

# **AN INTERNSHIP REPORT ON**

## **Application, Prospects and Problems of Mobile Banking in Bangladesh**

*Submitted by-*

**Md. Ahashanuzzman**

Student ID : E-130502051

MBA (Evening), 2<sup>nd</sup> Batch

Major in HRM

Session : May, 2016

HSTU, Dinajpur-5200

**Masters of Business Administration (MBA) (Evening)**

(This paper has been prepared for submission in the Faculty of Business Studies, Hajee Mohammad Danesh Science and Technology University, Dinajpur, as a partial required for fulfillment of the MBA (Evening) Degree Program



**HAJEE MOHAMMAD DANESH SCIENCE AND TECHNOLOGY UNIVERSITY**  
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**HAJEE MOHAMMAD DANESH SCIENCE AND TECHNOLOGY UNIVERSITY, DINAJPUR.**

**May, 2016**

DEDICATED  
TO MY

 National Bank Limited  
A Bank of Performance with Potential

---

**BELONGED PARTNERS**

Dinajpur Branch, Goneshtola Road, Dinajpur, Bangladesh.  
Tel : 0531-64744, 63288, E-mail : dinajpur@nblbd.com, Fax : +88 0531-51651

Date: 09 May, 2016

**To Whom it may Concern**

This is to certify that Md. Ahashanuzzman student of MBA (EVENING) (Major in HRM) Department of Management, Faculty of Business Studies, Student ID No.: E-130502051 Faculty of Business Studies of Hajee Mohammad Danesh Science and Technology University, Dinajpur has successfully completed internship program for

15.03.2016 To 30.04.2016 (45 days) at National Bank Limited, Dinajpur Branch, Dinajpur.

We wish him every success in life.

.....

**Md. Abdur Rahim**

Assistant Vice President & Manager

## Letter of Transmittal

09 May 2016

**Dr. Shaikh Mostak Ahammad**  
Associate Professor  
Department of Accounting  
Faculty of Business Studies  
HSTU, Dinajpur-5200.

**Subject: Submission of Internship Report.**

Dear Sir,

It is a great pleasure for me to submit my Internship paper on the topic **Application, Prospects and Problems of Mobile Banking in Bangladesh**. I have prepared this report, as a fulfillment of EMBA Degree requirement. To make this report up to the standard, I have tried my best to full fill the requirements. I hope that this will help me in my future life.

I believe that you will be pleased to see my work. I also believe that this report will be able to fulfill your expectation.

Thanking you

Sincerely yours.

.....  
**Md. Ahashanuzzman**

## ACCEPTANCE LETTER

This is to certify that a bonafide internship report entitled **Application, Prospects and Problems of Mobile Banking in Bangladesh** is submitted by **Md. Ahashanuzzman**, Student of EMBA under the faculty of Business Studies, Hajee Mohammad Danesh Science and Technology University, bearing Student No. E-130502051, Session: May, 2016 as a partial requirement of the award of the degree of EMBA.

I wish his every success in life.

Supervisor.

.....  
**Dr. Shaikh Mostak Ahammad**  
Associate Professor  
Department of Accounting  
Faculty of Business Studies  
HSTU, Dinajpur-5200.

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Supervisor

.....  
**Shahnaz Parvin**  
Assistant Professor  
Department of Finance and Banking  
Faculty of Business Studies  
HSTU, Dinajpur-5200



## **Student Declaration**

I hereby declare that the report of internship namely on **Application, Prospects and Problems of Mobile Banking in Bangladesh**, this report has prepared as per academic requirement after the successfully completing of 45 days internship program under the supervision of my honorable supervisor Dr. Shaikh Mostak Ahammad, Associate Professor, Department of Accounting, HSTU, Dinajpur.

I have tried my best get together as much information as possible to enrich the report. I believe that it was a fascinating experience and it has enriched both my knowledge and experience.

.....  
**Md. Ahashanuzzman**  
Student ID: E-130502051

## **PREFACE**

Education is the backbone of a nation. Education is the basic element to achieve knowledge. Basically there are two parts of education for achieving knowledge. One is called theoretical knowledge and other is called practical knowledge. Practical knowledge is very much important to acquire a complete knowledge on any subject. Without practical knowledge theoretical knowledge is incomplete. In this connection, Internship is very important way for gaining practical experience.

Feeling this importance, all MBA (EVENING) students under the “Faculty of Business Studies” are sent to specific organization of acquire practical knowledge. It is very much essential part for all MBA (EVENING) students as a part of academic curriculum having three (3) credit hours.

I selected topics on Application, Prospects and Problems of Mobile Banking in Bangladesh, as my field to conduct my internship program, which runs for Fourty Five (45) days only. I was very much eager to perform exclusive internship here but due to time constrain and some other obstacles, I have to restrict. Though I tried my best to collect relevant and significant date as much as possible and prepared the report with my best effort. I regret fro my undue mistake in the report. If the report do little support to any student, teacher, researcher or analyst, I may consider my effort does not go in vain.

## ACKNOWLEDGEMENT

With great pleasure and happiness, I want to give thanks to almighty Allah, Who helps me to complete my Internship program successfully.

I am very much grateful to my favourite teacher **Dr. Shaikh Mostak Ahammad** Associate professor Department of Accounting, who has supervised my internship program, Without his kind assistance, my desire to do something better cannot be fulfilled.

I am also grateful to the co-supervisor **Shahnaz Parvin**, Assistant Professor, Department of Finance and Banking, for his kind permission to do my internship programs in the Bank.

I am grateful to my honorable teachers, friends and associates who helped and co-operated me to a great extent during the study.

I owe a lifelong debt my parents, brothers, and sister for their king and moral supports, innumerable sacrifice of keen interest and encouragement in my education. So I apologize for the mistake in this report.

I would like to thank from the deep of my heart to those people who and related with making of this report and make it a success.

At last but not be least, the Hajee Mohammad Danesh Science and Technology University, Dinajpur for giving me and opportunity to complete by MBA (Evening) degree and give me a scope to gather practical experience and enrich my knowledge.

May ALLAH bless all of the people, I would like to thank from the deep of my heart to those who are elated with making of this report and make it as success.

At last but not the least, the Hajee Mohammad Danesh Science and Technology University, Dinajpur for giving me an opportunity to complete my MBA (Evening) degree and give me a scope to gather practical experience and enrich my knowledge.

**The Author**

## **ABSTRACT**

Mobile banking application offers a wide range of banking and information services to take care on banking system. The tremendous advances and the aggressive infusion of information technology had brought in a paradigm shift in banking operations. With the rapid proliferation of Internet Technology banking sector now takes a different approaches often termed as mobile banking. The adoption of electronics banking becomes a necessity for the banking which wishes to maintain its share of market and retain its customers. In one hand, it offers ease of operation for both customers and consumers. On the other hand, It overcomes the geographical bars between the countries. But such improved services have come at the cost of rigorous adaptation of business rules and policies as well as to cope with the new technology. This paper reveals the current situation of mobile banking in Bangladesh and problem and prospect on mobile banking activities. The new challenges of mobile banking are to develop and apply policy from the perspectives of society, banks, and regulatory authorities as like as government are addressed in the study.

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### **Introduction**

Mobile banking is defined as provision and availability of banking services with the help of mobile telecommunication devices such as mobile phones. To provide banking and financial services through mobile technology devices a mobile phone called mobile banking. The increasing convergence of mobile technologies and the internet

is rapidly giving way to mobile data services among various multi-data service (MDS), m-banking can add more value than other services. Typical functions include viewing account balances, transferring funds from one account to another, receiving alerts and paying bills, However, m-banking cannot support all banking functions. For instance, cash can only be withdrawn at physical branches or at automated teller machines (ATM). M-banking is generally viewed as a channel that is more flexible and ubiquitous than the existing banking channels. It has the potential to transform banking and telecom sectors. It increases revenue for mobile service providers and saves cost for banks by offering self services to users. Further, it provides exciting possibilities to increase remittance flows through banks, and include the poor and un-banked to the banking net, Interest about m-banking is growing among practitioners and researchers alike. In an increasingly competitive banking market, managers are interested in improving understanding of user acceptance of technology mediated m-banking it is a quite popular method of banking that fits in well with a busy. Technologically oriented lifestyle.

Information technology is becoming an important factor in the future development of financial services industry, especially and banking industry. The banking sector is based on sharing of information, which itself heavily relies on information and communication technology (ICT) in order to acquire, analyze and deliver data to all relevant users. In this context, banking sector are obliged to continuously innovate and update their marketing strategies in order to closely meet the demands and the requirements of the individual customers. It also provides safe and confidential services which best suit customers needs. Therefore, when media (e.g. computers, EDI, ATM, Internet, TV etc) and transmission mediums (e.g. telecommunications, cable, electronics etc) complement and overlap one another, the banking agency is no longer considered to be an inevitable right for the customers. The customer wants more flexibility without paying more and his demands are clear ; Make transactions wherever, whenever and however he wants.

According to Jim Bruence (2006), 'Online banking is the best to happen to personal finance management since the invention of the paper statement. In many countries,

half or more of online users routinely visit their bank to check account activities, verify deposits, and just see if everything is in order.

Mobile Banking is a financial transaction conducted by logging on to a bank's website using a cell phone, such as viewing account balances, making transfers between accounts, or paying bills, This can be conducted through the internet browser on the phone, through a program downloaded from your bank, or by text-message (SMS), Mobile banking is an application of mobile computing which provides customers with the support needed to be able to bank anywhere, anytime using a mobile handheld device and a mobile service such as short message service (SMS). Mobile banking removes space and time limitations from banking activities such as checking account balances, or transferring money from one account to another. In event research and studies it was found that while mobile banking and more specifically SMS based mobile banking applications have become popular in some countries and regions, they were still not widely.

**In one academic model mobile banking is defined as:**

Mobile Banking refers to provision and a ailment of banking-and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transaction, to administer accounts and to access customized information.”

**According to this model mobile banking can be said to consist of three inter-related concepts :**

- Mobile Accounting
- Mobile Brokerage
- Mobile Financial Information Services

Most services in the categories designated Accounting and Brokerage are transaction-based. The non-transaction based services of an information nature are however essential for conducting transaction—for instance, balance inquires might be needed before committing a money remittance. The accounting and brokerage services are therefore offered invariably in combination with information services. Information services, on the other hand, may be offered as on independent module.

Mobile banking (also known as M-Banking, m-banking) is a term used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device such as a mobile phone or personal digital assistant (PDA).

Mobile banking and Mobile payments are often, incorrectly, used interchangeably. The two terms are differentiated by their service provider to consumer for mobile banking and payments, respectively. Mobile banking involves using mobile devices gain to access financial service. Mobile payments on the other hand may be defined as the use of mobile device to pay for goods or services either at the point of purchase or remotely. Bill payment is not considered a form mobile payment because it does not occur in real time.

The earliest mobile banking services were offered over SMS, a service know as SMS banking. With the introduction of the first primitive smart phones with wireless application protocol (WAP) support enabling the use of the mobile web in 1999, the first European banks started to offer mobile banking on this platform to their customers.



- To cope with the change of banking system.
- To build relationship between customers and banking system.
- To reduce the cost of banking transactions
- To save time.
- To increase banking system among common people
- To achieve technological goals
- Present the current scenario of M-banking in Bangladesh
- Identify the problems as well as prospects of M-banking in Bangladesh.
- Highlight some recommendation for rendering M-banking service facilities in Bangladesh.

A business can simplify or improve its human resources by introducing various internet technologies, Benefits include the improvement of administrative system better information tacking, and time and cost effectiveness. Under this condition, the transition to “M-banking” has become a necessity for banks : In one hand it offers the major opportunities in terms of competitive advantages. On the other hand, It improves efficiency and operational effectiveness within the company and develops a stronger and more durable business relationship with its customers.

## **LITERATURE REVIEWS ON MOBILE BANKING**

The term mobile banking describes the banking services that the user can perform via a mobile device ubiquitously at anytime and from anywhere. In order for users to access their accounts, they need a mobile device and network connectivity. Therefore, sitting in front of a computer is not a requirement anymore, accessing accounts can occur while users are waiting their turn at the dentist clinic or relaxing at the beach! (Al-Akhras and Qwasmi, 2011)

Sylvie and Xiaoyan investigate the market status for online/mobile banking in china. With the recent and forecasted high growth of Chinese electronic banking, it has the potential to develop into a world-scale internet economy and requires examination. The results showed Chinese online and mobile bank users were predominantly males, not necessarily young and highly educated, in contrast with the electronic bank users in the west. The issue of security was, found to be the most important factor that motivated Chinese consumer adoption of online banking barriers to online banking were the perception of risks, computer and technological skills and Chinese traditional cash-carry banking culture. The barriers to mobile banking adoption were lack of awareness and understanding of the benefits provided by mobile banking (Laforet, 2005).

Telecommunications companies world-wide are developing 3G mobile phones and applications. In the UK, mobile banking is considered to be one of the most value-added and important mobile services available. However, the adoption rate of using 3G mobile phones for financial services is yet to be determined. The current research examined both innovative attributes and customers' perceived risk in order to understand customers' behavior and motivation toward this innovation. It has advanced the theoretical frameworks of innovation and customers' risk perception as new attributes and risk dimensions were identified. The findings provide banking executives with a better understanding of what are the perceived advantages and disadvantages of 3G mobile banking services, helping them to plan marketing

strategies and promotion approaches for 3G mobile banking services in the future (Morna 2003).

According to Jim Bruene (2006), 'online banking is the best thing to happen to personal finance management since the invention of the paper statement. In many countries, half or more of online users routinely visit their bank to check account activities, verify deposits, and just see if everything is in order'.

According by a report by Mintel International Group Ltd. (June 1, 2006), The forces driving the growth of the Internet-increased broadband access, new innovation that provide a secure environment, and the coming of age of more tech savvy people will combine to propel online banking as well. Mintel expects that online banking will continue to grow and become more profitable for financial institutions, particularly as the Internet matures and subsequent generations become more technologically literate. Factors impacting online banking include the trend within the industry and the socioeconomic forces behind changing demographics ([www.marketresearch.com](http://www.marketresearch.com)).

Mobile Banking is a financial transaction conducted by logging on to a bank's website using a cell phone, such as viewing account balances, making transfers between accounts, or paying bills. This can be conducted through the internet browser on the phone, through a program downloaded from your bank, or by text-message (SMS). Mobile banking is an application of mobile computing which provides customers with the support needed to be able to bank anywhere, anytime using a mobile handheld device and mobile service such as text messaging (SMS). Mobile banking removes space and time limitations from banking activities such as checking account balances, or transferring money from one account another.

The telecommunications industry worldwide has scrambled to bring what is available to networked computers to mobile devices (Parasuraman, 2005).

Presently, the use of electronic banking is considerably high and as more and more users sign up for electronic-banking, the maturity as regards remote banking (i.e.

banking outside the banking hall) is on the increase. With electronic banking, users can now conveniently carry out banking transactions, but his convenience cannot be achieved if the user does not have access to the internet, hence, in other words, the user cannot carry out a banking transaction while waiting for a bus, or perhaps while having lunch in a restaurant. With m-banking, convenience can be achieved 24hrs a day. This is because a user has access to his mobile phone all day, at all times. So, to effectively achieve a truly convenient banking mode, a truly mobile mode of banking has to be explored, hence the need for m-banking (Andrew, 2009).

The convergence of the Internet and mobile networks creates new opportunities and applications. Treating mobile business as simply an extension to the traditional web could result in missing out unique differentiated qualities for new value-added possibilities. Mobile Banking is considered to be one of the most value-added and important mobile services available. Arcraf's current research examined technological changes in mobile networks and innovative attributes of Mobile Internet. It has advanced the theoretical framework of innovation in service to develop a customer centric analysis of m-banking value proposition. His article goes on to discuss critical factors in the diffusion of m banking and explores reasons of failure and further prospects of success (Ayadi, 2005)

According to Rasheda Sultana, across the developing countries, millions of people rely on informal economic activity and local level networks to earn their living. Most of these populations are from bottom of pyramid and they don't have access to basic financial services / banks as access to them is costly and very limited. However, the outstanding growth of mobile sector worldwide has created a unique opportunity to provide social and financial services over the mobile network. With over 4 billion mobile cellular subscriptions worldwide, mobile network has the ability to immediately offer mobile banking to 61% of the world population (Sultana, 2009)

With the improvement of mobile technology and devices, banking users are able to conduct banking services at anyplace and anytime. Recently, many banks in the world have provided mobile access to financial information. The reason to

understand what factors contribute to users' intention to use mobile banking is important issue of research. The researcher's purpose is to examine and validate determinants of user' intention to mobile banking. He used a structural equation modeling (SEM) to test the causalities in the proposed model. The results indicated strong support for the validity of proposed model with 72.2% of the variance in behavioral intention to mobile banking. His study found that self efficiency was the strongest antecedent of perceived ease-of-use, which directly and indirectly affected behavioral intention through perceived usefulness in mobile banking. Structural assurance are the strongest antecedent of trust, which could increase behavioral intention of mobile banking, This research verified the effect of perceived usefulness, trust and perceived ease-of-use on behavioral intention in mobile banking. The results have several implications for mobile banking managers (GU Ja, 2009).

According to some researchers, the mobile payment services markets are currently under transition with a history of numerous tried and failed solutions, and a future of promising but yet uncertain possibilities with potential new technology innovations. At this point of the development, the researchers take a look at the current state of the mobile payment services market from a literature review perspective. They review prior literature on mobile payments, analyze the various factors that impact mobile payment services markets, and suggest directions for future research in this still emerging field. Consumer perspective of mobile payments as well as technical security and trust are best covered by contemporary research. The impacts of social and cultural factors on mobile payments, as well as comparisons between mobile and traditional payment services are entirely uninvestigated issues (Glaveli, 2006)

Although millions of dollars have been spent on building mobile banking systems, reports on mobile banking show that potential users may not be using the systems, despite their availability. Thus, research is needed to identify the factors determining user's acceptance of mobile banking. While there has been considerable research on the technology acceptance model (TAM) that predicts whether individuals will accept and voluntarily use information systems, limitations of the TAM include the omission of an important trust-based construct in the context of electronic / mobile

commerce, and the assumption that there are no barriers preventing an individual from using in IS if he or she chooses to do so, Based on literature relating to the theory of planned behavior (TPB) and the TAM, this study extends the applicability of the TAM in a mobile banking context, by adding one trust-based construct (perceived credibility) and two resource-based constructs (perceived self-efficacy” and “Perceived financial cost”) to the model, while paying careful attention to the placing of these constructs in the TAM’s existing homological structure (Luarn, 2005).

Mobile banking is growing at a remarkable speed around the world. In the process it is creating considerable uncertainty about the appropriate regulatory response to his newly emerging service. Researcher sets out a framework for considering the design of regulation of mobile baking. Since it lies at eh interface between financial services and telecoms, mobile banking also raise competition policy and interoperability issues that are discussed in his paper, Finally, by unbundling payments services into its component parts, mobile banking provides important lessons for the desin of financial regulation more generally in developed as well as developing economies (Anderson, 2007).

Lee, K. C *et al.* (2009) Investigated the customers perspectives of mobile baning their perceived importance for it, usage patterns and problems rising on its utilization, The paper discussed the strategic implications of the research findings. Empirical data were gathered from bank customers in Kuwait to achieve the research objectives. All bank customers in Kuwait were considered as population of research interest. The results showed the perceived importance of internet banking services by customers current and potential use of MB services in Kuwait and problems perceived by bank customers in using MB. The researcher’s main hypothesis tested that top five services considered relative important in Kuwait banks were “Review account balance” “Obtain detailed transactions histories, “Open accounts” , pay bills and Transfer funds between own accounts”.

Sathye (1999) Analyzing the factors affecting the adoption of Mobile banking by Australian consumers. His sample was from individual residents and business firms in Australia. The study focused on the capital cities where use of mobile internet and population was likely to be high. White and yellow pages were used as the frame of reference for personal and business customers, respectively. The findings suggest that security concerns and lack of awareness about mobile banking and its benefits stand out as being the obstacles to the adoption of mobile banking in Australia. He also suggests some of the ways to address these impediments. Further, he suggests that delivery of financial services over the internet should be a part of overall customer service and distribution strategy. These measures could help in rapid migration of customers to mobile internet banking, resulting in considerable savings in operating costs for banks.

Rotchanakitmanuai and Speece (2003) Investigated why corporate customers do not accept mobile banking, which can assist banks to implement this self-service technology more efficiently. Many Thai banks are currently implementing mobile banking. Banks that offer service via this channel claim that it reduces costs and makes them more competitive. However, many corporate customers are not highly enthusiastic about mobile banking. They used in depth qualitative interviews methodology for collecting their data. The interviews with Thai firms suggested that security of the Internet is a major factor inhibiting wider adoption. Those already using Internet banking seem to have more confidence that the system is reliable, where non-users are much more service conscious, and do not trust financial transactions made via internet channels. Non-mobile banking users tend to have more negative management attitudes toward adoption and are more likely to claim lack of resources. Legal support is also a major barrier to internet banking adoption for corporate customers.

## **IMPORTANCE OF MOBILE BANKING IN BANGLADESH**

Mobile banking and payments is experiencing phenomenal growth world-wide and has become strategically important for any bank in a developing country like Bangladesh where penetration of mobile phones is much higher than the reach of banking services. According to industry analysis- the worldwide market for mobile payments will grow to \$633.4 billion by 2014, up from \$68.7 billion in 2009 (source: Generator Research 2010).

For a developing country like Bangladesh, mobile banking has a very strong business potential. Currently only 13% of the people in Bangladesh has bank accounts, and this is primarily limited to urban areas, and middle-to-high income segments. On the other hand, Bangladesh already has country-wide mobile phone coverage, and 56% of the people have mobile phones. Thus there are 43% people using new products based on mobile phone technologies.

Progoti Systems is deploying a Mobile Financial service (MFS)- named sure cash- that will offer a hosted mobile banking and payment service to ecosystem partners such as banks and financial institutions, mobile operations, retail agents, payment partners such as utility companies, merchants/ retailers, employers, insurance organizations and government departments. Bangladesh already has a conducive environment for mobile banking in many ways:

- Country-wide mobile phone coverage with 56% user penetration
- Only 13% banked population
- National ID Card
- Broad awareness of financial services from country-wide micro-credit services
- Very large inward foreign remittance.
- Available agent networks from Telcos and NGOs



## **DATA AND METHODOLOGY**

The study has been conducted mainly on the basis of secondary information. For this purpose, different recognized census, government rules and regulations, policies have been discussed.

Various seminar papers and summary of discussions in those seminars, taskforce report of research organizations and some periodicals, national and international journals, newspapers, magazines, Bangladesh Bank publications have been surveyed. Some bank specialists have also personally interviewed in order to collect some primary information used in this study.

Beside this, internet has been used as another source of information.

**Research Design :** Mobile banking is a new invention for all people in Bangladesh. In this country, most of the people use traditional banking system. People are afraid of using mobile banking because they cannot feel it trust worthy. In our country, most of the customers are influenced by advertisement. In recent period, customers become more conscious about their savings. Marketers use these strategies for selling their products.

Different banks advertise about mobile banking to give information about it to all the people in the country.

This study has researched the consumer perception on mobile banking based on the above dimensions. The study involved a field survey conducted across different places all over the country. The respondents were approached at home, university, collage etc.

## **Mobile Banking Background**

A woman counts her cash after a withdrawal from the first cash point machine in London, in 1967. For 30 years, financial institutions have been on a quest to satisfy their customers. Need for more convenience. First come the automated teller machine (ATM), which New York's Chemical Bank introduced to the American public in 1969. It did little more than dispense cash at first, but the ATM evolved over time to become a true bank-away-from-bank, providing a full suite of financial transactions. Then come Internet banking in the mid 1990s, which enabled consumers to access their financial accounts using a home computer with an Internet connection. Despite its promise of ultimate convenience, online banking saw slow and tentative growth as banks worked out technology issues and build consumer trust. Today, Internet banking has crested a critical mass, with about 35 percent of U.S. households conducting bank transactions online. Not so with mobile phones. They can be carried anywhere and are by an enormous number of people. More than 238 million people in the U.S. have mobile phones. That is a whopping 78 percent of the population. And worldwide there are more than 3.25 billion mobile phone subscribers, with penetration topping 100 percent in Europe. If mobile phones only delivered voice data, then their use as a vehicle to deliver banking services would be limited. Most phones, however, also provide text messaging capabilities, and a growing number are Web-enabled. That makes the mobile phone an ideal medium through which banks can deliver a wide variety of services. Banks classify these services based on how information flows. A pull transaction is one in which a mobile phone user actively requests a service or information from the bank. For example, inquiring about an account balance is a pull transaction. So is transferring funds, paying a bill or requesting a transaction history. Because banks must respond or take some action based on the user request, pull transactions are considered two-way exchanges. A push transaction, on the other hand, is one in which the bank sends information based on a set of rules. A minimum balance alert is a good example of a push transaction. The customer defines the rule "Tell me when my balance gets below \$100"—and the bank generates an automatic message any time that rule

applies. Similar alerts can be sent whenever there is a debit transaction or a bill payment. As these examples illustrate, push transactions are generally one way, from the bank to the customer.

Mobile banking is used in many parts of the world with little or no infrastructure, especially remote and rural areas. This aspect of mobile commerce is also popular in countries where most of their population is unbanked. In most of these places, banks can only be found in big cities, and customers have to travel hundreds of miles to the nearest bank.

In Iran, banks such as Parisian, Tejarat, Mellat, Saderat, Sepah, Edbi, and Bankmelli offer the service. Banco industrial provides the service in Guatemala, Citizens of Mexico can access mobile banking with Omnilife, Bancomer and MPower Venture, Kenya's Safaricom (part of the Vodafone group) has the M-Pesa Service, which is mainly used to transfer limited amounts of money, but increasingly used to pay utility bills as well in 2009, Zain launched their own mobile money transfer business, in Kenya and other African countries. In Somalia, the many telecom companies provide mobile banking.

Telenor Pakistan has also launched a mobile banking solution, in coordination with Taameer Bank, under the label Easy Paisa, which was begun in Q4 2009. Eko India Financial Services, the business correspondent of State Bank of India (SBI) provides bank accounts, deposit, withdrawal and remittance services, micro-insurance, and micro-finance facilities to its customers (nearly 80%, of whom are migrants or the unbanked section of the population) through mobile banking.

In a year of 2010, mobile banking users soared over 100 percent in Kenya, China, Brazil and USA with 200 percent, 150 percent, 110 percent and 100 percent respectively.

Mobile banking is used in many parts of the world with little or no infrastructure, especially remote and rural areas. This aspect of mobile commerce is also popular in countries where most of their population is unbanked. In most of these places, banks

can only be found in big cities, and customers have to travel hundreds of miles to the nearest bank.

## **Mobile Banking**

Mobile banking (m-banking) is the newest delivery channel for banking services. The definition of m-banking varies among the researches partially because electronic banking refers to several types of services through which customers can request for information and carry out most retail banking services via mobile phone (Daniel 190, Mols, 1998, Sathye 1999) Burr (1996) describes M-banking is an electronic connection between bank and customer in order to prepare manage and control financial transactions through the mobile device.

M-banking is considered to be a segment of e-business to the extent that banks are involved in the conduct of business transactions via mobile device, other non-banking financial products and services (e.g. insurance), not to mention products.

## **History of Mobile Banking in Bangladesh**

Recent developments have dramatically altered the banking landscape and transformed the relationships between banks and their customers.

This is making it more difficult for banks to retain assets to retain assets, acquire new deposits, cross-sell products or acquire new customers. Customers are feeling the need to stay vitally connected to their accounts, but that is driving up the cost to service them. However. Traditional interaction channels, including most mobile banking solutions, are customer seractive. Whether they have an enquiry or require service, customers must initiate contact with the bank.

“Dutch Bangla Bank Limited” (DBBL) has for the first time introduced its mobile banking service expanding the banking service from cities to remote areas. Bangladesh Bank governor Atiur Rahman inaugurated the service by depositing Tk 2000 and withdrawing Tk 1500 through Banglalink and Citycell mobile networks in Motijheel area. Bangladesh Bank has already allowed 10 banks to initiate mobile

banking. Of them DBL kicked off first. “Mobile banking is an alternative to the traditional banking through which banking service can be reached at the doorsteps of the deprived section of the society,” the central bank governor said at an inaugural press briefing at Hotel Purbani. Atiur Rahman said through mobile banking various banking services including depositing and withdrawing money, payment of utility bills and reaching remittance to the recipient would be possible. By going to the DBBL-approved Citycell and Banglalink agents throughout the country the subscribers on showing necessary papers and payment of a fee of Tk 10 can open an account. To avail of the banking service a subscriber will require owning a cell phone of any provider and he will be given a four-digit PIN. By using the PIN he can operate all types of banking services including depositing and withdrawing money maintaining security of his account.

The customer will hand over cash to the agent and the agent will initiate the transaction from his mobile phone, the agent will help the account holder to do the banking using his PIN. A customer can deposit or withdraw money five times a day and he can deposit or draw Tk. 5000 per day. One percent of the transaction amount or Tk 5, whichever is higher, will be taken as cash in charges. In case of cash out the charge will be 2 percent of the transaction amount or Tk 10. However the registration fee, salary and remittance disbursement services will be provided free of cost.

“BRAC Bank Limited” is set to introduce mobile banking secondly a top official said the service will enable millions of banked and unbanked people to deposit, withdraw and transfer money through mobile phones. Bkash, a joint venture between BRAC Bank and US-based Money is Motion, will provide mobile banking with a fully encrypted VISA technology platform for transactions through mobile phones. Any mobile user can register and open up a bkaash account and then do transactions through their mobile phones in easy, convenient and reliable way.

“bkaash will fundamentally change the way people now do transactions, as all transactions will be possible through mobile phones in future,” said Syed Mahbubur

Rahman, managing director of the bank, “Customers will not need to come to the bank ; rather the bank will go to them,”

The bank said a bkash account will act as a digital mobile wallet and any body can take the service. “Your mobile phone will become our wallet, Customers can get financial services through phones, even by the handset that costs the lowest,” Rahman said, Under a partnership with UNDP and Local Government Division, bkash is rolling out mobile banking in 4,501 union parishads in the country. Bkash has already signed a deal with a leading mobile operator and is in talks with other to enable all mobile users-currently around 7.5 crore- to have individual digital wallets, said Mamdudur Rashid, deputy managing director of the bank. BRAC Bank launched its operation 10 years back with the objective of bringing unbanked people under formal banking coverage.

The business model of the bank is to mobilize deposits from urban area and disburse it to rural areas. The country’s youngest bank has already set some records: It has acquired over 12 lakh customers, bringing full banking services not only to small and medium enterprises, but all strata of the banking industry, said the bank “Being the youngest Bangladesh bank, we have emerged as the largest SME bank servicing about 3.65 lakh entrepreneurs at grassroots level, an achievement that helped global recognition for the Bangladesh Bank, said Rashid the bank believes in 3P philosophy – people, planet and profit and has been active in Green banking. It has already turned 22 of its SME Unit offices solar-powered and plans to convert the rest in the same manner by 2012.

A wide spectrum of Mobile/branchless banking models is evolving. However, no matter what business model, if mobile banking is being used to attract low-income populations in often rural locations, the business model will depend on banking agents, i.e., retail or postal outlets that process financial transactions on behalf telcos or banks. The banking agent is an important part of the mobile banking business model since customer care, serviced quality and cash management will depend on

them. Many telecoms will work through their local airtime resellers. However, banks in Colombia, Brazil, Peru, and other markets use pharmacies, bakeries, etc.

These models differ primarily on the questions that who will establish the relationship (account opening, deposit taking, lending etc.) to the end customer, the Bank or the Non-Bank/ Telecommunication Company (Telco). Another difference lies in the nature of agency agreement between bank and the Non-Bank Models of branchless banking can be classified into three broad categories – Bank Focused Bank-Led and Nonbank-Led.

**Bank focused Model:** The bank-focused model emerges when a traditional bank uses non-traditional low-cost delivery channels to provide banking services to its existing customers. Examples range from use automatic teller machines (ATMs) to internet banking or mobile phone banking to provide certain limited banking services to banks' customers. This Model is additive in nature and may be seen as a modest extension of conventional branch-based banking.

**Bank-led Model :** The bank-led model offers a distinct alternative to conventional branch-based banking in that customer conducts financial transactions at a whole range of retail agents (or through mobile phone) instead of at bank branches or through bank employees. This model promises the potential to substantially increase the financial service outreach by using a different delivery channel (retailers/mobile phones) a different trade partner (telco/chain store) having experience and target market distinct from traditional banks, and may be significantly cheaper than the bank-based alternatives. The bank-led model may be implemented by either using correspondent arrangements or by creating a JV between Bank and Telco/non-bank in this model customer account relationship rests with the bank.

**Non-bank-led model :** The non-bank-led model is where a bank has a limited role in the day-to-day account management. Typically its role in this model is limited to safe keeping of funds. Account management functions are conducted by a non-bank (e.g. telco) who has direct contact with individual customers.

A specific sequence of SMS messages will enable the system to verify if the client has sufficient funds in his or her wallet and authorize a deposit or withdrawal transaction at the agent. When depositing money, the merchant receives cash and the system credits the clients bank account or mobile wallet. In the same way the client can also withdraw money at the merchant : through exchanging sms to provide authorization the merchant hands the client cash and debits the merchant's account.

Kenya's M-PESA mobile banking service, for example, allow customers of the mobile phone operator Safaricom to hold cash balance which are recorded on their SIM cards, Cash may be deposited or withdrawn from M-PESA accounts at Safaricom retail outlets located throughout the country, and may be transferred electronically from person to person as well as used to pay bills to companies. One of the most innovative applications of mobile banking technology is Zidisha, a US-based nonprofit microlending platform that allows residents of developing countries to raise small business loans from web users worldwide. Zidisha uses mobile banking for loan disbursement and repayments, transferring fund from lenders in the United States to the borrowers in rural Africa using nothing but the internet and mobile phones.

In Cote d'Ivoire, Orange has a commercial offer which allows subscribers to use ATMS to top up their mobile wallet account. Due to very flexible and modular soap software, it is easy to add future options such as the payment of utility bills or insurance premium.

***Five key aspects of Mobile Banking in Bangladesh*** : Mobile banking is taking off. If anybody carry a cell phone and interested in finances then it's only a matter of time before mobile banking is second nature. As that happens, there will be five key aspects of your mobile banking experience: mobile payments, mobile check processing, SMS banking, mobile banking apps and general banking through the mobile web.



**Mobile Payment :** Being able to make payments with the mobile phone is one of the most important features of mobile banking. There are a few different ways that this is happening right now :

- Paying for virtual items using the mobile phone. Anybody can purchase online items (such as song downloads) using with mobile phone. The cost of the purchase goes on to your phone bill and pay for it when pay cell phone bill.
- Paying for on-site items using your mobile phone as a debit card. It is increasingly common to see the option of paying on-site for items using technology that reads with mobile phone. The phone acts like debit card and takes the payment directly out of the checking account. This is the future of mobile banking.
- Paying for on-site items using the phone as the billing system. This option combines the above two options, using the swipe of the phone but charging the phone instead of the checking account. Anybody pay for the item when pay with phone bill.

**Mobile Check Processing :** One of the most popular features of mobile banking right now is mobile check processing. It involves using the mobile phone (with an app and the phone's camera) to take a photo of a check that received and then processing the check through bank account. This means that anybody doesn't need to physically go to the bank anymore to deposit checks. This type of convenience in Banking is what mobile banking is all about.

**SMS Banking :** Text messages are an increasingly important part of banking for many people. For example, a lot of people opt to receive alerts from their banks via text message. The bank may notify them when a payment is due, when the account is nearly empty or when a payment has been made. Two-way text message is increasingly an option, as well. This means that you can use SMS to contact with bank with questions, verify purchases and even make transactions.

***New Mobile Banking Application:*** There are many different mobile banking application being developed today. These include the mobile check processing apps describe above but also include a diverse range of different apps. These included apps developed and offered by banks themselves as well as third party apps. They allow to do various banking budgeting, transfer of funds, etc. all using your mobile phone. This area of mobile banking is probably the areas that will experience the most growth in the years of come since application are the way of the mobile phone future.

***General Banking through the Mobile Web :*** The experience of the Internet on smart phones has become strikingly similar to the experience you get when accessing websites on a compute. This means that any of the online banking that do from your computer can increasingly be done from the phone. In any given day may use with phone to transfer funds from PayPal account to check account, make a bill payment using the banks online billing system check on the status of social lending club investments, compare loans and credit card offers and view advertisements for new bank deals.

### **Five reasons to use mobile banking in Bangladesh**

***i. Good Security:*** “I’ve never heard of any major security breaches.” Says Gillen. Van Dyke agrees. “Security is a perceived disadvantage in mobile banking,” he says, “but it’s not a reality.” He believes that mobile banking is safer than other channels, including Internet banking. “Malware is less likely to threaten mobile banking because of the proliferation of platforms, “he says.”

Even if you lose your phone, you’re safe, say many experts, Bank data is guarded with passwords and other ID checks. Also, you can disable your phone remotely, says Van Dyke.

***ii. Mobile banking is ramping up quickly :*** Mobile banking began catching on in 2007. But already, the big banks offer these services, along with 500 other banks and credit unions. What’s more, some of them offer robust features. For example, PNC

offers a virtual wallet, where you can see how your money is being spent. It also offers a savings engine that lets you set aside money automatically, says Trebilcock.

*iii. No fees:* For now, banks aren't changing fees for mobile banking services. However, your phone provider may tack on extra charges. Depending on your data plan, you may be paying for each message or download, "Says Gillen, So, it pays to check what your plan pays for.

*iv. Easy access:* Being able to access the financial records anytime anywhere makes mobile banking appealing. Anybody can check deposits, notice money transfers and monitor transaction history. Those actions give you a safety advantage, too. "The more you monitor your account, the safer you are," says Van Dyke. "The bulk of identity fraud is discovered by people with their own accounts."

In the future, people will have more access to all their accounts. "It will work more like remote control," He says, There will also be more movement of funds and virtual wallets where you can make payments with mobile devices. Already, Bank of America is testing the ability to make deposits remotely.

*v. More ways to access accounts:* Banks typically let you access accounts via texting, mobile browsers or downloadable applications. Texting is the simplest method for many. "It's the least sexy, but it plays an important role," says Red Gillen, a senior analyst at Celent. "It's best for alerts, especially when your account is low." Using your web browser accesses your online account. It's the way most people to do their mobile banking. But downloadable applications are expanding quickly.

### **Future functionalities in mobile banking in Bangladesh:**

With the advent of technology and increasing use of smartphone and tablet based devices, the use of Mobile Banking functionality would enable customer connect across entire customer life cycle much comprehensively than before, With the scenario, current mobile banking objectives of say building relationships, reducing

cost, achieving new revenue stream will transform to enable new objective targeting higher level goals such as building brand of the banking organization. Emerging technology and functionalities would enable to create new ways of lead generation prospecting as well as developing deep customer relationship and mobile banking world would achieve superior customer experience with bi-directional communication.

***Illustration of objective based functionality enrichment in Mobile Banking :***

- Communication enrichment :- video Interaction with agents, advisors.
- Pervasive Transactions capabilities : Comprehensive “Mobile wallet”
- Customer Education : “Test drive” for demos of Banking services
- Connect with new customer segment : Connect with Gen Y- Gen Z using games and social network ambushed to surrogate bank’s offerings
- Content monetization : Micro level revenue themes such as music, e-book download
- Vertical positioning :- Positioning offering over mobile banking specific industries.
- Horizontal positioning : Positioning offering over mobile banking across all the industries
- Personalization of corporate banking services : Personalization experience for multiple roles and hierarchies in corporate banking as against the vanilla based segment based enhancements in the current context.
- Build Brand : Build the bank’s brand while enhancing the “Mobile real estate”.

***Handset operability :*** There are a larger number of different mobile phone device and it is s big challenge for banks to offer mobile banking solution on any type of device. Some of these devices support Java ME and others support SIM Application Toolkit, a WAP browser, or only SMS.

Initial interoperability issues however have been localized, with countries like India using portals like R-world to enable the limitations of low end java based phones while focus on areas such as South Africa have defaulted to the USSD as a basis of communication achievable with any phone.

The desire for interoperability is largely dependent on the banks themselves, where installed applications (Java based or native) provide better security, are easier to use and allow development of more complex capabilities similar to those of internet banking while SMS can provide the basics but becomes difficult to operate with more complex transactions.

There is a myth that there is a challenge of interoperability between mobile banking application due to perceived lack of common technology standards for mobile banking. In practice it is too early in the service lifecycle for interoperability to be addressed within an individual country, as very few countries have more than one mobile banking service provider. In practice, banking interfaces are well defined and money movements between banks follow ISO-8583 standard. As mobile banking matures, money movements between service providers will naturally adopt the same standards as in the banking world.

Received the password is sent to the consumer's phone via SMS. The password is expired once it has been used or once its scheduled life-cycle has expired.

Because of the concerns made explicit above, it is extremely important that SMS gateway providers can provide a decent quality of service for banks and financial institutions in regards to SMS services. Therefore, the provision of service level agreements (SLAs) is a requirement for this industry; it is necessary to give the bank customer delivery guarantees of all messages.

### **Problem of Mobile Banking in Bangladesh**

Security is not the main concern in mobile banking. The real issue is making m-banking viable as a business concern, in order to offer it to the unbanked.

Bankers are aware that risks are involved; the problem is identifying those risk. When asked about malware attacks, one presenter suggested that malware attacks on mobile are possible, but because of the diversity in mobile operating systems, threats of malware are, well, not quite so significant, at least for now. Of course, that comment raised a few eyebrows, mine included.

Banks should adopt a number of measures to ensure that adequate security controls are integrated into the heart of their mobile banking strategy; these include:

- Consider using the in-built features of a mobile device for stronger multi-factor authentication and verification, including biometrics, behavioural analysis and relocation.
- Monitor apps stores for any rogue apps that purport to represent your company and kill them quickly.
- Introduce a plan for updating mobile banking apps
- Ensure that mobile banking apps are security tested
- Integrate mobile apps with other banking channels, so that security lessons learned in one channel benefit the others
- Educate users about system hygiene when upgrading their handset, and disposing of an old one.

Mobile banking has created new opportunities for consumers and criminals alike, and some of the greatest vulnerabilities stem from the same factors that make banking by cell phone so attractive, industry observers and participants say.

For starters, short messaging service texting-which can be done on nearly any mobile phone and is often the first and sometimes only mobile service a credit union offers-is considered particularly prone to phishing attacks.

Then there are security problems caused by banking applications created sometimes hastily before being uploaded for i-Phones, Black-Berry and Android platform phones. Furthermore, mobile phones are small and easily lost and stolen, taking their stored credentials and text messages with them.

The steps the industry has taken so far, by simply looking to online security measures for the security roadmap it lays for mobile, are not sufficient. Mobile needs its own guidance, its own oversight and its own mandates. I know that's not something the industry likes to hear, but I think everyone would agree with the sentiment.

Foreign and private banks offered a broad range of services over the mobile device. Public sector banks lag behind in offering wider range of mobile banking services and products.

At present, there is no proper infrastructure for performing Mobile banking activities in Bangladesh. Poor telecommunication network policies and slow paced regulatory initiatives very minimum number of users of mobile device. The banking infrastructure in terms of electronic payments and inter-agreement between telecommunication industry and banking industry connectivity is poor. Limitations of supportive legal system, lack of skilled IT workforce, absence of cyber law absence of EFT (Electronic Fund Transfer) legislation.

Prospect of mobile banking in Bangladesh : Mobile Banking is a Banking process without bank branch which provides financial services to unbaked communities efficiently and at affordable cost. The aim of the service is to bring more people under the umbrella of banking service. Bangladesh Bank governor Dr Atiur Rahman inaugurated the service through deposit and withdrawal of money from two banking outlets in the city. Government thinks it has a great prospect as it is a new technology in digital Bangladesh. But in Bangladesh many people think traditionlly, because they cannot think it has any facility to use mobile banking. People feel mobile banking has prospect in Bangladesh whereas they also think it has no prospect in Bangladesh as many people will not feel interest or have belief on mobile banking.

## **Recommendation of Mobile banking in Bangladesh**

In order to ensure a successful practice of mobile banking in Bangladesh, we recommend the following.

Considering above discussions regarding m-banking we can recommend banks those are providing this facility that application that is to be downloaded in order to operate the account through mobile should be user friendly at the same time they should keep in view of capacity of the people of the respective country in which they are likely to provide this type of banking if the required mobile phone is much expensive and the unavailability of frequency service exist then not all people will be able to get this facility.

Charges of the bank and the security are another concern for account holder so it is necessary to ensure strong security and minimum maintaining cost of mobile banking.

Government should compel the banking sectors to automate their operation and going online by a specific period.

Provide adequate training and technological support to develop the manpower, appropriate legal framework, Proper infrastructure development. Government should implement the cyber laws to ensure proper security about customers information (i.e. Credit card number) Government should establish proper educational institution to create efficient IT- professionals to support e-banking in Bangladesh, and developing of integrated e-banking software.

Government, in collaboration with the banks, should educate and inform its citizens and customers on the workability and effectiveness of E-banking. This will increase the confidence level of customers.

Banks and tele-communication industry should have adequate research and technological background in this regard. Bank can charge normal profit to enlarge the market size on the electronic banking products.



Political commitment to improve governance and institutional strength is essential for successful application of m-banking. As m-banking users mostly use ATMs and POS in most cases, the banks should emphasize on providing uninterrupted service.

## **Conclusion**

Mobile banking as a vehicle to boost up trade, especially international trade has already been recognized by international business community, However mobile banking and its related technologies are still in its infancy stage in Bangladesh. Since the world is moving towards mobile banking everything, so we should try to overcome all the barriers and also try to develop such environment that is favorable for the development of m-banking.

Mobile banking is suspended to become the big killer mobile application arena. However, banks going mobile the first time need to step the path cautiously. The biggest decision that banks need to make is the channel that they will support their services on. Mobile banking through an SMS based service would require the lowest amount of effort, in terms of cost and time, but will not be able to support the full breath of transaction-based services On the other hand a market heavily segmented by the type and complexity of mobile phone usage might be good place to roll of WAP based mobile applications.

According to the Gartner Group, mobile banking services will have to support a minimum of 50 different device profiles in the near future.

In order for m-banking to continue to grow, the security and the privacy aspects need to be improved. With the security and privacy issues resolved, the future of m-banking can be very prosperous. The future of electronic banking will be a system where users are able to interact with their banks “worry-free” and banks are operated under one common standard.

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