# Effect of Internet on Banking Industry

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## Abstract

*Internet Banking is the latest in the series of technological wonders of the recent past. ATMs, Tele-Banking, Internet Banking, Credit Cards and Debit Cards have emerged as effective delivery channels for traditional banking products. Banks nowadays are very much aware that using internet as a channel for communication gives them access to the customers who are located not only within the boundaries of a country but also beyond that. It provides universal connection from any location worldwide and can easily be accessed with the help of internet from any part of the world. Information technology developments in the banking sector have sped up communication and transactions for clients. It is vital to extend this banking feature to clients for maximizing the advantages for both clients and service providers. Internet Banking has slowly become very popular in the banking industry and is providing various benefits to the customers in terms of convenience and cost of transactions. Electronic Finance has been extensively used these days in the banking industry. The paper attempts to explore the various pros and cons of internet banking services. Thus, the present paper primarily focuses on the various issues which have come up since the inception of internet banking. The paper has been prepared on the basis of extensive review of available literatures on the Internet Banking. The present research paper reveals that the internet had a deep impact on the Banking Industry and the number of individuals using internet banking has increased several folds over the last decade.*

**Keywords:**Internet Banking; Banks; Services; Regulatory Issues

## INTRODUCTION

Banks have always been trying their level best to provide better service to customers with the use of technology. It's been quite some time now, since banks have been using electronic and telecommunication networks to provide high quality services and wide range of products to their customers. The delivery channels or the medium of communication that banks had been using primarily include direct dial up connections, public networks and private networks. The devices used for the purpose of communication include telephone, personal computers, mobiles and Automated Teller Machines. Nowadays, with the availability of computers and mobiles to almost each households and access to internet services to most of the customers, internet is being extensively used as a medium for receiving instructions and delivering their wide range of products and services to their customers. The Banking done over the internet is referred as Internet Banking. The number of products and services that each bank offers to its respective customers through internet may vary from bank to bank.

Internet technology holds the potential to fundamentally change banks and the banking industry. An extreme view speculates that the Internet will destroy old models of how bank services are developed and delivered (DeYoung, 2001a). The widespread availability of Internet banking is expected to affect the mixture of financial services produced by banks, the manner in which banks produce these services and the resulting financial performances of these banks. Whether or not this extreme view proves correct and

whether banks take advantage of this new technology will depend on their assessment of the profitability of such a delivery system for their services. In addition, industry analysis outlining the potential impact of Internet banking on cost savings, revenue growth and risk profile of the banks have also generated considerable interest and speculation about the impact of the Internet on the banking industry (Berger, 2003).

Not only globally, but in the recent times the access to the internet services has increased tremendously in India as well. Banks have started offering various financial products and services over the internet to their customers (Malhotra and Singh, 2004). For some activities, banks hope to see a near-term impact on profitability. Other investments are motivated more by a desire to establish a competitive position or avoid falling behind the competition. With the passage of time, Internet has become a major communication and distribution channel for the Banking Industry. The present study would try to analyze the effect of internet on the banking industry.

Internet Banking can be defined as the traditional banking services provided through the help of the internet, i.e. internet is used as a channel or a medium of communication. Usage of internet for providing banking services have made the life of customer much easier but at the same time, it has brought up certain issues which needs to be taken care of and it has compelled regulators all over the world to keep an eye on this emerging channel of communication.

Internet Banking is the latest in the series of technological wonders of the recent past. ATMs, Tele-Banking, Internet Banking, Credit Cards and Debit Cards have emerged as effective delivery channels for traditional banking products. Banks nowadays are very much aware that using internet as a channel for communication gives them access to the customers who are located not only within the boundaries of a country but also beyond that. Internet Banking enables the bank customers to get an access to their accounts and other products & services offered by the bank. These services can be availed by using the website of the bank. Internet Banking has reduced the cumbersome paperwork to a minimum level and now the customer can perform various kinds of transactions by sitting at his home. It is the types of services through which bank customers can request information and carry out most retail banking services such as balance reporting, inter-account transfers, bill-payment, etc., via telecommunication network without leaving their home/organization. It provides universal connection from any location worldwide and can easily be accessed with the help of internet from any part of the world. Information technology developments in the banking sector have sped up communication and transactions for clients. It is vital to extend this banking feature to clients for maximizing the advantages for both clients and service providers. Internet is the cheapest delivery channel for banking products as it allows the entity to reduce their branch networks and downsize the number of service staff. The navigability of the website is a very important part of Internet Banking because it can become one of the biggest competitive advantages of a financial entity. Bankers consider 'minimizes inconvenience', 'minimizes cost of transactions' and 'time saving' to be important benefits and 'chances of government access', 'chances of fraud' and 'lack of information security' to be vital risks associated with electronic banking. Due to increase in technology usage the banking sector's performance increases day by day. Internet Banking is becoming the indispensable part of modern day banking services.

Internet Banking has slowly become very popular in the banking industry and is providing various benefits to the customers in terms of convenience and cost of

transactions. Electronic Finance has been extensively used these days in the banking industry. Electronic finance is the provision of financial services and markets using electronic communication and computation. In practice, e-finance includes e-payment, e-trading, and e-banking.

## REVIEW OF LITERATURE

Indian financial services industry is dominated by the banking sector that contributes significantly to the level of economic activity, as empirically demonstrated by Jadhav and **Ajit (1996).**

**Sangmi and Nair (2010)** in their research study, analyzed through the CAMEL Parameters, which looks into Capital adequacy, Asset quality, Management capability, Earnings capacity and Liquidity found that both the Punjab National Bank and Jammu & Kashmir Bank have adopted prudent policies of financial management and both banks have shown significant performance as far as asset quality is concerned.

The reforms were broadly aimed to improve the performance of banks despite the unexpected global recession and internal disturbances. Banking sector is immensely competitive and growing in the right trend **(Ram Mohan, 2008).**

**Benston, et, al, (1982)** observed that output is measured in terms of what banks in turn form the basis of operating expenses. In this approach, banks ware viewed as producers of loans and deposits account services using available input.

**Egland et al. (1998)** conducted their study for the U.S. Banks and tried to estimate the number of banks in U.S. offering internet banking services. He analyzed the characteristics and performance of these banks. He found no major difference between the banks offering internet banking services and the ones not offering internet banking services in terms of efficiency, profitability and credit quality. However, transactional Internet banks differed from other banks primarily by size.

In contrast to the results of Egland et al. (1998), **Furst et al. (2000a, 2000b, 2002a and 2002b)** highlighted that in all size categories, the banks offering the internet banking services were more profitable as compared to those not offering internet banking services. An exception to the superior performance of Internet banks was the de novo (new start-ups) Internet banks, which were less profitable and less efficient than non-Internet de novos. The authors concluded that the Internet Banking is not a major factor which can affect the profitability of the bank. **Sullivan (2000)** found that click and mortar banks in the 10th Federal Reserve District incurred somewhat higher operating expenses but offset these expenses with somewhat higher fee income. On average, this study found no systematic evidence that banks were either helped or harmed by offering the Internet delivery channel. Similar to the results of Furst et al., this study also found that de novo click and mortar banks performed significantly worse than de novo brick and mortar banks.

**Hasan et al. (2002)** found that the Internet banking institutions were performing significantly better than the non- Internet groups. Additionally, the risk variables associated with the Internet group continued to be lower relative to the non-Internet group. The asset-liability variables revealed that on average the banks in this Internet group were larger and had significantly higher trading and investment activities and less dependent on retail deposits (both demand and saving deposits) relative to the non-Internet group. The only category where the Internet group showed a lower performance was the noninterest expense category. They observed a significant and positive relationship between the banks offering internet banking services and the bank's profitability. They also found a

negative but a marginally significant relationship between the internet banking services provided by a bank and the risk levels.

**Hernando and Nieto (2005)** examined the performance of multichannel banks in Spain between 1994 and 2002. They concluded in their study that the internet banking services complimented the physical banking industry. In contrast to earlier studies, the multichannel banks in Spain relied more on typical banking business (lending, deposit taking and securities trading). The adoption of the Internet as a delivery channel had a positive impact on banks' profitability after one and a half years of adoption. It was explained by the lower overhead expenses and in particular, staff and IT costs after the same period.

**Sathye (2005)** analyzed the impact of internet banking services upon the performance and risks associated with it for the major banks in Australia. Similar to the results of **Sullivan (2000)**, the Internet banking variable didn't show a significant association with the performance as well as with operating risk variable. He concluded that the internet banking services provided by the banks does not have any impact on the performance of the banks in Australia.

**DeYoung et al. (2006)** observed the change in financial performance of Internet community banks in U.S. during 1999-2001. The results found that Internet adoption improved community banks' profitability, particularly through rise in the bank revenues collected from the service charges on deposits. They also found a close relationship between the internet banking services and increased use of brokered deposits. In terms of loan portfolio mix, they found a weak relationship with the introduction of internet banking services. The findings suggested that Internet adoption was associated with an economically and statistically significant improvement in bank profitability.

**DeYoung (2001a, 2001b, 2001c and 2005)** analyzed systematically the financial performance of pure-play Internet banks in U.S. They observed a relatively lower profit margin in Internet–only banks as compared to the traditional branch banks that have a physical structure. However, they concluded that, the internet-only banks have a potential to grow at a much faster rate than the traditional branch banks. Internet-only banks have a much larger access to customers as compared to the traditional branch banks and that is why they have the potential to become more financially competitive over the passage of time. **Delgado et al. (2004 and 2006)** found similar results for Internet-only banks in the EU. Nevertheless, the magnitude of technology based scale economies found in Delgado et al. (2004 and 2006) was substantially larger than that estimated by DeYoung studies.

**Kheechee (2011)** in his study analysed the profitability of different categories of banks and to find out the causes of difference in their profitability, so that a mechanism can be evolved for improving the profitability and productivity of commercial banks**. Dang-Thanh (2012)** in his study applied a modified Data Envelopment Analysis to analyze the performance changes through time of the Vietnamese banking system in the 1990-2010 periods.

**Berger and Humphrey (1992)** define bank outputs as behaviour, which have large expenditure on labour and capital, and they are included in the deposits as both outputs and inputs of banking.

A more recent research by **Ibrahim (2010)** concluded that performance of rural banks in India has significantly improved following amalgamation process by the Indian Government.

Based on the literature, it is evident that Banks in all the sectors including private,

public and foreign are striving to be competitive and increase their performance, by providing better services to its customers and Internet Banking is playing a significant role in this regard.

## MEDHODOLOGY

The present study is primarily based on secondary data. The secondary data has been compiled from statistical tables relating to banks, Reserve Bank of India bulletins, Centre for Monitoring Indian Economy reports, economic surveys of various years, European Statistics Report, proceeding of state level bankers committees, and other published resources.

## OBJECTIVES

- To highlight the advantages of Internet Banking
- To identify the issues and concerns in Internet Banking

## *ADVANTAGES OF INTERNET BANKING*

The main benefit of Internet Banking is that it saves a lot of time of the customers. The services are fully automated and transaction can be done 24x7 from any corner of the world. A few major benefits are:-

***(i) Convenient and Time Saving:*** A customer can perform transaction from any part of the world and at any point of time as per his convenience.

***(ii) Reduced Costs:*** As the process is fully automated and does not require bank employees so the bank saves quite a big amount at their end and it adds to their profitability. Banks can also reduce the service charges on the basis of profit earned through automated banking services.

***(iii) Faster Response Rate:*** Customers can check their account with just a click on the mouse. Banks have fast servers that gives response to customer queries at a very fast pace. Customers can check multiple accounts at a click of a button.

***(iv) Systematic Cash Management:*** Internet Banking facilitates the cash management process. Banks offer a wide range of products to its customers over the internet and the customers can wisely select a few according to their liquidity and profitability preferences. Banks offer short term as well as long term instruments over the internet.

***(v) Services:*** Direct banks typically have more robust websites that offer a comprehensive set of features that may not be found on the websites of traditional banks. These include functional budgeting and forecasting tools, financial planning capabilities, investment analysis tools, loan calculators and equity trading platforms. In addition, they offer free online bill payments, online tax forms and tax preparation.

***(vi) Environment friendly:*** Internet banking is also environmentally friendly. Electronic transmissions require no paper, reduce vehicle traffic and are virtually pollution-free. They also eliminate the need for buildings and office equipment.

***(vii) Fund management:*** Banks provide the history of various transactions done by the customer on his different accounts. Customer can analyze his debit and credit balances and can plan his funds accordingly.

## FEW ISSUES IN INTERNET BANKING

***(i) Matching the Benchmarks of the Industry:*** An adequate amount of infrastructure and human capital are required to match the global level of Internet Banking Services. Developing countries need to strive hard to match this level. According to a report, the migration plan for Society for Worldwide Interbank Financial Telecommunication (SWIFT) has not occurred for many developing

countries due to the shortage of infrastructure and technical knowhow.

***(ii) E-Payment Issues:*** E-Payment systems are not working effectively in many parts of the globe. In few developing countries, because of the lack of infrastructure facilities, Customers are unable to effectively use the E-Payment facility.

***(iii) Transaction Issues:*** Sometimes a face-to-face meeting is required to complete complex transactions and address complicated problems. A traditional bank can host meetings and call in experts to solve a specific issue. Moreover, international transactions may be more difficult (or impossible) with some direct banks. If a customer deposits cash on a regular basis, a traditional bank with a drive-through window may be more practical and efficient.

***(iv) Trust over the Channel:*** Confidentiality of the accounts and authentication of the user were the major features of the "brick and mortar" form of banking and the branch banking system very well lived up to it for several decades but when it comes to the usage of internet as a channel for transaction, Customers are a bit speculative. Communication across an open and insure channel might worry them a little. It might not be considered a strong link between the bank-client relationships.

***(v) Regulatory Issues:*** Internet Banking has given birth to various security issues as well. There has been an immense growth in cross border transaction since the inception of Internet banking facilities. The regulatory and supervisory authorities are trying their level best to overcome all the loop holes in context of cross border transactions. Many securities related issues are being worked upon. The Basel committee has defined certain Risk Management Principles for safe internet banking. The major challenge is implementing the existing risk management framework to the Internet Banking setting. RBI is making sure to maintain a reasonable level of security in the transactions done over the internet.

***(vi) Lack of Internet Banking Facilities for Small Businesses:*** There is no commercial bank in India that exclusively caters to the needs of Small businesses. SMEs always face problems in accessing finance from banks and their non transparent working makes it even more difficult for them to get access to finance. There is no proper web based relationship model for SMEs that might help them to coordinate with the banks. Table – 1 highlights the percentage of individuals using Internet banking.

**Table-1**
**Percentage of Individuals using Internet banking (between the age of 16 and 74)**

| | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Belgium** | : | : | 23 | 28 | 35 | 39 | 46 | 51 | 54 | 56 | 58 |
| **Bulgaria** | : | 1 | : | 1 | 2 | 2 | 2 | 2 | 3 | 4 | 5 |
| **Czech Republic** | 3 | 5 | 5 | 10 | 12 | 14 | 18 | 23 | 30 | 34 | 41 |
| **Denmark** | 38 | 45 | 49 | 57 | 57 | 61 | 66 | 71 | 75 | 79 | 82 |
| **Germany** | 21 | 26 | : | 32 | 35 | 38 | 41 | 43 | 45 | 45 | 47 |
| **Estonia** | : | 35 | 45 | 48 | 53 | 55 | 62 | 65 | 68 | 68 | 73 |
| **Ireland** | 8 | 10 | 13 | 21 | 25 | 28 | 30 | 34 | 33 | 43 | 46 |
| **Greece** | 1 | 1 | 1 | 2 | 4 | 5 | 5 | 6 | 9 | 9 | 11 |
| **Spain** | 10 | 12 | 14 | 15 | 16 | 19 | 23 | 26 | 27 | 31 | 33 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **France** | : | : | : | 18 | 34 | 40 | 43 | 50 | 51 | 54 | 58 |
| **Italy** | : | : | 8 | 9 | 12 | 13 | 16 | 18 | 20 | 21 | 22 |
| **Lithuania** | 3 | 7 | 10 | 15 | 21 | 27 | 32 | 37 | 40 | 43 | 46 |
| **Hungary** | : | 3 | 6 | 8 | 12 | 13 | 16 | 19 | 21 | 26 | 26 |
| **Austria** | 13 | 18 | 22 | 27 | 30 | 34 | 35 | 38 | 44 | 45 | 49 |
| **Poland** | : | 4 | 6 | 9 | 13 | 17 | 21 | 25 | 27 | 32 | 32 |
| **Portugal** | 6 | 8 | 8 | 10 | 12 | 14 | 17 | 19 | 22 | 25 | 23 |
| **Romania** | : | : | : | 1 | 2 | 2 | 2 | 3 | 4 | 3 | 4 |
| **Finland** | 43 | 50 | 56 | 63 | 66 | 72 | 72 | 76 | 79 | 82 | 84 |
| **Sweden** | 38 | 40 | 51 | 57 | 57 | 65 | 71 | 75 | 78 | 79 | 82 |
| **United Kingdom** | 22 | 22 | 27 | 28 | 32 | 38 | 45 | 45 | : | 52 | 54 |
| **Iceland** | 48 | 54 | 61 | 67 | 72 | 68 | 72 | 77 | 80 | 86 | 87 |
| **Norway** | 49 | 55 | 62 | 67 | 71 | 75 | 77 | 83 | 85 | 86 | 87 |

Source: Compiled from European Statistics Report (2013)

## CONCLUSION

The usage of Internet services has been dominated by the banking industry over the last decade. Introduction of Internet to banking has changed the dynamics of the industry and now there is nothing called "geographical boundaries". In India as well it has resulted in lowering of transaction costs. There is no denying the fact that there are various benefits that internet banking has brought in but it has also given birth to certain issues which needs to be tackled strategically. Developing countries still need to strive hard to match the global standards of internet banking services. They are unable to implement it effectively because of the lack of infrastructure facilities and non availability of technical knowhow. One of the major achievements of internet banking services is the rise in the level of customer satisfaction. Customers can operate their accounts from any part of the globe and at any moment of time. Table-1 clearly concludes that there has a several fold increase in the percentage of individuals using Internet banking over the last decade.

With the introduction of internet banks in the banking sector, the competition has become very tough. Both "Brick & Mortar" form of banking and internet banking have got their own pros and cons, so the customer should wisely use both of them and should not get sticked to only one form of banking. A customer should enjoy the convenience provided by the internet banking but along with that he must visit the physical branches to enhance the personal relationships and service facilities. There is no question that Internet Banking has made our lives very easy but it has also brought up few security threats. Before opening up an online account, it is imperative for a customer to properly investigate the security policies of the bank.

Clearly, choice of whether or not to bank over the internet depends on many variables. Even if a customer can see benefits, he may be unwilling because of the lack of trust and experience. At the other end of the spectrum, people may sign up for limited services like account viewing. This will save them from safety concerns but will give them daily access to account activity. If the customer decides that internet banking is right for him, he must be sure to review other offers from several banks.

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