CONSUMER PERCEPTION TOWARDS INTERNET BANKING: A COMPARATIVE STUDY OF PUBLIC, PRIVATE AND FOREIGN BANKS

THESIS

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by

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SEPTEMBER, 2016

Dedicated

to

My Father Late Sh. J. L. Khurana

DECLARATION

I hereby declare that this thesis entitled **"CONSUMER PERCEPTION TOWARDS INTERNET BANKING: A COMPARATIVE STUDY OF PUBLIC, PRIVATE AND FOREIGN BANKS"** being submitted in fulfillment of the requirements for the Degree of Doctor of Philosophy in the Department of Management Studies under Faculty of Management Studies of YMCA University of Science & Technology Faridabad, during the academic year 2016-2017, is a bonafide record of my original work carried out under guidance and supervision of Dr. Manisha Goel, Associate Professor, Department of Management Studies, YMCA University of Science and Technology, Faridabad and Dr.Sunita Bishnoi, Associate Professor, Department of Management Studies , DAV Institute of Management, Faridabad and has not been presented elsewhere.

I further declare that the thesis does not contain any part of any work which has been submitted for the award of any degree either in this university or in any other university.

(ASHIMA TANDON)

Registration No.: YMCAUST/Ph 47/2011

CERTIFICATE

This is to certify that this thesis entitled "**CONSUMER PERCEPTION TOWARDS INTERNET BANKING: A COMPARATIVE STUDY OF PUBLIC, PRIVATE AND FOREIGN BANKS"** by **ASHIMA TANDON,** submitted in fulfillment of the requirement for the Degree of Doctor of Philosophy in Department of Management Studies under Faculty of Management Studies of YMCA University of Science & Technology Faridabad, during the academic year 2016-2017, is a bonafide record of work carried out under our guidance and supervision.

We further declare that to the best of our knowledge, the thesis does not contain any part of any work which has been submitted for the award of any degree either in this university or in any other university.

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(Ashima Tandon)

Consumer Perception Towards Internet Banking: A Comparative Study of Public, Private and Foreign Banks

ABSTRACT

The development that is being experienced in the information and communication technology has brought about a lot of changes in almost all facets of life. Information technology has taken important place in the development of financial services, especially banking sector. The use of internet as a new distribution channel for banking transactions has led to the growth of internet banking. This internet banking has replaced the traditional way of banking. Internet banking has a lot of benefits which add value to consumers' satisfaction. The research work aims at studying the various aspects of internet banking and various factors which affect the consumer perception towards internet banking.

The current study extracted 15 factors namely ***'Convenience and Promptness', 'Security' , 'Customer Care', 'Interactivity', 'Responsiveness', 'Efficient Transaction Management', 'User Friendly Websites', 'Trustworthy', 'Risk Enhancement', 'Connectivity', 'Informative', 'Additional Support Services', 'Promised Service Delivery' , 'Guide'*** *and* ***'Accuracy'*** that enable internet banking. The results of t-test and ANOVA reflected that 'Gender' has significant relation with the factor '*User friendly website'*. On the other hand 'Place of Residence' has significant relation with the factors namely '*Convenience & Promptness', 'Responsiveness', 'Efficient Transaction Management'* and *'Connectivity'*. Talking about, 'Qualification' it has significant relation with the factors, *'Convenience & Promptness'* and *'Promised Service Delivery'*. As far as 'Occupation' is concerned it has significant relation with the factors, namely *'Convenience & Promptness', 'Security', 'Responsiveness', 'Risk Enhancement'* and *'Informative'*. The demographic variable, 'Age group' has significant relation with the factors '*Security', 'Efficient Transaction Management', 'Additional Support Services'* and *'Promised Service Delivery'*. The demographic variable 'Income' has significant relation with maximum number of factors namely, *'Security', 'Customer Care', 'Responsiveness',*

'Efficient Transaction Management', 'Trustworthy', 'Risk Enhancement' and *'Guide'*. Talking about 'Respondent's association with the bank' it has significant relation with the factors, '*Convenience & Promptness', 'Customer Care', 'Efficient Transaction Management', 'User Friendly Websites'* and *'Informative'*.

As far as the factors that enables internet banking in public, private and foreign sector banks, the comparison across 'Category of Bank' has shown significant relation with the factors namely *'Security', 'Customer Care', 'Responsiveness', 'Efficient Transaction Management'* and *'Connectivity'*. The study reflected that the level of awareness and knowledge is good among the respondents of foreign and private sector banks in comparison to public sector banks. The respondents of public, private and foreign sector banks reflected significant difference in the level of awareness and knowledge regarding the dimensions namely *'Website of the Bank', 'Technology Adoption Level', 'Online Banking Services, information and enquiries'* and *'Managing ATM/Debit, Credit Card through IB'*.

The internet banking service *'View account balance and statements'* is often used by the respondents. Other services like *'Inquire about your fixed deposit', 'Download applications', 'Calculate loan payment information', 'Inquire about your TDS details', 'Online trading with Demat Services', 'Apply for loan or other services'* and *'Request to stop cheque payment'* are rarely used by the respondents.

It was found that the problems, '*Poor Network', 'Inadequate Knowledge', 'Delayed Complaint handling process', 'Frequent change in password', 'Lack of Personalized touch'* and *'Hanging websites'* are faced by the respondents sometimes. On the other hand problems like '*Lack of clarity in procedures', 'Lack of technological requirements', 'Time consuming', 'Complex process', 'Hacking of password is possible'* and *'Lack of security'* are all faced rarely by the respondents. The intensity of problems faced during internet banking by the respondents who belong to different '*gender', 'qualification'* and *'age group'* was almost similar.

Results of the study basically provide the policy makers and decision makers a deep understanding of the consumer perception regarding internet banking. It is very important for the bank managers to understand the consumers so that all the bank initiatives can be taken in the direction to ensure consumer satisfaction and in order to improve the level of acceptance of internet banking. On the basis of the research work and the findings a number of strategies to public, private and foreign sector banks in order to change their consumers' perceptions have been suggested.

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CHAPTER-I

INTERNET BANKING: CONCEPT, DEVELOPMENT AND BENEFITS

1.1 INTRODUCTION

The banking system constitutes the heart of the financial sector and plays an important role in transmitting monetary policy impulses to the entire economic system. Money is a necessary factor for economic development. Banking industry is the blood vascular system of our economy. It has a positive role to play in the economic development of the country as the success of economic development depends on the mobilization of the resources and their appropriate investment. To quote Bhabha, "Banking is the kingpin of the chariot of economic progress. As such its role in expanding economy of a country like India can neither be underestimated nor be overlooked. The success of our plan is dependent upon other things, on the smooth and satisfactory performance of the role played by the Banking Industry of our country" **(R.K. Uppal, 2006).**

Technology brought about a revolutionary change in the various industries. Banking is one such industry affected by the technological innovations. Traditional banking has been replaced by ATMs, internet banking, mobile banking, debit cards and credit cards etc.

Banking industry has always tried to obtain the maximum advantage out of whatever new technological options are available at its disposal. The evolution of a new paradigm shift in banking which is known as E-banking could be traced back to early 1970s. Banking involved adoption of new technologies to optimize and improve upon various banking operations. Gone are the days when the customers used to flock the branches of the banks to transact their business. With the advent of time, a segment of techno-savvy customers is also emerging who prefer to bank at their convenience round the clock without actually venturing into a branch premises. This demographic change is also instrumental to a large extent in the bank's building the capabilities for "anytime anywhere banking" by implementing state of art projects like ATMs, mobile banking, internet banking, credit cards, debit cards etc.

The banking sector has become competently dependent on technology as a service/ product delivery channels. Technology is identified as the single strongest factor that provides a bank with a competitive edge over others. The competition in the banking sector between Public and Private Sector Banks; Old Private Sector Banks, New Generation of Private Sector Banks and Foreign Banks is mainly through technology innovations, up gradation and modernization. It becomes necessary for a bank to differentiate its product from others **(V.V. Sesha & S. Tapla , 2006).**

With the passage of time, the banks implemented a host of delivery channels to offset the stiff competition posed by their business rivals. Although the New Generation Private Sector Banks and Foreign Banks have dominated the post liberalization and deregulated banking environment in absorption of IT for business advantage, the state owned and other Private Sector Banks were not far behind with most of them following suit. With the adoption of latest technological tools for business advantage, the focus shifted to providing the customer the comfort of 'anytime /anywhere banking', thereby imparting the freedom and flexibility to bank at their convenience with speed and ease. This also instilled in the minds of the customers a sense of loyalty to the bank they are dealing with. Further, adoption of innovative IT tools enabled the banks to garner additional business, draw new clientele besides facilitating reduction of transaction costs. This resulted in shrinking of geographical boundaries, easy reach to the clientele, reliable and secured services.

1.1.1 Historical Perspective of Indian Banking Industry

Banking is the backbone of a Modern Economy. Talking about the history of banking in India:

- ✓ Bank of Hindustan was set up in 1770.
- ✓ 19th century saw the Presidency Banks (Bank of Calcutta in 1806 Bank of Bombay 1840 and Bank of Madras in 1843) setting up under a charter.
- ✓ Private Banks were allowed in 1900.
- ✓ In 1921 these banks were amalgamated to form the Imperial Bank of India.

- ✓ In 1935 the Reserve Bank of India (RBI) was constituted as the Apex Bank. Upto 1949 it was a private ownership bank, then with the passage of the Banking Regulations Act 1949, it came under Government Control.
- ✓ State Bank of India came into existence and became the Bank of the Government of India in 1955 with RBI taking control of the Imperial Bank of India.
- ✓ The first phase of nationalization of the banking sector took root in 1949 and culminated in the nationalization of fourteen banks in the year 1969.

In the year 1951 the total number of banks was 566, which came down to 86 in 1971 as weaker banks were merged with the healthier banks. In the year 1980 six more banks were brought into the nationalization field. After the nationalization of 14 large banks in the year 1969, no new banks had been allowed to be set up in the private sector. Progressively over this period the public sector banks have expanded their branch network considerably and have catered to the needs of the large masses of the population especially the weaker sections and those in the rural areas. While recognizing the importance and the role of public sector banks there were increasing recognition of the need to introduce greater competition which can lead to higher productivity and efficiency of the banking system. Therefore a stage was reached when New Private Sector Banks were allowed to be set up with a view to induce competition and market oriented system **(R.K. Uppal, 2006).**

Tracing back the history of Indian banking scenario, there are two distinct groups as far as infusion of technology is concerned. One group comprises of the Public Sector Banks (PSBs) which command over the three quarter of the market share and Old Generation Private Sector Banks (OGPSBs) who are relatively smaller entities from the first group. These banks were very slow in imbibing technology in their operations, have a large branch network all over the country. The second group which consists of the New Generation Private Sector Banks (NGPSBs) and Foreign Banks (FBs) were early adopters of technology in their operations. The issues relating to technology therefore are distinctly different for these two groups of banking organizations as the latter were able to introduce technology in their operations with comparative ease as they started off at a time when excellent technology infrastructure was at their disposal and their operations

were mainly restricted to the urban/metropolitan areas. Therefore, the role of technology in the PSBs, OGPSBs has been more or less that of a facilitator for banking convenience both from the bank and the customers' point of view. With the competition increasing up with the entry of NGPSBs and FBs, the role of IT in the PSBs , OGPSBs also underwent a facelift from that of a facilitator for convenience to that of an extreme necessity for survival.

1.2 EMERGENCE OF IT IN INDIAN BANKING SYSTEM

Computerization was a positive step towards the growth of the banks. With the help of the computers the banking activities could be done faster. Computerization in banking sector dates back to 1963 when Life Insurance Corporations introduced computers for maintenance and processing of insurance policies. The scenario of information technology is extremely dynamic. Information technology brings about efficiency of operations if utilized properly and to remain competitive it is very important to use appropriate technology. There is also a dire need for continuous updating of the IT resources. In other words, there has to be a perfect correlation between the business plan and the technology initiatives. Infact in banking industry, IT is finding its use in five key areas:

a) Convenience in Product Delivery Access
b) Managing Productivity Access
c) Product Design
d) Adapting to Market and Customer Needs and
e) Access to Customer Market

The internet and the IT revolution is entirely changing the way banking business is done. Thus banking industry also has undergone a revolution. Now, banks are depending more and more on technology and are gradually moving towards the age of high tech banking. The introduction of technology has reduced the need for human involvement and the banks can be managed with the help of less manpower. Indian banks have a chequered history. The British legacy left behind a host of large and small privately held banks. The late 1960s saw the nationalization of banks leading to the emergence of public sector banks. The 1990s saw the banking industry embracing technology in a massive way, led

in particular by the New Private Banks and Foreign Banks. Among these technological innovations Internet Banking is a recent phenomenon that has generated a lot of interest in the Indian Banking Industry. Private and Foreign Banks have been the early adopters while the PSU banks are the followers **(G. Goel , T. Nandan & K.A. Upadhyay, 2008).** The table 1.1 shows the percentage of internet users in India which shows that the percentage of population with internet users has been increased from 3.95 percent in 2007 to19.19 percent in 2014.The global rank of India on the basis of country share of world internet users has also improved from 6 in 2007 to 3 in 2014.

Table 1.1: Percentages of Internet Users in India

Year	Internet Users	Population	Percentage of population with Internet users	Country Share of world internet users	Global Rank
2007	45,784,262	1,159,095,250	3.95 %	3.33 %	6
2008	51,450,210	1,174,662,334	4.38 %	3.27 %	6
2009	60,935,069	1,190,138,069	5.12 %	3.45 %	6
2010	90,421,849	1,205,624,648	7.50 %	4.42 %	4
2011	122,970,441	1,221,156,319	10.07 %	5.39 %	3
2012	155,575,944	1,236,686,732	12.58 %	6.18 %	3
2013	213,339,324	1,252,139,596	17.04 %	7.87 %	3
2014	243,198,922	1,267,401,849	19.19 %	8.33 %	3

Source: Internet LiveStats *(www.InternetLiveStats.com)*
Elaboration of data by Internet and Mobile Association of India (IAMAI), International Telecommunication Union (ITU), World Bank, and United Nations Population Division.

Table 1.2: Milestones of IT Implementation in Indian Banking Industry

YEAR	MAJOR INNOVATIONS
1980	Arrival of debit card based payments
1983	Study the scope and feasibility of the computerization and mechanization
1984	Branch automation
1986	Operationalisation of MICR technology, setting up network of ATMs

YEAR	MAJOR INNOVATIONS
1990	Introduction of electronic clearing services (ECS) & credit cards
1991	Transfer of messages by BANKNET
1994	Establishment of an EFT system, optimal usage of SWIFT
1998	Strengthening of banking system, upgrading of technology
1999	Inauguration of INFINET (The Indian Financial Network)
2000	Introduction of Information Technology (IT) Act 2000 & Electronic Fund Transfer (EFT)
2004	Introduction of Real Time Gross Settlement (RTGS)
2005	Introduction of National Electronic Fund Transfer (NEFT) as a replacement of EFT.
2006	Cheque Truncation System (CTS)
2009	Recommendation on Nationwide Electronic Financial Inclusion System by linking no-frills account (NEFIS)

(http://shodhganga.inflibnet.ac.in/bitstream/10603/8668/9/09_chapter%201.pdf)

1.2.1 Reforms in Banking Sector and Technological Changes in India

As per the reports of RBI, the first reform in banking technology began with the use of Advanced Ledger Posting Machines (ALPM) in the 1980s. The RBI advised all the banks to go in for huge computerization at the branch level. There were two options: automate the front office or the back office. Many banks opted for automating the front office in the first phase whereas banks like State Bank of India also concentrated on the back office automation at the branch level.

The second reform of development was in Total Branch Automation (TBA) which came in late 1980s. This automated both the front-end and back-end operations within the same branch. TBA comprised of total automation of a particular branch with its own database.

In the third reform that started after 1990, the New Private Sector Banks entered into the field of automation. These banks opted for different models of having a single centralized database instead of having multiple databases for all their branches. The banks followed up on this move by choosing suitable application software that would support centralised operations.

The fourth reform started with the evolution of the ATM delivery channel. This was the first stage of empowerment of the customer for his own transactions. The second stage was the Suvidha experiment in Bangalore. This showed the power of technology and how

the reach can be increased amazingly at a great pace. Seeing these, all the banks started revamping their retail delivery channels. Their core focus became increasing the number of customers they can service at a lower cost. The main channels for these were internet banking and mobile banking. **(http://shodhganga.inflibnet.ac.in/bitstream/10603/25027/6/chapter-2.pdf).**

Customer convenience has been facilitated with the help of different electronic channels namely ATM, internet banking and mobile banking. These even help the customers to pay their bills online at the click of a button. Faster funds transfer has become possible with the help of electronic funds transfer. The electronic data interchange and cash management service facilities have enabled better funds management for the customer.

Reserve Bank of India has played an important role in implementation of information technology development in banking sector (RBI, Report, 1984, 1989 and 1998). In addition in this context guidelines of RBI and recommendations given by various committees appointed by RBI to work in this area are summarized below:

1. **Dr. C. Rangarajan Committee (1983-84)** had taken up the first step for computerisation and mechanisation in banking industry and looked into modalities of drawing up a phased plan for mechanisation for the banking industry covering period 1985-89. The committee in its report in 1984 recommended introduction of computerisation and mechanisation at branch, regional office / zonal office and head office levels of banks. In 1988 another committee was organised under the chairmanship of Dr. Rangarajan for making plans for computerisation for the next five years from 1990-94 for the banking industry. It identified the purpose of computerisation as improvement in customer service, decision making, housekeeping and profitability **(RBI, Report Committee 1984)**.

2. **W.S. Saraf Committee (1994)**, the Governor, Reserve Bank of India had appointed a committee on technology issues under the chairmanship of W. S. Saraf. The committee looked into technological issues related to the payment system and to make recommendations for widening the use of modern technology

in the banking industry. The Saraf committee recommended setting up institutions for electronic funds transfer system, telecommunication system ie. (BANKNET) and optimum utilization of SWIFT by the banks in India **(www.rbi.com 20-12-2012)**.

3. **Shere Committee (1995*),*** RBI formed a committee under the chairmanship of K. S. Shere, to study all aspects relating to electronic funds transfer and propose appropriate legislation. The Shere committee had recommended framing of RBI (EFT system) regulations under 59 section 58 of the Reserve bank of India Act 1934 (RBI Act.), amendments to the RBI act and to the bankers book evidence act, 1991 as short term measures and enacting of a few new acts such as EFT act, the computer misuse and data protection act etc. as long term measures **(www.bankindia.net 20-12-2012).**

4. **Narasimhan Committee (1998),** In order to examine the various issues related to the technology upgradation in the banking sector, the Reserve Bank of India appointed Narasimhan Committee in September 1998. The committee also suggested implementation of the necessary legislative changes, keeping in the view the recommendations of Shere committee **(RBI, Committee Report, 1998)**. The need for addressing the following issues was also emphasised:

- Encryption on Public Switching Telephone Network (PSTN) lines.
- Admission of electronic files as evidence.
- Treating Electronic Funds Transfers on par with crossed cheques / drafts for purposes of Income Tax etc.
- Electronic record keeping.
- Provide data protection.
- Implementation of digital signatures.
- Clarification on payment finality in case of EFT.

With the advancement in Technology and the Boom in IT Sector Internet became popular. This INTERNET provided both an opportunity and a challenge for various Industries.

1.3 BANKING INDUSTRY-TECHNOLOGICAL INNOVATIONS

The innovative facilities offered by the banks were instrumental in enhancing the clientele base and boosting the business volumes. The increased level of IT awareness, availability of better infrastructure also enabled the banks to venture into innovative delivery channels in the last 4-5 years which were hitherto unheralded in the Indian scenario. Extensive network of ATMs, comprehensive internet banking utilities, tele-banking applications, mobile banking using wireless application protocol (WAP)/short messaging services and utility payment initiatives were implemented by many of the banks. The offerings became more and more customer friendly at the same time being customer centric and customer driven. This has gone a long way in helping the banks to not only retain their clientele in the present day competitive regime from shifting loyalties but also to enhance clientele /business base in efficient cost effective manner.

Benefits of Technology in Banking Sector

1. Getting queries promptly responded due to screen displays.
2. Neatly typed generation of statement of accounts in time.
3. Execution of standing and stop payments instructions in time, regularly.
4. Automatic calculation of interest and its posing in customer's account.
5. Generation of various operational miscellaneous report/statements like ledger sheets, drawing power maintenance, details of over withdrawals etc.
6. Better information system and transfer of funds.

The technology enables the customer banking through telephone from home, workplace or office. Just dial the given number, get information related to the account from the bank:

- At the service 24 hours a day and 7 days a week.
- The customer can give instructions to the bank.
- The facilities and benefits that can be offered are balance enquiry request for statement of account, latest transaction query/forex rate query etc.

The leveraging of technology for customer benefit can be enabled through personal computer. The device requires a computer, a modem and a telephone connection. The customer can get benefited by the services offered such as:

- Balance enquiry
- Latest transaction enquiry
- Stop payment request
- Cheque book request status enquiry
- Deposit rates query
- Forex rate query
- Download account statement
- Request for other services

The Electronic Bill Presentation and Payment Service which enables the bank customers to get their various bills paid without their involvement. The features are:

- Customers can give standing instructions to the bank to pay the bills with an individual upper limit for each of the bill, and as long as the customer's bill is within the limit, it would be without customer's intervention.
- Customers who have access to Internet can avail of the service through the online payment option.
- Customers can make payment to electricity, telephone, mobile, insurance, gas, credit cards, and depository etc.

The technology initiatives for benefits of customers developed in Electronic mode are:

- Introduction of MICR based cheque clearing which has resulted in reduced time for realisation of cheques.
- Implementation of safe, secure and quick modes of electronic fund both in corporate and retail segments, in the form of Electronic Clearing and Electronic Funds Transfer (EFT), which cover about banks spread across 200 cities and towns of the country.
- The introduction of Negotiated Dealing System for screen based transactions and government securities by RBI regulated institutions.
- The introductions of the Real Time Gross Settlement for settlement of inter bank fund transfers and transaction-by-transaction is a significant achievement. This

has resulted in risk free credit and mode of settlement. The RTGS system witnesses inter bank transactions amounting to an average of Rs. 5,000 cr. on a normal working day in Mumbai.

All these have been aimed at exploiting the benefits of IT to provide information channel to banks that would enable them in turn to offer better services to customers. It may also be observed that the recent past has witnessed a new concept of anywhere banking and anytime banking adopted by banks. These are offshoots of technology implementation by banks. With the introduction of ATM we can even go to any networked branch or networked ATMs and carry out the transactions. With E-banking, many activities can be carried out from within the home. Such innovations have a positive impact on customer service and benefit that is derived by the banks.

Banks replaced their traditional delivery channels like branch banking with the latest e-delivery channels like ATMs, phone banking, internet banking and mobile banking. Banks started using these channels in order to fight stiff competition in the market and also to retain their customers.

1.3.1 Customer Centric Automated Services

a. ATMs

One of the main responsibilities of the banks' includes the safe custody of their customer's money. The traditional systems had a drawback where the customer could make certain transactions only during the bank timings. Automated Teller Machines or ATMs allowed banks to dispense cash throughout 24 hrs in a day. The initial ATMs served only as a cash dispenser but the latest generation ATMs allow customers to do many branch banking functionalities like cash withdrawal, mini statement, balance enquiry etc. The entry of foreign and private sector banks such as HDFC Bank , ICICI Bank, Citibank , Standard Chartered Bank etc. led to the growth of ATMs not with their own networks but their partner bank's network also whom they have got mutual understanding for sharing ATMs. By this, customers can utilize the services of ATMs of other banks where they have no account.

Table 1.3: Bank Group Wise Distribution of Automated Teller Machines (ATMs)

Groups	Number of ATMs									
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Nationalized Banks	9888	13355	15938	19702	24836	31050	37061	59296	71689	80461
SBI and its associates	6441	8433	11339	20978	24651	27143	32591	51128	54122	58688
Private Sector Banks	9799	11967	15320	18465	23651	36079	43101	48467	51490	55581
Foreign Sector Banks	960	1034	1054	1026	1367	1414	1261	1164	1097	1060
Total	27088	34789	43651	60171	74505	95686	114014	160055	178398	195790
Trend Percentages (Taking 2006-07 as a base year)	100.00	128.42	161.14	222.13	275.04	353.24	420.90	590.87	658.58	722.79

Source: RBI Bulletin, Trend and Progress Various Issues (Including IDBI Bank

b. Phone Banking

In case of phone banking most of the banking transactions (except cash withdrawal or deposits) could be carried out by a customer using a telephone. The customer needs to dial a banking number provided by the bank after that the customer could do banking through an interactive voice response system provided by the bank. As a security measure the customer needs to punch in a secret code called tele banking PIN(TPIN).Various transactions like account balance information, electronic bill payments etc. can be done through phone banking but still the customer acceptance of phone banking channel has been the lowest among the new delivery channels. The main reason could be lack of options for withdrawal of cash.

c. Mobile Banking

All over the world the mobile phones have become one of the most convenient means of carrying out banking transactions. M- Banking customers could conduct banking transactions using Short Messaging Service (SMS) or mobile internet. Mobile banking provides the following services to a customer: account balance information, list of latest transactions, electronic bill payments, micropayments, mobile recharge, cheque book request, cheque status, fund transfer between customer's accounts etc. The provision of

real time updates of critical banking transactions is the main benefit of mobile banking. The customer immediately gets a mobile alert after a cash withdrawal at an ATM. But talking about India even though the number of people using the mobile phone is more but very few people use mobile even for simple banking queries. This is due to low level of awareness, frauds and security problems. However various banks have entered into strategic tie-ups with mobile companies so that the customers can avail the various services.

Table 1.4: Mobile Banking Volume of Transactions (Million) and Value of Transactions in Money (Rupees Billion)

Mobile Banking Volume of Transactions				
Year	**Total volume of Transactions (Million)**	**Percentage Change**	**Value of Transactions in Money (Rupees Billion)**	**Percentage Change**
May 2009-10	6.85	-----	0.0062	------
2010-11	1.43	- 79.12	0.0011	- 82.25
2011-12	25.56	1,687.41	18.20	16,54,445.45
2012-13	53.30	108.52	59.90	229.12
2013-14	94.71	77.69	224.18	274.25
2014-15	172.01	81.61	1,035.60	361.95
2015-16	295.5208	71.80	2,888.827	178.95

(Source: Database on Indian economy, www. http://dbie.rbi.org.in/ RBI, quarterly Report on banks MOF Database, Data Compiled from RBI Trend and Progress Report, annual reports of RBI, Operations and Performance of Commercial Banks various Issues) Statistics on Mobile Banking Report Available from May 2009) Up to Jan 2016.

d. Credit/Debit Cards

While the usage of cards by customers of banks in India has been in vogue since the mid 1980s it is only since the early 1990s that the market has witnessed a quantum jump. Almost all the categories of banks issue debit / credit cards. It is important to mention here that the debit cards are more popular than the credit cards because the money drawn

from the ATMs or used at merchants' outlets is limited to the balance held in their account. On the other hand credit cards are issued on case to case basis based on the credit worthiness, age, job, annual income of the account holders etc.

Table 1.5: Total Volume of Transaction in (Million) and Value of Transaction in (Rupees Billion) by Debit Cards

Total Volume of Transaction in (Million) and Value of Transaction in (Rupees Billion) by Debit Cards				
Year	**Volume (Million) of Transactions**	**Percentage Change**	**Value (Rupees Billion) of transactions**	**Percentage Change**
2004-05	41.53	-----	53.61	-----
2005-06	45.69	10.01	58.97	9.99
2006-07	182.74	299.95	295.74	401.50
2007-08	155.49	-14.91	240.80	-18.57
2008-09	127.65	-17.90	185.47	-22.97
2009-10	170.17	33.30	264.18	42.43
2010-11	237.06	39.30	386.91	46.45
2011-12	5,409.45	2,181.89	14,532.04	4,930.16
2012-13	5,775.25	6.76	17,426.39	19.91
2013-14	6,707.10	16.13	20,602.86	18.22
2014-15	7,804.57	16.36	23,492.64	14.30
2015-16	9,246.16	18.47	26,949.28	14.71

Source: Database on Indian economy, www. http://dbie.rbi.org.in/ RBI, quarterly Report on banks MOF Database, Data Compiled from RBI Trend and Progress Report, annual reports of RBI, Operations and Performance of Commercial Banks various Issues) (including IDBI Bank)

Table 1.6: Total Volume (Million) of Transactions and Value (Rupees Billion) of Transactions through Credit Cards

Transactions through Credit Cards				
Year	**Volume (Million) of Transactions**	**Percentage Change**	**Value (Rupees Billion) of transactions**	**Percentage Change**
2004-05	129.48	------	256.88	------
2005-06	156.09	20.55	338.86	31.91
2006-07	169.55	8.62	413.62	22.06
2007-08	228.21	34.59	579.85	40.18
2008-09	259.63	13.76	653.54	12.70
2009-10	234.25	-9.77	618.23	- 5.40
2010-11	265.16	13.19	755.16	22.14
2011-12	322.16	21.49	978.72	29.60
2012-13	399.23	23.92	1,244.27	27.13
2013-14	512.03	28.25	1,556.72	25.11
2014-15	619.41	20.97	1,922.62	23.50
2015-16	791.66	27.80	2,436.83	26.74

Source: Database on Indian economy, www. http://dbie.rbi.org.in/ RBI, quarterly Report on banks MOF Database, Data Compiled from RBI Trend and Progress Report, annual reports of RBI, Operations and Performance of Commercial Banks various Issues).

e. Internet Banking

In general, Internet banking refers to the use of internet as a delivery channel for the banking services, including traditional services, such as opening an account or transferring funds among different accounts, as well as new banking services, such as electronic bill presentment and payment, which allow the customers to pay and receive the bills on a bank's website. Internet banking provides convenience as banking

transactions and other related activities can be performed at the comfort of customers' home or office. Thus it eliminates the inconvenience associated with driving to the bank, cost of petrol and parking ticket **(M.N. Khalil, J. Sutanonpaiboon & N. Hamimah, 2010).** In India, slowly but steadily, the Indian customer is moving towards internet banking. A number of banks have either adopted internet banking or are on the threshold of adopting it. The Indian banks started internet banking initially with simple functions such as getting information about interest rates, checking account balances and computing loan eligibility. Then the services were extended to online bill payment, transfer of funds between accounts and cash management services for corporate. The banks are using internet banking technology to meet the ever-increasing competition and increasing productivity and profitability. It has also emerged as a wonderful resource for improving the efficiency of operations. Also it emphasized on reduction of cost by replacing paper based methods with automated processes**. (P. Malhotra & B.Singh, 2009)**

1.4 INTERNET BANKING WEBSITES: SERVICES, IMPORTANCE AND ELEMENTS

Internet Banking has started gaining recognition as people have started using various websites of the banks to avail the internet banking services. These services are just a click away. To collect information related to internet banking services of various banks, websites of banks were surfed and various features were identified which seemed to be important for secure, informative and user friendly sites. The websites are very important for internet banking services. Certain characteristic features about these websites are:-

1. The websites are attractive and logically arranged. To some extent the websites of private and foreign sector banks are more appealing in comparison to public sector banks.
2. All the important services like internet banking, mobile banking are available on the home page itself.
3. The user can just click on the option and can login to his account after a maximum of two to three steps.

4. The demos of internet banking, fund transfer, and mobile banking is available online so these facilitate the user and help him in achieving his objectives.
5. Due consideration has been given to security issues by these website. Most of the banks have made the use of one time passwords mandatory.
6. A link known as 'Customer Care' is available for all sorts of customer enquiries.

The websites of these banks provide the following services to the users. These have been highlighted in the table below:

Table 1.7: Services Provided to the Users by Various Banks' Websites

Balance enquiry	Receive alerts	Cheque status inquiry
Funds transfer	Monthly statement by e-mail	TDS enquiry
Third-party funds transfer	Requests/standing orders/instructions	One view account
Bills payment	Deposit applications	Charity online
Account opening application	Credit card operations/payments	Online tax payment
Insurance	Interest rates updates	Online ticket booking
Demat holdings	Foreign exchange rates updates	Customer correspondence
Brokerage	Trading online	Change password and user profile
Investments	Online shopping	Demonstration of I-banking
Loan applications	Market watch	Corporate Internet banking

Source: Compiled after studying various websites of various banks

The websites are a storehouse of all the above mentioned services. Thus the websites need to be user friendly so that it is convenient for the user to interact with the site and do internet banking. Thus internet banking has become a 'need to have rather than a nice to have service.'

For internet banking one needs a computer, PDA or cell phone with active internet connection. Before using internet banking one needs to activate internet banking facility with his/ her bank. Bank provides a unique user ID and password for its customers to log in into the bank website for conducting financial transactions using internet banking. For

any transaction, one should have an active bank account, appropriate bank balance for transactions, bank account number, customer's user ID, debit/ credit card number, and internet banking PIN number along with access to the internet**.(http://www.internetbanking.in as accessed on 12th Oct, 2011).**

Banks have designed their websites in a very user friendly manner for internet banking facilities. Most of the banking interfaces are easily viewable and instructions are provided at every step so that people can carry out any transaction almost effortlessly. In case a person gets stuck in any transaction due to internet failure, he or she can take assistance from online help available on the website. Phone banking has a feature which permits the customer to call at bank's toll free number and get the required assistance. To avail the phone banking facility customers are provided with phone banking PIN along with their ATM PIN and net banking PIN **(http://www.internetbanking.in as accessed on 12th Oct, 2011).**

1.4.1 Important Elements of Websites

Before we think of designing a website it is important to understand the objective of website design. The website should try to satisfy the needs of the customer and should ensure repeat visits from the customer on the website. An interactive and content full website creates added value and highly motivates customer repeated visits. A more usable website can attract and retain customers in the long run thereby increasing revenues, reducing customer support costs and increasing profits **(J. Mielson, G.J. Udo, & G.P. Marquis, 2001).** The increasing popularity of the Internet has created great challenges for companies in various business sectors to promote and sell their products and services using this new distribution channel. One very responsive business sector to this change is the banking sector. As the number of banks providing online services is increasing day by day; therefore the banks need to focus more and more on the design of the websites.

In the network economy, the website is a firm's primary interface to the customer **(J. Nielsen, 2000).** Web design needs to cater to the general user that has limited experience with online activities. A website cannot be successful if it only targets the advanced web users. Website has to be such which caters to the needs of all the users. It should even be

able to help a first time user. Design flaws and non-standard interaction sequences lead to lost customers and sales **(J. Nielsen & H. Loranger, 2006).**

In order to gain a deep insight a table has been compiled which depicts various elements of an effective website as suggested by various experts dealing in website design.

Table 1.8 : Various Elements of An Effective Website

	J. Paul Rutter 2004	**Selene M.Bowlby 2008**	**M.N. Patrick 2011**	**J. M. Donald 2011**	**Jessica Meher 2012**	**A. K. Chatterjee 2014**	**Carrie Cousins 2013**	**D. Perk 2014**
1	Background	Good Visual Designs	Links	Secure sign in	Headline& sub headline	Content	Space	Business Description
2	Color Choices	Thoughtful User Interface	Forms	Online statements	Primary calls to action	Overall look	Simple Navigation on About Us	Well Optimized Web Address
3	Fonts	Navigation (Primary & Repeat)	Button Behaviour	Transfers	Features (products & services)	Speed	Contact Information	Easy Navigational site map
4	Compatibility	Contact Information	Form Validation	Bill pay	Benefits	Graphics and layout	Call To Action Or Sign Up	Customer Testimonials
5	Graphics	Search	Status Messages, Errors ' Warnings'	Ebill	Customer proofs	Text readability	Search Options	Business contact information
6	Sounds	Sign Up /Subscribe	Extending The background on Larger Screen	Paperless statements	Success indicators	Structure each page	Informational Footer	Quality Content
7	Contact Information	Site Map	Base HTML Elements	Person to person statement	Navigation	Fonts	Style For Buttons	
8	Links (CONTENT)	Separate Design From Content	Website E.Mails	Mobile	Supporting images	Navigation	Great Images	
9	Spelling & Grammar	Cross Browser Compatibility	Page Stretching	Online check imaging	Content offered	Privacy statement & testimonials	Web Fonts	
10	Content & Content Accuracy	Statistics / Tracking And Analytics	Animations, Pop Ups,	Remote deposit capture	Resources	Words		
11	Layout & Navigation		Tool Tips , Transitions Etc	Personal financial management	Secondary calls to action			
12	Navigation			Banking & Account alerts				

Source: Compiled with the help of various articles written by the above mentioned experts

1.4.2 Internet Banking Websites

Recently there has been a shift in the banking industry. The industry is rapidly moving towards a click and bricks strategy that emphasize on an online supplement to the

conventional banking services **(F.J. Miranda, R. Cortes & C. Barriuso, 2006).** Internet Banking and Internet Banks there are basically two different strategies: First an existing bank with physical offices can establish a website and offer internet banking to its customer as an additional delivery channel. A second alternative is to establish an internet only bank or virtual bank, almost without physical offices **(F.J. Miranda, R. Cortes & C. Barriuso , 2006).** For the banks to go in for internet banking, the websites play a very important role.

E. Diniz (1998) reported that banks use the web to achieve main objectives like to market information, to deliver banking products and services and also as a tool in order to improve customer relationship. According to **E. Donlan (1999)**, although delivery is highly important in fulfilling customer needs, perceptions and expectations also need to be managed and the website plays a main role in this. The design of a good website should be based on a common ground between the site's goals and the customer's goals; this reveals ideal customer experience **(G. Creative, 2000)**. According to **C. Jayawardhena (2004)** today's context of e-banking, is one whereby a customer uses the internet to connect to the bank's computer systems and there is no human contact element as found in traditional banking services. In this process a very large number of transactions between the bank and the customer are carried out by digital means. Banks web sites can contain various features including the product information, contact information to enable customer feedback, general company information etc. **H**. **Borman & S.R. Solms (1993)** were of the opinion that a website is unique in its hypermedia attributes. Hypermedia integrates multimedia content with hypertext connection. Multimedia content refers to information while hypertext connection appertains to navigation Basic required information should be available on the home page and related information should be easily traceable **(F.J. Miranda, R. Cortes and C. Barriuso, 2006).**

In the past many banks were of the opinion that designing a website is a technical job and it can be handled best by the engineers and the architects. Recent research has proven that the design of the website is very important in attracting the customer and improving the overall sales. Now, important website decisions are more likely to be made in the boardroom than the cubicle **(J**. **Brown, 2003).** User satisfaction depends on website

features **(W.J. Doll &G. Tozkzadeh, 1988)** and hence it is important to analyse web features of banking services delivered over the internet. **C. Jayawardhena & P.Foley (2002)** suggested that the website features that should be analysed are: speed of download, content, design, interactivity, navigation and security features. **J. Cox & B.G. Dale (2001)** examined factors that can contribute to delivering good service quality through a website are ease of use, customer confidence, online resources and relationship services. According **to K. Waite & T. Harrison (2004)** the information provided on the banking website may help provide needed knowledge and thus help to motivate adoption of internet banking.

Good websites are the need of today's banking environment. The purpose of the website should be to indicate what it is offering to the customer. It should be crystal clear as to whether the site is only providing information or is also providing a platform to perform various online transactions. The website should be designed in a fashion that it is easier for the customer to trace information without any effort. Moreover clear instructions should be available on the home page of the banks' websites in order to avoid any kind of confusion for the customers. If we talk about the websites of various banks today they even have links for demos which demonstrate to the user as to how he can perform internet banking or mobile banking. Effective communication is very critical for internet banking transactions. If the users cannot understand the bank's homepage in about 15 seconds, they abandon the site and turn to other sites that are more usable **(J. Nielsen, R. Molich, C. Snyder & S. Farrell, 2001)**.

In today's time the site of the bank has to play the same role which a physical bank was actually playing. In a physical bank if the customer has any problem he/ she can easily approach a person for any kind of help but in case of that website where the customer is not able to find a solution to his problem he / she will immediately switch over to some other website where he has an internet banking account.

Table 1.9: Important Website Elements for Internet Banking

SPEED OF THE WEBSITE	CON-TENT	DESIGN	NAVI-GATION	INTER-ACTIVITY	SECURITY	EASY USE OF THE SITE	SUPPORT TO THE USER	REGI-STRATION
Time required for downloadin	Relevant Content	Appealing Website	Easy login	It should be easy for the customer to	Use of strong passwords	Easy to find the site	Availability of feedback forms	Easy registration

SPEED OF THE WEBSITE	CON-TENT	DESIGN	NAVI-GATION	INTER-ACTIVITY	SECURITY	EASY USE OF THE SITE	SUPPORT TO THE USER	REGI-STRATION
g text and animation		Design		interact				process
Time required to complete a transaction	Sufficient information.	User friendly layout of the website	Appealing homepage	Banking tools should be customized	Use of one time passwords also recommender	Easy to return to the main page	Availability of banks phone numbers and fax numbers	E.mail request for receiving offers
	Easy to read fonts with correct spellings.	Availability of language alternative	All hyperlinks should work well	Availability of loan calculators	Automatic log user off after inactivity	Easy to use the search engine	Service availability 24x7	Easy exit
	Availability of printable versions of pages.	Consistent use of color, color combinations and backgrounds	Site map should be available	Availability of exchange rate convertors	Availability of bank site firewall		Help facility available	Easy modification of user's profile
	Easily understandable menus	Effective graphics	Search facility should be available					
	Availability of table of contents		No underconstruction pages					
	Availability of demos and Effective advertisements							
	Availability of privacy information							

Source: Compiled with the help of various research and conceptual papers

In order to determine how well a bank's website is performing, there are certain factors that need to be considered:

1. Number of visitors visiting the website.
2. Number of times a visitor visits one particular page.
3. Total time a particular visitor spends on the website.

When a customer opens an account with a bank, he/she receives a welcome kit from the bank. This kit contains all the important documents including confidential information required by the customer including document with account number, Debit cum ATM card, ATM PIN, customer's user ID, online banking password, phone banking password, chequebook etc. Customer should ensure that he has received all the confidential

information otherwise he should report to the bank. Customer has to give his consent to the concerned bank that he wants to avail the internet banking facility. Banks maintain good security standards in relation to password authentication but generally the banks suggest the customers to keep their password secret and change it periodically. (http://www.internetbanking.in as accessed on 12th Oct, 2011).

According to a study the six primary drivers of internet banking includes, in order of primacy are**: (A.K. Mishra, 2011)**

a) Improve customer access
b) Facilitate the offering of more services
c) Increase customer loyalty
d) Attract new customers
e) Provide services offered by competitors
f) Reduce customer attrition

Banks providing internet banking services have been entering into agreements with their customers setting out the terms and conditions of the services. The terms and conditions include information on the access through user-id and secret password, minimum balance and charges, authority to the bank for carrying out transactions performed through the service, liability of the user and the bank, disclosure of personal information for statistical analysis and credit scoring also, non-transferability of the facility, notices and termination, etc. Users of internet banking services are required to fill up the application forms online and send a copy of the same by mail or fax to the bank. A contractual agreement is entered into by the customer with the bank for using the internet banking services. In this way, personal data in the applications forms is being held by the bank providing the service.

Not all banking products and customers adapt well to the internet channel. Transferring funds, paying bills and applying for credit cards do not require personal contact or a large physical space where as there are certain complex transactions like closing on a home mortgage which typically require a secure physical space and person to person communication. The mix of delivery channels a bank chooses has consequences for its expenses, the convenience of its customers and the quality of the products and services it delivers.

1.5 THE BENEFITS OF INTERNET BANKING IN DELHI AND NATIONAL CAPITAL REGION

Technology brought about a revolutionary change in the various industries. Banking is one such industry affected by the technological innovations. Traditional Banking has been replaced by Electronic Banking. Electronic Banking includes ATMs, internet banking, mobile banking, debit cards and credit cards. These technological innovations help in increasing the productivity and revenue of these industries. The table below highlights a comparison between the bank branch charges and net banking charges in relation to various services provide by the banks.

Table 1.10: Comparison of Cost between Branch Banking and Internet Banking

S. No.	Services provided by the banks	Bank Branch Charges (Rs.)	Net Banking Charges(Rs.)
1.	Duplicate account statement	100	0-50
2.	Issuance of demand draft	50-75	30
3.	Stop payment of cheque	50-100	Nil
4.	Debit card PIN regeneration	25	Nil
5.	Reissue of internet ID/password	50	Nil

Source: Financial Service and Technology, Economic Times, Newspaper Friday, 31st August 2012.

The data in the above table reflects that for all the services the netbanking charges are less in comparison to bank branch charges.

Internet banking refers to the banking services provided by the banks over the internet. Some of these services include paying of bills, funds transfer, viewing account statement, etc. Banks have started delivering their latest products and services over the internet. Over a period of time internet banking is becoming very popular day by day. Banking is now no more limited to branches and its operations can be performed any where any time.

(a) A bank customer can perform some non-transactional tasks through internet banking, which includes:

- Viewing account balances
- Viewing recent transactions
- Inquiring about the cheque status
- Downloading bank statements
- Downloading applications
- Inquiring about fixed deposits.
- Ordering cheque books and many more

(b) A bank customer can perform various transactional tasks through internet banking, which majorly includes:

- Funds transfers between the customer's linked accounts
- Fund transfer to a third party
- Paying utility bills
- Shopping online
- Paying insurance premium and many more
- With the help of internet banking one can get your inter city cheque credited in account within seconds. One does not have to wait for clearance of out station cheques for a month.

Some of the distinctive features of internet-banking are (www.rbidocs.rbi.org.in):

1. Internet banking helps in reaching the customers of different countries across the globe. Hence geography is no longer a barrier.
2. It has added new dimension to different kinds of risks traditionally associated with banking, heightening some of them and throwing new risk control challenges.
3. Security of banking transactions, customers' privacy have become issues of importance with internet banking. The control is now not in one single hand since internet is a public domain.
4. Internet banking is an efficient and cost effective channel of banking. It only provides returns to those banks who respond timely to this technology.

Online consumer behavior plays an important role in the adoption of internet banking.

H. Li et al. (1999) found that knowledge of the internet channel, convenience, experience, perceived accessibility and utility are key influences on online consumer behavior. Convenience plays an important role as it is convenient for the consumer to access variety of options on the net. For example, in a recent survey, convenience was found the main reason why US consumers selected the internet channel for news services **(Pew, 2003).** Time savings appears an important aspect of the convenience of online services **(S. Bellman et al., 1999; B.G.C. Dellaert and B.E. Kahn, 1999).** Finally, transaction cost economics theory suggests people will choose the cheaper method to transact when choosing between electronic or traditional services **(J.S. Huang, 2002).**

A. Benefits of Internet Banking

Internet Banking has several benefits over traditional one which makes banking simple and convenient. It allows one to conduct various transactions using the bank's website and offers several advantages. Over a period of time Internet Banking has become very popular in Delhi and areas of Noida, Gurgaon and Faridabad **(AnujAgarwal, 2015)**. Some of the benefits of internet banking include:

- One does not have to keep receipts of all the bills as the transactions can be viewed easily online.
- It is available all the time, i.e. 24x7.
- Commonly known as Anywhere Anytime facility.
- It is fast and efficient way of banking.
- Funds get transferred from one account to the other very quickly.
- Several accounts can be managed and monitored easily with the help of internet banking.
- It also acts as a great medium for the banks to endorse their products and services. The services include loans, investment options, and many others.

According to **J. Chavan (2013), I. Koskosas (2011)** other benefits of internet banking include

1. **More efficient rates**

The lack of significant infrastructure and overhead costs allow direct banks to pay higher interest rates on savings and charge lower mortgage and loan rates. In addition, some

accounts can be opened with no minimum deposits and carry no minimum balance or service fees.

2. 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.

3. **Mobility**

Internet banking also includes mobile capabilities. New applications are continually being created to expand and improve this capability or smart-phones and other mobile devices. The feature of mobile banking is also becoming popular day by day.

4. **Ease of use**

Online accounts are easy to set up and require no more information than a traditional bank account. Many offer the option of inputting the customer's data online or downloading the forms and mailing them in. If the customer runs into a problem, he has the option of calling or e-mailing the bank directly. The option of customer care is available on the websites of the banks.

5. **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.

Internet banking is not only important for the customers, it is equally important for the bankers as well. For the bankers, this system of internet banking is cost-effective, as it has considerably reduced the administrative costs and paperwork related to banking transactions. Moreover, the banks can look after the needs of several customers at the same time. As a result the profit margins of banks have increased and their operating

costs have reduced. Also with the help of internet banking one can collect important information regarding banking policies, rates of interest offered on different types of bank accounts, and the formalities required for executing various transactions. As a result, you can compare the services provided by different banks, and opt for the one that satisfies your individual needs and requirements.

B. Benefits to Customers

1. Anytime Anywhere banking

Personal accounts can be accessed at any time and from anywhere, regardless of a bank's opening hours. One can transfer money from the comfort of one's own home or anywhere from where one has an access to a computer and the internet. One does not have to drive or walk into local branch, fill out transfer or withdrawal forms and line up in a long queue. There's also the added incentive of no queues.

2. 24 x 7 hour banking

The internet banking facility is available throughout the year and all 24 hrs in a day. One does not have to keep a watch on the time to do any transaction. The transactions can be done according to one's own convenience.

3. Reduction in number of visits to the bank

Since internet banking can be done from any where one has an access to the internet, thus the number of visits to the bank are reduced. One does not have to drive or walk into local branch, fill out transfer or withdrawal forms and line up in a long queue.

4. A good number of facilities

One can access one's account from anywhere in order to check the account details such as how much money is there in the account, any upcoming bills, credit card balances, and scheduled transfers. Paying bills and credit cards is another advantage available just with the help of some mouse clicks.

5. Mobility

Internet banking also includes various mobile capabilities.

6. Better Funds Management

It is possible for the customers to download the details of their accounts and the transactions as and when required. This helps them to manage their funds in an effective way.

7. Better interest rates

Banks are able to pay better interest rates on savings of the customers due to lack of infrastructural and overhead cost. Some accounts of the customers can be opened with no minimum deposits or zero balance.

8. Environment friendly

Another advantage of internet banking is that it is environment friendly. Internet banking transactions are paperless; it reduces the travelling and is pollution free.

C. Benefits to Banking Sector

In addition to banking customers, growth of e-banking infrastructure in general and online banking in particular has proved to be extremely beneficial to banks and overall bank organizations.

1. Provides competitive advantage

Banks using internet banking facility today have a competitive advantage over the ones not using this facility. Internet banking is considered as one of the competitive tools being used by the banks today.

2. Increases the customer base

With the internet banking facility the banks can cater to the needs of a larger segment of the customers since geography is not a barrier. The customer can be served even if he is at a distant location with the help of internet banking.

3. Increases customer loyalty

With internet banking the customer does not have to visit a bank in order to carry out the transactions. Any transaction can be done at any time which was not being offered earlier by the physical branches. As a result it is leading towards a good relationship between the banks and the customers thus increasing the customer loyalty towards the banks.

4. Reduces the transaction cost

Electronic processing of banking transactions reduces the cost per transaction as it reduces the costs incurred in arranging the resources required to carry out physical transactions. No cost is incurred as far as automated fund transfer is concerned.

Some other benefits are:

a) The concept of online banking has immensely helped the banks in putting a tab over their specific overheads and operating cost.

b) The rise of internet banking has made the banks more competitive.

c) Internet banking ensures transparency of transactions.

d) It has considerably reduced the paper documentation, since majority of records under internet banking set up are maintained electronically.

e) The reach and delivery capabilities of internet-enabled banks, proves to be significantly better than the network of physical bank branches.

1.6 DRAWBACKS OF INTERNET BANKING

1. ***Security is a major issue***

   A major drawback for internet banking transactions is security. Since all information gets encrypted, the possibility of an account getting hacked is low or minimal, but sometimes it does happen. Internet hackers can hack into one's bank account and transfer money out. Thus internet banking poses a much bigger risk in comparison to traditional banking. A breach of security could result in direct financial loss to the bank. In addition to external attacks banks are exposed to security risk from internal sources e.g. employee fraud. Employees being familiar with different systems and their weaknesses become potential security threats in a

loosely controlled environment. They can manage to acquire the authentication data in order to access the customer accounts causing losses to the bank.

2. ***Computer literacy is required***

   One needs to be a computer literate in order to avail the benefits of internet banking. The knowledge of internet and online operations is a must. This might prove to be a hindrance for older people and house wives.

3. ***Lacks personalized touch***

   Another drawback of internet banking is that face to face interaction is not there. Sometimes a face to face meeting is required in order to complete certain complex transactions and resolve various address related issues. The personalized touch is totally missing .For a customer, the banker is just a screen and not someone with a pleasing smile on his or her face.

4. ***Technical problems*** like server not found, network traffic etc. can also affect the utility of internet banking.

5. ***Bank relationship***

   In case of traditional banking there was a better customer-bank relationship. A bank manager could establish better relationships with the customers and pursue them for various banking initiatives. This is missing in case of internet banking.

But one thing that is important to remember is that mere deployment of web technologies as a new platform to serve the needs of customers by the banking organizations will not lead to the path of success unless and until the services delivered over the internet are enriched with high quality. Service quality has been identified as one of the important contributing factors to the ability of an organization to attract and retain customers in the electronic market place **(F.F. Reichheld & P. Schefter, 2000; J. Santos , 2003; V.Shankar et al., 2003).**

1.7 CONCLUSION

This chapter summarizes the various aspects of information technology and banking sector. The emergence of IT in Indian banking sector has brought revolutionary changes for the consumers as well as for the banking industry. The Reserve Bank of India has also taken various steps to reform the Indian Banking Sector so that the banks can compete in the era of ever changing technology. The banking sector has developed automated services such as ATMs, debit cards, credit cards, phone banking, mobile banking and internet banking to provide immediate, accurate and convenient services to the consumers. The factors which affect the consumers to adopt internet banking includes 'Convenience', 'Accuracy', 'Security', 'Promptness' and 'Efficient Transaction Management' whereas 'Cost Effectiveness', 'Multiple Delivery Channels', 'Secured Transactions', 'International Competitiveness', 'World Class Facilities to their Consumers' are the important reasons which motivate Indian Banks to adopt internet banking.

CHAPTER-II

REVIEW OF LITERATURE

Strong banking system is a must for a healthy and successful economy. The Indian banking system has made noteworthy achievements over the past decades. Having started with just banking at the branches, today the customer has become hi tech and has started making the use of various electronic channels in banks. In banking sector, automated services are revolutionizing the way business is conducted. Electronic banking has replaced conventional banking system and almost all banks have adopted a click strategy. In recent past, banking sector in India has been working towards providing improved services to its customers by adopting new technologies and introducing faster and improved payment systems. The modern age banking customers have made a friend i.e internet which has today become a catalyst in the number of jobs of the customer. Today the customer has started paying their bills, school fees of their children, trade on the stock exchange and a number of other things with the help of internet. The use of internet in banking gave rise to internet banking.

The research work carried out in the past provides a foundation for the new researches in every field. The review of earlier researches help and support in finding the gaps in the vast area of knowledge and provides insight to make further researches on the selected objectives, which has not been studied by the researchers. So, it is of utmost importance for the researcher to read and understand the details of the work available in the form of research articles, books, journals etc. In the current chapter an attempt has been made to study the existing literature related to banking, e-banking and internet banking.

2.1 NEED AND GROWTH OF TECHNOLOGICAL DEVELOPMENTS IN BANKING

Banks play a vital role in the economic growth and development of the country like India and are the main stimulus of the economic progress. Due to gradual upgradation of technology and number of re-engineering processes attempted by both foreign and private sector banks, public sector banks in India have started facing new challenges. The

need to become highly customer focused has forced the slow-moving public sector banks to adopt a fast track approach **B.Revathy (2012).** The retail banking sector is characterized by three basic features:

1. Multiple products like credit cards, debit cards, deposits, insurance, investments and securities;
2. Multiple channels of distribution like branches, phone banking, SMS banking, call centres, internet and kiosks;
3. Multiple customer groups like corporate, consumer, small business etc.

The objective of retail banking is to provide customers a full range of financial products, banking services and give the customers a one-stop window for all their banking requirements**.** Retail banking segment is continuously undergoing innovations, product re-engineering, adjustments and alignments.

P. Natarajan & N.S. Simon (2015) in their study attempted to provide an insight into the impact of technology on the performance of banks. In their study they compared the performance of the banks before and after the implementation of information technology. Information technology facilitates varied channels of distribution and hence increases competition in order to raise the efficiency. In order to respond to this increasing competition banks specialize, diversify and customize their activities. They concluded that due to technology acting as leveler nationalized banks have been able to regain that shares which they had lost to the private banks.

S. Khurana (2014) in her study concluded that the expectations and the perceptions of the customers towards the service quality dimensions of tangibility, competency and empathy have a greater impact on the level of customer satisfaction in case of banking industry. Also there is a positive relationship between customer satisfaction and customer perception and also between customer satisfaction and customer expectations.

N. Virk & P.M. Kaur (2012) suggested that banks now days are emphasizing more and more on customer satisfaction. Banks have realized that the cost of attracting new customers is much more than retaining existing customers. The customer of today has become very demanding. He is quality conscious and wants the best of services in minimum possible time. So customers prefer technology oriented services. Their study attempted to make a comparative analysis of level of customer satisfaction towards

services provided by public and private sector banks. The study was conducted in Chandigarh city with a sample of 160 customers and concluded that private sector banks were more preferred in comparison to public sector banks by majority of the customers as they emphasized more upon relationship building with their clients and were better equipped with technological facilities.

S. Agrawal & A. Jain (2012) in their study which was purely based on secondary database highlighted the benefits and challenges of innovative banking trends. They revealed that banking sector in India has undergone significant transformation in the 2006-2011. A conductive macro-economic environment, fall in interest rates, fast spreading technological innovations and huge potential in the retail segment promise well for Indian banks.

B.S. Sawant (2011) conducted a study on technological development in Indian banking sector. The research study was adopted to identify the technological development in banks. Study revealed that use of technology in expanding banking is one of the key focus areas of banks. The banks in India are using information technology (IT) not only to improve their own internal processes but also to increase facilities and services to their customers. Efficient use of technology has facilitated accurate and timely management of the increased transaction volume of banks that comes with large customer base. By designing and offering simple, safe and secure technology, banks reach at doorstep of customer, thus increasing the customer satisfaction.

N.Z. Hosein (2009) in his study concluded that with the rising importance of the internet for commerce, internet websites are playing a more important role in most companies' business plans. The achievements of internet banking are determined not only by banks support, but also by customers' acceptance of it. Internet banking has gained importance as banks move toward implementing internet banking as part of their overall strategy. The benefit of internet banking is to generate additional revenue, improve customer service, extend marketing, and increase cost savings. In the service environment, consumers are involved in the assembly and consumption of services due to the inseparability dimension of services. In the IB environment, the inference of inseparability is complicated due to the lack of social presence; i.e., the sellers of the service are not available physically at the point of usage. Thus, consumers have to

complete the process without interaction from service providers. Consumers may therefore find it difficult to use online IB services, leading to a decrease in their intention to adopt IB. In response, companies need to standardize their IB services to make the service as simple as possible for consumers to use. At the same time, they need to develop more effective websites that offer clear and precise instructions, so as to provide adequate support for users of their services.

According to **S.B. Verma, S.K. Gupta & M.K. Sharma (2007)** all banks are trying to implement technology oriented services. Even though public sector banks have initiated the process of technological development by computerization of their branch operations, but new generation private banks are more focused and technology driven. A number of studies suggested that different electronic channels such as debit cards, ATMs, mobile banking and credit cards have changed the total idea of banking. Private sector banks have started attracting the customers by offering all such kinds of facilities. In order to compete public sector banks have also started working in the same direction.

S.V. Seshaiah & V. Narender (2007) attempted to analyze the factors that affect the choice of customers in choosing the retail banks. The study suggested six most important factors namely safety of deposits, size and strength, accuracy, general service quality, speed of delivery, proximity.

S.K. Bose (2007) concluded that the banking industry is one of the most vital sectors of the service industry. It is important to note that any service including banking cannot be stored while it makes direct contact to the customer. Customer satisfaction plays an important role in the success of any business and also helps a company in maximizing its profit. Service, accuracy, friendliness, quality of service and timely delivery vary from bank to bank and branch to branch in most areas.

R.V. Shastri (2001) suggested that the progression in technology has brought about changes in the working environment of the banks and also saves a lot of time and effort.

2.2 ELECTRONIC BANKING / ROLE OF INFORMATION TECHNOLOGY IN BANKING

Electronic banking is one of the innovations of banking industry. It involves the use of information technology in banking. E-banking services are gaining recognition day by day and have attracted the attention of the traditional banking customers. It has brought the revolutionary changes in the Indian banking industry in terms of various banking operations. Electronic banking is very convenient as it saves time of the customers, reduces costs and is a facility which is available anytime and anywhere. People have access to all banking services on just a click of a button. **Hertzum et. al (2004)** defined E-banking as web based banking. In other words banking refers to banking operations done over the web/internet. As per the definition given by UNCTAD (United Nations Conference on Trade and Development), "Internet banking refers to the deployment over the internet of retail and wholesale banking services. It involves individual and corporate clients and includes bank transfers, payments and settlements, documentary collections and credits, corporate and household lending, card business and some others".

E-banking is also prevalently known as cyber banking, virtual banking, internet banking and online banking **(J. Kaur & H. Jhamb, 2010).** According to the study of **D. Dutta (2010),** among top 10 most visited business or finance sites witnessed, ICICI bank led as the top banking website in India with 4.7 million visitors, an increase of 40 percent from the previous year, whereas HDFC group followed as the second most visited site with 3.5 million visitors (up 58%) with the State Bank of India grabbing the third spot with nearly 3 million visitors (up 84%).

N.G. Shirodhkar (2015) conducted a study to analyse the customers' attitudes and operational risks faced in using electronic banking products. He surveyed different customer segments, viz. government employees, self employed, housewives, students and corporate customers of the respective banks in the state of Goa. He collected a sample of 460 respondents through a structured questionnaire. His study provided some suggestions such as banks should provide necessary information to the customers regarding the different risks associated with the electronic products. This is observed across all the customer segments included in the study. The customers using the service of net banking

mainly face the risk of hackers and risk of errors in transaction. This is observed across all the customer segments included in the study.

Sudesh & R. Chugh (2015) explored the online banking services of ICICI bank, a leading private sector bank. They carried out a descriptive type of research with a sample size of 80 respondents. They found that efficiency, responsiveness, reliability and privacy of customers' information were important factors of online banking. Furthermore they also concluded that ICICI is a pioneer bank in India for its online banking operations.

P. Sawant, R.V. Kulkarni & S.D. Mundhe (2013) in their study concluded that E-banking is changing the face of banking industry. This has had an impact on banking relationships. The performance of private sector banks is better than that of the public sector banks. The level of customer satisfaction is higher for private sector banks than for public sector banks. In order to improve their performance and level of customer satisfaction public sector banks must focus on their functioning.

M.B. Anand & D.L. Sreenivas (2013) conducted a study on the branchless banking, its performance, cost structures and issues and challenges on selected parameters. The study concluded that there was a significant growth taking place in branchless banking services in India. Even though smart phones, ATMs and laptops are becoming popular but still, branches are unlikely to die. Branches will persist even after the new modes spread to rural areas.

R. Lal & R. Saluja (2012) conducted a study based on the secondary data about technological development of banks in India. They revealed that the progress of the E-banking in Indian scenario is measured through ATMs, computerization of branches, transactions through retail electronic payment methods etc. In order to popularize the concept of E-banking, the Indian banks are making sincere efforts. The research also concluded that E-banking would be the most preferred mode of banking in years to come.

In a study carried out by **R. Kaushal & M. Singh (2011)** it was revealed that all the banks are at different stage of E-banking adoption. Private banks are very fast and quick in providing the e-services, whereas the public sector banks are far behind. Top two positions out of ten are held by private sector banks. The study also revealed that all the banks irrespective of their category are providing 100 percent services of ATM's.

A.B. Omar et al. (2011) in their study examined the customer perception, preferences, problems and suggestions about online banking in Pakistan. The study revealed that internet banking is a preferred mode of banking in comparison to branch banking due to reliability, convenience, speed, safety and security, cost effectiveness, user-friendly, and error free system. On the other hand various security problems, lack of trust and knowledge, ATM machine problems etc. affect the decision of the customers to adopt internet banking services. Services like cash depositing facility through ATM machines, "SMS/E-mail Alert" service, transfer funds through ATM machines, payment of utility bills through internet were found to be most required / demanding services by the customers.

K.T. Geetha & V. Malarvizhi (2011) investigated the factors affecting the acceptance of E-banking services among the customers and also indicated the level of concern regarding security and privacy issues in Indian context. The study concluded that the factors like security and privacy and awareness level increased the acceptance of E-banking services among Indian customers. The findings also showed that the customers are willing to adopt E-banking if banks provide them necessary guidance and ensured safety of their accounts.

S. Chawla & R. Sehgal (2010-11) addressed the inter-country comparison of technological developments of banking sector. The research considered the data of ATM development, debit and credit card circulation, large value payment system (ECS/NEFT) and real time gross settlement system (RTGS). The study concluded that banks and IT are parallel tracks. IT allows banks to offer diverse services by utilizing wide ranging infrastructure and delivers many important benefits. In case of ATM the percentages of foreign sector banks are higher followed by new private sector banks, SBI group, old private sector banks and nationalized banks in India. It has been found from inter-country comparison that during 2008 the number of terminals per million inhabitants was highest in Canada followed by Belgium, Italy, France, Switzerland, Netherlands and Sweden.

V. Selvam & C. Nanjappa (2010-11) concluded that the banking sector in India has become more competitive over a period of time. E.banking has gained a lot of appreciation in order to attract and retain the customers. The Indian banking is now easily

available to almost each and every individual because of the computerization process adopted by the banking sector.

J. Kaur & H. Jhamb (2010) conducted a study to provide an overview on electronic banking in India and how it has impacted the traditional services provided by banks. The study found that the development of electronic banking is good and it minimizes the threat of union and strikes.

N. Dixit & S.K. Datta (2010) investigated the factors affecting the acceptance of E-banking services among adult customers and the level of concern regarding the security and privacy issues. The study concluded that if the banks provide necessary guidance to the adult customers, they are happily willing to adopt online banking.

M. Polasik & T.P. Wisniewski (2008) studied the behavior of internet users in Poland. According to them one of the dominant relationships observed in the study is the link between the decision to open an online account and the perceived level of security of Internet transactions. The experience with the medium of internet and certain demographic variables also proved to be robust predictors of the adoption status.

R.K. Uppal (2008) defined E.banking as, "the use of a computer to retrieve and process banking data and to initiate transactions directly with a bank via telecommunication network (even the internet). Also most of the customers of e. banks are satisfied with the different e-channels and their services but one of the factors that is a hindrance to the growth of E.banking is awareness to the customers about E.banking**."**

M.M. Rahman (2007) studied the implications of adopting technology in banking activities in Bangladesh. The study gave a complete account on the present status and trends in offering innovative products and services by the country's banking sector. Six alternative methods of dividing the banks into two different groups relating to the technology adoption, namely adopters and non-adopters were used. The study concluded that the performance of the technology adopters improves as they gain maturity in adopting innovative technology.

R.H. Walker & L.W. Johnson (2006) conducted a research which was undertaken to investigate and establish the reasons as to why people use, or choose not to use, three types of technology-enabled services namely internet banking, telephone bill-paying, and internet shopping services. A behavioral model was developed and tested. The findings of

the study showed that the decision of a customer to use the internet and telephone for financial and shopping services is influenced by his or her sense of personal capacity or capability to engage with these service systems, the perceived risks and relative advantages associated with their use, and the extent to which contact with service personnel is preferred or deemed necessary.

M.S. Eastin (2002) presented the model that demonstrated the adoption of four e-commerce activities currently available for internet users: (1) Online Shopping, (2) Online Banking (3) Online Investing and (4) Electronic Payments for an internet service (i.e. access to exclusive sites). Further researcher found six attributes namely perceived convenience and financial benefits, risk, previous use of the telephone for a similar purpose, self efficiency and internet use which are common to the model and play a significant role in the adoption process.

H. Karjaluoto, M. Mattila & T. Pento (2002) tried to analyze the consumer beliefs and reactions to electronic banking channels in Finland. They observed that the bank employees (in particular bank managers) could improve the chances of customer adoption of internet banking by more effective customer communication.

2.3 AWARENESS AND KNOWLEDGE

The literature review focused on the advancements in technology that changed the way of traditional banking. Very few studies could be traced related to consumer awareness regarding different aspects of banking.

H. Varsha & B. Mahesh (2014) conducted a study to identify the level of awareness and knowledge among the customers of private and public sector banks. Demographic variables were taken into account to test awareness and knowledge of internet banking Services provided by banks. It was found that 63 percent of the respondents were partially aware about the internet banking services and 16 percent of them were totally unaware. It was also found that there is no significant difference in the level of awareness of internet banking services among the customer of private and public sector banks. Thus the category of banks does not influence the level of awareness and knowledge of the customers. According to **S. Prasannakumar & S. Rajkumar (2014)** there is a significant relationship between awareness and knowledge about banking functions and

services among the senior secondary school. The different groups of senior secondary school students did not differ significantly in their knowledge and awareness in banking function and services with respect of gender. **V. Kamesam (2001)** studied the changes that took place in the Indian banking industry due to technological advancements. Technology has helped in centralized data storage which has helped in reduction of costs. Technological advancements have led to the emergence of services such as electronic data interchange (EDI), smart cards, RTGS, e-commerce etc which have all resulted in increasing the level of profitability and productivity of banks. **M. Sathye (1999)**, in his research paper, explored the factors affecting the adoption of internet banking by Australian customers. He stated that internet and other virtual banking had comparatively lowered down the cost structure in comparison to the traditional delivery channels. So, the banks should encourage customers to use internet for banking transactions. The study also focuses on the fact that for adoption of internet banking, it was necessary for the banks to make the consumers aware about the availability of such services.

2.4 INDIAN AND FOREIGN STUDIES RELATED TO INTERNET BANKING

S.V. Gupta & R. Garg (2015) concluded that internet banking is an easy and convenient way with the help of which queues can be avoided. One can do various transactions by just sitting at home or in the office. They also suggested that whenever the banks introduce new technology enabled products, banks should take adequate care about various issues of security, privacy and cost related with them.

H. Sufyan (2012) conducted a study on knowledge about the consumers' perspective of internet banking. It was related to internet banking customers and the service providers that offer internet banking. The study concluded that impact of internet banking on cost saving, revenue growth and increased customer satisfaction on industry is wonderful and can be a potential tool for building a sound strategy. The study also identified the weakness of conventional banking and explored the consumer awareness, use patterns, satisfaction and preference for internet banking.

N. Jahangir & N. Parvez (2012) conducted a study in Bangladesh. The findings of the study suggested that in order to attract more users towards internet banking, it is not

enough only to introduce an internet banking system, in fact beliefs regarding usefulness of the system of internet banking have to be developed.

M.N. Khalil et al. (2010) in their research focus on the impact of cultural traits on the intention to use internet banking. In the study data collected from 742 respondents who actually use internet banking were analyzed. With the use of TAM (Technology Acceptance Model) researchers examined the influence of perceived ease of use, perceived usefulness, and trust on the intension to use internet banking among Malay and Chinese ethnic groups. For both ethnic groups, the results showed that perceived usefulness, perceived ease of use, and trust, all have significant effect on the intension to use internet banking.

H.H. Chang & M. Rizal (2010) investigated internet banking adoption among Taiwanese bank customers. They examined the affect of involvement using TAM (technology acceptance model). From the PII (Personal Involvement Inventory) scales, the results indicated that involvement is significantly influenced by the characteristics of the person, stimulus and the situation.

T. Dube et al. (2009) in their article on "Adoption and Use of Internet Banking in Zimbabwe" explored the extent of adoption and usage of internet banking by commercial banks in Zimbabwe. The study concluded that while majority of the banks in Zimbabwe have adopted internet banking, usage levels are still relatively low, as not many customers are interested in using this innovation. The study also recommended that the banks in Zimbabwe should rigorously promote internet banking among its customers.

V. Jain et al. (2009) highlighted the emergence and evolution of internet banking over the years, the features associated with it and the benefits which internet banking provides to its customers. The study concluded that Internet and Mobile Association of India estimates that 4.6 million users transfer funds online in 2006. Sources from ICICI bank claim that around 100 crore net banking transactions are conducted every month. Around 78 percent of the banks customers' base is reportedly registered for internet banking.

K.S. Grabner & R. Faullant (2008) in their study investigated the role of internet trust as a specific form of technology trust in the context of internet banking. The approach took the form of an empirical study with 381 bank customers in Austria (adopters and non-adopters) and used a basic model of the adoption of internet banking with structural

equation modelling (SEM). The results confirmed the influence of internet trust on risk perception and consumer attitudes towards internet banking. Propensity to trust is a determinant not only for interpersonal relationships but also for trust in technological systems.

Y. **Mahfooz et al. (2008)** in their study observed that there is a reduction in the number of physical visits to the banks due to the online facilities available. Indian internet users do online banking. However it was not studied how many users actually fulfill their online banking responsibilities as dictated by the banks. Thus security is also a major concern for the customers.

G. Goel, T. Nandan & K.A. Upadhyay (2008) in their study observed the prime factors or reasons for using internet banking namely convenience, saving of time, better control over finances, and availability of more information. Most of the people came to know about internet banking from the bank official followed by self driven initiative of the user and advertisements. The share of online banking users is varying from state to state. Maharashtra has the highest percentage (28.7%) of online banking customers followed by Delhi (17.7%), States like Bihar (1.6%) and Uttaranchal (1%) have the lowest users (IAMAI Report, 2006).

Shu-Hsun Ho & Ying-Yin Ko (2008) said that the purpose of their study was to investigate whether self-service technology (SST) could enhance customer value (CV) and customer readiness (CR). In addition, it proposed to inspect the effects of CV and CR in customers' continued use of Internet banking. An online survey was used with a sample of 771 respondents. Structural equation models (SEM) were used to examine 11 hypotheses in the theoretical framework. The findings of the study concluded that SST characteristics (i.e. ease of use, usefulness, costs saved, and self-control) demonstrated positive effects on CV and CR. CR is positively related to CV. Furthermore, customers were willing to use internet banking when CV and CR were high.

R.K. Srivastava (2007) explained that internet banking is still at infancy stage in the world. The research focused on the customer's perception about internet banking and drivers that drive consumer towards better perception. The study revealed that factors namely education, gender, income and training play an important role in usage of internet

banking. Inhibitory factors like trust, gender, education, culture, religion, security and price can have minimal effect on consumer mind set towards internet banking.

P. Malhotra & B. Singh (2007) concluded that the banks with lower market share see internet banking technology as one of the means to increase their market share. More and more customers can be attracted with the help of internet banking. It was also found that the larger banks, banks with younger age, private ownership, and higher expenses for fixed assets, higher deposits and lower branch intensity evidence a higher probability of adoption of this new technology.

G. Radhakrishna & L. Pointon (2007) conducted a study with the objective to investigate the incidence of fraud in internet banking; the adequacy of the relevant regulations and statutes; and whether the setting up of a cyber court would better facilitate the prosecution of such financial crimes in Malaysia. The results of the study found that the applicability of various existing laws and banking practices to internet banking has not been fully tested in Malaysia and is still evolving.

M.N. Khalil & J.M. Pearson (2007) tried to analyze the influence of trust together with some attributes of Innovation Diffusion Theory on internet banking acceptance. The study was conducted among business students in Malaysia. The findings showed that variables such as trust, relative advantage and trialability had significant effect on attitude towards using internet banking.

P. Gerrard et al. (2006) identified eight factors viz., risk, need, lack of knowledge, inertia, inaccessibility, human touch, pricing and IT fatigue as barriers to internet banking.

G.S. Shergill & B. Li's (2005) study of internet banking consumers found that women regarded privacy protection and ethical standards more seriously than did men.

H. White & F. Ntelli (2004) studied internet banking in U.K and tried to find out the reasons for less internet banking customers. Using trade off analysis to interview 56 internet banking customers, they identified and ranked five key service quality attributes. Cluster Analysis revealed two groups of respondents. One group was most concerned about security related issues while the other group was more interested in convenience, speed and timeliness of the service.

According to **K. Waite & T. Harrison (2004)** the information provided on the banking website may help to provide needed knowledge and thus help to motivate adoption of internet banking.

T.K. Hui & D. Wan (2004) tried to examine the reasons for shopping on the web by the customers. They investigated the relationship between consumer innovativeness and determination of internet banking. They concluded that "individuals with higher levels of internet usage and those who score high on open processing innovativeness and domain specific innovativeness are more likely to adopt the internet for shopping."

H. Karjaluoto, T. Koivumaki & J. Salo (2003) tried to study the banking habits of the customers in Finland. They found that customer acceptance of new delivery channels is high and for digital customer relationship management is critical for banks. They also observed that non internet banking users would be more loyal to the bank in comparison to internet banking users.

M. Mattila, H. Karjaluoto & T. Pento (2003) tried to study the adoption of internet banking among "mature" customers in Finland. They found that perceived difficulty and lack of personal service were the main barriers for mature customers to accept internet banking. Mature customers had more concerns on security of internet banking than other general customers.

D. Sciglimpaglia & D. Ely (2002) tried to study the impact of internet banking from "customer centric" perspective. They concluded that the customers who don't mind doing business through internet might leave their current bank, if they find a rival offering the better service. They also observed that electronic channels of delivery cannot be sidelined by banks and they should strive to offer all the latest technology to their customers.

B. Nancy et al. (2001) studied the case of consumer adoption of internet financial services, which may be considered as an innovation in the delivery of services. The qualitative study employed Rogers' model of perceived innovation attributes. The perceived innovation attributes were found to be the most important determinants of consumers' adoption decisions. The study argued that it is convenient for the customers to interact with humans rather than machines. They believe that bank clerks are less prone to errors and can answer various queries. Moreover face to face transactions are carried out more efficiently and courteously.

N. Ravi et al. (2001) suggested that basically there are two types of online banking, namely e-banks and e-branches, an e-bank exists only on the internet, where no paper record is kept and it operates globally without any geographical boundaries. It is also available round the clock. On the other hand, e-branch bank is a brick and mortar bank that provides internet banking to its customers because customers prefer more e-branch service than E-banking service.

V.N. Polatoglu & S. Ekin (2001) conducted an exploratory study to analyze the customer acceptance of internet banking services in Turkish Bank. Their findings suggest that customer confidence in internet banking services tends to increase when they use the service for a long time.

M. Tan & T. Teo (2000) in their study suggested that banks that fail to respond to internet banking are likely to lose customers and the cost of offering internet banking services is often less than the cost of keeping branch banking.

As per **L. Bradley & K. Stewart (2003)** Internet Banking is a form of electronic banking offered via internet whereby consumers can perform and transact financial services in a virtual environment. Internet banking offers advantages as a retail channel namely accessibility, direct communications, cost reductions and new markets **(S.W. Anderson 1995; M.J. Cronin 1996; E. Daniel & C. Storey 1997; N.F. Doherty et al. 1999; T. Hughes 2001).** Internet banking is a new delivery channel for banks in India. The internet banking channel is both an informative and transactional medium. However internet banking has not been popularly adopted in India as expected **(V. Ravi et al. 2007).** The services available online vary from bank to bank. Some of the options that are available online are:

a) Viewing of account balances
b) Paying of bills
c) Money transfers from one account to the other
d) Online trading

2.5 REASONS AND FACTORS AFFECTING THE ADOPTION OF INTERNET BANKING

There are some studies related to the reasons and factors that affect the adoption of internet banking. The findings of various researchers regarding factors affecting internet banking have been discussed below:

G. Srivastav & A. Mittal (2016) in their exploratory study discussed the impact of various internet banking services on the overall satisfaction levels of the banking customers. The analysis of their study revealed that the customers wanted private sector banks to improve upon features like safety, privacy of ID and password, quality of service and frequency of reminder given for password change. On the other hand in case of public sector banks the customers were concerned about lack of development in rules and regulations of E-banking as well as poor structure of internet banking. The study also concluded that if the customers were provided with better guidelines related to internet banking, the adoption level would be more. Also security was a major concern by the customers of both the banks.

S. Saibaba (2014) suggested that banks in India should make their customers understand the different benefits, ease of use and trust related to internet banking. The results of the study found that six constructs namely performance expectancy, effort expectancy, social influence, trust, attitude and awareness all have significant influence on customers' behavioral intention to accept internet banking services.

S. Raitani & V. Vyas (2014) in their study attempted to study what keeps the E-banking customer loyal in a banking environment. Exploratory factor analysis was performed to analyse the data. The results suggested that website quality, e-trust, e-satisfaction, corporate image, product information and perceived security significantly affect the e-loyalty of online banking customers.

C. Prema (2013) in her study concluded that internet banking is influenced by its perceived reliability along with other variables adopted from the TAM model. She also suggested that in order to attract consumers' attention to internet banking services awareness can be improved,

Further security is another factor which plays an important role as it certainly affects consumers' adoption of internet banking.

M. Kumar et al. (2013) in their study suggested that the level of adoption of internet banking has a positive relation with levels of different types of trust and perceived usefulness and perceived ease of use. The study also indicated that in case of adoption of internet banking trusting beliefs play a greater role in comparison to perceived usefulness and perceived ease of use. In order to promote internet banking among its customers trust is an important factor in the strategies formulated by the banks.

P. Sawant et al. (2013) in their study suggested that customer satisfaction is one of the major factors to measure the performance of banks. Their study presented the impact of e-services on customer satisfaction. The study concluded that convenience, availability and saving of time are the main reasons for using E-banking and in the case of those not using E-banking (nearly 80%), the reasons are lack of social dimension, unable to find relevant information, bounce rate of web pages, not receiving acknowledgement for transactions, errors on the web pages, lack of computing skills, security, etc.

A.G. Modi et al. (2013) conducted a study on "Acceptance of Internet Banking Among Retail Customers: Survey Evidence from Ahmedabad Region". The study was conducted using a structured questionnaire with a sample of 195 respondents. The data were analysed with the help of factor analysis and concluded that factors namely convenience, trust, intention, information about internet banking, customer awareness and security have significant effect on the retail customers' acceptance of internet banking services.

M. Sharma & D.S. Chaubey (2013) attempted to summarize the results of literature review on customer experience towards the services of a bank from various perspectives. Factor analysis, mean, ANOVA and SEM were carried out to assess the relationship. Study indicated the strong relationship between customer experience with the overall feeling, trust and their satisfaction. The main factors which contribute in customer satisfaction are positive outlook, convenience, responsiveness, technological support, ambiance, marketing support services and professionalism.

A. Shah (2012) provided a detail understanding of how and why specific factors affect the consumer decision in relation to internet banking. To achieve the objectives he surveyed 300 respondents. The results reflected that banking needs, risk and privacy concerns and cost savings were the major factors that motivate the respondents' decision

to adopt internet banking. Further convenience and feature availability were found to moderately affect internet banking adoption.

R. Majhi (2012) in her study identified the factors responsible for customers' attitudes and perceptions towards internet banking. It also revealed the importance of the key variables relating to customers' demographic and social inputs. Analysis of the data revealed that factors such as word of mouth, customer relationship management and the attitudes of the customers play important role in increasing the productivity of internet banking.

S. Rahmath et al. (2011) conducted a research on the topic "Internet Banking Adoption in an Emerging Economy: Indian Consumers Perspective". Their study determines the factors influencing the consumer's adoption of internet banking in India. The sample of the study was 116 respondents using internet banking. The study concluded that perceived usefulness, perceived ease of use and perceived risk is the important determinants of online banking adoption.

A. Shah (2011) in his study concluded that Banking Needs followed by Core Services, Problem Resolution, Cost Saved, Convenience and Risk and Privacy Concerns were the major factors that strongly affect the overall satisfaction of the internet banking consumers. Also Consumer Continuation and Feature Availability were found to moderately affect the overall satisfaction of the customers using internet banking services. The study also suggested that providing customer education and friendly customer services by the banks would help in improving the customer confidence towards internet banking services.

S. Sharma & R. Singh (2011) carried out a study in which they identified seven factors influencing internet banking-lack of security and confidentiality, inadequate infrastructure and connectivity, limited e-skills, no restoration and personal touch, uncertainty about the completion of transactions, lack of evidence and faith and inadequate regulatory mechanism which collectively accounted for 83.51 percent of the total variance.

S. Singh (2011) examined the adoption and impact of ATM, internet banking and tele-banking services on customer satisfaction and retention by leading Indian banks. The customer satisfaction has been affected positively by the information and communication

technology channels. Some characteristics such as availability of cash and location of ATM, time to process request has very high customer satisfaction across both private and public sector banks.

M. Kilic (2010) conducted a study on internet banking service quality and customer satisfaction in Turkey. Results indicate that accessibility, trust, credibility and web interface variables affect satisfaction level of internet banking customers positively whereas demographic variables such as gender, age, income level and education level do not affect the satisfaction level of internet banking customers.

According to **M. Kaur (2010)** "In today's increasingly competitive environment, it has become important for the banks to satisfy their customers in all aspects. With the nationalized banks giving a tough competition to the private banks, satisfaction and retention of the customers has become the need of the hour. If the unquenchable needs of the customers are not fulfilled on time, no matter how hard the bank tries to retain them, the customers will switch over to some other bank in search of contentment." The findings of the study showed that the most important factors that can add to a customer's delight are technology savvy, good investment advisory services, efficient and co-operative staff and better approach to Customer Relationship Management.

M.S. Norazah (2010) conducted a study to find out the factors that influence the internet banking adoption among Malaysian consumers. He collected a sample of 100 respondents. He employed multiple regression analysis to find out the results. Trialability has the weakest influence for consumer Internet banking adoption beside complexity, risk, and utilitarian oriented internet banking sites. The empirical data used for this study was collected in Malaysia market which may have a culturally and technologically different environment from some other countries. The results hint that information about Internet banking services and its benefits is a critical factor influencing the adoption.

S. Karthikeyan & J.C. Sudhahar (2010) suggested that there are many models to predict factors that influence the adoption of a technology. Their study used the Technology Acceptance Model (TAM). The TAM provides a precise set of antecedents that can explain the intention to adopt internet banking, the technology in this study. According to the Technology Acceptance Model (TAM), perceived ease of use and perceived usefulness constructs are important in determining the acceptance and usage of

various IT techniques. The study proposed to extend the Technology Acceptance Model (TAM) by incorporating 'Consumer trust on internet banking' as a new factor that reflects the user's security and privacy concerns in the acceptance of internet banking and its influence on an individual's 'intention to adopt internet banking. The study also demonstrated the significance of 'Awareness' and 'Computer Self-efficacy' on usage intentions through perceived ease of use, perceived usefulness and perceived security.

T.R. Verena et al. (2010) studied the extent to which internet banking is adopted among bank customers and investigated the factors that affect the adoption of this new delivery channel. A sample of 400 bank customers of different age groups and of different educational levels in both urban and rural areas across the country were chosen. The results showed that perceived ease of use and perceived security and privacy were important factors that influence the use of internet banking among customers. It was also observed that having internet access at home promotes the use of internet banking. Moreover robust marketing by banks, inclusion of chat forum on the websites and awareness campaign concerning security aspects also encourages customers to use internet banking.

L.Z. Anita et al. (2010) in their study concluded that there is a significant relationship between trust and perceived risk and that both are crucial in explaining the internet banking usage intention. Also, trust in the bank is fundamental not only to reducing risk perceptions of internet banking services in general but also to building trust in the banks' competence in terms of internet banking services' activity.

S. Khurana (2009) conducted a study on 'Managing Service Quality: An Empirical Study on Internet Banking' .The study was aimed to identify customer preference towards online banking and to find out various service quality dimensions that affect customer satisfaction in internet banking. A sample of 100 respondents of Hisar city of Haryana, India, who actually use internet banking was selected by non probabilistic convenience sampling techniques. The five independent factors were extracted from the factor analysis from a list of 21 statements and this analysis reveals that the five factors that influence the satisfaction level of customers are 'Responsiveness', 'Reliability', 'Efficiency', 'Privacy of Information' and 'Easiness to Use'.

W.A. Mahardika & R. Bashuki (2009) examined the factors influencing acceptance level of internet banking by the bank customers in Surabaya. There were ten constructs complied into a structured model to explain the customer acceptance level of internet banking. i.e. awareness of service quality, security, quality of internet connection, computer self efficacy, perceived usefulness, perceived ease of use, perceived employments, trust, attitude towards using, and adoption intension.

Manzano et al. (2009) analyzed how consumer innovativeness can be used as a variable to positively influence internet banking adoption both directly and reducing consumer perceived risk. The impact of innovativeness and risk on internet banking adoption has been tested through structural equation modelling techniques. The sample consisted of 511 Spanish internet banking services users accessed through an internet survey. Risk has been measured as a formative construct. The results revealed consumer innovativeness as a key construct to improve E-banking adoption both directly and by its effective role in reducing consumer risk perception of using internet channel in the financial services context. Practical guidelines are provided to bank managers on how to use consumer innovativeness level as a segmentation variable to increase the use of internet banking among actual customers who are non users or light users of the electronic channel.

G. Goel, T. Nandan & K.A. Upadhyay (2008) in their study observed the concept of internet banking, perception of internet bank customers, non-customers and issue of major concern in internet banking. In order to have a clear and focused insight about the perception of user and non-users about internet banking, a survey was conducted. In total 100 adult internet users in Allahabad were selected. The findings of the survey provide valuable insight into concern for security, reasons for lower presentation, and likeliness of adoption. It is very important for the banks to study not only the perception of the people who visit the bank as customer but also the ones who are internet users but currently not using internet banking.

D. Singhal & V. Padhmanabhan (2008) in their study indicated that 'utility request', 'security', 'utility transaction', 'ticket booking' and 'fund transfer, are the major factors. Out of the total respondents more than 50 percent agreed that internet banking is convenient and flexible way of banking and it also has various transaction-related benefits.

D. Singh (2008) also suggested that convenience is the main motivator for consumers to bank on the internet. The findings also highlight increasing risk acceptance by consumers in regard to internet-based services and the growing importance of offering deep levels of consumer support for such services. The study also suggests that banks will be better able to manage consumer experiences with moving to internet banking if they understand that such experiences involve a process of adjustment and learning over time, and not merely the adoption of new technology.

G. Spiros & C. Koritos (2008) in their study seek to compare, through empirical evidence, two widely adopted models (Technology Acceptance Model (TAM) and the Diffusion of Innovations (DoI) model) to an underutilized one (Perceived Characteristics of the Innovation PCI) in order to examine which is better in predicting consumer adoption of internet banking (IB), while investigating innovation attributes vis-a-vis other important predictors of adoption of innovations, such as consumer personal characteristics. The data was derived from both users and non-users of IB through a web survey. Their study assesses the psychometric properties of the measures through confirmatory factor analysis and then employs logistic regression analysis in order to assess and compare the ability of the models to accurately predict consumer adoption of IB. The study found that PCI performed significantly better than TAM and DoI in predicting consumer adoption of IB, whereas the addition of consumer demographics and psychographics further improved the predictive ability of the overall Logit model.

S. Mansumitrchai et al. (2006) conducted a study on internet banking adoption among adopters and non-adopters in Mexico. Factor analysis was conducted by them which suggested factors like: difficulty, trust, compatibility, third party concerned, human contact, social influence, security and computer proficiency. Analysis of variance (ANOVA) showed that adopters and non-adopters differed on their attitudes towards these four attributes of the adoption: difficulty, trust, compatibility and human contact.

N.O. Ndubisi & Q. Sinti (2006) examined consumer attitudes, system's characteristics and internet banking adoption in Malaysia. The research framework links attitudinal constructs such as importance of internet banking needs, compatibility, complexity, trialability and risk to internet banking adoption. The results of the study revealed that the attitudinal factors play a significant role in internet banking adoption.

L. Sharman & C. Williamson (2006) in their study analyzed the Australian banking consumer experiences with the adoption of internet banking. The study concluded that 'Convenience' is the main motivator for consumers to bank on the internet. It also pointed that increasing risk acceptance by consumers and the growing importance of consumer support for service are the reasons for the success of providing internet banking. Hence, it was suggested by the study that for successful adoption of internet banking, the banks need to understand the consumers.

R. Awamleh & C. Fernandes (2005) analyzed the factors influencing customers' satisfaction of the internet banking services offered by banks in United Arab Emirates (UAE). The factors they considered were convenience, independence and security of internet banking transactions. Their findings revealed that convenience and security of internet banking transactions have a significant impact on satisfaction.

Y.T. Chang (2005) in their **s**tudy analyzed the behavior of banks' customers in Korea. They concluded that the adoption of internet banking is influenced by sex, age, marital status, degree of exposure to internet banking and the characteristics of the banks.

S. Shajahan (2005) surveyed a total of 100 respondents across ten branches of ICICI banks in Chennai in order to study the level of customers' satisfaction on various modes of banking services such as internet, phone, branch and ATM in India. The study observed that internet literacy in a country is the major issue in online banking penetration in India.

M. Sohail & B. Shanmugham (2004) suggested that age, educational qualification, accessibility to internet, awareness of E-banking and customers' resistance to change are significantly affecting the adoption of internet banking in Malaysia.

Z. Liao & M.T. Cheung (2002) concluded that accuracy, security, network speed, user friendliness, user involvement and convenience are the most important quality attributes that influence the usefulness of and willingness to use internet-based banking.

R. Suganthi et al. (2001) conducted an empirical study on internet banking patronage in Malaysia. They identified the factors which influenced internet banking adoption namely, accessibility, reluctance, costs and trust in one's bank, security concerns, convenience and ease of use. They studied the internet banking adoption among internet banking users and non-internet banking users. They observed that more promotional activities should be

carried out by the banks in order to create greater awareness among customers regarding the benefits of internet banking to ensure better adoption.

According to **E. Daniel (1999)**, customers' value features in the internet banking such as convenience, increased choice of access to bank, improved control over their banking activities and finances, ease of use, speed and security. **M**. **Sathye (1999)** in his study tried to identify the factors affecting the adoption of internet banking by Australian customers. The findings of the study revealed that lack of awareness and security concerns were the main obstacles for the adoption of internet banking among the customers.

Convenience has been identified by a number of studies as an important adoption factor **(A.C**. **Nielsen 2005; Pew 2003; J. Ramsay & M. Smith 1999; J. Thornton & L. White 2001).** A US survey found the main motivator for internet banking to be convenience in terms of 24/7 access and time savings. Accessibility, which may be related to convenience, has been found important **(J. Ramsay & M. Smith, 1999).** Security, privacy, trust and risk concerns may impact consumer internet banking choices. Security has also been identified as a key consumer concern in various internet banking adoption studies **(N.J. Black et al., 2002; N.Y.M Siu & J.C.W Mou, 2005).** In Australia, **M**.**Sathye's (1999)** study highlighted consumer security fears while **J.Ramsay & M.Smith (1999)** found privacy to be a key consumer concern.

The forthcoming matter is related to some of the important studies which extensively cover the knowledge area related to internet banking in public, private and foreign sector banks.

2.6 INTERNET BANKING IN PUBLIC, PRIVATE AND FOREIGN SECTOR BANKS

S. Kundu & S.K. Datta (2014) in their study concluded that the customers of private sector banks are more loyal towards internet banking than customers of public sector banks. The public sector banks are facing fierce competition from the private sector banks primarily because these banks have advanced technology and innovations. Private banks in India are the early adopters of IT enabled banking.

R. Garg (2013) examined the customer's perceptions towards internet banking facility and also analyzed the customer's satisfaction on various parameters of internet banking services. In total 180 respondents were surveyed to achieve the objective of the study. The study found that perception of customers towards internet banking service quality was largely influenced by the '*reliability', 'user-friendliness', 'responsiveness', 'accuracy', 'speed of service', whereas 'compatibility', 'efficiency', 'customer support', 'security', 'approachability' and 'availability'* are the major factors which influence the customer perception in private banks. Further it was observed that the least score is given to the 'accuracy' in public sector banks whereas 'security' gets the minimum score in case of private sector banks which is leading to the dissatisfaction of customers as compared to the other dimensions.

Further **P. Sawant, R.V. Kulkarni & S.D. Mundhe (2013)** in their study concluded that electronic banking is changing the face of banking industry with major impact on banking relationships. Overall the performance of private sector banks is better than that of the public sector banks. The level of customer satisfaction is higher for private sector banks than for public sector banks. Public sector banks must focus on their functioning to compete with the private banks.

H. Sufyan (2012) concluded that internet banking in India is only at its primitive stage. It is mainly dominated by the Indian private and foreign banks. A good number of risks are associated with internet banking which have to be taken care by the banks. In order to maximize its revenues from internet banking the banks can focus on strategic consumer groups. It was also suggested that banks cannot avoid the internet banking phenomenon, but in order to get competitive advantage banks must reorganize their business models in order to suit to Indian consumers.

Study carried out by **R. Kaushal & M. Singh (2011)** revealed that all the banks are at different stages of electronic banking adoption. However private banks are very fast and quick in providing the services in comparison to public sector banks. The study also revealed that all the banks irrespective of their category are providing 100 percent services of ATMs. So effective use of electronic banking services has enabled the banks to hold various positions in the banking sector and top two positions out of ten are held

by private sector banks which show that they are more efficient and providing better customer services as compared to public sector banks.

S. Singh (2011) in his research paper examined the adoption and impact of ATM, internet banking and tele-banking services on customer satisfaction and retention by leading Indian banks. The information and communication technology channels have positive impact on the customer satisfaction. Some characteristics such as 'availability of cash' and 'location of ATM' and 'time to process request' have very high customer satisfaction across both private and public sector banks.

B. Marakarkandy & A. Daptardar (2011) in their study concluded that the environment of internet banking is very vibrant and due to constant changes in web technology an understanding of the users' viewpoint is necessary for policymaking. The study contributes to the literature by evaluating the internet banking websites based on users' viewpoint of banks in India and allows bankers to identify the grey areas in order to take corrective action by introducing facilities and features on their banks web pages. The findings of the study indicated that the "new private sector and foreign banks lack a strong branch network in India and they were in the forefront of adopting innovative service delivery channels like internet banking. Public sector banks recorded a significant progress by fully computerizing their branches. The number of fully computerized branches was 9.7 percent at the end of March 2008. This indicated that the public sector banks are not far behind and may soon catch up with the foreign and private banks in adopting Internet banking."

U. Hooda (2011) in his research paper compared the factors, which affect the choice of customer in selection of public and private sector banks. The results of the study showed that customer chose public sector bank due to accessibility, acquaintance. Whereas private sector bank are chosen due to efficient and speedy services, longer working hours and other value added services.

P. Malhotra & B. Singh (2010) attempted to reflect the present status of internet banking in India and the extent of internet banking services offered by internet banks. They examined the factors affecting the extent of internet banking services. The data for this study was based on a survey of bank websites explored during July 2008. The sample consisted of 82 banks operating in India at 31st March 2007. Multiple regression

technique was employed to explore the determinants of the extent of Internet banking services. The study concluded that the private and foreign internet banks have performed well in offering a wider range and more advanced services of Internet banking in comparison with public sector banks. Among the determinants affecting the extent of internet banking services, size of the bank, experience of the bank in offering internet banking, financing pattern and ownership of the bank were found significant.

S. Singh (2010) explained the use of internet banking in customer relationship management. Today the internet banking is also considered an important tool by the banks and used as a business strategy to create, retain and maintain long-term profitable customer relationship by satisfying customers' needs. The author analyzed the opinion of 400 customers of two public sector and two private sector banks. ANOVA was applied to find out the significant differences and the results found that private sector banks were better in their performance. The website of private sector banks was also found more attractive.

According to **P. Malhotra & B. Singh (2009)** the private and foreign internet banks have performed well in offering a wider range and more advanced services of internet banking in comparison with public sector banks. Among the determinants affecting the extent of internet banking services; size of the bank, experience of the bank in offering Internet banking, financing pattern and ownership of the bank were found to be significant.

K.S. Pathania & M. Sharma (2009) conducted a study titled "Technology Adoption in Banking: A Study of Public and Private Sector Banks". The main objectives of the study were to evaluate the perception of customer regarding modern technology. The study included the customers who were using different facilities of internet banking. The study also concluded that information technology is very influential on responsiveness, reliability, professionalism, accessibility and accuracy. ATM is the most comfortable banking channel where as internet banking, phone banking and mobile banking are the most insecure channels. They also concluded that awareness is needed to increase the use of internet banking.

According to **G. Goel, T. Nandan & K.A. Upadhyay (2008)** public sector banks have remained laggards in the race for adopting internet banking practices**.** According to **S.B.Verma, S.K. Gupta & M.K. Sharma (2007)** public sector banks have initiated the

process of technological development by computerization of branch operations, but new generation private banks have well focused business vision, with technology integral component in it. Thus all the banks are trying their level best to take the maximum advantage of technology in the public sector banks. A number of studies focused on the fact that different electronic channels such as ATMs, mobile banking, debit cards and credit cards are changing the concept and the total philosophy of banking. Private sector banks have started offering all such kinds of facilities and thus attracting the consumers. In order to meet the competition the public sector banks have also started working in the same direction.

2.7 CONCLUSION

This chapter reviewed the important and useful studies which are essential to formulate research gap, objectives, methodology and hypothesis for the current study. A good amount of conceptual and exploratory studies are available as far as need and growth of technological developments in banking sector is concerned. Various researchers have tried to explore the role of information technology in banking sector and they are quite successful in their initiative. The researchers found lack of studies related to consumer awareness regarding various aspects of internet banking. The amount of Indian and foreign studies related to internet banking are also available to develop the conceptual aspects for the current study. A good number of researches have been conducted on the topic which covers various factors which affect adoption of internet banking. In this context it is worthy to mention that the foreign studies have an edge over Indian studies as in foreign countries this topic is more studied than in India. Moreover no comprehensive study is found which covers the consumers' doing internet banking in NCR. The features and services of internet banking are increasing very fast so there is a need to conduct a fresh research which finds out the factors that enables internet banking in NCR area. So the forthcoming chapter i.e chapter 3 is specifically devoted to explaining the objectives, methodology and chapter plan of the current study.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In these days of highly competitive world and globalization, internet technology is gaining recognition day by day. The use of internet has increased and internet today is being used in most of the areas. It is playing a very important role in the banking industry. Internet banking has made the banking services available to the user irrespective of the location. The biggest issue is that how the customer is responding to these internet banking services? What is the difference in the perception of the people who are banking with public, private and foreign sector banks? In the last chapter i.e. chapter 2 good amount of review work related to the technological developments, awareness and knowledge, factors affecting internet banking has been done. The review has given support in formulating the hypothesis in the forthcoming paragraphs.

The present chapter deals with the research methodology adopted in order to achieve the objectives of the study. The broad outline of the chapter is as follows: first section brings out the research gap. In next section, research objectives are discussed. After research objectives are formulated, research hypotheses, scope of the study, methods of data collection, development of the questionnaire and sampling design is to be discussed. Next section deals with details about the various statistical methods adopted for data analysis, limitations of the study and finally the chapter plan.

The study is both exploratory and descriptive. The objective of exploratory research is to gather preliminary information that will help define problems and suggest hypotheses. The objective of descriptive research is to describe things, such as the market potential for internet banking or the demographics and attitudes of consumers who are using internet banking. The study has identified the factors which affect the consumer perception towards the usage of internet banking. The study also attempted to examine the various problems which the customer faces while using internet banking. The focus of

the study is also to analyze the characteristic features of the various websites through which the customer can do internet banking.

3.2 RESEARCH GAP

Internet Banking acceptance has gained special attention in academic studies from 2000 when banking journals have devoted special issues on the topic **(H. Karjaluoto et al., 2002; K. Waite and T. Harrison, 2002; L. Bradley and K. Stewart, 2003; P.Gerrard and J.B. Cunningham, 2003; A. Mukherjee and P. Nath , 2003; T. Pikkarainen et al., 2004)**. It revealed that perceived usefulness and information on online banking on the website were the main factors influencing online banking acceptance. On the other hand awareness, security, cost and accessibility are most significant factors in adoption of internet banking in Nigeria **(A.A. Aliyu et al., 2012).** Hence internet banking in India is in nascent stage due to various reasons as there are still a significant number of customers who are not familiar and hesitate in using net banking services **(Ravi et al., 2007; A.M. Aladwani, 2001; R. Suganthi et al ., 2001;)**. But in spite of their security and privacy concerns adult customers are willing to adopt online banking if banks provide them necessary guidance **(N. Dixit & S.K. Dutta, 2010).**

The research has focused on what are the consumers' perceptions about internet banking and factors which enable the usage of internet banking. Consumer behavior is a very complex phenomenon which is considered primarily in Marketing. Consumer behavior is dynamic and it keeps on changing. By recognizing consumers' preferences, bankers are tailoring the banking experience for its consumers. Most of the people have heard about internet banking but probably have not tried it. People are still paying their bills through cheques. The purpose of internet banking is not to change our money habits but its aim is to facilitate our work by replacing the traditional time consuming banking activities with the latest internet banking techniques. To face and survive in the cutting edge competition today the banks have to deliver their best to the consumers since the customer is the king and he is the one who is going to evaluate a bank on the basis of the services of the bank. Market researchers have tried to understand consumers' perceptions, and develop models to help bankers understand how a consumer makes a decision for internet banking. If the process is understood, a banker may be able to influence the buyer's decision, through

advertising or special promotions. It is definitely important to find out who the actual and potential customers are and what motivates them to go for online banking. Finding out what specific groups of consumers want is done via segmentation, dividing customers into specific segments. There are basically two ways to find out what customers want. The first is to ask them what they need, and the second is to infer what they want by observing what they do on the internet. It is very important for every bank to understand the perceptions' of the consumers towards internet banking so that they can serve the consumer accordingly. In case a bank has to undergo certain changes in order to satisfy or come up to the expectations of the customer they should be ready to do it since it is very important for their survival.

A study on the internet users, conducted by IAMAI (Internet and Mobile Association of India) in 2006 found that about 23 percent of the online users prefer internet banking as the banking channel in India, second to ATM which is preferred by 53 percent. Various studies related to internet banking reveal that education, gender, income play an important role in the usage of Internet banking. Not much research has been done on these areas as they were focused more on the acceptance of technology rather than on people. The studies also reveal that if more emphasis is laid on customer awareness and training regarding internet banking then the customer would show greater interest in using internet banking. Also the share of online banking users is just (17.7%) in Delhi (IAMAI Report, 2006), so it gives us a sufficient reason to go on for this research work.

3.3 RESEARCH OBJECTIVES

In the section 3.2, the researcher has tried to identify the various research gaps prevailing in the scope of study. An analysis of these gaps put forward research questions covered under the current study. These questions are important to take the discussion ahead and may also help in defining the research objectives in operational terms. Some formal research questions raised by the preceding discussion helped us to lay down the objectives of the present research study, as follows:

(i) To find out the factors that enable internet banking in public, private and foreign sector banks.

(ii) To examine the variations in consumer perception in relation to the demographic variables and factors of internet banking.

(iii) To compare public, private and foreign sector banks in relation to internet banking.

(iv) To find out the benefits of internet banking in Delhi and National Capital Region.

(v) To suggest suitable strategies to public, private and foreign banks to change their consumers' perceptions.

3.4 RESEARCH HYPOTHESES

To conduct this research following hypotheses are formulated:

In order to achieve objective 2: To examine the variations in consumer perception in relation to the demographic variables and factors of internet banking the following hypotheses are formulated.

Hypothesis 1

H_0: The factors that enable internet banking do not differ across gender, place of residence, qualification, occupation, age group, income group of the consumers, respondents' association with the bank and respondents' experience of doing internet banking. The delineated hypotheses mentioned in chapters are as follows: -

H_{01}: The factors that enable internet banking do not differ across gender of the respondents.

H_{02}: The factors that enable internet banking do not differ across place of residence of the respondents.

H_{03}: The factors that enable internet banking do not differ across qualification of the respondents.

H_{04}: The factors that enable internet banking do not differ across occupation of the respondents.

H_{05}: The factors that enable internet banking do not differ across age group of the respondents.

H_{06}: The factors that enable internet banking do not differ across income group of the respondents.

H_{07}: The factors that enable internet banking do not differ across respondents' association with the bank.

H_{08}: The factors that enable internet banking do not differ across respondents' experience of doing internet banking.

The respective results have been presented in Chapter 4.

Further to achieve objective 3: To compare public, private and foreign banks in relation to internet banking the following hypothesis are formulated.

Hypothesis 2

H_{01}: The level of awareness and knowledge does not differ across the respondents of public sector, private sector and foreign sector banks.

H_{02}: The frequency of usage of internet banking services does not differ across the respondents of public sector, private sector and foreign sector banks.

H_{03}: The frequency of usage of internet banking transactions does not differ across the respondents of public sector, private sector and foreign sector banks.

H_{04}: The responses in relation to the elements of website does not differ across the respondents of public sector, private sector and foreign sector banks.

H_{05}: The responses in relation to the problems faced while using internet banking does not differ across the respondents of public sector, private sector and foreign sector banks.

H_{06}: The factors that enable internet banking does not differ across public sector, private sector and foreign sector banks.

The respective results have been presented in Chapter 4.

To further analyze various other aspects of the research work the forthcoming hypothesis are formulated.

Hypothesis 3

H_{01}: The level of awareness and knowledge does not differ across gender, place of residence, qualification, occupation, age group, income group of the consumers, respondents' association with the bank and respondents' experience of doing internet banking.

H_{02}: The frequency of usage of internet banking services does not differ across gender, place of residence, qualification, occupation, age group, income group of the consumers,

respondent's association with the bank and respondent's experience of doing internet banking.

H_{03}: The frequency of usage of internet banking transactions does not differ across gender, place of residence, qualification, occupation, age group, income group of the consumers, respondent's association with the bank and respondent's experience of doing internet banking.

The respective results have been presented in Chapter 5.

Hypothesis 4

H_{01}: The importance of elements of website does not differ across gender, place of residence, qualification, occupation, age group, income group of the consumers, respondents' association with the bank and respondents' experience of doing internet banking.

H_{02}: The frequency of problems faced by respondents while using internet banking does not differ across gender, place of residence, qualification, occupation, age group, income group of the consumers, respondents' association with the bank and respondents' experience of doing internet banking.

The results of these hypotheses are presented in Chapter 6. The results are presented in the form of delineated hypothesis.

3.5 SCOPE OF THE STUDY

The duration of the research work is from April 2012 to April 2016. The survey was limited to Delhi and NCR (Gurgaon, Faridabad and Noida). Since this region is fast developing into big business hub, with the double income group into demanding jobs, the use of internet banking is increasing as this is a facility which is available any time anywhere. Moreover internet banking is convenient and it saves both effort and time. The double income group due to shortage of time and with many other responsibilities to handle prefers doing internet banking as it is convenient for them and can be done as and when they find time in their busy schedules.

3.6 DATA COLLECTION

The logical step in research process after the identification of research variables and development of theoretical framework is to design the research in such a way that the

requisite data can be collected and analyzed. It is an arrangement of various aspects of research design, data collection methods and the data analysis process. To study this, the descriptive survey method of investigation coupled with various statistical techniques like Factor Analysis, t-test, Analysis of Variance (ANOVA) was used. The entire analysis part was analyzed on **SPSS 19.0** version. Mean score and standard deviation has also been used to interpret the results. Hence the present study is descriptive in nature.

3.6.1 Data Collection Methods

The study is based on both primary and secondary data. Secondary research review was done to understand the concepts of internet banking, its advantages, security issues related to it and website elements etc. The various secondary sources used for the purpose of study include annual reports of various banks, magazines, websites, journals and newspapers. The review of the existing literature helped in finding out the various reasons as to why the customer banks through internet and also in suggesting various strategies to public, private and foreign banks as to how they can change their consumers' perceptions. These also helped in framing the objectives of the study.

In order to collect the primary data for the present study a questionnaire is designed. The questionnaire is developed after discussion with some of the people who bank through the internet, carefully going through the literature related to internet banking and also after surfing the websites of various banks.

Utmost care was taken in formulating the questionnaire to match the targeted respondents with regard to their linguistic standard and awareness of the various aspects of internet banking. The questionnaire was sent for a pilot survey and only those people were contacted who do internet banking. A pilot survey was conducted in Faridabad and Gurgaon. A total of 70 questionnaires were distributed out of which only 50 were found fit for pilot survey. Response rate of 70 percent and over is necessary to ensure that the replies of those responding will give an accurate picture of the population from which they are drawn **(C.A. Moser & G. Kalton, 2001).** The outcome of the pilot study suggested to the researcher to change some of the questions and statements. The researcher amended and improved the same and few questions/variables were added while few options were modified, so that perceptual differences could be avoided as

much as possible. While conducting the survey, due attention was given to the respondents of different variables, i.e. gender, age groups, educational background, income etc. The major components of the research instrument are: awareness level of consumers regarding internet banking, various internet banking services, different transactions carried out by the customer, experience related to internet banking, problems faced by the customer during internet banking and various elements of website evaluation related to various internet banks.

3.6.2 Developing the Research Instrument: Questionnaire

After pre-testing the research instrument and making final selection of items, the final draft of the instrument was prepared. The questionnaire was divided into four parts. The first part of the questionnaire was related to the biographical information of the respondents. The second part has questions related to the level of awareness and knowledge of various consumers related to internet banking, various banking transactions which a customer does and various internet banking services which various banks are offering. The third part of the questionnaire consists of various statements related to the experience of consumer as far as internet banking is concerned. The fourth part of the questionnaire consists of various elements related to website evaluation and the problems related to internet banking. The 5-point Likert Scale was used to obtain the responses from the internet banking users. The value of the Likert scale format lies in the fact that respondents are asked to indicate how much they agree or disagree with the statement **(A. Burns and R. Bush, 1998)**. In this survey, respondents were asked to indicate as to what extents they agree or disagree with the various statements.

The following sub-sections deals with the sample designing and various statistical techniques used for the study.

3.6.3 Sampling Design and Sample Size

In the given study, the research problem focuses on finding out the consumer perception towards internet banking in relation to public, private and foreign sector banks. In order to get accurate results, a large sample size is required, which is not feasible for an individual researcher. The study had proposed to survey 450 respondents who are using internet banking from the public, private and foreign sector banks. Thus the researcher

distributed 700 questionnaires out of which only 450 questionnaires were found to be fit for the analysis.

The population of study is comprised of the internet banking consumers of public, private and foreign sector banks. As no list of users of internet banking was available, a convenience and purposive sampling was used to select respondents. For the purpose of selection of representative sample, initially some private sector banks situated in shopping malls, different branches of banks in commercial areas were surveyed, so as to collect location and addresses of private sector banks. Further the websites of different banks operating in NCR was also surfed to know the branch locations. However, by going through this method of sampling it has been ensured that all units of the population are adequately represented. This survey was restricted to NCR (Delhi, Noida, Gurgaon and Faridabad).

3.6.4 Statistical Techniques

After the collection of data, several statistical techniques are applied in order to perform the analysis of data collected by way of survey responses. The first step to analyze the data i.e coding of responses was performed. The process of coding is related to assigning numerical codes or other character symbols. The data from questionnaire is transferred to the data file in SPSS Version 19.0. The responses of the various questions were coded from 1 to 4, 5, 6 etc. depending on the number of options available for each question. To avoid human errors every 20^{th} coded questionnaire was checked for coding accuracy. After coding transcribing and editing of primary data was done.

For further analysis a number of statistical techniques were used. Univariate analysis is the simplest form of statistical analysis. Univariate analysis is commonly used in the first, descriptive stages of research, before being supplemented by more advanced, inferential bivariate or multivariate analysis **(A. Cooper and J. Weekes, 2006).** Univariate analysis involves frequency distribution, mean and standard deviation.

Further to perform the multivariate analysis, the study used the *Principal Component Analysis and Varimax with Kaiser Rotation* method of *Factor Analysis*.

3.6.4A Factor Analysis

Factor analysis is of two types: Exploratory (when factors are not pre-defined) and Confirmatory (when factors are defined). Exploratory factor analysis is a data reduction

technique used to reduce the number of statements into major factors. Each factor consists of similar statements, which are highly correlated. In the current study, for the purpose of the analysis relating to factors that enables internet banking in public, private and foreign banks the factor analysis was done. Each factor comprised of similar statements, which were inter-related. The *Factor Analysis* through the *Principal Component* Analysis (PCA) and *Varimax Rotation* were carried out over 58 statements (ANNEXURE I).

It was also ensured that the measuring instrument is fulfilling all the prerequisites of validity and reliability. **A.Burns and R.Bush (1998)** and **D.Cooper and P.Schindler (1998)** refer to various methods of assessing reliability (the degree that a measure supplies consistent results) such as – *retest, split-half reliability and Cronbach's alpha*.

For testing the reliability of the scale, Cronbach's alpha method is used. Testing of reliability of scale is very important as it shows the extent to which a scale produces consistent results if measurements are made repeatedly. Reliability can be defined as extent to which the measures are free from the random error. Its value varies from 0 to 1 but an alpha coefficient of 0.6 and above is considered to be good for research in social sciences **(N.K. Malhotra 2004)** and **(L.Cronbach 1990).** In the present study, Cronbach's alpha scale has been used as a measure of reliability. The latter is useful in indicating the degree to which instrument items are homogeneous and reflect the same underlying construct. Cronbach's alpha of the whole scale and for the set of the items on each factor for consumers was used to assess the consistency, which was found satisfactory.

Kaiser-Meyer-Oklin (KMO) Measure of Sampling Adequacy (ASA) and *Barlett's Test of Sphericity* **(M.S. Barlett, 1950)** has also been applied. The Kaiser-Meyer-Oklin (KMO) is a useful method of measuring the adequacy of data for factor analysis. The KMO value lies between 0 and 1 **(H.F. Kaiser, 1990)** and values below 0.5 imply that the factor analysis may not be appropriate generally, a value greater than 0.5 is desirable. High values indicate that factor analysis is appropriate.

Barlett's Test of Sphericity is the third test applied in this study for verifying the appropriateness of the data set for factor analysis. This test value should be significant,

i.e. having a significance value less than 0.5, which indicates that the data is appropriate for Factor Analysis.

3.6.4B t-Test, Analysis of Variance (ANOVA) And Post Hoc Test

Hypothesis Testing

After that the data was further analyzed by using *t-test and Analysis of Variance (ANOVA) for hypothesis testing*. The entire analysis part was analyzed on SPSS 19.0 Version.

ANOVA is tool for analysis of variance and is used to test statistical significance of differences in mean values of one variable in different categories of other variable. Number of categories of the other variable may be more than two. This test checks out whether the differences in means of various groups are significant or they are by chance only **(C.R. Kothari, 2006)**. These tests were used to examine the differences in the mean values of the dependent and independent variables. Essentially, *Analysis of Variance (ANOVA)* is used as a test of means for two or more populations. ANOVA can include more than one independent variable. Furthermore, at least one of the independent variables must be categorical and the categorical variables may have more than two categories. In ANOVA there are several different groups. For example, the difference in the opinions of consumers lying in the different age groups and consumers having difference in their qualifications could be tested by conducting ANOVA.

't-test' is another statistical tool to check the significance of differences in the means of dependent variables. But this test is used where the number of categories is two. In the current study it was used to study the impact of 'Gender' of the respondents.

Post Hoc Test

In this study Post-Hoc test is also applied to check the patterns and/or relationships between subgroups of sampled populations. It is implemented after application of one way ANOVA. Further after selecting the significant factors from one way ANOVA Levene statistic values calculated and these are tested as they are significant or non-significant. On Levene statistic significant values Games-Howel test is applied and on non-significant Levene statistic values Tuckey test is applied to test the significant relations between different groups.

3.7 CHAPTER PLAN

The entire study has been presented in the form of seven chapters. The structure of these chapters is described as follows:

Chapter I: Internet Banking: Concept, Development and Benefits

This chapter includes the introduction to banking industry; emergence of information technology in banking, technological innovations in the banking industry, internet banking websites and their importance, benefits of internet banking for consumers and banks and the last section explains the drawbacks of internet banking.

Chapter II: Review of Literature

This chapter describes review of literature. The review is related to role of information technology in banking sector, internet banking, factors which affect the adoption of internet banking and internet banking in public, private and foreign sector banks. It also includes studies related to awareness and knowledge related to internet banking. In order to give a detailed and complete platform to the study a good number of Indian as well as foreign studies have been included in this chapter.

Chapter III: Research Methodology

This chapter deals with the research methodology adopted to carry out the study. It exhibits the rationale of study, objectives of the research, method of sampling, technique of data collection, statistical techniques used to analyze the data, hypothesis framed and limitations of the present study.

Chapter IV: Analysis and Interpretation-I

This chapter contains two parts, where first part elaborates the various factors that enable internet banking in public, private and foreign sector banks and their association with demographic variables. The second part of the chapter deals with the results related to comparisons made among the triangle of banks. The results of factor analysis, ANOVA, and t-test are also included along with the results of Post Hoc tests.

Chapter V: Analysis and Interpretation –II

This chapter highlights the perception of respondents using internet banking regarding the level of awareness and knowledge, usage of internet banking services and transaction services. The results of factor analysis, ANOVA, and t-test are also included along with the results of Post Hoc tests.

Chapter VI: Analysis and Interpretation - III

This chapter deals with the discussion of association between demographic variables and the responses of respondents about importance of website elements and various problems faced by respondents while using internet banking. The results of ANOVA and t-test are presented in this chapter.

Chapter VII: Findings and Suggestions

This chapter highlights the findings from the thesis along with the conclusions and also suggests useful recommendations for public, private and foreign sector banks to improve the various internet banking services provided to their consumers. The chapter has also presented implications and future research directions in relation to the present research work.

The chapters are followed by bibliography on the research work and annexure.

3.8 LIMITATIONS OF THE STUDY

Any research work would have its own limitations. The researcher has identified the following limitations in the present study.

The data collected through sample survey is never free from biasness and inaccuracy in one respect or another. Hence, the data collected for the current study may not be free from some errors especially with respect to the respondents' adequate comprehension of the subject.

Internet banking is an emerging concept in India; the researcher faced some difficulty in getting the questionnaires filled due to the non serious attitude of the respondents. The researcher found lack of information regarding the level of awareness and knowledge regarding internet banking, website aspects related to internet banking etc. among the Indian consumers during the review of literature, thus the researcher had to rely on the studies conducted in other countries and the literature from various secondary sources.

The primary data has been collected from Delhi and NCR so the results of the study may not represent the geographical areas with diversity in culture, language, lifestyle, literacy rate, customs, traditions, etc in India. The sample size chosen for this study was 450 respondents; this representation can be another limitation of the study.

CHAPTER- IV

ANALYSIS AND INTERPRETATION- I

4.1 INTRODUCTION

The current chapter deals with the first, second and the third objectives of the research i.e. to find out the factors that enable internet banking in public, private and foreign banks, to examine the variations in consumer perception in relation to the demographic variables and factors of internet banking and third objective i.e. to compare public, private and foreign banks in relation to internet banking. To give a clear representation it has been decided to divide this chapter into two sections. The first section presents the results related to factor analysis and the association between the extracted factors and demographic variables. To achieve the objective a self administered questionnaire consisting of 58 statements is used to construct the factors. In total fifteen factors have been extracted by applying the Principal Component Analysis.

The second part is contributed to the results representing the comparison of triangle of banks i.e. public sector, private sector and foreign sector banks. The comparison is made on the basis of certain aspects namely factors that enable internet banking, level of awareness and knowledge, usage of services, usage of transactions, importance of website element and problems faced while using internet banking. To start with the analysis part first of all the table 4.1 related to frequency distribution is presented to know the distributive features of the primary data collected through survey.

Frequency Distribution of Primary Data

To analyze the primary collected data descriptive statistics such as frequency distribution, percentages, mean scores and standard deviations have been used as these techniques are widely used tools in this nature of data and best fitted. To test the null hypothesis t test/F test is used. These statistical techniques are run through SPSS version 19 for Windows.

Table 4.1: Distribution of Respondents on the Basis of Demographic Variables

S.No.	Demographic Variables	Categories	Frequency	Percent
	Frequency Distribution Related To Personal Details			
1.	Gender	Male	345	76.7
		Female	105	23.3
2.	Place of Residence	Delhi	117	26.0
		Gurgaon	102	22.7
		Noida	101	22.4
		Faridabad	130	28.9
3.	Qualification	Senior Secondary	82	18.2
		Graduation	168	37.4
		Post-Graduation	200	44.4
4.	Occupation	Business	40	8.88
		Public Sector Employee	52	11.5
		Private Sector Employee	281	62.4
		Professional	77	17.1
5.	Age Group	Less than 25 yrs	44	9.8
		25yrs to less than 35 yrs	290	64.4
		35 yrs to less than 45 yrs	87	19.3
		45 yrs to less than 60 yrs	29	6.4
6.	Income	Less than 3 lakhs p.a	53	11.8
		3 lakhs to less than 5 lakhs p.a	120	26.6
		5 lakhs to less than 10 lakhs p.a	134	29.8
		10 lakhs and above	143	31.8
	Frequency Distribution Related To Internet Banking			
7.	Category of the Bank	Public Sector	137	30.4
		Private Sector	192	42.7
		Foreign Sector	121	26.9
8.	Span of association with the Bank	Less than 1 year	14	3.1
		1 year to less than 3 years	145	32.2
		3 years to less than 5 years	104	23.1
		5 years and above	187	41.6
9.	Stretch of Internet Banking	Less than 1 year	58	12.88
		1 year to less than 3 years	149	33.11
		3 years to less than 5 years	106	23.55
		5 years and above	137	30.44

S.No.	Demographic Variables	Categories	Frequency	Percent
10.	Frequency of use of Internet for IB	Daily	62	13.78
		Weekly	130	28.89
		Fortnightly	46	10.22
		Monthly	71	15.78
		As and when required	141	31.33
11.	Place of access of Internet for Internet Banking activities	Personal system	316	70.2
		Official system	66	14.7
		Cybercafe	23	4.9
		Any system	45	10.0

Source: Prepared from Primary Data Analysis

Table 4.1 presents the demographic features of respondents which, reflects that out of the total 450 respondents 76.7 percent are males and 23.3 percent are females. The sample is confined to NCR, here 26 percent respondents are residing in Delhi, 22.7 percent in Gurgaon, 22.4 percent in Noida and 28.9 percent in Faridabad. Out of the total respondents surveyed 37.3 percent are graduate and 44.4 percent are post graduate. The majority i.e. 62.4 percent are private sector employees whereas 17.1 percent are professionals and 11.5 percent are public sector employees. Table further reveals that 64.4 percent of the respondents are in the age group of 25 years to less than 35 years, 19.3 percent are in the age group of 35 years to less than 45 years, 9.8 percent in the age group of less than 25 years and 6.4 percent in the age group of 45 years to less than 60 years. Moreover 31.8 percent of the respondents had their income 10 lakhs and above, 29.8 percent had income 5 lakhs to less than 10 lakhs per annum, 26.6 percent had 3 lakhs to less than 5 lakhs per annum and 11.8 percent had income less than 3 lakhs per annum.

Among the banks 42.7 percent of the respondents belonged to private sector banks 30.4 percent to public sector and 26.9 percent to foreign sector banks. As far as the association with the bank is concerned 41.6 percent of the respondents are associated with their respective bank for 5 years and above, 32.2 percent for 1 year to less than three years, 23.1 percent of the people have been associated for 3 years to less than 5 years and 3.1 percent for less than 1 year. As far as the use of internet banking is concerned 33.1 percent of the total respondents have been doing internet banking from 1 year to less than 3 years, 30.4 percent from 5 years and above, 23.5 percent from 3 years to less than 5

years and 12.8 percent from less than 1 year. Out of the total, 31.3 percent of the respondents use the internet for internet banking activities as and when required, 28.8 percent use it weekly, 13.7 percent use it daily, 15.7 percent use it monthly and only 10.2 percent use it fortnightly. As far as the place of access is concerned 70.2 percent respondents access internet for internet banking activities from their personal system, 14.7 percent from their official system, 10 percent from any system and only 4.9 percent from cybercafé.

4.2 FACTOR ANALYSIS

Factor analysis is a general name denoting a class of procedures primarily used for data reduction and summarization. In marketing research, there may be a large number of variables, most of which are correlated and which must be reduced to a manageable level. Relationships among sets of many interrelated variables are examined and represented in terms of a few underlying factors **(N.K. Malhotra, 2006).**

Principal Component Analysis:

Principal Components are particular linear combinations of the p random variables X_1, X_2 … …, X_P ; these linear combinations represents the selection of a new coordinate system obtain by rotating the original system with X_1, X_2, ……, X_P as the coordinate axes. The new axes represent the directions with maximum variability and provide a simpler and more parsimonious description of the covariance structure.

Principal Component Method of Factor Analysis, developed by H. Hotelling, seeks to maximum the sum of squared loadings of each factor extracted in turn. Accordingly, Principal Component factor explains more variance than would the loadings be explained from any other method of factoring. The aim of the Principal Component Method is the construction out of a given set of variables X_J's (J= 1, 2, 3, ……, k) of new variables (p_i), called Principal Components which are linear combinations of the X_s. Symbolically,

$P_1 = a_{11}X_1 + a_{12}X_2 + \ldots\ldots\ldots a_{1k}X_k$

$P_1 = a_{21}X_1 + a_{22}X_2 + \ldots\ldots\ldots a_{2k}X_k$

.....

.....

$P_1 = a_{k1}X_1 + a_{k2}X_2 + \ldots\ldots\ldots a_{kk}X_k$

The method is being applied mostly by using standardized variables, i.e.,

$z_j = (X_j - X^{\wedge}{}_j)^2 \ / \ \sigma_j$.

The a_{ij}'s are called loadings and are worked out in such a way that the extracted principal components satisfy two conditions: (i) principal components are uncorrelated (orthogonal) and (ii) the first principal component (P_1) has the maximum variance, the second principal component (P_2) has the next maximum variance and so on.

In order to identify and confirm specific components which have significant impact on customer's experience related to internet banking, the researcher run the Principal Component Analysis method on the data collected by using survey method.

Reliability Tests:

With an objective to determine the suitability of the data for factor analysis, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) and the Barlett's Test of Sphericity were applied. The Kaiser- Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) is a statistic that indicates the proportion of variance in the variables that might be caused by the reduced factors. Kaiser (1974) recommends that a bare minimum of 0.5 and that value between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb **(Hutcheson and Sofroniou, 1999, pp. 224-225).**

The results from these tests are given in table 4.2 and table 4.3 respectively

Table 4.2: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.882	.936	58

Table 4.3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.906
Bartlett's Test of Sphericity	Approx. Chi-Square	11439.214
	Df	1653
	Sig.	.000

High value of KMO 0.906 (>0.8) indicates that a factor analysis is quite useful for the data being used in this study. For these data the value of KMO falls in to the range of great. Similarly, the significant value for Barlett's test of sphericity is 0.000 which indicates that there exist significant relationships among variables. The obtained value shows that *Cronbach's Alpha* of the scale was 0.882, which is also considered satisfactory. The output of KMO and Barlett's tests supports the view that factor analysis is very much useful for the present data.

Factor Analysis was conducted on selected statements in order to find out the major factors, which enable internet banking in public, private and foreign banks.

The table 4.4 is showing mean and standard deviation of individual statements used in the questionnaire. There are total ten statements which have mean scores above 4. The high mean values reflect that the consumers are accepting that internet banking is an easy way of banking and it provides anywhere anytime banking. It also reduces the paper work. Further it facilitates online shopping and the transactions are accurate through internet banking. Also it is clear from the table that there are eight statements which have mean scores less than 3.50

Table 4.4: Mean and S.D of the Statements

S. No	Statements	Mean	Standard Deviation
S1	Easy way of banking	4.16	.743
S2	All portal claimed services are available immediately	3.93	.701
S3	Provides required service anywhere anytime	4.03	.736
S4	Makes work easier	4.24	.686
S5	Reduces paper work	4.28	.700
S6	Quick fund transfer	4.28	.700
S7	Facilitates online shopping	4.24	.686
S8	Facilitates online trading	3.89	.815
S9	Chances of fraud	3.30	.929

S. No	Statements	Mean	Standard Deviation
S10	A skilled helper is required for internet banking	2.91	1.090
S11	Trustworthy	3.76	.740
S12	Possibility of account being hacked.	3.32	.924
S13	Accurate transactions	4.13	.793
S14	Safe transactions	3.89	.726
S15	Anywhere anytime transaction	4.12	.791
S16	Less transaction cost	3.91	.748
S17	Greater control over finances	3.89	.786
S18	Manage finances more efficiently	3.93	.770
S19	Saves time	4.14	.802
S20	It provides the facility of networking with other banks	4.10	.780
S21	Regular updation of accounts is done	3.73	.860
S22	Quick response to the service requests.	3.68	.754
S23	Prompt and timely services	3.80	.671
S24	Internet bank's website is appealing.	3.66	.725
S25	Website is easy to navigate	3.93	2,51
S26	User friendly website	3.92	.663
S27	Up to date information on website	3.79	.761
S28	Complete information on website	3.72	.770
S29	Internet bank's website has a FAQ page	3.76	.784
S30	Site has contact details for complaints and suggestions	3.88	.704
S31	Website flashes important and new information	3.80	.706

S. No	Statements	Mean	Standard Deviation
S32	Site has online tutor to explain how to use the website	3.54	.823
S33	Website provides print facility of various forms	3.73	.771
S34	Easy access to services	3.89	.704
S35	Easy to understand instructions	3.78	.723
S36	Information about new services provided through e.mails.	3.66	.810
S37	Performs promised service dependably and accurately	3.69	.820
S38	Quick response to e-mail enquiries	3.48	.858
S39	Good complaint /grievances handling system	3.54	.784
S40	Provides SMS and e-mails regularly	3.80	.754
S41	Attends to your suggestions	3.47	.770
S42	Safe to make transactions with internet bank	3.70	.737
S43	Delay in the transactions due to problem in connectivity	3.40	.839
S44	Uncertain transaction completion time because of poor connectivity	3.31	.854
S45	Good privacy policy.	3.64	.740
S46	Strong security mechanism	3.70	.746
S47	Confidentiality of accounts.	3.73	.716
S48	All the transactions through internet banking are reliable	3.62	.742
S49	Warning alerts to solve problems , if they occur during transaction process	3.47	.795
S50	Hyperlinks on the portal are valid	3.61	.669
S51	Portal has a search engine and site map	3.60	2.057
S52	Internet bank satisfies the customer complaints within 24 hrs.	3.46	.764

S. No	Statements	Mean	Standard Deviation
S53	Keeps promise as advertised	3.48	.734
S54	Quick and easy registration process	3.70	.788
S55	Easy to open an internet banking account	3.78	.715
S56	It provides service right first time.	3.73	.661
S57	Provides customer feedback services	3.59	.736
S58	IB website provides economic news related to the Bank	3.36	.766

(1- *Strongly Disagree, 2-Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree)*

Factor Analysis is also used to reduce the dimension scales into smaller and manageable factors. The scale consisting of 58 items was analyzed. Factors are derived using Principal components and only factors with Eigen values 1 or greater than 1 were included. Factors were rotated using the Varimax Rotation method and factor loading greater than +/- .40 were retained and 55 statements in context to internet banking were further kept for analysis. In total 3 statements (S11, S14, S15,) which are having factor loading less than .40 were dropped from the study.

The Communalities which give the proportion of variance for each of the original variable preserved in the factor solution are listed in the last column of table 4.5.

Table 4.5: Results of Factor Analysis

Component	Initial Eigen values			Extraction Sum of squared loadings			Rotation Sums of Squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	14.209	24.498	24.498	14.209	24.498	24.498	6.304	10.868	10.868
2	4.079	7.032	31.530	4.079	7.032	31.530	3.828	6.600	17.468
3	2.075	3.578	35.108	2.075	3.578	35.108	3.211	5.537	23.005
4	1.939	3.343	38.452	1.939	3.343	38.452	2.952	5.089	28.094
5	1.867	3.218	41.670	1.867	3.218	41.670	2.649	4.567	32.661

Component	Initial Eigen values			Extraction Sum of squared loadings			Rotation Sums of Squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
6	1.683	2.901	44.571	1.683	2.901	44.571	2.624	4.524	37.185
7	1.399	2.412	46.983	1.399	2.412	46.983	2.296	3.958	41.143
8	1.376	2.372	49.355	1.376	2.372	49.355	2.271	3.916	45.059
9	1.313	2.264	51.619	1.313	2.264	51.619	1.873	3.229	48.288
10	1.252	2.159	53.778	1.252	2.159	53.778	1.775	3.060	51.348
11	1.230	2.121	55.898	1.230	2.121	55.898	1.596	2.752	54.100
12	1.166	2.010	57.909	1.166	2.010	57.909	1.447	2.495	56.595
13	1.118	1.928	59.837	1.118	1.928	59.837	1.414	2.439	59.033
14	1.080	1.862	61.699	1.080	1.862	61.699	1.366	2.356	61.389
15	1.030	1.776	63.475	1.030	1.776	63.475	1.210	2.086	63.475

(Table : Total Variance Explained)

Extraction Method: Principal Component Analysis

Rotation Method : Varimax with Kaiser Normalisation

Table 4.5 shows the output of the factor analysis, the rotated factor matrix comprising all variables, the percent of variance, and cumulative percent of variance and Eigen values of all factors having Eigen values of 1 or more than 1. Total fifteen components are extracted from rotation matrix out of 55 statements. The cumulative percent values of variance are 24.498, 31.530, 35.108, 38.452, 41.670, 44.571, 46.983, 49.355, 51.619, 53.778, 55.898, 57.909, 59.837, 61.699, 63.475. These fifteen extracted factors together account for 63.47 percent of cumulative variance. It means, it seems economizes to retain 63 percent of information by fifteen extracted factors and only 37 percent of information is lost. This reflects considerable contribution of these factors in carrying out internet banking.

Further table 4.6 shows the results of factor analysis along with the factor labels. Each of the statement stated in table highlights the factors enabling internet banking in Public,

Private and Foreign Sector Banks. A factor loading represents a correlation between an original statement and its factors. Factor loading is nothing but coefficient of correlation.

Table 4.6: Results of the Factor Analysis and Factor Labels

Sr. No	Statements	Factor Loadings	Factor name
1.	**S1-** Easy way of banking	.751	**CONVENIENCE & PROMPTNESS**
	S2- All portal claimed services are available immediately	.652	
	S3- Provides required service anywhere anytime	.655	
	S4- Makes work easier	.826	
	S5- Reduces paper work	.787	
	S6- Quick fund transfer	.773	
	S7- Facilitates online shopping	.405	
	S8- Facilitates online trading	.462	
	S19- Saves time	.512	
	S22 - Quick response to the service requests.	.413	
	S23- Prompt and timely services	.432	
			SECURITY
2.	**S27**-Upto date information on the website	.418	
	S42- Safe to make transactions with internet bank	.479	
	S45- Good privacy policy.	.737	
	S46- Strong security mechanism	.781	
	S47- Confidentiality of accounts	.715	
	S48- All the transactions through internet banking are reliable	.618	
	S49- Warning alerts to solve problems, if they occur during transaction process	.406	
			CUSTOMER CARE
3.	**S28-** Complete information on website	.402	
	S36-Information about new services provided through e.mails	.497	
	S38- Quick response to e-mail enquiries	.600	
	S39- Good complaint /grievances handling system	.640	
	S40- Provides SMS and e-mails regularly	.402	
	S41- Attends to your suggestions	.500	

Sr. No	Statements	Factor Loadings	Factor name
4.	**S30-**Site has contact details for complaints and suggestions	.499	**INTERACTIVITY**
	S31- Website flashes important and new information	.608	
	S32- Site has online tutor to explain how to use the website	.414	
	S33- Website provides print facility of various forms	.734	
	S34- Easy access to services	.653	
	S35- Easy to understand instructions	.509	
5.	**S54-** Quick and easy registration process	.771	**RESPONSIVENESS**
	S55- Easy to open an internet banking account	.694	
	S56- It provides service right at first time.	.454	
6.	**S16-** Less transaction cost	.516	**EFFICIENT TRANSACTION MANAGEMENT**
	S17- Greater control over finances	.798	
	S18- Manage finances more efficiently	.763	
7.	**S24-** Internet bank's website is appealing	.653	**USER FRIENDLY WEBSITES**
	S25- Website is easy to navigate	.628	
	S26- User friendly website	.526	
	S29-Internet banks' website has a FAQ page	.460	
8.	**S50-** Hyperlinks on the portal are valid	.581	**TRUSTWORTHY**
	S52- Internet bank satisfies the customer complaints within 24 hrs.	.699	
	S53- Keeps promise as advertised	.542	
9.	**S9-** Chances of fraud	.773	**RISK ENHANCEMENT**
	S12- Possibility of account being hacked.	.645	
10.	**S20-**It provides the facility of networking with other banks	.454	**CONNECTIVITY**
	S43- Delay in the transactions due to problem in connectivity	.733	
	S44- Uncertain transaction completion time because of poor connectivity.	.701	

Sr. No	Statements	Factor Loadings	Factor name
11.	**S57-** Provides customer feedback services	.543	**INFORMATIVE**
	S58- IB website provides economic news related to the Bank	.699	
12.	**S10-** A skilled helper is required for internet banking	.730	**ADDITIONAL SUPPORT SERVICES**
13.	**S37-** Performs promised service dependably and accurately	.832	**PROMISED SERVICE DELIVERY**
14.	**S51-** Portal has a search engine and site map	.728	**GUIDE**
15.	**S13-** Accurate transactions	.691	**ACCURACY**
	S21- Regular updation of accounts is done.	-.424	

Factor 1: *Convenience and Promptness*

The first factor is related to ***Convenience and Promptness*.** It consists of 11 important statements of internet banking. The statement '*Makes work easier'* has the highest factor loading 0.826. Next in the order *'Reduces paper work'* and '*Quick fund transfer'* have factor loadings 0.787 and 0.773 respectively. The statement *'Easy way of banking'* has a factor loading 0.751. All these indicate that a respondent is happy doing internet banking because it is an easy way of doing banking, is reliable and it actually reduces the paper work which is done in traditional banking. Other statements like '*Provides required service anywhere anytime'* and '*All portal claimed services are available immediately'* have factor loadings 0.655 and 0.652 respectively. These indicate that internet banking provides convenience of any where any time. The next parameter '*Saves time'* has a factor loading 0.512. This is another important factor which supports the fact that internet banking helps in saving time. Other factors like, '*Facilitates online trading* 'and '*Prompt and timely services'* have a factor loading 0.462 and 0.432 respectively. These further

support the fact that internet banking saves a good amount of time. Other statements like '*Quick response to the service requests*' has a factor loadings 0.413 which, clearly highlights that internet banking is becoming popular as it provides quick response to the request of the respondents. The statement '*Facilitates online shopping'* has a factor loading 0.405. The respondents feel that internet banking makes online shopping convenient for the users.

R. Suganthi, K.G. Balachandher & V. Balachandran (2001), Awamleh, R.,Fernandes (2005), G. Goel, T. Nandan and K.A. Upadhyay (2008) in their study also mentioned 'convenience' as one of the factor.

Factor 2: *Security*

The next factor is related to ***Security*** associated with Internet Banking. The statement '*Strong security mechanism*' has the highest factor loading 0.781. The statements '*Good Privacy policy*' and '*Confidentiality of accounts*' have factor loadings 0.737 and 0.715 respectively. These indicate that security is highly important as far as various internet transactions are related. The statement 'A*ll the transactions through internet banking are reliable'* has factor loading 0.618 which signifies the reliability of various internet transactions. The statement '*Safe to make transactions with the internet ban*k' has a factor loading 0.479 which further supports the factor security that the respondent should feel safe while doing the transactions with the internet bank. The statement '*Warning alerts to solve problems, if they occur during the transaction process'* has factor loading 0.406. All these point to the security related to internet banking transactions. The respondents should get updated information on the website and in case there is any problem he should also get a warning alert.

R. Suganthi, K.G. Balachandher & V. Balachandran (2001), Awamleh, R.,Fernandes (2005), in their study also mentioned 'security' as one of the factors where as S. Mansumitrchai, C.R. Sanchez, D.M.Arreola, & M.S.Minor (2006) mentioned 'security and computer proficiency' as one of the factors. S.V. Seshaiah and V. Narender (2007) also mentioned 'security of environment' as one of the factors that affect the choice of customers.

Factor 3: *Customer Care*

The next factor that governs internet banking is ***Customer Care***. The statement '*Good complaint /grievances handling system*' has factor loading 0.640 which, indicates that an internet bank's website cares for the customer and tries to handle the complaints of the consumers. The next statement '*Quick response to e-mail enquiries'* has a factor loading 0.600 whereas '*Attends to your suggestion'* has a factor loading 0.500. Both these again point towards the caring attitude of the internet banks' website. The statement '*Complete information on the website*' has a factor loading 0.402, and '*Provides SMS and e-mails regularly'* has factor loading 0.402. All these statements indicate that the website of an internet bank plays a very important role in successfully carrying out internet banking activities. The website should try to satisfy the needs of the respondents and should ensure repeat visits of the respondents on the website. An interactive and content full website creates added value and highly motivates customer repeated visits. A more usable website can attract and retain customers in the long run thereby increasing revenues, reducing customer support costs and increasing profits (J. Mielsen, G.J. Udo, and G.P. Marquis, 2001).

Factor 4: *Interactivity*

A website plays a very important role in the success of internet banking. In case of traditional banking a customer could approach the bank in case of any problem whereas in case of internet banking a website needs to play the same role. So the website needs to be as interactive as possible. Therefore, the next factor is ***Interactivity***. The statement '*Website provides print facility of various forms'* has a factor loading 0.734 which indicates the importance of the website. The availability of the forms on the website makes it convenient for the consumers doing internet banking. The next statement '*Easy access to services'* has a factor loading 0.653. This emphasizes that for a respondent the access to the services is easy in case of internet banking. Therefore, the respondents find it convenient to access theses services. The statement '*Website flashes important and new information'* with factor loading of 0.608 is also an indication of the fact that the website provides all the important and latest information to the consumers. Other statements like

'Site has online tutor to explain how to use the website' with a factor loading of 0.414, *'Easy to understand instructions'* with a factor loading 0.509. All these statements indicate that the website should be interactive enough in explaining the instructions to the consumers and solving their complaints. It should be easier for a consumer to understand the instructions available on the internet banks' website.

Factor 5: *Responsiveness*

The next factor affecting internet banking is ***Responsiveness.*** The statement '*Quick and easy registration process'* has a factor loading 0.771. This indicates that the website of an internet bank is responsive. It helps in quick and easy registration process. The statement '*Easy to open an internet banking account'* and '*It provides service right at first time'* have factor loading 0.694 and 0.454 respectively. All these support the fact that the website is responsive. It responds quickly to the consumer's requests. It immediately provides the service right at the very first time and the opening of an internet bank account is a simple process.

Factor 6: *Efficient Transaction Management*

Another factor affecting internet banking is ***Efficient Transaction Management.*** The statements '*Greater control over finances'* and '*Manage finances more efficiently*' have factor loading 0.798 and 0.763 respectively. These highlight that internet banking actually helps in exercising greater control over the finances and hence helps in managing funds more efficiently. The statement '*Less transaction cost'* also has a factor loading 0.516. Thus the transaction cost is comparatively less when the users go in for transactions through internet banking.

Factor 7: *User Friendly Websites*

The next factor affecting internet banking is ***User Friendly Websites.*** The statements '*Internet bank's website is appealing*' and '*Website is easy to navigate'* have factor loadings 0.653 and 0.628 respectively. These basically indicate that a banks' website should definitely be appealing and should be easy to navigate. Only then the respondent will feel convenient interacting with the websites. Next statement like '*User friendly website*' have factor loading 0.526. All these statements support the fact that the website of the bank needs to be user friendly. It even has a FAQ page which gives the answers to

the questions of the respondents. The interaction of the consumer has to be done with the banks' website instead of a physical person. So the website needs to have all the links which help the consumer in one way or the other.

Factor 8: *Trustworthy*

The next factor that affects internet banking is ***Trustworthy.*** The statement '*Internet bank satisfies the customer complaints within 24 hrs'* has a factor loading 0.699. It basically reflects that the internet bank is trustworthy. The consumer can rely that if they log on any complaint with the internet bank, the complaint would be solved within 24 hrs. This great assurance for the consumer that they can get a solution to their problem within 24 hrs. Other statements like '*Hyperlinks on the portal are valid'* and '*Keeps promise as advertised'* have factor loadings 0.581 and 0.542 respectively. This is in favour of the fact that the site of a bank is trustworthy. All the hyperlinks on the portal are valid. Whenever we click on any hyperlink it connects us to the services as mentioned in that particular hyperlink. Moreover whatever is advertised by the internet bank they try to keep their promise as advertised. Hence the consumer has trust in the internet bank. Trust plays a very important role as it helps in ensuring the loyalty of the consumers towards the internet bank.

R. Suganthi, K.G. Balachandher & V. Balachandran (2001) in their study also mentioned 'trust in one's bank' as one of the factors whereas S. Mansumitrchai, C.R. Sanchez, D.M. Arreola, & M.S.Minor (2006) mentioned 'trustworthy'.

Factor 9: *Risk Enhancement*

Risk Enhancement is another factor that affects internet banking. The statement '*Chances of fraud*' has a factor loading 0.773.This basically signifies that the internet banking enhances the risk. All the transactions are virtual. There is actually no physical transaction like in a physical bank or traditional banking. Just with a help of a click funds can be transferred from one account to the other. Hence the risk is enhanced. The person is not sure about his transaction until and unless he sees his updated accounts on the screen. Moreover the statement '*Possibility of account being hacked'* has a factor loading 0.645. Talking about risk enhancement the consumer has the fear that his account may be hacked. This is due to the fact that the security of the account is all behind a password. If

somebody is able to hack the password the account may be hacked. Thus Risk Enhancement is another factor that affects internet banking.

Factor 10: *Connectivity*

Connectivity is another factor that affects internet banking. The statement '*Delay in the transactions due to problem in connectivity*' has a factor loading 0.733. In internet banking the transactions are often delayed due to problem in connectivity. The completion time is uncertain for the transactions because of poor connectivity. This is supported by the factor loading 0.701 the statement '*Uncertain transaction completion time because of poor connectivity'*. Both these statements reflect that connectivity plays a very important role as far as internet banking is concerned. Connectivity can delay the transactions. The consumer does not have any idea as to when the transaction would be completed.

Factor 11: *Informative*

Informative is another factor that affects internet banking. The statement '*Provides customer feedback services'* has a factor loading 0.543. This supports the fact that the internet banks' website is really informative. It provides all the information that is required by the respondent. It even provides the necessary feedback services that are required by the consumers. The statement '*IB website provides economic news related to the bank'* even has a factor loading 0.699 which again supports the factor namely '*Informative*'. The website of an internet bank is informative enough to provide all the information related to the economic news of the bank. The more the site of the bank is informative the more it is going to influence the consumers to log in to these sites in order to carry out various kinds of transactions.

Factor 12: *Additional Support Services*

A customer who is interacting with an internet bank requires some or the other support services which help him to execute various types of transactions. The websites of internet banks provide some ***additional support services*** which are supported by the statement '*A skilled helper is required for internet banking'* which has a factor loading 0.730.

Factor 13*: Promised Service Delivery*

In order to ensure consumer satisfaction every internet bank needs to keep its promises. It should deliver all the services that have been committed and promised by it. This will even help in building the consumer trust and confidence in the bank. Thus another factor that affects internet banking is ***Promised Service Delivery*** which is supported by the factor loading 0.832 of the statement '*Performs promised service dependably and accurately'*. It means that a consumer can depend on an internet bank. The banks try its level best to deliver the services accurately.

Factor 14: *Guide*

An internet bank acts as ***Guide*** for the consumer. It tries to help the consumer whenever he is stuck up. Like a guide it guides the consumers every now and then. This is supported by the statement 'P*ortal has a search engine and site map'* with a factor loading 0.728. The portal of the bank has a search engine which helps in searching any required facility. It even provides a site map so as to assist the consumers and provide them with whatsoever services required as and when desired. Thus the internet bank acts as a guide and provides guidance to the consumers from time to time.

Factor 15: *Accuracy*

Accuracy is another factor that affects internet banking. The statement '*Accurate transactions'* has a factor loading 0.691. This signifies that whatever transactions are carried out by an internet bank is accurate. Also the statement '*Regular updation of accounts is done*' has a factor loading -0.424. In internet banking all the accounts are regularly updated. As soon as any transaction is done the accounts are updated immediately. This helps in ensuring consumer satisfaction and building up the consumer's confidence that whatever transactions are done through an internet bank are accurate.

S.V. Seshaiah and V. Narender (2007) also mentioned 'accuracy' as one of the factors that affect the choice of consumers in choosing the retail banks by the consumers.

4.3 OVERALL MEAN VALUES OF FACTORS THAT ENABLE INTERNET BANKING

After extracting the factor in the last section it is also important to know the mean scores of each respective factor individually so that a clear picture of different factors can be achieved to interpret the results. Further the data analysis below help to find out the relation between various demographic variables and factors that enable internet banking (15 which are extracted from study).

Table 4.7: Mean and Ranking of Various Factors that Enable Internet Banking

S.No.	Factors	Mean	Rank	Standard Deviation
1.	Convenience & Promptness	2.98	11	.421
2.	Security	1.71	13	.245
3.	Customer Care	1.44	15	.214
4.	Interactivity	1.50	14	.225
5.	Responsiveness	3.73	4	.608
6.	Efficient Transaction Management	3.90	2	.652
7.	User Friendly Websites	3.81	3	.838
8.	Trustworthy	3.51	8	.567
9.	Risk Enhancement	3.31	10	.767
10.	Connectivity	3.60	6	.933
11.	Informative	3.47	9	.637
12.	Additional Support Services	2.91	12	1.09
13.	Promised Service Delivery	3.68	5	2.54
14.	Guide	3.59	7	2.05
15.	Accuracy	3.92	1	1.31

(1-Strongly Disagree, 2-Disagree, 3- Neutral, 4-Agree, 5-Strongly Agree)

The data analysis in table 4.7 depicts the ranking of various factors affecting internet banking usage along with their mean scores and respective standard deviations. An attempt is also made to measure the importance of factors which affect the usage of internet banking. It can be gauged from the table that the factors '*Accuracy*', '*Efficient Transaction Management*', '*User Friendly websites*', '*Responsiveness*' and '*Promised Service Delivery*' are highly perceived factors which affect the use of internet banking. The factors '*Connectivity*' and '*Guide*' are the next important factors. It can be concluded from the table that the respondents residing in NCR are very busy so they need accurate

and efficient transactions through internet banking. Further to complete the transactions they need user friendly websites.

4.3.1 Results of t-Test and ANOVA

The management research has proved the fact that the demographic variables of the respondents have significant impact on different aspects studied. Hence to know the impact of respondents' demography on the factors that enable internet banking t-test and ANOVA are used. Further the hypothesis developed in chapter 3 is also studied in this chapter.

Gender of the Respondents

Hypothesis: The factors that enable internet banking do not differ across the gender of the respondents.

Table 4.8: Factors that Enable Internet Banking Across Gender of the Respondents

S.No.	Factors	Male	Female	t- value (Sig.) hypothesis
1.	Convenience & Promptness	2.97	3.00	-.585 (.560) Accepted
2.	Security	1.71	1.71	-.140 (.889) Accepted
3.	Customer Care	1.44	1.44	.098 (.922) Accepted
4.	Interactivity	1.50	1.50	.300 (.765) Accepted
5.	Responsiveness	3.71	3.82	-1.831 (.069) Accepted
6.	Efficient Transaction Management	3.93	3.83	1.388 (.167) Accepted
7.	User Friendly Websites	3.85	3.69	2.153 (.032)* Rejected
8.	Trustworthy	3.52	3.49	.395 (.694) Accepted
9.	Risk Enhancement	3.30	3.33	- .279 (.781) Accepted
10.	Connectivity	3.53	3.80	- 1.624 (.107) Accepted
11.	Informative	3.45	3.52	-.901 (.369) Accepted

12.	Additional Support Services	2.93	2.83	.850 (.396) Accepted
13.	Promised Service Delivery	3.57	4.05	-.966 (.336) Accepted
14.	Guide	3.60	3.56	.323 (.747) Accepted
15.	Accuracy	3.93	3.90	.335 (.738) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

The table 4.8 represents the relation between the various factors of internet banking and the demographic variable gender. The table represents the mean scores of males and females with respect to various factors of internet banking. The results in the table reflect that t value for '*User Friendly Websites' is 2.153 (.032)* which is significant at .05 percent level of significance. Hence there is significant difference in the opinion of males and females in relation to this internet banking factor. For all the other factors of internet banking there is no significant difference in the opinion of the males and females. The acceptance and rejection of hypothesis is also shown in the last column of the table.

Place of Residence

Hypothesis: The factors that enable internet banking do not differ across the place of residence of the respondents.

The F values in the table 4.9 depict the relations between the various factors of internet banking and the demographic variable namely place of residence. The factors '*Responsiveness'* and *'Efficient Transaction Management'* are significant at .01 percent level of significance. This indicates that there is significant difference in the opinion of the respondents residing in Delhi, Faridabad, Gurgaon and Noida as far as these two factors of internet banking are concerned. The mean scores for the factor '*Responsiveness'* are highest for Faridabad. Whereas, for the factor '*Efficient Transaction Management'* the mean scores are highest for Faridabad and Delhi. Talking about the factors, '*Convenience & Promptness'* and '*Connectivity'* their mean difference are significant at .05 percent level of significance. This means that there is significant difference in the opinion of the consumers residing in different areas of NCR in relation to the above mentioned factors of internet banking. Similarly the mean scores for

'*Convenience & Promptness'* and '*Connectivity'* are also highest for respondents of Faridabad.

Table 4.9 : Factors that Enable Internet Banking Across Place of Residence of the Respondents

S.No.	Factors	Delhi A1	Gurgaon A2	Noida A3	Faridabad A4	F(Sig.) Hypothesis
1.	Convenience & Promptness	3.01	2.91	2.91	3.03	2.619 (.050)* Rejected
2.	Security	1.72	1.67	1.74	1.70	1.644 (.178) Accepted
3.	Customer Care	1.45	1.40	1.45	1.45	1.692 (.168) Accepted
4.	Interactivity	1.50	1.48	1.51	1.51	.446 (.720) Accepted
5.	Responsiveness	3.75	3.56	3.75	3.83	4.023 (.008)** Rejected
6.	Efficient Transaction Management	3.98	3.71	3.91	3.98	4.088 (.007)** Rejected
7.	User Friendly Websites	3.83	3.67	3.79	3.92	1.720 (.162) Accepted
8.	Trustworthy	3.56	3.42	3.51	3.54	1.355 (.256) Accepted
9.	Risk Enhancement	3.35	3.13	3.36	3.38	2.320 (.075) Accepted
10.	Connectivity	3.66	3.37	3.59	3.72	2.974 (.031)* Rejected
11.	Informative	3.53	3.34	3.46	3.51	1.926 (.125) Accepted
12.	Additional Support Services	2.74	3.04	3.00	2.89	1.709 (.164) Accepted
13.	Promised Service Delivery	3.58	3.47	3.70	3.94	.765 (.514) Accepted
14.	Guide	3.50	3.45	3.46	3.90	1.331 (.264) Accepted
15.	Accuracy	3.92	3.99	3.81	3.97	.401 (.752) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 4.10: Results of Post Hoc Test

S.No.	Factors	Levene's Statistics	Sig. Value	Post Hoc Test Applied	Significant Pairs
1.	Convenience & Promptness	5.283	.001	Games-Howell	A3 Vs A4
2.	Responsiveness	3.684	.012	Games-Howell	A2 Vs A4
3.	Efficient Transaction Management	6.422	.000	Games-Howell	A1 Vs A2 A2 Vs A4
4.	Connectivity	.736	.531	Tukey	A2 Vs A4

The results of post hoc test in table 4.10 depicts that for the factors of internet banking namely , *'Convenience & Promptness', 'Responsiveness' and 'Connectivity'* there is one significant pair whereas in case of factor '*Efficient Transaction Management'* there are two significant pairs.

Qualification of the Respondents

Hypothesis: The factors that enable internet banking do not differ across the qualification of the respondents.

Talking about the next demographic variable i.e qualification' the F Values in the table 4.11 suggest that the internet banking factors, '*Convenience & Promptness' and 'Promised Service Delivery'* both are significant at .01 percent level of significance. Hence there is significant difference in the opinion of respondents who have done senior secondary, are graduates or post graduate in relation to the above mentioned factors of internet banking. The mean scores for the factor i.e. *'Convenience & Promptness'* is highest in case of Post Graduate. This signifies that the respondents who are post graduates show a greater association with the factor '*Convenience & Promptness'*. Talking about the next factor '*Promised Service Delivery'* the mean scores are more in case of graduates. Hence there is a greater association of graduate respondents towards the factor '*Promised Service Delivery'*.

Table 4.11: Factors that Enable Internet Banking Across Qualification of the Respondents

S.No	Factors	S. Secondary A1	Grad. A2	P.G A3	F (Sig) Hypothesis
1.	Convenience & Promptness	2.75	2.96	2.97	6.682 (.000)** Rejected
2.	Security	1.72	1.71	1.71	.337 (.798) Accepted
3.	Customer Care	1.27	1.45	1.44	1.452 (.227) Accepted
4.	Interactivity	1.41	1.51	1.50	.499 (.683) Accepted
5.	Responsiveness	3.66	3.74	3.73	.083 (.969) Accepted
6.	Efficient Transaction Management	4.11	3.88	3.92	.374 (.771) Accepted
7.	User Friendly Websites	3.41	3.72	3.87	1.770 (.152) Accepted
8.	Trustworthy	3.27	3.54	3.50	.760 (.517) Accepted
9.	Risk Enhancement	2.83	3.30	3.33	.980 (.402) Accepted
10.	Connectivity	3.22	3.66	3.56	.853 (.465) Accepted
11.	Informative	3.16	3.47	3.47	.921 (.430) Accepted
12.	Additional Support Services	2.50	3.02	2.84	1.299 (.274) Accepted
13.	Promised Service Delivery	3.00	3.61	3.57	13.417 (.000)** Rejected
14.	Guide	3.16	3.63	3.58	.117 (.950) Accepted
15.	Accuracy	3.58	3.86	3.96	.478 (.698) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

The results of Post Hoc test in table 4.12 depicts that for the factors of internet banking, *'Convenience & Promptness' and 'Promised Service Delivery'* there are no significant pairs.

Table 4.12: Results of Post Hoc Test

S.No.	Factors	Levene's Statistics	Significant Value	Post Hoc Test Applied	Significant Pairs
1.	Convenience & Promptness	9.612	.000	Games-Howell	-
2.	Promised Service Delivery	79.648	.000	Games-Howell	-

Occupation of the Respondents

Hypothesis: The factors that enable internet banking do not differ across the occupation of the respondents.

The table number 4.13 depicts the relationship between factors that enable internet banking and the demographic variable occupation. The F values in the table suggest that the factors affecting internet banking namely, '*Convenience & Promptness'*, '*Security', 'Responsiveness' and 'Risk Enhancement'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of respondents with different occupations in relation to the above mentioned factors of internet banking. Also the factor '*Informative'* is significant at .05 percent level of significance. Hence there is significant difference in the opinion of respondents with different occupations in relation to the above mentioned factors of internet banking

Table 4.13: Factors that Enable Internet Banking Across Occupation of the Respondents

S.No.	Factors	Business A1	Public Sector A2	Private Sector A3	Professional A4	F (Sig.) Hypothesis
1.	Convenience & Promptness	2.88	3.00	3.02	2.83	4.748 (.003)** Rejected
2.	Security	1.72	1.68	1.73	1.63	3.850 (.010)** Rejected
3.	Customer Care	1.44	1.42	1.45	1.40	1.393 (.244) Accepted

S.No.	Factors	Business A1	Public Sector A2	Private Sector A3	Professional A4	F (Sig.) Hypothesis
4.	Interactivity	1.57	1.52	1.50	1.47	1.467 (.223) Accepted
5.	Responsiveness	3.89	3.71	3.78	3.51	4.948 (.002)** Rejected
6.	Efficient Transaction Management	4.08	3.82	3.94	3.79	2.094 (.100) Accepted
7.	User Friendly Websites	3.65	3.62	3.89	3.73	2.418 (.066) Accepted
8.	Trustworthy	3.43	3.45	3.56	3.41	1.858 (.136) Accepted
9.	Risk Enhancement	3.10	3.59	3.31	3.17	4.183 (.006)** Rejected
10.	Connectivity	3.58	3.80	3.62	3.37	2.467 (.062) Accepted
11.	Informative	3.60	3.30	3.51	3.37	2.765 (.042)* Rejected
12.	Additional Support Services	3.00	2.77	2.90	3.02	.665 (.574) Accepted
13.	Promised Service Delivery	3.55	3.63	3.75	3.52	.216 (.885) Accepted
14.	Guide	3.37	3.49	3.69	3.39	.621 (.601) Accepted
15.	Accuracy	3.81	4.01	3.99	3.67	1.333(.263) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 4.14: Results of Post Hoc Test

S.No.	Factors	Levene's Statistics	Significant Value	Post Hoc Test Applied	Significant Pairs
1.	Convenience & Promptness	.977	.403	Tukey	A3 Vs A4
2.	Security	.145	.933	Tukey	A3 Vs A4
3.	Responsiveness	.356	.785	Tukey	A3 Vs A4 A1 Vs A4
4.	Risk Enhancement	.621	.602	Tukey	A1 Vs A2 A2 Vs A4
5.	Informative	4.194	.006	Games-Howell	-

The results of post hoc test in table 4.14 depicts that for the factors of internet banking, '*Convenience & Promptness'* and *'Security'* there is just one significant pair i.e. between private sector and professional. On the other hand in case of factors, '*Responsiveness'* and '*Risk Enhancement'* there are two significant pairs for each factor. The factor *'Informative'* however has no significant pair.

Age Group of the Respondents

Hypothesis: The factors that enable internet banking do not differ across the age group of the respondents.

Talking about the next demographic variable, 'age group', the F Values in the table 4.15 suggest that the various factors of internet banking '*Security', 'Additional Support Services*, and *'Promised Service Delivery*' are significant at .01 percent level of significance. Hence there is significant difference in the opinion of respondents with different age groups for these factors of internet banking. Talking about the next factor, *'Efficient Transaction Management'* it is significant at .05 percent level of significance. Hence there is significant difference in the opinion of respondents with different age groups for this factor of internet banking

Table 4.15: Factors that Enable Internet Banking Across Age Group of the Respondents

S.No.	Factors	<25 yrs A1	25 to < 35 yrs A2	35 to < 45 yrs A3	45 to < 60 yrs A4	F (Sig.) Hypothesis
1.	Convenience & Promptness	2.98	2.96	3.05	2.87	1.627 (.182) Accepted
2.	Security	1.76	1.71	1.71	1.56	4.335 (.005)** Rejected
3.	Customer Care	1.49	1.44	1.43	1.38	1.485 (.218) Accepted
4.	Interactivity	1.55	1.50	1.49	1.47	1.037 (.376) Accepted
5.	Responsiveness	3.85	3.71	3.76	3.73	.782 (.505) Accepted
6.	Efficient Transaction Management	3.90	3.87	4.06	3.73	2.651 (.048)* Rejected
7.	User Friendly Websites	3.65	3.84	3.86	3.61	1.338 (.262) Accepted
8.	Trustworthy	3.64	3.49	3.56	3.40	1.515 (.210) Accepted
9.	Risk Enhancement	3.07	3.31	3.37	3.50	2.162 (.092) Accepted
10.	Connectivity	3.67	3.59	3.59	3.56	.111 (.954) Accepted
11.	Informative	3.47	3.49	3.42	3.37	.484 (.694) Accepted
12.	Additional Support Services	2.68	3.03	2.63	2.86	3.951 (.008)** Rejected
13.	Promised Service Delivery	3.50	3.58	3.56	2.37	4.699 (.003)** Rejected

S.No.	Factors	<25 yrs A1	25 to < 35 yrs A2	35 to < 45 yrs A3	45 to < 60 yrs A4	F (Sig.) Hypothesis
14.	Guide	3.65	3.49	3.89	3.65	.882 (.450) Accepted
15.	Accuracy	3.75	3.93	4.03	3.84	.499 (.683) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 4.16 : Results of Post Hoc Test

S.No.	Factors	Levene's Statistics	Significant Value	Post Hoc Test Applied	Significant Pairs
1.	Security	.144	.934	Tukey	A1 Vs A4 A2 Vs A4 A3 Vs A4
2.	Efficient Transaction Management	.602	.614	Tukey	-
3.	Additional Support Services	.158	.925	Tukey	A2 Vs A3
4.	Promised Service Delivery	13.500	.000	Games-Howell	-

The results of post hoc test in table 4.16 depict that among the various factors of internet banking, the factor , *'Security'* has three significant pairs, '*Additional Support Services'* has one significant pair whereas , '*Efficient Transaction Management'* and *'Promised Service Delivery'* have no significant pairs.

Income of the Respondents

Hypothesis: The factors that enable internet banking do not differ across the income of the respondents.

Further for the next demographic variable income, the F values in the table 4.17 depict that the various factors affecting internet banking namely, *'Customer Care' and 'Guide'* are significant at .01 percent level of significance. Hence there is a significant relation between the income of the respondents and the above mentioned factors affecting internet banking. Also the other factors like '*Security', 'Responsiveness', 'Efficient Transaction*

Management', 'Trustworthy' and *'Risk Enhancement'* are significant at .05 percent level of significance.

Table 4.17: Factors that Enable Internet Banking Across Income of the Respondents

S.No.	Factors	<3 lakhs A1	3 to <5 lakhs A2	5 to < 10 lakhs A3	10 lakhs and above A4	F(Sig.) Hypothesis
1.	Convenience & Promptness	3.01	2.97	2.95	2.99	.327 (.806) Accepted
2.	Security	1.74	1.75	1.67	1.69	2.865 (.036)* Rejected
3.	Customer Care	1.44	1.49	1.40	1.43	3.906 (.009)** Rejected
4.	Interactivity	1.51	1.49	1.48	1.53	1.073 (.360) Accepted
5.	Responsiveness	3.93	3.77	3.67	3.68	2.699(.045)* Rejected
6.	Efficient Transaction Management	3.93	3.80	3.86	4.03	2.909 (.034)* Rejected
7.	User Friendly Websites	3.78	3.79	3.79	3.86	.244 (.866) Accepted
8.	Trustworthy	3.64	3.58	3.47	3.44	2.574 (.050)* Rejected
9.	Risk Enhancement	3.05	3.27	3.40	3.34	2.895 (.035)* Rejected
10.	Connectivity	3.67	3.62	3.63	3.51	.560 (.642) Accepted
11.	Informative	3.42	3.53	3.44	3.45	.606 (.611) Accepted
12.	Additional Support Services	2.54	2.99	2.90	2.99	2.483 (.060) Accepted
13.	Promised Service Delivery	3.39	3.64	3.91	3.62	.612 (.607) Accepted
14.	Guide	4.45	3.60	3.49	3.37	2.017 (.011)** Rejected
15.	Accuracy	3.88	3.81	3.91	4.05	.814 (.486) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Hence there is a significant relation between the income of the respondents and the above mentioned factors of internet banking. The data in the table also reflects that of all the factors affecting internet banking the mean scores are comparatively low for the factors namely, *'Security', 'Customer Care'* and *'Interactivity'*.

Table 4.18: Results of Post Hoc Test

S.No.	Factors	Levene's Statistics	Significant Value	Post Hoc Test Applied	Significant Pairs
1.	Security	2.477	.061	Tukey	A2 Vs A3
2.	Customer Care	2.134	.095	Tukey	A2 Vs A3
3.	Responsiveness	1.461	.224	Tukey	-
4.	Efficient Transaction Management	2.091	.101	Tukey	A2 Vs A4
5.	Trustworthy	2.547	.055	Tukey	-
6.	Risk Enhancement	.623	.601	Tukey	A1 Vs A3
7.	Guide	4.706	.003	Games-Howell	-

The results of post hoc test in table 4.18 depict that the factors of internet banking, *'Security', 'Customer Care', 'Efficient Transaction Management'* and '*Risk Enhancement'* all have one significant pair for each factor where as the factors, '*Responsiveness', 'Trustworthy'* and *'Guide'* have no significant pairs.

Respondents' Association with the Bank

Hypothesis: The factors that enable internet banking do not differ across the respondents' association with the bank.

As far as the length of association with the bank is concerned the F values in the table 4.19 depict that the factors namely, '*Convenience & Promptness', 'Customer Care', 'Efficient Transaction Management'* and '*Informative'* are significant at .05 percent level of significance. Hence there is significant difference between the opinions of the respondents who have been associated with the banks for different time periods in relation to the above mentioned factors of internet banking. Also the factor enabling internet banking, *'User Friendly Websites'* significant at .01 percent level of significance.

Table 4.19: Factors that Enable Internet Banking Across Respondents' Association with the Bank

S. No.	Factors	< 1Yr A1	1 to <3 Yrs A2	3 to < 5 Yrs A3	5 Yrs and above A4	F (Sig.) Hypothesis
1.	Convenience & Promptness	3.04	2.99	2.87	3.02	3.220 (.023)* Rejected
2.	Security	1.59	1.70	1.70	1.73	1.777 (.151) Accepted
3.	Customer Care	1.38	1.43	1.40	1.47	2.642 (.049)* Rejected
4.	Interactivity	1.44	1.51	1.48	1.52	.874 (.455) Accepted
5.	Responsiveness	3.66	3.72	3.68	3.78	.745 (.526) Accepted
6.	Efficient Transaction Management	4.04	3.84	3.81	4.00	2.957 (.032)* Rejected
7.	User Friendly Websites	4.73	3.68	3.78	3.86	7.291 (.000)** Rejected
8.	Trustworthy	3.42	3.51	3.43	3.56	1.216 (.303) Accepted
9.	Risk Enhancement	3.64	3.27	3.22	3.37	1.833 (.140) Accepted
10.	Connectivity	3.66	3.58	3.49	3.66	.847 (.469) Accepted
11.	Informative	3.17	3.39	3.49	3.54	2.574 (.050)* Rejected
12.	Additional Support Services	2.50	2.86	3.05	2.90	1.394 (.244) Accepted
13.	Promised Service Delivery	2.85	3.49	3.51	3.99	1.844 (.138) Accepted
14.	Guide	2.85	3.49	3.75	3.64	.947 (.418) Accepted
15.	Accuracy	3.96	3.87	3.98	3.94	.164 (.920) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Hence there is significant difference between the opinions of the respondents who have been associated with the banks for different time periods in relation to the above mentioned factor of internet banking.

Table 4.20: Results of Post Hoc Test

S. No.	Factors	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Convenience & Promptness	.204	.894	Tukey	A3 Vs A4
2.	Customer Care	.390	.760	Tukey	-
3.	Efficient Transaction Management	1.298	.275	Tukey	-
4.	User Friendly Websites	21.35	.000	Games-Howell	A2 Vs A4
5.	Informative	.909	.436	Tukey	-

The results of post hoc test in table 4.20 depicts that for the factors of internet banking, *'Convenience & Promptness'* and '*User Friendly Websites'* there is one significant pair for each factor. On the other hand the factors, '*Customer Care', 'Efficient Transaction Management'* and '*Informative'* do not have any significant pairs.

Respondents' Experience of Doing Internet Banking

Hypothesis: The factors that enable internet banking do not differ across the respondents' experience of doing internet banking.

Talking about the experience of doing internet banking the F values in the table 4.21 depict that the factors, '*Security'* and '*Efficient Transaction Management'* are significant at .05 percent level of significance. Hence there is significant difference between the opinions of the respondents who have varying experience of doing internet banking in relation to the above mentioned factors of internet banking. Also the factor affecting internet banking, '*Customer Care'* and '*Risk Enhancement'* are significant at .01 percent level of significance. Hence there is significant difference between the opinions of the respondents who have varying experience of doing internet banking in relation to the above mentioned factors of internet banking.

Table 4.21: Factors that Enable Internet Banking Across Respondents' Experience of Doing Internet Banking

S. No.	Factors	< 1Yr A1	1 to <3 Yrs A2	3 to < 5 Yrs A3	5 Yrs and above A4	F (Sig.) Hypothesis
1.	Convenience & Promptness	3.033	2.94	2.94	3.04	1.936 (.123) Accepted
2.	Security	1.68	1.68	1.69	1.75	2.774 (.041)* Rejected
3.	Customer Care	1.55	1.42	1.41	1.49	4.959 (.002)** Rejected
4.	Interactivity	1.53	1.49	1.49	1.53	1.38 (.271) Accepted
5.	Responsiveness	3.77	3.71	3.71	3.78	.498 (.684) Accepted
6.	Efficient Transaction Management	3.94	3.80	3.91	4.02	3.100 (.027)* Rejected
7.	User Friendly Websites	3.91	3.72	3.84	3.89	1.113 (.344) Accepted
8.	Trustworthy	3.61	3.52	3.43	3.58	1.614 (.185) Accepted
9.	Risk Enhancement	4.16	3.24	3.23	3.43	4.672 (.003)** Rejected
10.	Connectivity	3.72	3.58	3.62	3.59	.092 (.964) Accepted
11.	Informative	3.08	3.48	3.38	3.55	2.340 (.073) Accepted
12.	Additional Support Services	3.33	2.91	2.93	2.88	.348 (.791) Accepted
13.	Promised Service Delivery	3.83	3.47	3.55	4.06	1.590 (.191) Accepted
14.	Guide	3.16	3.47	3.65	3.70	.450 (.717) Accepted
15.	Accuracy	3.91	3.82	4.01	3.97	.580 (.628) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 4.22: Results of Post Hoc Test

S. No.	Factors	Levene's Statistics	Significant Value	Post Hoc Test Applied	Significant Pairs
1.	Security	1.657	.175	Tukey	A2 Vs A4
2.	Customer Care	.668	.572	Tukey	A2 Vs A4 A3 Vs A4
3.	Efficient Transaction Management	.373	.773	Tukey	A2 Vs A4
4.	Risk Enhancement	.389	.761	Tukey	A1 Vs A2 A1 Vs A3

The results of post hoc test in table 4.22 depict that the factors of internet banking, '*Customer Care'* and *'Risk Enhancement'* have two significant pairs each where as the factors, '*Security'* and *'Efficient Transaction Management'* have one significant pair only.

To summarize the results of t-test and F test we have represented a table 4.23 showing the significant factors with each demographic variable. The table below highlights the relationship between the factors affecting internet banking and various demographic variables.

Table 4.23: Summary of t-test and ANOVA Results

S. No.	Factors	Gender	Residence	Qualification	Occupation	Age Group	Income	Association with Bank	Experience of doing IB
1.	Convenience & Promptness		✓	✓	✓			✓	
2.	Security				✓	✓	✓		✓
3.	Customer Care						✓	✓	✓
4.	Interactivity								
5.	Responsiveness		✓		✓		✓		
6.	Efficient Transaction Management		✓			✓	✓	✓	✓
7.	User Friendly Websites	✓						✓	
8.	Trustworthy						✓		

S. No.	Factors	Gender	Residence	Qualification	Occupation	Age Group	Income	Association with Bank	Experience of doing IB
9.	Risk Enhancement				✓		✓		✓
10.	Connectivity		✓						
11.	Informative				✓			✓	
12.	Additional Support Services					✓			
13.	Promised Service Delivery			✓		✓			
14.	Guide						✓		
15.	Accuracy								

The above table depicts the relation between various demographic variables and the factors affecting internet banking. The tick marks in the column show that there is a significant relation between that particular factor of internet banking and the respective demographic variable.

4.4 COMPARISON OF PUBLIC, PRIVATE AND FOREIGN SECTOR BANKS

This section is representing the comparison of various aspects related to internet banking and sector of bank. On the basis of the analysis there is noticeable difference between the three categories of banks as far as technology adoption, latest updation in technological advancement; facilities for consumers etc. are concerned. It is generally believed that private sector and foreign sector banks are better than public sector banks. The first two categories have better facilities and user friendly technologies which serve their consumers in such a way that it enhances retention of consumers. To find out the actual picture the current section is an attempt to provide a comparison of responses of public, private and foreign sector banks respondents.

4.4.1 Level of Awareness and Knowledge

Hypothesis: The level of awareness and knowledge does not differ across the respondents of public sector, private sector and foreign sector banks.

The mean scores for the aspects indicate that the level of awareness and knowledge is good among all the respondents of private and foreign sector for most of the aspects

namely, '*About your bank', 'About internet banking', 'Website of the bank', 'Online banking services, information & enquiries', 'Fund transfer through IB', and 'RTGS/NEFT facility as a mode of payment'* whereas in case of public sector it is average for some of the aspects namely, '*Technology adoption level', 'Mobile banking', 'Various rules and regulations regarding IB', 'Claim settlement procedures', 'Online complaint procedures'* and *'Online grievance handling'*. If the mean scores are compared they are comparatively higher for private banks and foreign sector banks in comparison to public sector banks. This indicates that the level of awareness and knowledge is more in case of respondents of private banks and foreign sector banks in comparison to public sector banks.

As far as the sector of bank is concerned the F values in the table 4.24 reflect that the aspects of internet banking, '*Website of the bank', 'Technology adoption level', 'Online banking services, information & enquiries'* and *'Managing ATM/ Debit , Credit Card through IB'* are all significant at .01 percent level of significance. It means that there is significant difference in the level of awareness and knowledge of the respondents banking with public, private and foreign sector banks. For rest of the aspects there is no significant difference.

Table 4.24: Level of Awareness and Knowledge Across Sector of Bank of the Respondents

S.No.	Level of Awareness and Knowledge	Public Sector A1	Private Sector A2	Foreign Sector A3	F (Sig.) Hypothesis
1.	About your bank	3.69	3.88	3.74	1.959 (.142) Accepted
2.	About internet banking	3.73	3.95	3.93	2.747 (.065) Accepted
3.	Website of the bank	3.71	3.99	4.06	6.116 (.002)** Rejected
4.	Technology adoption level	3.46	3.81	3.64	5.145 (.006)** Rejected
5.	Online banking services, information & enquiries	3.58	3.91	3.82	5.493 (.004)** Rejected
6.	Mobile banking	3.26	3.56	3.44	2.603 (.075) Accepted

S.No.	Level of Awareness and Knowledge	Public Sector A1	Private Sector A2	Foreign Sector A3	F (Sig.) Hypothesis
7.	Managing ATM/ Debit , Credit Card through IB	3.67	4.05	3.67	7.327 (.001)** Rejected
8.	Various rules and regulations regarding IB	3.36	3.60	3.44	2.405 (.091) Accepted
9.	Claim settlement procedures	3.08	3.30	3.36	2.660 (.071) Accepted
10.	Online complaint procedures	3.34	3.56	3.40	2.102 (.123) Accepted
11.	Online grievance handling	3.30	3.56	3.47	2.340 (.098) Accepted
12.	Fund Transfer through IB	3.71	3.97	3.89	2.697 (.068) Accepted
13.	RTGS/NEFT facility as a mode of payment	3.72	3.98	3.90	2.631 (.073) Accepted

(1-Very Poor, 2- Poor, 3-Average, 4- Good, 5- Very Good)

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 4.25: Results of Post Hoc Test

S. No.	Level of Awareness and Knowledge	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Website of the bank	2.244	.107	Tukey	A1 Vs A2 A1 Vs A3
2.	Technology adoption level	2.792	.062	Tukey	A1 Vs A2
3.	Online banking services, information & enquiries	1.574	.208	Tukey	A1 Vs A2
4.	Managing ATM/ Debit , Credit Card through IB	6.092	.002	Games-Howell	A1 Vs A2 A2 Vs A3

The results of Post Hoc Test in the table 4.25 reflect that in case of, '*Website of the bank'* and '*Managing ATM/ Debit, Credit Card through IB'* there are two significant pairs. On the other hand in case of '*Technology adoption level'* and '*Online banking services, information & enquiries'* there is just one significant pair for each issue.

4.4.2 Usage of Internet Banking Services

Hypothesis: The frequency of usage of internet banking services does not differ across the respondents of public sector, private sector and foreign sector banks.

The F values in the table 4.26 reflect that the internet banking service '*Ask for a cheque book'* is significant at .01 percent level of significance. It means that there is significant difference in the opinion of the consumers banking with public, private and foreign sector banks. For rest of the services there is no significant difference in the opinion of the consumers . Also the mean scores in the table reflect that the service '*Ask for a cheque book'* is rarely used by the consumers banking with public sector banks and it is used sometimes by the consumers banking with private sector and foreign sector banks.

Table 4.26: Usage of Internet Banking Services Across Sector of Bank of the Respondents

S. No	Internet Banking Services	Public Sector A1	Private Sector A2	Foreign Sector A3	F (Sig.) Hypothesis
1.	View account balance and statements	1.92	1.83	1.95	.711 (.492) Accepted
2.	Inquire about cheque status	3.26	3.23	3.13	.511 (.600) Accepted
3.	Ask for a cheque book	3.50	3.15	3.15	4.837 (.008)** Rejected
4.	Inquire about your fixed deposit	3.60	3.45	3.55	.713 (.491) Accepted
5.	Inquire about your TDS details	3.70	3.68	3.78	.297 (.743) Accepted
6.	Online trading with Demat Services	3.83	3.68	3.79	.700 (.497) Accepted
7.	Update your profile	3.34	3.16	3.44	2.481 (.085) Accepted
8.	Seeking product and rate information	3.53	3.45	3.47	.176 (.838) Accepted
9.	Download applications	3.59	3.54	3.71	.980 (.376) Accepted
10.	Request to stop cheque payment	3.82	4.05	3.88	2.477 (.085) Accepted
11.	Apply for loan or other services	3.88	3.95	3.91	.167 (.846) Accepted

S. No	Internet Banking Services	Public Sector A1	Private Sector A2	Foreign Sector A3	F (Sig.) Hypothesis
12.	Calculate loan payment information	3.55	3.66	3.69	.559 (.572) Accepted

(1- Very Often, 2- Often, 3- Sometimes, 4- Rarely, 5- Never)

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 4.27: Results of Post Hoc Test

S.No	Internet Banking Services Used	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Ask for a cheque book	.017	.983	Tukey	A1 Vs A2 A1 Vs A3

The results of Post Hoc Test in the table 4.27 reflect that in case of '*Ask for a cheque book'* there are two significant pairs.

4.4.3 Usage of Internet Banking Transactions

Hypothesis: The frequency of usage of internet banking transactions does not differ across the respondents of public sector, private sector and foreign sector banks.

The F values in the table 4.28 reflect that the internet banking transactions namely, '*Transfer funds to a third party'* and *'Pay credit card dues'* are significant at .01 percent level of significance. It means that there is significant difference in the opinion of the consumers banking with public, private and foreign sector banks. For rest of the transactions there is no significant difference in the opinion of the consumers. Also the mean scores in the table reflect that the internet banking transactions '*Transfer funds to a third party'* and *'Pay credit card dues'* is often used by the consumers who are banking with private sector and foreign sector banks. But it is used sometimes by the respondents banking with public sector banks.

Table 4.28: Internet Banking Transactions Across Sector of Bank of the Respondents

S. No.	Internet Banking Transactions	Public Sector A1	Private Sector A2	Foreign Sector A3	F (Sig.) Hypothesis
1.	Transfer funds between your accounts	2.30	2.10	2.02	2.536 (.080) Accepted
2.	Transfer funds to a third party	2.59	2.40	2.18	4.711 (.009)** Rejected
3.	Pay your utility bills	2.34	2.27	2.25	0.219 (.804) Accepted
4.	Shop online through internet banking	2.78	2.48	2.54	2.724 (.067) Accepted
5.	Create/renew fixed/ recurring deposits online	3.47	3.34	3.15	2.174 (.115) Accepted
6.	Request a demand draft /pay order	3.67	3.76	3.50	1.827 (.162) Accepted
7.	Pay credit card dues	2.88	2.49	2.42	4.297 (.014)** Rejected
8.	Subscribe for mobile banking/ATM/Debit cards	3.08	2.81	2.90	1.963 (.142) Accepted
9.	Pay insurance premium	3.23	2.96	3.06	1.890 (.152) Accepted
10.	Online tax payment	3.32	3.31	3.27	.052 (.949) Accepted
11.	Prepaid mobile recharge	3.11	3.02	3.08	0.200 (.819) Accepted

(1- Very Often, 2- Often, 3- Sometimes, 4- Rarely, 5- Never)

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 4.29: Results of Post Hoc Test

S. No.	Internet Banking Transactions	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Transfer funds to a third party	7.203	.001	Games-Howell	A1 Vs A3
2.	Pay credit card dues	4.821	.008	Games-Howell	A1 vs A3

The results of Post Hoc test in table 4.29 depicts that for the internet banking transactions, '*Transfer funds to a third party'* and *'Pay credit card dues'* there is just one significant pair each transaction .

4.4.4 Elements of Website Evaluation

Hypothesis: The responses in relation to the elements of website does not differ across the respondents of public sector, private sector and foreign sector banks.

Sector of Bank: Talking about the sector of bank the F values in the table 4.30 depict that the website elements, '*Help function'* and '*Customer care'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the respondents banking with different sector banks in relation to the above mentioned website elements. Also the mean scores in the table reflect that both the elements '*Help function'* and '*Customer care'* are considered important by all the respondents irrespective of the sector of the bank with which they are banking. The reason can be attributed to the fact that whether it is a public sector bank, private sector bank or foreign sector bank the website of all the banks is equally concerned about the help facility and the customer care. Hence these elements are considered important. Also the elements, '*Instructions on the website related to IB should be easy to read', 'FAQ facility'* and '*Current news and quick updates'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents banking with different sector banks in relation to the above mentioned website elements. The means scores in the table reflect these elements are considered important by the respondents of all the categories irrespective of the sector of bank with which the respondents is banking. The three elements mentioned above are crucial and important aspect of any banks' website.

Table 4.30: Elements of Website Evaluation Across Sector of Bank of the Respondents

S. No	Elements of Website	Public Sector	Private Sector	Foreign Sector	F(Sig.) Hypothesis
1.	Provides complete information about the bank	1.95	1.80	1.80	1.599 (.204) Rejected
2.	Provides complete information about the customer	2.14	1.99	2.05	1.445 (.237) Rejected

S. No	Elements of Website	Public Sector	Private Sector	Foreign Sector	F(Sig.) Hypothesis
3.	Provides complete information about the product	1.91	1.74	1.79	2.146 (.118) Rejected
4.	Privacy policy	1.79	1.71	1.66	.807 (.447) Rejected
5.	Security policy	1.76	1.69	1.66	.430 (.651) Rejected
6.	Instructions on the website related to IB should be easy to read	2.01	1.77	1.79	3.753 (.024)* Accepted
7	Option for change of password	1.85	1.67	1.64	2.533 (.081) Rejected
8	Tutorial demonstrator	2.18	2.08	2.25	1.941 (.145) Rejected
9	Help function	2.04	1.96	2.26	6.077 (.002)** Accepted
10.	FAQ facility	2.10	1.94	2.13	3.151 (.044)* Accepted
11.	Customer care	1.93	1.68	1.83	4.888 (.008)** Accepted
12.	Website is interactive	2.04	1.89	1.93	1.561 (.211) Rejected
13.	Website processes transaction quickly	1.89	1.67	1.75	2.625(.074) Rejected
14.	Current news and quick updates	2.15	2.07	2.31	2.977 (.050)* Accepted

(1- Highly Important, 2- Important, 3- Somewhat Important, 4- Unimportant, 5- Highly Unimportant)

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 4.31: Results of Post Hoc Test

S. No.	Elements	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Instructions on the website related to IB should be easy to read	1.663	.191	Tukey	A1 Vs A2
2.	Help function	3.913	.021	Games-Howell	A1 Vs A3 A2 Vs A3
3.	FAQ facility	1.046	.352	Tukey	----
4.	Customer care	3.495	.031	Games-Howell	A1 Vs A2

S. No.	Elements	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
5.	Current news and quick updates	.766	.466	Tukey	A2 Vs A3

The results of the Post Hoc test in table 4.31 depict that the elements for website evaluation like *'Help function'* has two significant pairs whereas elements, *'Instructions on the website related to IB should be easy to read'*, '*Customer care'* and '*Current news and quick updates'* have one significant pair each. The problem '*FAQ Facility'* does not have any significant pair.

4.4.5 Problems While Doing Internet Banking

Hypothesis: The responses in relation to the problems faced while using internet banking does not differ across the respondents of public sector, private sector and foreign sector banks.

The sector of the bank with which the respondent is interacting can be public sector, private sector or foreign sector bank. The F values in the table 4.32 highlight that the internet banking problems such as '*Inadequate knowledge', 'Lack of technological requirements', 'Hanging websites', 'Frequent change in password', 'Delayed complaint handling process', 'Lack of security', 'Hacking of password is possible'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the respondents banking with different sector of banks in relation to the above mentioned problems of internet banking. The mean scores for the problem '*Inadequate knowledge'* reflects that this particular problem is faced sometimes by the respondents who are banking with public and private sector banks where as it is faced rarely by the respondents banking with foreign sector banks. The reason can be that foreign sector banks take more care and provide detailed information. Talking about the next problems, '*Lack of technological requirements', 'Hanging websites', 'Frequent change in password', 'Hacking of password is possible'* and *'Delayed complaint handling process'*, are sometimes faced by the respondents of public sector but rarely faced by the respondents of private and foreign sector banks. This indicates that respondents are more comfortable

banking with private and foreign sector banks. Talking about '*Lack of security'* this is rarely faced by all the respondents. Other problems like, '*Poor network', 'Time consuming', Complex process', 'Lack of clarity in procedures'* and *'Lack of personalized touch'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents banking with different sector banks in relation to the above mentioned problems of internet banking. The mean scores for the problem '*Poor network'* indicates that it is sometimes faced by the respondents irrespective of the bank with which they are banking. On the other hand the problems '*Time consuming'*, ' *complex process'* and '*Lack of clarity in procedures'* are faced sometimes by the respondents of the public sector but rarely by the respondents of private and foreign sector banks.

Table 4.32: Problems Faced While Using Internet Banking Across Sector of Bank

S.No.	Problems	Public Sector	Private Sector	Foreign Sector	F (Sig.) Hypothesis
1	Inadequate knowledge	3.12	3.30	3.55	5.659 (.004)** Rejected
2	Poor network	3.07	3.30	3.29	3.660 (.026)* Rejected
3	Lack of technological requirements	3.24	3.60	3.78	3.370 (.000)** Rejected
4	Time consuming	3.43	3.69	3.66	3.098 (.046)* Rejected
5	Hanging websites	3.29	3.56	3.60	4.304 (.000)** Rejected
6	Complex process	3.44	3.68	3.69	3.097 (.046)* Rejected
7	Frequent change in password	3.20	3.54	3.73	3.769 (.000)** Rejected
8	Delayed complaint handling process	3.22	3.53	3.63	3.355 (.002)** Rejected
9	Lack of security	3.55	3.65	4.05	4.043 (.000)** Rejected
10	Hacking of password is possible	3.44	3.66	3.88	3.158 (.002)** Rejected

S.No.	Problems	Public Sector	Private Sector	Foreign Sector	F (Sig.) Hypothesis
11	Lack of clarity in procedures	3.37	3.56	3.65	2.974 (.050)* Rejected
12	Lack of personalized touch	3.33	3.48	3.65	3.620 (.028)* Rejected

(1- Very Often, 2- Often, 3- Sometimes, 4- Rarely, 5- Never)

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

But the problem *'Lack of personalized touch'* is faced sometimes by public and private sector respondents but is rarely faced by the respondents of foreign sector banks. One very important finding of the table is that private and foreign sector banks have an edge over the public sector banks in case of network, technological requirements, website, processes, security, password management and personalized touch.

Table 4.33: Results of Post Hoc Test

S. No.	Problems	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1	Inadequate knowledge	4.887	.008	Games-Howell	A1 Vs A3
2	Poor network	1.631	.197	Tukey	A1 Vs A2
3	Lack of technological requirements	6.880	.001	Games-Howell	A1 Vs A2 A1 Vs A3
4	Time consuming	.078	.925	Tukey	A1 Vs A2
5	Hanging websites	.640	.528	Tukey	A1 Vs A2 A1 Vs A3
6	Complex process	2.032	.132	Tukey	
7	Frequent change in password	2.184	.114	Tukey	A1 Vs A2 A1 Vs A3
8	Delayed complaint handling process	.384	.681	Tukey	A1 Vs A2 A1 Vs A3
9	Lack of security	2.077	.126	Tukey	A1 Vs A3 A2 Vs A3
10	Hacking of password is possible	2.033	.132	Tukey	A1 Vs A3
11	Lack of clarity in procedures	1.114	.329	Tukey	-

S. No.	Problems	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
12	Lack of personalized touch	2.678	.070	Tukey	A1 Vs A3

The results of the Post Hoc test in table 4.33 depict that the out of the various problems faced during internet banking, the problems, '*Inadequate knowledge', 'Poor network', 'Time consuming' ,' Hacking of password is possible'* and *'Lack of personalized touch'* all have one significant pair each where as the problems '*Lack of technological requirements', 'Hanging websites', 'Frequent change in password', 'Delayed complaint handling process'* and *'Lack of security'* all have two significant pairs each.

4.4.6 Factors that Enable Internet Banking

Hypothesis: The factors that enable internet banking does not differ across public sector, private sector and foreign sector banks.

The table 4.34 below depicts the relation between factors affecting internet banking and the variable 'Sector of Bank'. The F values in the table depict that the factor, *'Customer Care'* is significant at .01 percent level of significance. Hence there is significant difference between the opinions of the respondents banking with different sector of banks in relation to the above mentioned factor of internet banking. Other factors like, '*Security', 'Responsiveness', 'Efficient Transaction Management'* and '*Connectivity'* are significant at .05 percent level of significance.

Table 4.34: Factors that Enable Internet Banking and Sector of Bank of the Respondents

S. No.	Factors	Public Sector A1	Private Sector A2	Foreign Sector A3	F (Sig.) Hypothesis
1.	Convenience & Promptness	2.92	3.01	2.98	1.831 (.162) Accepted
2.	Security	1.66	1.74	1.71	3.798 (.023)* Rejected
3.	Customer Care	1.38	1.47	1.45	7.258 (.001)** Rejected

S. No.	Factors	Public Sector A1	Private Sector A2	Foreign Sector A3	F (Sig.) Hypothesis
4.	Interactivity	1.48	1.52	1.51	1.399 (.248) Accepted
5.	Responsiveness	3.63	3.80	3.74	3.233(.040)* Rejected
6.	Efficient Transaction Management	3.79	3.96	3.94	2.958 (.050)* Rejected
7.	User Friendly Websites	3.69	3.84	3.90	2.199 (.112) Accepted
8.	Trustworthy	3.43	3.52	3.58	2.304 (.101) Accepted
9.	Risk Enhancement	3.32	3.28	3.34	.227 (.797) Accepted
10.	Connectivity	3.44	3.71	3.59	3.235 (.040) * Rejected
11.	Informative	3.38	3.50	3.51	1.774 (.171) Accepted
12.	Additional Support Services	2.78	2.95	2.99	1.344 (.262) Accepted
13.	Promised Service Delivery	3.55	3.90	3.50	1.180 (.308) Accepted
14.	Guide	3.74	3.49	3.59	.588 (.556) Accepted
15.	Accuracy	3.81	3.91	4.09	1.550 (.213) Accepted

(1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5-Strongly Agree)

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 4.35: Results of Post Hoc Test

S. No	Factors	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Security	1.016	.363	Tukey	A1 Vs A2
2.	Customer Care	1.896	.151	Tukey	A1 Vs A2 A1 Vs A3
3.	Responsiveness	.332	.718	Tukey	A1 Vs A2

S. No	Factors	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
4.	Efficient Transaction Management	.175	.839	Tukey	-
5.	Connectivity	.294	.745	Tukey	A1 Vs A2

The results of post hoc test in table 4.35 depicts that for the factors of internet banking, '*Security', 'Responsiveness'* and '*Connectivity'* there is one significant pair. On the other hand the factor '*Customer Care'* has two significant pairs.

4.4.7 Information /Services offered by Homepage of Bank

The banking website has very important role to play for users of internet banking. The websites are like the front office executives working in branch banking. Hence the construction of website and homepage is of utmost importance. The user's first interaction is with the homepage of the bank's website so the homepage should be simple, attractive, informative, user friendly and presentable. In the questionnaire, in order to know the perception of internet banking users about the homepage of bank, a section was included consisting of 9 dimensions. The results for the same are presented in the forthcoming tables.

Table 4.36: Information /Services offered by Homepage of Bank

S. No.	Information/Services offered by the Homepage of the Bank	Yes Frequency (% Age)	No Frequency (% Age)
1.	A single/few pages of presentation	208 (46.2)	242 (53.8)
2.	Information and advertising about the bank.	338 (75.1)	112 (24.9)
3.	Economic data about the bank (balance sheet, etc….)	103 (22.9)	347 (77.1)
4.	Commercial/corner (presence of guest subjects on site)	128 (28.4)	322 (71.6)
5.	Information/conditions of services offered	281 (62.4)	168 (37.3)
6.	Customer care	335 (74.4)	115 (25.6)

S. No.	Information/Services offered by the Homepage of the Bank	Yes Frequency (% Age)	No Frequency (% Age)
7.	Complaints service	267 (59.3)	183 (40.7)
8.	Informative internet banking	277 (61.6)	173 (38.4)
9.	Categorical log in facilities	150 (33.3)	300 (66.7)

The frequency distribution of the information/ services offered by the homepage of the bank has been presented in table 4.36. The table shows that 75 percent of the respondents agreed that the homepage of the bank provides '*Information and advertising about the bank'* whereas 24.9 percent did not agree to this. In total 74.4 percent agreed that the service '*Customer care'* is available on the homepage whereas 25.6 percent did not agree to this. Out of the total 450 respondents 62.4 percent confirmed the availability of '*Information/conditions of services offered'* by the homepage whereas 37.3 percent did not. As against 38.4 percent, 61.6 percent respondents agreed that the homepage provides '*Informative internet banking'*. The data in the above table also reveals that more than 50 percent respondents agreed that the homepage of the bank offers various services like '*Information and advertising about the bank'*, '*customer care' , 'Information/conditions of services offered', 'Informative internet banking'* and *'Complaints service*'. On the other hand less than 50 percent respondents agreed that the homepage of the bank offers the services like '*A single/few pages of presentation'* (46.2 %), '*Economic data about the bank*' *(balance sheet, etc….)*' (22.9 %), '*Commercial/corner (presence of guest subjects on site)*' (28.4 %) and '*Categorical log in facilities'* (33.3 %). In nut shell the data analysis reveals that the home page of the bank primarily focuses on '*Information and advertising about the bank'* and the *'Customer care'*.

To study the internet banking it is very essential to include the perception of consumers regarding home page of websites developed by the banks to interact with their consumers. A section on information/services offered by the homepage of the bank is included as a part of questionnaire and it has a total of 9 dimensions which are rated on

the basis of a nominal scale. Further to find out the variation in frequency distribution chi square test is best suitable so, it is applied. The results of chi-square in table 4.37 reflects that the dimensions namely '*A single/few pages of presentation'* and '*Informative internet banking'* are significant at 99 percent level of confidence whereas, '*Information and advertising about the bank'* and '*Economic data about the bank (balance sheet, etc.)'* are significant at 95 percent level of confidence.

Table 4.37: Results of Chi-Square

S. No.	Information/Services offered by the Homepage of the Bank	Response	Public Sector	Private Sector	Foreign Sector	Chi-Square (Sig.)
1.	A single/few pages of presentation	Yes	44 (32.1%)	104 (54.2%)	60 (49.6%)	16.392 (.000)**
		No	93 (67.9%)	88 (45.8%)	61 (50.4%)	
2.	Information and advertising about the bank.	Yes	92 (67.2%)	155 (80.7%)	91 (75.2%)	7.883 (.019)*
		No	45 (32.8%)	37 (19.3%)	30 (24.8%)	
3.	Economic data about the bank (balance sheet, etc….)	Yes	37 (27%)	48 (25%)	18 (14.9%)	6.203 (.045)*
		No	100 (73%)	144 (75%)	103 (85.1%)	
4.	Commercial/corner (presence of guest subjects on site)	Yes	35 (25.5%)	57 (29.7%)	36 (29.8%)	.812 (.666)
		No	102 (74.5%)	135 (70.3%)	85 (70.2%)	
5.	Information/conditions of services offered	Yes	80 (58.4%)	127 (66.1%)	74 (61.2%)	4.255 (.373)
		No	56 (41.6%)	65 (33.9%)	47 (38.8%)	
6.	Customer care	Yes	96 (70.1%)	152 (79.2%)	87 (71.9%)	4.038 (.133)
		No	41 (29.9%)	40 (20.8%)	34 (28.1%)	
7.	Complaints service	Yes	75 (54.7%)	117 (60.9%)	75 (62%)	1.753 (.416)
		No	62 (45.3%)	75 (39.1%)	46 (38%)	

S. No.	Information/Services offered by the Homepage of the Bank	Respo nse	Public Sector	Private Sector	Foreign Sector	Chi-Square (Sig.)
8.	Informative internet banking	Yes	71 (51.8%)	133 (69.3%)	73 (60.3%)	10.388 (.006)**
		No	66 (48.2%)	59 (30.7%)	48 (39.7%)	
9.	gorical log in facilities	Yes	38 (27.7%)	71 (37%)	41 (33.9%)	3.096 (.213)
		No	99 (72.3%)	121 (63%)	80 (66.1%)	

4.4.8 Informative Internet Banking Services

Table 4.38: Frequency Table: Informative Internet Banking Services

S. No.	Informative Internet Banking Services	Frequency (% Age)	
		Yes	No
1.	Detailed Information about the various services offered	338 (75.1)	112 (24.9)
2.	Presence of an intelligent tutorial for the customer	195 (43.3)	255 (56.7)
3.	Possibility of stipulation of the loan agreement directly online	189 (42)	261 (58)
4.	Possibility of having assigned codes directly online	138 (30.7)	312 (69.3)
5.	Information about own account (balance, statement, etc.)	327 (72.7)	123 (27.3)
6.	Simulation of calculations , installments, loans or similar	184 (40.9)	266 (59.1)
7.	Sending e.mail and announcements to an employee online	233 (51.8)	217 (48.2)
8.	Requesting loan and or personal credit online	251 (55.8)	199 (44.2)
9.	Booking for opening a current account ,getting credit cards etc.	260 (57.8)	190 (42.2)
10.	Booking for consulting and taking appointments (by form)	100 (22.2)	349 (77.6)

The frequency distribution of the informative internet banking services offered by the primary bank of the customer has been presented in table 4.38. The table shows that 75 percent of the respondents agreed that their primary bank offers '*Detailed Information about the various services offered'* where as 24.9 percent did not agree to this. Out of total 72.7 percent agreed that the service '*Information about own account (balance, statement, etc.'* is offered by the primary bank whereas 27.3 percent did not agree to this. Out of the total 450 respondents 57.8 percent confirmed the offering of the service '*Booking for opening a current account, getting credit cards etc.'*. Whereas 42.2 percent respondents did not consider it important. As against 44.2 percent, 55.8 percent respondents agreed that their primary bank offers the service '*Requesting loan and or personal credit online'*. Also 51.8 percent respondents agreed that their bank even offers the service '*Sending e-mail and announcements to an employee online'*.

The data in the above table 4.39 also reveals that more than 50 percent respondents agreed that their primary banks offers various informative internet banking services like '*Detailed information about the various services offered', 'Information about own account (balance, statement, etc.)', 'Booking for opening a current account, getting credit cards etc.', 'Requesting loan* and *or personal credit online' and 'Sending e-mail and announcements to an employee online'*. On the other hand less than 50 percent respondents did not agree that their primary bank offers various informative internet banking services like detailed information about the various services offered (24.9 %).

In nut shell the data analysis reveals that the primary bank of the respondents focuses on two main informative internet banking services i.e '*Detailed Information about the various services offered'* and *'Information about own account (balance, statement, etc.)*

Table 4.39: Results of Chi-Square Test

S.No.	Informative Internet Banking Services offered by the Primary Bank	Response	Public Sector	Private Sector	Foreign Sector	Chi-Square (Sig.)
1.	Detailed Information about the various services offered	Yes	92 (67.2%)	155 (80.7%)	91 (75.2%)	7.883 (.019)*
		No	45 (32.8%)	37 (19.3%)	30 (24.8%)	
2.	Presence of an intelligent tutorial for the customer	Yes	52 (38%)	100 (52.1%)	43 (35.5%)	10.595 (.005)**

S.No.	Informative Internet Banking Services offered by the Primary Bank	Response	Public Sector	Private Sector	Foreign Sector	Chi-Square (Sig.)
		No	85 (62%)	92 (47.9%)	78 (64.5%)	
3.	bility of stipulation of the loan agreement directly online	Yes	51 (37.2%)	94 (49%)	44 (36.4%)	6.676 (.036)*
		No	86 (62.8%)	98 (51%)	77 (63.6%)	
4.	Possibility of having assigned codes directly online	Yes	39 (28.5%)	69 (35.9%)	30 (24.8%)	4.784 (.091)
		No	98 (71.5%)	123 (64.1%)	91 (75.2%)	
5.	Information about own account (balance, statement, etc….)	Yes	87 (63.5%)	145 (75.5%)	95 (78.5%)	8.660 (.013)**
		No	50 (36.5%)	47 (24.5%)	26 (21.5%)	
6.	Simulation of calculations , installments, loans or similar	Yes	57 (41.6%)	83 (43.2%)	44 (36.4%)	1.489 (.475)
		No	80 (58.4%)	109 (56.8%)	77 (63.6%)	
7.	ng e.mail and announcements to an employee online	Yes	55 (40.1%)	107 (55.7%)	71 (58.7%)	10.932 (.004)**
		No	82 (59.9%)	85 (44.3%)	50 (41.3%)	
8.	esting loan and or personal credit online	Yes	69 (50.4%)	121 (63%)	61 (50.4%)	7.123 (.028)*
		No	68 (49.6%)	71 (37%)	60 (49.6%)	
9.	ing for opening a current account, getting credit cards etc….	Yes	66 (48.2%)	127 (66.1%)	67 (55.4%)	10.977 (.004)**
		No	71 (51.8%)	65 (33.9%)	54 (44.6%)	
10.	Booking for consulting and taking appointments (by form)	Yes	27 (19.7%)	60 (31.3%)	13 (10.7%)	20.371 (.000)**
		No	110 (80.3%)	131 (68.2%)	108 (89.3%)	

**significant at 5 percent level*
*** significant at 1 percent level*

To find out the association between the informative internet banking services offered by the primary bank and sector of bank chi-square test has been applied. The informative internet banking services offered by the primary bank are measures in nominal scale (yes and no), hence chi square is the best suitable test which can be applied. It is clear from the chi-square values and the respective p-values that the sector of bank has significant bearing on informative internet banking services offered by the primary bank. The

informative internet banking services offered by the primary bank which are significant at 5 percent level of significance are '*Requesting loan and or personal credit online'*, '*Possibility of stipulation of the loan agreement directly online'* and *'Detailed Information about the various services offered'*. The informative internet banking services offered by the primary bank which are significant at 1 percent level are as follow: '*Presence of an intelligent tutorial for the customer', 'Information about own account (balance, statement, etc.)', 'Sending e. mail and announcements to an employee online', 'Booking for opening a current account, getting credit cards etc',* and *'Booking for consulting and taking appointments (by form)'*.

4.5 CONCLUSION

The current chapter explained the various factors that enable internet banking in public, private and foreign sector banks. The chapter in total contributed fifteen factors , some of important factors among those are '*Accuracy', 'Efficient Transaction Management' , 'User Friendly Websites', 'Responsiveness'* and *'Promised Service Delivery'*. The results of ANOVA and t-test concluded that area of residence, occupation; income group and association with the bank are the important demographic variables which are responsible for difference in the consumer perception. Further this chapter concluded that foreign sector banks and private sector banks have an edge over public sector banks in terms of various factors that enable internet banking, level of awareness and knowledge and services offered by the homepage of the bank.

CHAPTER - V

ANALYSIS AND INTERPRETATION-II

The prime objective of the present study is to find out the factors that enables internet banking in public, private and foreign banks. Some introductory information is also needed to achieve the mentioned objective. Hence some questions were asked from the respondent to provide a strong foundation for the research. To record the responses of internet banking users various parameters related to the specific questions were developed after a thorough literature review. The study used Likert scale technique to collect responses. The current chapter throws light on level of awareness and knowledge, usage of internet banking services offered by the bank and banking transactions made by the consumers.

5.1 LEVEL OF AWARENESS AND KNOWLEDGE

The literature review focused on the advancements in technology that changed the way of traditional banking. Very few studies could be traced related to consumer awareness regarding different aspects of banking. Technological innovations play a very important role in reshaping or redefining the various aspects of our lives. The invention of internet has led to a number of changes in the working of various functional areas. Banking is also one such industry where the internet has led to number of changes and introduction of various innovative services. Today the banks have really changed their ways of working. They are looking for ways not only to attract the customers but also to retain them. The customer of today is very busy. He does not have time to wait in the long queues of the banks. He prefers to do the banking operations according to his convenience. Therefore these changing needs of the customers and advancements in technology have led to a number of innovations in the banking industry like Fund Transfer, RTGS/NEFT, ATM, Internet Banking, and Mobile banking, Debit and Credit Cards, payments of utility bills, online grievance handling and many more value added services. There has been a shift from the traditional banking to the electronic banking

where the bank is trying to provide all the facilities to a customer with the help of its website. Therefore, it is important for a bank to create awareness regarding its various facilities among the customers.

5.2 FREQUENCY DISTRIBUTION AND OVERALL MEAN

Table 5.1: Level of Awareness and Knowledge

S. No.	Level of Awareness and Knowledge	Very Poor	Poor	Average	Good	Very Good
1.	About your bank	10 (2.2)	19 (4.2)	131 (29.1)	188 (41.8)	102 (22.7)
2.	About internet banking	7 (1.6)	22 (4.9)	97 (21.6)	218 (48.4)	106 (23.6)
3.	Website of the bank	4 (.9)	21 (4.7)	110 (24.4)	185 (41.4)	130 (28.9)
4.	Technology adoption level	11 (2.4)	49 (10.9)	107 (23.8)	200 (44.4)	83 (18.4)
5.	Online banking services, information & enquiries	6 (1.3)	28 (6.2)	116 (25.8)	207 (46.0)	93 (20.7)
6.	Mobile banking	43 (9.6)	54 (12.0)	106 (23.6)	158 (35.1)	89 (19.8)
7.	Managing ATM/ Debit , Credit Card through IB	9 (2.0)	50 (11.1)	86 (19.1)	168 (37.3)	137 (30.4)
8.	Various rules and regulations regarding IB	15 (3.3)	58 (12.9)	144 (32.0)	159 (35.3)	74 (16.4)
9.	Claim settlement procedures	29 (6.4)	73 (16.2)	158 (35.1)	136 (30.2)	54 (12.0)
10.	Online complaint procedures	14 (3.1)	63 (14.0)	147 (32.7)	159 (35.3)	67 (14.9)
11.	Online grievance handling	23 (5.1)	62 (13.8)	124 (27.6)	169 (37.6)	72 (16.0)
12.	Fund transfer through IB	13 (2.9)	31 (6.9)	102 (22.7)	159 (35.3)	145 (32.2)
13.	RTGS/NEFT facility as a mode of payment	12 (2.7)	37 (8.2)	99 (22.0)	147 (32.7)	155 (34.4)

Source: Prepared from Primary Data Analysis
Note: Figures in parentheses is the respective percentage of the frequency row wise

To begin with the results, the frequency distribution of the consumers' level of awareness and knowledge about various aspects related to internet banking has been presented in Table 5.1 It shows that 64.5 percent consumers have good knowledge about their bank where as 6.4 percent consumers have poor knowledge about the bank. Out of the total 72 percent respondents have good awareness and knowledge about internet banking where as 6.5 percent have poor awareness and knowledge '*About internet banking'*. Out of the total 70 percent respondents have good awareness and knowledge about the '*Website related to the bank'* as against 5.6 percent respondents have poor knowledge and awareness about the banks' website. As far as Technology adoption level is concerned 44.4 percent have good level of awareness and knowledge regarding various aspects of internet banking. Out of the total 66.7 percent respondents have good awareness and knowledge regarding '*Online banking services, information and enquiries'*.

As far as mobile banking is concerned 54.9 percent respondents have good level of awareness and knowledge regarding mobile banking as against 23.6 percent who have only average level of awareness and knowledge. Here one interesting fact is found that 21.6 percent have poor awareness and knowledge about the mobile banking. The reason behind the above fact can be traced from the fact that mobile banking is still in its infancy stage in India and it is the latest version of electronic banking. The frequency and percentages in the table also reflects that almost 86.8 percent respondents have average to good awareness and knowledge about '*Managing ATM/ Debit Credit Card through IB'*, and 83.7 percent respondents also have average to good knowledge and awareness about '*Various rules and regulations regarding internet banking'*. Approximately only half of the respondents have good or very good level of awareness and knowledge regarding the '*Claim settlement procedures'*. Similarly almost 50 percent respondents have good level of awareness and knowledge about '*Online complaint procedures'*. More than 80 percent respondents have average to good level of awareness and knowledge about '*Online grievance handling'*. Respondents are well aware about the fund transfer through internet banking except 9.8 percent who have poor level of awareness and knowledge about fund transfer through internet banking. To conclude the analysis of the table 5.1, it is found that the level of awareness and knowledge is comparatively poor in relation to the aspects namely '*Technology adoption level', 'Mobile banking', 'Managing*

ATM/ Debit, Credit Card through IB', 'Various rules and regulations regarding IB', 'Claim settlement procedures', 'Online complaint procedure' and 'Online grievance handling'.

Table 5.2: Overall Mean Values and Ranking of Various Aspects of Internet Banking

S.No.	Level of Awareness and Knowledge	Mean	Rank	Standard Deviation
1.	About your bank	3.78	5	.918
2.	About internet banking	3.88	2	.879
3.	Website of the bank	3.92	1	.892
4.	Technology adoption level	3.66	6	.980
5.	Online banking services, information & enquiries	3.78	5	.888
6.	Mobile banking	3.44	10	1.207
7.	Managing ATM/ Debit , Credit Card through IB	3.83	4	1.046
8.	Various rules and regulations regarding IB	3.49	7	1.019
9.	Claim settlement procedures	3.25	11	1.069
10.	Online complaint procedures	3.45	9	1.007
11.	Online grievance handling	3.46	8	1.074
12.	Fund transfer through IB	3.87	3	1.035
13.	RTGS/NEFT facility as a mode of payment	3.88	2	1.059

(1- Very Poor, 2- Poor, 3-Average, 4- Good, 5- Very Good)

After giving individual values frequency distribution in table 5.1, mean values of the various aspects of internet banking and their respective standard deviations is presented in table 5.2. On the basis of mean values ranks are provided to various aspects (the aspect with the maximum mean has been ranked as 1 and so on). This represents the overall positions of the various parameters related to the level of awareness and knowledge of a consumer about internet banking. The consumers have good level of awareness and knowledge about various parameters like the '*Website of the bank'* ($\bar{x}$ = 3.92), '*RTGS/NEFT facility as a mode of payment'* ($\bar{x}$= 3.88), '*Fund transfer through IB*'($\bar{x}$= 3.87), '*Managing ATM/ Debit , Credit Card through IB'* ($\bar{x}$= 3.83), '*Online banking services, information & enquiries'* ($\bar{x}$ =3.78), '*About your bank'* ($\bar{x}$ = 3.78) and '*Technology adoption level'* ($\bar{x}$= 3.66). The level of awareness and knowledge is average

regarding various other parameters like '*Various rules and regulations regarding IB'* ($\bar{x}$ = 3.49), *'Online grievance handling'* ($\bar{x}$= 3.46), '*Online complaint procedures' ($\bar{x}$= 3.45), 'Mobile banking'* ($\bar{x}$= 3.44) and '*Claim settlement procedures'* ($\bar{x}$= 3.25). It is clear from the table that consumers who are doing internet banking have good level of awareness and knowledge regarding internet banking and the website of their bank. The respondents are fully aware about the fund transfer facility and the RTGS/NEFT facility. The values of standard deviation are quite high as in some aspects (aspect 6 to 13), it is above 1, hence there is a possibility of variation in the opinion of internet banking users regarding their level of awareness and knowledge.

5.3 RESULTS OF GROUP WISE MEAN SCORES, t-TEST AND ANOVA

After explaining the overall mean values, we need to know the variations in consumer perception across various demographic variables in relation to the level of awareness and knowledge. Further to test whether the mean differences are significant or not, parametric hypothesis test i.e t-test and ANOVA are used.

ANOVA and Post Hoc Test

Once a significant F- value is obtained in an Analysis of Variance, the work of the researcher is not over. A significant F- value tells only that the means are not all equal (i.e. reject the null hypothesis). To know exactly which group means are significantly different from which other group, hence there is a need to examine the numbers more carefully to be able to say exactly where the significant differences between the groups are. In the forthcoming tables, the significant F-value would allow us to conclude that the smallest and the largest means were significantly different from each other, but is cannot find out the difference of mean within the groups (Mean 1 and Mean 2 or Mean 1 and Mean 3). To find this we need post hoc tests **(www.une.edu.au/ WebStat/unit_materials/c7…/oneway_post_hoc.htm).**

The explanation below is related to acceptance or rejection of hypotheses with the help of t-test and F-test performed with the help of SPSS version 19. The difference of mean values is calculated with the help of t-test and the acceptance or rejection decisions are taken on the basis of significant values.

Gender of the Respondents

Hypothesis: The level of awareness and knowledge does not differ across the gender of the respondents.

Table 5.3 represents the mean scores of males and females with respect to the level of awareness and knowledge regarding various aspects of internet banking. The results in the table reflect that t value for '*Mobile banking'* is 2.875 which is significant at .01 percent level of significance. Hence, there is significant difference in the opinion of males and females in relation to this particular parameter related to awareness and knowledge about internet banking.

Table 5.3: Level of Awareness and Knowledge Across Gender of the Respondents

S.No.	Level of Awareness and Knowledge	Male (Mean)	Female Mean)	t values (Sig.) Hypothesis
1.	About your bank	3.81	3.71	.941 (.348) Accepted
2.	About internet banking	3.90	3.79	1.180 (.240) Accepted
3.	Website of the bank	3.92	3.93	-.123 (.902) Accepted
4.	Technology adoption level	3.68	3.56	1.081 (.281) Accepted
5.	Online banking services, information & enquiries	3.81	3.70	1.060 (.291) Accepted
6.	Mobile banking	3.53	3.11	2.875 (.005)** Rejected
7.	Managing ATM/ Debit , Credit Card through IB	3.88	3.69	1.595 (.113) Accepted
8.	Various rules and regulations regarding IB	3.51	3.41	.865 (.388) Accepted
9.	Claim settlement procedures	3.30	3.10	1.759 (.080) Accepted
10.	Online complaint procedures	3.49	3.32	1.486 (.139) Accepted
11.	Online grievance handling	3.50	3.30	1.662 (.098) Accepted
12.	Fund transfer through IB	3.92	3.71	1.775 (.078) Accepted

S.No.	Level of Awareness and Knowledge	Male (Mean)	Female Mean)	t values (Sig.) Hypothesis
13.	RTGS/NEFT facility as a mode of payment	3.88	3.87	.141(.888) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

For all the other aspects of internet banking there is no significant difference in the opinion of males and females. For all the aspects the respective mean scores as shown in the table are more for males than females. This indicates that the level of awareness and knowledge about various aspects is more in case of males than in case of females. This can be attributed to the fact that since being the head of the family the male is more responsible as far as Indian society is concerned. He has to manage the financial affairs. Hence his awareness is more. Further it can be inferred from the mean values that the male and female respondents have good level of awareness about, '*About your bank', 'About internet banking', 'Website of the bank', 'Online banking services, information & enquiries', 'Managing ATM/ Debit , Credit Card through IB', 'Fund transfer through IB 'and RTGS/NEFT facility as a mode of payment'*.

Place of Residence of the Respondents

Hypothesis: The level of awareness and knowledge does not differ across the place of residence of the respondents.

As depicted by the F values in the table 5.4 the aspects related to level of awareness and knowledge regarding internet banking, '*Website of the bank', 'Online banking services, information & enquiries', 'Online complaint procedures', 'Online grievance handling'* and *'RTGS/NEFT facility as a mode of payment'* are significant at .01 percent level of significance. This indicates that there is significant difference in the opinion of the respondents residing in Delhi, Faridabad, Gurgaon and Noida as far as level of awareness and knowledge regarding these aspects is concerned. In case of aspects like '*Website of the bank', 'Online banking services, information & enquiries' and 'RTGS/NEFT facility as a mode of payment'* the mean scores indicate that the level of awareness and knowledge about these aspects is good for the respondents residing in Delhi, Gurgaon, Noida and Faridabad. On the other hand talking about the aspects like '*Online complaint procedures'* and *'Online grievance handling'* the mean scores indicate that the

respondents who are residing in Faridabad have good level of awareness in comparison to those residing in Delhi, Noida and Guragon whose level of awareness and knowledge are average. Also the aspects like *'About your bank'* and '*Managing ATM/ Debit, Credit Card through IB'* are both significant at .05 percent level of significance. This means there is significant difference in the opinion of the consumers residing in different areas of NCR. Also the mean scores in the table for these two aspects indicate a good level of awareness and knowledge about various aspects of internet banking amongst the consumers residing in Delhi, Noida, Faridabad and Gurgaon.

Table 5.4: Level of Awareness and Knowledge Across Place of Residence of the Respondents

S.No.	Level of Awareness and Knowledge	Delhi A1	Gurgaon A2	Noida A3	Faridabad A4	F(Sig.) Hypothesis
1.	About your bank	3.84	3.55	3.77	3.93	3.535 (.015)* Rejected
2.	About internet banking	3.95	3.76	3.83	3.93	1.066 (.363) Accepted
3.	Website of the bank	4.01	3.55	3.97	4.11	8.710 (.000)** Rejected
4.	Technology adoption level	3.62	3.56	3.59	3.82	1.688 (.169) Accepted
5.	Online banking services, information & enquiries	3.81	3.51	3.82	3.95	4.911 (.002)** Rejected
6.	Mobile banking	3.34	3.29	3.43	3.64	1.939 (.122) Accepted
7.	Managing ATM/ Debit , Credit Card through IB	3.81	3.60	3.87	4.00	2.918 (.034)* Rejected
8.	Various rules and regulations regarding IB	3.55	3.28	3.51	3.57	1.797 (.147) Accepted
9.	Claim settlement procedures	3.27	3.01	3.30	3.38	2.515 (.058) Accepted
10.	Online complaint procedures	3.41	3.15	3.47	3.71	6.190 (.000)** Rejected

S.No.	Level of Awareness and Knowledge	Delhi A1	Gurgaon A2	Noida A3	Faridabad A4	F(Sig.) Hypothesis
11.	Online grievance handling	3.42	3.12	3.50	3.72	6.233 (.000)** Rejected
12.	Fund transfer through IB	3.89	3.71	3.85	4.0	1.570 (.196) Accepted
13.	RTGS/NEFT facility as a mode of payment	3.91	3.70	3.72	4.12	4.030 (.008)** Rejected

** indicates significance at .05 percent level*

*** indicates significance at .01 percent level*

Table 5.5: Results of Post Hoc Test

S.No.	Level of Awareness and Knowledge	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	About your bank	4.742	.003	Games-Howell	A2 Vs A4
2.	Website of the bank	4.909	.002	Games-Howell	A1 Vs A2 A2 Vs A3 A2 Vs A4
3.	Online banking services, information & enquiries	6.619	.000	Games-Howell	A2 Vs A4
4.	Managing ATM/ Debit , Credit Card through IB	3.377	.018	Games-Howell	A2 Vs A4
5.	Online complaint procedures	.021	.996	Tukey	A2 Vs A4
6.	Online grievance handling	1.857	.136	Tukey	A2 Vs A3 A2 Vs A4
7.	RTGS/NEFT facility as a mode of payment	3.822	.010	Games-Howell	A2 Vs A4 A3 Vs A4

The results of Post Hoc Test in the table 5.5 reflect that in case of '*About your bank', 'Online banking services, information & enquiries', 'Managing ATM/ Debit, Credit Card through IB' and 'Online complaint procedures'* there is one significant pair for each issue i.e. between Gurgaon and Faridabad. On the other hand in case of '*Website of the bank'* there are three significant pairs. Talking about, '*Online grievance handling'* and

'RTGS/NEFT facility as a mode of payment' there are two significant pairs for each aspect.

Qualification of the Respondents

Hypothesis: The level of awareness and knowledge does not differ across the qualification of the respondents.

The F Values in the table 5.6 suggest that the aspects of internet banking '*About internet banking', 'Mobile banking'* both are significant at .01 percent level of significance. Hence there is significant difference in the opinion of respondents who have done senior secondary, are graduates or post graduate in relation to the level of awareness and knowledge about various aspect of internet banking. The mean scores in the table for the aspect, *'About internet banking'* indicate that the level of awareness of the respondents about this particular aspect is average among the respondents who have done senior secondary. The level of awareness is good among all the other respondents who are graduates and post graduates. As far as the aspect *'Mobile banking'* is concerned the level of awareness is poor among the respondents who are post graduate and good among the graduates. The reason can be attributed to the fact that the respondents who are graduates are more enthusiastic about acquainting them with the upcoming latest techniques.

On the other hand various other aspects like, '*About your bank', 'Technology adoption level', 'Online banking services, information & enquiries', 'Managing ATM/ Debit, Credit Card through IB', 'Claim settlement procedures', 'Online complaint procedures'* and *'RTGS/NEFT facility as a mode of payment'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of respondents who have done senior secondary, are graduates and post graduates in relation to the level of awareness and knowledge about the above mentioned aspects of internet banking. The mean scores for the aspects '*About your bank', 'Technology adoption level', 'Online banking services, information & enquiries', 'Managing ATM/ Debit, Credit Card through IB'* reflect that the level of awareness and knowledge about these aspects are average among the respondents who are senior secondary whereas it is good among the respondents who are graduate / post graduate.

Table 5.6 : Level of Awareness and Knowledge Across Qualification of the Respondents

S. No.	Level of Awareness and Knowledge	Senior Secondary A1	Grad. A2	PG A3	F (Sig.) Hypothesis
1.	About your bank	2.67	3.79	3.80	3.083 (.027)* Rejected
2.	About internet banking	2.67	3.95	3.87	4.426 (.004)** Rejected
3.	Website of the bank	3.00	3.95	3.93	2.223 (.085) Accepted
4.	Technology adoption level	2.67	3.73	3.62	2.836 (.038)* Rejected
5.	Online banking services, information & enquiries	2.83	3.88	3.75	3.318 (.020)* Rejected
6.	Mobile banking	2.17	3.59	3.38	3.594 (.014)** Rejected
7.	Managing ATM/ Debit , Credit Card through IB	3.00	3.96	3.77	2.560 (.054)* Rejected
8.	Various rules and regulations regarding IB	3.00	3.60	3.43	1.397 (.243) Accepted
9.	Claim settlement procedures	2.33	3.39	3.19	3.096 (.027)* Rejected
10.	Online complaint procedures	2.67	3.60	3.36	3.322 (.020)* Rejected
11.	Online grievance handling	2.83	3.55	3.42	1.478 (.220) Accepted
12.	Fund transfer through IB	3.17	3.88	3.88	1.093 (.352) Accepted
13.	RTGS/NEFT facility as a mode of payment	2.83	3.85	3.90	3.294 (.020)* Rejected

** indicates significance at .05 percent level*

*** indicates significance at .01 percent level*

The results of post hoc test in the table 5.7 reflect that in case of, *'About internet banking'* there are two significant pairs i.e between senior secondary and graduation and between senior secondary and post graduation. Talking about, '*Online banking services, information & enquiries', 'Mobile banking'* and *'RTGS/NEFT facility as a mode of payment'* there is just one significant pair for each aspect. On the other hand, '*About your*

bank', 'Technology adoption level', 'Managing ATM/ Debit , Credit Card through IB', 'Claim settlement procedures' and *'Online complaint procedures'* do not have any significant pairs.

Table 5.7: Results of Post Hoc Test

S.No.	Level of Awareness and Knowledge	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	About your bank	4.298	.005	Games-Howell	-
2.	About internet banking	1.152	.328	Tukey	A1 Vs A2 A1 Vs A3
3.	Technology adoption level	3.973	.008	Games-Howell	-
4.	Online banking services, information & enquiries	1.296	.275	Tukey	A1 Vs A2
5.	Mobile banking	1.757	.155	Tukey	A1 Vs A2
6.	Managing ATM/ Debit , Credit Card through IB	6.524	.000	Games-Howell	-
7.	Claim settlement procedures	3.066	.028	Games-Howell	-
8.	Online complaint procedures	2.272	.080	Tukey	-
9.	RTGS/NEFT facility as a mode of payment	.574	.632	Tukey	A1 Vs A4

Occupation of the Respondents

Hypothesis: The level of awareness and knowledge does not differ across the occupation of the respondents.

The F Values in the table 5.8 suggest that the various aspects of internet banking namely, '*About internet banking', 'Website of the bank', 'Technology adoption level' , 'Online banking services, information & enquiries' , 'Mobile banking' and 'RTGS/NEFT facility as a mode of payment'* are significant at .01 percent level of significance. Hence, there is

significant difference in the opinion of respondents with different groups of occupations in relation to the above mentioned aspects of internet banking. The mean scores for the aspects '*About internet banking', 'Website of the bank', 'Technology adoption level' , 'Online banking services, information & enquiries' and 'RTGS/NEFT facility as a mode of payment'* indicate that the level of awareness and knowledge about these aspects is good among the respondents irrespective of their occupations. As far as *'Mobile banking'* is concerned the level of awareness and knowledge is good among the private sector employees and businessmen but average among public sector employees. Talking about the aspect, '*About your bank'*, it is significant at .05 percent level of significance. Hence there is significant difference in the level of awareness and knowledge of this particular aspect by the respondents of different occupations. Also the mean scores in the table reflect that the level of awareness about, '*About your bank*' is good amongst the respondents of all the occupations.

Table 5.8: Level of Awareness and Knowledge Across Occupation of the Respondents

S.No.	Level of Awareness and Knowledge	Business A1	Public Sector A2	Private Sector A3	Professional A4	F (Sig.) Hypothesis
1.	About your bank	3.97	3.82	3.83	3.51	2.988 (.031)* Rejected
2.	About internet banking	4.14	3.84	3.93	3.60	3.833 (.000)** Rejected
3.	Website of the bank	4.28	3.81	4.01	3.56	7.247 (.000)** Rejected
4.	Technology adoption level	4.07	3.47	3.71	3.44	4.050 (.007)** Rejected
5.	Online banking services, information & enquiries	4.07	3.70	3.85	3.51	4.135 (.007)** Rejected

6.	Mobile banking	3.76	2.98	3.52	3.33	4.115 (.007)** Rejected
7.	Managing ATM/ Debit , Credit Card through IB	4.10	3.61	3.88	3.69	2.199 (.088) Accepted
8.	Various rules and regulations regarding IB	3.72	3.37	3.53	3.33	1.531 (.206) Accepted
9.	Claim settlement procedures	3.41	3.11	3.28	3.19	.724 (.538) Accepted
10.	Online complaint procedures	3.48	3.30	3.53	3.26	1.987 (.115) Accepted
11.	Online grievance handling	3.62	3.21	3.53	3.29	2.297 (.077) Accepted
12.	Fund transfer through IB	3.97	3.84	3.94	3.59	2.518 (.058) Accepted
13.	RTGS/NEFT facility as a mode of payment	3.79	3.81	4.00	3.54	4.097 (.007)** Rejected

** indicates significance at .05 percent level*

*** indicates significance at .01 percent level*

Table 5.9: Results of Post Hoc Test

S.No.	Level of Awareness and Knowledge	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	About your bank	3.533	.015	Games-Howell	-
2.	About internet banking	5.828	.001	Games-Howell	A1 Vs A4
3.	Website of the bank	6.496	.000	Games-Howell	A1 Vs A2 A1 Vs A4 A3 Vs A4
4.	Technology adoption level	6.543	.000	Games-Howell	A1 Vs A2 A1 Vs A3 A1 Vs A4
5.	Online banking services, information & enquiries	3.286	.021	Games-Howell	A1 Vs A4 A3 Vs A4
6.	Mobile banking	1.296	.275	Tukey	A1 Vs A2 A2 Vs A3

7.	RTGS/NEFT facility as a mode of payment	5.459	.001	Games-Howell	A3 Vs A4

The results of post hoc test in the table 5.9 reflect that in case of, '*Website of the bank'* and *'Technology adoption level'* there are three significant pairs for each aspect. On the other hand talking about, '*About internet banking' and 'RTGS/NEFT facility as a mode of payment'* there is just one significant pair. There are two significant pairs for each issue in case of '*Online banking services, information & enquiries'* and *'Mobile banking'.*

Age Group of the Respondents

Hypothesis: The level of awareness and knowledge does not differ across the age groups of the respondents.

The F Values in the table 5.10 suggest that the aspect, '*Various rules and regulations regarding IB'* is significant at .05 percent level of significance. Hence there is significant difference in the level of awareness and knowledge of respondents with different age groups regarding this particular aspect of internet banking. For rest of the aspects of internet banking there is no significant difference in the opinion of the respondents across different age groups. The mean scores for the aspect, '*Various rules and regulations regarding IB'* reflect that the level of awareness and knowledge is average for the respondents of all the age groups except those whose age lies in '25 years to less than 35 years' the level of awareness is good.

Table 5.10: Level of Awareness and Knowledge Across Age Group of the Respondents

S.No.	Level of Awareness and Knowledge	< 25 yrs A1	25 to < 35 yrs A2	35 to <45 yrs A3	45 to <60 yr A4	F (Sig.) Hypothesis
1.	About your bank	3.73	3.77	3.89	3.76	.453 (.716) Accepted
2.	About internet banking	4.02	3.87	3.89	3.69	.851 (.466) Accepted
3.	Website of the bank	4.05	3.88	4.00	4.00	.833 (.476) Accepted
4.	Technology adoption level	3.66	3.65	3.62	3.79	.227 (.877) Accepted

S.No.	Level of Awareness and Knowledge	< 25 yrs A1	25 to < 35 yrs A2	35 to <45 yrs A3	45 to <60 yr A4	F (Sig.) Hypothesis
5.	Online banking services, information & enquiries	3.98	3.76	3.78	3.72	.797 (.496) Accepted
6.	Mobile banking	3.43	3.50	3.16	3.66	2.082 (.102) Accepted
7.	Managing ATM/ Debit , Credit Card through IB	3.95	3.82	3.82	3.83	.226 (.878) Accepted
8.	Various rules and regulations regarding IB	3.43	3.58	3.28	3.28	2.524 (.050)* Rejected
9.	Claim settlement procedures	3.16	3.29	3.22	3.10	.445 (.721) Accepted
10.	Online complaint procedures	3.30	3.47	3.45	3.48	.388 (.762) Accepted
11.	Online grievance handling	3.32	3.49	3.38	3.52	.535 (.659) Accepted
12.	Fund transfer through IB	3.84	3.91	3.75	3.86	.593 (.620) Accepted
13.	RTGS/NEFT facility as a mode of payment	3.80	3.89	3.92	3.76	.274 (.844) Accepted

** indicates significance at .05 percent level*

*** indicates significance at .01 percent level*

The reason can be attributed to the fact that this particular age group is young and our enthusiastic to know about everything. For other aspects of internet banking there is no significant difference in the level of awareness and knowledge of the respondents across different age groups.

Table 5.11: Results of Post Hoc Test

S.No.	Level of Awareness and Knowledge	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Various rules and regulations regarding IB	2.079	.102	Tukey	-

The results of Post Hoc test in the table 5.11 reflect that in case of 'Various rules and regulations regarding IB' there is no significant pair.

Income of the Respondents

Hypothesis: The level of awareness and knowledge does not differ across the income of the respondents.

In relation to the demographic variable Income the F values in the table 5.12 reflect that for all the aspects of internet banking there is no significant difference in the level of awareness and knowledge of the respondents with different income groups. After analyzing the mean values in the table no significant pattern regarding the mean values could be found. So the researcher is not able to draw any specific conclusion. Hence there is no impact of the varied income groups on the level of awareness and knowledge of the respondents regarding various aspects of internet banking.

Table 5.12: Level of Awareness and Knowledge Across Income of the Respondents

S.No.	Level of Awareness and Knowledge	< 3 lakhs	3 to < 5 lakhs	5 to < 10 lakhs	10 lakhs And above	F (Sig.) Hypothesis
1.	About your bank	3.58	3.78	3.87	3.78	1.187 (.314) Accepted
2.	About internet banking	3.79	3.89	3.84	3.92	.369 (.775) Accepted
3.	Website of the bank	4.00	3.93	3.96	3.86	.430 (.732) Accepted
4.	Technology adoption level	3.60	3.78	3.63	3.59	.848 (.468) Accepted
5.	Online banking services, information & enquiries	3.83	3.84	3.69	3.80	.698 (.554) Accepted
6.	Mobile banking	3.30	3.58	3.37	3.43	.968 (.408) Accepted
7.	Managing ATM/ Debit , Credit Card through IB	3.87	3.87	3.78	3.84	.193 (.901) Accepted
8.	Various rules and regulations regarding IB	3.57	3.53	3.47	3.43	.331 (.803) Accepted
9.	Claim settlement procedures	3.23	3.33	3.28	3.17	.530 (.662) Accepted

S.No.	Level of Awareness and Knowledge	< 3 lakhs	3 to < 5 lakhs	5 to < 10 lakhs	10 lakhs And above	F (Sig.) Hypothesis
10.	Online complaint procedures	3.49	3.56	3.43	3.36	.868 (.458) Accepted
11.	Online grievance handling	3.47	3.54	3.43	3.40	.414 (.743) Accepted
12.	Fund transfer through IB	3.91	3.83	3.95	3.83	.437 (.727) Accepted
13.	RTGS/NEFT facility as a mode of payment	3.79	3.88	3.99	3.80	.869 (.451) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Respondents' Association with the Bank

Hypothesis: The level of awareness and knowledge does not differ across the respondents' association with the bank.

Table 5.13: Level of Awareness and Knowledge Across Respondents' Association with the Bank

S.No.	Level of Awareness and Knowledge	< 1Yr	1to < 3 Yr	3 to < 5 Yrs	5 Yrs and above	F (Sig.)
1.	About your bank	3.79	3.74	3.65	3.89	1.707 (.165) Accepted
2.	About internet banking	3.43	3.89	3.88	3.89	1.249 (.291) Accepted
3.	Website of the bank	4.07	3.87	3.88	3.98	.611 (.608) Accepted
4.	Technology adoption level	3.71	3.66	3.59	3.69	.263 (.852) Accepted
5.	Online banking services, information & enquiries	3.71	3.73	3.74	3.86	.688 (.560) Accepted
6.	Mobile banking	3.71	3.41	3.48	3.41	.347 (.791) Accepted
7.	Managing ATM/ Debit , Credit Card through IB	3.71	3.79	3.83	3.88	.267 (.849) Accepted

8.	Various rules and regulations regarding IB	3.29	3.44	3.57	3.49	.494 (.687) Accepted
9.	Claim settlement procedures	3.36	3.19	3.32	3.25	.320 (.811) Accepted
10.	Online complaint procedures	3.79	3.33	3.43	3.52	1.546 (.202) Accepted
11.	Online grievance handling	4.00	3.37	3.37	3.53	2.043 (.107) Accepted
12.	Fund transfer through IB	3.79	3.72	3.84	4.02	2.385 (.069) Accepted
13.	RTGS/NEFT facility as a mode of payment	4.00	3.72	3.88	3.99	1.781 (.150) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

In relation to the variable length of association the F values in the table 5.13 reflect that for all the aspects of internet banking there is no significant difference in the level of awareness and knowledge of the respondents who are associated with the banks for different time periods. So consequently there are no significant pairs

Respondents' Experience of doing Internet Banking

Hypothesis: The level of awareness and knowledge does not differ across the respondents' experience of doing internet banking.

As far as the experience of doing internet banking is concerned the F values in the table 5.14 reflect that the aspects of internet banking namely, '*About internet banking', 'Website of the bank', 'Online banking services, information & enquiries', 'Fund transfer through IB' and 'RTGS/NEFT facility as a mode of payment'* are significant at .01 percent level of significance. It means that there is significant difference in the level of awareness and knowledge of the respondents who have been doing internet banking for varying time periods. Also the aspects such as, '*About your bank', 'Technology adoption level', 'Managing ATM/ Debit , Credit Card through IB'* and *'Online complaint procedures'* are significant at .05 percent level of significance. It means that there is significant difference in the level of awareness and knowledge of the respondents who have been doing internet banking for varying time periods.

Table 5.14 : Level of Awareness and Knowledge Across Respondents' Experience of doing Internet Banking:

S.No.	Level of Awareness and Knowledge	< 1Yr A1	1to < 3 Yrs A2	3 to <5 Yrs A3	5 Yrs and above A4	F (Sig.) Hypothesis
1.	About your bank	3.83	3.67	3.72	3.98	3.361 (.019)* Rejected
2.	About internet banking	3.67	3.71	3.83	4.12	5.983 (.001)** Rejected
3.	Website of the bank	3.83	3.80	3.86	4.14	4.275 (.005)** Rejected
4.	Technology adoption level	3.33	3.53	3.64	3.83	2.630 (.050)* Rejected
5.	Online banking services, information & enquiries	3.83	3.67	3.71	3.99	3.829 (.000)** Rejected
6.	Mobile banking	3.00	3.39	3.49	3.46	.464 (.707) Accepted
7.	Managing ATM/ Debit , Credit Card through IB	3.33	3.65	3.89	4.00	3.513 (.015)* Rejected
8.	Various rules and regulations regarding IB	3.00	3.38	3.49	3.63	2.121 (.097) Accepted
9.	Claim settlement procedures	3.00	3.15	3.30	3.33	.925 (.428) Accepted
10.	Online complaint procedures	3.33	3.27	3.48	3.63	3.537 (.015)* Rejected
11.	Online grievance handling	3.17	3.39	3.39	3.60	1.442 (.230) Accepted
12.	Fund transfer through IB	3.33	3.65	3.89	4.13	6.263 (.000)** Rejected
13.	RTGS/NEFT facility as a mode of payment	3.50	3.65	3.97	4.08	4.881 (.002)** Rejected

** indicates significance at .05 percent level*

*** indicates significance at .01 percent level*

The mean scores as depicted in the table are more among the respondents who have been doing internet banking for a time period of 5 years and above. Hence the level of

awareness and knowledge about the various aspects is maximum in case of such respondents in comparison to the other categories.

Table 5.15: Results of Post Hoc Test

S.No.	Level of Awareness and Knowledge	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	About your bank	1.917	.126	Tukey	A2 Vs A4
2.	About internet banking	.825	.480	Tukey	A2 Vs A4 A3 Vs A4
3.	Website of the bank	.784	.503	Tukey	A2 Vs A4 A3 Vs A4
4.	Technology adoption level	.354	.786	Tukey	A2 Vs A4
5.	Online banking services, information & enquiries	1.605	.188	Tukey	A2 Vs A4 A3 Vs A4
6.	Managing ATM/ Debit , Credit Card through IB	3.936	.009	Games-Howell	A2 Vs A4
7.	Online complaint procedures	.695	.555	Tukey	A2 Vs A4
8.	Fund transfer through IB	3.586	.014	Games - Howell	A2 Vs A4
9.	RTGS/NEFT facility as a mode of payment	1.621	.184	Tukey	A2 Vs A3 A2 Vs A4

The results of Post Hoc Test in the table 5.15 reflect that in case of, '*About internet banking', 'Website of the bank', 'Online banking services, information & enquiries'* and *'RTGS/NEFT facility as a mode of payment'* there are two significant pairs for each issue. On the other hand in case of '*About your bank', 'Technology adoption level', 'Managing ATM/ Debit, Credit Card through IB', 'Online complaint procedures'* and *'Fund transfer through IB'* there is just one significant pair for each issue i.e between 1 year to less than 3 years and 5 years and above.

5.4 USAGE OF INTERNET BANKING SERVICES OFFERED BY THE BANK

After analyzing the level of awareness and knowledge about the various aspects of internet banking this chapter further deals with the various internet banking services offered by the banks and often used by the respondents. The respondents were asked to reveal their responses regarding the frequency of usage of these internet banking services.

5.5 FREQUENCY DISTRIBUTION AND OVERALL MEAN

Table 5.16: Frequency of Usage of Various Internet Banking Services

S.No.	Internet Banking Services often used	Very Often	Often	Sometimes	Rarely	Never
1.	View account balance and statements	178 (39.6)	175 (38.9)	68 (15.1)	26 (5.8)	3 (.7)
2.	Inquire about cheque status	35 (7.8)	73 (16.2)	152 (33.8)	140 (31.1)	50 (11.1)
3.	Ask for a cheque book	35 (7.8)	73 (16.2)	143 (31.8)	139 (30.9)	60 (13.3)
4.	Inquire about your fixed deposit	19 (4.2)	73 (16.2)	129 (28.7)	113 (25.1)	116 (25.8)
5.	Inquire about your TDS details	14 (3.1)	51 (11.3)	108 (24.0)	154 (34.2)	123 (27.3)
6.	Online trading with demat services	19 (4.2)	62 (13.8)	114 (25.3)	70 (15.6)	185 (41.1)
7.	Update your profile	29 (6.4)	79 (17.6)	141 (31.3)	135 (30.0)	66 (14.7)
8.	Seeking product and rate information	18 (4.0)	65 (14.4)	149 (33.1)	119 (26.4)	99 (22.0)
9.	Download applications	13 (2.9)	56 (12.4)	140 (31.1)	130 (28.9)	111 (24.7)
10.	Request to stop cheque payment	6 (1.3)	28 (6.2)	106 (23.6)	160 (35.6)	150 (33.3)
11.	Apply for loan or other services	6 (1.3)	56 (12.4)	98 (21.8)	100 (22.2)	190 (42.2)
12.	Calculate loan payment information	18 (4.0)	55 (12.2)	140 (31.1)	98 (21.8)	139 (30.9)

Note: Figures in parentheses is the respective percentage of the frequency row wise

To begin with the results, the frequency distribution of the internet banking services often used by the respondents has been presented in table 5.16. The data in the table reveals that 39.6 percent consumers use the service '*View account balance and statements'* very often where as 38.9 percent consumers often use the same service. On the other hand 15.1 percent respondents use it sometimes. It is rarely used by 5.8 percent respondents and only 0.7 percent of the consumers never use that service. Talking about the service '*Inquire about cheque status'* 33.8 percent use this service sometimes, whereas 31.1 percent respondents use this service rarely. It is found that only 7.8 percent very often use

this service whereas only 16.2 percent respondents often use this service. In case of the service '*Ask for a cheque book'* 7.8 percent respondents very often use this service whereas only 16.2 percent respondents often use this service, 31.8 percent respondents use this service sometimes as against 30.9 who rarely use it. There are only 13.3 percent respondents who do never use this service. The data in the table reveals that the service '*Inquire about your fixed deposit'* is never used by 25.8 percent consumers as against 28.7 percent who use it sometimes. Only 20.4 percent respondents use this service often and very often. Looking at the broader perspective it is found that the data in the table reveals that the service '*View account balance and statements'* is the service which is used very often by maximum number of respondents (39.6%). Less than 8 percent respondents are using the remaining services very often. Talking about the services which are often used by the consumers, the service *' View account balance and statements'* is used by 38.9 percent respondents and less than 18 percent respondents often use various other internet banking services as mentioned in the table. The respective percentages of the respondents using the various internet banking services sometimes are, '*View account balance and statements'*(15.1 %), '*Inquire about cheque status'* (33.8 %), '*Ask for a cheque book'* (31.8 %), '*Inquire about your fixed deposit'* (28.7 %), '*Inquire about your TDS details'*(24 %, '*Online trading with demat services'* (25.3 %), '*Update your profile'* (31.3 %), '*Seeking product and rate information'* (33.1%), '*Download applications'* (31.1 %), '*Request to stop cheque payment'* (23.6 %), '*Apply for loan or other services'* (21.8 %), '*Calculate loan payment information'* (31.1 %). The data analysis reveals that around 20 to 35 percent respondents rarely use the various internet banking services except '*View account balance and statements'* (5.8 %) and '*Online trading with demat services'* (15.6 %). Among the various internet banking services there are certain services that are never used by the respondents .The percentage of respondents who never use '*Online trading with demat services'* is 41.1 percent, '*Request to stop cheque payment'* is 33.3 percent , '*Apply for loan or other services'* is 42.2 percent and '*Calculate loan payment information'* is 30.9 percent.

Table 5.17: Overall Mean Values and Ranking of Usage of Various Internet Banking Services

S.No.	Internet Banking Services used	Mean	Rank	Standard Deviation
1.	View account balance and statements	1.89	1	.910
2.	Inquire about cheque status	3.22	2	1.089
3.	Ask for a cheque book	3.26	3	1.119
4.	Inquire about your fixed deposit	3.52	6	1.160
5.	Inquire about your TDS details	3.71	9	1.080
6.	Online trading with demat services	3.76	10	1.241
7.	Update your profile	3.29	4	1.113
8.	Seeking product and rate information	3.48	5	1.105
9.	Download applications	3.60	7	1.076
10.	Request to stop cheque payment	3.93	12	.967
11.	Apply for loan or other services	3.92	11	1.120
12.	Calculate loan payment information	3.63	8	1.156

(1- Very Often, 2- Often, 3-Sometimes, 4- Rarely, 5- Never)

Table 5.17 gauges the mean score and the standard deviation of the various internet banking services often used by the respondents. On the basis of mean values ranks are provided to various aspects (the aspect with the minimum mean has been ranked as 1 and so on). This represents the overall positions of the various internet banking services used by the respondents. The data reveals that the service '*View account balance and statements'* is often used by the respondents (mean $\bar{x}$= 1.89). Other services like '*Inquire about cheque status'* ($\bar{x}$=3.22), *'Ask for a cheque book'* ($\bar{x}$= 3.26), '*Update your profile'* ($\bar{x}$= 3.29), '*Seeking product and rate information'* ($\bar{x}$=3.48) are used by the consumers only sometimes. Other services like *'Inquire about your fixed deposit'*($\bar{x}$ =3.52), '*Download applications'* ($\bar{x}$=3.60), '*Calculate loan payment information'* ($\bar{x}$ =3.63), '*Inquire about your TDS details '* ($\bar{x}$=3.71), '*Online trading with demat services '* ($\bar{x}$= 3.76) , '*Apply for loan or other services'* ($\bar{x}$= 3.92) and '*Request to stop cheque payment'*($\bar{x}$=3.93) are rarely used by the respondents as depicted by the mean scores.

5.6 RESULTS OF t-TEST AND ANOVA

The forthcoming explanation is related to acceptance or rejection of hypotheses with the help of t-test and F-test performed using SPSS version 19.

Gender of the Respondents

Hypothesis: The frequency of usage of internet banking services does not differ across gender of the respondents.

Table 5.18 represents the mean scores of males and females with respect to various internet banking services that are used by the consumers. The results in the table reflect that t value for *'Online trading with demat services'* is - 2.818 which is significant at .01 percent level of significance. Hence there is significant difference in the opinion of males and females in relation to the frequency of usage of internet banking service. Also the t value for the service '*Calculate loan payment information'* is -4.204 which is, significant at .01 percent level of significance. Hence there is significant difference in the opinion of males and females in relation to this internet banking service. But the t values for '*Seeking product and rate information'* is -2.058 and '*Request to stop cheque payment'* is -2.029; both the values are significant at .05 percent level of significance. Hence there is significant difference in the opinion of males and females in relation to these internet banking services. For all the four services the respective mean scores as shown in the table are high among females than males. This indicates that the males are more inclined towards using these internet banking services in comparison to females. The negative t values are reflecting that the mean value is lower in case of male respondents. Both groups of gender often use the service namely, '*View account balance and statements'*.

Table 5.18: Usage of Internet Banking Services Across Gender of the Respondents

S.No.	Internet Banking Services	Male (Mean)	Female (Mean)	t values (Sig.) Hypothesis
1.	View account balance and statements	1.87	1.96	- .877 (.382) Accepted
2.	Inquire about cheque status	3.23	3.18	.344 (.732) Accepted
3.	Ask for a cheque book	3.21	3.43	-1.718 (.088) Accepted

S.No.	Internet Banking Services	Male (Mean)	Female (Mean)	t values (Sig.) Hypothesis
4.	Inquire about your fixed deposit	3.52	3.52	-.037 (.970) Accepted
5.	Inquire about your TDS details	3.71	3.73	-.207 (.837) Accepted
6.	Online trading with demat services	3.66	4.06	-2.818 (.005)** Rejected
7.	Update your profile	3.31	3.23	.603 (.547) Accepted
8.	Seeking product and rate information	3.42	3.68	-2.058 (.041)* Rejected
9.	Download applications	3.56	3.74	-1.513 (.132) Accepted
10.	Request to stop cheque payment	3.88	4.10	-2.029 (.044)* Rejected
11.	Apply for loan or other services	3.86	4.09	-1.862 (.064) Accepted
12.	Calculate loan payment information	3.52	4.01	-4.204 (.000)** Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Further in order to test the group variations in the opinion of the consumers using internet banking services in relation to 'residence', ' highest qualification', 'occupation', 'age group' , 'income', ' sector of bank', 'length of association' one way ANOVA was used and one of the assumptions of this method is that the variances of the groups in comparison are similar.

Place of Residence of the Respondents

Hypothesis: The frequency of usage of internet banking services does not differ across place of residence of the respondents.

As depicted by the F values in the Table 5.19 the various internet banking services often used by the consumers like '*Inquire about your TDS details'* and *'Download applications'* both are significant at .05 percent level of significance. This indicates that there is significant difference in the opinion of the respondents residing in Delhi, Faridabad, Gurgaon and Noida as far as these two internet banking services are concerned. In case of '*Inquire about your TDS details'* the mean scores indicate that the

consumers living in Gurgaon, Delhi and Faridabad rarely use this service where as consumers living in Noida have similar option but with low intensity.

Table 5.19: Usage of Internet Banking Services Across Place of Residence of the Respondents

S. No.	Internet Banking Services Used	Delhi A1	Gurgaon A2	Noida A3	Faridabad A4	F(Sig.) Hypothesis
1.	View account balance and statements	1.78	1.93	1.95	1.92	.845 (.470) Accepted
2.	Inquire about cheque status	3.28	3.15	3.15	3.26	.483 (.694) Accepted
3.	Ask for a cheque book	3.36	3.23	3.05	3.35	1.844 (.138) Accepted
4.	Inquire about your fixed deposit	3.57	3.51	3.33	3.63	1.416 (.237) Accepted
5.	Inquire about your TDS details	3.85	3.63	3.47	3.85	3.364 (.019)* Rejected
6.	Online trading with demat services	3.82	3.79	3.56	3.82	1.040 (.374) Accepted
7.	Update your profile	3.50	3.29	3.14	3.22	2.166 (.091) Accepted
8.	Seeking product and rate information	3.55	3.48	3.30	3.56	1.305 (.272) Accepted
9.	Download applications	3.80	3.66	3.47	3.48	2.640 (.050)* Rejected
10.	Request to stop cheque payment	4.15	3.93	3.59	4.01	6.503 (.000)** Rejected
11.	Apply for loan or other services	4.12	3.76	3.88	3.88	2.010 (.112) Accepted
12.	Calculate loan payment information	3.82	3.63	3.54	3.54	1.518 (.209) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

The mean scores in case of '*Download applications'* indicate that consumers living in Noida and Faridabad use this service sometimes where as consumers living in Delhi and Gurgaon rarely use this service. As far as the service '*Request to stop cheque payment'* is concerned it is significant at .01 percent level of significance. This means there is significant difference in the opinion of the consumers residing in different areas of NCR. Also the mean scores in the table reflect that respondents living in Delhi, Noida, Faridabad and Gurgaon rarely use this particular internet banking service. For the other internet banking services often used by the respondents there is no significant difference in the opinion of the respondents residing in Delhi, Faridabad, Gurgaon and Noida. The data in the table also reflects that the mean values of the respondents residing in Noida are minimum for all the services except, '*View account balance and statements'* and *'Apply for loan or other services'.*

The results of Post Hoc Test in the table 5.20 reflect that in case of '*Inquire about your TDS details'* and '*Request to stop cheque payment'* there are two significant pairs for each service.

Table 5.20: Results of Post Hoc Test

S.No.	Internet Banking Services Used	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Inquire about your TDS details	1.307	.272	Tukey HSD	A1 Vs A3 A3 Vs A4
2.	Download applications	2.893	.035	Games – Howell	-
3.	Request to stop cheque payment	5.112	.002	Games-Howell	A1 Vs A3 A3 Vs A4

Qualification of the Respondents

Hypothesis: The frequency of usage of internet banking services does not differ across qualification of the respondents.

The F Values in the table 5.21 suggest that the internet banking services '*Ask for a cheque book'* and '*Online trading with demat services'* are significant at .01 percent level of significance. Hence, there is significant difference in the opinion of respondents who

have done senior secondary, are graduate and post graduate. The mean scores in the table for the service '*Ask for a cheque book'* indicate that consumers who have passed senior secondary rarely use this particular service whereas, the consumers who are graduate and post graduate use this service sometimes.

On the other hand the mean scores in the table for the service '*Online trading with demat services'* suggest that the consumers with senior secondary qualification, graduation and post graduation rarely use this service. Rest for all the other services there is no significant difference in the opinion of the consumers with different qualifications. The overall mean values in the table reflect that the respondents who belong to senior secondary group have comparatively higher mean values.

Table 5.21: Usage of Internet Banking Services Across Qualification of the Respondents

S.No.	Internet Banking Services Used	Senior Secondary A1	Grad. A2	PG A3	F (Sig.) Hypothesis
1.	View account balance and statements	1.95	1.83	1.87	.468 (.705) Accepted
2.	Inquire about cheque status	3.67	3.25	3.20	1.177 (.318) Accepted
3.	Ask for a cheque book	4.17	3.41	3.16	3.710 (.010)** Rejected
4.	Inquire about your fixed deposit	3.67	3.57	3.49	.275 (.843) Accepted
5.	Inquire about your TDS details	4.00	3.86	3.62	1.848 (.138) Accepted
6.	Online trading with demat services	4.17	3.92	3.60	5.228 (.001)** Rejected
7.	Update your profile	3.67	3.26	3.30	.304 (.823) Accepted
8.	Seeking product and rate information	3.33	3.57	3.44	.879 (.452) Accepted
9.	Download applications	4.33	3.59	3.60	1.119 (.341) Accepted
10.	Request to stop cheque payment	4.17	3.99	3.89	.548 (.649) Accepted

S.No.	Internet Banking Services Used	Senior Secondary A1	Grad. A2	PG A3	F (Sig.) Hypothesis
11.	Apply for loan or other services	4.50	3.89	3.93	.890 (.446) Accepted
12.	Calculate loan payment information	3.83	3.78	3.52	2.064(.104) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Hence it can be concluded that this group uses internet banking services less in comparison to other educational groups. Another interesting analysis that can be observed from the table is that the respondents with higher education use these services more than their counter parts. Hence it can be concluded that as the education of the respondents' increases there is an increase in the frequency of usage of internet banking services.

Table 5.22: Results of Post Hoc Test

S. No.	Internet Banking Services Used	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Ask for a cheque book	1.781	.150	Tukey	-
2.	Online trading with demat services	10.106	.000	Games-Howell	A2 Vs A3

The results of Post Hoc Test in the table 5.22 reflect that in case of '*Online trading with demat services*' there is one significant pair.

Occupation of the Respondents

Hypothesis: The frequency of usage of internet banking services does not differ across occupation of the respondents.

The F Values in the table 5.23 suggest that the internet banking services '*Inquire about your fixed deposit', ' Inquire about your TDS details', 'Online trading with demat services',' Request to stop cheque payment', 'Apply for loan or other services'* and *'Calculate loan payment information'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of respondents with different occupations in relation to the frequency of usage about the above mentioned internet

banking services. The mean scores for the service '*Inquire about your fixed deposit'* reflects that this particular service is sometimes used by respondents who are into business and those who are professionals. But this service is rarely used by respondents who are public sector and private sector employees. The services '*Inquire about your TDS details', 'Request to stop cheque payment'* are rarely used by the categories such as business, private sector employees and public sector employees, but it is used sometimes by professionals. Also the internet banking services *'Download applications'* is significant at .05 percent level of significance. Hence there is significant difference in the usage of internet banking services by the respondents of different occupations. The mean scores in the table reflect that the internet banking service *'Download applications'* is rarely used by public sector and private sector employees, but sometimes used by professionals and businessmen. The service '*Update your profile'* is rarely used by business men and sometimes used by the respondents of all the other categories. The service '*Apply for loan or other services'* is sometimes used by professionals and is rarely used by business men, private sector and public sector employees. As seen in the table the overall mean values are lower in case of professionals. It reflects that professionals use the entire mentioned internet banking services more than their counterparts. Also in most of the cases the mean values of business group is higher which, indicates a comparatively less usage of internet banking services by them.

Table 5.23: Usage of Internet Banking Services across Occupation of the Respondents

S.No.	Internet Banking Services Used	Business A1	Public Sector A2	Private Sector A3	Professional A4	F (Sig.) Hypothesis
1.	View account balance and statements	1.93	2.01	1.90	1.67	1.654 (.176) Accepted
2.	Inquire about cheque status	3.13	3.25	3.27	2.90	1.216 (.303) Accepted
3.	Ask for a cheque book	3.10	3.56	3.27	3.06	2.389 (.068) Accepted
4.	Inquire about your fixed deposit	3.23	3.82	3.59	3.03	5.075 (.002)** Rejected

S.No.	Internet Banking Services Used	Business A1	Public Sector A2	Private Sector A3	Professional A4	F (Sig.) Hypothesis
5.	Inquire about your TDS details	3.72	3.93	3.79	3.28	5.509 (.001)** Rejected
6.	Online trading with demat services	3.48	3.91	3.86	3.35	4.424(.004)** Rejected
7.	Update your profile	3.52	3.42	3.30	3.08	1.629 (.182) Accepted
8.	Seeking product and rate information	3.21	3.68	3.51	3.33	1.763 (.153) Accepted
9.	Download applications	3.41	3.82	3.65	3.32	3.123 (.026)* Rejected
10.	Request to stop cheque payment	3.69	4.11	4.06	3.45	9.821 (.000)** Rejected
11.	Apply for loan or other services	3.97	4.05	4.00	3.50	4.487 (.004)** Rejected
12.	Calculate loan payment information	3.34	3.89	3.71	3.27	4.679 (.003)** Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 5.24: Results of Post Hoc Test

S.No.	Internet Banking Services Used	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Inquire about your fixed deposit	1.182	.316	Tukey	A1 Vs A2 A2 Vs A4
2.	Inquire about your TDS details	2.226	.084	Tukey	A2 Vs A4 A3 Vs A4
3.	Online trading with demat services	1.762	.154	Tukey	A2 Vs A4 A4 Vs A3
4.	Download applications	1.006	.363	Tukey	A2 Vs A4
5.	Request to stop cheque payment	3.413	.017	Games-Howell	A2 Vs A4 A4 Vs A3

6.	Apply for loan or other services	2.363	.071	Tukey	A2 Vs A4 A4 Vs A3
7.	Calculate loan payment information	2.518	.058	Tukey	A2 Vs A4 A4 Vs A3

The above table 5.24 reflects the number of significant pairs for each internet banking service as suggested by the post hoc test. The services, *'Inquire about your TDS details', 'Online trading with demat services', 'Request to stop cheque payment', 'Apply for loan or other services' and 'Calculate loan payment information'* have two significant pairs each i.e. one between public sector and professional and the other one between private sector and professional. On the other hand the service, *'Download applications'* just has one significant pair i.e. between public sector and professional.

Age Group of the Respondents

Hypothesis: The frequency of usage of internet banking services does not differ across age group of the respondents.

The F Values in the table 5.25 suggest that the internet banking service *'Online trading with demat services'* is significant at .05 percent level of significance. Hence, there is significant difference in the opinion of respondents with different age groups for this particular service. For rest of the internet banking services used by the consumers there is no significant difference in the opinion of the consumers with different age groups. The mean scores for the service '*Online trading with demat services'* also suggest that this service is rarely used by the respondents of different age groups except the consumers lying in the age group of 35 years to less than 45 years who use this service sometimes.

Table 5.25: Usage of Internet Banking Services Across Age Group of the Respondents

S. No.	Internet Banking Services Used	< 25 yrs A1	25 to <35 yrs A2	35 to < 45 yrs A3	45 to < 60 yrs A4	F (Sig.) Hypothesis
1.	View account balance and statements	1.73	1.92	1.83	2.00	.882 (.450) Accepted
2.	Inquire about cheque status	3.32	3.19	3.29	3.07	.471 (.702) Accepted

3.	Ask for a cheque book	3.61	3.21	3.25	3.24	1.694 (.168) Accepted
4.	Inquire about your fixed deposit	3.43	3.51	3.55	3.69	.324 (.808) Accepted
5.	Inquire about your TDS details	3.73	3.69	3.70	4.00	.746 (.525) Accepted
6.	Online trading with demat services	4.02	3.80	3.44	3.90	2.860 (.037)* Rejected
7.	Update your profile	3.43	3.21	3.45	3.34	1.303 (.273) Accepted
8.	Seeking product and rate information	3.41	3.46	3.56	3.55	.300 (.825) Accepted
9.	Download applications	3.48	3.59	3.70	3.62	.465 (.707) Accepted
10.	Request to stop cheque payment	4.20	3.87	4.00	4.00	1.822 (.142) Accepted
11.	Apply for loan or other services	4.09	3.91	3.89	3.79	.497 (.684) Accepted
12.	Calculate loan payment information	3.77	3.65	3.51	3.62	.590 (.622) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 5.26: Results of Post Hoc Test

S.No.	Internet Banking Services Used	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Online trading with demat services	3.489	.016	Games – Howell	A1 Vs A3

The results of post hoc test in table 5.26 reflect that in case of '*Online trading with demat services'* there is just one significant pair i.e. between 'less than 25 years' and '35 years to less than 45 years'.

Income of the Respondents

Hypothesis: The frequency of usage of internet banking services does not differ across income of the respondents.

In relation to the demographic factor income the F values in the table 5.27 reflect that the internet banking services '*View account balance and statements', ' Inquire about your fixed deposit', 'Online trading with demat services'*, '*Request to stop cheque payment' and 'Calculate loan payment information'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents with different income groups in relation to the above mentioned internet banking services. The mean scores in the table reflect that the service '*View account balance and statements'* is often used by the respondents of all income groups. The service '*Inquire about your fixed deposit'* is sometimes used by the respondents with income '10 lakhs and above' whereas it is rarely used by respondents with other income groups. The services '*Online trading with demat services'* and '*Request to stop cheque payment'* are rarely used by the respondents of all income groups. As far as the service '*Calculate loan payment information'* is concerned it is used sometimes by respondents with the income group 3 lakhs to less than 5 lakhs p.a and is rarely used by respondents with all other income groups. Talking about the service '*Ask for a cheque book'* it is significant at .01 percent level of significance. Hence there is significant difference in the opinion of consumers with different income groups as far as usage of internet banking services are concerned. The mean score for, '*Ask for a cheque book'* reflects that it is rarely used by consumers with income less than 3 lakhs and is sometimes used by respondents of all the other income groups. The data in the table also reflects that as far as level of income is concerned out of the total twelve internet banking services the mean values of at least six internet banking services are less for the highest income group i.e. 10 lakhs and above which indicates a higher usage of these services by this particular income group in comparison to its counter parts.

Table 5.27: Usage of Internet Banking Services Across Income of the Respondents

S.No.	Internet Banking Services Used	< 3 lakhs A1	3 to < 5 lakhs A2	5 to < 10 lakhs A3	10 lakhs And above A4	F (Significance)
1.	View account balance and statements	2.09	1.91	1.96	1.73	2.617 (.050)* Rejected
2.	Inquire about cheque status	3.36	3.31	3.22	3.08	1.374 (.250) Accepted

3.	Ask for a cheque book	3.53	3.34	3.43	2.93	6.586 (.000)** Rejected
4.	Inquire about your fixed deposit	3.75	3.68	3.52	3.30	3.186 (.024)* Rejected
5.	Inquire about your TDS details	4.04	3.73	3.70	3.59	2.198 (.088) Accepted
6.	Online trading with demat services	3.89	3.59	4.01	3.61	3.464 (.016)* Rejected
7.	Update your profile	3.36	3.23	3.23	3.36	.501 (.682) Accepted
8.	Seeking product and rate information	3.58	3.33	3.59	3.46	1.319 (.268) Accepted
9.	Download applications	3.57	3.49	3.70	3.61	.822 (.482) Accepted
10.	Request to stop cheque payment	4.17	3.90	4.05	3.76	3.321 (.020)* Rejected
11.	Apply for loan or other services	4.23	3.77	3.96	3.89	2.171 (.091) Accepted
12.	Calculate loan payment information	3.94	3.39	3.74	3.62	3.448 (.017)* Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 5.28: Results of Post Hoc Test

S. No.	Internet Banking Services Used	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	View account balance and statements	1.473	.221	Tukey	-
2.	Ask for a cheque book	1.413	.238	Tukey	A1 Vs A4 A2 Vs A4 A3 vs A4
3.	Inquire about your fixed deposit	.535	.659	Tukey	A2 Vs A4
4.	Online trading with demat services	.805	.492	Tukey	A2 vs A3 A4 vs A3
5.	Request to stop cheque payment	4.108	.007	Games-Howell	A1 vs A4
6.	Calculate loan payment information	.315	.814	Tukey	A1 Vs A2

The above table 5.28 reflects the number of significant pairs for each internet banking service as suggested by the post hoc test. The internet banking services, *'Ask for a cheque book'* has three significant pairs i.e. between less than 3 lakhs p.a and 10 lakhs p.a and above, 3 lakhs to less than 5 lakhs p.a and 10 lakhs and the third one between 5 lakhs to less than 10 lakhs p.a and 10 lakhs p.a and above. The internet banking service, '*Online trading with demat services '* has two significant pairs i.e between 3 lakhs to less than 5 lakhs p.a and 5 lakhs to less than 10 lakhs p.a and the second one between 5 lakhs to less than 10 lakhs p.a and 10 lakhs p.a and above.

Respondents' Association with the Bank

Hypothesis: The frequency of usage of internet banking services does not differ across respondents' association with the bank.

The F values in the table 5.29 reflects that the internet banking services, '*Ask for a cheque book', 'Calculate loan payment information'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents who are associated with the bank for different time periods in relation to these internet banking services. The analysis also reflects that the service '*Ask for a cheque book'* is used sometimes by the respondents who have been associated with the bank for different time periods.

Table 5.29: Usage of Internet Banking Services Across Respondents' Association with the Bank

S.No.	Internet Banking Services Used	< 1Yr A1	1 to < 3 Yrs A2	3 to < 5 Yrs A3	5 yrs and above A4	F (Sig.) Hypothesis
1.	View account balance and statements	1.36	1.90	2.02	1.86	2.414 (.066) Accepted
2.	Inquire about cheque status	3.21	3.33	3.13	3.18	.863 (.460) Accepted
3.	Ask for a cheque book	2.71	3.47	3.22	3.16	3.441 (.017)* Rejected
4.	Inquire about your fixed deposit	3.64	3.62	3.31	3.55	1.628 (.182) Accepted

5.	Inquire about your TDS details	3.86	3.83	3.47	3.75	2.456 (.062) Accepted
6.	Online trading with demat services	3.43	3.92	3.55	3.76	2.207 (.087) Accepted
7.	Update your profile	3.43	3.28	3.21	3.33	3.37 (.798) Accepted
8.	Seeking product and rate information	3.21	3.36	3.47	3.60	1.583 (.193) Accepted
9.	Download applications	3.57	3.54	3.48	3.71	1.224 (.301) Accepted
10.	Request to stop cheque payment	3.93	4.19	3.71	3.86	5.646 (.001)** Rejected
11.	Apply for loan or other services	3.57	4.10	3.81	3.86	2.191 (.088) Accepted
12.	Calculate loan payment information	3.00	3.84	3.59	3.55	3.436 (.017)* Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

The service '*Calculate loan payment information'* is used sometimes by the consumers who have been associated with the bank for the time periods less than 1 year and it is rarely used by all the other respondents. The internet banking service, '*Request to stop cheque payment'* is significant at .01 percent level of significance. Hence there is significant difference in the opinion of the consumers who have been associated with the bank for different lengths. For rest of the internet banking services there is no significant difference in the opinion of the consumers.

Table 5.30: Results of Post Hoc Test

S.No.	**Internet Banking Services Used**	**Levene's Statistics**	**Significant Value**	**Post Hoc Test**	Significant Pairs
1.	Ask for a cheque book	.627	.598	Tukey	A2 Vs A4
2.	Request to stop cheque payment	1.275	.282	Tukey	A2 Vs A3 A2 Vs A4
3.	Calculate loan payment information	1.051	.370	Tukey	A1 Vs A2

The results of Post Hoc test in table 5.30 reflect that in case of '*Ask for a cheque book'* and '*Calculate loan payment information'* there is one significant pair where as in case of '*Calculate loan payment information'* there are two significant pairs (one between 1 year to less than 3 years and 3 years to less than 5 years and the other one between 1 years to less than 3 years and 5 years and above)

Respondents' Experience of Doing Internet Banking

Hypothesis: The frequency of usage of internet banking services does not differ across respondents' experience of doing internet banking.

The F values in the table 5.31 reflects that the internet banking services, '*Ask for a cheque book'* and *'Request to stop cheque payment'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the respondents who have been doing internet banking for varying time periods. The data also reflects that the service 'Inquire about your fixed deposit' and '*Inquire about your TDS details'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents who have been doing internet banking for varying time periods. For rest of the internet banking services there is no significant difference in the opinion of the respondents. The mean scores in the table also reflect that the internet banking service '*View account balance and statements'* is concerned it is often used by all the respondents irrespective of their length of internet banking. The mean scores for all the other services reflect that the services are either used sometimes or rarely by the respondents.

Table 5.31: Usage of Internet Banking Services Across Respondents' Experience of Doing Internet Banking:

S. No.	Internet Banking Services Used	< 1Yr A1	1 to < 3 Yrs A2	3 to < 5 Yrs A3	5 Yrs and above A4	F (Sig.) Hypothesis
1.	View account balance and statements	1.83	2.01	1.91	1.74	2.428 (.065) Accepted
2.	Inquire about cheque status	3.33	3.32	315	3.15	.902 (.440) Accepted

3.	Ask for a cheque book	3.00	3.51	3.14	3.08	4.799 (.003)** Rejected
4.	Inquire about your fixed deposit	4.33	3.68	3.46	3.35	3.165 (.024)* Rejected
5.	Inquire about your TDS details	4.17	3.85	3.52	3.72	2.594(.050)* Rejected
6.	Online trading with demat services	3.50	3.87	3.70	3.69	.795 (.497) Accepted
7.	Update your profile	3.33	3.34	3.26	3.26	.191(.902) Accepted
8.	Seeking product and rate information	3.17	3.44	3.52	3.50	.312 (.816) Accepted
9.	Download applications	4.00	3.52	3.55	3.72	1.308(.271) Accepted
10.	Request to stop cheque payment	4.67	4.05	3.70	3.93	3.761(.010)** Rejected
11.	Apply for loan or other services	3.67	3.95	3.96	3.85	.395(.757) Accepted
12.	Calculate loan payment information	3.17	3.73	3.56	3.60	.939(.422) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

5.7 BANKING TRANSACTIONS MADE BY THE CONSUMERS

The next section of the analysis basically deals with the different types of transactions made by the consumers. The internet banking provides different types of services which help in the transactions of money. These services range from day to day needs and payment of bills, insurance, credit card payments etc.

5.8 FREQUENCY DISTRIBUTION AND OVERALL MEAN

Table 5.32: Frequency Distribution of Various Banking Transactions Made

S. No.	Internet Banking Transactions	Very Often	Often	Some times	Rarely	Never
1.	Transfer funds between your accounts	143 (31.8)	164 (36.4)	95 (21.1)	33 (7.3)	15 (3.3)
2.	Transfer funds to a third party	104 (23.1)	145 (32.2)	140 (31.1)	40 (8.9)	21 (4.7)

3.	Pay your utility bills	144 (32)	121 (26.9)	124 (27.6)	36 (8.0)	25 (5.6)
4.	Shop online through internet banking	97 (21.6)	113 (25.1)	155 (34.4)	48 (10.7)	37 (8.2)
5.	Create/renew fixed/ recurring deposits online	37 (8.2)	74 (16.4)	150 (33.3)	83 (18.4)	106 (23.6)
6.	Request a demand draft /pay order	25 (5.6)	37 (8.2)	141 (31.3)	108 (24)	139 (30.9)
7.	Pay credit card dues	112 (24.9)	106 (23.6)	135 (30.0)	36 (8)	61 (13.6)
8.	Subscribe for mobile banking/ATM/debit cards	62 (13.8)	105 (23.3)	152 (33.8)	70 (15.6)	61 (31.6)
9.	Pay insurance premium	54 (12)	96 (21.3)	155 (34.4)	55 (12.2)	90 (20)
10.	Online tax payment	43 (9.6)	81 (18)	136 (30.2)	76 (16.9)	114 (25.3)
11.	Prepaid mobile recharge	76 (16.9)	85 (18.9)	130 (28.9)	51 (11.3)	108 (24)

Note: Figures in parentheses is the respective percentage of the frequency row wise

Table 5.32 represents the frequency distribution of the various banking transactions often made by the respondents. The figures in the table reveals that 31.8 percent consumers '*Transfer funds between your accounts'* very often whereas 36.4 percent consumers often make this transaction Out of the total, 21.1 percent consumers sometimes make this transaction where as 7.3 percent rarely use it. Talking about the next transaction i.e '*Transfer funds to a third party'*, 32.2 percent often make this transaction where as 31.1 percent go in for this transaction sometimes only. In total 23.1 percent respondents make this transaction very often whereas only 4.7 percent never make it. As far as *'Pay your utility bills'* is concerned 32 percent consumers make this transaction very often in comparison to 26.9 percent who make it often and 27.6 percent who sometimes make this transaction. The next transaction *'Shop online through internet banking'*, 34.4 percent consumers sometimes make this transaction, 25.1 percent often go in for this transaction and 21.6 percent who make this transaction very often. In total 10.7 percent rarely make this transaction whereas 8.2 percent never make this transaction. The table also reflects

that the transaction '*Create/renew fixed/ recurring deposits online'* 33.3 percent consumers only sometimes make this transaction. There are only 16.4 percent respondents who often make this transaction whereas 8.2 percent make these transactions very often. Out of the total 23.6 percent consumers never make such kind of transaction. One third of respondents i.e. 31.3 sometimes make the transaction '*Request a demand draft /pay order'* whereas an almost equal number 30.9 percent never make this transaction. Talking about the transactions '*Pay credit card dues'* there is almost 78.5 percent consumers who make this transaction either very often or often whereas 13.6 percent consumers never make this particular transaction. The figures also reveals that for the transaction *'Subscribe for mobile banking/ATM/debit cards* ' 13.8 percent respondents often make this transaction where as 31.6 percent never make this particular transaction. The frequency table also reveals that the transaction '*Pay insurance premium '* is used by 67.7 percent consumers often or very often where as 20 percent respondents never make this transaction. Further 30.2 percent respondents make this transaction '*Online tax payment'* sometimes in comparison to 25.3 percent who never make this particular transaction. Also 28.9 percent respondents sometimes make the transaction *'Prepaid mobile recharge*' where as 24 percent respondents never make this particular transaction. The frequency table reveals that out of all the transactions that are never made the highest percentage i.e. 31.6 percent is of the respondents who never make the transaction *'Subscribe for mobile banking/ATM/debit cards'*.

Table 5.33: Overall Mean Values and Ranking of Various Internet Banking Transactions Made

S.No.	Internet Banking Transactions	Mean	Rank	Standard Deviation
1.	Transfer funds between your accounts	2.14	1	1.051
2.	Transfer funds to a third party	2.40	3	1.078
3.	Pay your utility bills	2.28	2	1.157
4.	Shop online through internet banking	2.59	4	1.176
5.	Create/renew fixed/ recurring deposits online	3.33	10	1.232
6.	Request a demand draft /pay order	3.66	11	1.158
7.	Pay credit card dues	2.62	5	1.308
8.	Subscribe for mobile banking/ATM/debit cards	2.92	6	1.216

9.	Pay insurance premium	3.07	8	1.271
10.	Online tax payment	3.30	9	1.287
11.	Prepaid mobile recharge	3.06	7	1.391

(1- Very Often, 2- Often, 3-Sometimes, 4- Rarely, 5- Never)

Table 5.33 gauges the mean score and the standard deviation of the various internet banking transactions that are often made by the respondents. On the basis of mean values, ranks are provided to various aspects (the aspect with the minimum mean has been ranked as 1 and so on). This represents the overall positions of the various internet banking transactions often made by the respondents. The data reveals that the transactions *'Transfer funds between your accounts'* ($\bar{x}$=2.14), '*Transfer funds to a third party'* ($\bar{x}$=2.40), '*Pay your utility bills'* ($\bar{x}$=2.28), are often made by the respondents. Other transactions like '*Shop online through internet banking*' ($\bar{x}$=2.59), '*Create/renew fixed/ recurring deposits online'* (mean $\bar{x}$=3.33), '*Pay credit card dues'* ($\bar{x}$=2.62), '*Subscribe for mobile banking/ATM/debit cards'* ($\bar{x}$=2.92), '*Pay insurance premium'* ($\bar{x}$ =3.07), '*Online tax payment'* ($\bar{x}$=3.30) and '*Prepaid mobile recharge'* ($\bar{x}$=3.06) are all made sometimes by the respondents. The transaction, '*Request a demand draft /pay order'* ($\bar{x}$=3.66) is the only one that is used rarely by the respondents. The reason for this can be attributed to the fact that internet banking users prefer to request a demand draft in a physical bank so that they can receive it there itself and send it to the required destination.

5.9 RESULTS OF t-TEST AND ANOVA

The forthcoming explanation is related to t-test and F-test performed to know the association between internet banking transactions made and various demographic variables.

Gender of the Respondents

Hypothesis: The frequency of usage of internet banking transactions does not differ across gender of the respondents.

Table 5.34 represents the mean scores of males and females with respect to various internet banking transactions that are often made by the consumers. The results in the table reflect that t value for '*Shop online through internet banking'* is 3.275 which is significant at .01 percent level of significance. Hence there is significant difference in the opinion of males and females in relation to this internet banking transaction. The t value for the transaction '*Transfer funds between your accounts'* is -1.941 which is significant at .05 percent level of significance. Hence there is significant difference in the opinion of males and females in relation to this internet banking transaction. The mean scores in the table also highlight that the transaction '*Shop online through internet banking'* is often carried out by females rather than males who do it sometimes. This can be attributed to the fact that females are more fond of shopping.

Table 5.34: Internet Banking Transactions Across Gender of the Respondents

S.No.	Internet Banking Transactions	Male (Mean)	Female (Mean)	t values (Sig.) Hypothesis
1.	Transfer funds between your accounts	2.08	2.38	- 1.941 (.050)* Rejected
2.	Transfer funds to a third party	2.37	2.49	- .951 (.343) Accepted
3.	Pay your utility bills	2.25	2.38	- .958 (.340) Accepted
4.	Shop online through internet banking	2.68	2.28	3.275 (.001)** Rejected
5.	Create/renew fixed/ recurring deposits online	3.39	3.13	1.733 (.085) Accepted
6.	Request a demand draft /pay order	3.71	3.51	1.486 (.139) Accepted
7.	Pay credit card dues	2.57	2.76	- 1.249 (.214) Accepted
8.	Subscribe for mobile banking/ATM/debit cards	2.92	2.92	- .058 (.954) Accepted
9.	Pay insurance premium	3.03	3.20	- 1.101 (.273) Accepted
10.	Online tax payment	3.32	3.26	.399 (.690) Accepted
11.	Prepaid mobile recharge	3.13	2.83	1.882 (.062) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Place of Residence of Respondents:

Hypothesis: The frequency of usage of internet banking transactions does not differ across place of residence of the respondents.

As depicted by the F values in the Table 5.35 the various internet banking transactions often made by the consumers like, '*Transfer funds to a third party', 'Pay your utility bills' and 'Request a demand draft /pay order'* are significant at .05 percent level of significance. This indicates that there is significant difference in the opinion of the respondents residing in Delhi, Faridabad, Gurgaon and Noida as far as these three internet banking transactions are concerned. The mean scores for the transaction, *'Transfer funds to a third party'* indicates that this particular transaction is often used by the consumers residing in Delhi, Gurgaon and Faridabad but it is used sometimes by the consumers residing in Noida. Also the mean scores for the transaction, 'Pay your utility bills' indicate that this particular transaction is often made by the consumers residing in Delhi, Gurgaon, Noida and Faridabad. It can be attributed to the fact that respondents in NCR are very busy with their 24X7 working schedules so internet banking is a wonderful option for them to pay all their utility bills. It is convenient and it helps in saving a good amount of time. On the other hand the transaction, *'Request a demand draft /pay order'* is made sometimes by consumers residing in Gurgaon but it is rarely made by the consumers residing in Delhi, Faridabad and Noida. It can be attributed to the fact that respondents prefer to order the demand draft at the physical bank only so that they can receive it by hand and finally dispatch it to the desired location. For the other internet banking transactions there is no significant difference in the opinion of the consumers residing in Delhi, Faridabad, Gurgaon and Noida. Of all the internet banking transactions the mean scores in the table also reflect that the transaction, '*Create/renew fixed/ recurring deposits online'* is sometimes used by the consumers whereas '*Request a demand draft /pay order'* is rarely used by the consumers.

Table 5.35: Internet Banking Transactions Across Place of Residence of the Respondents

S. No.	Internet Banking Transactions	Delhi (Mean) A1	Gurgaon (Mean) A2	Noida (Mean) A3	Faridabad (Mean) A4	F(Sig.) Hypothesis
1.	Transfer funds between your accounts	2.12	2.09	2.19	2.16	.185 (.907) Accepted
2.	Transfer funds to a third party	2.32	2.20	2.61	2.45	2.874 (.036)* Rejected
3.	Pay your utility bills	2.16	2.42	2.48	2.13	2.619 (.050)* Rejected
4.	Shop online through internet banking	2.51	2.47	2.74	2.63	1.138 (.333) Accepted
5.	Create/renew fixed/ recurring deposits online	3.31	3.12	3.40	3.45	1.563 (.198) Accepted
6.	Request a demand draft /pay order	3.75	3.45	3.55	3.84	2.690 (.046)* Rejected
7.	Pay credit card dues	2.68	2.45	2.75	2.58	1.037 (.376) Accepted
8.	Subscribe for mobile banking/ATM/debit cards	3.05	2.73	3.05	2.85	1.877 (.133) Accepted
9.	Pay insurance premium	3.22	2.88	3.10	3.65	1.329 (.264) Accepted
10.	Online tax payment	3.26	3.34	3.29	3.32	.082 (.970) Accepted
11.	Prepaid mobile recharge	3.21	2.82	3.21	3.01	1.868 (.134) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 5.36: Results of Post Hoc Test

S.No.	Internet Banking Transactions	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Transfer funds to a third party	5.349	.001	Games – Howell	A2 Vs A3
2.	Pay your utility bills	1.404	.241	Tukey HSD	-

3.	Request a demand draft /pay order	.485	.693	Tukey HSD	-

The results of Post Hoc Test in the table 5.36 reflect that in case of '*Transfer funds to a third party'* there is just one significant pair.

Qualification of the Respondents

Hypothesis: The frequency of usage of internet banking transactions does not differ across qualification of the respondents.

The F Values in the table 5.37 suggest that the internet banking transactions, '*Shop online through internet banking'* and *'Pay credit card dues'* are both significant at .01 percent level of significance. Hence there is significant difference in the opinion of respondents who have done senior secondary, are graduates and even post graduate. The mean scores for the transaction, '*Shop online through internet banking'* indicate that this particular transaction is often made by the consumers who are post graduate but it is made sometimes by the consumers who are either graduate and have senior secondary as qualification. The reason can be that the level of awareness is more in case of post graduates in comparison to other consumers.

Table 5.37: Internet Banking Transactions Across Qualification of the Respondents

S.No.	Internet Banking Transactions often Made	Senior Secondary A1	Grad. A2	PG A3	F (Sig.) Hypothesis
1.	Transfer funds between your accounts	2.67	2.19	2.10	.901 (.441) Accepted
2.	Transfer funds to a third party	3.00	2.49	2.34	1.682 (.170) Accepted
3.	Pay your utility bills	2.67	2.45	2.16	2.345 (.072) Accepted
4.	Shop online through internet banking	2.67	3.95	3.87	4.426 (.004)** Rejected
5.	Create/renew fixed/ recurring deposits online	3.67	3.43	3.27	1.106 (.346) Accepted
6.	Request a demand draft /pay order	4.00	3.78	3.60	1.447 (.229) Accepted
7.	Pay credit card dues	3.83	2.84	2.45	5.051 (.002)** Rejected
8.	Subscribe for mobile banking/ATM/debit cards	3.33	2.92	2.92	.360 (.782) Accepted

9.	Pay insurance premium	3.33	3.09	3.02	1.862 (.135) Accepted
10.	Online tax payment	3.33	3.46	3.23	2.210 (.086) Accepted
11.	Prepaid mobile recharge	2.00	3.01	3.14	2.139 (.095) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

On the other hand the transaction '*Pay credit card dues'* is rarely made by the consumers who are senior secondary, is made sometimes by graduates and is often made by the consumers who are post graduates. It can be attributed to the fact that the respondents who are post graduates are more aware and use the credit cards more often in order to make their payments. The mean scores in the table also indicate that certain internet banking transactions like, '*Subscribe for mobile banking/ATM/debit cards', 'Pay insurance premium', 'Online tax payment'* and *'Prepaid mobile recharge'* all are made sometimes by all the consumers whether they graduate, post graduate or have senior secondary qualification. For remaining the other internet banking transactions made by the consumers there is no significant difference in the opinion of the consumers with different levels of qualifications.

Table 5.38: Results of Post Hoc Test

S.No.	Internet Banking Transactions	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Shop online through internet banking	5.166	.002	Games – Howell	A2 Vs A4 A3 Vs A4
2.	Pay credit card dues	.204	.893	Tukey	A1 Vs A3 A2 Vs A3

The results of post hoc test in the table 5.38 reflect that in case of '*Shop online through internet banking*' and '*Pay credit card dues'* there are two significant pairs for each transaction.

Occupation of the Respondents

Hypothesis: The frequency of usage of internet banking transactions does not differ across occupation of the respondents.

The F Values in the table 5.39 suggest that the internet banking transactions, '*Pay credit card dues', 'Subscribe for mobile banking/ATM/debit cards'* and *'Prepaid mobile recharge'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of respondents with different occupations in relation to the above mentioned internet banking transactions. The mean scores in the table reflect that the transactions '*Pay credit card dues'* is made sometimes by the respondents who are into business and public sector. This particular transaction is made often by the customers who are into private sector or are professionals. The transaction, '*Subscribe for mobile banking/ATM/debit cards'* is made rarely by the consumers who are into business and is made sometimes by the consumers who are either into public sector or private sector or are professionals. Talking about the transaction, '*Prepaid mobile recharge '*, it is made rarely by respondents who are into business and is made sometimes by public sector employees, private sector or professionals. On the other hand internet banking transactions, '*Pay your utility bills', 'Pay insurance premium'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of respondents with different occupations in relation to the above mentioned internet banking transactions. Talking about the transaction *'Pay your utility bills'* this particular internet banking transaction is made sometimes by the consumers who are into business or public sector. Whereas this transaction is made often by the consumers who are working into private sector and are professionals. The reason can be attributed to the fact that the customers who are into private sector or professionals are more aware, technology savvy, want to save time. Therefore they make this particular transaction often in comparison to consumers with other occupations. The transaction '*Pay insurance premium'* is rarely used by the consumers who are into business or public sector whereas it is made sometimes by the consumers who are into private sector or are professionals. For the remaining internet banking transactions there is no significant difference in the opinion of the consumers with different occupations.

Table 5.39: Internet Banking Transactions Across Occupation of the Respondents

S. No.	Internet Banking Transactions	Business A1	Public Sector A2	Private Sector A3	Professional A4	F (Sig.) Hypothesis
1.	Transfer funds between your accounts	2.22	2.39	2.14	1.92	1.142 (.334) Accepted
2.	Transfer funds to a third party	2.50	2.69	2.38	2.17	1.270 (.257) Accepted
3.	Pay your utility bills	3.11	2.57	2.20	2.26	2.075 (.037)* Rejected
4.	Shop online through internet banking	3.28	2.96	2.53	2.45	1.793 (.076) Accepted
5.	Create/renew fixed/ recurring deposits online	3.72	3.63	3.30	3.09	1.399 (.195) Accepted
6.	Request a demand draft /pay order	4.11	3.90	3.70	3.31	1.766 (.082) Accepted
7.	Pay credit card dues	3.39	3.12	2.48	2.51	2.622 (.008)** Rejected
8.	Subscribe for mobile banking/ATM/debit cards	3.72	3.31	2.86	2.70	2.814 (.005)** Rejected
9.	Pay insurance premium	3.61	3.53	3.02	2.87	2.070 (.037)* Rejected
10.	Online tax payment	3.72	3.61	3.32	3.01	1.374 (.206) Accepted
11.	Prepaid mobile recharge	3.94	3.35	3.03	2.94	2.925 (.003)** Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Talking about '*Subscribe for mobile banking/ATM/debit cards'* and '*Pay insurance premium'* there are two significant pairs each i.e one between public sector and private sector and the other between public sector and professional. For the internet banking transaction '*Prepaid mobile recharge'* there is no significant issue.

Table 5.40: Results of Post Hoc Test

S. No.	Internet Banking Transactions	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Pay your utility bills	2.757	.042	Games – Howell	A1 Vs A3, A2 Vs A3 A1 Vs A4
2.	Pay credit card dues	3.829	.010	Games – Howell	A1 Vs A3 A1 Vs A4 A2 Vs A3
3.	Subscribe for mobile banking/ATM/debit cards	1.274	.283	Tukey	A2 Vs A3 A2 Vs A4
4.	Pay insurance premium	3.857	.010	Games – Howell	A2 Vs A3 A2 Vs A4
5.	Prepaid mobile recharge	6.427	.000	Games – Howell	-

The results of Post Hoc test in the table 5.40 reflect that in case of '*Pay your utility bills* ' and '*Pay credit card dues'* there are three significant pairs for each issue i.e. between business and private sector, public sector and private sector and finally between business and professional.

Age Group of the Respondents

Hypothesis: The frequency of usage of internet banking transactions does not differ across age group of the respondents.

The F Values in the table 5.41 suggest that the internet banking transactions, '*Transfer funds between your accounts', 'Transfer funds to a third party', 'Shop online through internet banking', 'Pay credit card dues', 'Subscribe for mobile banking/ATM/debit cards'* and *'Prepaid mobile recharge'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of respondents with different age groups for these internet banking transactions. The mean scores for the transaction, 'Transfer funds between your accounts' reflects that this particular transaction is made often by consumers of all age groups except consumers lying in the age group 45 years to less than 60 years for which this transaction is made sometimes by them. Talking about the transaction ,'*Transfer funds to a third party'* mean scores reflect that this transaction is made often by the consumers lying in the age group of 25 years to less than 35 years

and 35 years to less than 45 years. Where as it is made sometimes by the consumers in the age group of less than 25 years and 45 years to less than 60 years. The transaction , '*Shop online through internet banking'* is often made by the consumers in the age group 25 years to less than 35 years where as it is made sometimes by the consumers of all the other age groups. The reason can be that respondents in this particular age group are more enthusiastic. They want to save time and want to explore more options in less time. Internet banking makes it convenient for them to order the product and immediately make the payments. The transaction '*Pay credit card dues'* is made often by the consumers lying in the age group of 25 years to less than 35 years where as it is made sometimes by the consumers of all the other age groups. On the other hand internet banking transactions '*Create/renew fixed/ recurring deposits online', 'Pay insurance premium'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of respondents with different age groups for these internet banking transactions. The transactions '*Create/renew fixed/ recurring deposits online',* and *'Pay insurance premium'* are both made rarely by consumers in the age group of 45 years to less than 60 years where as it is made sometimes by the consumers of all the other age groups. For rest of the internet banking transactions often made by the consumers there is no significant difference in the opinion of the consumers with different age groups.

Table 5.41: Internet Banking Transactions Across Age Group of the Respondents

S. No.	Internet Banking Transactions	<25 yrs A1	25 to < 35 yrs A2	35 to < 45 yrs A3	45 to < 60 yrs A4	F (Sig.) Hypothesis
1.	Transfer funds between your accounts	2.43	2.09	1.94	2.79	4.743 (.001)** Rejected
2.	Transfer funds to a third party	2.70	2.32	2.31	2.96	4.030 (.003)** Rejected
3.	Pay your utility bills	2.36	2.22	2.33	2.64	.997 (.409) Accepted
4.	Shop online through internet banking	2.57	2.41	2.92	3.32	7.509 (.000)** Rejected
5.	Create/renew fixed/ recurring deposits online	3.32	3.26	3.36	3.93	2.421 (.048)* Rejected

S. No.	Internet Banking Transactions	<25 yrs A1	25 to < 35 yrs A2	35 to < 45 yrs A3	45 to < 60 yrs A4	F (Sig.) Hypothesis
6.	Request a demand draft /pay order	3.64	3.61	3.80	3.79	.891 (.469) Accepted
7.	Pay credit card dues	3.36	2.48	2.52	3.18	6.089 (.000)** Rejected
8.	Subscribe for mobile banking/ATM/debit cards	3.07	2.76	3.37	2.89	4.743 (.001)** Rejected
9.	Pay insurance premium	3.39	3.00	2.94	3.64	2.558 (.038)* Rejected
10.	Online tax payment	3.18	3.26	3.44	3.50	.641 (.633) Accepted
11.	Prepaid mobile recharge	2.59	2.94	3.52	3.54	5.668 (.000)** Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 5.42: Results of Post Hoc Test

S. No.	Internet Banking Transactions often	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Transfer funds between your accounts	2.084	.102	Tukey	A2 Vs A4 A3 Vs A4
2.	Transfer funds to a third party	1.469	.222	Tukey	A2 Vs A4 A3 Vs A4
3.	Shop online through internet banking	1.556	.199	Tukey	A1 Vs A4 A2 Vs A3 A2 Vs A4
4.	Create/renew fixed/ recurring deposits online	1.180	.317	Tukey	A2 Vs A4
5.	Pay credit card dues	1.781	.150	Tukey	A1 Vs A2 A1 Vs A3 A4 Vs A2
6.	Subscribe for mobile banking/ATM/debit cards	.266	.850	Tukey	A2 Vs A3
7.	Pay insurance premium	1.460	.225	Tukey	-

S. No.	Internet Banking Transactions often	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
8.	Prepaid mobile recharge	.932	.425	Tukey	A1 Vs A3 A1 Vs A4 A2 Vs A3

The results of Post Hoc test in the table 5.42 reflect that in case of '*Transfer funds between your accounts'* and '*Transfer funds to a third party'* there are two significant pairs for each issue. Talking about '*Shop online through internet banking'* and '*Pay credit card dues'* and '*Prepaid mobile recharge'* there are three significant pairs for each issue. For internet banking transactions like '*Create/renew fixed/ recurring deposits online'* and *'Subscribe for mobile banking/ATM/debit cards'* there is just one significant pair for each transaction.

Income level of the Respondents

Hypothesis: The frequency of usage of internet banking transactions does not differ across income of the respondents.

In relation to the demographic factor income the F values in the above table 5.43 reflect that the internet banking transactions, '*Transfer funds between your accounts', 'Transfer funds to a third party', 'Create/renew fixed/ recurring deposits online', 'Request a demand draft /pay order', 'Subscribe for mobile banking/ATM/debit cards', 'Pay insurance premium'* and *'Prepaid mobile recharge'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the respondents with different income groups in relation to the above mentioned internet banking transactions that are often used. The mean scores in the table reflect that the transactions '*Transfer funds between your accounts'* and *'Transfer funds to a third party',* are often made by the consumers of all income groups except the one with income less than 3 lakhs p.a who do it sometimes. The internet banking transactions 'Pay insurance premium' and '*Prepaid mobile recharge' i*s made sometimes only by the consumers of all the income groups. Further about '*Request a demand draft /pay order*' it is rarely made by the consumers of all the income groups except one in the income group 3 lakhs to less than 5 lakhs p.a who make use of this service sometimes only. Other internet banking transactions like '*Pay your utility bills'* and '*Shop online through internet banking'* are all significant at .05 percent level of significance. Hence there is significant difference in the

opinion of the respondents with different income groups in relation to the above mentioned internet banking transactions that are often used. The internet banking transaction '*Pay your utility bills'* the mean scores indicate that this particular transaction is made often by consumers of all income groups except those who lie in the income group less than 3 lakhs p. a who do it sometimes only. Also for the transaction '*Shop online through internet banking'* the mean scores reveal that this transaction is often made by the consumers in the income group of 3 lakhs to less than 5 lakhs p.a. For rest of the income groups this particular transaction is made only sometimes.

Table 5.43: Internet Banking Transactions Across Income of the Respondents

S. No.	Internet Banking Transactions	< 3 lakhs A1	3 to < 5 lakhs A2	5 to < 10 lakhs A3	10 lakhs and above A4	F (Sig.) Hypothesis
1.	Transfer funds between your accounts	2 .60	2.12	2.20	1.93	5.685 (.001)** Rejected
2.	Transfer funds to a third party	2.72	2.48	2.45	2.17	4.102 (.007)** Rejected
3.	Pay your utility bills	2.51	2.09	2.46	2.20	3.072 (.028)* Rejected
4.	Shop online through internet banking	2.64	2.30	2.72	2.69	3.412 (.017)* Rejected
5.	Create/renew fixed/ recurring deposits online	3.75	3.17	3.51	3.13	5.266 (.001)** Rejected
6.	Request a demand draft /pay order	4.26	3.35	3.69	3.68	8.086 (.000)** Rejected
7.	Pay credit card dues	2.94	2.47	2.70	2.55	1.970 (.118) Accepted
8.	Subscribe for mobile banking/ATM/debit cards	3.09	2.54	2.98	3.11	5.695 (.001)** Rejected
9.	Pay insurance premium	3.45	2.73	3.11	3.17	4.866 (.002)** Rejected
10.	Online tax payment	3.45	3.13	3.35	3.35	1.060 (.366) Accepted

S. No.	Internet Banking Transactions	< 3 lakhs A1	3 to < 5 lakhs A2	5 to < 10 lakhs A3	10 lakhs and above A4	F (Sig.) Hypothesis
11.	Prepaid mobile recharge	2.79	2.64	3.20	3.38	7.685 (.000)** Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 5.44: Results of Post Hoc Test

S. No.	Internet Banking Transactions	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Transfer funds between your accounts	7.965	.000	Games Howell	A1 Vs A4
2.	Transfer funds to a third party	2.593	.052	Tukey	A1 Vs A4
3.	Pay your utility bills	.884	.449	Tukey	-
4.	Shop online through internet banking	1.729	.160	Tukey	A2 Vs A3 A2 Vs A4
5.	Create/renew fixed/ recurring deposits online	3.212	.023	Games Howell	A1 Vs A2 A1 Vs A4 A3 Vs A4
6.	Request a demand draft /pay order	2.633	.049	Games Howell	A1 Vs A2 A1 Vs A3 A1 Vs A4
7.	Subscribe for mobile banking/ATM/debit cards	1.683	.170	Tukey	A1 Vs A2 A2 Vs A3 A2 Vs A4
8.	Pay insurance premium	1.541	.203	Tukey	A1 Vs A2 A4 Vs A2
9.	Prepaid mobile recharge	4.864	.002	Games Howell	A2 Vs A3 A2 Vs A4

The results of post hoc test in the table 5.44 reflect that in case of '*Transfer funds between your accounts'* and '*Transfer funds to a third party'* there are just one significant pair for each issue. Talking about '*Shop online through internet banking', 'Pay insurance premium'* and '*Prepaid mobile recharge'* there are two significant pairs for each issue. Further, for the internet banking transactions like, '*Create/renew fixed/ recurring deposits online' , 'Request a demand draft /pay order', 'Subscribe for mobile*

banking/ATM/debit cards' there are three significant pairs for each transaction. There is no significant pair for the internet banking transaction '*Pay your utility bills'*.

Respondents Association with the Bank

Hypothesis: The frequency of usage of internet banking transactions does not differ across respondents' association with the bank.

The F values in the above table 5.45 reflects that the internet banking transactions that are often made such as, '*Pay your utility bills', 'Pay credit card dues', 'Pay insurance premium'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the consumers who are associated with the bank for different time periods in relation to these internet banking transactions. The mean scores for the transaction 'Pay your utility bills' indicate that this particular transaction is often made by the consumers of all the categories except those who have been associated with the bank for time period of 1 year to less than 3 years. This particular category makes this transaction only sometimes. As far as 'Pay credit card dues' is concerned it is often carried out by the consumers who have been associated with the bank for less than 1 year or more than 5years. Talking about '*Pay insurance premium'* the mean scores indicate that this transaction is carried out sometimes by all the consumers who have been associated with the bank for different time periods. On the other hand transactions like '*Transfer funds between your accounts', 'Transfer funds to a third party'* and *'Subscribe for mobile banking/ATM/debit cards'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the consumers who are associated with the bank for different time periods in relation to these internet banking transactions.

The mean scores in the table for the transactions '*Transfer funds between your accounts'* and *'Transfer funds to a third party'* indicate that these particular transactions are carried out often by all the consumers who have been associated with the bank for different time periods. Also the mean scores for the transaction '*Subscribe for mobile banking/ATM/debit cards'* indicate that this particular transaction is made sometimes by the consumers who are associated with the banks for different time periods.

Table 5.45: Internet Banking Transactions Across Respondents' Association with the Bank

S. No.	Internet Banking Transactions	< 1Yr A1	1 to < 3 Yrs A2	3 to < 5 Yrs A3	5 Yrs and above A4	F (Sig.) Hypothesis
1.	Transfer funds between your accounts	1.57	2.27	2.22	2.04	2.930 (.033)* Rejected
2.	Transfer funds to a third party	2.14	2.56	2.48	2.25	2.812 (.039)* Rejected
3.	Pay your utility bills	1.79	2.59	2.27	2.09	6.374 (.000)** Rejected
4.	Shop online through internet banking	3.00	2.63	2.56	2.55	.731 (.534) Accepted
5.	Create/renew fixed/ recurring deposits online	3.36	3.39	3.16	3.36	.807 (.490) Accepted
6.	Request a demand draft /pay order	3.79	3.86	3.52	3.59	2.194 (.088) Accepted
7.	Pay credit card dues	2.43	2.96	2.63	2.36	6.034 (.000)** Rejected
8.	Subscribe for mobile banking/ATM/debit cards	2.79	3.13	2.68	2.89	2.899 (.035)* Rejected
9.	Pay insurance premium	3.36	3.45	2.96	2.81	7.654 (.000)** Rejected
10.	Online tax payment	3.21	3.48	3.09	3.30	1.887 (.131) Accepted
11.	Prepaid mobile recharge	3.64	3.07	2.88	3.11	1.466 (.223) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 5.46: Results of Post Hoc Test

S.No.	Internet Banking Transactions	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Transfer funds between your accounts	.603	.613	Tukey	-
2.	Transfer funds to a third party	.370	.775	Tukey	A2 Vs A4

3.	Pay your utility bills	1.866	.135	Tukey	A2 Vs A4
4.	Pay credit card dues	4.558	.004	Games-Howell	A2 Vs A4
5.	Subscribe for mobile banking/ATM/debit cards	3.655	.013	Games-Howell	A2 Vs A3
6.	Pay insurance premium	4.018	.008	Games-Howell	A2 Vs A4

The results of post hoc test in table 5.46 depicts that for the internet banking transactions, '*Transfer funds to a third party', 'Pay your utility bills', 'Pay credit card dues ' and 'Pay insurance premium* ' there are two significant pairs for each issue i.e between 1 year to less than 3 years and 5 years and above. Talking about the transaction, '*Subscribe for mobile banking/ATM/debit cards*' there is just one significant pair i.e between 1 year to less than 3 years and 5 years and above. There is no significant pair for the transaction '*Transfer funds between your accounts'*.

Respondents' Experience of Doing Internet Banking

Hypothesis: The frequency of usage of internet banking transactions does not differ across respondents' experience of doing internet banking:

The F values in the above table 5.47 reflects that the internet banking transactions that are often made, '*Transfer funds between your accounts', 'Transfer funds to a third party', 'Pay your utility bills', 'Request a demand draft /pay order', 'Pay credit card dues ' and 'Pay insurance premium'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the consumers who are associated with the bank for internet banking for different time periods in relation to these internet banking transactions.

Further the mean scores for the transactions **'***Transfer funds between your accounts', 'Transfer funds to a third party', 'Pay your utility bills*' indicate that these particular transactions are made often by all the consumers who are associated with the bank for internet banking for varying time periods. The mean scores for the transaction '*Request a demand draft /pay order '*, indicate that this transaction is made rarely by the consumers of all the categories except those who are associated with the bank for internet banking

for less than 1 Year. The reason can be attributed to the fact the respondents who are new to internet banking try and explore all the options. As their association with the bank increases they realize as to which transactions are beneficial to be done by internet banking. Talking about the transaction '*Pay credit card dues'* it is carried out sometimes by the respondents of all the groups except those who have been associated with the bank for internet banking for a time period of more than 5 years. This particular group often makes this transaction. The transaction **'***Pay insurance premium'* is carried out sometimes by the consumers of all the groups who are associated with the bank for internet banking for varying time periods. On the other hand transaction like '*Create/renew fixed/ recurring deposits online'* is significant at .05 percent level of significance. Hence there is significant difference in the opinion of the consumers who are associated with the bank for internet banking for different time periods in relation to these internet banking transactions. As far as the transaction '*Create/renew fixed/ recurring deposits online'* is concerned it is made sometimes by the respondents of all the groups except those who are associated with the bank for internet banking for less than 1 year. This particular group often makes this transaction.

Table 5.47: Internet Banking Transactions Across Respondents' Experience of Doing Internet Banking:

S. No.	Internet Banking Transactions	< 1Yr A1	1 to < 3 Yrs A2	3 to < 5 Yrs A3	5Yrs and above A4	F (Sig.) Hypothesis
1.	Transfer funds between your accounts	1.83	2.33	2.14	1.92	4.186 (.006)** Rejected
2.	Transfer funds to a third party	2.50	2.63	2.43	2.09	6.845 (.000)** Rejected
3.	Pay your utility bills	1.67	2.54	2.15	2.13	4.957 (.002)** Rejected
4.	Shop online through internet banking	2.67	2.65	2.69	2.42	1.428 (.234) Accepted
5.	Create/renew fixed/ recurring deposits online	2.50	3.44	3.41	3.15	2.621 (.050)* Rejected
6.	Request a demand draft /pay order	2.00	3.84	3.67	3.52	6.368 (.000)** Rejected
7.	Pay credit card dues	2.67	3.01	2.60	2.17	11.367 (.000)** Rejected

S. No.	Internet Banking Transactions	< 1Yr A1	1 to < 3 Yrs A2	3 to < 5 Yrs A3	5Yrs and above A4	F (Sig.) Hypothesis
8.	Subscribe for mobile banking/ATM/debit cards	2.83	3.10	2.80	2.81	2.049 (.106) Accepted
9.	Pay insurance premium	3.50	3.29	3.05	2.81	3.896 (.009)** Rejected
10.	Online tax payment	3.33	3.39	3.22	3.28	.475 (.700) Accepted
11.	Prepaid mobile recharge	3.20	3.20	3.02	2.94	.959 (.412) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 5.48: Results of Post Hoc Test

S.No.	Internet Banking Transactions	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Transfer funds between your accounts	1.651	.177	Tukey	A2 Vs A4
2.	Transfer funds to a third party	.538	.656	Tukey	A2 Vs A4 A3 Vs A4
3.	Pay your utility bills	3.323	.020	Games-Howell	A2 Vs A3 A2 Vs A4
4.	Create/renew fixed/ recurring deposits online	.786	.502	Tukey	-
5.	Request a demand draft /pay order	1.173	.320	Tukey	A Vs A2 A1 Vs A3 A1 Vs A4
6.	Pay credit card dues	.371	.774	Tukey	A2 Vs A3 A2 Vs A4
7.	Pay insurance premium	3.966	.008	Games-Howell	A2 Vs A4

The results of Post Hoc test in table 5.48 depicts that for the internet banking transactions '*Transfer funds to a third party', 'Pay your utility bills' and 'Pay credit card dues* ' there are two significant pairs for each issue. Talking about transactions like, '*Transfer funds between your accounts'* and *'Pay insurance premium*' there is just one significant

pair for each issue. The internet banking transaction, *'Request a demand draft /pay order* '*is the only transaction in case of which there are three significant pairs.*

5.10 CONCLUSION

The current chapter explained the various aspects related to internet banking. It includes the level of awareness and knowledge related to internet banking, various services provided by the internet banks and also the transactions related to internet banking. The level of awareness and knowledge is found good among males, respondents residing in Delhi and Gurgaon, post graduates, professionals and private sector employees, youngsters, high income group and those who have a longer association with the bank. As far as internet banking services are concerned 'View account balance and statements' , 'Inquire about cheque status' and 'Ask for a cheque book' are frequently used services by the respondents and the various categories of respondents demography such as gender , occupation , income and association with the bank differ significantly in the usage of internet banking services. Various internet banking transactions such as ' Transfer funds between your accounts' , 'Pay utility bills' , 'Transfer funds to a third party' and 'Shop online' are the frequently used transaction services by the respondent and the various categories of place of residence, occupation , age group , income level and length of association differ significantly in the usage of various internet banking transactions services.

CHAPTER - VI

ANALYSIS AND INTERPRETATION-III

This chapter throws light on the various elements of the website which are important while doing internet banking. Further internet banking in India is not free from problems. There are various problems faced by the users while doing internet banking. To find out the results regarding the above mentioned issues two sections are included in the questionnaire (Annexure I). The respondents were asked to give their responses on a five point Likert Scale. Further to examine the variations across different demographic and internet banking aspects, the results of t-test and ANOVA also constitute the subject matter of this chapter.

6.1 ELEMENTS RELATED TO WEBSITE EVALUATION

For effective internet banking the banks need to design websites which are easy and attractive so that the customers can interact effectively with these in order to interact with the bank. The websites are today being used as a competitive tool to attract new customers, improve the service quality and hence improve the overall performance. The websites of these banks need to very attractive and user friendly in order to make internet banking more convenient for the customers. The website should try to satisfy the needs of the customer and should ensure repeat visits from the customer on the website. An interactive and content full website creates added value and highly motivates customer repeated visits. A more usable website can attract and retain customers in the long run thereby increasing revenues, reducing customer support costs and increasing profits **(Nielsen, J., Udo, G.J. and G.P. Marquis , 2001).**

6.2 FREQUENCY DISTRIBUTION AND OVERALL MEAN

To find the perception of respondents regarding various website elements a question consisting of 14 statements was asked on a five point Likert Scale. The statement/ elements were decided after a discussion and review of literature of related papers. Further websites of banks were also surfed.

Table 6.1: Frequency Distribution of Elements Related to Website

S. No.	Elements	Highly Imp.	Imp.	Somewhat Important	Unimp.	Highly Unimp.
1.	Provides complete information about the bank	159 (35.3)	229 (50.9)	41 (9.1)	15 (3.3)	6 (1.3)
2.	Provides complete information about the customer	98 (21.8)	257 (57.1)	69 (15.3)	23 (5.1)	2 (.4)
3.	Provides complete information about the product	156 (34.7)	238 (52.9)	49 (10.9)	3 (.7)	4 (.9)
4.	Privacy policy	206 (45.8)	184 (40.9)	43 (9.6)	11 (2.4)	5 (1.1)
5.	Security policy	216 (48)	175 (38.9)	43 (9.6)	5 (1.1)	10 (2.2)
6.	Instructions on the website related to IB should be easy to read	167 (37.1)	208 (46.2)	57 (12.7)	11 (2.4)	7 (1.6)
7.	Option for change of password	211 (46.9)	176 (39.1)	47 (10.4)	12 (2.7)	4 (.9)
8.	Tutorial demonstrator	82 (18.2)	235 (52.2)	116 (25.8)	15 (3.3)	2 (.4)
9.	Help function	94 (20.9)	250 (55.6)	92 (20.4)	7 (1.6)	6 (1.3)
10.	FAQ facility	106 (23.6)	232 (51.6)	102 (22.7)	8 (1.8)	2 (.4)
11.	Customer care	166 (36.9)	221 (49.1)	53 (11.8)	9 (2.0)	1 (.2)
12.	Website is interactive	128 (28.4)	236 (52.4)	70 (15.6)	13 (2.9)	3 (.7)
13.	Website processes transaction quickly	201 (44.7)	179 (39.8)	55 (12.2)	7 (1.6)	8 (1.8)
14.	Current news and quick updates	106 (23.6)	199 (44.2)	121 (26.9)	16 (3.6)	8 (1.8)

Note: Figures in parentheses is the respective percentage of the frequency row wise

To begin with the results, the frequency distribution of the various elements related to the website evaluation of the bank has been presented in the table 6.1. The data in the table reflects that the element, '*Provides complete information about the bank'* is considered important by almost 51 percent of the respondents where as 35.3 percent respondents consider it highly important. Rest 4.6 percent respondents do not consider this element important. The element, '*Provides complete information about the customer'* is considered highly important by 22 percent respondents, important by 57 percent respondents and unimportant by 5.5 percent respondents. The next element, '*Provides complete information about the product'* is considered highly important by 34.7 percent respondents, important by 53 percent respondents, unimportant by 1.6 percent respondents. There are only 11 percent respondents who consider this element to be somewhat important.

6.2.1 Overall Mean and S.D. of Website Elements

Table 6.2: Overall Mean Values and Ranking of Various Elements Related to Website

S.No.	Elements	Mean	Rank	S.D
1.	Provides complete information about the bank	1.84	5	.822
2.	Provides complete information about the customer	2.05	9	.785
3.	Provides complete information about the product	1.80	4	.724
4.	Privacy policy	1.72	2	.822
5.	Security policy	1.70	1	.858
6.	Instructions on the website related to IB should be easy to read	1.85	6	.846
7.	Option for change of password	1.72	2	.825
8.	Tutorial demonstrator	2.16	11	.768
9.	Help function	2.07	10	.771
10.	FAQ facility	2.04	8	.757

S.No.	Elements	Mean	Rank	S.D
11.	Customer care	1.80	4	.739
12.	Website is interactive	1.95	7	.784
13.	Website processes transaction quickly	1.76	3	.857
14.	Current news and quick updates	2.16	11	.885

(1- Highly Important, 2- Important, 3- Somewhat Important, 4- Unimportant, 5- Highly Unimportant)

Other website elements namely '*Privacy policy'*, '*Security policy'*, '*Instructions on the website related to IB should be easy to read'* and '*Option for change of password*' more than 80 percent of the respondents consider these elements highly important and important. Therefore, there are less than 20 percent respondents who consider these elements less important. More than 50 percent respondents consider, '*Tutorial demonstrator'*, '*Help function', 'FAQ facility' and 'Website is interactive'* as important website elements. Further, for the element, '*Website processes transaction quickly'* 44.7 percent respondents consider this element to be highly important where as 39.8 percent respondents consider it to be important. The data in the table represents that almost all the website elements are considered either important or highly important. There is less percentage of respondents who do not consider these elements important.

After giving individual values frequency distribution in Table 6.1, mean values of the various elements related to website evaluation of the internet bank and their respective standard deviations is presented in table 6.2. The aspect with the minimum mean has been ranked as 1 and so on. This represents the overall positions of the various elements related to website evaluation. The data reveals that the website elements namely, '*Security policy'*($\bar{x}$= 1.70), '*Privacy policy'* ($\bar{x}$= 1.72), '*Option for change of password'* ($\bar{x}$= 1.72), '*Website processes transaction quickly'* ($\bar{x}$= 1.76), '*Customer care'* ($\bar{x}$= 1.80), '*Provides complete information about the product'* ($\bar{x}$= 1.80), '*Provides complete information about the bank*' ($\bar{x}$= 1.84), '*Instructions on the website related to IB should*

be easy to read' ($\bar{x}$= 1.85), '*Website is interactive'* ($\bar{x}$= 1.95),' FAQ facility' ($\bar{x}$= 2.04),' *Provides complete information about the customer'* ($\bar{x}$= 2.05), '*Help function'* ($\bar{x}$= 2.07),' '*Tutorial demonstrator'* ($\bar{x}$= 2.16), '*Current news and quick updates'* ($\bar{x}$= 2.16) are all considered important by the respondents.

6.3 RESULTS OF t-TEST AND ANOVA

Consumer may have different opinions regarding the various elements of website evaluation of their banks and automated services. It is also important to find out that whether the perception of the respondents is associated with their demographic profile or not. For this we need to apply t-test and one way analysis of variances F-test (ANOVA)

Gender of the Respondents

Hypothesis: The importance of elements of website does not differ across gender of the respondents.

Table 6.3: Elements of Website Evaluation Across Gender of the Respondents

S. No.	Website Elements	Male	Female	t (Sig.) Hypothesis
1.	Provides complete information about the bank	1.82	1.92	-1.054 (.294) Accepted
2.	Provides complete information about the customer	2.02	2.16	-1.616 (.108) Accepted
3.	Provides complete information about the product	1.76	1.93	-1.933 (.055)*** Rejected
4.	Privacy policy	1.69	1.80	-1.103 (.272) Accepted
5.	Security policy	1.66	1.84	-1.716 (.088)*** Rejected
6.	Instructions on the website related to IB should be easy to read	1.83	1.91	-.867 (.387) Accepted
7.	Option for change of password	1.70	1.77	-.786 (.433) Accepted
8.	Tutorial demonstrator	2.16	2.15	.045 (.964) Accepted
9.	Help function	2.06	2.08	-.130 (.897) Accepted
10.	FAQ facility	2.01	2.12	-1.215 (.226) Accepted

S. No.	Website Elements	Male	Female	t (Sig.) Hypothesis
11.	Customer care	1.78	1.84	-.638 (.525) Accepted
12.	Website is interactive	1.95	1.94	.086 (.931) Accepted
13.	Website processes transaction quickly	1.73	1.86	-1.247 (.214) Accepted
14.	Current news and quick updates	2.16	2.14	.194 (.846) Accepted

*** *indicates significance at .10 percent level*

Table 6.3 below represents the mean scores of males and females with respect to the various elements related to website evaluation. The results in the table reflect that there is no significant difference in the opinion of the males and females with respect to the importance of various elements related to website evaluation. The mean scores are higher in case of females than males. It reflects that female respondents have comparatively given fewer score to website elements mentioned in the table.

Place of Residence of the Respondents

Hypothesis: The importance of elements of website does not differ across place of residence of the respondents.

As depicted by the F values in the Table 6.4 the various elements related to website evaluation of the internet bank depict that the elements '*Provides complete information about the bank'* and *'Current news and quick updates'* are significant at .01 percent level of significance. This indicates that there is significant difference in the opinion of the respondents residing in Delhi, Faridabad, Gurgaon and Noida as far as these two elements of website evaluation are concerned. The mean scores for the element '*Provides complete information about the bank'* indicate that this particular element is important for the respondents residing in Delhi, Faridabad Noida and Gurgaon. Also the mean scores for the element *'Current news and quick updates'* also indicate that this particular element is also important for the respondents residing in Delhi, Faridabad, Noida and Gurgaon. It can be attributed to the fact that the respondents who access the website for internet banking consider both these options important as far as elements related to website evaluation are

concerned. On the other hand the elements, '*Provides complete information about the product'*, '*Instructions on the website related to IB should be easy to read'*, '*Option for change of password', 'Customer care'* and *'Website processes transaction quickly'* are all significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents related to these elements of website evaluation. The mean scores for all these elements indicate that these elements are considered important by the respondents residing in Delhi and Noida in comparison to the respondents residing in Faridabad and Gurgaon. This can be attributed to the fact that any respondent who is accessing the website considers these elements to be important as they help the respondents to easily access the website and makes internet banking convenient for them.

Table 6.4: Elements of Website Evaluation Across Place of Residence of the Respondents

S. No.	Website Elements	Delhi A1	Gurgaon A2	Noida A3	FBD. A4	F(Sig.) Hypothesis
1.	Provides complete information about the bank	1.79	2.12	1.85	1.68	5.949 (.001)** Rejected
2.	Provides complete information about the customer	2.09	2.20	1.97	1.97	2.078 (.102) Accepted
3.	Provides complete information about the product	1.75	1.95	1.84	1.70	2.613 (.050)* Rejected
4.	Privacy policy	1.71	1.83	1.80	1.57	2.373 (.070) Accepted
5.	Security policy	1.70	1.85	1.71	1.58	1.920 (.126) Accepted
6.	Instructions on the website related to IB should be easy to read	1.85	1.97	1.95	1.68	2.860 (.037)* Rejected
7	Option for change of password	1.69	1.82	1.84	1.55	3.107 (.026)* Rejected
8	Tutorial demonstrator	2.14	2.24	2.21`	2.07	1.093 (.352) Accepted

9	Help function	2.12	2.16	2.06	1.95	1.594 (.190) Accepted
10.	FAQ facility	2.12	2.07	2.04	1.95	1.148 (.329) Accepted
11.	Customer care	1.82	1.91	1.86	1.63	3.359 (.019)* Rejected
12.	Website is interactive	1.87	2.01	2.08	1.87	1.974 (.117) Accepted
13.	Website processes transaction quickly	1.75	1.89	1.84	1.60	2.654 (.048)* Rejected
14.	Current news and quick updates	2.29	2.42	2.19	1.81	11.465 (.000)** Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 6.5: Results of Post Hoc Test

S. No.	Website Elements	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Provides complete information about the bank	1.398	.243	Tukey	A1 Vs A2 A2 Vs A4
2.	Provides complete information about the product	.733	.532	Tukey	A2 Vs A4
3.	Instructions on the website related to IB should be easy to read	2.494	.059	Tukey	-
4.	Option for change of password	.063	.979	Tukey	A3 Vs A4
5.	Customer care	.821	.483	Tukey	A2 Vs A4
6.	Website processes transaction quickly	1.909	.127	Tukey	A2 vs A4
7.	Current news and quick updates	6.711	.000	Games-Howell	A1 vs A4 A2 vs A4 A3 Vs A4

The results of the post hoc test in table 6.5 depict that the elements for website evaluation like '*Provides complete information about the product', 'Option for change of password',' Customer care'* and *'Website processes transaction quickly'* have one

significant pair each. The elements namely '*Provides complete information about the bank'* and *'Current news and quick updates'* have two significant pairs each.

Qualification of the Respondents

Hypothesis: The importance of elements of website does not differ across qualification of the respondents.

As depicted by the F values in the Table 6.6 the various elements related to website evaluation of the internet bank depict that the elements '*Provides complete information about the bank*', '*Provides complete information about the customer', 'Provides complete information about the product', 'Privacy policy', 'Security policy', 'Instructions on the website related to IB should be easy to read', 'Option for change of password', 'Tutorial demonstrator', 'Help function', 'FAQ facility', 'Website processes transaction quickly*' are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the respondents with different qualifications in relation to these elements of website evaluation. The mean score for the element '*Provides complete information about the bank*' reveal that this element is considered important by respondents of all the qualifications groups. Talking about the elements '*Provides complete information about the customer'*, '*Provides complete information about the product'* and *'Option for change of password'*, are considered important by the respondents except those who just have senior secondary as their qualification. The reason can be attributed to the fact that higher the qualification of the respondents, higher is the realization regarding furnishing of correct information about the customer and the product. A more educated respondent is more cautious and careful about the correct details and the options related to the change of the password. For other elements the mean scores in the table reveal that the elements are considered important by the respondents of all the groups of qualifications. Preceding further the element, '*Website is interactive'* is significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents with different educational qualifications.

Table 6.6: Elements of Website Evaluation Across Qualification of the Respondents

S.No.	Website Elements	Senior Secondary A1	Grad. A2	PG A3	F (Sig.) Hypothesis
1.	Provides complete information about the bank	2.17	1.80	1.83	5.521 (.001)** Rejected
2.	Provides complete information about the customer	2.67	1.97	2.06	4.525 (.004)** Rejected
3.	Provides complete information about the product	2.50	1.72	1.82	3.732 (.011)** Rejected
4.	Privacy policy	2.00	1.69	1.70	4.444 (.004)** Rejected
5.	Security policy	1.83	1.67	1.68	6.115 (.000)** Rejected
6.	Instructions on the website related to IB should be easy to read	2.33	1.88	1.79	3.995 (.008)** Rejected
7	Option for change of password	2.67	1.77	1.65	3.969 (.008)** Rejected
8	Tutorial demonstrator	2.33	2.08	2.17	4.345 (.005)** Rejected
9	Help function	2.33	1.99	2.07	6.578 (.000)** Rejected
10.	FAQ facility	2.17	1.96	2.06	3.589 (.014)** Rejected
11.	Customer care	2.00	1.80	1.77	1.256 (.289) Accepted
12.	Website is interactive	2.00	1.95	1.92	2.665 (.047)* Rejected

S.No.	Website Elements	Senior Secondary A1	Grad. A2	PG A3	F (Sig.) Hypothesis
13.	Website processes transaction quickly	2.17	1.76	1.72	4.054 (.007)** Rejected
14.	Current news and quick updates	2.33	2.17	2.13	1.669 (.173) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 6.7: Results of Post Hoc Test

S. No.	Website Elements	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Provides complete information about the bank	8.348	.000	Games-Howell	----
2.	Provides complete information about the customer	4.099	.007	Games-Howell	----
3.	Provides complete information about the product	1.552	.200	Tukey	A1 Vs A2
4.	Privacy policy	2.588	.052	Tukey	A2 Vs A4 A3 Vs A4
5.	Security policy	7.176	.000	Games-Howell	-----
6.	Instructions on the website related to IB should be easy to read	5.083	.002	Games-Howell	-----
7.	Option for change of password	1.099	.349	Tukey	A1 Vs A2 A1 Vs A3
8.	Tutorial demonstrator	2.575	.053	Tukey	A2 Vs A4 A3 Vs A4
9.	Help function	6.495	.000	Games-Howell	-----
10.	FAQ facility	2.330	.074	Tukey	A2 Vs A4 A3 Vs A4
11.	Website is interactive	1.870	.134	Tukey	A2 Vs A4 A3 Vs A4

S. No.	Website Elements	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
12.	Website processes transaction quickly	12.010	.000	Games-Howell	------

The results of the post hoc test in table 6.7 depict that the elements for website evaluation like '*Provides complete information about the bank', 'Provides complete information about the customer' , 'Security policy'* and *'Instructions on the website related to IB should be easy to read'* do not have any significant pairs. Talking about other elements like, '*Privacy policy' , 'Option for change of password', 'Tutorial demonstrator', 'FAQ facility'* and *'Website is interactive'* all have two significant pairs each whereas the element '*Provides complete information about the product'* has one significant pair.

Occupation of the Respondents

Hypothesis: The importance of elements of website does not differ across occupation of the respondents.

As depicted by the F values in the table 6.8 the elements, '*Option for change of password'*, '*Customer care'*, '*Website is interactive'*, '*Website processes transaction quickly'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the respondents with different occupations in relation to the importance of these website elements. The mean scores for all these four statements reflect that all these are considered to be important by the respondents of all the occupational groups. The reason can be attributed to the fact that the website plays a very important role in case of internet banking. Also the elements, '*Provides complete information about the customer*' and '*Security policy'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents with different occupations in relation to the importance of these website elements. The website element '*Provides complete information about the customer*' is considered important by all the respondents irrespective of their occupations. On the other hand the element, '*Security policy*' is also considered important by the all the respondents except the businessmen who consider this highly important. The reason can be attributed to the fact that businessmen make more transactions and deal with high amounts. Hence they

consider Security policy as highly important website element. The mean scores for the element '*Privacy policy'* also reflect that this particular element is also considered highly important by businessmen.

Table 6.8: Elements of Website Evaluation Across Occupation of the Respondents

S. No.	Website Elements	Business A1	Public Sector A2	Private Sector A3	Professional A4	F(Sig.) Hypothesis
1.	Provides complete information about the bank	1.62	1.84	1.83	2.00	1.710 (.164) Accepted
2.	Provides complete information about the customer	1.62	2.07	2.09	2.06	3.180 (.024)* Rejected
3.	Provides complete information about the product	1.62	1.74	1.80	1.94	1.661 (.175) Accepted
4.	Privacy policy	1.48	1.57	1.76	1.76	1.726 (.161) Accepted
5.	Security policy	1.41	1.54	1.72	1.86	2.757 (.042)* Rejected
6.	Instructions on the website related to IB should be easy to read	1.62	1.75	1.86	1.99	1.651 (.177) Accepted
7	Option for change of password	1.86	1.54	1.66	1.97	4.139 (.007)** Rejected
8	Tutorial demonstrator	2.14	2.07	2.16	2.22	.410 (.746) Accepted
9	Help function	2.14	1.91	2.04	2.24	2.333 (.073) Accepted
10.	FAQ facility	1.90	2.02	2.01	2.21	1.722 (.162) Accepted
11.	Customer care	1.66	1.77	1.74	2.06	4.415 (.004)** Rejected

S. No.	Website Elements	Business A1	Public Sector A2	Private Sector A3	Professional A4	F(Sig.) Hypothesis
12.	Website is interactive	1.79	1.86	1.91	2.21	3.676 (.012)** Rejected
13.	Website processes transaction quickly	1.55	1.67	1.71	2.08	4.747 (.003)** Rejected
14.	Current news and quick updates	2.24	2.05	2.18	2.13	.433 (.729) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 6.9: Results of Post Hoc Test

S.No.	Website Elements	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Provides complete information about the customer	3.208	.023	Games-Howell	A1 Vs A2 A1 Vs A3 A1 Vs A4
2.	Security policy	1.352	.257	Tukey	-
3.	Option for change of password	2.372	.070	Tukey	A2 Vs A4 A3 Vs A4
4.	Customer care	1.844	.138	Tukey	A3 Vs A4
5.	Website is interactive	1.103	.348	Tukey	A3 Vs A4
6.	Website processes transaction quickly	.696	.555	Tukey	A1 Vs A4 A2 Vs A4 A3 Vs A4

The results of the post hoc test in table 6.9 depict that the elements for website evaluation like '*Provides complete information about the customer'* and '*Website processes transaction quick'* both have three significant pairs each. On the other hand the element '*Option for change of password'* has two significant pairs. Talking about website elements like '*Customer care'* and '*Website is interactive'* have one significant pair each. The element '*Security policy'* does not have any significant pair.

Age Group of the Respondents

Hypothesis: The importance of elements of website does not differ across age group of the respondents.

The F values in the table 6.10 reflect that there is no significant difference in the opinion of the respondents belonging to different age groups as far as the importance of various website elements is concerned.

Table 6.10: Elements of Website Evaluation Across Age Group of the Respondents

S.No.	Website Elements	< 25 yrs A1	25 to < 35 yrs A2	35 to < 45 yrs A3	45 to < 60 yrs A4	F (Sig.) Hypothesis
1.	Provides complete information about the bank	1.84	1.84	1.90	1.69	.458 (.712) Accepted
2.	Provides complete information about the customer	1.98	2.07	2.00	2.14	.421 (.738) Accepted
3.	Provides complete information about the product	1.70	1.81	1.84	1.79	.336 (.792) Accepted
4.	Privacy policy	1.70	1.71	1.77	1.69	.141 (.935) Accepted
5.	Security policy	1.70	1.71	1.70	1.69	.005 (.999) Accepted
6.	Instructions on the website related to IB should be easy to read	1.86	1.90	1.71	1.79	1.106 (.346) Accepted
7	Option for change of password	1.80	1.73	1.60	1.79	.848 (.468) Accepted
8	Tutorial demonstrator	2.14	2.17	2.11	2.21	.149 (.930) Accepted
9	Help function	2.12	2.07	2.05	2.07	.080 (.971) Accepted
10.	FAQ facility	1.93	2.02	2.08	2.24	1.110 (.345) Accepted

S.No.	Website Elements	< 25 yrs A1	25 to < 35 yrs A2	35 to < 45 yrs A3	45 to < 60 yrs A4	F (Sig.) Hypothesis
11.	Customer care	1.75	1.79	1.80	1.86	.139 (.937) Accepted
12.	Website is interactive	1.89	1.97	1.90	2.03	.380 (.768) Accepted
13.	Website processes transaction quickly	1.73	1.80	1.67	1.72	.556 (.644) Accepted
14.	Current news and quick updates	2.23	2.18	2.05	2.17	.611 (.608) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

The mean scores reflect that all these elements are considered to be important by the respondents of all the age groups. The website of a bank is in fact a channel with which the respondents can interact with the bank. Hence this channel needs to be interactive, informative, user friendly with all the latest updates. Hence all the elements of the website are considered equally important by the respondents of all the age groups.

Income of the Respondents

Hypothesis: The importance of elements of website does not differ across income of the respondents.

For the variable Income, F values in the table 6.11 reflect that the element, '*Privacy policy'* is significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents with different income groups in relation to this particular element of website evaluation. Moreover the mean scores in the table reflect that '*Privacy policy'* is considered important by the respondents of all the income groups. Other elements like, '*Provides complete information about the customer', 'Tutorial demonstrator'* and '*FAQ facility'* are also significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents with different income groups in relation to these particular elements of website evaluation. The mean scores in the table for all these website elements indicate that all the elements

mentioned are considered important by all the respondents irrespective of their income groups but the level of importance differs. The reason can be attributed to the fact that the importance of a particular website cannot be decided on the basis of the income of a particular respondent. The website is important in fact for every respondent since it is a channel with which the respondent can interact with the bank.

Table 6.11: Elements of Website Evaluation Across Income of the Respondents

S. No.	Website Elements	< 3 lakhs A1	3 to < 5 lakhs A2	5 to <10 lakhs A3	10 lakhs and above A4	F(Sig.) Hypothesis
1.	Provides complete information about the bank	1.85	1.81	1.81	1.91	.469 (.704) Accepted
2.	Provides complete information about the customer	2.34	2.03	2.03	1.99	2.827 (.038)* Rejected
3.	Provides complete information about the product	1.85	1.81	1.72	1.86	1.009 (.388) Accepted
4.	Privacy policy	1.94	1.85	1.60	1.64	3.761 (.011)* Rejected
5.	Security policy	1.85	1.79	1.60	1.67	1.610 (.186) Accepted
6.	Instructions on the website related to IB should be easy to read	2.04	1.93	1.72	1.84	2.204 (.087) Accepted
7	Option for change of password	1.85	1.73	1.57	1.80	2.402 (.067) Accepted
8	Tutorial demonstrator	2.23	2.23	1.98	2.23	3.468 (.016)* Rejected
9	Help function	2.25	2.05	1.95	2.13	2.366 (.070) Accepted
10.	FAQ facility	2.11	1.97	1.94	2.17	2.705 (.045)* Rejected

S. No.	Website Elements	< 3 lakhs A1	3 to < 5 lakhs A2	5 to <10 lakhs A3	10 lakhs and above A4	F(Sig.) Hypothesis
11.	Customer care	1.83	1.76	1.74	1.87	.850 (.467) Accepted
12.	Website is interactive	2.09	1.90	1.87	2.01	1.603 (.188) Accepted
13.	Website processes transaction quickly	1.87	1.70	1.69	1.83	1.078 (.358) Accepted
14.	Current news and quick updates	2.23	1.99	2.19	2.24	1.992 (.114) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 6.12: Results of Post Hoc Test

S.No.	Website Elements	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Provides complete information about the customer	8.230	.000	Games-Howell	-
2.	Privacy policy	4.501	.004	Games-Howell	-
3.	Tutorial demonstrator	2.809	.039	Games-Howell	A2 Vs A3 A3 Vs A4
4.	FAQ facility	1.576	.194	Tukey	-

The results of the post hoc test in table 6.12 depict that the elements for website evaluation like '*Provides complete information about the customer'*, '*Privacy policy'* and '*FAQ facility*' do not have significant pairs whereas element '*Tutorial demonstrator'* has two significant pairs.

Respondents' Association with the Bank

Hypothesis: The importance of elements of website does not differ across respondents' association with the bank.

The data in the table 6.13 reveals that the website elements, '*Tutorial demonstrator' and 'Website processes transaction quickly'* both are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the respondents who

have been associated with banks for different time periods. The mean scores in the table also indicate that for the website element, '*Tutorial demonstrator'* it is considered important by all the respondents except those who have been associated with the bank for less than 1 year. The reason could be that the respondent who is new to the bank first wants to acquaint himself with the various facilities offered to him. On the other hand the element *'Website processes transaction quickly*' is considered highly important by the respondent who has been associated with the bank for less period of time. The reason could be that the respondents whose association has been not so long considers this particular element very important since he is not that experienced. For all the other respondents these website elements are considered to be important. Talking about, '*Instructions on the website related to IB should be easy to read' and 'Current news and quick updates'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents who have been associated with banks for different time periods. For these two website elements the mean scores in the table indicate that these are considered important by all the respondents who have been associated with the banks for different time periods. Be it any respondent, receiving current news, quick updates and easy to read instructions are required by every respondent.

Table 6.13: Elements of Website Evaluation Across Respondents' Association with the Bank

S.No.	Website Elements	< 1Yr	1 to < 3 Yrs	3 to < 5 Yrs	5 Yrs and above	F (Sig.) Hypothesis
1.	Provides complete information about the bank	1.57	1.90	1.90	1.79	1.262 (.287) Accepted
2.	Provides complete information about the customer	2.36	2.12	2.07	1.96	1.949 (.121) Accepted
3.	Provides complete information about the product	1.71	1.83	1.88	1.74	.927 (.427) Accepted
4.	Privacy policy	1.50	1.77	1.77	1.67	.888 (.447) Accepted

5.	Security policy	1.36	1.81	1.75	1.62	2.294 (.077) Accepted
6.	Instructions on the website related to IB should be easy to read	1.79	2.02	1.86	1.72	3.485 (.016)* Rejected
7	Option for change of password	1.57	1.83	1.78	1.60	2.394 (.068) Accepted
8	Tutorial demonstrator	2.64	2.28	2.02	2.10	4.566 (.004)** Rejected
9	Help function	2.50	2.14	1.99	2.02	2.477 (.061) Accepted
10.	FAQ facility	2.50	2.08	1.97	2.01	2.277 (.079) Accepted
11.	Customer care	1.86	1.83	1.80	1.76	.231 (.875) Accepted
12.	Website is interactive	2.07	2.05	1.94	1.87	1.592 (.191) Accepted
13.	Website processes transaction quickly	1.21	1.90	1.81	1.67	4.014 (.008)** Rejected
14.	Current news and quick updates	2.00	2.34	2.11	2.06	3.092 (.027)* Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 6.14: Results of Post Hoc Test

S. No.	Elements	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Instructions on the website related to IB should be easy to read	1.773	.151	Tukey	A2 Vs A4
2.	Tutorial demonstrator	2.964	.032	Games-Howell	A1 Vs A3 A1 Vs A4 A2 Vs A3
3.	Website processes transaction quickly	3.728	.011	Games-Howell	A1 vs A2 A1 Vs A3 A1 Vs A4
4.	Current news and quick updates	6.588	.000	Games-Howell	A2 Vs A4

The results of the post hoc test in table 6.14 depict that the elements for website evaluation like '*Tutorial demonstrator'* and '*Website processes transaction quickly'* both

have three significant pairs each where as '*Instructions on the website related to IB should be easy to read'* and '*Current news and quick updates'* have only one significant pair each.

Respondents' Experience of Doing Internet Banking with the Bank

Hypothesis: The importance of elements of website does not differ across respondents' experience of doing internet banking with the bank.

Table 6.15: Elements of Website Evaluation Across Respondents' Experience of Doing Internet Banking with the Bank

S.No.	Website Elements	< 1Yr	1 to < 3 Yrs	3 to < 5 Yrs	5 Yrs and above	F (Sig.) Hypothesis
1.	Provides complete information about the bank	1.67	1.89	1.88	1.77	.704 (.550) Accepted
2.	Provides complete information about the customer	2.50	2.13	2.03	1.97	1.765 (.153) Accepted
3.	Provides complete information about the product	1.67	1.85	1.81	1.75	.522 (.668) Accepted
4.	Privacy policy	1.50	1.74	1.72	1.70	.215 (.886) Accepted
5.	Security policy	1.33	1.78	1.68	1.65	1.026 (.381) Accepted
6.	Instructions on the website related to IB should be easy to read	1.83	1.96	1.78	1.78	1.615 (.185) Accepted
7	Option for change of password	1.50	1.81	1.67	1.65	1.253 (.290) Accepted
8	Tutorial demonstrator	2.33	2.22	2.11	2.11	.794 (.498) Accepted
9	Help function	2.17	2.09	2.05	2.06	.127 (.944) Accepted
10.	FAQ facility	2.17	2.08	2.03	1.99	.430 (.732) Accepted
11.	Customer care	1.83	1.82	1.73	1.83	.545 (.651) Accepted
12.	Website is interactive	2.00	1.99	1.94	1.90	.365 (.778) Accepted

13.	Website processes transaction quickly	1.33	1.85	1.70	1.73	1.297 (.275) Accepted
14.	Current news and quick updates	2.00	2.21	2.14	2.12	.352 (.788) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

The results in the table 6.15 reflect that there is no significant difference in the opinion of the respondents with varying experience of doing internet banking with respect to the various elements related to website evaluation. The reason can be attributed that the importance of website can not reduce or enhance on the basis of experience. All the respondents have given (irrespective of their experience of doing internet banking) similar importance to all the fourteen elements of website evaluation.

6.4 PROBLEMS WHILE USING INTERNET BANKING

Internet banking no doubt has gained recognition over a period of time but still the respondents face a number of problems while accessing Internet Banking. An attempt has been made by the researcher to study these problems as a part of the research work. ANOVA and t-test was applied to study the relation between the demographic variables and the problems under study.

The problems have been listed after thorough discussion with the consumers and after studying various research articles.

6.5 FREQUENCY DISTRIBUTION AND OVERALL MEAN

Table 6.16: Problems Faced While Using Internet Banking

S. No.	Problems	Very Often	Often	Some Times	Rarely	Never
1.	Inadequate knowledge	2.2 (4.9)	74 (16.4)	149 (33.1)	153 (34)	52 (11.6)
2.	Poor network	6 (1.3)	80 (17.8)	188 (41.8)	159 (35.3)	17 (3.8)
3.	Lack of technological requirements	7 (1.6)	47 (10.4)	158 (35.1)	173 (38.4)	65 (14.4)

4.	Time consuming	11 (2.4)	42 (9.3)	147 (32.7)	165 (36.7)	85 (18.9)
5.	Hanging websites	13 (2.9)	51 (11.3)	147 (32.7)	181 (40.2)	58 (12.9)
6.	Complex process	12 (2.7)	37 (8.2)	150 (33.3)	167 (37.1)	84 (18.7)
7.	Frequent change in password	18 (4)	64 (14.2)	127 (28.2)	164 (36.4)	77 (17.1)
8.	Delayed complaint handling process	9 (2)	65 (14.4)	159 (35.3)	144 (32)	73 (16.2)
9.	Lack of security	9 (2)	42 (9.3)	134 (29.8)	144 (32)	121 (26.9)
10.	Hacking of password is possible	10 (2.2)	48 (10.7)	133 (29.6)	158 (35.1)	101 (22.4)
11.	Lack of clarity in procedures	5 (1.1)	57 (12.7)	162 (36)	147 (32.7)	79 (17.6)
12.	Lack of personalized touch	9 (2)	63 (14.0)	147 (32.7)	165 (36.7)	66 (14.7)

Note: Figures in parentheses is the respective percentage of the frequency row wise

To begin with the results, the frequency distribution of the various problems faced by the respondents while using internet banking has been presented in table 6.16. It shows that of all the problems each problem is faced by the respondents at one point of time or the other. Out of the total 4.9 percent respondents very often face the problem '*Inadequate knowledge'* where as 16.4 percent face it often, 33 percent respondents face this problem sometimes where as 34 percent face it rarely and 11.6 percent respondents never face this problem. Talking about '*Poor network'* 41.8 percent respondents face this problem sometimes where as 35.3 percent rarely face this problem. As far as '*Lack of technological requirements'* is concerned 35.1 percent respondents face this problem sometimes, where as 38.4 percent rarely face this problem. Further 32.7 percent respondents sometimes face the problem '*Time consuming'* where as 36.7 percent rarely face this particular problem. As far as the next problem '*Hanging websites*' is concerned 40.2 percent respondents rarely face this particular problem, 33.3 percent respondents sometimes face the problem '*Complex process'* where as 37.1 percent of the respondents rarely face this particular problem. As far as '*Frequent change in password'* is concerned 36.4 percent of the respondents rarely face this problem where as 28.2 percent of the

respondents sometimes face this problem. More than 30 percent of the respondents rarely face these problems '*Delayed complaint handling process*', '*Lack of security*', '*Hacking of password is possible*, '*Lack of clarity in procedures'* and ' *Lack of personalized touch'*.

Table 6.17: Overall Mean Values and Ranking of Various Problems Faced by the Respondents While Using Internet Banking

S. No.	Problems	Mean	Rank	Standard Deviation
1.	Inadequate knowledge	3.31	2	1.034
2.	Poor network	3.22	1	.829
3.	Lack of technological requirements	3.54	7	.917
4.	Time consuming	3.60	8	.976
5.	Hanging websites	3.49	5	.954
6.	Complex process	3.61	9	.969
7.	Frequent change in password	3.48	4	1.058
8.	Delayed complaint handling process	3.46	3	.992
9.	Lack of security	3.72	11	1.023
10.	Hacking of password is possible	3.65	10	1.013
11.	Lack of clarity in procedures	3.53	6	.960
12.	Lack of personalized touch	3.48	4	.972

(1-Very Often, 2- Often, 3- Sometimes, 4- Rarely, 5- Never)

After giving individual values frequency distribution in table 6.16, mean values of the various problems faced while using internet banking and their respective standard deviations is presented in table 6.17. The aspect with the minimum mean has been ranked as 1 and so on. This represents the overall positions of the various problems faced while using internet banking. The data reveals that the problem, '*Poor network'* (mean $\bar{x}$= 3.22), '*Inadequate knowledge'* ($\bar{x}$= 3.31), '*Delayed complaint handling process'* ($\bar{x}$= 3.46), '*Frequent change in password'* ($\bar{x}$= 3.48), '*Lack of personalized touch'* ($\bar{x}$= 3.48) and '*Hanging websites'* ($\bar{x}$= 3.49) are faced by the respondents sometimes. Other problems like, *'Lack of clarity in procedures'* ($\bar{x}$= 3.53), '*Lack of technological requirements'* ($\bar{x}$= 3.54), '*Time consuming'* ($\bar{x}$= 3.60), '*Complex process'* ($\bar{x}$= 3.61), '*Hacking of password is possible'* ($\bar{x}$= 3.65) and '*Lack of security'* (mean $\bar{x}$= 3.72) are faced rarely by the respondents. The mean values reflecting that the internet banking

services are not free from problems. There are various problems which are faced by the respondents. The banking sector needs to work hard to reduce the intensity of these problems.

6.6 RESULTS OF t-TEST AND ANOVA

Gender of the Respondents

Hypothesis: The problems faced by the respondents while using internet banking does not differ across gender.

Table 6.18 below represents the mean scores of males and females with respect to the various problems faced during internet banking. The results in the table reflect that there is no significant difference in the opinion of the males and females with respect to the various problems faced while using internet banking.

Table 6.18: Problems Faced While Using Internet Banking Across Gender of the Respondents

S. No.	Problems	Male	Female	t (Sig.) Hypothesis
1.	Inadequate knowledge	3.32	3.27	.505 (.614) Accepted
2.	Poor network	3.25	3.13	1.270 (.206) Accepted
3.	Lack of technological requirements	3.56	3.46	1.052 (.294) Accepted
4.	Time consuming	3.61	3.57	.379 (.705) Accepted
5.	Hanging websites	3.49	3.50	-.082 (.935) Accepted
6.	Complex process	3.60	3.63	-.260 (.795) Accepted
7.	Frequent change in password	3.47	3.54	-.694 (.488) Accepted
8.	Delayed Complaint handling process	3.43	3.55	-1.131 (.260) Accepted
9.	Lack of security	3.70	3.80	-.900 (.370) Accepted
10.	Hacking of password is possible	3.66	3.62	.354 (.724) Accepted

11.	Lack of clarity in procedures	3.52	3.57	-.556 (.579) Accepted
12.	Lack of personalized touch	3.48	3.50	-.189 (.850) Accepted

Place of Residence of the Respondents

Hypothesis: The problems faced by the respondents while using internet banking does not differ across place of residence.

The F values in the table 6.19 reflects that of all the problems faced during internet banking the problem, '*Lack of personalized touch'* is significant at .01 percent level of significance. This indicates that there is significant difference in the opinion of the respondents residing in Delhi, Faridabad, Gurgaon and Noida in relation to the above mentioned problem. The mean scores in the table reflect that the problem, '*Lack of personalized touch'* is faced sometimes by the respondents residing in Gurgaon but is rarely faced by the respondents residing in Delhi, Faridabad or Noida. Moreover the problem, '*Frequent change in password'* is significant at .05 per cent level of significance. This indicates that there is significant difference in the opinion of the respondents residing in Delhi, Faridabad, Gurgaon and Noida in relation to the above mentioned problem. The mean scores in the table reflect that the problem, '*Frequent change in password'* is faced sometimes by the respondents residing in Faridabad and Gurgaon whereas it is faced rarely by the respondents residing in Delhi and Noida.

Table 6.19: Problems Faced While Using Internet Banking Across Place of Residence of the Respondents

S. No.	Problems	Delhi	Gurgaon	Noida	FBD	F (Sig.) Hypothesis
1	Inadequate knowledge	3.49	3.24	3.22	3.28	1.641 (.179) Accepted
2	Poor network	3.27	3.25	3.14	3.22	.542 (.654) Accepted
3	Lack of technological requirements	3.60	3.49	3.48	3.57	.467 (.706) Accepted

4	Time consuming	3.62	3.51	3.56	3.68	.682 (.563) Accepted
5	Hanging websites	3.48	3.44	3.53	3.50	.172 (.915) Accepted
6	Complex process	3.62	3.47	3.77	3.58	1.688 (.169) Accepted
7	Frequent change in password	3.67	3.43	3.56	3.30	2.785 (.040)* Rejected
8	Delayed complaint handling process	3.45	3.33	3.58	3.47	1.088 (.354) Accepted
9	Lack of security	3.81	3.62	3.77	3.69	.771 (.511) Accepted
10	Hacking of password is possible	3.74	3.64	3.63	3.58	.526 (.665) Accepted
11	Lack of clarity in procedures	3.50	3.40	3.52	3.66	1.472 (.221) Accepted
12	Lack of personalized touch	3.56	3.18	3.56	3.58	4.388 (.005)** Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 6.20: Results of Post Hoc Test

S. No.	Problems	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Frequent change in password	5.024	.002	Games-Howell	A1 Vs A4
2.	Lack of personalized touch	2.675	.047	Games-Howell	A1 Vs A2 A2 Vs A3 A2 Vs A4

The results of the post hoc test in table 6.20 depict that the out of the various problems faced during internet banking the problem, *'Frequent change in password'* has one significant pair where as the problem , '*Lack of personalized touch'* has three significant pairs in relation to the demographic variable ' Place of Residence'.

Qualification of the Respondents

Hypothesis: The problems faced by the respondents while using internet banking does not differ across qualification of the respondents.

Table 6.21 : Problems Faced While Using Internet Banking Across Qualification of the Respondents

S.No.	Problems	Senior Secondary	Grad.	PG	F(Sig.) Hypothesis
1	Inadequate knowledge	3.33	3.41	3.23	1.396 (.243) Accepted
2	Poor network	3.00	3.27	3.19	.510 (.676) Accepted
3	Lack of technological requirements	3.83	3.56	3.51	.528 (.663) Accepted
4	Time consuming	4.33	3.58	3.59	1.683 (.170) Accepted
5	Hanging websites	3.33	3.50	3.47	.964 (.410) Accepted
6	Complex process	4.33	3.48	3.67	2.472 (.061) Accepted
7	Frequent change in password	3.50	3.38	3.54	1.007 (.390) Accepted
8	Delayed complaint handling process	3.83	3.40	3.46	2.247 (.082) Accepted
9	Lack of security	4.50	3.67	3.72	2.018 (.111) Accepted
10	Hacking of password is possible	3.33	3.72	3.61	.599 (.616) Accepted
11	Lack of clarity in procedures	3.83	3.53	3.51	.425 (.735) Accepted
12	Lack of personalized touch	3.17	3.53	3.46	.456 (.713) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

As far as qualification of the respondents is concerned no significant difference was observed between the qualification of the respondents and the problems faced during internet banking as shown in table 6.21.

Occupation of the Respondents

Hypothesis: The problems faced by the respondents while using internet banking does not differ across occupation of the respondents.

As far as the occupation of the respondents is concerned, the F values in the table 6.22 reflect that the problems such as *'Poor network', 'Lack of technological requirements',*

'Complex process', 'Frequent change in password', 'Lack of security', 'Hacking of password is possible', 'Lack of clarity in procedures' are significant at .01 percent level of significance. This indicates that there is significant difference in the opinion of the respondents with different occupations in relation to the above mentioned problems. The mean scores in the table reflect that the problem '*Poor network* ' is faced sometimes by all the respondents whether they are into business, public sector, private sector or professionals. The reason can be attributed to the fact that poor network is such an issue which has nothing to do with the occupation. It in fact is an issue which is bank specific or may be due to server and can be faced by all the respondents at one point of time or other. The problems '*Lack of technological requirements'* and '*Complex process'* are faced sometimes by the public sector employees and professionals. But it is rarely faced by the respondents who are either business men or are working with private sector. The next problem '*Time consuming'* is faced sometimes by the respondents of public sector but is rarely faced by the respondents of private sector. The reason can be attributed to the fact that the private sector employees are more tech savvy. Hence this problem is rarely faced by them. The problem '*Frequent change in password'* is faced sometimes by the respondents of all the categories except the private sector employees who rarely face this problem. The reason can be again attributed to the fact that the private sector employees are more tech savvy. They daily use so many passwords related to number of things. Hence they rarely face this problem.

Table 6.22: Problems Faced While Using Internet Banking Across Occupation of the Respondents

S. No.	Problems	Business	Public Sector	Private Sector	Professional	F(Sig.) Hypothesis
1	Inadequate knowledge	3.62	3.18	3.37	3.08	2.841 (.038)* Rejected
2	Poor network	3.24	2.95	3.33	3.04	5.081 (.002)** Rejected
3	Lack of technological requirements	3.86	3.35	3.64	3.18	7.451 (.000)** Rejected
4	Time consuming	3.48	3.49	3.72	3.29	4.464 (.004)** Rejected

S. No.	Problems	Business	Public Sector	Private Sector	Professional	F(Sig.) Hypothesis
5	Hanging websites	3.21	3.51	3.56	3.33	2.030 (.109) Accepted
6	Complex process	3.52	3.47	3.72	3.32	4.191 (.006)** Rejected
7	Frequent change in password	3.45	3.12	3.65	3.14	7.752 (.000)** Rejected
8	Delayed complaint handling process	3.41	3.42	3.53	3.23	1.997 (.114) Accepted
9	Lack of security	3.79	3.54	3.86	3.35	5.976 (.001)** Rejected
10	Hacking of password is possible	3.45	3.39	3.80	3.35	6.452 (.000)** Rejected
11	Lack of clarity in procedures	3.72	3.53	3.59	3.20	3.632 (.010)** Rejected
12	Lack of personalized touch	3.62	3.56	3.53	3.17	3.395 (.018)* Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

The problems, *'Lack of security'* and '*Lack of clarity in procedures'* are faced sometimes by professionals but are rarely faced by the respondents of all the other categories. Also the problem, '*Hacking of password is possible'* is faced rarely by the respondents who belong to private sector where as it is faced sometimes by the respondents belonging to all the other categories. The reason can be attributed to the fact that the private sector employees are a bit more confident in carrying out these internet banking transactions. Hence the sense of insecurity is less in their case. Also the problems '*Inadequate knowledge*' and '*Lack of personalized touch'* are significant at .01 percent level of significance. Hence there is significant difference in the opinion of the respondents with different occupations regarding the problems faced related to internet banking. The mean scores in the table reflect that the problem '*Lack of personalized touch'* is sometimes faced by professionals where as it is rarely faced by the respondents of all the other

categories. The reason can be attributed to the fact that the professional expect a more personalized touch in comparison to other respondents.

Table 6.23: Results of Post Hoc Test

S.No.	Problems	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1	Inadequate knowledge	1.478	.220	Tukey	----
2	Poor network	2.239	.083	Tukey	A2 Vs A3 A3 Vs A4
3	Lack of technological requirements	.589	.623	Tukey	A1 Vs A4 A3 Vs A4
4	Time consuming	8.272	.000	Games-Howell	A3 Vs A4
5	Complex process	7.196	.000	Games-Howell	A3 Vs A4
6	Frequent change in password	.815	.486	Tukey	A2 Vs A3 A3 Vs A4
7	Lack of security	3.025	.029	Games-Howell	A4 Vs A3
8	Hacking of password is possible	1.625	.183	Tukey	A2 vs A3 A4 Vs A3
9	Lack of clarity in procedures	1.233	.297	Tukey	A3 Vs A4
10	Lack of personalized touch	1.090	.353	Tukey	A4 Vs A3

The results of the post hoc test in table 6.23 depict that the out of the various problems faced during internet banking, the problems, '*Poor network'*, '*Lack of technological requirements'* , '*Frequent change in password'* and '*Hacking of password is possible'* all have two significant pairs each. The unique feature of all these is that each of these has one significant pair atleast i.e between respondents who are professionals and belong to private sector. Talking about problems , '*Time consuming' , 'Complex process' , 'Lack of*

security', 'Lack of clarity in procedures' and *'Lack of personalized touch'* all these problems have one significant pair each.

Age Group of the Respondents

Hypothesis: The problems faced by the respondents while using internet banking does not differ across age group of the respondents.

The F values in the table 6.24 reflect that there is no significant difference in the opinion of the respondents with different age groups in relation to the various problems faced during internet banking. Hence the intensity of problems faced does not make any significant contribution across age of the respondents. The overall mean values are above 3 which reflect that internet banking is not a problem free banking in India.

Table 6.24: Problems Faced While Using Internet Banking Across Age Group of the Respondents

S. No.	Problems	< 25 yrs	25 to < 35 yrs	35 to < 45 yrs	45 to < 60 yrs	F (Sig.) Hypothesis
1	Inadequate knowledge	3.45	3.29	3.31	3.28	.333 (.802) Accepted
2	Poor network	3.34	3.23	3.18	3.07	.712 (.545) Accepted
3	Lack of technological requirements	3.84	3.53	3.46	3.38	2.121 (.097) Accepted
4	Time consuming	3.68	3.61	3.62	3.38	.613 (.607) Accepted
5	Hanging websites	3.45	3.52	3.52	3.17	1.196 (.311) Accepted
6	Complex process	3.66	3.64	3.59	3.31	1.061 (.365) Accepted
7	Frequent change in password	3.66	3.47	3.57	3.10	1.897 (.129) Accepted
8	Delayed complaint handling process	3.61	3.46	3.45	3.24	.825 (.481) Accepted
9	Lack of security	3.93	3.73	3.69	3.45	1.348 (.258) Accepted

S. No.	Problems	< 25 yrs	25 to < 35 yrs	35 to < 45 yrs	45 to < 60 yrs	F (Sig.) Hypothesis
10	Hacking of password is possible	3.73	3.70	3.51	3.41	1.473 (.221) Accepted
11	Lack of clarity in procedures	3.48	3.54	3.45	3.69	.543 (.653) Accepted
12	Lack of personalized touch	3.43	3.49	3.45	3.59	.185 (.906) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Income of the Respondents

Hypothesis: The problems faced by the respondents while using internet banking does not differ across income of the respondents.

Talking about the next variable income, the F values in the table 6.25 depict that the various internet banking problems, '*Complex process', 'Hacking of password is possible' , 'Lack of clarity in procedures'* and *'Lack of personalized touch'* are significant at .05 percent level of significance. Hence there is a significant relation between the income of the respondents and the problems faced during internet banking. The mean scores for the problem, '*Complex process'* and '*Hacking of password is possible'* reveal that these particular problems are rarely faced by the respondents with any of the income groups. On the other hand the problems, '*Lack of clarity in procedures'* and '*Lack of personalized touch'* are faced sometimes by the respondents in the income group of 10 lakhs and above. The reason could be that when a high income group respondent is doing any transaction he feels the need of a personalized touch and some extra attention. For rest of the problems there is no significant difference in the opinion of the respondents with varied income groups.

Table 6.25: Problems Faced While Using Internet Banking Across Income of the Respondents

S. No.	Problems	< 3 lakhs	3 to < 5 lakhs	5 to <10 lakhs	10 lakhs and above	F (Sig.) Hypothesis
1	Inadequate knowledge	3.40	3.18	3.43	3.27	1.445 (.229) Accepted
2	Poor network	3.28	3.19	3.22	3.24	.166 (.919) Accepted
3	Lack of technological requirements	3.60	3.46	3.53	3.59	.533 (.660) Accepted
4	Time consuming	3.91	3.53	3.54	3.61	2.130 (.096) Accepted
5	Hanging websites	3.70	3.39	3.51	3.47	1.324 (.266) Accepted
6	Complex process	3.96	3.53	3.61	3.55	2.893 (.035)* Rejected
7	Frequent change in password	3.75	3.52	3.41	3.43	1.558 (.199) Accepted
8	Delayed complaint handling process	3.66	3.48	3.51	3.33	1.675 (.172) Accepted
9	Lack of security	3.85	3.78	3.78	3.59	1.332 (.263) Accepted
10	Hacking of password is possible	3.55	3.85	3.65	3.52	2.585 (.053)* Rejected
11	Lack of clarity in procedures	3.68	3.68	3.52	3.35	3.175 (.024)* Rejected
12	Lack of personalized touch	3.70	3.58	3.51	3.29	3.100 (.027)* Rejected

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Table 6.26: Results of Post Hoc Test

S. No.	Problems	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Complex process	1.280	.281	Tukey	A1 Vs A2 A1 Vs A4
2.	Hacking of password is possible	1.496	.215	Tukey	A2 Vs A4
3.	Lack of clarity in procedures	2.288	.078	Tukey	A2 Vs A4

S. No.	Problems	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
4.	Lack of personalized touch	.391	.759	Tukey	A1 Vs A4

The results of the post hoc test in table 6.26 depict that the out of the various problems faced during internet banking, the problems, '*Complex process'* has two significant pairs where as the problems namely '*Hacking of password is possible', 'Lack of clarity in procedures'* and *'Lack of personalized touch'* have one significant pair each.

Respondents' Association with the Bank

Hypothesis: The problems faced by the respondents while using internet banking does not differ across respondents' association with the bank.

The data in the table 6.27 reflects that the internet banking problems, '*Inadequate knowledge', 'Lack of technological requirements'*, '*Delayed complaint handling process'* and '*Hacking of password is possible'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents who have been associated with their banks for different time periods in relation to the above mentioned problems generally faced while using Internet Banking. For all the other problems there is no significant difference in the opinion of the respondents. The mean scores for the problem '*Inadequate knowledge'* indicate that this particular problem is rarely faced by the respondents who are associated with the bank for just less than 1 year. The reason can be that the respondents whose association is less do not go into the details and just do only a particular category of transactions with the bank. For all the other respondents this particular problem is faced sometimes due to the fact that when you do a good number of transactions, the problems can be faced at one particular point or the other.

Table 6.27: Problems Faced While Using Internet Banking Across Respondents' Association with the Bank

S. No.	Problems	< 1Yr	1to < 3 Yrs	3 to < 5 Yrs	5 Yrs and above	F(Sig.) Hypothesis
1	Inadequate knowledge	3.79	3.35	3.08	3.37	3.072 (.028)* Rejected
2	Poor network	3.21	3.13	3.29	3.26	.950 (.416) Accepted
3	Lack of technological requirements	3.71	3.55	3.32	3.64	2.944 (.033)* Rejected
4	Time consuming	3.86	3.52	3.46	3.73	2.451 (.063) Accepted
5	Hanging websites	3.64	3.45	3.37	3.58	1.332 (.263) Accepted
6	Complex process	3.50	3.54	3.49	3.74	1.957 (.120) Accepted
7	Frequent change in password	3.50	3.39	3.41	3.60	1.307 (.272) Accepted
8	Delayed complaint handling process	3.64	3.44	3.24	3.58	2.867 (.036)* Rejected
9	Lack of security	3.71	3.70	3.52	3.86	2.465 (.062) Accepted
10	Hacking of password is possible	4.14	3.66	3.43	3.72	3.064 (.028)* Rejected
11	Lack of clarity in procedures	3.50	3.50	3.44	3.60	.650 (.583) Accepted
12	Lack of personalized touch	3.64	3.46	3.42	3.52	.379 (.768) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

Talking about the problem, '*Lack of technological requirements'* this particular problem is faced rarely by the respondents who are associated for less than 1 year, 1 year to less than 3 years and 5 years and above whereas it is faced sometimes by the respondents who are associated for 3 years to less than 5 years. Other problems like, '*Delayed complaint handling process'* and '*Hacking of password is possible*' are faced rarely by the respondents who are associated for less than 1 year and 5 years and above but are faced sometimes by the respondents who are associated for a time period of 3 years to less than 5 years. The reason can be that problems are less when the association is less as the

respondents are not that aware. The problems are faced rarely even when the association is very long as the respondents are now comfortable with internet banking. But the problems are faced sometimes when the association is at a medium stage.

Table 6.28: Results of Post Hoc Test

S. No.	Problems	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1.	Inadequate knowledge	.336	.800	Tukey	---
2.	Lack of technological requirements	1.632	.181	Tukey	A3 Vs A4
3.	Delayed complaint handling process	3.771	.011	Games-Howell	A3 Vs A4
4.	Hacking of password is possible	1.153	.327	Tukey	---

The results of the post hoc test in table 6.28 depict that the out of the various problems faced during internet banking, the problems, '*Inadequate knowledge'* and *'Hacking of password is possible',* both do not have any significant pairs. On the other hand the problems, '*Lack of technological requirements'* and *'Delayed complaint handling process'* both have one significant pair each i.e between 3 years to less than 5 years and 5 years and above.

Respondents' Experience of Doing Internet Banking

Hypothesis: The problems faced by the respondents while using internet banking does not differ across respondents' experience of doing internet banking.

As shown in table 6.29 the experience of doing internet banking and the problems faced while using internet banking, the problems namely, '*Inadequate knowledge', 'Time consuming', 'Complex process', 'Delayed complaint handling process', 'Hacking of password is possible*' all are significant at .05 percent level of significance. Hence there

is significant difference in the opinion of the respondents with varied lengths of internet banking and the above mentioned problems of internet banking.

Table 6.29: Problems Faced While Using Internet Banking Across Respondents' Experience of Doing Internet Banking

S.No.	Problems	< 1Yr	1 to < 3 Yrs	3 to < 5 Yrs	5 Yrs and above	F(Sig.) Hypothesis
1	Inadequate knowledge	2.83	3.26	3.19	3.49	2.679 (.047)* Rejected
2	Poor network	2.33	3.24	3.27	3.21	2.476 (.061) Accepted
3	Lack of technological requirements	3.33	3.51	3.47	3.65	1.076 (.359) Accepted
4	Time consuming	3.50	3.47	3.58	3.78	2.644 (.049)* Rejected
5	Hanging websites	3.00	3.50	3.41	3.57	1.185 (.315) Accepted
6	Complex process	3.50	3.50	3.55	3.80	2.797 (.040)* Rejected
7	Frequent change in password	3.67	3.43	3.41	3.60	1.022 (.382) Accepted
8	Delayed complaint handling process	3.67	3.48	3.27	3.60	2.630 (.050)* Rejected
9	Lack of security	3.83	3.68	3.60	3.88	1.925 (.125) Accepted
10	Hacking of password is possible	4.33	3.63	3.48	3.80	3.293 (.021)* Rejected
11	Lack of clarity in procedures	3.50	3.51	3.45	3.63	.906 (.438) Accepted
12	Lack of personalized touch	3.17	3.45	3.45	3.56	.592 (.620) Accepted

** indicates significance at .05 percent level*
*** indicates significance at .01 percent level*

The mean scores for the problem '*Inadequate knowledge'* indicate that this problem is faced sometimes by all the respondents. Further, the problem '*Time consuming'* is faced rarely by all the respondents except those who have been doing internet banking for 1 year to less than 3 years. They face this problem sometimes. The problem '*complex process'* is faced sometimes by the respondents whose association is less than 3 years and is rarely faced by the respondents whose association is more than 3 years and above. Talking about the problem '*Hacking of password is possible'* the mean scores indicate that this problem is faced rarely by all the respondents except those who have been doing internet banking for 3 years to less than 5 years.

Table 6.30: Results of Post Hoc Test

S. No.	Problems	Levene's Statistics	Significant Value	Post Hoc Test	Significant Pairs
1	Inadequate knowledge	2.472	.061	Tukey	----
2	Time consuming	3.614	.013	Games-Howell	A2 Vs A4
3	Complex process	6.488	.000	Games-Howell	A2 Vs A4
4	Delayed complaint handling process	3.569	.014	Games – Howell	A3 Vs A4
5	Hacking of password is possible	1.858	.136	Tukey	A3 Vs A4

The results of the post hoc test in table 6.30 depict that the out of the various problems faced during internet banking, the problems, '*Inadequate knowledge'* does not have any significant pair. Talking about the problems, '*Time consuming', 'Complex process', 'Delayed complaint handling process'* and '*Hacking of password is possible'* all have one significant pair each.

6.7 CONCLUSION

The current chapter discusses the various elements of the website which are important while doing internet banking. It was found that the website elements play a very important role in carrying out internet banking. This is due to the fact that website is the

medium with which the user can interact with the bank. This medium needs to be interactive, informative and user friendly in order to improve consumer satisfaction. It also throws light on the various problems faced by the users while doing internet banking. From the research work it can be concluded that the problems '*Poor Network', 'Inadequate Knowledge', 'Delayed complaint handling process', 'Frequent change in password', 'Lack of Personalized touch,* and *'Hanging websites'* are all faced sometimes by the respondents. Other problems like*, 'Lack of clarity in procedures', 'Lack of technological requirements', 'Time consuming', 'Complex Process', 'Hacking of password is possible'* and *'Lack of security'* are all faced rarely by the respondents.

CHAPTER - VII
FINDINGS AND SUGGESTIONS

7.1 INTRODUCTION

This chapter summarizes the acquired results, discussion concerning the verification of findings, which have emerged from the overall analysis of the various aspects of internet banking, the variations in consumer perception in relation to the demographic variables and factors that enable internet banking and the study also attempted a comparison of public, private and foreign sector banks in relation to various aspects. This will be followed by suggestions and implications of the study. Further an effort has also been made to suggest suitable strategies to Public, Private and Foreign banks to change their consumers' perceptions as this was also one of the objectives of the present research.

The development that is being experienced in the information and communication technology have brought about a lot of changes in almost all facets of life. Information Technology has taken important place in the development of financial services, especially banking sector. The use of internet as a new distribution channel for banking transactions has led to the growth of internet banking. This internet banking has replaced the traditional way of banking and has a lot of benefits which add value to consumers' satisfaction. The current research work aims at studying the various aspects of internet banking, various factors which affect the consumer perception towards the use of internet banking.

The major findings of the study are presented section wise based on different chapters from 4 to 6. The first section presents the major finding of factor analysis. Then findings related to the comparison between public, private and foreign sector is presented. After these findings the issues such as 'usage of services', 'transaction services', 'website

elements', 'awareness and knowledge' and 'problems' faced by the respondents are covered.

7.2 RESULTS OF FACTOR ANALYSIS

To find out the factors that enable internet banking factor analysis was conducted on 58 statements (3 dropped) in order to find out the major factors, which enable internet banking in public, private and foreign sector banks. The results of factor analysis produced 15 factors namely '*Convenience and Promptness', 'Security', 'Customer Care', 'Interactivity', 'Responsiveness', 'Efficient Transaction Management', 'User Friendly Websites', 'Trustworthy', 'Risk Enhancement', 'Connectivity', 'Informative', 'Additional Support Services', 'Promised Service Delivery' , 'Guide' and 'Accuracy'.*

7.2.1 Results of t-test and ANOVA

It is found that the demographic variable 'Gender' has significant relation with the factor '*User friendly website'*. On the other hand 'Place of Residence' has significant relation with the factors namely '*Convenience & Promptness', 'Responsiveness', 'Efficient Transaction Management'* and *'Connectivity'*. Talking about, 'Qualification' it has significant relation with the factors, *'Convenience & Promptness'* and *'Promised Service Delivery'*. As far as 'Occupation' is concerned it has significant relation with the factors, namely *'Convenience & Promptness', 'Security', 'Responsiveness', 'Risk Enhancement'* and *'Informative'*. The demographic variable 'Age group' has significant relation with the factors '*Security', 'Efficient Transaction Management', 'Additional Support Services'* and *'Promised Service Delivery'*. The demographic variable 'Income' has significant relation with maximum number of factors namely *'Security', 'Customer Care', 'Responsiveness', 'Efficient Transaction Management', 'Trustworthy', 'Risk Enhancement'* and *' Guide'*. Talking about the variable 'Respondents' association with the bank' it has significant relation with the factors '*Convenience & Promptness', 'Customer Care', 'Efficient Transaction Management', 'User Friendly Websites'* and *'Informative'*.

7.3 RESULTS OF COMPARISON AMONG PUBLIC PRIVATE AND FOREIGN SECTOR BANKS

This section of the chapter is presenting the major findings related to i.e. comparison among public, private and foreign sector banks in relation to internet banking.

As far as the factors that enable internet banking in public, private and foreign sector banks, the comparison across 'Category of Bank' has shown significant relation with the factors namely *'Security', 'Customer Care', 'Responsiveness', 'Efficient Transaction Management'* and *'Connectivity'*. The study reflected that the level of awareness and knowledge is good among the respondents of foreign and private sector banks in comparison to public sector banks. The respondents of public, private and foreign sector banks reflected significant difference in the level of awareness and knowledge regarding the dimensions namely *'Website of the Bank', 'Technology Adoption Level', 'Online Banking Services, information and enquiries'* and *'Managing ATM/Debit, Credit Card through IB'*. As far as the frequency of usage of internet banking services are concerned the study found that the respondents of foreign sector banks have shown more inclination towards internet banking in comparison to private sector and public sector banks. The responses of the consumers differ in case of *'Ask for a cheque book'*.

The results of the current study found that various banking transaction services such as *'Transfer funds to a third party'* and '*Pay Credit Card Dues'* differ significantly among the respondents of different sector of banks. Further it is added in the existing knowledge that the respondents of foreign sector banks and private sector banks are using the internet banking transaction services more frequently than the public sector respondents. The informative internet banking services provided on the homepage, the results of Chi-Square test reflected that foreign sector banks have an edge over the private sector and public sector banks. Further information on the homepage of the foreign sector banks was also better in comparison to the other banks. The responses regarding the importance of the elements related to website evaluation reflected that the respondents of private and foreign sector banks more or less have given the same

weightage to the elements which are covered under the current study. The importance level about elements of website evaluation differed significantly in relation to '*Instructions on the website related to IB should be easy to read'*, '*Help Function', 'FAQ Facility', 'Customer Care'* and *'Current news and quick updates'*. Further the responses regarding the problems faced while using internet banking reflected that the respondents are more comfortable banking with private and foreign sector banks in comparison to public sector banks. The problems namely '*Lack of technological requirements', 'Hanging websites', 'Frequent change in password', 'Hacking of password is possible'* and *'Delayed Complaint handling process'* are sometimes faced by the respondents of public sector but are rarely faced by the respondents of private and foreign sector banks.

7.4 LEVEL OF AWARENESS AND KNOWLEDGE

The consumers who are doing internet banking have good level of awareness and knowledge regarding internet banking and the website of their bank. They are aware about various parameters like *'Website of the Bank' , 'RTGS/NEFT facility as a mode of payment', 'Fund Transfer through IB', 'Managing ATM/ Debit, Credit Card through IB', 'Online Banking Services, information & enquiries'* and *'About your Bank'*. It is also found that the level of awareness and knowledge is comparatively poor in relation to the aspects namely *'Technology Adoption level', 'Mobile banking', Managing ATM/ Debit , Credit Card through IB', 'Various rules and regulations regarding IB, Claim Settlement Procedures', 'Online Complaint Procedures'* and *'Online Grievance Handling'*.

As far as '*Mobile Banking'* is concerned half of the respondents have good level of awareness and knowledge regarding mobile banking. The reason behind the above fact can be traced from the fact that mobile banking is still in its infancy stage in India and it is the latest version of electronic banking. Further regarding '*Mobile Banking'* the level of awareness and knowledge in relation to educational qualification is poor in case of senior secondary, average in case of post graduates and good in case of graduates. The level of awareness and knowledge of mobile banking is good in case of private sector

employees and businessmen but average in case of public sector employees. Another interesting finding is that the level of awareness and knowledge about various aspects of internet banking is more in case of males than in case of females. The level of awareness and knowledge for the aspect, *'Various rules and regulations regarding IB'* is good among the respondents whose age lies in 25 years to less than 35 years. The reason can be attributed to the fact that this particular age group is young and are enthusiastic to know about everything. The level of awareness and knowledge of the respondents does not differ among the different income groups. The respondents who have been doing internet banking for a time period of 5 years and above, their level of awareness and knowledge about the various aspects is higher than their counter parts. The study proved that '*qualification', 'occupation' and 'place of residence'* have higher association with the level of awareness and knowledge regarding various aspects of internet banking. On the contrary there is absence of association of '*age groups'* and *'income groups'* on the level of awareness and knowledge.

7.5 INTERNET BANKING SERVICES USED

It is also clear from the research that consumers who are doing internet banking use number of services that are offered by the banks. The internet banking service namely *'View account balance and statements'* is often used by the respondents. Other services like *'Inquire about your fixed deposit', 'Download applications', 'Calculate loan payment information', 'Inquire about your TDS details', 'Online trading with Demat Services', 'Apply for loan or other services'* and *'Request to stop cheque payment'* are rarely used by the respondents. The males are more inclined towards using internet banking services in comparison to females and the gender group differ in their usage in case of services namely, *'Online trading with Demat Services', 'Seeking product and rate information', 'Request to stop cheque payment'* and *'Calculate loan payment information'*. There is significant difference in the opinion of the respondents residing in Delhi, Gurgaon, Noida and Faridabad regarding the usage of various internet banking services. In relation to the service '*Inquire about TDS details'* and *'Request to stop cheque payment* 'there is significant difference in the opinion of people residing in

Noida and Delhi as well as Noida and Faridabad. As far as educational qualification is concerned there is significant difference in the opinion of the respondents who are Graduate and Post Graduate for the service, '*Online trading with Demat Services'* and *'Ask for a cheque book'***.** There is significant difference in the opinion of people with different occupations in relation to the internet banking services, ' *'Inquire about your fixed deposit', ' Inquire about TDS details', 'Online trading with Demat services', 'Download applications', 'Request to stop cheque payment', 'Apply for loan or other services'* and *' Calculate loan payment information'.*

As far as income of the respondents is concerned there is significant difference in the opinion of respondents with different income groups regarding internet banking services like '*Ask for a cheque book', 'Inquire about your fixed deposit', 'Online trading with Demat services', 'Request to stop cheque payment '* and *' Calculate loan payment information.*

7.6 BANKING TRANSACTIONS OFTEN MADE

The transactions '*Transfer Funds between your accounts'* ($\bar{x}$=2.14), '*Transfer funds to a third party'* ($\bar{x}$=2.40), '*Pay your utility bills'* ($\bar{x}$=2.28), are often made by the respondents. Other transactions like '*Shop online through internet banking'* ($\bar{x}$=2.59), *'Create/Renew Fixed/ Recurring Deposits Online'* ($\bar{x}$=3.33), '*Pay Credit Card Dues'* ($\bar{x}$=2.62), '*Subscribe for Mobile banking/ATM/Debit cards'* ($\bar{x}$=2.92), '*Pay insurance premium'*($\bar{x}$=3.07), '*Online tax payment'*($\bar{x}$=3.30) and '*Prepaid Mobile recharge'* ($\bar{x}$ =3.06) are made sometimes by the respondents. The transaction, '*Request a Demand Draft /Pay order'* ($\bar{x}$=3.66) is the only one that is used rarely by the respondents. The reason for this can be attributed to the fact that internet banking users prefer to request a demand draft in a physical bank so that they can receive it there itself and send it to the required destination. Talking about the various banking transactions often made by the consumer, the transaction, '*Pay your utility bills'* indicate that this particular transaction is often made by the consumers residing in Delhi. Gurgaon, Noida and Faridabad. The transaction, '*Request a Demand Draft /Pay order'* is made sometimes by customers residing in Gurgaon but it is rarely made by the consumers residing in Delhi, Faridabad

and Noida. The transaction, '*Shop online through internet banking'* is often made by the consumers who are post graduate but it is made sometimes by the consumers who are either graduate or have senior secondary qualification. The transaction '*Pay Credit Card Dues'* is rarely made by the consumers who are senior secondary, is made sometimes by graduates and is often made by the consumers who are post graduates. The transaction '*Pay Credit Card Dues'* is made sometimes by the consumers who are businessmen and public sector employees.This particular transaction is made often by the consumers who are into private sector or are professionals.

The transaction '*Subscribe for Mobile banking/ATM/Debit cards'* is made rarely by the consumers who are into business and is made sometimes by the consumers who belong to public sector, private sector and professionals' category. Talking about the transaction, '*Prepaid Mobile recharge*', it is made rarely by people who are into business and is made sometimes by public sector employees, private sector and professionals. Further the transaction '*Pay your utility bills'* is made sometimes by the consumers who are into business and public sector. Whereas this transaction is made often by the consumers working in private sector and those who are professionals. The transaction '*Pay insurance premium'* is rarely used by the consumers who are into business and public sector employees whereas, it is made sometimes by the consumers who are working in private sector and are professionals.

The transaction '*Shop online through internet banking'* is often made by the consumers in the age group 25 years to less than 35 years where as it is made sometimes by the consumers of all the other age groups. The transaction '*Pay Credit Card Dues'* is made often by the consumers lying in the age group of 25 years to less than 35 years where as it is made sometimes by the consumers of all the other age groups. The transactions '*Transfer Funds between your accounts'* and '*Transfer funds to a third party'* are carried out often by all the consumers who have been associated with the bank for different time periods. The transactions '*Transfer Funds between your accounts'*, '*Transfer funds to a third party'* and *'Pay your utility bills'* are made often by all the

consumers who are associated with the bank for internet banking for varying time periods

7.7 ELEMENTS RELATED TO WEBSITE EVALUATION OF INTERNET BANK

As far as gender of the respondents is concerned the study found that the male and female respondents have perceived similar level of importance to the elements of website evaluation covered under the study. The analysis in relation to various elements related to website evaluation of the internet bank reveal that the element '*Provides complete information about the Bank'* is important for the respondents residing in Delhi, Faridabad Noida and Gurgaon. The mean scores for the element '*Current news and quick updates'* also indicate that this particular element is also important for the respondents residing in Delhi, Faridabad, Noida and Gurgaon.

The elements, '*Provides complete information about the Product'*, '*Instructions on the website related to IB should be easy to read'*, '*Option for change of Password'*, '*Customer Care'* and '*Website processes transaction quickly'* have shown significant difference in the opinion of the respondents with different place of residence. The mean scores for all these elements indicate that these elements are considered to be important by the people residing in Delhi, Faridabad, Gurgaon and Noida. This can be attributed to the fact that any respondent who is accessing the website considers these elements to be important as they help the respondents to easily access the website and makes internet banking convenient for them.

The elements '*Provides complete information about the Customer'*, '*Provides complete information about the Product'* and *'Option for change of Password'*, are considered to be important by all the respondents except those who just have senior secondary as their qualification. A more educated respondent is more cautious and careful about the correct details and the options related to the change of the password. Preceding further the element, '*Website is interactive'* is considered important by all the respondents irrespective of their qualifications. The reason can be attributed to the fact that until and unless a website is interactive the respondents will not feel comfortable interacting with it.

The various elements related to website evaluation namely *'Provides complete information about the Bank*', '*Provides complete information about the Customer' ,*

'Provides complete information about the Product', 'Privacy Policy', 'Security Policy' , 'Instructions on the website related to IB should be easy to read', 'Option for change of Password', 'Tutorial demonstrator', 'Help Function', 'FAQ Facility', 'Website processes transaction quickly' and '*Website is interactive'* have shown significant difference across the qualification of the respondents.

The website elements are considered equally important by all the respondents who belong to different occupational categories. The elements, '*Security Policy'* and *'Privacy Policy'* are considered highly important by Businessmen. The website elements namely '*Option for change of Password'*, '*Customer Care'*, '*Website is interactive'*, '*Website processes transaction quickly',* '*Provides complete information about the Customer*' and '*Security Policy'* have shown significant difference across the different occupational categories of the respondents.

The website elements are considered important by the respondents of all the age groups. The website of a bank is a channel with the help of which the respondents can interact with the bank. This channel needs to be interactive, informative, user friendly with all the latest updates. As far as age group of the respondents is concerned the study found that the respondents with different age groups have perceived similar level of importance to the elements of website evaluation covered under the study. The website element '*Privacy Policy'* is considered important by the respondents of all the income groups. The reason can be attributed to the fact that Privacy is an important issue for every respondent. The data analysis reveals that all website elements are considered important by all the respondents irrespective of their income groups. The reason can be attributed to the fact that the importance of a particular website cannot be decided on the basis of the income of a particular respondent. The website is important in fact for every respondent, since it is a channel with which the respondent can interact with the bank. Also it was found that the elements of website evaluation namely '*Privacy Policy',* '*Provides complete information about the Customer', 'Tutorial demonstrator'* and '*FAQ Facility'* have shown significant difference across the different income groups of the respondents. Talking about the respondents' association with the bank it was found that the website element, '*Tutorial demonstrator'* is considered important by all the respondents, except those who have been associated with the bank for less than 1 year. The element *'Website processes transaction quickly*' is considered highly important by the respondent who has been associated with the bank for less period of time. The

various website elements namely '*Tutorial demonstrator', 'Website processes transaction quickly',* '*Instructions on the website related to IB should be easy to read' and 'Current news and quick updates'* have shown significant difference across the respondents' association with the bank. Further, about respondents' experience of doing internet banking it is found that there is no significant difference in the opinion of the respondents with varying experience of doing internet banking with respect to the various elements related to website evaluation.

7.8 PROBLEMS FACED WHILE USING INTERNET BANKING

During the research work it was also found that there are number of problems that are faced by the respondents during internet banking. A number of problems were listed in the questionnaire and were a part of the study. The data analysis reflects that out of the total number of respondents who were surveyed more percentage of the respondents either face the problem sometimes or rarely.

It was found that the problems, '*Poor Network, 'Inadequate Knowledge', 'Delayed Complaint handling process', 'Frequent change in password', 'Lack of Personalized touch'* and *'Hanging websites'* all are faced by the respondents sometimes. On the other hand problems like '*Lack of clarity in procedures', 'Lack of technological requirements', 'Time consuming', 'Complex process', 'Hacking of password is possible'* and *'Lack of security'* are all faced rarely by the respondents. The intensity of problems faced during internet banking by the respondents who belong to different '*gender', 'qualification'* and *'age group'* was almost similar.

As far as gender is concerned the study found that there is no significant difference in the opinion of the males and females with respect to the various problems faced while using internet banking. Talking about the demographic variable place of residence, it was observed that the problem, '*Lack of Personalized touch'* is faced sometimes by the people residing in Gurgaon but is rarely faced by the respondents residing in Delhi, Faridabad or Noida. Also the problems, *'Lack of Personalized touch'* and *'Frequent change in password'* have shown significant difference across place of residence. The problem '*Poor Network'* was faced sometimes by all the respondents whether they are into business, public sector, private sector or professionals. The reason can be attributed

to the fact that poor network is such an issue which has nothing to do with the occupation. This issue is bank specific and can be faced by all the respondents at one point of time or other. The problems *'Time consuming', 'Hacking of password is possible'* and *'Frequent change in password'* are faced sometimes by all the respondents with different occupations but are rarely faced by the respondents of private sector. The reason can be attributed to the fact that the private sector employees are more tech savvy. They are a bit more confident in carrying out these internet banking transactions. Also the problems '*Inadequate Knowledge*' and '*Lack of Personalized touch'* have shown significant difference across occupation. There is no significant difference in the opinion of the respondents with different age groups in relation to the various problems faced during internet banking. Hence the intensity of problems faced does not make any significant distribution across age of the respondents.

The problems, *'Lack of clarity in procedures'* and *'Lack of Personalized touch'* are faced sometimes by the respondents belonging to the income group of 10 lakhs and above.

Internet banking problems, '*Complex process', 'Hacking of password is possible', 'Lack of clarity in procedures'* and *'Lack of Personalized touch'* have shown significant difference across the income of the respondents. Talking about respondents' association with the bank, internet banking problems, '*Inadequate Knowledge', 'Lack of technological requirements', 'Delayed Complaint handling process'* and '*Hacking of password is possible'* are significant at .05 percent level of significance. Hence there is significant difference in the opinion of the respondents who have been associated with their banks for different time periods in relation to the above mentioned problems generally faced while using Internet Banking.

Problems like *'Delayed Complaint handling process' and 'Hacking of password is possible'* are faced rarely by the respondents who are associated for less than 1 year and 5 years and above but are faced sometimes by the respondents who are associated for a time period of 3 years to less than 5 years. The problem '*Time consuming'* is faced rarely by all the respondents except those who have been doing internet banking for 1 year to less than 3 years. They face this problem sometimes. The problem 'C*omplex process'* is faced sometimes by the respondents whose association is less than 3 years and is rarely faced by the respondents whose association is more than 3 years and above. Talking

about the problem '*Hacking of password is possible'* the mean scores indicate that this problem is faced rarely by all the respondents except those who have been doing internet banking for 3 years to less than 5 years. The problems namely, '*Inadequate Knowledge', 'Time consuming', 'Complex process', 'Delayed Complaint handling process', 'Hacking of password is possible*' have shown significant difference across respondents' experience of doing internet banking.

The study also found that internet banking has several benefits over the traditional banking system which makes banking simple and convenient. It allows the users to conduct various transactions using the bank's website and offers several advantages. Over a period of time Internet Banking has become very popular in Delhi and areas of NCR (Noida, Gurgaon and Faridabad). The reasons for its popularity are its convenience and availability around the clock i.e 24x7. It is fast and efficient and saves a lot of time of the consumer.

7.9 SUGGESTED STRATEGIES TO BANKING SECTOR

The study provides banking decision makers to gain an insight into the consumers' perception regarding internet banking. It is very important for the bank managers to understand the consumers so that all the bank initiatives can be taken in the direction to ensure consumer satisfaction and in order to improve the level of acceptance of internet banking. On the basis of the research work and the findings we here can suggest a number of strategies to public, private and foreign sector banks in order to change their consumers' perceptions.

The study extracted 15 factors that enable internet banking for the consumers. According to the study the factors namely *'Accuracy', 'Efficient Transaction Management', 'User Friendly Websites', 'Responsiveness'* and *'Promised Service Delivery'* are the most important factors which contribute to use internet banking. So the banks should take care about all these aspects which enhance the usage of internet banking among the people of NCR. Further security is the most needed factor so the banks should develop the full proof mechanism to secure the money transactions and other services.

The study found that consumers have low level of awareness and knowledge regarding *'Mobile Banking', 'Various rules and regulations', 'Claim Settlement Procedures'* and

'Online Compliant Procedure' and 'Online Grievance Handling'. So the banks irrespective of their sector need to enhance the awareness and knowledge among their consumers. The level of awareness and knowledge regarding various aspects of internet banking is more among respondents of private and foreign sector banks in comparison to public sector banks. Thus, the public sector banks need to start awareness programs in order to make the people aware about the facilities, other transactions and services. In order to change the consumer perception they need to personally interact with their customers and familiarize them with their facilities. The awareness programs must give importance to females, mature age group, lower income group, professionals, business class and public sector employees. Further banks must take care of the respondents who are associated with the banks for less than two years and have less experience of doing internet banking.

It was observed that the internet banking service namely '*Ask for a cheque book'* is rarely used by the consumers banking with public sector banks and it is used sometimes by the consumers banking with private sector and foreign sector banks. Thus the public sector banks need to take an initiative in order to change the consumers' perception regarding this particular service offered by public banks. These banks should try their level best to reduce the time taken to deliver the cheque book to the consumer. Similarly all private sector and foreign sector banks should also improve upon this particular facility. The internet banking transactions often made by the consumers '*Transfer funds to a third party'* and *'Pay Credit Card Dues'* are often used by the consumers who are banking with private sector and foreign sector banks. But these services are used sometimes by the respondents banking with public sector banks. Therefore the public sector banks need to improve upon their transaction time. The triangle of banks should give importance to females, business class, middle income group, less educated group and having less association and experience of doing internet banking.

The public sector and private sector banks both need to work upon the issue of inadequate knowledge about internet banking to the consumers. Banks need to start an awareness programme and acquaint the consumers fully with the various aspects of internet banking. Banks can even recruit some of their staff members who can specifically guide the consumers.

The study found that the problems, '*Time consuming', 'Complex process', 'Lack of clarity in procedures', 'Lack of technological requirements', 'Hanging websites', 'Frequent change in password', 'Hacking of password is possible'* and *'Delayed complaint handling process'* are sometimes faced by the respondents of public sector but rarely faced by the respondents of private and foreign sector banks. In order to deal with these problems the public sector banks need to develop an effective website which provides all the links to various facilities. The links should be very convenient. The site has to be secured enough with an efficient and quick complaint handling process. The problem '*Poor Network'* needs more emphasis as it is generally faced by all the respondents irrespective of the demography and the category of the bank to which the consumer belongs. All the banks should take effective measures in order to resolve this network issue. The '*Lack of Personalized touch'* is increasing in the scenario of today's banking. So the Public, Private and Foreign Sector Banks all should pay more personal attention to the respondents. This personalized touch would help in increasing the consumer loyalty towards the bank. Internet banking is used comparatively less by the consumers who belong to lower income group. The banks need to explore the reasons for this and take a special initiative for the consumers with less income. This will actually help the banks in capturing some more respondents.

7.10 SUGGESTIONS FOR IMPROVEMENT IN INTERNET BANKING

A number of areas could be listed out during the study where improvements are required. So certain suggestions have been given for the improvement of such areas.

1. Awareness of internet banking among the consumers

In order to improve this particular area the banks need to do the following

a) Create awareness among the consumers about features, advantages and disadvantages of internet banking

b) Attract consumer attention towards internet services through better promotion and marketing.

c) Try and remove the various consumer doubts or concerns about technology

2. Trust, Security and Privacy risks

a) Provide assurance to the consumer and information related to internet banking services.

b) Improve security and privacy related to internet banking transactions.

c) Develop secure internet banking practices and risk management procedures.

3. Women's concerns

a) Banks should start a special awareness program for female consumers.

b) Banks need to develop targeted strategies to improve women's access and address their technological concerns.

4. Young Generation Consumers

a) Banks need to target young generation consumers as well and clarify all their doubts regarding various aspects of internet banking.

5. Competition of internet banking with phone banking

a) Banks should offer training programs for consumers in internet banking

b) Banks should market the relative advantages of internet banking over the phone banking , especially the convenience factors

6. Initial set up procedure related to internet banking

a) The banks need to streamline set up procedures and provide set up support .

b) Banks also need to timely update their technology and system.

7. Internet banking facility

a) Familiarize the people with the convenience of using the internet banking facility

b) Banks need to develop an effective website.

c) They need to improve screen design and navigation

8. **Knowledge of Bank Staff**

a) Banks need to start special internet banking training programmes for the bank staff.

b) The bank staff should be trained well to handle consumer enquiries.

9. Customer Care

a) The websites of the banks should have a link for customer care.

b) The staff should be trained to give prompt response to the consumer enquiries.

c) The login id and password of any new internet banking account should be provided at the earliest to the consumer.

7.11 MANAGERIAL IMPLICATIONS

Every research has responsibility of giving suggestions and valuable implications. The current study has also completed its duty. Results of the study basically provide the policy makers and decision makers a deep understanding of the consumer perception regarding internet banking among the consumers residing in NCR. The use of internet banking among the consumers is increasing day by day. The scope of the study for the banks is as follows:

The study is of utmost importance for the public sector banks operating in NCR. These banks can use findings of the study to improve the various weak areas that are reflected in the results of the study. The public sector banks can use the findings of the study to develop their awareness programs. Further these banks can have a complete comparison with the private and foreign sector banks, so they can take the implications to improve their technological facilities, websites, homepage management and intensity of problems faced by their consumers while using internet banking.

The private and foreign sector banks can use the results of the study to make themselves at the top in providing the facilities and services through internet banking. Both the sectors can plug out the details in which they are better and have an edge over their counterparts. The results of the study can be applicable in the areas where the private and foreign sector banks can create niche and able to attract new consumers and retain the existing ones.

The study plugged some loop holes related to awareness and knowledge regarding various parameters of internet banking. So the bank managers can start a special awareness program for the consumers in relation to the various aspects of internet banking. The program can highlight the various features and benefits of internet banking. It will definitely provide a better understanding to the consumers. Moreover the bank managers can launch special promotion campaigns in order to promote internet banking. Hence it will improve the level of acceptance of internet banking among the users.

The study concluded that websites of banks are very important aspect in internet banking. The results related to website elements reflected that the websites of public sector banks are not much effective and attractive in comparison to their counterparts.

So it is the peak time for public sector banks to manage the website in an efficient and attractive manner.

The responses of consumers reflected that poor networking and inadequate knowledge are often faced by them while using internet banking. So the banking sector can frame their policies and planning to install proper networking techniques which are latest available in market. Here the public sector bank must do efforts to reduce the problems faced by their consumers irrespective of their demographic characteristics.

Further one of the important finding of the study concluded that the respondents of various income, occupation and age groups need personalized touch while using internet banking services. So the banks' top management can initiate some special training programs for the bank staff. These training programs will train the bank staff so that they can deal easily with the queries and the problems related to internet banking and provide personalized touch to the consumers. This will definitely improve the level of consumer satisfaction related to internet banking.

The research work reflects that security is a major issue which acts as an obstacle to many customers going in for internet banking. Hence the bank managers need to work upon this. They need to assure the security to the consumer regarding the internet banking transactions. The customer needs to be explained the importance of one time passwords and other security measures.

Efforts can also be made by the bank managers to try and minimize the effects of the various problems related to Internet Banking that are being faced by the consumers. Further the bank managers can explore the areas about which the customer is not fully aware and the reasons also for that in order to improve the level of awareness and knowledge regarding the various aspects of internet banking.

As far as consumers are concerned the research work has helped in understanding the consumer perception in relation to internet banking with respect to public, private and foreign sector banks. The customers find it very convenient to do their bank transactions from any location and have updated information with the help of Internet. Using internet banking consumers can explore what other benefits they can avail using internet banking. Further they can get idea regarding the internet banking services and transactions of different sector of banks. This analysis would help them to select the

sector of bank, which they can adopt to do internet banking in future. The introduction part of the study is helpful for the people to gain conceptual knowledge about the internet banking. They can have the idea of different services, transaction services, awareness and knowledge level, website elements and problems face

7.12 FUTURE RESEARCH DIRECTIONS

The acceptance of internet banking among the Indian consumers is at a nascent stage due to various security and privacy issues. Hence the researcher faced some problem in tracing the suitable internet banking users for the purpose of survey. As the use of internet banking is increasing day by day and is expected to raise in near future due to convenience and anytime anywhere availability so a more comprehensive study can be conducted using a bigger number of respondents. In order to improve the generalizability of the findings the researcher proposes to conduct a survey in different parts of India. An online survey may also be conducted since greater number of users can easily participate from different parts of the country. The study was specifically limited to the users of internet banking. A separate study may be carried out in order to understand the consumer perception towards internet banking of the non users of internet banking. Further a comparative analysis can be done to understand the consumer perception of the users and non users of internet banking. Further the research can add sector specific study to the existing knowledge.

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3. www.bankindia.net
4. www.rbi.org.in
5. www.internetworldstats.com
6. www.InternetLiveStats.com
7. www.internetbanking.in.com
8. www.ssrn.com
9. www.google.com
10. www.icicibank.com
11. www.hdfcbank.com
12. www.axisbank.com
13. www.citibank.co.in
14. www.sbi.co.in
15. www.pnbindia.in
16. www.rbs.in
17. www.abnamro.com
18. www.americanexpress.com
19. www.deutschebank.co.in
20. www.kotak.com
21. www.unionbankofindia.co

Questionnaire for Consumers

I, Ashima Tandon (ashimatandon77@gmail.com), a research scholar in Department of Management Studies, YMCA University of Science & Technology, Faridabad am doing research on "Consumer Perception towards Internet Banking". I request you to kindly spare up some of your valuable time to give feedback on the various aspects of Internet Banking. I assure you that your feedback will be kept confidential and would be used only for research purposes.

PART-1

Personal Details

Name :
Gender :
Place of Residence :

Highest Qualification :
(a) Senior Secondary (b) Graduation (c)Post-Graduation

Occupation:
(a) Business (b) Public sector employee (c) Private sector employee (d) Professional

Age Group:
(a) Less than 25 yrs (b) 25yrs to less than 35 yrs (c) 35yrs to less than 45 yrs (d) 45yrs to less than 60 yrs

Annual Income:
(a) Less than 3 lakhs p.a (b) 3 lakhs to less than 5 lakhs p.a (c) 5 lakhs to less than 10 lakhs p.a (d) 10 lakhs and above

PART-2

1. Please specify the name of the Bank with which you have an Internet Banking Account: _____

2. For how long have you been associated with this Bank?
(a) Less than 1 yr (b) 1yr to less than 3 yrs (c) 3yrs to less than 5 yrs (d) 5 yrs and above

3. Since when have you been doing Internet Banking?
(a) Less than 1 yr (b) 1yr to less than 3 yrs (c) 3yrs to less than 5 yrs (d) 5 yrs and above

4. How often do you use the Internet for internet banking activities?
(a) Daily (b) Weekly (c) Fortnightly (d) Monthly (e) As and when required

5. From where do you access the Internet for Internet Banking activities?
(a). Personal system (b) Official system (c) Cybercafe (d)Any system

6. Please tick your level of awareness and knowledge about the following :
(1-Very Poor , 2-Poor , 3-Average , 4-Good and 5-Very Good)

1.	About your Bank	1	2	3	4	5
2.	About Internet Banking	1	2	3	4	5
3.	Website of the Bank	1	2	3	4	5
4.	Technology Adoption level	1	2	3	4	5
5.	Online Banking Services, information & enquiries	1	2	3	4	5
6.	Mobile Banking	1	2	3	4	5
7.	Managing ATM/Debit , Credit Card through IB	1	2	3	4	5
8.	Various rules and regulations regarding IB	1	2	3	4	5
9.	Claim Settlement Procedures	1	2	3	4	5
10.	Online Complaint Procedures	1	2	3	4	5
11.	Online Grievance Handling	1	2	3	4	5
12.	Fund Transfer through IB	1	2	3	4	5
13.	RTGS/NEFT facility as a mode of payment	1	2	3	4	5

7. What internet banking services do you often use, which your bank offers? (Please tick in the column)

#	Banking Services	Very Often	Often	Sometimes	Rarely	Never
i.	View account balance and statements					
ii.	Inquire about cheque status					
iii.	Ask for a cheque book					
iv.	Inquire about your fixed deposit					
v.	Inquire about your TDS details					
vi.	Online trading with Demat Services					
vii.	Update your profile					
viii.	Seeking product and rate information					
ix.	Download applications					
x.	Request to stop cheque payment					
xi.	Apply for loan or other services					
xii.	Calculate loan payment information					

8. What information /services does the HOMEPAGE of your bank offers? (Choose all the answers applicable)

i) A single/few pages of presentation
ii) Information and advertising about the bank.
iii) Economic data about the bank (balance sheet, etc….)
iv) Commercial/corner (presence of guest subjects on site)
v) Information/conditions of services offered
vi) Customer care
vii) Complaints service
viii) Informative Internet Banking
ix) Categorical log in facilities

9. What kind of Informative Internet Banking services your primary bank offers? (Choose all the possible answers)

i) Detailed Information about the various services offered
ii) Presence of an intelligent tutorial for the customer
iii) Possibility of stipulation of the loan agreement directly online
iv) Possibility of having assigned codes directly online
v) Information about own account (balance, statement, etc….)
vi) Simulation of calculations , installments, loans or similar
vii) Sending e.mail and announcements to an employee online
viii) Requesting loan and or personal credit online
ix) Booking for opening a current account ,getting credit cards etc….
x) Booking for consulting and taking appointments (by form)

10. What banking transactions do you often make? (Please tick the appropriate choice)

	Banking transactions	**Very often**	**Often**	**Sometimes**	**Rarely**	**Never**
1.	Transfer Funds between your accounts					
2.	Transfer funds to a third party					
3.	Pay your utility bills					
4.	Shop online through internet banking					
5.	Create/Renew Fixed/ Recurring Deposits Online					
6.	Request a Demand Draft /Pay order					
7.	Pay Credit Card Dues					
8.	Subscribe for Mobile banking/ATM/Debit cards					
9.	Pay insurance premium					
10.	Online tax payment					

	Banking transactions	Very often	Often	Sometimes	Rarely	Never
11.	Prepaid Mobile recharge					

PART-3

Your experience related to Internet Banking (Please tick the appropriate choice)

S. No	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	Easy way of banking					
2.	All portal claimed services are available immediately					
3.	Provides required service anywhere anytime					
4.	Makes work easier					
5.	Reduces paper work					
6.	Quick fund transfer					
7.	Facilitates Online Shopping					
8.	Facilitates Online trading					
9.	Chances of fraud					
10.	A skilled helper is required for Internet Banking					
11.	Trustworthy					
12.	Possibility of account being hacked.					
13.	Accurate transactions					
14.	Safe transactions					
15.	Anywhere anytime transaction					
16.	Less transaction cost					
17.	Greater control over finances					
18.	Manage finances more efficiently					
19.	Saves time					

S. No	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20.	It provides the facility of networking with other banks					
21.	Regular updation of accounts is done					
22.	Quick response to the service requests.					
23.	Prompt and timely services					
24.	Internet bank's website is appealing.					
25.	Website is easy to navigate					
26.	User friendly website					
27.	Up to date information on website					
28.	Complete information on website					
29.	Internet Bank's website has a FAQ page					
30.	Site has contact details for complaints and suggestions					
31.	Website flashes important and new information					
32.	Site has online tutor to explain how to use the website					
33.	Website provides print facility of various forms					
34.	Easy access to services					
35.	Easy to understand instructions					
36.	Information about new services provided through e.mails.					
37.	Performs promised service dependably and accurately					

S. No	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
38.	Quick response to e-mail enquiries					
39.	Good complaint /grievances handling system					
40.	Provides SMS and e-mails regularly					
41.	Attends to your suggestions					
42.	Safe to make transactions with internet bank					
43.	Delay in the transactions due to problem in connectivity					
44.	Uncertain transaction completion time because of poor connectivity					
45.	Good Privacy policy					
46.	Strong Security Mechanism					
47.	Confidentiality of accounts					
48.	All the transactions through internet banking are reliable					
49.	Warning alerts to solve problems, if they occur during transaction process					
50.	Hyperlinks on the portal are valid					
51.	Portal has a search engine and site map					
52.	Internet bank satisfies the customer complaints within 24 hrs.					
53.	Keeps promise as advertised					
54.	Quick and easy registration process					

S. No	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
55.	Easy to open an internet banking account					
56.	It provides service right first time.					
57.	Provides customer feedback services					
58.	IB website provides economic news related to the Bank					

PART-4

Elements related to Website Evaluation of your Internet Bank

S. No.	Elements	Highly Imp.	Imp.	Somewhat Important	Unimp.	Highly Unimp.
1.	Provides complete information about the Bank					
2.	Provides complete information about the Customer					
3.	Provides complete information about the Product					
4.	Privacy Policy					
5.	Security Policy					
6.	Instructions on the website related to IB should be easy to read					
7	Option for change of Password					
8	Tutorial demonstrator					
9	Help Function					
10.	FAQ Facility					
11.	Customer Care					
12.	Website is interactive					

S. No.	Elements	Highly Imp.	Imp.	Somewhat Important	Unimp.	Highly Unimp.
13.	Website processes transaction quickly					
14.	Current news and quick updates					

Problems that you generally face while using Internet Banking(Please Tick)

S. No.	Problems	Very often	Often	Some Times	Rarely	Never
1	Inadequate Knowledge					
2	Poor Network					
3	Lack of technological requirements					
4	Time consuming					
5	Hanging websites					
6	Complex process					
7	Frequent change in password					
8	Delayed Complaint handling process					
9	Lack of security					
10	Hacking of password is possible					
11	Lack of clarity in procedures					
12	Lack of Personalized touch					

Any suggestions for improvement in Internet Banking

Thanks a lot for your valuable time,

(Ashima Tandon)

BRIEF PROFILE OF THE RESEARCH SCHOLAR

Ashima Tandon

She is presently working in DAV Institute of Management, Faridabad. She is an Assistant Professor in the MBA Department with specialization in Management and Information Technology. She is MBA, MCA and is registered for PhD with YMCA University of Science & Technology, Faridabad in the area of Internet Banking. She has been working in DAVIM for the past 15 years and has rich teaching experience in the areas of Management Information System, E.Commerce, IT Management, Software Engineering, System Analysis and Design. She also has various International and National Paper Publications to her credit both in the field Of IT and Management. She has also attended a number of International and National Conferences. She is also the Associate Editor-in-Chief of her institute's Bi-annual Refereed Journal "VIRTUE"

LIST OF PUBLICATIONS OUT OF THESIS

List of Published Papers

S.No	Title of Paper	Name of Journal where Published	ISSN No.	Volume & Issue	Year	Pages
1.	Consumer Awareness towards Internet Banking: A Comparative Study of Public, Private and Foreign Banks	International Journal of Hybrid Information Technology (IJHIT) SERSC,Australia	1738-9968	Vol. 9, No.6	2016	77-90
2.	Usage of Internet Banking Transactions : Customers' Insight	DAVCC's Advance Management Research: An International Journal (AMRIJ) DAV Centenary College, NH-3, Faridabad Haryana India	2321-2616	Vol.3, No.1	2015	11-32
3.	Elements of Effective Website With Special Reference to Internet Banking	International Journal on Global Business Management and Research RI Publications Pvt.Ltd. Chennai Tamil Nadu India	2278-8425	Vol.3, No. 2	2015	15-22

S.No	Title of Paper	Name of Journal where Published	ISSN No.	Volume & Issue	Year	Pages
4.	Evaluation Of Various Internet Banking Services In Indian Public And Private Sector Banks: A Customer Perspective	EIJMMS **(Excel International Journal of Multidisciplinary Management S tudies)**	**ISSN Online: 2249-*8834***	Vol.4 , No.1	2014	11-24

List of Accepted Papers

S.No	Title of Paper	Name of Journal where Published	ISSN No.	Volume & Issue	Year	Pages
5.	"Factors Affecting Internet Banking: A Descriptive Study of Delhi and NCR"	International Journal of Financial Innovation in Banking (IJFIB) INDERSCIENCE PUBLISHERS	ISSN Online: 2055-6799 Print: 2055-6780		2016	