

# INTERNET BANKING IN INDIA – CONSUMER CONCERNS AND BANK STRATEGIES

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## ABSTRACT

*Internet banking has attracted the attention of banks, securities trading firms, brokerage houses, insurance companies, regulators and lawmakers in developing nations since the late 1990s. With the rapid and significant growth in electronic commerce, it is obvious that electronic (Internet) banking and payments are likely to advance. Researches show that impact of Internet banking on cost savings, revenue growth and increased customer satisfaction on Industry is tremendous and can be a potential tool for building a sound strategy. However, it has raised many public policy issues before the banking regulators and government agencies. Interestingly, reliable and systematic information on the scope of Internet banking in Indian context is still not sufficient, particularly what it means to the consumers and the bankers. The paper fills significant gaps in knowledge about the consumer's perspective of Internet banking, trace its present growth and project the likely scenario. The paper presents the data, drawn from a survey of Internet banking consumers and the services providers (banks) that offer Internet banking and develops a functional model for maximizing value to the consumers, which the banks may choose to adopt Internet banking strategically. The paper identifies the weaknesses of conventional banking and explores the consumer awareness, use patterns, satisfaction and preferences for Internet banking vis-à-vis conventional form of banking and also highlights the factors that may affect the bank's strategy to adopt Internet banking. It also addresses the regulatory and supervisory concerns of Internet banking.*

JEL: G20, G28

## INTRODUCTION

The objective of this paper is to examine the consumer behavior with respect to Internet banking vis-à-vis conventional banking, and to explore the possibility of blending these banking systems. The paper also suggests strategies to banks to maximize the value of services to consumers. The primary data used in the research consists of survey conducted on a sample of 2000 consumers arrived at using relative precision technique (Taylor, 1997). The survey includes in major cities of India, instrument being questionnaires filled up from the consumers and personal interaction, discussions with the front line executives of online banking divisions of the major players, particularly their marketing and customer servicing departments and the banking experts, personal visits at Automated Teller Machine (ATMs), Point of Sale (POS) counters of major banks. The major assumptions in this research are – (a) online banking is synonymous to Internet banking (b) the behavior of the surveyed population viz. consumers and bankers confirms to a normal distribution. The study limits itself to major cities given the fact that Internet Banking has no geographical boundaries.

## LITERATURE REVIEW

Internet revolution is global phenomenon and going by the current growth statistics, India expects a spurt in the Internet penetration in coming years particularly in the electronic commerce. It is an obvious notion that electronic (Internet) banking and payments are likely to advance more or less in tandem with e-commerce. Researches indicate that Internet banking has a significant impact on the business models of banks, securities trading firms, brokerage houses, insurance companies etc. Internet banking has also attracted the attention of, regulators and lawmakers in the developing nations since the late 1990s.

Internet banking is a cause of concern to majority of the offline banks who should be ready for an unprecedented competition from the non-traditional banking institutions that offer banking and financial services over the Internet (Rajgopalan, 2001). Although some of the traditional banks have started offering their services on line, it is only an extension of their offline services (Devi, 2001). Internet banking has now started motivating customers to park their funds with the online banks, which has a substantially impact on the deposit base of the brick and mortar banks.

The use of technology in banking has direct relationship with the profitability. *Ceteris paribus*, investment in electronic banking increase the profit margin of banks by reducing costs and increase in non-interest income, which will increase the ROA and ROE (Sinkney, 1998). Cost-effectiveness in delivery of services directly implies *comparatively* high consumer satisfaction and a consequent change in the revenue model for the banks. Adoption of the Internet mode of banking would result in increased consumer awareness, attracts the entry of global majors in the market and would lead to the emergence of open standards in the banking industry (Treasury Management, 2001). The integration of the banking services with e-commerce and emergence of e-cash would positively affect the efficiency scores of the banks (Scott, 1999)

However, Internet banking is a mixed blessing in the form of increased risk, the level of confidence reposed by the consumers and the problem of blending it with the physical system (Hawke, 2001). Internet banking has brought about a new orientation to risks like settlement risk, international technology transfer risk, crime or fraud risk, regulatory avoidance risk, taxation avoidance risk, and competition risk (Saunders, 1997). Basel II recommendation on operational risk also supports this hypothesis. In India, some banks like HDFC and ICICI have introduced payment gateways running on secure systems having firewalls against hacking (Rao, 2001). Convenience, safety and cost effectiveness are the jargons in the spectrum of online banking (Rose, 1998).

Researchers on various occasions have raised many issues, which must be addressed in context of Internet banking in India. *First*, the availability of technology and infrastructure to support the new model of banking. *Second*, the need for Internet banking itself – Internet Banking or an efficient system of instantaneous banking or convenient banking. *Third*, an adequate mechanism to tackle the security risk and operational risk aspects (Sharma, 2001). *Fourth*, a proper legal framework to take care of the rights and obligation of the consumers. While most of these issues have been somewhat addressed, an important issue still remains - what existing and potential consumers feel about Internet banking and on the basis of this how an appropriate banking model can be developed in Indian context. There is a need to measure and analyze the consumer perception towards Internet banking, to find out what is wrong with traditional banks and provide a framework for the banks to strategically adopt the Internet so as to maximize value for the consumers.

## **ANALYSIS AND FINDINGS**

### Consumer Behavior and Concerns Awareness

The awareness level of private sector Indian banks is the highest followed by the foreign banks. This is mainly due to the reason that private sector Indian banks are relatively new and they have positioned themselves as online banks from the very inception. Also, the various consumer groups do not perceive the public sector banks as online banks. However, the banks feel that their market perception is likely to change soon once they put on intensive advertising. Banks proposing the Initial Public Offer (IPOs) of securities in near future can think of simultaneously positioning themselves as the *new generation banks*. The awareness of online offering is polarized towards their (Consumer's) own banks from which they are availing the banking services.

Consumer Behavior and Concerns: Usage Patterns

A significant proportion of Internet banking users (56.5%) use Internet banking 1-5 times a month, which is low compared to the e-developed countries, and also Asian counterparts like Korea and Japan. Another 31.5% are using e-banking 6-10 a month. Daily users of Internet banking are almost absent and the percentage of those using once in two days is meager to establish any significance probably because of low Internet penetration. However researches indicate that in spite of low availability of sophisticated branch networks, spread of Internet would promote e-banking (Jaffe, 2003).

Table 1: Gender Wise Usage of the Internet Banking

Frequency of Use (Times per Month)	Percentage of Total Respondents		
	Female	Male	Total
Never	-	-	1.0%
1-5	15.8%	40.7%	56.5%
6-10	9.3%	22.2%	31.5%
10-15	3.7%	1.9%	5.6%
16-20	-	2.7%	2.7%
Above 20	-	2.7%	2.7%

Table 2: Education Background and Internet Banking

Frequency of Use (Times per Month)	Percentage of Total Respondents			
	Under -Graduate	Graduate	Post-Graduate	Professional
Never	-	-	-	-
1-5	2.8%	37.8%	11.2%	5.6%
6-10	-	1.6%	9.3%	6.5%
10-15	-	-	0.1%	4.7%
16-20	-	0.1%	0.2%	-
Above 20	-	0.1%	0.1%	0.1%

A significant variation exists between the various banks for the frequency of usage ( $F= 7.503$ ) with high value for Indian private banks followed by multinational banks. Interviews conducted at banks revealed that the use of Internet banking is mainly attributable to day-to-day transactions, which is further confirmed by the questionnaire responses. Gender wise usage of the Internet banking reflects a polarization towards males (Table 1). These results are obvious because the conventional, brick and mortar banking is also dominated by the male users. This implies a good scope for the Indian banks to capitalize the opportunity and focus on females. Research studies conducted by IAMAI also indicates that male users constitute the major chunk of the Internet banking population ([www.iamai.in](http://www.iamai.in)). In India, female workers in the organized sector have been conventionally low. But, the recent trends show a potential for significant rise in the female working population especially, in the awake of policy programs focusing on education for female child and spread of Information technology. In addition, the BPO and other ITES sectors are on rise and once the females become Internet savvy in India, they can turn out to be good customers for the banks with high probable usage.

Results reveal that a significant portion of the frequent (1-5 times a month) Internet banking users (37.8%) is a graduate followed by postgraduates who use Internet banking not more than 10 times a month. Interestingly, the professionals' category is not the frequent user. After combining the categories of professionals and post graduates, it is established that they are the second grade users of internet banking though not using beyond 1-10 times a month (Table 2).

The study shows that the income groups 2 and 3 {Less than Rs. 15,000 and Between Rs.15000-30000} are frequent users of the Internet banking. Research conducted by Ekos Research Associates Inc. Canada indicates that use of electronic banking is a positive function of income levels. However, Indian

conditions are different from those of developed countries therefore it is difficult to generalize. None the less, the findings have strategic implications for the banks since their reference group is somewhat different as noticed during the interviews with the bankers.

Consumer Behavior and Concerns: Satisfaction

The overall satisfaction scores of the respondents obtained on a scale of 1-10 on various measurable variables and tested for F-ratios reveals that satisfaction level differs among income groups, use frequency and banks (F-values - income groups = 11.828; use frequency = 21.165; banks = 9.28). The mean satisfaction levels in case of public sector banks are the lowest. This may be due to late starts, poor infrastructure or lower risk tolerances. Satisfaction levels are comparatively better for private banks because of their strategic business models as mentioned earlier. On the basis of mean scores obtained for incomes groups it may be concluded that the persons having income in the range of 15,000 – 30,000 are highly satisfied compared to others. This was obvious because this is the class, which uses Internet banking frequently. A survey of the Korean customer revealed high Internet banking use and consequently high satisfaction. But, the overall mean scores of satisfaction indicate that in general, Indian consumers are partially satisfied with the Internet banking services.

Consumer Behavior and Concerns: Preferences

The results show that most of the consumers use Internet banking for account information and day-to-day transactions. Examination of the websites of various Internet Banking service providers suggest that websites offering only basic level services and the other facilities like transfer balances, investment in securities, loan and mortgages etc. are not available. It can be concluded that the usage levels can grow once the web sites are equipped with multiple products offering coupled with appropriate infrastructure, which is, as highlighted, the problem of most of the banks in India.

Table 3: E-Banking Services of Foreign Banks

Banks	Daily Transactions	Account Information	Transfers	Other
	<i>Percentage of Respondents</i>			
ABN Amro Bank	100%	100%	30%	30%
Bank of Punjab	60%	80%	0%	20%
Canara Bank	100%	100%	0%	0%
Citi Bank	100%	83%	50%	33%
HDFC Bank	62%	85%	50%	33%
HSBC	100%	0%	0%	0%
ICICI Bank	75%	83%	8%	13%
IDBI Bank	86%	0%	0%	0%
State Bank of India	100%	33%	0%	0%
Standard Chartered Bank	100%	0%	50%	0%
UTI Bank	86%	100%	14%	0%

Table 3 reveals that the e-banking services of foreign banks and some flag public sector banks are used primarily for daily transactions and private banks like HDFC, BOP ICICI are lagging. Similar results are also shown by research studies on Nigeria (Chiemeke, 2006).

Another major use of the e-banking is account information. It is well known that account information has been for many years a major area of concerns from the point of view of customer services. This is one of

prominent advantages of Internet banking what bankers revealed. The funds transfer facilities are used mostly in case of private banks and customers of none of the public sector banks were found to be using the Internet banking for this purpose. It was also found that those who use e-banking frequently visit the bank branches only 1-2 times per month. Citibank and ABN Amro bank are popular among their customers for Internet Banking. In general, people are highly concerned about security and therefore they do not rely on the public sector banks for Internet fund transfers.

Consumer Behavior and Concerns: Consumer Expectations

Table 4 Expected vs. Actual Performance (Conventional Banking)

Parameters	F-ratio
Accuracy (ACC)	47.593
Speed (SPEE)	13.174
Confidentiality (CONF)	30.311
Customisation (CUS)	10.167
Ease of Use (EASE)	22.820
Safety (SAFE)	51.064
Empathy (EMP)	40.384
Trust (TRUST)	101.761

Table 5: Conventional vs. Internet Banking

Parameters	Computed F-ratio
Accuracy (ACC)	9.943
Speed (SPEE)	18.257
Confidentiality (CONF)	3.416
Customisation (CUS)	22.804
Ease of Use (EASE)	89.188
Safety (SAFE)	28.641
Empathy (EMP)	62.841
Trust (TRUST)	38.932

The expected level of performance and the actual performance of the conventional banking system shows a huge gap. The least mean scores of performance for parameters like accuracy, confidentiality, safety and empathy indicate significant dissonance between expectations and performance. However, trust is interestingly found to be a major area of concern. Lesser variances are obtained for speed and customisation. Also, the computed value for F-ratio is significant for all parameters except confidentiality. Conclusions derived are- (a) Consumers feel that Internet banking is easier compared to conventional banking; (b) Conventional banking lacks speed especially in case of public sector banks and (c) Ratings on various parameters are comparatively higher in case of frequent users and high-income groups. Deutsche Bank AG (2006) research indicates “speed” as an important driver of Internet Banking. GVU (2004) study indicates that security is an “important factor” for opening Internet bank account followed by convenience (83.1%), availability of variety of features and services (77.1%), attractive interest rates and services charges (74.5%), quick service (72%), familiarity with the bank name and image (68.3%), the actual bank location (42.2%), the size of the bank, in terms of assets (39.4%), and having integrated value-added services from other on-line services and resources (30.2%). The results indicate deviations in context of Indian Consumers.

The results obtained from the perceptual maps generated and cluster trees run for income levels reveal that – (a) Trust is the most important factor in provision of banking services followed by accuracy and confidentiality; (b) Consumers in the high income groups are highly concerned about the safety of transactions in banking though ease of transaction is on the least priority; (c) Speed is an area of concern for the conventional banking system where the consumer rated the least (d) Safety ranking of the conventional banking system was found to rise with the movement to higher income levels; (e) Internet banking has been highly rated the highest by the consumers on the parameters of accuracy though safety is matter of concern; (f) the opinions on ease of transactions and customization in Internet banking are mixed among the consumer groups. This may be because of the access to the computer systems and varied requirements among them.

Factorial analysis of banking services reveals that the banking services must prioritize and optimize on the group of variables consisting of speed (SPEE), Safety (SAFE), Trust (TRUST), Confidentiality (CONF) and Accuracy (ACC). Another set, which emerges, is Customization (CUS), Empathy (EMP) and Ease (EASE). The logical strategic function for bankers can be expressed as follows:

$$\begin{aligned} \text{Maximize Value } (V) = & P_1(\alpha_1 TRUST + \alpha_2 ACC + \alpha_3 CONF + \alpha_4 SPEE + \alpha_5 SAFE) \\ & + P_2(\alpha_6 CUS + \alpha_7 EMP + \alpha_8 EASE); \quad P_1 > P_2 \end{aligned}$$

*Limiting Variables: Technology (TECH), Investment (INV), Legal Restrictions (LR), Asset Base (A)*

The two main consumer groups, which extract from the clusters and perceptual ratings are – (a) high-income males placing high reliance on safety of transactions and (b) graduates in the middle income group desiring convenience of banking. Researches also show that the companies would do well if they could find the demographic profile of Internet users, which would help them devise strategies accordingly. The use and resulting profits of the Internet banking depends upon the brand positioning, level of services offered and consumers targeted. It can be concluded that from the consumer's perspective, apart from speed and convenience, there are certain other factor like trust, safety and confidentiality are of paramount importance, which unless focused cannot maximize value to the customer, at least, in Indian context.

## **BANK STRATEGIES**

Interviews and opinions of the bankers indicate that the factors which determine the bank's strategy to go online are - *Assets of a bank* -the larger the bank the more likely it will be to choose to offer Internet banking; *Years in operation* – new banks are more adaptive to new technologies and has more probability of offering Internet Banking; *A bank that is a member of a bank holding company* is more likely to offer Internet banking, because a bank holding company can use a single Web site to provide Internet banking access to customers of the many banks in the holding company; *Urban locations* – banks situated in urban areas are more likely to offer their customers Internet banking than banks in non-urban areas. Banks in more densely populated areas may respond to greater customer demand for Internet banking and to more intense competitive pressure from rival banks in the same market; *Deposits Ratio* - Banks that are less reliant on traditional sources of funding may pursue a more aggressive overall business strategy, including the adoption of Internet banking; *Expenses ratio* - On the one hand, banks with relatively high expenses for premises and fixed assets may view adoption of Internet banking as a way to reduce expenditures devoted to maintaining a branch network.

On the other hand, some analysts have argued that banks without a large branch network will seize on Internet banking as an inexpensive means to expand their customer base; *Non-fee income ratio* – banks with lower interest income ratio would adopt Internet banking strategically. *ROE* - profitable banks will prefer Internet banking for competitive positioning and also less profitable banks may be more willing to

invest in Internet banking to improve their performance. *Rating* – Rating on safety and soundness also affect decision to offer Internet banking. Research reports indicate that Internet banking may not yet have had a big impact on the bottom line of most banks except the newly born banks. Also, awareness and growth of e-commerce would make Internet banking as an important factor affecting bank performance. It is logical that the profitable banks are more likely to adopt Internet banking than others.

### International Experiences

In U.S.A. the Internet banking is relatively developed with a fairly large number of transactional websites and business volumes. However, the large banks are more dominant than the small banks in offering Internet – based banking services. It has been found that e-banks are more profitable than non e-banks but this phenomenon cannot be generalized as such. The growth is significant but not sufficient. This is probably because of lack of value added proposition that banks offer to customers (www.capco.com, 2005). In Europe, the Internet banking is growing gradually and most of the prominent banks are offering Internet banking services. Swedish and Finnish markets are market leaders lead the world in terms of Internet penetration and the range and quality of their online services. Internet Banking started slowly in Australia, but now is picking very fast. In New Zealand, the major banks offer Internet banking service to customers; operate as a division of the bank rather than as a separate legal entity. Reserve Bank of New Zealand applies a uniform approach to the regulation of both Internet banking activities and traditional banking activities. Banks in Japan are increasingly focusing on e-banking transactions with customers and Internet banking is an important part of their strategy. Based on the experience in native countries, the foreign banks are trying hard to capture the market. But, these banks have to restructure their business models suitable to Indian conditions.

In the current scenario, the banks need a transformation which can be achieved through – a mindset to adopt technology, recognizing the core competencies, an initiative from the top management to convert the organization to outward looking and aligning roles and value propositions with the customer segments. The suitability of technology and a careful analysis of the needs of customers are equally important (Pires and Aisbett, 2002). Study conducted by Sangaran (2001) on Malaysia focuses on the change that is required in the attitude of bankers to adopt Internet banking. The banks have to develop a sound strategy before implementing Internet banking in order to compete in the global market place.

### Regulatory and Supervisory Concerns

Internet banking requires that the banks' internal systems to be linked with the systems in public domain. Further, the concept of conventional audit trails is not logically applicable to Internet banking. Internet Banking is susceptible to risks in the form of criminal activities, such as fraud, money laundering, tax evasion etc. Internet banking allows the banks as well as customers to operate with geographical boundaries thus creating a problem of exchange controls. Cross border issues are more critical when the banks have their operating offices in different locations posing the problems of jurisdiction and conflicting laws of different nations. Evidences indicate that banks are facing loss of customer confidentiality, which may pose a reputation risk to banks and the banking system as a whole. However some banks have started educating customers through adequate disclosures of such risks.

Internet Banking is subject to various statues including Banking Regulations Act, 1949, the Reserve Bank of India Act, 1934, and the Foreign Exchange Management Act, 1999, Information Technology Act, 2000, Indian Contract Act, 1872, the Negotiable Instruments Act, 1881, Indian Evidence Act, 1872, etc. which need to be amended and made clear in relation to the Internet banking transactions. A study conducted by Gupta (2006) also raised concerns over data protection provisions. The impact of Internet banking on monetary and credit policies of Reserve Bank of India is a critical area of concern. In

developed countries a broad regulatory framework for Internet banking exists, which is still pending in India.

## SUMMARY AND CONCLUSIONS

It can be concluded that Internet banking in India is only at its primitive stage dominated by the Indian private and foreign banks. The use of Internet banking is confined to a few consumer segments. The risks associated with Internet banking are many, which the banks have to model using sophisticated systems and extensive use of technology. The legal framework as its exists requires an updating to streamline and handle the issues associated with Internet banking. The functional model can be used to prioritize perceptual variable concerning consumer behavior so that value to the consumer can be maximized. The banks can focus on strategic consumer groups to maximize its revenues from Internet banking. The experiences of the global economies suggest that banks cannot avoid the Internet banking phenomenon, but to gain a competitive advantage, they must structure their business models to suit to Indian conditions.

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