

# Problems and Prospects of E-Banking in Bangladesh

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**Abstract-** 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 E-banking. The adoption of E-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 E-banking in Bangladesh and the impact of E-banking on banking activities. The new challenges of E-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.

**Index Terms-** E-Banking, ATM, POS, PDA, Internet, ICT

## 1. INTRODUCTION

Information technology is becoming an important factor in the future development of financial services industry, especially the 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. The ICT is crucial not only for information analysis, but also enables the banking sector to differentiate its offer from competitors and thereby make it a market leader. 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. Hence, the development of the concept of electronic financial services, more commonly known as "E-banking". Many banks have adopted the "E-banking" concept for their day-to-day transactions which meets the expectations its internal users (employees) and external users (customers, suppliers, or institutional partners). A business can simplify or improve its human resources by introducing various internet technologies. Benefits include the improvement

of administrative systems, better information tracking, and time and cost effectiveness. Under this condition, the transition to "E-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.

### 1.1 Objectives of the Study

The objectives of the study are to

- Present the current scenario of E-banking in Bangladesh.
- Identify the problems as well as prospects of E-banking in Bangladesh.
- Suggest measures for growth of E-banking in Bangladesh.

### 1.2. 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 been personally interviewed in order to collect some primary information used in this study. Besides this, internet has been used as another source of information.

## 2. E-Banking

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

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

and services from other sectors of business may be sold electronically as well.

E-banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. Customers access E-banking services by using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or Touch Tone telephone (Federal Financial Institutions Examination Council, n.d).

E-banking or internet banking or online banking are analogous and defined as the conduct of banking services by using electronic delivery channels such as ATM, telebanking and PC banking. Under this banking process, the branches of a bank are connected electronically in such a way so that a client or a customer of a particular bank can draw the money or make deposits anytime anywhere of the country or the world. Large number of banks world-wide offer e-banking/web banking/internet banking, whereby their customers manipulate their personal finances and execute transactions via the internet. Banks and others financial institutions advertise frequently on the significance and convenience of the e-banking facilities. Banks are encouraging their consumers to be benefited from e-banking services. E-banking will soon mature into an offensive business strategy rather than a passive (Hirst, 1999).

E-Banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. The following terms refers to one form of electronic banking: personal computer (PC) banking, Internet banking, virtual banking, online banking, home banking, remote electronic banking, and phone banking. PC banking and Internet or online banking is the most frequently used designations. It should be noted, however, that the terms used to describe the various types of electronic banking are often used interchangeably.

## 2.1. Different Forms of E-banking

The terms 'PC banking', 'online banking', 'Internet banking', 'Telephone banking' or 'mobile banking' refer to a number of ways in which customers can access their banks account without having to be physically present at the branch of a bank. E-banking may be understood as the term that covers all the ways of banking business electronically.

### 2.1.1. Tele-banking

Tele-banking service is provided by phone. To access an account it is required to dial a particular telephone number and there are several options of services. Options included

- Checking account balance
- Funds transfer between current, savings and credit card accounts
- Bill payments
- Stock exchange transaction
- Receive statement via fax
- Loan payment information \

### 2.1.2. PC Banking

The increasing awareness of the importance of literacy of computer has resulted in increasing use of personal computers through the entire world. Furthermore, incredible plummet of cost of microprocessor has accelerated the use of computer. The term 'PC banking' is used for banking business transacted from a customer's PC. Using the PC banking or home banking now customers can use their personal computers at home or at their office to access their accounts for transactions. For subscribing to and dialing into the banks' Intranet proprietary software system is use for password.

Basically, there are two types of PC banking.

The first type is online banking, in which bank transactions are conducted within closed networks. The customer needs specialized software provided by his bank.

The second type is Internet banking, which German banks have been offering since the mid-nineties, although the only product they were offering at the time of information. Unlike closed networks, Internet banking permits the customer to conduct transactions from any terminal with access to the Internet.

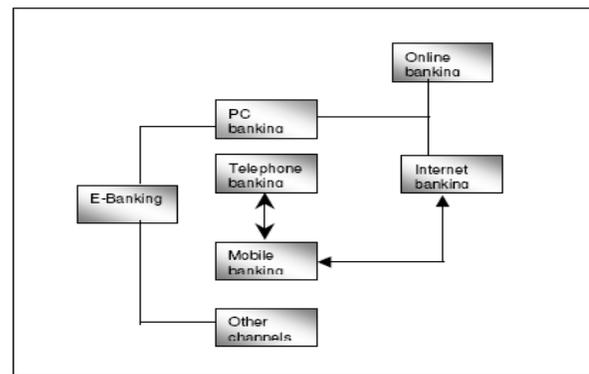


Figure 1: Types of E-banking

## 2.1.3 Internet Banking

Internet banking would free both bankers and customers of the need for proprietary software to carry on with their online banking transactions. Customer behavior is changing rapidly. Now the financial service is characterized by individuality, independence of time, place and flexibility. These facts represent huge challenges for the financial service providers. So the Internet is now considered to be a 'strategic weapon' to satisfy the ever-changing customers' demand and innovative business needs. Adequate legal framework and maximum security are the two essential factors for Internet banking. The comprehensive security infrastructure includes layers of security from the network to the browser, including sophisticated encryption that protects customers' from intrusion when they access the bank over the public network.

## 2.1.4 Mobile Banking

Actually mobile banking is a variation of Internet banking. Mobile banking is a good example of how the lines between the various forms of e-banking are becoming gradually blurred. Due to the new transmission technologies such as WAP (Wireless Application Protocol), portable terminal like mobile phones,

personal digital assistant (PDA) or small hand-held PCs are providing bank customers with access to the Internet and thus paving the way to Internet banking. It assures immense flexibility and makes the financial services independent of time and place. However, the use of mobile banking is still in a nascent state. The slower transmission speed of the WAP standard and the limited amount of information available are just two of the factors inhibiting the use of those terminals.

### 3.1. Banking sector in Bangladesh

According to the Scheduled Banks Statistics; (October-December, 2006) by Bangladesh Bank, the entire banking sector comprised 48 scheduled banks (commercial banks plus specialized banks i.e.DFIs) and 4 non-scheduled banks. It had all told 6562 branches. Total credit (net assts) and the total deposits (liabilities) of the sector stood Tk.156254.52 and Tk.182925.60 crores respectively as on end December, 2006. The detailed position is given below:

**Table 1: Banking Sector: December, 2006**

Bank types	Number of banks	Number of branches
NCBs	4	3384
PCBs	30	1776
DFIs	5	1354
FCBs	9	48
Total	48	6562

Source: Bangladesh Bank Statistics , 2006

It appears the above figures that the banking sector is dominated by four nationalized commercial banks (NCBs) followed by the private commercial banks (PCBs). Nationalized commercial banks not only had the highest number of branches, but also held the highest amount of credit and deposits. Out of total 6562 branches, the NCBs had 3384 branches i.e. 51.57 percent. In terms of business, next highest position is held by the private commercial banks (PCBs). There are thirty commercial banks in the private sector including Islami banks. The third position is held by five development finance institutions (DFIs). On the other hand, nine foreign commercial banks stood in forth on year end 2006.

### 3.2. ICT in Banking Sector

Penetration of Computer in Banks is very rapid. All banks now are computerized at least at head office level. If we go at branch level only; 19% branches of NCBs, 38% branches of PCBs and 97 % branches of FCBs are computerized. ITRC survey found that overall computer density in the banking sector is 1.64. Only 1,131 branches have at least one computer. For foreign commercial banks the computer density is 45.34, where as for NCBs the ratio is only 0.41. The specialized bank scenario is almost same as the NCBs, 0.43. On the other hand, private commercial banks have comparatively higher ratio, 4.94. As a whole 61.81 percent bank does not have any LAN. LAN penetration ratio [considering the branch level] is also very poor for overall banking sector, 0.07. The ideal ratio should be 1. Only FCBs have satisfactory picture in this regard. The PCB has an acceptable ratio, 0.22. Generally in NCBs other than the major

two cities [also not each branch] banks are working in stand-alone environment. The problem is, NCBs is the unique market player with more than 50 percent of market share, so ICT penetration is more crucial for this category of banks. Some midrange and mainframe computer systems are available in the banking sector. Only 11% of banks have inter branch connectivity through ICT network [WAN]. 70 percent of solution provider for WAN are of local origin. At the head office level 95.45 percent banks use banking software. 24 types of banking software are available in banks. 95 percent banks have Management Information Systems. But only 38 percent MIS are integrated to the transaction processing system [TPS].

If we consider head office level in service processing the use of computer or electronic device is very encouraging: 96.5 percent of banks use computer or some sort of electronic device, the similar figures are 58.62 percent in corporate banking, 68.97 percent in foreign exchange, 41.38 percent in fund transfer, 37.93 in investment banking. A broad spectrum of electronic banking services is available in Bangladesh with different degree of penetration. Credit card service is provided by 23. 1 percent banks, both PCBs and FCBs are there. The credit card service is from VISA and Master Card. Telebanking is second most penetrated e-banking service in Bangladesh. Credit card is becoming very popular service in major cities of Bangladesh. During 1999 the growth of credit card market is almost 100 percent.

Majority of banks is planning to introduce ICT for integration of banking services and new ICT based banking services, which will play a vital role in penetration of e-commerce in Bangladesh. 75 percent banks have strategic plan and implement it in IT and e banking. According to the survey the electronic banking service will observe an exponential growth in the next two years.

### 3.2. E-Banking in Bangladesh

In recent years the banking industry has undergone massive changes in providing service to their customers by using information technology. Developments in information technology and telecommunications have set in a motion an electronic revolution in the Bangladeshi banking sector. Foreign Commercial Banks (FCBs) in Bangladesh are playing a pioneer role in introducing modern financial products and services. Private Commercial Banks (PCBs) have started to follow the same pattern. On the other hand Nationalized Commercial Banks (NCBs) and the Specialized Banks (SBs) could not yet show notable performance regarding the issues. But due to the demands of the time, they are now taking initiatives to launch modern and innovative products and services. Currently most of the banks in Bangladesh are providing electronic products and services to their Customers'. We cannot say they are completely following electronic way. Because they offer some of the functionalities of the complete electronic banking like intra-bank transactions, Letter of Credit (LC) and foreign exchange etc. Banks products and services are categorized into two broad groups (i) Traditional Products and Services; and (ii) Modern and Innovative Products and Services which is called E-banking.

**Table 2: Payment and Transaction of Products and Services offered by Category of Banks in Bangladesh**

Category of Bank	Traditional		Modern and Innovative
	Used Domestically	Internationally	Used Domestically/ Internationally /Both
NCBs, SBs, PCBs, FCBs	<ul style="list-style-type: none"> <li>➤ Savings Deposit A/c</li> <li>➤ Current Deposit A/c</li> <li>➤ Short Term Deposit A/c</li> <li>➤ Demand Draft</li> <li>➤ Pay Order</li> </ul>	NOSTRO Account	<ul style="list-style-type: none"> <li>➤ Debit Card</li> <li>➤ ATM</li> <li>➤ SWIFT</li> <li>➤ Router</li> </ul>
NCBs, PCBs	<ul style="list-style-type: none"> <li>➤ Fixed Deposit A/c</li> <li>➤ Cash Credit Account</li> <li>➤ SOD Account</li> <li>➤ Telegraphic Transfer</li> <li>➤ Mail Transfer</li> <li>➤ Pay Slip</li> </ul>	<ul style="list-style-type: none"> <li>➤ Foreign Demand Draft</li> <li>➤ Foreign Documentary Bills Purchase</li> <li>➤ Foreign Bills Purchase</li> <li>➤ Foreign Bills for Collection</li> <li>➤ Payment against Documents</li> <li>➤ Inland Foreign Bills Purchase</li> </ul>	<ul style="list-style-type: none"> <li>➤ POS</li> <li>➤ Internet</li> <li>➤ On-line (e-banking)</li> </ul>
PCBs, FCBs, Islamic Banks	<ul style="list-style-type: none"> <li>➤ Demand Draft</li> <li>➤ Telegraphic Transfer</li> <li>➤ Pay Order</li> </ul>	<ul style="list-style-type: none"> <li>➤ FC Account Resident</li> <li>➤ F.C Deposit A/c</li> <li>➤ Non-resident F.C Deposit A/c</li> <li>➤ Foreign Demand Draft</li> </ul>	<ul style="list-style-type: none"> <li>➤ Debit Card</li> <li>➤ ATM</li> <li>➤ On-line (e-banking)</li> <li>➤ SWIFT and Router</li> </ul>
NCBs	<ul style="list-style-type: none"> <li>➤ Deposit Pension Scheme A/c</li> </ul>		
SBs	<ul style="list-style-type: none"> <li>➤ Fixed Deposit A/c</li> <li>➤ Mail Transfer</li> </ul>		
PCBs	<ul style="list-style-type: none"> <li>➤ Monthly Savings Scheme</li> <li>➤ Special Savings Scheme</li> </ul>	<ul style="list-style-type: none"> <li>➤ Non-Resident Taka Account</li> <li>➤ Travelers' Cheque</li> <li>➤ International Credit Card</li> </ul>	<ul style="list-style-type: none"> <li>➤ Moneygram Xpress Money</li> <li>➤ Credit Card</li> </ul>
FCBs	<ul style="list-style-type: none"> <li>➤ Access Account</li> </ul>	<ul style="list-style-type: none"> <li>➤ Travelers' Cheque</li> </ul>	<ul style="list-style-type: none"> <li>➤ Credit Card</li> <li>➤ POS</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Recurring Deposits</li> <li>➤ Cash Credit Account</li> </ul>	<ul style="list-style-type: none"> <li>➤ International Credit Card</li> </ul>	<ul style="list-style-type: none"> <li>➤ Internet Card</li> <li>➤ Cheque</li> <li>➤ Prepaid</li> </ul>
Islamic Banks	<ul style="list-style-type: none"> <li>➤ Mudaraba Savings Deposit A/c</li> <li>➤ Mudaraba Term Deposit A/c</li> <li>➤ Al-Wadia Current Deposit A/c</li> <li>➤ Mudaraba SND A/c</li> <li>➤ Hajj Deposit A/c</li> <li>➤ Pension Scheme</li> <li>➤ Cash WAQF</li> <li>➤ Term deposit</li> </ul>	<ul style="list-style-type: none"> <li>➤ NOSTRO Account</li> <li>➤ Foreign Tele Transfer</li> </ul>	

Source: Survey output conducted on Commercial Banks in Bangladesh.

The existing modern and innovative banking products and services in Bangladesh are: modern and innovative products like Debit Card and Credit Card, modern and innovative services like Automated Teller Machine (ATM), Point of Sales (POS) and e-services like On-line banking, , Society for Worldwide Inter-bank Financial Telecommunication (SWIFT)etc.

**Table 3: Number of Banks Adopting Modern Products and Services**

Products and Services	July, 2005					July, 2007				
	NC Bs	SB s	PC Bs	FC Bs	Tot al	N C Bs	SB s	PCBs s	F C Bs	Tota l
No of Banks	4	5	30	9	48	4	5	30	9	48
Credit Card	0	0	11	1	12	1	1	16	6	24
Debit Card	3	1	13	2	19	3	1	17	5	25
ATM	2	1	15	4	22	3	1	20	7	31
POS	2	0	8	1	11	2	0	10	3	15
Internet	1	0	3	3	7	1	0	8	5	14
Phone Banking	0	0	2	2	4	0	1	6	5	12
Online	1	0	19	4	24	1	1	21	5	28
Swift	4	2	21	6	40	4	2	29	7	42

Based on a recent survey on the scheduled banks in Bangladesh, it is found that during the last couple of years, the use of debit card, credit card and ATM as a smart payment rapidly increasing the transaction of products and services. ATM facility was available only in 22 banks (2 NCBs, 1 SB, 15 PCBs and 4 FCBs) at the July of 2005, but at the July of 2007, the number reached to 31 (3 NCBs, 1 SB, 20 PCBs and 7 FCBs) (Table 1). The Credit Card, Debit Card, On-line banking and SWIFT facilities also reached to 24, 25, 28, and 40 banks respectively over the period. Efforts of PCBs in offering modern and innovative

products and services increased substantially during the period 2005-2007 (Table 1).

### 3.3. Constraints to E-Banking in Bangladesh

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

- At present, there is no proper infrastructure for performing Electronic banking activities in Bangladesh.
- Slow uptake of internet access and PCs.
- Poor telecommunication network policies and slow paced regulatory initiatives.
- Very minimum number of users of internet.
- The banking infrastructure in terms of electronic payments and inter-bank connectivity is poor.
- Limitations of supportive legal system.
- Lack of skilled IT workforce.
- Absence of cyber law.
- Absence of EFT (Electronic Fund Transfer) legislation.
- Absence of need based business plan for on-line banking
- ATMs may have network problems, unavailability and shortage of money.
- High price of computer, compute hardware and banking software.
- Lack of awareness at government level of e-banking issue.
- Lack of awareness at customer level of e-banking issue.
- Weather has a direct effect towards e-banking. If create heavy rain, flood or cyclone then the entire network is down.

### 3.4. Prospects of E-Banking

Information technology environment changes rapidly. It is estimated that the number of Internet users in Bangladesh will increase in a recent years. The number of physical branches will be decreased (the profile of physical branches will change to advice and support centers) and most of the transactions will be concluded via main e-banking channels: online Internet bank and m-banking services. Rapid growth of e-banking in Bangladesh is expected.

## 4. Recommendations and Conclusion

### 4.1. Recommendations

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

- E-banking systems should be simple to use, fast and user friendly.
- E-banking services should be standardized so that wherever the solution is used the customer is familiar with the procedure followed.

- 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.
- 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.
- The clearing house operation in Bangladesh should be fully automated system.
- Banks 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 e-banking.
- As e-bank users mostly use ATMs and POS in most cases, the banks should emphasize on providing uninterrupted service.

### 4.2. Conclusion

E-banking as a vehicle to boost up trade, especially international trade has already been recognized by international business community, especially in European Union, North American and some of the other developed nation like Japan, Singapore, and Hong Kong etc. However e-banking and its related technologies are still in its infancy stage in Bangladesh. Since the world is moving towards e-everything, so we should try to overcome all the barriers and also try to develop such environment that is favorable for the development of E-banking.

In order for E-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 E-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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