

“Analysis of e-banking system and exploring the research gap in Indian banking perspective”

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Abstract:

Today most of the banking happens while you are sipping coffee or taking an important call. ATMs are at your doorstep. Banking services are accessible 24x7. There are more plastic cards in your wallet than currency notes. A huge part of this change is due to advent of IT. Banks today operate in a highly globalized, liberalized, privatized and a competitive environment. In order to survive in this environment banks have to use IT. Indian banking industry has witnessed a tremendous developments due to sweeping changes that are taking place in the information technology. Electronic banking has emerged from such an innovative development. The objective of the present paper is to study and analyze the progress made by Indian banking industry in adoption of technology. The study is secondary based and analytical in nature. The progress in e-banking in Indian banking industry is measured through various parameters such as Computerization of branches, Automated Teller Machines, Transactions through Retail Electronic Payment Methods etc. Statistical and mathematical tools such as simple growth rate, percentages and averages etc are used. The study shows that e-banking has multi-dimensional advantages to individual as well as corporate, however, it is not without certain challenges and issues for the security and interest of customers. Although there are various work done in the past for exploring the success of e-banking on various scale, it is strongly felt that very few studies were focused on Indian Banking Sector systematically and comprehensively. Therefore, the paper will highlight the various aspects of e-banking system from researcher's viewpoint and identify the research gap in Indian context.

Keywords: e-banking, online banking, internet banking, banking sector of India, issues in internet banking.

Introduction

Introduction: Information Technology has become a necessary tool in today's organizations. Banks today operate in a highly globalized, liberalized, privatized and a competitive environment. In order to survive in this environment banks have to use IT. IT has introduced new business paradigm. It is increasingly playing a significant role in improving the services in the banking industry. Indian banking industry has witnessed a tremendous developments due to sweeping changes that are taking place in the information technology. Electronic banking has emerged Asia Pacific Journal of Marketing & from such an innovative development. Modern technology is seen as a panacea for most of the ills that the banking sector faces today.

Even at present, India is a relative unbanked country as the credit-to-GDP ratio is one of the lowest in the developing economies. So banks are facing the dual challenge of increasing penetration and high growth trajectory. The banking industry can kill two birds with one stone that is with help of technology. Tremendous progress took place in the field of technology which has reduced the world to a global village and it has brought

remarkable changes in the banking industry. Branch banking in the brick and mortar mode has been transformed into click and order channel mode.

Within the span of last two decades, functioning of banks has changed considerably. Operations of the banks have become much more high tech today. [1] Nowadays, the electronic technology is playing a major role for the world of business especially in banking activities. Electronic banking (e-banking) is the newest delivery channel for banking services. The definition of e-banking varies amongst researches partially because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999; Mols, 1998; Sathye, 1999).

In fact, it has effectively “opened” twenty-four hours a day, seven days a week. Customers can do their daily banking activities without having to wait in line or wait on hold for telephone banking services. E-banking offers electronic services that allow consumers to check the balances in their accounts, transfer funds among accounts, pay bills electronically as well as apply for loans, download information about accounts into their own computers, trade stocks or mutual funds, look at images of their cheques and deposit slips (Turban et al., 2004).

E-banking has become increasingly prevalent, employed by many financial institutions to reduce costs associated with having personnel serve customers physically, shorten processing periods, increase speed, improve the flexibility of business transactions and provide better service overall (Shih and Fang, 2004). Also, with the rapid progress of other types of electronic, largely Internet based services; there has been increased interest in e-banking services. With the rapid growth of Internet technology, online banking has played an important role in the e-payment area which provides an online transaction platform to support many e-commerce applications such as online shopping, online auction and Internet stock.

Banks have been using the Internet as one of their distribution channels because Internet Banking services benefit both the banks and their customers. It has become the most profitable distribution channel of the banks because it can help banks to save costs. It is convenient for the customers to execute their bank transactions or contact their banks faster, anytime and anywhere. Many companies in the financial services sector have been quick to implement Internet capabilities, and electronic service is becoming a viable option for interaction between financial service providers and their customers. Clearly, in order to grow consumer internet banking adoption, banks must make key improvements that address consumer concerns. Thus, it would

Electronic Banking

E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. 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 using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or Touch Tone telephone.

Evolution of E-banking:

E-banking came into being in UK and USA in 1920s. It became prominently popular during 1960s through electronic funds transfers and credit cards. The concept of web-based banking came into existence in Europe and USA in the beginning of 1980s. It has been estimated that around Opening up of economy in 1991 marked

the entry of foreign banks. They brought new technology with them. Banking products became more and more competitive. There was need for differentiation of products and services. The ICICI Bank kicked off online banking in 1996. 1996 to 1998 marked the adoption phase, while usage increased only in 1999, owing to lower Internet Service Provider (ISP) online charges, increased PC penetration and a tech-friendly atmosphere. To cope with the pressure of growing competition, Indian commercial banks have adopted several initiatives and e-banking is one of them. The competition has been especially tough for the public sector banks, as the newly established private sector and foreign banks are leaders in adoption of e-banking.

Indian Banks offer to their customers following e-banking products and services: Automated Teller Machines (ATMs), Internet Banking, Mobile Banking Phone Banking, Tele banking, Electronic Clearing Services, Smart Cards, Door Step Banking, Electronic Fund Transfer.

The three broad facilities that e-banking offers are:

- Convenience- Complete your banking at your convenience in the comfort of your home.
- No more Qs- There are no queues at an online bank.
- 24x7 service- Bank online services is provided 24 hours a day, 7 days a week and 52 weeks a year.

Electronic banking is a high-order construct, which consists of several distribution channels. It should be noted that electronic banking is a bigger platform than just banking via the Internet. The term electronic banking can be described in many ways. In a very simple form, it can mean the provision of information or services by a bank to its customers, via a computer, television, telephone, or mobile phone (Daniel, 1999). Burr (1996), for example, describes it as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. Furthermore, electronic banking has three types of delivery channels: telephone, PC, and the Internet.

Daniel (1999) introduces four different channels for electronic banking: PC banking, Internet banking, managed network, and TV-based banking. Moreover, PC Home Banking allows customers to do their banking services only on PC that have been installed the assigned software package. Telephone banking, TV-based banking, and managed network do not play such a big role in banking today (Karjaluo, 2002). However, in the future the delivery platform is expected to shift from wired Internet connections to wireless mobile technologies. Electronic banking does not necessarily have to be on a computer screen. It can, for example, be on the tiny screen of a mobile phone or any other wireless device.

With these wireless applications, customers can, for example, consult their bank account balances and transaction histories, view pie charts of their holdings in a portfolio, initiate payments or orders to buy and sell securities, and also send e-mail to their banks. Several benefits of strong electronic service have also been identified as including satisfied and retained customers, attraction of new customers, development of customer relationships, increased sales and market shares, enhanced corporate image, reduced costs and increased profit margins and business performance (Parasuraman et al., 2005; Bauer et al., 2005). These benefits may explain the observed increase in the level of technology adoption in the delivery of banking services (Kalakota and Whinston, 1997; Bauer et al., 2005).

Functions of E-Banking

The personal e-bank system provides the following services:

- **Inquire about information of account:** The client inquires about the details of his own account information such as the card's / account's balance and the detailed historical records of the account and downloads the report list.
- **Card accounts transfer:** The client can achieve the fund to another person's Credit Card in the same city.
- **Bank-securities account transfer:** The client can achieve the fund transfer between his own bank savings accounts of his own Credit Card account and his own capital account in the securities company. Moreover, the client can inquire about the present balance at real time.
- **Foreign exchange transaction:** The client can do the realtime transfer and get the feedback information about payment from our bank when the client does shopping in the appointed web-site.
- **Client Service:** The client can modify the login password, information of the Credit Card and the client information in e-bank on net.
- **Account Management:** The client can modify his own limits of right and state of the registered account in the personal e-bank, such as modifying his own login password, freezing or deleting some cards and so on.
- **Reporting the loss if any:** The client can report the loss in the local area (not nationwide) when the client's Credit Card or passbook is missing or stolen.

Benefits of E-Banking

An effective Virtual banking reduces operational costs and facilitates the information that affects efficiency and effectiveness of the transaction. It has many benefits like accessibility, saving time, user friendly, anytime and anywhere banking facility, Secure, Convenience, useful, protect environment in comparison to Real Banking. The Concept of any time anywhere banking has thus been ushered in by Internet; the electronic bill payment service provided by banks overcomes the individual's onerous task of visiting several places to pay his service bill like telephone, water and electricity. Right from his desktop he can pay his regular monthly bills such as telephone, electricity, mobile phone, insurance etc. No more missed deadlines. No more loss of interest- he can schedule his bills advance and thus avoid missing the bills deadlines as well as earn extra interest on his money. The effectiveness of virtual banks allowed the customer to invest in shares mutual funds and other financial products.. Check book replenishment, Demand Draft/ Pay-order ,Fixed deposit account opening, opening of letter of credit, The same convenience while investing in mutual funds – hassle free and paperless investing is brought to the customer by virtual banking. With the advent of online transactions, speedy and secure settlements of payment has lead to the globalization of financial services, Better customer services provide using various IT aided developments such as introduction of ATM, Magnetic Ink Character Recognition (MICR) checks , digital signature, credit cards , debit cards , smart cards digital e-cash and electronics funds transfer , online E-ticket booking. These development have helped in reducing the time processing transaction and also the services are made available to customer at a convenient place, The day to day transactions in banks are insurance companies are automated which provide better. Services in processing transaction, throughout the world financial services providers are looking a new concept of “any time any where any how” banking.

Issues in E-Banking

By considering the findings of the research in other countries, the researchers found various kinds of risks: (1) Security, (2) financial, (3) social, (4) time and (5) performance risks in e-commerce area. Moreover, through the

research carried out in Iran, 2 more kinds of risks were discovered which are: (6) legal and (7) hardware risks based on the fact that ecommerce is a kind of newly established business in Iran from the customers' point of view (Table 1). In the following lines, using the previous definitions for all kinds of risks, a brief introduction to each kind of risk will be given from the customers' viewpoint:

- **Performance risks:** This risk is related to the potential or imposed damage, which is caused by technical deficiencies or improper functioning of e-banking systems.
- **Social risk:** The potential or imposed damage that cause the loss of social status of people because electronic banking services are used among other authority groups.
- **Time-loss risk:** This risk refers to the potential or imposed damage caused by wasting time and it brings about problems because of the delay in leading e-banking operations and also spending time on learning how to use e-banking tools and devices.
- **Financial risk:** This risk is known as the potential or imposed financial risk which is caused by
- **Performance risk:** errors in e-banking operations or misuse of bank account in e-banking systems.
- **Security risk:** This is defined as a potential loss due to fraud or the hacker compromising the security of an online transaction or on-line user.
- **The legal risk:** It refers to the potential or imposed damage which is the result of lack of any compiled law for electronic crime or lack of knowledge in this area.
- **Hardware risk:** It refers to the potential or imposed risk which is caused because of the lack of new tools when compared to the number of the customers, inaccessibility of such tools (cell-phones or the internet) and the time consuming process of repairing and maintaining such tools.

Technology Innovation Awards

We are in the age of anytime anywhere banking. Technology innovation has moved banking to desktops, laptops, tablets and mobiles. The customer has grabbed banking into her palm. Even we has issues with the new era digital banking because of the increasing trend in failed or fraudulent transactions.

It is the responsibility of the banks to put in place all necessary infrastructure and systems to ensure that digital banking is safe and secure. They have to ensure confidentiality, integrity and availability, the three key requirements of secured banking. Banks have been working on security solutions at various levels. In order to put all such solutions together and to build a system that not only integrates the best features of the solutions but also a super structure that identifies abnormalities early and alerts stakeholders immediately, banks have started working on Information Security Operation Centers (ISOCs).

The awards are a discerning innovator and technologist's delight. In India, The IBA Banking Technology Innovation Awards are most sought after, and have set hitherto unmatched industry standards. These awards are back to recognize and reward individuals, professionals and banks who have recorded noteworthy technology and business benefits in the previous year.

Year	Technology Bank of the year
2010-11	Bank of India
2011-12	Canara Bank

2012-13	State Bank of India
2013-14	State Bank of India
2014-15	Bank of India
2015-16	Union Bank of India
2016-17	State Bank of India

Table1: Source: <http://www.idrbt.ac.in/index.html>

RESEARCH METHODOLOGY:-

Methodology

- ❖ The present paper is concerned with the Indian banking system. The required data have been collected from the various issues of Banking Statistics, published by Reserve Bank of India.
- ❖ The study is empirical and explorative in nature and therefore the information presented is based on both primary and secondary data.
- ❖ Secondary information has been collected from various documents such as books, newsletters, reports, magazines, journals, daily newspaper, WWW, as well as from existing literature.

Author	Country	Period	Review/Analysis
Furst et al. (2000a,2000b, 2002a and 2002b)	U.S., 2,517 National Banks		Internet banks outperformed non-Internet banks in terms of profitability. Offering Internet banking didn't have a statistically significant impact on profitability.
Carlson et al. (2001)	U.S., 2517 National Banks	1998-2000	Internet banking is not having an independent impact on bank profitability
Sullivan (2000)	10th Federal Reserve District, 1618 banks	2000	Measures of profitability for Internet banks are similar to those of the non-Internet banks.
DeYoung (2001a)	U.S., 10 Internet only and 569 benchmark banks 1997-2000	1997-2000	Poor financial performance but higher assets growth of pure-play Internet banks
DeYoung (2001b)	U.S., 10	1997-2000	Poor financial performance of pure play Internet banks.

Table 2 : Illustration of the prior Study conducted

Exploring Research Gap

A few empirical studies exist in the literature, which have examined the relative performance of banks offering Internet banking services. Table 2 summarizes the previous research done on the performance of Internet banks. The table also includes the studies which have examined the financial performance of Internet only banks that do not operate any physical branches. The present study is an attempt to present the present status of Internet banking in India and its implications for Indian banking industry In Indian context, many publications throw light over the importance of Internet banking and also its prospects for the Indian banking industry. However these studies don't depict any empirical relationship between banks' profitability and Internet banking. The present study intends to know the factors affecting the acceptance of adult customers and also indicates level of concern regarding security and privacy issues in Indian context.

Conclusion

The proposed paper presents a brief of e-banking, understanding its advantages and challenges along with identification of research gap in study on Indian banking sector. Last, but not the least, the paper also attempt to see if there is any association between adoption of Internet banking and the banks' performance and risk. The evidence reveals no significant association between adoption of Internet banking by banks and their performance. However, Internet banking has a positive or negative and significant impact on profitability of different types of bank (public, private, new generation, and foreign bank). The collections of prior research work evidently shows that all the major work is done in European countries and comparatively less quality focus in done on Indian Banking Sector.

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