

2013

## Automated Cheque Clearing System: Tools and Practices in Shahjalal Islami Bank Limited

This report is my academic learning and practical observation of clearing system of bank. I have prepared this report on the ground of Shahjalal Islami Bank Limited (SJIBL). Since the inauguration in 2001, SJIBL has been able to keep up strong position in all key areas covering capital adequacy, good asset quality, sound management, good earning and strong liquidity...



# Shahjalal Islami Bank

L I M I T E D

Committed to Cordial Service



**Internship Report  
on  
Automated Cheque Clearing System: Tools and  
Practices in Shahjalal Islami Bank Limited**

**Course BUS 401**

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**Prepared For**  
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Senior Lecturer  
BRAC BUSINESS SCHOOL  
BRAC University  
**Date of Submission:** December 26, 2013

## LETTER OF SUBMISSION

December 26, 2013

To  
MD Tamzidul Islam  
Senior Lecturer  
BRAC BUSINESS SCHOOL  
BRAC University

**Subject: Submission of the Internship Report**

Dear Sir

With respect to state that, I am grateful to submit herewith the Internship Report. I have prepared this report titled "**Automated Cheque Clearing System: Tools and Practices in Shahjalal Islami Bank Limited**" as of your instruction.

The internship provided me with a good opportunity to know more about automated cheque clearing system (ACCS) and electronic fund transfer (EFT). It helped me be acquainted with the corporate culture. It also helped me know the benefits of ACCS and EFT uses and ways to improve banking performance by dint of ACCS.

I urge your apology for my shortcomings due to lack of experience. I will be glad to answer any sort of query throughout this report and I will be pleased to provide any further clarification or information in interpreting this report if you need.

Sincerely yours

.....

Abdullah Al Mamun  
09304112  
BBS  
BRAC University

## **ACKNOWLEDGEMENT**

At the very beginning, I would like to express my deepest gratitude to almighty Allah for giving me the strength & the composure to complete the internship report. Words actually will never be enough to express how grateful I am. Nevertheless I shall try my level best to express my gratefulness toward some people. Getting a finished report into a reader's hands requires the work and help of many people. My report also stands on the basis of such efforts. I would like to recognize just a few of the people who guide and help me to make this report.

At first I would like to thank my honorable supervisor MD Tamzidul Islam for giving me time regularly in his busy schedule. Special thanks to Khandakar Sakib Ahmed Vice Chairman of SJIBL for helping me for the internship placement. Also, thanks to Mr. Redwanul Hoque, Mr Sunny, Mrs Tania and Ata-ur-Rahman of SJIBL for helping me to get valuable information regarding the clearing system of bank.

I am especially indebted to Shahjalal Islami Bank Limited for providing me the opportunity for internship in their Kawran Bazaar branch.

Last, but not least, thanks to BRAC BUSINESS SCHOOL, BRAC University for the provision of internship at BBA level.

I wish to thank all of them who helped me in this work.

.....  
Abdullah Al Mamun  
09304112  
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## **EXECUTIVE SUMMARY**

This report is my academic learning and practical observation of clearing system of bank. I have prepared this report on the ground of Shahjalal Islami Bank Limited (SJIBL). Since the inauguration in 2001, SJIBL has been able to keep up strong position in all key areas covering capital adequacy, good asset quality, sound management, good earning and strong liquidity. It has also been able to emerge as a leading financial institution with highest level of reputation in the country. SJIBL is governed by its Shariah board and is consider one of the largest 'islami' banks in Bangladesh.

As it is consider that payment systems are a vital part of the economic and financial infrastructure of the country. Safe and efficient payment systems are critical for maintaining the stability of the overall financial system. The report is mainly focus on comprehensive study about the automated cheque clearing system, tools and mechanism required to operate the automated clearing system. It highlights the comprehensive benefit of automated system for different stakeholder like Bangladesh Bank, business people, commercial bank and the clients itself.

In line with the Core Banking Solution, Shahjalal Islami Bank Ltd. has successfully implemented Bangladesh Automated Cheque Processing System (BACPS) as well as Bangladesh Electronic Fund Transfer Network (BEFTN) as per Bangladesh Bank Guideline. For betterment of Customers' services, Bank has expressed and deployed different channels like ATM, POS, and Debit Cards etc. services. To make the Banking operation faster, easier, more efficient and even more effective to serve its valued customers on 24 hours a day, 365 days a year, Bank also provide the Internet and Mobile Banking facilities to their clients.

Automated clearing system is a new horizon in the financial infrastructure development initiative in Bangladesh. Automated systems not only speed up the cheque processing system but also a directive for automation in banking and financial system in Bangladesh.

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# Sahjalal Islami Bank Ltd

## History of SJIBL

Shahjalal Islami Bank Limited (SJIBL) commenced its commercial operation in accordance with principle of Islamic Shariah on the 10th May 2001 under the Bank Companies Act, 1991. During last twelve years SJIBL has diversified its service coverage by opening new branches at different strategically important locations across the country offering various service products both investment & deposit. Islamic Banking, in essence, is not only INTEREST-FREE banking business, it carries wise business product thereby generating real income and thus boosting GDP of the economy. Board of Directors enjoys high credential in the business arena of the country, Management Team is strong and supportive equipped with excellent professional knowledge under leadership of a veteran Banker Mr. Md. Abdur Rahman Sarker.

## Vision

To be the unique modern Islami Bank in Bangladesh and to make significant contribution to the national economy and enhance customers' trust & wealth, quality investment, employees' value and rapid growth in shareholders' equity.

## Mission

- To provide quality services to customers.
- To set high standards of integrity.
- To make quality investment.
- To ensure sustainable growth in business.
- To ensure maximization of Shareholders' wealth.
- To extend our customers innovative services acquiring state-of-the-art technology blended with Islamic principles.
- To ensure human resource development to meet the challenges of the time.



## Products & Services

Accounts & Scheme	
<b>Deposit Account</b> <input type="checkbox"/> Al-Wadiah Current Deposit <input type="checkbox"/> Mudaraba Savings Deposit <input type="checkbox"/> Mudaraba Special Notice Deposit <input type="checkbox"/> Mudaraba Term Deposit <b>Receipt</b> <input type="checkbox"/> Mudaraba Foreign Currency Deposit <input type="checkbox"/> Mudaraba SJIBL School	<b>Deposit Schemes</b> <input type="checkbox"/> Mudaraba Millionaire Scheme <input type="checkbox"/> Mudaraba Monthly Income Scheme <input type="checkbox"/> Mudaraba Double/Triple Benefit Scheme. <input type="checkbox"/> Mudaraba Monthly Deposit Scheme. <input type="checkbox"/> Mudaraba Hajj Scheme. <input type="checkbox"/> Mudaraba Cash Waqf Deposit Scheme
Investment Product	
<b>Corporate (Mode)</b> <input type="checkbox"/> Murabaha <input type="checkbox"/> Bai-Muajjal <input type="checkbox"/> Hire Purchase under Shirkatul Meelk <input type="checkbox"/> Ijara <input type="checkbox"/> Bai-Salam <input type="checkbox"/> Quard-e-Hasanah <input type="checkbox"/> Investment against LC <input type="checkbox"/> Investment against Scheme/Deposit	<b>Retail</b> <input type="checkbox"/> Household Durable Scheme <input type="checkbox"/> Housing Investment Program <input type="checkbox"/> Car Investment Scheme <input type="checkbox"/> Investment for Self-employment <input type="checkbox"/> Investment Scheme for Executives <input type="checkbox"/> Investment Scheme for Doctors <input type="checkbox"/> Investment Scheme for Marriage <input type="checkbox"/> Investment Scheme for CNG Conversion
Others	
<b>Capital Market Operation</b> <input type="checkbox"/> Brokerage Operation <input type="checkbox"/> Margin Facility	<b>SJBL Card</b> <input type="checkbox"/> VISA Debit Card <input type="checkbox"/> VISA Prepaid Card (Local) <input type="checkbox"/> VISA Prepaid Card (International) <input type="checkbox"/> VISA Prepaid Card (Dual) <input type="checkbox"/> VISA Souvenir Card

## **Strategies**

- To strive for customers best satisfaction & earn their confidence.
- To manage & operate the Bank in the most effective manner.
- To identify customers' needs & monitor their perception towards meeting those requirements.
- To review & updates policies, procedures & practices to enhance the ability to extend better services to the customers.
- To train & develop all employees & provide them adequate resources so that the customers' needs are reasonably addressed.
- To promote organizational efficiency by communicating company plans, polices & procedures openly to the employees in a timely fashion.
- To cultivate a congenial working environment.
- To diversify portfolio both the retail & wholesale markets.

## **Core Values**

In the performance of these corporate missions, Shahjalal Islami Bank Limited (SJIBL) is guided by its corporate brand values with a Slogan:

***AN UNIQUE; DYNAMIC; PROFESSIONAL; CARING AND TRUSTWORTHY BANK***

**A Unique Bank:** Islamic Products are the Benchmark Reputed as the pioneer in Islamic banking; we helped to build the Islamic banking industry.

**Dynamic:** Progressive and Innovative SJIBL are constantly moving ahead as offering new and technologically advanced products and services.

**Professional:** SJIBL are knowledgeable and equipped to handle global business challenges

**Caring:** Approachable and Supportive Partner. SJIBL helps to fulfill every customer's financial needs

**Trustworthy:** Dependable and Reliable. SJIBL offer and provide Shariah compliant products, services towards customers.

## Corporate Information

Name of the Company	Shahjalal Islami Bank Limited
Legal Form	A public limited company incorporated in Bangladesh on 1st April 2001 under the companies Act 1994 and listed in Dhaka Stock Exchange Limited and Chittagong Stock Exchange Limited.
Commencement of Business	10th May 2001
Head Office	Uday Sanz, Plot No. SE (A) 2/B Gulshan South Avenue, Gulshan - 1, Dhaka-1212.
Telephone No.	88-02-8825457,8828142,8824736,8819385,8818737
Fax No.	88-02-8824009
Website	www.shahjalalbank.com.bd
SWIFT	SJBL BD DH
E-mail	sblho@shahjalalbank.com.bd
Chairman	Mr. A.K. Azad
Managing Director	Farman R. Chowdhury
Auditors	M/S. Hoda Vasi Chowdhury & Co. Chartered Accountants Ispahani Bhaban 14-15 Motijheel C/A Dhaka-1000 Phone: 88-02-9555915, 9560332
Tax Advisor	M/S K.M Hasan & Co. Chartered Accountants 87, New Eskaton Road Dhaka. Phone: 88-02-9351457, 9351564
Legal Advisor	Hasan & Associates Chamber of Commerce Building (6th floor), 65-66 Motijheel C/A, Dhaka
No. of Branches	87
No. of ATM Booth	37
No. of SME Centers	06
Off-Shore banking Unit	01
No. of Employees	1,811
<b>Stock Summary:</b>	
Authorized Capital	Tk. 6,000 million
Paid up Capital	Tk. 5,566 million
Face Value per Share	Tk. 10

## **Corporate Social Responsibility**

SJIBL foundation has drawn up programs to look after the education, health & Medicare requirements of the people of rural areas where the Bank has launched Rural Investment Program (RIP). The Bank has distributed scholarship in the year 2012 to poor but meritorious students with outstanding result in secondary school and higher secondary examination to facilitate them for pursuing their further studies without hindrance. The program of this education award will continue every year. Besides, during 2012 bank distributed Blanket to cold affected peoples throughout the country.

This year bank also donates two affected families of BDR tragedy, as part of its commitment. The Bank is conscious the responsibility of the society and people of Bangladesh as and when required situational Development Program will be gradually undertaken in future, In -sha-Allah. Shahjalal Islami Bank Limited Foundation has a plan to establish the following projects and programs also:

- Shahjalal Islami Bank Limited International School & College.
- Shahjalal Islami Bank Limited Hospital

# **JOB Duties & Responsibilities**

## **Job Description**

### **Voucher Sorting**

□ Voucher sorting is the main task of any intern students. For each day transaction posting in SJIBL banking software, named 'BankUltimus', SJIBL keeps a printed document. The task of us is to sort out these transaction vouchers along with their printed document based on different account type e.g. SJIBL General Account, Profit Paid on MTDR, and Unearned Income on Bi-Muazzal etc.

- These vouchers are mainly categorized in two different types name as General Banking Voucher and Client Voucher. The prefix of client voucher is 90 and General Banking Voucher is 1, 3,4,5,7.
- Bank keep these documents for the purpose of audit both internal and external, for making any type of dispute in future.
- As per I know that bank keep these document for twelve years.

### **Supplementary Arrangement**

Summary of each day transaction is recorded against each account. These summary are generated from the BankUltimus software used by SJIBL. From the sorted voucher, we need to check again weather all the transaction documents is exists or no. we need to check all the different script compare to each summery and make confirm which document is missing. This is the final stage of sorted voucher document and keeps in the storage of bank.

### **Working in Cash Department**

All intern students are required to work in different departments of bank as per their requirement. So several of times I have to work in Cash department of SJIBL. Here I have assigned to collect cheque, share application form and other documents from the client, place seal in the cheque, IPO number and finally return to the client receipt to the client.

### **Working in Foreign Exchange Department**

- At the beginning of my internship period I have worked couple of days in foreign exchange department of SJIBL. Here I have instructed to write and to prepare the LCA (Letter of Credit Authorization) form which is issued from the Bangladesh Bank for each LC document. These documents are filling up according to the LC act 1947.

- Some of the particulars of LCA form are applicant address, beneficiary address, description of goods, quantity of goods, mode of transportation, address of shipment zone, exchange value with currency type, value in taka etc.
- This is one of the most responsible jobs in my internship period. I have to work more sincerely so that there find out any mistake in the LCA form, because there have only one form for each document.

### **Working in Clearing Department**

- As my report concern, I have worked last couple of weeks in clearing department of SJIBL under the supervision of Mr. Sunny and Mrs. Tania. I have assigned to receive cheque or the documents from the client and check figure amount with in word, date, mobile number and finally making seal of authorization and give MR. Sunny to making signature and finally return the receipt to the client.
- Also I have prepared daily clearing statement both normal value cheque and high value cheque for sending the report to Bangladesh Bank. Sample format of report is given in the appendix.
- For outward clearing process, I have checked all the different particulars of a cheque receive from the different bank by using the ACCS (Automated Cheque Clearing System). These particulars include the seal of the bank, cross seal, signature, date of clearing, amount in figure with in word etc.
- For inward cheque processing, I have worked to sort out high value cheque and normal value cheque, different branch cheque and make ready for scanning and uploading these in the ACCS (Automated Cheque Clearing System) software.

### **Preparing Bill for Petty Cash**

Along with my clearing tasks, I have worked to prepare daily bill for petty cash. Each day SJIBL expense some amount in cash such as local conveyance, entertainment cost, paper ribbon costs etc. For each cost I have prepared a debit voucher, along with defined account number and description of the costs.

## SWOT Analysis of SJIBL

Shahjalal Islami Bank Limited is a big-size commercial bank of Bangladesh. But the bank is not much aged. The bank is about to grab the hi-tech facilities. For a generalized point of view I can make a simple SWOT analysis for SJIBL.

<b>Strengths:</b> <ul style="list-style-type: none"><li>• A highly motivated team</li><li>• Reputation as an Islami Bank</li><li>• Wide branch Network</li><li>• Newly established core banking systems</li><li>• ATM network</li><li>• Corporate goodwill</li><li>• Collaboration with Q-cash members</li><li>• Financial strength</li></ul>	<b>Opportunities:</b> <ul style="list-style-type: none"><li>• Big lucrative market</li><li>• Bank dependant economic</li><li>• Large number of people is still out of the banking services</li><li>• Services for the rural people.</li></ul>
<b>Weakness:</b> <ul style="list-style-type: none"><li>• Limited ATM booths</li><li>• No SME financing specification.</li><li>• No branches even at each district</li><li>• Facilities only for city dwellers</li><li>• No customer differentiation</li><li>• Not using Business Intelligence or Competitive Intelligence</li></ul>	<b>Threats:</b> <ul style="list-style-type: none"><li>• More modern banking services of other banks</li><li>• New competitors with new modern banking facility</li><li>• More acceptance of other banks to the corporate world</li><li>• More reach of other banks by more branches</li></ul>

# PROJECT

## **Automatic Clearing House (ACH)**

Automatic Clearing House (ACH) is a nationwide electronic funds transfer (EFT) system that provides for the inter-bank clearing of credit and debit transactions and for the exchange of information among participating financial institutions. The purpose of ACH is to exchange (clear and settle) electronic transactions. The Automated Clearing House is a secure, private electronic payment transfer system that connects all financial institutions of a country. Direct pay check deposits is an example of electronic fund transfer that are processed through this network.

Utilizing ACH payments is cheaper and faster than processing paper checks, both B2B (business-to-business) and B2C (business-to-consumer) e-commerce payment activities heavily rely on the ACH system and have helped give the system tremendous traction.

## **A Little History on ACH: Context of Bangladesh**

The modernization of the payments and settlement system is one of the core objectives of Bangladesh Bank (BB). In November 2006, BB with the financial assistance from the United Kingdom Department for International Development (DFID) initiated a project called the Remittance and Payments Partnership (RPP), with the objective of promoting 'pro-poor' economic growth in the country. RPP consisted of several outputs. In plain sight of the project was to implement an Automated Clearing House (ACH) in the country, which will in-turn expedite the delivery of expatriates' remittances. The broad objective of the project was to establish an international standard payment system to create avenues for participants to make faster and cheaper payments. Several renowned consultants were hired to contribute to the vendor selection and project implementation process who worked collaboratively with a dedicated Bangladesh Bank team that was developed to assist the whole process of implementation.

The project and BB directives encouraged banks to install core banking and thereby upgrade their own internal operations. Thirty-one banks now have their core banking systems (CBS) installed and the remaining (except for a couple) banks are at different stages of implementation of CBS and linking up all their branches countrywide.

In early 2009, the cheque design specification was finalized with active participation from consultants and the Bangladesh Automated Clearing House (BACH) vendor(s).

The functional specifications for both the Bangladesh Automated Cheque Clearing System (BACPS) and Bangladesh Electronic Funds Transfer Network (BEFTN) were finalized within mid 2009, and specific time lines were published to the participating banks to develop/install their systems accordingly. The second component of BACH, Bangladesh Electronic Funds Transfer Network (BEFTN) software was installed in the



fourth quarter of 2010. The same BB team carried out the User Acceptance Testing (UAT) of the system and according to the plan the system integration & testing was performed with the participating banks. The system went into production on Feb.28, 2011 with 40 commercial banks technically ready for participation.

The BACPS started operations in October 2010 by replacing the manual cheque clearing system with image and date-based cheque truncation system where Magnetic Ink Character Recognition (MICR) encoded cheques (see appendix) are exchanged in encrypted form between the participating banks through a secured communication link.

BB is the organization responsible for developing the rules and the standards regarding ACH transactions. In January 2010, BB approved and distributed the operating rules and procedures regarding the ACH titles as "Bangladesh Automated Cheque Processing System BACPS: Operating Rules & Procedures". In August 2010, BB also published operating rules for EFT titled as "Bangladesh Electronic Funds Transfer Network (BEFTN): Operating Rules".

.Through the automated system, the central bank cleared an average 85,000 regular value cheques and high value cheques worth Tk. 4,700 core in a day while some cases earlier took 7 to 30 days.

### **Bangladesh Automated Clearing House (BACH)**

Bangladesh Automated Clearing House (BACH), the first ever electronic clearing house has started live operation in Dhaka from 7 October 2010. It has two components –

1. Bangladesh Automated Cheque Processing System (BACPS) and
2. Bangladesh Electronic Funds Transfer Network (BEFTN).

Bangladesh Automated Cheque Processing System (BACPS) is the electronic cheque processing of paper-based instruments, uses Cheque Imaging and Truncation (CIT) technology. The system supports both intra-regional and inter-regional clearing and is based on a centralized processing centre located in Dhaka and in designated clearing regions.

BACPS participants are all commercial banks and related Government offices.

Country wide use of MICR encoded standardized instruments. These instruments include Cheques, Drafts, Pay-Orders, Dividend and Refund Warrants, etc. has been ensured. At present 15,00,000 (approx.) regular and 90,000 high value cheques and other instruments are cleared through BACPS per month. Almost 90 percent of all the clearing instruments are now being cleared through BACH.

BEFTN is the maiden initiative for electronic (credit and debit) transfer of funds. This network facilitates the transmission of funds between the banks electronically, which

makes it faster and efficient means of inter-bank clearing over the existing paper based system.

BEFTN is able to handle a wide variety of credit transfer applications such as payroll, foreign and domestic remittances, social security, company dividends, retirement, expense reimbursement, bill payments, corporate payments, government tax payments, veterans' payments, government license fees and person to person payments as well as debit transfer applications such as mortgage payments, membership dues, loan payments, insurance premiums, utility bill payments, company cash concentration, government tax payments, government licenses and fees.

A state-of-the-art Data Center (DC) and a Disaster Recovery Site (DRS) have been established comprising of modern software and hardware for dealing with the operations of BACH. A Virtual Private Network (VPN) has been created using the communication links between the participating commercial banks and Data Center (DC) & Disaster Recovery Site (DRS).

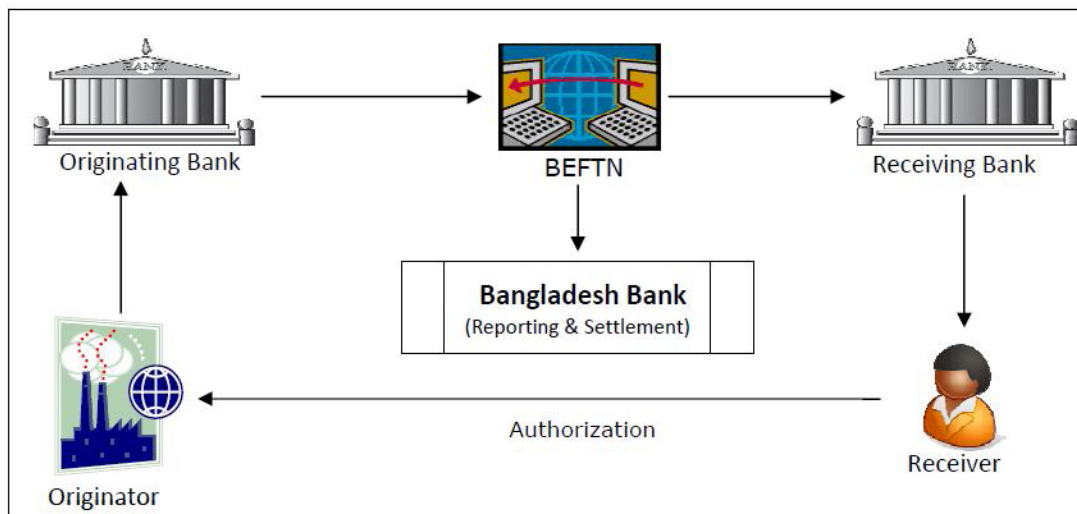


Figure 1: Participants involved in an EFT transaction

## Inauguration of BACH

The central bank of Bangladesh has launched its automated clearing house on 5<sup>th</sup> August 2010, on testing and trial basis that would function in full swing within a month or two.

Under the new system, the payment is settled using automated cheque clearing system and electronic fund transfer among 1100 bank branches in Dhaka initially.

The Bangladesh Automated Clearing House (BACH), the automated payment systems platform, has two components - the first one is Bangladesh Automated Cheque Processing Systems (BACPS) and the second Bangladesh Electronic Funds Transfer Network (BEFTN).

After implementation in Dhaka, the automated process is being spread to the regional clearing houses including Bangladesh Bank offices in Chittagong, Khulna, Rajshahi, Bogra, Sylhet, Barisal and Rangpur respectively.

Transactions received by the financial institution during the day are stored and processed later in a batch mode. Rather than sending each payment separately, ACH transactions are accumulated and sorted by destination for transmission during a predetermined period. This provides significant economies of scale. It also provides faster processing than paper checks, which must be physically handled. Instead of using paper to carry necessary transaction information, ACH transactions are transmitted electronically between financial institutions through data transmission.

### **Bank's Benefits from ACH Payments**

Commercial banks benefit from ACH payments. There's no need to wait for customers to write checks and have them lost in the mail. ACH payments are received more quickly and reliably, and there's no need to forward checks to the bank and wait for processing.

Businesses benefit from ACH processing in several ways:

- Payments are credited to the account immediately, so the banks don't need to send (or drive, or walk) checks to the bank.
- There have possible fewer or no errors with ACH processing. Once it's set up correctly for a client, it's likely to work going forward.
- Bank can automate attempts to collect bad checks. ACH processing services often include this as part of their service, so you don't have to deal with the same check twice.

### **Clients value of ACH Payments**

Bank clients also benefit from ACH payments. There's no need to write checks and get them into the mail on time. If using automatic ACH payments, they do not need to keep an eye out for bills - everything runs on autopilot for better or worse.

- No-hassles payments from
- Early check deposit
- Easy control and management of customer risk
- Eliminate cost and time of handling paper checks
- Enable auto-recurring billing from a bank account
- Secure bill pay online or over the phone
- Timely and efficient bill payment.

### **Business People Value of ACH Processing**

- Allows for fast direct receipt of funds from a checking account

- Enables acceptance of payment from a host of methods including phone, WEB, or recurring billing
- Provides early notification of non-collection of funds
- Saves time and cost of invoicing
- Reduces collection calls
- Improves cash management forecasting
- Time saved in trips to financial institution
- Reduces number of late payments due to mail delivery issues, which reduces late fees
- A perfect means to increase customer retention

### **BACH Enables BB to Increase Cheque-Clearing Speed**

The high value cheque clearing has doubled and the duration of clearing time has reduced significantly maximizing speedy payments as Bangladesh Bank is clearing high value cheques and regular value cheques with an automated cheque processing system, mentioned in BB news room in their website.

According to BB, of the total 85,000 cheques, 80,000 are regular value (below Tk. 5 lac) and the remaining 5,000 are high value (worth Tk. 5 Lac and above) cheques.

"Currently all regional clearing houses of BB have been brought under one central clearing system and clears items within a day". Nazneen Sultana, deputy governor of Bangladesh Bank.

The number of high value cheques rose to 5,000 in the automated system from 2,000 in the manual system, and the number of regular value cheques also increased to 85,000 from 70,000 in the previous system. With the initiative, duration of cheque clearance reduced and its volume increased significantly, said BB officials. Under the automated system, Tk. 5,000 crore on average is cleared and transferred through the BACPS and BEFTN per day.

# Description of the Project:

## Objectives of the Study

The objective of internship program is cope pedagogical knowledge with real world business practice. The main objective of this report is present my experience and knowledge which I achieved from my internship program. However some precise objectives of my internship and this report are pointed here:

- To identify tools and mechanism used in automated cheque clearing system in bank.
- Identify underlying value of automated clearing system among the central bank, commercial banks, businesses and clients of banks.
- To gain a comprehensive knowledge about the new system adopted for cheque clearing in Bangladesh.

## Methodology

This report is for academic purpose and from information perspective. The report will be aligned with the academic discipline of Information Systems and Management. The main data will be collected from Shahjalal Islami Bank Limited regarding Automated Cheque Clearing System. The ground of the report, as it is academic, will be compiled from books and journals. As it is a comparative study from both corporate and academic perspective, the main focus will be on academic shape. To adorn my internship report I have collected data from different sources. These sources the following two main categories:

**Primary data:** Primary data have been collected mainly from SJIBL by making conversation with the employees, doing different jobs assigned my supervisor, and observing day to day activities of bank.

**Secondary data:** The secondary data is for recommendations, literature review, and for analysis. This is the ground of the study. Secondary data has been collected from books, journals, manuscripts, former thesis report, news latter and the web.

The main data collection method is observation. Some other methods have been used for data collection like

- Interview
- Checklist
- Observation

The sample is only one for data collection and it is SJIBL. Quantitative data analysis is less important here than of comparison only but there will be some. A visualization technique has been used to represent data and comparisons.

### **Limitations of the Study**

This is an academic report for internship purpose in postgraduate level. This is also a comprehensive study about bank clearing system. But this is not a research paper.

Though the report aims at a comprehensive study of clearing system in bank, this is done from academic perspective. For this reasons there haven't technical details of the systems.

The report is written mainly on the basis of face to face conversation with the officials and little practical experience in the bank. So, no perfect study is conducted to measure the viability of the report. The following are some other limitations –

- Limitation of time was one of the most important factors that shortened the present study. Due to time constraints, many aspects could not be discussed in the present study.
- Lack of comprehension of the respondents was the major problem that created many confusions regarding verification of conceptual questions.
- Confidentiality of data was another important barrier that was faced during the conduct of this study. Every bank has their own secrecy that cannot be revealed in public.
- Rush hours in bank were another reason that acts as an obstacle while gathering data.
- As, I had more dependence on the primary sources, so there might be some level of inaccuracy with those collected information.
- Insufficient books, publications, Facts and figures narrowed the scope of accurate analysis.
- The websites of SJIBL does not have rich and wealthy collection of various types of Banking related Books and Journals as well as clearing process.
- Confidential information regarding past profit or product cost, financial information was not accurately obtained. Alike all other banking institutions, SJIBL is also very conservative and strict in providing those information. In those cases, I have relied upon some assumptions, which in result have created certain level of inaccuracy. Still, I had tried my best in obtaining that sensitive information, as much as possible.

### **Brief Description of Clearing Function of SJIBL**

Clearing department of bank is responsible for maintaining and processing the clearing of cheque, bank draft, pay order and other bank instrument. The clearing process is managed into two broad categories via

1. Inward processing
2. Outward processing

### **Operational Steps of Cheque Processing**

The operational steps of cheque processing are noted as follows:

1. A cheque deposit is accepted by the presenting bank.
2. The cheque and optionally a deposit slip are passed for in house processing.
3. The bank manually endorses the rear of the cheque in the designated area with the Bank stamp.
4. All transactions [one or more cheques and optionally credit items] are processed via the banks chosen automated solution.
5. All cheques are retained at the presenting banks location of choice.
6. The front and rear images of the cheque and the MICR code line data are captured within groupings referred to as batches.
7. At the point of cheque processing and scanning the rear of each document the bank's capture device will put an endorsement line on the rear of the cheque
8. All batches must be presented to the BACPS in a reconciled state i.e. the batch must contain a batch total to which all cheques are balanced. Code line correction must have been carried out to ensure that the routing number and transaction code are present and amount entry made to assign an amount electronically to each cheque.
9. Batches must be packaged into an electronic files referred to as a Cheque Envelope [CE] in accordance with the already published standard for presentation to the BACPS.
10. The presenting bank system will pass the CE, in this case referred to as an OCE (Outward CE), to a software application known as the Participant Bank Module [PBM] embedded within its own system for preliminary validation and transmission.
11. The PBM will validate the structure of the OCE and the contents of records within the OCE.
12. The PBM will reject, prior to transmission to the BACPS, any files failing validation.
13. Files passing validation will be encrypted and assigned a Digital Signature by the PBM indicating the identity of the presenting bank.
14. Files will be passed from the PBM application via the banks own chosen communication link to the BACPS.

### **Processing at Participating Bank Module: Outward Clearing**

#### **Participating Bank Module (PBM)**

The BACPS Participating Bank Module (PBM) provides cheque envelope validation

and provides an interface for sending and receiving cheque envelopes from and to BACPS.

### **Receiving Outward Presentment**

The PBM will receive the duly balanced outward clearing files containing cheque image and electronic data from the capture system of the bank.

### **Image Quality Analysis and Failure Handling**

All outward images are subjected to IQA (Image Quality Analysis) validations. Any image failing IQA validation will result in the rejection of the cheque envelope by the presenting bank PBM with an appropriate response file. The bank may re-scan and resubmit as many times as is necessary to meet the IQA requirements.

### **Item Processing**

The outward cheque envelopes presented by the capture system are validated by the PBM against the validation indicated in the PBM Specifications. The PBM after validations generates response files which contain information related to acceptance or rejection of each file and the items present in each file with appropriate reason codes.

### **Session Attachment**

The items are assigned to an appropriate clearing sessions that is open based on parameters fixed for a session by the Clearing House. These parameters are passed on to the capture system through the PBM. The item inherits 'session date' that is the business date of the session and session type (i.e. Regular and High value). If there is no appropriate session that is open, the items/bundles wait at the PBM until such a session opens.

### **Reconciliation of Outward Presentation**

After End of Session at the Clearing House, PBM generates an Outward Acknowledgement File (OACK) containing the details of items those have been accepted for settlement at the Clearing House. It shall be the responsibility of presenting bank to reconcile their entire presentation by collating the information from the OACK files.

## **Processing at Participating Bank Module: Inward Clearing**

### **Receipt of Inward Data/Images**

The inward processing deals with accepting inward presentment data and images from the Clearing House and providing data in the form of files for use within the (paying)



banks in-clearing system. The PBM will receive digitally signed inward electronic data and image exchange files from the Clearing House.

### **Validation**

The PBM shall authenticate and load the exchange file data into the system. The PBM will send an acknowledgement exchange file to the Clearing House if the inward data exchange file or image exchange file is accepted.

### **Control Mechanism**

**The receiving point should verify that all the inward bundles/items have been received by it to ensure that there is no data loss in the transmission from clearing house to the PBM. The PBM supervisor shall compare the relevant information available from the ‘clearing house processing monitor’ and ‘inward exchange file screen’ for this purpose. The paying bank will not be able to generate posting files unless all the inward bundles/items have been actually received at the PBM. If any file is lost in transmission the bank may request the Clearing House for retransmission of images/data.**

### **Generation of Posting File**

The PBM, for each session, can generate posting files that may be used for interfacing with the banks accounting system. PBM is capable of creating posting files for payment processing for inward and outward clearing. The posting file may be sorted by the banks in any manner they desire for posting purposes (e.g. by bank, by branch, or by branch and transaction code).

## **Hardware and Software Installation for Clearing Process in SJIBL**

### **MICR Scanner**

Each Capturing Bank shall capture Images in accordance with the, BACPS Image Usability Standard and the BACPS Active Image Clearing Specifications (AICS). SJIBL uses Borrough check scanner machine which is used for scanning cheque.



MICR Scanner used by SJIBL

### **Desktop PC**

One particular PC is linked with the scanner machine and two other PCs are used for clearing function. One is for inward cheque processing and other is for outward cheque processing.

### **Bank Ultimus**

This is the core banking software of SJIBL. This software is widely used from branch to the head office. This is the interface to query and to update the information. Different users have different level of access to this software. Bank Ultimus is totally centralized. For inward cheque processing this software is used for query client information, balance availability etc

### **Automated Cheque Clearing System (ACCS)**

This is a web based software maintain by Bangladesh bank. SJIBL use this software to send and receive the scan copy of cheque. Return of cheque also receives by using this software with specified reasons mentioned in the return messages.

MICR Scanner used by SJIBL

## **MS Excel**

Each participating bank is required to send the summery report of clearing transaction to the Bangladesh Bank in a prescribed manner. SJIBL uses MS excel software for preparing the report of each day differentiating with high value and normal value cheque.

## **Recommendations**

A promptly and well managed clearing system indirectly motivates clients to deposit more in that particular bank. Bank that does better than others can gain competitive advantages. The more deposits the bank has the more opportunity to invest money. In order to gain customer satisfaction and increase in banks profitability, clearing services should be well planned and well articulated strategy for the long run. I have had the practical exposure in SJIBL for just two months. On the basis of my observation I would like to present the following recommendations-

- In Kawran Bazaar branch of SJIBL, the clearing department is far from the entrance point. So I hope it will be better for clients if the point is near to the entrance of the bank.
- Clients are not very much aware about the charges of high value cheque. So there is required to make awareness among the clients so that they become conscious about it.
- Making SMS to the clients for any dishonor cheque, pay order will increase customer satisfaction more.
- Most of the clients are not very aware about the automated clearing system, time required for clearing, closing time for a particular day. Also customers have little knowledge about online charges. So there should be a list of instructions and different charges applicable for different services.
- There is no facility of training for intern students. Introducing a workshop or short term period training for interns will enhance the performance and knowledge of the intern students.
- In each and every branch, the bank should have their own backup facility regarding the power system, server pc, internet connectivity for minimizing the service down time.

## **Conclusion**

I am working in the SJIBL and achieved real practice of automated cheque processing system that I have learnt in my pedagogical course. The BACPS started operations in October 2010 by replacing the manual cheque clearing system with an image and date based cheque truncation system where Magnetic Ink Character Recognition encoded cheques

are exchanged in encrypted form between the participating banks through a secured communication link.

Cheque receive from the clients of other bank to deposit in SJIBL is called outward cheque for SJIBL but inward for the paying bank. Image or data receive form ACCS is known as inward cheque for SJIBL. Based on the cheque amount there have two differentiation named as high value cheque and normal value cheque. The maximum value for normal value is less than half million and minimum value of high value cheque is half million. For high value cheque clearing bank charges a nominal fee.

Also for EFT over different branches, SJIBL charges online transaction fee from the client.

Since the inception of BACPS, SJIBL is working as a participated bank. Participating in the automated system, SJIBL can process more clearing transaction than before.

Also it enhances the performance of bank in clearing section. Processing cheque thorough the automated system also helps SJIBL achieve the competitive advantages than others.

## GLOSSARY

- **Account** means an account with reserve and/or clearing balances on the books of the Bangladesh Bank.
- **Archive** means a repository used to store and index Images and associated information, including MICR line information, item sequence number, and full audit trail information, for necessary retention and accessibility.
- **BACH** means the overall system and facility that supports the Exchange and settlement of payment items between Participating Banks and the Bangladesh Bank.
- **BACPS** means a facility that clears cheques and approved payment items for Bank companies.
- **BACPS-Eligible Item** means an electronic copy of a paper-based Payment Item that the Presenting bank certifies is a copy of the original instrument acceptable for Exchange using MICR and Image technologies and is listed as one of the Items or instruments in Chapter 3, section 8 of these Rules.
- **BACPS Participating Bank Module** means the software and equipment that manages the transmission and receipt of BACPS Cheque Envelopes, acknowledges receipt of BACPS Cheque Envelopes, and interfaces with the Banking Companies' host systems.
- **BACPS Cheque Envelope** means an electronic file that is exchanged between a Sending and a Receiving Point, which contains electronic information representing BACPS-eligible Items, Returned BACPS Items, and the relevant audit trail information.
- **Business Day** means a Banking day including all days except weekly holidays and all approved Bank holidays.
- **Bureau Service** means BACPS cheque processing service offered by the Bangladesh Bank to process the Outward Clearings on behalf of the commercial banks.
- **Capturing Bank** means a Bank or the Bangladesh Bank that creates or purports to create an Image of a BACPS-eligible Item on its own behalf or on behalf of another Bank.
- **Cheque Truncation** means the process by which the physical movement of a cheque within a Banking company, between banking companies is stopped and replaced by the exchange, or storage, of Images and corresponding electronic information.
- **Cheque Image** means a digital representation of the front and back of a cheque.

- **Clearing** means the exchange of payment instructions between payment system participants, and includes without limitation, the processes associated with clearing, sorting, editing, netting and prioritizing such instructions or orders in whatever form these take.
- **Convenience Amount** means the amount that appears on a cheque that is normally written in numeric values.
- **Correspondent Bank** means bank acting on behalf of a participating Bank. That means it will send and received approved payment items to and from Bangladesh Bank on behalf of the participating bank(s).
- **Counterfeit Item** means an Item that appears to be original or genuine, but has been fraudulently made and, for the purpose of these Rules, shall be considered an Item with a Forged or Unauthorized Signature.
- **Electronic Cheque:** is an electronic version of a paper cheque, including date, payee name, payment amount, and signature.
- **Electronic Cheque Presentment (ECP)** means the process by which BACPS-eligible Items, Returned BACPS Items and Redirected Returned BACPS Items are exchanged through the transmission and receipt of Images and corresponding electronic information.
- **Exchange** means the delivery and receipt of Payment Items.
- **Financial Institution:** as defined in clause (b) of section 2 of the Financial Institutions Act, 1993.
- **Forged or Unauthorized Signature** means (i) a signature on the face of an Item that is not the signature of the person (the drawer) that it purports to be, or (ii) a signature that is written on or applied to an Item without the drawer's authority.
- **Force Majeure** means any event beyond the control of a Banking company that could not be avoided by the exercise of such standard of care as is reasonable in the circumstances, including acts of God (earthquakes, natural floods, and storms), fire, explosion, war, insurrection, riot, disaster, and civil disorder.
- **High Value** Items means Item amounting taka 5.00 (Five) lacks and above.
- **Item** means an instruction for the payment of money via an approved payment instrument (negotiable instrument) that is handled by the Bangladesh Bank for clearing and settlement under these rules.
- **Legal Amount** means the amount of a cheque that is normally written in words.

- **Magnetic Ink Character Recognition (MICR)** means the machine recognition of numeric data printed with magnetically charged ink.
- **Material Alteration** means an unauthorized change to one or more of the completed details of an originally authorized Item, and includes those material alterations identified in the Negotiable Instruments Act, 1881 which are alterations: (i) to the date, (ii) to the sum payable, (iii) of the time of payment, (iv) of the place of payment, or (v) of the addition of a place of payment without the acceptor's asset where a bill has been accepted generally, as well as any alteration of the Paying Bank or of the payee name.
- **Participating Bank** means a Bank who is a participant in the BACH.
- **Paying Bank** means the Bank upon which a Cheque or other item is drawn.
- **Presenting Bank** means the Bank presenting a Cheque or other items for collection.
- **Public Key Infrastructure** means a set of cryptographic techniques in which two different keys (private and public keys) are used for encrypting and decrypting data. The private key is kept secret by its holder while the public key is made available to communicating entities.
- **Returned BACPS Item** means the corresponding payment information of a BACPS-eligible Item that is returned to the Presenting Bank in accordance with and for any reason permitted by these Rules.
- **Sending Point/Receiving Point** A bank will have one single point of connection with BACH which will be termed as sending/receiving point. The PBM will be located at this point.
- **Settlement Account** means the Account at the Bangladesh Bank that the Participating Bank maintains for the purpose of settlement.
- **Settlement Date** means the date for settlement of an item as provided in these Rules.
- **Service Branch** is a branch which will act as a sending and receiving point, for each individual bank there will be only one service branch for each bank.
- **Truncation** means a settlement process in which the physical exchange of a paper based payment instrument is substituted by the exchange of images and data in electronic format. Cheque truncation involves stopping the physical movement of cheques and the replacement of physical instrument by images of the instrument and corresponding data contained in the item MICR line.
- **Truncation Point** is a point from which physical movement of an instrument

is stopped, here the image and data will be captured and transmitted to the service branch. A bank may have multiple truncation points.

**Unqualified** Item refers to an item which does not meet the criteria of a BACPS-eligible Item.

**Unusable** Image means an Image that does not meet the requirements of the Image Usability Standard.



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