INTRODUCTION AND DESIGN OF THE STUDY

1.1 INTRODUCTION

Financial liberalization and technology revolution have allowed the developments of new and more efficient delivery and processing channels as well as more innovative products and services in banking industry. Banking institutions are facing competition not only from each other but also from non-bank financial intermediaries as well as from alternative sources of financing, such as the capital markets. Another strategic challenge facing banking institutions today is the growing and changing needs and expectations of consumers in tandem with increased education levels and growing wealth. Consumers are becoming increasingly discerning and have become more involved in their financial decisions. For this reason, they are demanding a broader range of products and services at more competitive prices through more efficient and convenient channels.

The challenging business process in the financial services pressurized banks to introduce alternate delivery channel to attract customers and improve customers’ perception. Many banks have implemented Internet banking to offer their customers a variety of online services with more convenience for accessing information and making transactions. Customer satisfaction and customer retention are increasingly developing into key success factors in e-banking. Technology, in particular, has been increasingly employed in service organizations to enhance customer service quality and delivery, reduce costs, and standardize core service offerings. There will be huge acceptance of online banking with the passage of time with growing awareness and education. A great many people are shifting to online banking and are readily accepting the usefulness of
this bounty. Online banking service allows customers to manage their accounts from any place at any time for minimum cost; it gives abundant compensation to the client in terms of price and ease.

E-banking is a generic term for delivery of banking services and products through electronic channels, such as the telephone, the internet, the cell phone, etc. The concept and scope of e-banking is still evolving. It facilitates an effective payment and accounting system thereby enhancing the speed of delivery of banking services considerably. While E-banking has improved efficiency and convenience, it has also posed several challenges to the regulators and supervisors. Several initiatives taken by the government of India, as well as the Reserve Bank of India (RBI), have facilitated the development of E-banking in India.

The government of India enacted the Information Technology Act, 2000, which provides legal recognition to electronic transactions and other means of electronic commerce. The RBI has been preparing to upgrade itself as a regulator and supervisor of the technologically dominated financial system. It issued guidelines on risks and control in computer and telecommunication system to all bank. Bankers consider ‘minimizes inconvenience’, ‘minimizes cost of transactions’ and ‘time saving’ to be important benefits and ‘chances of government access’, ‘chances of fraud’ and ‘lack of information security’ to be vital risks associated with electronic banking. Banking industry is also one of the influenced industries adopting technologies which are helpful in providing better services to customers. Quality of service is improved by using technological innovations.
1.2 CONCEPTUAL FRAMEWORK OF E-BANKING

Technological innovations are having significant importance in human general and professional life. This era can safely be attributed as technology revolution. The quick expansion of information technology has imbibed into the lives of millions of people. Rapid technology advancements have introduced major changes in the worldwide economic and business atmosphere. Research on consumer attitude and adoption of internet banking showed there are several factors predetermining the consumer’s attitude towards online banking such as person’s demography, motivation and hacking, and the protection of personal information. Electronic banking requires perhaps the most consumer involvement, as it requires the consumer to maintain and regularly interact with additional technology (a computer and an Internet connection). Consumers who use e-banking use it on an ongoing basis and need to acquire a certain comfort level with the technology to keep using it.

Customer adoption is a recognized dilemma for the strategic plans of financial institutions. Several studies have investigated why individuals choose a specific bank. Important consumer selection factors include convenience, service facilities, reputation and interest rates. Customers have less time to spend on activities such as visiting a bank and therefore want a higher degree of convenience and accessibility. The service-quality attributes that the Internet banks must offer to induce consumers to switch to online transactions and keep using them are perceived usefulness, ease of use, reliability, responsiveness, security, and continuous improvement. In another study they found that individual expectations regarding accuracy, security, network speed, user-friendliness,
and user involvement and convenience were the most important quality attributes in the perceived usefulness of Internet-based e-retail banking. The crucial factors that affect an individual’s decision to use or not to use online services the individual’s age, the difficulties of using the Internet, the fear of changes in the banking sector due to technological development and the lack of information concerning products and services provided to customers through electronic delivery channels. Factors such as the speed of transactions or the cost of using the Internet have little impact on an individual’s final decision.

During 2008, in a study it is revealed that six composite dimensions of electronic service quality, including the provision of convenient/accurate electronic banking operations; the accessibility and reliability of service provision; good queue management; service personalization; the provision of friendly and responsive customer service; and the provision of targeted customer service. Perceived usefulness, security and privacy are the main perusing factors to accept online banking system.

E-banking is a cost-effective delivery channel for financial institutions. Consumers are embracing the many benefits of e-banking. Access to one’s accounts at anytime and from any location via the World Wide Web is a convenience unknown a short time ago. Thus, a bank’s Internet presence transforms from ‘brouchreware’ status to ‘e-banking’ status once the bank goes through a technology integration effort to enable the customer to access information about his or her specific account relationship.
The six primary drivers of E-banking includes,

Improve customer access

- Facilitate the offering of more services
- Increase customer loyalty
- Attract new customers
- Provide services offered by competitors
- Reduce customer attrition

All businesses, including small and medium scale industries, no matter their geographical locations, are all beneficiaries of e-banking. It encompasses all kinds of commercial transaction that is conducted on an electronic medium, mostly through the internet. E-banking links business to customers no matter their geographical location. It allows companies to make new business contacts from different global business alliances, test new products and services, and make market research and other enquiries all at a minimal cost both financial and otherwise. Smaller community banks, among others, are more interested in the application of e-banking to gain certain competitive edges over their larger counterparts.

E-banking is the latest in the series of technological wonders of the recent past. ATMs, Tele-Banking, Internet Banking, Credit Cards and Debit Cards have emerged as effective delivery channels for traditional banking products. Internet or Electronic or online banking is the newest delivery channel to be offered by retail banks in many developed countries, and there is a wide agreement that this channel will have a
significant impact on the market. Banks know that the internet opens up new horizons for them and moves them from local to global frontiers.

*E-banking solution offers:*

-- Exceptional rates on Savings, CDs, and IRAs

-- Checking with no monthly fee, free bill payment and rebates on ATM surcharges

-- Credit cards with low rates

-- Easy online applications for all accounts, including personal loans and mortgages

-- 24 hour account access

-- Quality customer service with personal attention

### 1.3 GLOBAL PERSPECTIVE OF E-BANKING

E-banking is a mix of services which include Internet banking, Mobile banking, ATM kiosks, Fund Transfer System, Real Time Gross Settlement (payment & settlement system), Credit/Debit/Smart/Kisan Cards, Cash management services, and Data warehousing, Operational data for MIS and Customer Relationship Management.

E-banking also can increase competition among banks, and allows banks to penetrate new markets and thus expand their geographical reach. Some even see e-banking as an opportunity for countries with underdeveloped financial systems to leapfrog into advanced stages. Customer in such countries can access services more easily from banks outside one’s own country through wireless communication systems, which are developing more rapidly than traditional ‘wired’ communication networks. A more recent e-banking development is wireless internet applications of banking sometimes called *m-banking* (mobile banking). With the combination of two most recent technological advancements – internet and mobile phone, a new service (mobile data
service) is thus enabled and the first such wireless internet commercial transaction is performed by the banking industry. It is believed that m-banking will provide another new channel for banking services, especially for certain remote areas where online internet is still unavailable. Strategic implications and customer perception of m-banking services are explored with a focus on the consumer value creation and a better understanding about the customer-perceived value of m-banking services. The recent directive from the Reserve Bank of India (RBI) on financial inclusion (banking for the common man) is a key driver for the growth of such solutions in India.

1.4 STATEMENT OF THE PROBLEM

The banking industry is expected to be a leading player in e-business. While the banks in developed countries are working primarily via Internet as non-branch banks, banks in the developing countries use the Internet as an information delivery tool to improve relationship with customers. The electronic revolution which has set the banking sector in motion appears to be e-banking. The tremendous advances in technology and the spread of information technology have brought in a paradigm shift in banking operations. The internet seems to be the new delivery channel in the banking sector which offers firms a new frontier of opportunities and challenges.

Using electronic delivery channels for banking services and products has become increasingly popular in recent years. Electronic banking makes it possible to offer banking services around the world 24 hours a day. The dependence on technology for providing the services with the necessary security and cross-border nature of transactions,
involve additional risks for banks and new challenges for banking regulars and supervisors.

This present study provides an overview of the issues resulting from the development of e-banking and to present the current state of e-banking in India. Also, various psychological and behavioral issues such as trust, security of internet transactions, reluctance to change, various level of satisfaction such as service oriented, technology oriented, technology oriented etc, expectations of the clients and bankers regarding e-banking technology and preference for human interface which appear to impede the growth of e-banking with special reference to commercial banks operating in India.

1.5 OBJECTIVES OF THE STUDY

The objectives of the present research study are outlined below:

- To know the products and services offered by the normal banks.
- To study the developments in banking sector.
- To examine the legal framework of e-banking services.
- To analyze the e-banking practices of the respondent banks chosen for the study.
- To ascertain the extent of satisfaction level on e-banking by customers.
- To identify the expectations of customers on e-services and to offer concrete suggestions to the respondent banks for providing improved services to them.
1.6 OPERATIONAL DEFINITIONS USED IN THE STUDY

BLUETOOTH

Bluetooth is a standardized interface that enables wireless communication between all kinds of devices such as printers, PCs, cell phones or PDAs. It is a low-power radio technology that was developed to replace cables and infrared links for distances of up to ten meters. Bluetooth is independent of operating systems or company standards. Different devices can be linked together to communicate and exchange data via a wireless transceiver that fits onto a single chip. Also, mobile payment with Bluetooth cell phones based on the Bluetooth Special Interest Group will be possible.

CHEQUE TRUNCATION

It is the conversion of physical cheque into electronic form for transmission to the paying bank. Cheque truncation eliminates cumbersome physical presentation of the cheque and saves time and processing costs.

CORE BANKING

It is a general term used to describe the services provided by a group of networked bank branches. Bank customers may access their funds and other simple transactions from any of the member branch offices.

EDI

Electronic data interchange (EDI) is the exchange of documents in a structured form between computers via telephone lines. It is being increasingly used to great effect worldwide, most commonly, but not exclusively, for purchasing and distribution - orders,
confirmations, shipping papers and invoices - but also for dentists payments and the distribution of exam results.

**FEDI**

Financial Electronic Data Interchange (FEDI) involves the computer to computer transmission of both payment instructions and remittance details using international message standards. An example would be trade payments - e.g. a retailer sending a payment to a supplier in payment of multiple invoices.

**NEFT**

National Electronic Fund Transfer is an online system for transferring funds of Indian financial institution (especially banks). This facility is used mainly to transfer funds below Rs. 2,00,000.

**PIM**

Personal Information Manager: a program which supports the daily planning, workgroup and task management and often have a toolset with calendar, planner and to-do list. It also can manage send capabilities like phone, email or fax.

**RTGS**

Real time gross settlement systems are funds transfer systems where transfer of money or securities takes place from one bank to another on a "real time" and on "gross" basis. Settlement in "real time" means payment transaction is not subjected to any waiting period. The transactions are settled as soon as they are processed. "Gross settlement"
means the transaction is settled on one to one basis without bunching or netting with any other transaction.

**SET**

Secure Electronic Transaction - A standard protocol from MasterCard and Visa for securing online credit card payments via the Internet. It is a three-way transaction: the user, merchant and bank must use the SET protocols. Credit card data and a digital certificate (for authentication) are stored in a plug-in to the user's Web browser. A SET-enabled merchant server that passes encrypted payment information to the bank receives the order. Approval is electronically sent to the merchant.

**SHORT CODE**

A short code is similar to a phone number, but shorter, and it can only be used for messaging. Short codes can only be used from mobile phones. They cannot be used to place voice phone calls. Short codes are country-specific.

**SMART PHONES**

Smart phones are wireless telephones capable of both voice and data communication. Their special, computer-enabled features enable quick and easy access to email, fax, and intranet.

**SMART CARDS**

Unlike debit and credit cards (with magnetic stripes), smart cards possess a computer chip, which is used for data storage, processing and identification.
S.W.I.F.T
Tademark of the Society for Worldwide Interbank financial Telecommunications.

TIN
“Taxpayer Identification Number” assigned to you by the internal revenue service.

TRANSACTIONAL WEBSITE
A website that allows transactions, such as Internet Banking allows you to pay bills or transfer funds, or an e-commerce site that allows you to make purchases.

1.7 HYPOTHESES

1. There is no relationship between Respondent banks and Number of times a customer is connected by bank.

2. There is no significant difference between Respondent banks with respect to Availability of Financial information.

3. There is no significant difference between Respondent banks with respect to increased service level of banks due to Introduction of Technology.

4. There is no significant difference between Respondent banks with respect to Personal contact between banker and customer is necessary

5. There is no significant difference between Respondent banks with respect to E-banking replaces the branches completely.

6. There is no relationship between Respondent banks and Shifting to other banks by customers during the last five years.

7. There is no significant difference between Respondent banks with respect to the overall benefits of E-banking to the customers.
8. There is no relationship between Respondent banks and Customers utilization of Net banking.

9. There is no relationship between Respondent banks and Customers utilization of Mobile banking.

10. There is no relationship between Respondent banks and Mode of connection to the bank Network connectivity.

11. There is no relationship between Respondent banks and Future plans intended by respondent banks.

12. There is no relationship between Respondent banks and Reasons for choosing present bank network connectivity.

13. There is no significant difference between Male and Female with respect to Dimensions of satisfaction level on banks.

14. There is no significant difference between Respondent banks with respect to Dimensions of satisfaction level on banks.

15. There is no significant difference between Age group with respect to Dimensions of satisfaction level on banks.

16. There is no significant difference between Occupations with respect to Dimensions of satisfaction level on banks.

17. There is no significant difference between Profession with respect to Dimensions of satisfaction level on banks.

18. There is no significant difference between Educational Qualification with respect to Dimensions of satisfaction level on banks.
19. There is no significant difference between Income level of Respondents with respect to Dimensions of satisfaction level on banks.

1.8 METHODOLOGY

The present study is an attempt to examine the performance of banks in terms of providing banking products and services through their websites. The study is Descriptive and Empirical one based on sample survey. For collection of data, the researcher prepared two research tools namely, an Interview Schedule and a structured Questionnaire. First hand data have been collected from the respondent banks through a well structured Interview Schedule. The opinions of the clients of the respondent banks were collected by means of a Questionnaire for the study. A search executed on the World Wide Web using a combination of knowledge of websites and search tools to discover the homepages.

1.9 DATA COLLECTION

The survey includes in major cities of India, instrument being used as questionnaire filled up from the clients and personal interaction, discussions with the front line executives of online banking divisions of the major players, particularly their marketing and customer servicing departments and the banking experts, personal visits at Automated Teller Machine (ATMs), Point of Sale (POS) counters of major banks.

The researcher depended both on primary data and secondary data. The data for this study are unique in several respects. First, the data covered the E-banking offerings of every Commercial banks. Secondly, the information is compiled from the websites of the respective banks for 293 Scheduled Commercial Banks. Various E-banking services
are considered for the purpose of making comparative analysis and ranking of public, private and foreign banks.

1.10 RESEARCH TOOLS EMPLOYED

For the purpose of study, the researcher has made use of Interview Schedule for Bankers as well as Questionnaire for Clients to collect the data. A copy of the Interview Schedule and Questionnaire administered to the Bankers and Clients respectively were shown in the present research report.

1.11 PILOT STUDY

Before starting for data collection, randomly 30 samples were collected and Reliability Analysis was made. It resulted as, “Cronbach’s coefficient alpha score value = 0.7184 and 0.8839. It revealed that, this study gives accurate feedback about the impact of e-banking in financial market and consumer market since the values are more than 0.05 and 5% level of significance.

1.12 SAMPLING DESIGN

Sufficient care has been taken to select the sample respondents. For this purpose, simple random sampling was used to select the respondents. The present study relied on primary data collected through administering a structured Interview Schedule and Questionnaire.

1.12.1 Universe of the study

The universe of the study consists of all scheduled commercial banks operating in India. There are 293 Scheduled Commercial Banks operating in India as on 31st Dec 2009. These comprise of 30 Private, 27 Public and 40 Foreign banks and 196 regional rural banks.
1.12.2 Sample of the study

For the purpose of the analysis-I, sample of “97 banks” were considered out of which 30 Private, 27 Public and 40 Foreign banks. The sample consists 33% of the universe. For the purpose of the analysis-II, sample of “412 clients” were considered out of which 132 clients operating with Private banks, 120 clients with Public banks and 160 clients with Foreign banks.

Following chart represents the structure of Scheduled Banks in India \(^1\) as on 31\(^{st}\) December 2009.

![Scheduled banking structure in India](http://upload.wikimedia.org/wikipedia/commons/b/bd/Scheduled_banking_structure_in_India.png)
<table>
<thead>
<tr>
<th>S.No</th>
<th>PUBLIC BANKS</th>
<th>PRIVATE BANKS</th>
<th>FOREIGN BANKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Allahabad Bank</td>
<td>Bharat Overseas Bank Ltd</td>
<td>ABN-AMRO Bank N.V.</td>
</tr>
<tr>
<td>3.</td>
<td>Bank of Baroda</td>
<td>Development Credit Bank Ltd</td>
<td>American Express Bank Ltd</td>
</tr>
<tr>
<td>4.</td>
<td>Bank of India</td>
<td>Lord Krishna Bank Ltd</td>
<td>Arab Bangladesh Bank Ltd</td>
</tr>
<tr>
<td>5.</td>
<td>Bank of Maharastra</td>
<td>SBI Commercial &amp; International Bank Ltd</td>
<td>Bank International Indonesia</td>
</tr>
<tr>
<td>7.</td>
<td>Central Bank of India</td>
<td>The Bank of Rajasthan Ltd</td>
<td>Bank of America NA</td>
</tr>
<tr>
<td>8.</td>
<td>Corporation Bank</td>
<td>The Catholic Syrian Bank Ltd</td>
<td>Bank of Bahrain and Kuwait</td>
</tr>
<tr>
<td>9.</td>
<td>Dena Bank</td>
<td>The Dhanalakshmi Bank Ltd</td>
<td>Bank of Ceylon</td>
</tr>
<tr>
<td>10.</td>
<td>IDBI Bank</td>
<td>The Federal Bank Ltd</td>
<td>Barclays Bank PLC</td>
</tr>
<tr>
<td>11.</td>
<td>Indian Bank</td>
<td>The Ganesh Bank of Kurundwad Ltd</td>
<td>BNP Paribas</td>
</tr>
<tr>
<td>13.</td>
<td>Oriental Bank of Commerce</td>
<td>The Karnataka Bank Ltd</td>
<td>Chohung Bank</td>
</tr>
<tr>
<td>14.</td>
<td>Punjab &amp; Sind Bank</td>
<td>The Karur Vysya Bank Ltd</td>
<td>Citibank N.A.</td>
</tr>
<tr>
<td>15.</td>
<td>Punjab National Bank</td>
<td>The Lakshmi Vilas Bank Ltd</td>
<td>Commerzbank AG</td>
</tr>
<tr>
<td>16.</td>
<td>Syndicate Bank</td>
<td>The National Bank Ltd</td>
<td>Credit Agricole Indosuez</td>
</tr>
<tr>
<td>17.</td>
<td>UCO Bank</td>
<td>The Nedungadi Bank Ltd</td>
<td>Credit Lyonnais</td>
</tr>
<tr>
<td>18.</td>
<td>Union Bank of India</td>
<td>The Ratnakar Bank Ltd</td>
<td>Deutsche Bank AG</td>
</tr>
<tr>
<td>20.</td>
<td>Vijaya Bank</td>
<td>The South Indian Bank Ltd</td>
<td>Dresdner Bank AG</td>
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<tr>
<td>S.No</td>
<td>PUBLIC BANKS</td>
<td>PRIVATE BANKS</td>
<td>FOREIGN BANKS</td>
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<tr>
<td>21.</td>
<td>State Bank of India</td>
<td>The United Western Bank Ltd</td>
<td>HSBC Ltd</td>
</tr>
<tr>
<td>22.</td>
<td>State Bank of Bikaner &amp;</td>
<td>ING Vysya Bank Ltd</td>
<td>ING Bank N.V.</td>
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<tr>
<td></td>
<td>Jaipur</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>State Bank of Saurastra</td>
<td>HDFC Bank</td>
<td>Mashreqbank psc</td>
</tr>
<tr>
<td>27.</td>
<td>State Bank of Travancore</td>
<td>ICICI Bank</td>
<td>Mizuho Corporate Bank Ltd (The Fuji Bank Ltd)</td>
</tr>
<tr>
<td>28.</td>
<td></td>
<td>IndusInd Bank Ltd</td>
<td>Oman International Bank S.A.O.G.</td>
</tr>
<tr>
<td>29.</td>
<td></td>
<td>Kotak Mahindra Bank</td>
<td>Oversea Chinese Banking Corporation Ltd</td>
</tr>
<tr>
<td>30.</td>
<td></td>
<td>UTI Bank</td>
<td>Societe Generale</td>
</tr>
<tr>
<td>31.</td>
<td></td>
<td></td>
<td>Sonali Bank</td>
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<tr>
<td>32.</td>
<td></td>
<td></td>
<td>Standard Chartered Grindlays Bank Ltd</td>
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<tr>
<td>33.</td>
<td></td>
<td></td>
<td>State Bank of Mauritius Ltd</td>
</tr>
<tr>
<td>34.</td>
<td></td>
<td></td>
<td>Sumitomo Mitsui Banking Corporation (The Sumitomo Bank Ltd)</td>
</tr>
<tr>
<td>35.</td>
<td></td>
<td></td>
<td>The Bank of Nova Scotia</td>
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<td>36.</td>
<td></td>
<td></td>
<td>The Bank of Tokyo-Mitsubishi Ltd</td>
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<td>37.</td>
<td></td>
<td></td>
<td>The Siam Commercial Bank</td>
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<td>38.</td>
<td></td>
<td></td>
<td>The Toronto-Dominion Bank Ltd</td>
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<tr>
<td>39.</td>
<td></td>
<td></td>
<td>UFJ Bank Ltd (The Sanwa Bank Ltd)</td>
</tr>
<tr>
<td>40.</td>
<td></td>
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</tbody>
</table>

Source: http://www.knowledgebase-script.com/demo/article-667.html
1.13 STATISTICAL TOOLS EMPLOYED

The study depended both on primary and secondary data. The data collected were systematically tabulated, analyzed, interpreted and presented in this report. Statistical tools viz. Percentage analysis, Chi-square test, ‘t’-test, ANOVA followed by Duncan Multiply Range Test(DMRT), Correlation of co-efficient analysis, Discriminant analysis were used for testing the hypotheses for arriving at appropriate conclusion.

1.14 PERIOD OF STUDY

Based on the availability of data, the period of study has been confined to fifteen years from 1995-2009. All the websites of the banks and voice of managers have been explored during this period.

1.15 LIMITATIONS OF THE STUDY

- The sample taken for the purpose of study comprises only commercial banks operating in India.
- Only important products and services of e-banking were studied.
- The information about the various services and products of e-banking being offered by the banks in India only explored from the web sites of the banks and direct visits to the banks.
1.16 SCHEME OF RESEARCH REPORT

Chapter I deals with introduction about the study, Conceptual framework of E-banking, Global perspective of E-banking, Statement of the problem, Objectives of the study, Methodology, Data collection, Research tools employed, Pilot study, Statistical tools employed, Period of study, Limitations of the study and Scheme of Research Report.

Chapter II entitled “Review of Literature” summarizes the earlier research studies on E-banking in India and Abroad.

Chapter III presents an overview of E-banking practices in banks.

Chapter IV discusses the legal framework of E-banking services.

Chapter V analyses the Survey Data – I, collected from the employees from various public, private and foreign banks to identify their opinion and expectations about E-banking.

Chapter VI analyses the Survey Data – II, collected from the clients from various public, private and foreign banks to elicit their opinion and expectations on E-banking.

Chapter VII consolidates the findings of the study, suggestions and conclusion about the E-banking practices in selected scheduled commercial banks.