An Assessment of the Current Level and Future Prospects of Internet Adoption by Banks in Pakistan

SHAFAY SHAMAIL, MIAN M. AWAIS, TAUQEER HUSSAIN, SAADIYA WAHEED RAZA Department of Computer Science, LUMS, DHA, Lahore

Abstract: - This paper presents the findings of a survey that was conducted to assess the current state of awareness and readiness towards Internet adoption as a means to e-commerce among banks in Pakistan. The survey instrument was designed to gain insight into duration and nature of online presence among banks in Pakistan; motivation towards a long-term online strategy; progress made, and the barriers and the effect of competition. We found that although in its nascent phase about 44% of the banks indicated that they currently had a website. Whereas, only 20% of the banks that participated in the survey currently offered online transactions capabilities. Around 79% of the banks have only "informational" websites. Although, automated processing and transactions are not currently prevalent among bank websites, a high percentage of increase is anticipated during the next year in online services such as electronic bill presentment and electronic bill payment.

Key Words: - Internet adoption, e-banking, online banking

1 Introduction

The past decade has witnessed an overwhelming increase in the use of the Internet technologies especially the World Wide Web (WWW) for business purposes [1]. This has not only reshaped the existing business practices but has also opened up a plethora of new business directions. Business organizations, regardless of their size, are proactively adopting these technological tools in a wide range of the activities to advertise and deliver products and services online under the umbrella of Electronic Commerce (EC). Moreover, businesses are increasingly investing more and more in EC in order to gain competitive advantage. The manifold increase in the users' base from the total Internet revenue of US\$ 40 billion in goods and services in 1996 to over US\$ 1 trillion at the end of 2003 (Forrester Research, 2002) [2] indicates that cyberspace is fast becoming a preferred alternate channel to provide services. Worldwide Internet research revenue has increased from US\$834 million in 2002 to US\$993 million in 2003 with an increase of 19% (www.emarketer.com). Further, rapid development of the telecommunication infrastructure in recent years, has provided broad network coverage with high quality and fast transmission. This factor, particularly in Pakistan, has provided the required momentum to businesses to adopt Internet technologies. Further, the advancements in the Web and the developments in open standards of the Internet, has made EC more feasible. [3].

Banking industry stands to benefit from EC as financial activity has always been a highly information intensive activity that relies heavily on information technology (IT) to acquire, process, and deliver the information to all relevant users. [4] In Pakistan, many banks and financial institutions are using the Internet to attract new customers, offer new services and products, build relationships with customers and suppliers, and cut the costs of serving established clients.

However, with the rapid developments in IT, banks need to constantly innovate and update their products and services so that these are convenient, reliable, and speedy. Many banks have revisited their banking strategy after the emergence of the Internet [5]. Their customers are more demanding and want new levels of convenience and flexibility. Internet banking has become a competitive necessity which must be adopted by banking and financial institutions in order to retain their competitive edge. This paper specifically gauges the state of Internet banking present in Banks in Pakistan. The results reveal that to date, banks in Pakistan, have established an advertising presence on the Internet- primarily in the form of informational or interactive web sites-than have created transactional web sites. However, a number of Banks that do not yet offer transactional Internet banking services have indicated on their web sites that they will offer such banking activities in the future.

2 E-Banking

Nsouli [6] defines electronic banking as an "*umbrella term*" for the process by which a customer can perform banking transactions electronically without visiting an offline facility. The following terms refer to one form or another of electronic banking: Personal Computer (PC) banking, Internet banking, online banking, virtual banking, and home banking, phone banking. Netbanker [7] defines a "true Internet bank" as one that provides account balances and some transactional capabilities to retail customers over the World Wide Web. A typical Internet bank site specifies the types of transactions offered and provides information

about account security. According to industry analysts, electronic banking provides a variety of attractive possibilities for remote account access [4], including:

- Availability of inquiry and transaction services round the clock,
- Worldwide connectivity;
- Easy access to transaction data, both recent and historical; and
- "Direct customer control of international movement of funds without intermediation of financial institutions in customer's jurisdiction."

E-Banking can be divided into the following levels:

Basic information e-banking refers to web sites that just disseminate information on banking products and services offered to bank customers and the general public.

Simple transactional e-banking refers to web sites that allow bank customers to submit applications for different services, make queries on their account balances, and submit instructions to the bank, but do no permit any account transfers.

Advanced transactional e-banking refers to web sites that allow bank customers to electronically transfer funds to/from their accounts pay bills, and conduct other banking transaction online.

3 Internet Adoption by Banks in Pakistan

The aforementioned survey was conducted specifically to gauge the:

- The current state of Internet adoption implementation in local and non-local banks in Pakistan.
- The future plans for Internet adoption.
- The attitude of banks towards Internet adoption
- The barriers faced by banks in pursuing an online strategy
- The competitive challenges faced by banks in pursuing an online strategy

The survey was completed by managers at executive or above designations in the IT departments of the Banks. It was mailed to 30 banks out of which 22 responded, resulting in a response rate of 73%. Table 1 states the percentage of the banks surveyed from different types of banks in Pakistan. The responses represented large, small, local and non-local banks in proportions very close to the actual.

4 Survey Results

The results have been discussed in the following four sections:

- Current online strategy
- Motivation and barriers

- Progress towards goals
- Effect of Competition

Table 1: Percentage of banks	of various types
surveyed.	

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Type of bank	%	% in
	Surveyed	industry
Nationalized commercial	19	7
banks		
De-nationalized	19	7
commercial banks		
Private Banks	35	38
Provincial Banks	2	5
Microfinance Banks	0	5
Foreign Banks	25	38
Private Banks Provincial Banks Microfinance Banks Foreign Banks	35 2 0 25	38 5 5 38

4.1 Current Online Strategy

This section provides the survey results that were obtained regarding the prevalence of bank websites, the nature of online services being currently offered and those being planned for the near future.

4.1.1 Online Presence of Banks in Pakistan

50% of banks indicated that they had some online presence between last three years. Only 20% of the banks that responded had an online presence for last five years or more.

4.1.2 Online Transaction Capability

Around 39% of the banks indicated that they had been providing some sort of online transactional capabilities for over a year. Over 79% of the banks with websites were maintaining an online presence just for informational purposes. The remaining banks were starting to offer online transactional facilities. Analysis revealed a positive correlation of r=0.53 between the duration of a bank's online presence, and the duration for which it has been offering online transaction capability.

4.1.3 Current Online Services Being Offered

Since many banks are still evolving their online strategy, it is important to examine, not just the online services being offered currently, but also those that are likely to be provided in the near future. The results of the survey are given in Table 1.

4.1.4 Functionality Being Supported Online

Banks were asked to indicate different functionalities that they were providing or intended to provide in the next one year. The objective was to assess the nature and extent of adoption of Internet technologies. These functionalities are given in Table 2.

Table 2: Services currently offered offline and online and anticipated in the next 12 months

	CURRENT		NEXT 12 Months	
Service	OFFLINE	ONLINE	OFFLINE	ONLINE
	(%)	(%)	(%)	(%)
Bank information	100	100	100	0
through homepage				
Support through email		92.30		0
Check book requests	100	23.07	100	100
Opening of savings	100	7.69	100	23.07
accounts				
Opening of checking	100	7.69	100	38.46
accounts				
Access to account	100	15.38	100	100
information				
Brokerage account	100	0	100	30.76
application				
Trading	23	0	30	15.38
Consumer loan	100	23.07	100	30.76
information				
Applications for	100	15.38	100	69.23
consumer loans				
Automated loan		0		0
decision/approval				
Mortgage information	100	0	100	92.30
Mortgage application	100	0	100	76.92
Automated mortgage		7.69		0
decision/approval				
Credit card application	100	15.38	100	100
Credit card account	100	38.46	100	100
information				
CDs and other	100	15.38	100	100
investments				
Electronic bill		15.38		53.84
presentment				
Electronic bill payment		15.38		38.46
Jobs / Human resources		69.23		100
Publications	100	7.69	100	100
Press Release/Latest	100	23.07	100	0
News				
Contact and email		76.92		100
Customer feedback		100		100
Site map		92.30		100
Site search		76.92		100
Other				

Table 3: Functionalities currently offered online and anticipated in the next 12 months

Functionality	ONLINE	NEXT 12
	(%)	MONTHS
		(%)
Electronic brochures	30.76	46.15
Site search engines	69.23	92.30
Reports download	30.76	30.76
Subscriptions	23.07	23.07
Interface customization	0	2.5
Advertisements	15.38	61.53
Electronic cash	16.92	30.76
Electronic signature	9.230	38.46
Electronic checks	8.46	38.46
Electronic mail	76.92	46.15
Remote Login	9	38.46
Virtual Private Network (VPN)	1.53	30.76
Feedback forms	38.46	76.15
Advising tools	0	0
Videoconferences	0	0
Mobile banking services	15.38	38.46
PC banking services	7.69	38.46
Reporting channels	0	15.38
Portal facilities	23.07	61.53
Data warehouse connectivity	0.23	15.38
Other:	30.76	46.15

4.2 Motivations and Barriers

This section presents the survey results gained about the importance, motivations and barriers associated with e-commerce among banks in Pakistan.

4.2.1 Importance of an Online Presence

89% of the respondent banks reported that an online presence was "very important" for their business. These bank segments have been classified according to the following criteria:

- Based on size of bank
- Based on state of online presence
- Based on duration of web presence

Table 4 illustrates the importance of an online presence as a function of the state of online presence in light of the survey results. Among banks that have an online presence, but which do not provide online transaction capability, 66% feel that an online presence is "very important". Of the banks that do provide online transaction capability, almost all of them feel that an online presence is "very important". Therefore we can conclude that the perception of importance of e-commerce increases as the banks go online and provide more services. Also worth noticing is the fact that, 14% of the banks that do not have online transactional capability feel that an online presence is "not important". Considering that most banks have yet to start providing transactional capabilities, this trend suggests that the remaining banks might not be enthusiastic about doing so in the near future.

Table 4: Importance of an online presence as a function of the state of online presence

	Importance of online	Without	With transaction
	presence	capability %	capability
	for all		%
	banks %		
Not	0	14	0
Important			
Moderately	23	10	0
Important			
Important	25	10	12
Very	52	66	88
Important			
Don't know	0	0	0

Table 5:	Importance of online presence with	respect
	to the Number of Online Branches	

	<100	100	200	300	400
	branc	-	-	-	-
	hes	200	300	400	500
Not Important	23	13	3	2	0
Moderately	34	22	7	5	0
Important					
Important	43	22	40	42	37
Very Important	0	43	50	49	63
Don't know	0	0	0	0	0

Table 6: Importance of online presence	as a function
of the duration of online preser	nce

	Since	1 to	3 to	>5
	this	3	5	
	year			
Not Important	12	0	0	0
Moderately	18	20	0	0
Important				
Important	27	25	34	20
Very Important	43	55	66	80
Don't know	0	0	0	0

Table 5 shows that as the size of the bank increases, there is an increasing level of importance attributed to a need for an online presence with a correlation r=0.37. Banks that already have transactional capability considered an online presence to be significantly more important than did banks without transactional capability as shown in Table 6. With a correlation of r=0.61, it is clear that the longer a bank has had a website, the more important an online presence is for it.

4.2.2 Barriers

To understand the barriers faced by banks in pursuing their online strategy the banks were given a set of 6 possible barriers and asked to rate each of them individually according to a scale ranging from 1-5 representing "not a barrier" to "very strong barrier". Results are shown in Table 7. Nonexistence of a trusted third party was perceived to be most important barrier for banks to pursue their online strategy.

Table 7: Barriers faced in the development of a longterm IT Strategy

0,
Average Importance
5
2.5
1.8
2.56
2.65
3.86

4.3 **Progress towards Online Strategy Goals**

This section focuses on the criteria that banks are using to assess the success of their online strategy and the extent to which they consider themselves to have been successful in achieving their e-banking business goals.

4.3.1 Criteria and Performance

In order to ascertain the criteria that banks would find most important when evaluating their online initiatives a set of seven possible criteria was given and the banks were asked to rate the importance as well as the level of success in their own terms for each of those criteria as between "not important" and "very important", (translating to a numerical scale of 1-5), in evaluating their performance.

Table 8: Importance and Performance on each criterion

ontonion				
Criteria to measure	Average	Average		
success	importance	performance		
	level	level		
Percentage of online	1.23	3.6		
transactions				
Percentage of revenue	2.34	4.7		
through online				
transactions				
Customer satisfaction	3.4	5		
Increase in customer base	1.2	4.5		
Reduction in cost per	3.27	2.23		
transaction				
Return on investment	1.12	3.53		

As is evident from the Table 8, banks specified *customer satisfaction*, *increase in customer base* and *percentage revenue through online transactions* as important criteria for assessing the success of online initiatives. However, performance on these criteria has been varying between *return on investment* and *increase in customer base*. It is interesting to note that performance on reduction in cost per transaction has been much better than its perceived importance in assessing the success of online initiatives.

4.3.2 Overall Progress

To ascertain progress towards long-term implementation of online strategy the banks were asked to rate between 1-5 representing "haven't started" to "done with implementation" implementing their long-term strategy. They also had an option to specify that they don't know. Over 38% reported that they were not sure as this question would be best answered by the turn of events with the current IT strategy, as shown in Table 9.

Table 9: Progress made towards implementation of long term IT strategy

leng term to et a	
Haven't Started	0
Just begun implementation	15.385
Halfway through	38.462
Almost complete	7.6923
Don't know	38.462

4.3.3 Costs

This study also inquired into the current levels and future levels of estimated spending on online initiatives by banks. The insights gained on these issues can be particularly important since the banks identified cost as the main barrier to developing their online initiatives. Table 10 shows that all banks plan to increase current spending on online initiatives in the next 12 months. Understandably, banks with more online branches intend to invest more than smaller banks.

Table 10: Spending on online initiatives with respect to number of online branches.

Number online branches	of	Estimate of spending in the current year	Estimate of spending in the next 1 year		
0-100		(Rs) 0	(Rs) 0		
100-200		100,000	200,000		
200-300		200,000	300,000		
300-400		350,000	350,000		
400-500		350,000	350,000		

4.4 The Effect of Competition

This section looks at the bank's perception about new competition due to the Internet; the special offerings that these competitors are offering to lure bank's customers and the reasons why customers may prefer offline facilities to online facilities. To ascertain the level of threat perceived by banks from various competitors, (including old competitors and those that have evolved due to the Internet), the banks were asked to rate the threat they perceived due to other local banks, non-local banks, and pure-Internet financial institutions. They were asked to rate between 1-5, representing "not a threat" and "a serious threat". Table 11 and 12 show the results.

Table 11: Threat perceived by competitors according to different bank sizes

Competition	Number of branches				
	0-	100-	200-	300-	400-
	100	200	300	400	500
Local banks	2.23	2.34	3.45	4.5	3
Non-local	1.86	2.22	3.1	4.67	4.8
banks					
Pure-	0	0	0	1.2	0.2
internet					
financial					
institutions					

Table 12: Threats perceived by banks according to different durations of online presence

Competition	Number of years			
	0-1	1-3	3-5	>5
Non-local banks	2.55	3.56	4.5	4.5
Local banks	1.86	1.28	3.2	3.78
Pure-internet financial	0	0	0	0
institutions				

4.4.1 Customer Preference for Offline Facility versus Online Facility

To help understand the potential advantages that offline facilities have over online facilities, the banks were asked to give reasons why their customers would prefer offline facilities over online services. The results are shown in Table 13.

4.4.2 Comparison with Competitors

In this section, how the banks viewed their relative positioning compared to other banks was studied. Results are shown in Table 14.

Table 13: Reasons why customers would prefer
offline facility over online with respect to duration of
online presence

	Jilline	preser	ice		
Reasons for	Duration in years				
customer					
preference of					
offline facilities					
	0-	100-	200-	300-	400-
	100	200	300	400	500
Face-to-face	3.57	4	5	5	5
interaction					
Security of	2.23	2.34	3.45	4.5	3
financial					
transactions					
Less threat to	1.86	2.22	3.1	4.67	4.8
privacy of					
personal					
information					
Cash	3.3	4.3	5	5	4.5
transactions (e.g.					
Deposits, cash					
withdrawal etc.)					
Language barrier	2	3	3.89	4.05	4.1

Table 14: Perceived level of success of online initiatives compared to the industry

Perceived level of success compared to	% of banks
competitors	
Substantially lagging behind most other	
banks	
Somewhat lagging behind most other banks	38
At the same level as other banks	23
Ahead of most other banks	38
Don't know	0

5 Conclusions

Due to the nature of the products and services they provide, banks stand to benefit greatly by e-commerce adoption, both in improving service to customers, and eventually in saving processing costs. As the financial services industry continues to adopt technology, the need for banks to adopt e-commerce becomes more imperative. The results of the survey have indicated that current level of Internet adoption in banks can be classified in three distinct phases of e-commerce adoption. Phase I is characterized by the creation of a website, offers banks an opportunity to begin their e-commerce adoption journey by offering static informational content (e.g. locations, hours of operation, etc.). Phase II encourages customer retention and potentially customer growth by adding value the services provided to the customers through automating business processes. At this phase, two-way transactional content is shared across the Internet, enabling such things as online banking, online loan application, and other automated transactions. Phase III technology enables full integration of customer contact across all service delivery channels, bringing even greater value to customers and increasing the potential for cost savings in the provision of services. Findings from this survey have shown that ecommerce is in fact, just another service delivery channel for banks.

As with the launch of any new distribution channel; creation of strategy, establishing of performance measures, analyzing potential channel conflicts and redundancies, and adequate marketing are some of the critical considerations for assuring the desired results.

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