

E-Banking: Performance, Problems, and Potentials in Bangladesh

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Abstract

With the technological advancement in course of time E-banking has become a need of time around the globe. It has changed the way of doing banking business by making the whole business speedier, more flexible, and more consumers friendly. If connected with the Internet, one can bank round the clock from anywhere on the planet with one single account only, which makes life easier. But banking online is prone to different risks related to online security i.e. risks and frauds associated with online data transfer and data management. Bangladesh, a labor surplus country, still lacks proper ICT infrastructure, IT education facilities, and the required human resources followed by the country fails to get the cent percent benefits from this technical update. However E-banking has been started in Bangladesh since 2005 with high rate of market penetration. But risks are still at large as Bangladesh could not make significant progress on the various issues of E-banking business model like access to computer, Internet, and IT knowledge. On the other hand poor governance along with the negative effects of automation because of E-banking like workforce cut creates employee dissatisfaction leading poor performance at the end. Therefore the question arise will it be feasible to establish and develop E-banking in a developing country like Bangladesh and even if it is being introduced, to what extent E-banking facilities should be incorporated.

Key Words: E-banking, Bangladesh, ICT infrastructure, Information Technology, Internet, Financial sector

Introduction

With their ever increasing role playing, banks are now at the heart of better world. In the era of globalization to survive in the market banks always try to come up with new products to make banking jobs smoother and more user friendly. E-banking is one such offering from the banks around the globe. But around globe market penetration of e-banking is not same though the demand is pretty high almost everywhere. The main reason behind this is the improper ICT (Information and Communication Technology) infrastructure because success of e-banking is a direct function of properly functioning ICT infrastructure.

Therefore ICT developed countries enjoy the maximum possible benefits of e-banking while in Least Developed Countries like Bangladesh popularity of e-banking is increasing with good pace. Awamleh and Fernandes (2005) found remarkable progress in the banking products and services in the Western economies (IMF, 2003). In Hong Kong 30% (Chan and Lu, 2004), in Singapore 46% (Gerrad and Cunningham, 2003), and in Korea 63% (Chang, 2003) people have been found using internet in banking which justifies the relation in between e-banking and ICT infrastructure. At the same time it signals the reasons of low e-banking market penetration in the developing, and LDC countries.

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However also in these countries e-banking provides competitive advantage the banks. Banks use the Internet as a channel for financial services. Technology sometimes can simplify consumers' understanding of exchange, but on the other hand, it can make consumers' understanding more difficult. Mick and Fournier (1998) identify eight such paradoxes of information technology. Consumers perceive Internet technology as leading to control and chaos, freedom and enslavement, new and outmoded practice, increase and decrease in the feeling of competence, increase and decrease in efficiency, fulfillment and creation of needs, promotion and hindrance of social interaction, and engagement and disengagement. These ambiguities make Internet technology difficult for consumers to understand.

Table-01: Internet Penetration around the globe

Country/Region	Population (millions)	Population Penetration (%)*
Bahrain	0.70	27.7
Iran	68.45	7.0
Jordan	5.78	7.9
Kuwait	2.53	22.4
Oman	2.40	7.5
Qatar	0.77	18.3
Saudi Arabia	23.13	11
Turkey	75.56	9.9
UAE	3.75	29.6
Middle East	260.81	8.3
Oceania/Australia	33.44	49.2
Europe	731.02	36.8
North America	328.38	68
World Total	6420	14.6

Source: Internet World Statistics (September 2005)

* Penetration rate = Internet Users/ Population

To get financial services through Internet, consumers not only need to understand the technology, they also need to understand financial services. The complex nature of financial services often renders the task of information search easier than information evaluation (Black et al, 2002). The combined effect of consumers' understanding of both the Internet channel and financial services is difficult to foresee, and therefore there is a need for more research in consumers' use of complex services in the Internet. In this paper the authors try to explore the problems, prospects, and the current condition of e-banking both globally and in Bangladesh.

Methodology

The paper incorporates both primary and secondary data. However its worthy to note that major portion of data comes from secondary sources like various related publications, and books. The researchers have made an intensive study of related materials to explore e-banking, problems of e-banking, potential of e-banking in developing countries like Bangladesh etc. For primary data the researchers have discussed the issue with some bank officials as well as some bank clients to know more on the e-banking status in Bangladesh along with the problems they do face in using e-banking.

Major Findings And Discussions

Defining E-banking : E-banking can be defined as the deployment of banking services and products over electronic and communication networks directly to customers (Singh and Malhotra, 2004). These electronic and communication networks include Automated Teller Machines

(ATMs), direct dial-up connections, private and public networks, remote money transaction, money transfer and many other utilities. Among these technologies, the increasing penetration of personal computers, relatively easier access to the Internet and particularly the wider diffusion of mobile phones has drawn the attention of most banks to e-banking. However, the continuing convergence of information, communications and media technologies is also opening up new electronic channels of delivering banking services. E-banking broadly refers to the ability of banks to operate internal and external banking transactions and information securely through an array of electronic technological devices and software. As a result new business models are replacing outdated ones and organizations are re-thinking business process designs and practices, and customer relationship management strategies.

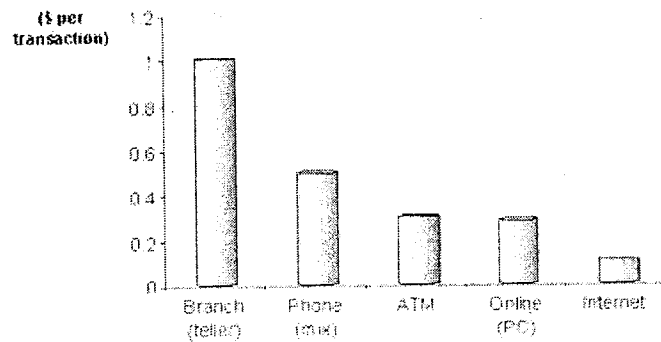
There are two ways to offer E-banking. First, an existing bank with physical offices can establish a web site and offer E-banking in addition to its traditional delivery channels. Second, a bank may be established as a branchless, Internet only or virtual bank without any physical branch. Broadly, the levels of banking services offered through Internet can be categorized in three types: (i) The Basic Level Services use the banks websites which disseminate information on different products and services offered to customers and members of public in general. It may receive and reply to customers queries through e-mail, (ii) In the next level are Simple Transactional Websites which allow customers to submit their instructions, applications for different services, queries on their account balances, etc, but do not permit any fund-based transactions on their accounts, (iii) The third level of Internet banking services are offered by Fully Transactional Websites which allow the customers to operate on their accounts for transfer of funds, payment of different bills, subscribing to other products of the bank and to transact purchase and sale of securities, etc. (RBI, 2001).

Significant differences exist among banks in terms of their e-banking capabilities. These differences can take two main dimensions. The first is the use of electronic channels and the second is the sophistication of banking services delivered over an electronic channel. Many established banks in developed countries began with ATMs and evolved through Personal Computer-banking, Telephone-banking, Internet-banking, TV-banking, and Mobile-banking. However, this evolution is not visible in recently established banks and in most of the African countries with the exception of South Africa. It appears that e-banking has dawned in Africa with Internet-banking (Brown and Molla, 2005).

Why E-banking : The evolution of the E-banking industry can be traced back to early 1970s. Banks began to look at E-banking as a means to replace some of their traditional branch functions for two reasons. Firstly, branches were very expensive to set up and maintain due to the large overheads associated with them. Secondly, E-banking products/services like ATM and electronic funds transfer were a source of differentiation for banks that utilized them. Being in a fiercely competitive industry, the ability of banks to differentiate themselves on the basis of price is limited (Singh et al, 2002). E-banking is offered by many banking institutions due to pressures from competitions (Yang, 1997). E-banking is the wave of the future. It provides enormous benefits to consumers in terms of ease and cost of transactions, either through Internet, telephone or other electronic delivery channels (Nsouli and Schaechter, 2002).

It has been repeatedly shown that as a delivery or distribution channel, the Internet could bring a substantial cost advantage for banks. Booz-Allen and Hamilton (1997) showed that the cost of a customer walking into the branch and using a teller is USD1.01, where as the cost of conducting the same transaction on the Internet is only a tenth of the cost. No doubt the ATM is considerably cheaper than a teller, but even so, the Internet is nearly 3 times cheaper than the ATM usage. In short, replacing a teller with an Internet channel should in theory, show a ten fold increase in the distribution revenue for the bank. This reason alone should be sufficient for banks to encourage this form of distribution channel. Figure 1 illustrates the cost function.

Figure-01: Processing costs per transaction

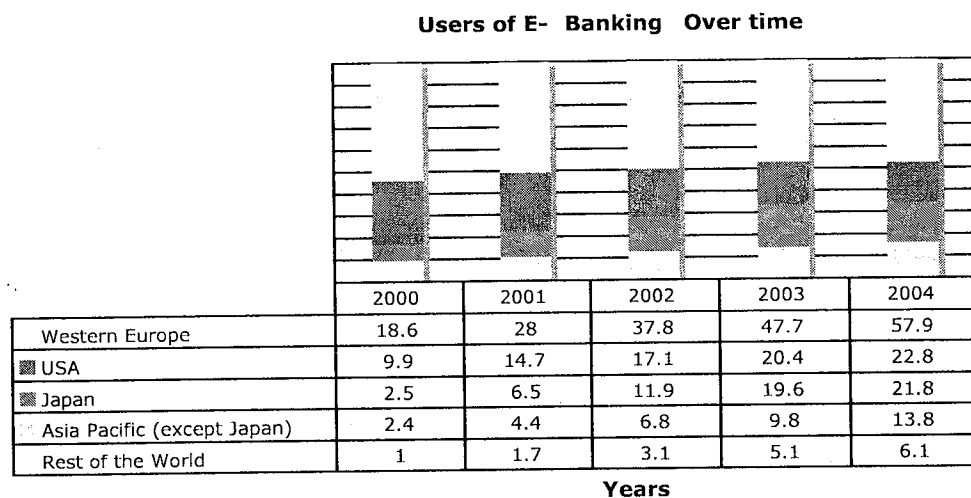


Source: Booz-Allen & Hamilton, JP Morgan, 2003

Banks will likely lose their competitiveness if they delay their actions in offering transactions based services on the Internet because customers are becoming more and more comfortable in using computers as well as remote banking services. The low costs of computer and communication devices will encourage customers to move in to E-banking much faster. If banks can't meet these customer demands quickly, they will lose a substantial part of their business in the future. Traditional banks have to move into other markets quickly. As cyber banks move in to the investment market and merchant market in addition to retail banking, traditional banks will lose their competitive edge if they allow these cyber banks to become leaders in Internet banking. In the end, to be successful, banks have to drive Internet banking instead of being pushed into it by others (Yan and Paradi, 1998).

Growth of E-banking : Banking platforms need to cope with continuously changing business environments and a continuous flood of new requirements, while staying sufficiently agile.

Figure-02: Growth in Internet Banking (in millions)



Source: International Data Corporation (www.epaynews.com)

Banking platform renewal requires thorough preparation based on a business foundation, including a description of what functionality the business side can expect (Xcom AG, 2006). Booz Allen Hamilton (1997) conducted a global survey covering 386 retail and corporate banking institutions in 42 countries to assess the strategic impact of Internet banking on the financial service industry. According to the study, there is a huge perception gap between North American/European banks and Japanese banks regarding the future of Internet banking. North American and European banks expect Internet banking to become the most important retail channel within ten years, but Japanese banks expect traditional branches to remain the most important channel. The study also indicates the rapid growth potential of Internet banking. Many of the banks that responded have plans to upgrade the functionality of their Internet service offerings.

The growth of Internet banking has been very encouraging and consequently financial institutions are actively pursuing Internet banking business. It is of little surprise that the number of customers banking online is expected to increase significantly over the next few years and that too not merely in the industrial nations but also in developing countries.

The introduction of the Inter-Bank GIRO system, an electronic credit transfer system in 2000 had recorded an annual average increase in transactions of 160% in terms of volume and nearly 200% in terms of value between 2003 and 2004 (Goi, 2006).

Major Concerns of E-Banking : The major concern is about security associated with the transactions over Internet. Both customers and banks exchange a bulky amount of information that is quite sensitive to both parties in course of transactions. Who can make both parties especially customers assured? The question is not answered fully yet though as a fundamental step many banks address on-line privacy through posting a statement of their policies about the collection and use of customer information. But the questions remained unanswered perfectly continuously.

Therefore people who try to break the banks' computer network never stop and often we learn about illegal money transfer over net. Studies point that banks' computer network is more vulnerable to internal attacks than external, because internal system users have knowledge of the system and access followed by banks have to spend more on prevention and detection of system exploitation both internally and externally. It increases costs for banks significantly but banks still gain because of the high profit margin coming from Internet banking (Sullivan, 2000).

E-banking Versus Traditional Banking : Creating monetary inflows to the bank and then balancing these flows with the profitable outflows is the main job of any bank. Success depends on the innovation and creative thinking of bankers how to do this job i.e. the ways that is comprised of service components. Therefore when one compares the traditional banking with e-banking one should focus on the service components. E-banking is one of the most creative way of time and with e-banking customers are at maximum possible ease of doing banking round the clock from anywhere. E-banking is also beneficial for banks in terms of lower costs, higher profits, competitive advantages in the market, better management of the organization, and improved corporate governance. However because of the infrastructural phenomenon not all countries can enjoy the benefits of e-banking at maximum. Therefore some countries introduce e-banking in small scale with limited features of e-banking. This is quite common in the developing and LDC countries.

The major problem with the traditional banking is that it can't consider the value of time for customers. Well it might be logical that one has to spend some times in banking but there should

be a limit considering the dynamism of today's lifestyles. Traditional banking can't consider that and therefore banks now add e-banking facilities with their existing traditional banking system in order to delight the customers followed by higher market penetration of e-banking around the globe. At the early stages of e-banking even in developing countries status of e-banking was confusing. Egland et al in 1998 did not find any significant difference in between e-banking and traditional banking in USA. However Frust et al in 2000 proved that with the growing number of banks adopting e-banking systems, e-banking offers more profits than the traditional banking in USA. In another study of Frust et al in 2002 they showed that banks in all categories of size offering Internet banking intended to rely less on interest yielding activities and deposits than non-Internet banks do.

E-banking as Human Replacement : Due to the direct relationship in between customer satisfaction and the ability to survive in the market, companies are now focusing more on customers' needs, wants, and demand. They treat these needs, demands, and want as not only the source of profits but also the source of innovative ideas to come up with new offerings. Therefore, companies emphasize on better understanding of customers' needs and want and then translate them into the capability to give customers what they really need and want. The technology of E-Commerce determines what can be offered to customers, but only customers determine which of those technologies will be accepted. The key to success for E-Commerce lies in knowing customers (Lin, 2003).

Suganthi et al (2001) conducted the review of Malaysian banking sites and revealed that all domestic banks were having a web presence, although four out of the ten major banks were with transactional sites. The remaining sites were at informational level. There are various psychological and behavioral issues as trust, security of Internet transactions, reluctance to change and preference for human interface which appear to impede the growth of Internet banking.

Robert H. Ashton, (2005) pointed out that human capital consists of personnel attributes such as knowledge, skill and experience. The concept of Skandia Navigator (Bontis, 1999) described that human capital would disappear as employees leave the firm, since human capital depends on capabilities of employees such as competence, commitment, motivation, loyalty etc. Human capital can be recognized as an accumulation of employees' general knowledge, leadership skill, risk taking ability, problems solving ability (F. Tunc Bozbura, 2004). The human capital can be developed so as to enhance the efficiency of firms' tangible and intangible assets (Fitz-enz, 2001). Companies invest significant amount of their money in human capital development in order to achieve competitive advantages in the global market (Ulrich, 1997).

Financial capital can be referred to as capital employed by a firm. The financial sector is an example of where the relationship between buyer and seller is complicated because the services are heterogeneous (Eriksson & Mattson, 2002) and contain an extensive level of uncertainty (Eriksson & Sharma, 2003). Financial services, such as funds, placements, accounts, and mortgages, are often perceived as difficult for consumers to understand, thus complicating the consumers' decision-making process and attaching a high perceived risk to it (Harrison, 2002). Research has shown that acquirement of additional information results in improved acting in financial matters (Braunstein & Welch, 2002). According to Mitchel (2002), a lack of financial knowledge may result in two possible scenarios. Individuals who do not understand a product or a service have a tendency to hesitate when they are buying. Consumers who intend to buy despite their lack of knowledge become vulnerable to salespeople who may try to sell them a product or a service that is inappropriate or that they do not need. Neither of these scenarios is good for the supplier of financial services. The first case results in an absent sale, and the second case may result in unsatisfied consumers and increased governance regulation. In the same way that the

level of knowledge of financial services may influence the consumers' use of financial services, the level of knowledge of technology may influence the consumers' use of financial services in a technology-intensive context. If consumers learn about financial services, but not how to purchase them, the level of Internet banking usage will not increase. It is therefore important that consumers learn about financial services as well as Internet banking in order to become a regular Internet banking user (Mittal & Sawhney, 2001).

E-Banking in Developing Countries : Adopting e-banking services, banks in developing countries are faced with strategic options between the choice of delivery channels and the level of sophistication of services provided by these delivery channels. Considering electronic channels, Banks have the options of ATMs, Personal Computer-banking, Telephone-banking, Internet-banking, TV-banking, and Mobile-banking. However, the choice of a delivery channel or combination of channels depends on the level of sophistication of e-banking services the Bank intends to deliver. E-banking services can begin at the basic level ranging from information-push services to information-download to an advanced level of full-transactional services. By assessing their capabilities and the constraints of their context, banks in developing countries can make the strategic choice of which services to provide over an e-delivery channel they can effectively deploy and manage (Boateng and Molla 2006). Therefore it's common that banks don't implement the full concept of e-banking. Awamleh et al (2003) found that because of the unavailability/high costs of infrastructural elements like telecommunication, information technologies, and qualified human resources Internet banking in Jordan can't grow properly and banks come up with very limited components of e-banking. Study of Unnithan et al in 2001 produced the same result. They compared Australia and India based on e-banking and concluded that ease of access to Internet, PC penetration rate, consumers' computer literacy, security protocols, and consumers' negative perception about e-banking and reluctance to accept it especially in the rural areas are the major differentiating factors for development of e-banking in these countries. Australia is in a favored place in case of all the factors and therefore e-banking penetration in Australia is much higher than that in India. Study signals that private banks are the early adopters of e-banking system while public banks take much time to adopt.

E-Banking in Bangladesh : E-banking is not out to change our money habits. Instead, it uses today's computer technology to give us the option of bypassing the time-consuming, paper-based aspects of traditional banking in order to manage our finances more quickly and efficiently (E-Biz, 2002). Banks view E-banking as a powerful 'value added' tool to attract and retain new customers while eliminating costly paper handling and teller instructions (www.whyonlinebanking.com).

Today, all foreign banks, large private banks, and even smaller banks and credit unions in Bangladesh offer E-banking, variously known as PC banking, home banking, electronic banking or Internet banking. Those are sometimes referred to as brick-to-click banks, both to distinguish them from brick-and-mortar banks that have yet to offer online banking, as well as from online or "virtual" banks that have no physical branches or tellers whatsoever. The challenge for the banking industry has been designing this new service channel in such a way that its customers will readily learn to use and trust it. After all, banks have spent generations earning our trust; they aren't about to risk that on a Web site that is frustrating, confusing or less than secure.

Most of the large banks in Bangladesh now offer fully secure, fully functional online banking for free or for a small fee. Some smaller banks offer limited access or functionality; for instance, the client may be able to view our account balance and history but not initiate transactions online. As more banks succeed online and more customers use their sites, fully functional online banking likely will become as commonplace as automated teller machines (E-Biz, 2002).

The usages of computers in Bangladeshi banks are increasing day by day. One by one, each and every bank is integrating information technology with their basic banking services. On one hand these online banking systems connect the clients directly with the banks and on the other it has brought the taste of globalization in banking. Once implemented, an online client of a real time banking service bank can operate his or her account from any part of the globe just using a PC having an Internet connection. As information technology in our country is still in its infancy, the local banks have to compete globally. With the advent of information technology and the imposition of Internet, most local banks are trying to replace their windows based platform into Web based platform.

Bangladesh being a developing country lack sufficient liquidity. On the contrary, it is effluent in human resources. E-banking requires huge investment to set-up and maintenance. Training for the bank employees also require a substantial amount of money, as old employees are not familiar to PC and other online operations. On the other hand E-banking minimizes cost by reducing the number of required employees to run the regular transactions. Banking includes not only the financial transactions but also various types of consultations, emotional and moral support to its clients associated with various financial transactions. Ricardo (1981), by taking the basic idea of Adam Smith, noted that even if a country possessed absolute advantage in the production of two products, it must still be relatively more efficient in one. The idea is known as comparative advantage. In any part of the world by utilizing the above stated theory, it is necessary to utilize the resource which is available rather than which is scarce. Under this circumstance, the question arise will it be feasible to establish and develop E-banking in a developing country like Bangladesh and even it is being introduced, how much E-banking facilities should be incorporated.

For the smooth functioning of e-banking there are couples of mandatory aspects. Access to Internet and the knowledge of Internet is most mentionable among them. In Bangladesh, though with the introduction of Ministry of Information and Communication Technology then government in 2002 promised to build Bangladesh as an ICT driven knowledge based country by 2006, it did not happen in reality. After six years currently elected government rephrased the same idea in another way; they want to digitize the operations at the maximum possible level with the aim to develop a digital Bangladesh in their words.

But for that at the very beginning Bangladesh requires a proper ICT infrastructure (Raihan, 2001). Till now in Bangladesh cyber cafes play the roles of community e-centres, which hinder the prospect of Internet access throughout the country. The hard truth is that these cafes are available mainly in Dhaka and Chittagong while some other district and sub district towns have few. On the other hand due to the improper IT education, majority of the mass people as well as a good part of the educated people are ignorant about the online banking (Khanam, 2005). Even they are suspicious about the system. This is related to Internet security aspect. When majority of the people don't have the required expertise to perform banking online and lots of them put suspicion on the whole system, it should not be expected that these people can secure themselves from the fraud, hackers' attacks, and data mismanagement over internet. In normal sense one should not use cyber café to make online transaction because of the vulnerability of the computers in cyber café. Above all not all the people have computers, an integral part of the e-banking business model, at home.

However since 2002 the situation has been improving; courtesy goes to the rapid growth of the telecommunication sector in Bangladesh. Right now at least two mobile companies along with the state owned land phone company, BTCL, offer easy access to the Internet for the mass people at a relatively lower price. On the other hand most foreign commercial banks have made their

operations computerized with Internet banking facilities in most cases. Standard Chartered Bank in 2005 started Internet banking in Bangladesh for the first time (Khanam, 2005) followed by wider penetration by Dutch Bank Limited (DBBL), the bank that claims having the largest ATM network in Bangladesh with 400 ATMs around the country (www.dbbl.com.bd). But the online operation of the DBBL does not yet include online transaction. It is mostly used for the account checking over Internet plus paying utility bills in some cases.

Table-02: E-banking services in Bangladesh (% of banks)

Service Name	1998	2000	2001
Tele Banking	14	20	24
Online corporate banking *	8	12
Electronic fund transfer	15.4	15	18
ATM	14	15.4	28
Credit card	10	23	-- **
Debit card	--	3.8	18
Internet banking	7.6	12
Source: Raihan, 2001			

*: Service unavailable **: Data unavailable

Among the constraints poor governance coupled with poor ICT infrastructure, low teledensity, poor IT education as well low literacy rate, lack of qualified human resources, and penetration of ICT by financial markets play major roles. However as current young generation is pro Internet, banking sector has no option to retreat. At the same time competition in the market push the banks to adopt the proper strategy to penetrate the market profitably. But success heavily depends on the initiative to make the people educated especially IT educated in addition to the development of the contemporary ICT infrastructure.

Conclusion

E-banking is the need for today and tomorrow. It not only reduces the complexity but also increases the speed and thus saves customers' precious time and energy. It also helps the customers through enhancing mobility as customers can operate with only one account rather than many from anywhere round the clock. But the question arises, what proportion of the population of Bangladesh are capable of receiving this service. Moreover how many banks and how many branches of those banks especially those who have many branches all over the country will be able to establish the E-banking facilities. Moreover the question also arises, how far E-banking facilities will be economically viable for an underdeveloped country like Bangladesh. Another question that arises is that in what extent automation should be made to maintain the substantial portion of job opportunities being created by the banking sector.

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