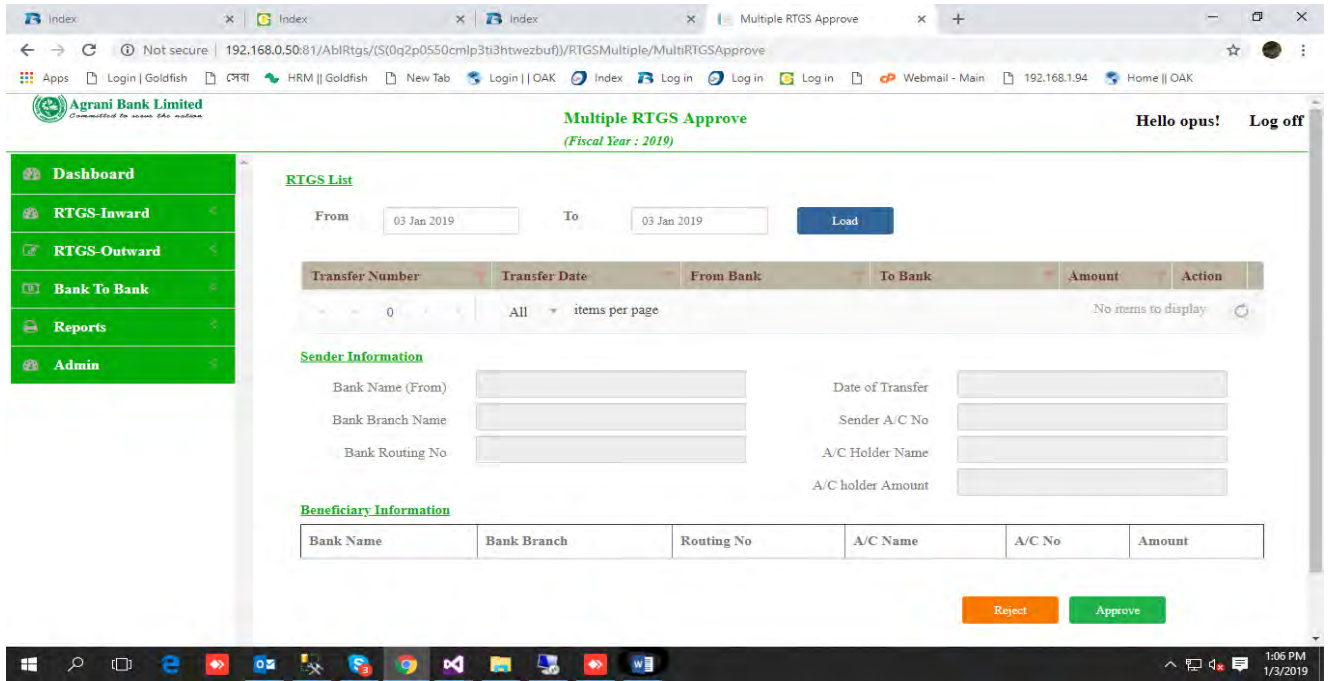


Figure: Multiple RTGS Approve

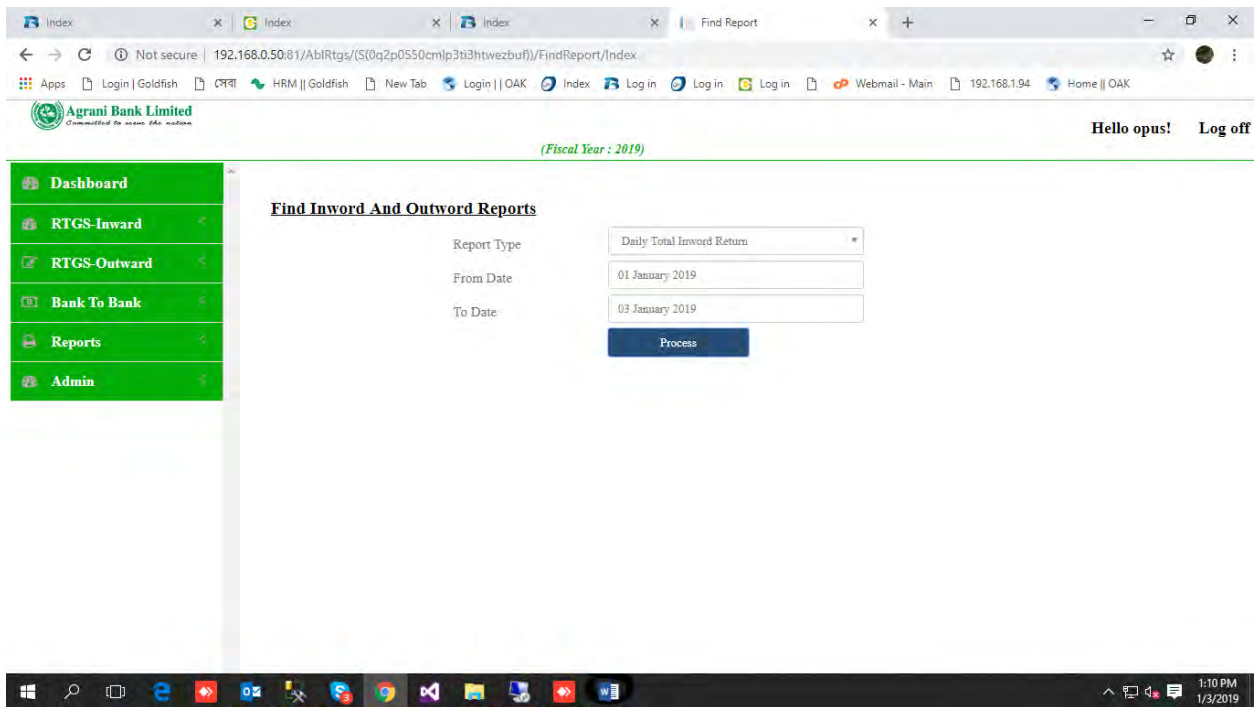


Figure 6.2.3: Find Inward And Outward Reports

6.2.5 Admin Menu

Here users create new accounts for the users and also can reset password. To create a new user account, fill all the necessary field and press REGISTER button. Admin users are the authorized person to access this page. Admin user can access page of other users in this page.

6.3 To identify the limitation of previous software

In order to find out the limitation of RTGS process, which was run previously, I asked the operator as well as my supervisor about it. Some of the limitations of previous RTGS process which was mentioned by them are stated following-

- Previously RTGS was run by the head office only. This facility was provided by the head office of ABL, and the service was not available in other branches. But now most of the corporate branches have this RTGS service.
- To transfer the fund, it requires more time comparing to the new RTGS fund transfer system. Previously it needed more than one day but now it takes maximum 30 minutes to one hour for fund transfer through RTGS software.
- Previously in ABL the charged for every transaction is higher than they are charging at present. Now they are charging one hundred per one Lac BDT taka transaction.

6.4 Additional benefits that clients and employees are getting from the new RTGS software-

The implementation of the Real Time Gross Settlement - Bangladesh (RTGS -BD /RTGS) system has made the transaction process between banks quicker as every payment process now occurs in real time. This reduces the transaction processing delay massively and increases the productivity of the bank's clients in a very significant way. This is the biggest benefit of this system for participating clients.

This transaction process has also increased profit for Agrani Bank. As every payment transaction happens in real time, Agrani Bank also gets their payment in real time with every purchase. Thus, this process has created a new cash flow process for them that brings more money to them than the previous systems. They have also fixed a new charge rate for this new system which is Bangladeshi Tk. (BDT) 100 for every transaction of 100,000 BDT.

Apart from settling real-time payments, RTGS system also has some added features that are very handy. According to the official documentation of Bangladesh bank's RTGS systems, this system also provides functions for monitoring payment flows, letting the bank keep reserve accounts, and providing an intraday liquidity facility. (Bank, 2015)

These features supply additional benefit for both clients and Agrani Bank Limited. A detailed discussion on these benefits is given below-

In the RTGS system, there are options for monitoring payment flows done by each participant. According to Bangladesh Bank's rulebook (2015), every transaction should be monitored by their respective parties to ensure the proper settlement of the payment instruction. They are also required to monitor the payment instruction that is in the queue as well. So, every client taking part in the RTGS process needs to see every step the payment process between them. The system used in Agrani Bank provides a detail user interface to its clients where they can monitor every step of the payment process very smoothly.

This monitoring system ensures proper transparency because every participant in the transaction can see every step of the payment instruction. Therefore, the bank can ensure transparency between every involved party. This process also makes it easier to address mistakes should they occur in the payment process.

Seeing from the clients' perspective, they can also get a detailed record of these transactions after the finishing of the process. Therefore, it is even easier for them to keep track of their transactions. Also, they can get these records almost immediately after the transaction and in a completely automated way ensuring the security of these sensitive data.

As the central bank, Bangladesh Bank also has the responsibility to check the authenticity of the issued payment structure to keep the integrity, security and confidentiality of the system. RTGS system also lets the central bank to keep records of all relevant payment instructions. Thus, the bank can successfully police and mediate issues raised in the RTGS system.

The system also lets Agrani Bank's clients reserve accounts before the day of the transaction. According to Bangladesh Bank's rulebook (2015), each participant of the RTGS process needs to have one settlement account per currency that means each type of currency transaction should occur in a single account. Setting up accounts in this way causes an additional delay in the

operation. So, if any clients want to avoid this additional delay, they can wish to reserve an account that will be prepared in the day before the scheduled transaction. In this case, each participant banks need to provide Agrani Bank with a standing instruction to deduct a prefixed sum for using the reserve accounts. Then at the beginning of the transaction day, the reserve accounts get updated with the settlement account balance and payment instruction in advanced. The bank also receives an added charge for providing this feature.

All in all, these are the significant additional benefit that both the bank and their clients getting from the RTGS-BD system.

6.5 Challenges faced to implement RTGS-BD system

In Agrani Bank Ltd, at the first phase of the initialization of the system, the operators faced multiple challenges.

No training was given- The biggest challenge was to get familiarized with a very delicate system which they have not experienced before. According to their opinions, the users of this system feedback of training to develop the necessary skills for adopt the system quickly. This lack of training and lack of knowledge of the system created confusion in configuring the system. As a result, many tasks in the system were left automated meaning operators did not have any control over them. This lack of control made things challenging to adjust whenever a change was needed. The settlement system is real-time in nature. So, this inability to adjust things quickly lead to a lot of delay in processing settlements, thus defeating the purpose of implementing this system in the first place.

No test run before implementation- At the time no test was run before the system's implementation, no beta test was held to evaluate the performance of the system in the new environment. Due to this lack of testing, users faced a lot of bugs (technical glitch) that hindered the entire payment system of the bank. This delay caused to take a significant financial loss in operating time.

Over the next years of the implementation of this system, Agrani Bank has tried to counter these deficiencies by providing on the job training for the employees who frequently work with them.

This training eventually helped to sort out some of the problems. However, some technical problem still exists.

Less security issues-At the beginning of starting this process, the bank had faced added scrutiny about security from the clients. They were concerned about the safety of the conducted transactions. To resolve their concern, Agrani Bank has deployed state of the art cyber security system.

Over the last two years, a lot of these mentioned challenges have been met by bank management. The bank also has complied with the central bank's recommendation for using the system. They have thus made documented policies and training guides to handle the system properly. They have also run drills on the operators to ensure that they can handle the technical glitch and other financial issues with the software of the system. As a result of these steps, handling the system has become smoother for the current operators.

The bank still faces trust issues from its clients on using this system, but over the years this trust is increasing, and more clients are getting interested in making payments through this system.

6.6 The difference between Real Time Gross Settlement and Bangladesh

Electronic Fund Transfer Network (BEFTN)

We know that both the RTGS and BEFTN systems fund transfer system from one bank to another bank, but still, there are some differences between them. The difference between Real Time Gross Settlement (RTGS) and Bangladesh Electronic Fund Transfer Network (BEFTN) are-

1. **Transaction process:** In RTGS the money transaction is done instantly but in BEFTN Money transaction is done normally at the end of the working day.
2. **Transaction Value:** the minimum transaction value of RTGS is one Lac and there is no maximum limit for the transaction but in BEFTN There is no minimum or maximum transaction value is set. Any amount can be transferred through BEFTN process.
3. **Risk:** The risk associated with transferring money through RTGS software is high comparative to BEFTN process. For example- fraud. The reason behind having high risk for RTGS fund transfer is because the process of fund transferring is faster than BEFTN and user get less time for verifying the details of the clients. But in BEFTN risk is lower because user get enough time for verification when they transfer money through this process.
4. **Charges:** In RTGS, you need to give charges for the money transaction. Clients need to pay 100tk per one Lac fund transfer. But In BEFTN, you don't have to give any charges while doing money transaction by this system.
5. **Notice for return fund:** If there is an urgent notice for returning the money, all the process of returning is done instantly in RTGS software but in BEFTN fund transfer system, you can return fund after one day or whenever you want to return.

Chapter-7: Recommendation

The analysis conducted on objective 04 of this study has found some shortcomings and potential challenges that ABL management faced while implementing RTGS system. While some of those challenges were met with reasonable solutions, the bank still needs to solve a lot of existing and potential problems. This recommendation will try to focus on the most important problem that needs an immediate attention.

The system is not still completely free out of bugs and technical errors. These errors sometimes cause backlog in the system due the delay in fixing them. Therefore, the management should take steps to hire professionals and fix these software problems.

ABL has a separate team structure for supporting and operating this system smoothly. However, this structure is inherently flawed because of the power imbalances in the team dynamics. The whole team structure has been set centering only one key personnel who knows the ins and outs of operating the system properly instead of providing every member of the team with sufficient knowledge. This type of setup has created an over dependency on a single person who is having train his other teammates instead of focusing on his core job. This is creating complications in running the system and causing further delay.

In recent time, cyber crimes like hacking and cyber thieving also increased with the growth of modern technology in financial sector. The bank needs to be conscious about this problem and ramp up their security measures in accordance to the current standard of the industry. Otherwise, they might face some serious issues in the future.

Lastly, still a lot of clients of the bank are skeptical about the security and efficiency of the BD-RTGS system. The bank needs to take steps to remove this fear. Such measures could include live demonstration session of the system to give a firsthand experience to the concerned parties.

If the bank follows these recommendations, they will most likely avoid a lot of potential challenges in the long run.

Chapter-8: Conclusions

The information analyzed in this report is not enough to cover all the potential ground of using this system, because the RTGS has just been launched in January in the branch this study was conducted in. Therefore, very few activities are done on RTGS software. Due to this reason, I had to take the help of secondary research as well as asked question regarding RTGS process to head office.

As we know that banks are very restricted to provide information regarding their policies and terms to the external candidates, I was unable to get most of the information that I needed to prepare my report.

Having accepted these limitations, it can be concluded by saying that, this newly implemented system has opened the door for new revenue potential for the bank in the short term. In the long term, this system has the capability to make significant changes with the industry practices making it more efficiently suitable for this era of information.

Also because of being restricted to share information to the intern, I was assigned to only in general banking section. Because of that reason, it has become a little difficult to get the information that I needed. I had to push the operator (who operate RTGS software) again and again to share information. Also, I got a few time for me at the office time as I was in the general banking section and I had the responsibility to fill up account opening forms.

The working environment is very wonderful, and all the people who are working in this bank are really helpful towards their colleagues as well as their clients. But while I was working in the bank opening division, there is only one person who is handling all the client issues, bank opening formalities and all. My recommendation will be that if they provide more than one person in this same category job, then the job can be done better, faster, as well as effectively.

Chapter-9: What I have learned from my Internship program

During this internship program, I got the privilege to learn professionalism, to be punctual, learn about discipline, formal communication as well as enhance adaptability. I have learned to work in any complex situation, and I never thought I could be able to work in such a situation before.

On the contrary, it also has been observed that most of the employees are helping their colleagues when they face any trouble regarding their banking problems; also they make the working environment very friendly. They are always very helpful for newcomers.

There are always some clients, who make problems for the bankers. During that time it is very difficult for them to handle those clients wisely. I have seen that bankers never get angry with them or don't show attitudes towards them. They again listen to the customers' concerns and try to fix them politely. It was great learning for me to know how to deal with difficult clients.

Last but not least, all the learning's that I have learned here will be very much helpful for my future career. Now I can use those learning's and experiences properly.

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Amplification of the short forms

- 1. ABL- Agrani Bank Limited**
- 2. BIC- Bank Identification Code**
- 3. RTGS- Real Time Gross Settlement**
- 4. BEFTN- Bangladesh Electronic Fund Transfer**