CHAPTER - III

INFORMATION COMMUNICATION TECHNOLOGY IN BANKS

AN OVERVIEW
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– AN OVERVIEW

3.1 INTRODUCTION

Today’s world is a world of information explosion. This information explosion takes place in such a tremendous speed that even a literate person is feeling as if he or she is illiterate being not able to cope up with speed of such information explosion. Here the question arises how can one to cope up with it? The answer is, information communication technology (ICT) that can help in coping with the information explosion.

The present chapter narrates the Information Communication Technology used in Banks under different heads like, meaning of information communication technology, definition of information communication technology, forces of change in Indian banking, history of ICT in banking sector, Indian banking transformation – the starting point, various committees on computerization in Indian banking sector, banking innovations and conclusion\(^1\).

3.2 MEANING OF INFORMATION COMMUNICATION TECHNOLOGY

Information Communication Technology (ICT) is often used as an extended synonym for Information Technology (IT). ICT is usually a more general term that stress the role of unified communications and the integration of telecommunication (telephone line and wireless signals) with computer technology.

Information Communication Technology refers to technologies that provide access to information through telecommunication\(^2\). It is similar to information technologies, but focuses primarily on communication technologies. This includes the internet, wireless networks, cell phones and other communication media.

Information Communication Technology integrates every equipment as interconnected system or sub system of equipments that is used in the acquisition, storage manipulation, management transmission or reception of data or information\(^3\).

### 3.3 DEFINITION OF INFORMATION COMMUNICATION TECHNOLOGY

Information Communication Technology is defined as “any technology used to support information gathering, processing, distribution and use”\(^4\).

ICT can be viewed as all form of technologies and product for a wide range of software, hardware, telecommunications and information management techniques, applications and devices and are used to create, produce, analyses, process, package, distribute, retrieve, store and transmit or receive information electronically in a digital form such as computers, email, internet, websites, social networking and other wireless communications devices, networks, broadband and as well as the various specialized devices and applications associated with them, such as satellite systems and videoconferencing.

**According to Ifueko Omoigui Okauru (2011)** defined that, “ICT is the digital processing and utilization of information by the use of electronic computers. It comprises the storage, retrieval, conversion and transmission of information”.

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According to Margaret Rouse (2005) defined that ICT (information and communications) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. ICTs are often spoken of in a particular context, such as ICTs in banking, education, health care, or libraries.

According to Chandler, Daniel; Munday, Rod et.al (2012) defined that, “the study, design, development, application, implementation, support or management of computer-based information systems. The term is commonly used as a synonym for computers and computer networks, but it also encompasses other information distribution technologies such as television and telephones.

According to Daintith, John, ed. (2009) defined that, “A branch of engineering dealing with the use of computers and telecommunications equipment to store, retrieve, transmit and manipulate data”.

3.4 FORCES OF CHANGE IN INDIAN BANKING

Developments in communication systems, coupled with blurring of differences between banks and non-banks and globalization have aggravated the competitive environment.

Technology became a key differentiator for the new private sector banks. The technological superiority helped these private sector banks to have upper edge over public sector banks. The traditional source of income (Net Interest margin = Interest Earned – Interest Expended) was compressed due to the pressure of competition. As a result commercial banks had to face the challenge of finding out new sources of

http://collegeassignments.wordpress.com/2012/10/01/provide-five-definitions-of-ict-it-indicate-
income and curtailing overhead expenses\textsuperscript{6}. The operating conditions are different for private sector and public sector banks in India (wage bill, legacy of non-performing assets and extensive network of Public sector banks) which results in imperfect competition in the market.

With increasing competition among banks, customers are also becoming more discerning and demanding. To meet customer expectations, banks will have to offer a broad range of deposit, investment and credit products through diverse distribution channels including upgraded branches, ATMs, telephone and Internet. The mantra to attract and retain customers lies in efficient customer service including customized and value added products to meet various needs of individual customers as also to meet the need of diverse types of customers\textsuperscript{7}.

3.5 HISTORY OF ICT IN BANKING SECTOR

Information Communication Technology (ICT) came into existence in the year 1980 in banking industry through the Rangarajan Committee recommendations\textsuperscript{8}. It totally changed the way the banks and financial institutions were functioning. In the words of Bill Gates, “we need banking, do we really need banks?” is totally true in this area. Today, no banking business or corporate strategy is complete without information technology. There were different phases introduced during the evolution of ICT in the banking sector. To have a clear picture regarding the developments of ICT, it has been divided into five phases\textsuperscript{9}.


During the First phase of development, the banks were focusing on automating the laborious accounting process and the functions performed at back office operations like maintenance of deposits, calculation of interest, and maintaining ledger accounts.

Second phase of development took place in 1980, when the front office and back office operations were automated. This helped in improving the customer service, reduction in processing time on the front office and back office operations. In this way, the time on carrying out the activities as well as providing the service to the customer was reduced to a large extent.

The third phase which was started by opening up of new generation private sector banks. These banks with small network and having the advantage of opening the branches under the computerized environment from day one of operations introduced the networking concept and centralized operations. With further investment in ICT the banks could provide innovative financial products at the minimum cost. The core banking solution was introduced and the banks have already captured substantial business under CBS. Now instead of ‘branch-customer’ concept, ‘bank-customer’ concept is introduced. This meant that the problems of decentralized network, data base and related operational costs are avoided. With the help of core banking solution, the banks are able to lower the service cost after the adoption of centralized operations.10

The centralized operations led to the fourth phase of development where the customer carried out their own required transactions through automated teller machine, mobile banking, internet banking, and phone banking. The AAA mantra of

Anywhere, Anytime and Anyhow implemented through ATMs, internet banking and mobile banking. The operational costs for transactions through ATMs are comparatively less and also provide flexible options to the customers. The other area where there is high potential to transact and operate by the customers with least operating cost is “Internet banking”. Internet banking has a least cost per transaction, that is, $ 0.01 per transaction comparing mobile banking, ATM, telephone banking, and normal branch transaction\textsuperscript{11}.

The banking industry is now at the fifth phase of development known as interbank connectivity. This connectivity of inter-bank and inter-branch has been possible through “Real Time Gross Settlement System”. The concept of “bank-customer” has further improved to “banking industry-customer”. In this system, the transactions are effected on real time basis as and when they occurred.

From the different phases of banking sector, it is now clear that technological advancement has totally changed the scenario of banking sector. So, computerization, information technology and automation of services are key issues for banks to survive in this competitive environment; and are receiving prime attention as it touches everybody’s work in some way or the other. But this cannot be done in a day. Banks do need to have extensive investment on technology to meet all the requirements and to reduce the transaction costs\textsuperscript{12}.

However, the implementation of IT in banking without undertaking appropriate Business Process Re-engineering (BPR) exercise will not prove to be


\textsuperscript{12} Ibid., 3 – 17.
fruitful. Proper business process re-engineering ensures the ICT initiatives to meet the required objectives, and ensures the financial outlay being properly utilized.

3.6 INDIAN BANKING TRANSFORMATION – THE STARTING POINT

Since independence Indian banks have undergone through major shifts which can categorized as pre-reform (before 1991) and post-reform period (after 1991):

3.6.1 Pre-Reform period (Before 1991)

- A period of consolidation of banks up to 1966
- A period of historic expansion in both geographical and functional terms from 1966 to mid-1980s
- A period of consolidation of branches from mid-1980s to 1991

These changes were policy induced but not driven by market forces.

3.6.2 Post-Reform period (After 1991)

Entry of technology in the Indian banking sector can be traced back to the Rangarajan Committee report, way back in the 1980s but during nineties, the banking sector witnessed various liberalization measures. New private sector and foreign banks emerged - equipped with the latest technology. These banks opted for a different model of having a single centralized database through a network infrastructure, instead of having multiple databases for all their branches. These changes were market driven, having the influence especially of globalization. The crux is Indian banks have no control over developments abroad but are subjected to their effects. Hence these changes were not the outcome of internal changes but of external changes. Deregulation has opened up new opportunities for banks to increase revenues by diversifying into investment banking, insurance, credit cards, mortgage financing, depository services, securitization, etc. Now all the banks have started with the concept of multi-channels, like ATMs, credit cards, debit cards, telephone/mobile
banking, internet banking, call centers, etc. The role of banking is redefined from a mere financial intermediary to service provider of various financial services under one roof acting like a financial supermarket\(^\text{13}\).

### 3.7 Various Committees on Computerization in Indian Banking Sectors

**Dr. Y.B. Damle** - Adviser, Management Services Department, Reserve Bank of India: Working Group to consider feasibility of introducing MICR/OCR Technology for Cheque Processing (1982)

- Introduction of 'item processing' (sorting and listing of cheques with the help of computers) in three phases.
- In the first phase at the four metropolitan cities viz. Mumbai, New Delhi, Chennai and Calcutta, with the help of MICR technology.
- In the second phase all state capitals and important commercial centres.
- In the final phase national clearing to be introduced by dividing the country into four Regional Grids with headquarters at Mumbai, New Delhi, Chennai and Calcutta.

*Each Regional Centre was to perform two functions*

- to act as a clearing house for intra-grid instruments, and
- participate in national clearing on behalf of the grid for extra-grid outstation cheques.

**Dr. C. Rangarajan**, Deputy Governor, Reserve Bank of India: Committee on Mechanisation in the Banking Industry (1984)

Banks should set up service branches at centers where they have more than 10 branches. The service branch so set up would exclusively be devoted to clearing

operations of the bank at that particular centre. Banks to be in readiness for the introduction of MICR Clearing at the four metropolitan cities by assessing their requirements for encoders, adopting standardized cheque forms and reorganizing work procedures where necessary, and training staff down to the branch level.

**Shri T.N.A. Iyer,** Executive Director, Reserve Bank of India: Committees on Communication Network for Banks and SWIFT implementation (1987)

- Setting up of X.25 based packet switching network called 'BANKNET' to be jointly owned by the Reserve Bank and the public sector banks.
- Inter-bank fund transfers on banks' own account and on customers' account
- Inter-branch funds transfers on banks' own account and on customers' account
- Currency chest transactions
- Government transactions
- Improvements in payment systems by facilitating automated clearing services
- India should join the SWIFT (Society for Worldwide Interbank Financial Telecommunication) Network for the transmission and reception of international financial messages.

**Dr. C. Rangarajan,** Deputy Governor, Reserve Bank of India: Committee on Computerisation in Banks (1988): Computerisation of the settlement operations in the clearing houses managed by Reserve Bank of India at Bhubaneshwar, Guwahati, Jaipur, Patna and Thiruvananthapuram.

- Operationalisation of MICR technology and the National Clearing of inter-city cheques at the four metropolitan cities.

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Introducing one-way collection of cheques drawn on the 4 metros received from Ahmedabad, Bangalore, Nagpur and Hyderabad.

Framing of Uniform Regulations and Rules of Clearing Houses.

Branch level computerisation and the establishment of connectivity between branches.

Improvements in customer service - introduction of on-line banking.

Standardisation and rigorous security features to ensure an efficient and risk-free transfer of funds electronically.

Setting up a network of Automated Teller Machines (ATMs)

Introduction of a single 'All Bank' credit Card

Shri W.S.Saraf, Executive Director, Reserve Bank of India: Committee on Technology Issues relating to Payments System, Cheque Clearing and Securities Settlement in the Banking Industry (1994)

Establishment of an Electronic Funds Transfer (EFT) system, with the BANKNET communications network as its carrier. Enactment of suitable legislation on the lines of the Electronic Funds Transfer Act 1978, USA and Data Protection Act 1984, UK.

MICR clearing is introduced at all centers with more than 100 bank branches.

Introduction of a Delivery versus Payment (DvP) system for SGL transactions, with settlement on gross basis both for securities transactions in PDO and funds transactions in current

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❖ Introduction of Electronic Clearing Service Credit for low value repetitive transactions such as interest, dividend, salary, pension payments and an Electronic Debit Clearing for payments to utility companies.

❖ Switch over to on-line inter-bank clearing on a gross basis.

❖ Large scale induction of computers and communication technology in service branches

❖ Optimal usage of SWIFT\textsuperscript{16}.


EFT system could be introduced immediately by framing regulations under Section 58 of the RBI Act. A Model Customer Contract agreement to govern the banker-customer relationship with regard to EFT should be adopted by all banks participating in the system.

Report of the Committee on Technology Upgradation in the Banking Sector: **Dr A. Vasudevan** - Report of the Working Group on Technology Upgradation of Banks.\textsuperscript{17}


❖ Separate trading platform

❖ Ensure authenticity


\textsuperscript{16} www.Banknetindia.com
\textsuperscript{17} www.rbi.com
3.8 BANKING INNOVATIONS

Today we have electronic payment system along with currency notes. India’s financial sector is moving towards a scenario, where it can have new instruments along with liquidity and safety. Important events in the evolution of new age payment systems in India are:

- Arrival of card-based payments- debit card, credit card- late 1980’s and early 1990’s.
- Introduction of Electronic Clearing Service (ECS) in late 1990’s
- Introduction of Electronic Funds Transfer/ Special EFT (EFT/SEFT) in the early 2000’s
- Real Time Gross Settlement (RTGS) was introduced in March 2004
- Introduction of NEFT (National Electronic Funds Transfer) as a replacement for EFT/SEFT in 2005/06
- Plan for implementation of cheque truncation system as a pilot program in New Delhi in 2007.

3.8.1 AUTOMATED TELLER MACHINES

Automated Teller Machines or ATMs are electronic machines linked to the accounts and records of a banking institution. It enables customers to carry out

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18 RBI reports www.rbi.org.in

banking transactions without visiting bank premises. ATMs are virtual banks which allow the user to withdraw cash, pay bills, balance inquiries, cash deposits etc. The machine is operated with the help of an access device, which is a card, code (Personal Identification Number), or through other means of access to a customer’s account, or any combination thereof.

ATMs are an issue of survival for the banks and are becoming just another part of everyday life. Falling costs of machines and connectivity is a key factor contributing to the growth of ATM network. Banks have also been cutting costs and gaining synergies through ATM sharing agreements amongst themselves\textsuperscript{20}.

Banks are now using ATMs for product promotion as banks market broader financial services to their captive audience of ATM users. But these facilities come with added problems when huge amount of money is withdrawn by large number of consumers in a market period (very short period of time)\textsuperscript{21}. The number of ATMs available in Virudhunagar district is given in Table 3.1.

\textbf{TABLE 3.1}

\textbf{NUMBER OF ATMs AVAILABLE IN VIRUDHUNAGAR DISTRICT}

<table>
<thead>
<tr>
<th>Name of Bank</th>
<th>Number of ATMs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICICI Bank</td>
<td>03</td>
</tr>
<tr>
<td>AXIS Bank</td>
<td>06</td>
</tr>
<tr>
<td>UCO Bank</td>
<td>02</td>
</tr>
<tr>
<td>IDBI Bank</td>
<td>02</td>
</tr>
<tr>
<td>HDFC Bank</td>
<td>03</td>
</tr>
<tr>
<td>Union Bank of India</td>
<td>07</td>
</tr>
<tr>
<td>State Bank of India</td>
<td>12</td>
</tr>
<tr>
<td>State Bank of Travancore</td>
<td>01</td>
</tr>
<tr>
<td>Punjab National Bank</td>
<td>02</td>
</tr>
<tr>
<td>Indian Overseas Bank</td>
<td>10</td>
</tr>
</tbody>
</table>

\textsuperscript{20} Rajashekhara K. S., “Application of IT in Banking”, Yojana, July 04

Canara Bank 11
Tamilnad Mercantile Bank 13
Karur Vysya Bank 10
Bank of India 02
Corporation Bank 01
Lakshmi Vilas Bank 01
South Indian Bank 01
Indian Bank 08

Total 95

Source: RBI Annual report, April 2012.

3.8.2 DEBIT CARD

An electronic card issued by a bank which allows bank clients access to their account to withdraw cash or pay for goods and services. This removes the need for bank clients to go to the bank to remove cash from their account as they can now just go to an ATM or pay electronically at merchant locations. This type of card, as a form of payment, also removes the need for checks as the debit card immediately transfers money from the client's account to the business account22. The study data collected on annual turnover of debit cards in India for the period of 3 years from 2009-10 to 2011-12. The annual turnover of debit cards which stood at 0.3 trillion during 2009-10 and gradually it increased to 0.5 trillion during 2011-12. The following table 3.2 contains the data on the annual turnover of debit cards in India over the period of 3 years.

TABLE 3.2

DEBIT CARD – ANNUAL TURNOVER

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume (Million)</th>
<th>Value (Trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>170.2</td>
<td>0.3</td>
</tr>
<tr>
<td>2010-11</td>
<td>237.1</td>
<td>0.4</td>
</tr>
<tr>
<td>2011-12</td>
<td>327.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>


3.8.3 CREDIT CARD

The bank issues credit cards to persons who may or may not have an account in the bank. It is used to make payments for purchase, so that, the individual does not have to carry cash. Credit card is also known as Plastic Money. It is basically Pay Later Card that is provided to customer.

Banks allow certain credit period to the credit cardholder to make payment of the credit amount. Interest is charged if a cardholder is not able to pay back the credit extended to him within a stipulated period. This interest rate is generally quite high.

The study data collected on annual turnover of credit cards in India for the period of 3 years from 2009-10 to 2011-12. The annual turnover of credit cards which stood at 0.6 trillion during 2009-10 and gradually it increased to 1 trillion during 2011-12. The following table 3.3 contains the data on the annual turnover of credit cards in India over the period of 3 years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume (Million)</th>
<th>Value (Trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>234.2</td>
<td>0.6</td>
</tr>
<tr>
<td>2010-11</td>
<td>265.1</td>
<td>0.8</td>
</tr>
<tr>
<td>2011-12</td>
<td>320.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>


3.8.4 ELECTRONIC CLEARING SERVICE (ECS)

The Electronic Clearing Service (ECS) was the first version of “Electronic Payments” in India. It is a mode of electronic funds transfer from one bank account to another bank account using the mechanism of clearing house. It is very useful in case of bulk transfers from one account to many accounts or vice-versa. ECS facility is available at more than 60 centers in India. The beneficiary has to maintain an account
with one of the banks at ECS center in order to avail benefits of ECS. There are two
types of ECS, namely ECS – credit and ECS – debit\textsuperscript{23}.

3.8.4.1 ECS DEBIT

It is a scheme under which an account holder with a bank can authorize an
ECS user to recover an amount at a prescribed frequency by raising a debit in his
account. Utility service providers such as telephone companies, electricity boards,
credit card collections, collection of loan installments by bank and financial
institutions, and investment schemes such as mutual funds are eligible to participate in
the ECS debit scheme\textsuperscript{24}.

The study data collected on annual turnover of ECS debit in India for the
period of 3 years from 2009-10 to 2011-12. The annual turnover of ECS debit which
stood at 0.7 trillion during 2009-10 and gradually it increased to 0.8 trillion during
2011-12. The following table 3.4 contains the data on the annual turnover of ECS
debit in India over the period of 3 years.

\begin{table}[h!]
\centering
\begin{tabular}{|c|c|c|}
\hline
Year & Volume (Million) & Value (Trillion) \\
\hline
2009-10 & 149.3 & 0.7 \\
\hline
2010-11 & 156.7 & 0.7 \\
\hline
2011-12 & 164.7 & 0.8 \\
\hline
\end{tabular}
\end{table}

\textbf{TABLE 3.4}

\textbf{ECS DEBIT – ANNUAL TURNOVER}

3.8.4.2 ECS CREDIT

ECS, as used with respect to credit clearing, refers to a system of payment
undertaken by banks, financial institutions, and others whereby direct deposit of a
large number of payments such as interest, dividend warrants into the bank accounts

57 – 65

\textsuperscript{24} Ibid.,
of the shareholders, depositors, investors and others is facilitated without having to issue paper instruments. The study data collected on annual turnover of ECS credit in India for the period of 3 years from 2009-10 to 2011-12. The annual turnover of ECS credit which stood at 1.2 trillion during 2009-10 and gradually it increased to 1.8 trillion during 2011-12. The following table 3.5 contains the data on the annual turnover of ECS credit in India over the period of 3 years.

### TABLE 3.5

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume (Million)</th>
<th>Value (Trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>98.1</td>
<td>1.2</td>
</tr>
<tr>
<td>2010-11</td>
<td>117.3</td>
<td>1.8</td>
</tr>
<tr>
<td>2011-12</td>
<td>121.5</td>
<td>1.8</td>
</tr>
</tbody>
</table>


#### 3.8.5 ELECTRONIC FUND TRANSFER (EFT)

Electronic Fund Transfer scheme targeted one to one payments as an alternative to the use of cheques and drafts for remitting funds between bank accounts located at different centers. EFT encountered the problem of low level of computerization and connectivity in the Indian banking industry. The study data collected on annual turnover of EFT in India for the period of 3 years from 2009-10 to 2011-12. The annual turnover of EFT which stood at 4.1 trillion during 2009-10 and gradually it increased to 17.9 trillion during 2011-12. The following table 3.6 contains the data on the annual turnover of EFT in India over the period of 3 years.

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25 Ibid.,
### TABLE 3.6

**EFT – ANNUAL TURNOVER**

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume (Million)</th>
<th>Value (Trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>66.3</td>
<td>4.1</td>
</tr>
<tr>
<td>2010-11</td>
<td>132.3</td>
<td>9.4</td>
</tr>
<tr>
<td>2011-12</td>
<td>226.1</td>
<td>17.9</td>
</tr>
</tbody>
</table>


### 3.8.6 REAL TIME GROSS SETTLEMENT SYSTEM (RTGSs)

The inter bank payments handle large amounts of money. The RTGS system is one in which payment instructions between banks are processed and settled individually and continuously throughout the day. In India currently it covers more than 28,000 branches of banks. The attraction of RTGS is that the payee banks and their customers receive funds with certainty and finality during the same day enabling them to use the funds immediately without exposing themselves to risk. RTGS system, do not create credit risk for the receiving participant because they settle the each payment individually, as soon as it is accepted, liquidity risks remains, as well as the possibility of the risks being shifted outside the system. The security has to ensure that hacking is not possible at the site. The study data collected on annual turnover of RTGSs in India for the period of 3 years from 2009-10 to 2011-12. The annual turnover of RTGSs which stood at 322.8 trillion during 2009-10 and gradually it increased to 484.9 trillion during 2011-12. The following table 3.7 contains the data on the annual turnover of RTGSs in India over the period of 3 years.

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### TABLE 3.7

RTGSs – ANNUAL TURNOVER

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume (Million)</th>
<th>Value (Trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>33.2</td>
<td>322.8</td>
</tr>
<tr>
<td>2010-11</td>
<td>49.3</td>
<td>394.5</td>
</tr>
<tr>
<td>2011-12</td>
<td>55.0</td>
<td>484.9</td>
</tr>
</tbody>
</table>


#### 3.8.7 MICR CLEARING

MICR is an acronym for Magnetic Ink Character Recognition. The MICR Code is a numeric code that uniquely identifies a bank-branch participating in the ECS Credit scheme. This is a 9 digit code to identify the location of the bank branch; the first 3 characters represent the city, the next 3 the bank and the last 3 the branch. The MICR Code allotted to a bank branch is printed on the MICR band of cheque leaves issued by bank branches. The study data collected on annual turnover of MICR clearing in India for the period of 3 years from 2009-10 to 2011-12. The annual turnover of MICR clearing which stood at 85.3 trillion during 2009-10 and it reduced to 80.2 trillion during 2011-12. The following table 3.8 contains the data on the annual turnover of MICR clearing in India over the period of 3 years.

### TABLE 3.8

MICR CLEARING – ANNUAL TURNOVER

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume (Million)</th>
<th>Value (Trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>1149.7</td>
<td>85.3</td>
</tr>
<tr>
<td>2010-11</td>
<td>1155.1</td>
<td>83.0</td>
</tr>
<tr>
<td>2011-12</td>
<td>1114.5</td>
<td>80.2</td>
</tr>
</tbody>
</table>


27 Ibid.,
3.10 CONCLUSION

Information Communication Technology integrates every equipment as interconnected system or sub system of equipments that is used in the acquisition, storage manipulation, management transmission or reception of data or information. To meet customer expectations, banks will have to offer a broad range of deposit, investment and credit products through diverse distribution channels including upgraded branches, ATMs, telephone and Internet for the purposes of back office and front office operation and core banking solution. Information Communication Technology (ICT) has been used from the year 1980 in banking industry in India after the Rangarajan Committee and various committees’ recommendations on computerization. Today, no banking business or corporate strategy is complete without information technology. The AAA mantra of Anywhere, Anytime and Anyhow banking are implemented through ATMs, internet banking and mobile banking. This connectivity of inter-bank and inter-branch has been possible through “Real Time Gross Settlement System”. The role of bank is redefined from a mere financial intermediary to comprehensive service provider of various financial services under one roof and is acting like a financial supermarket. The forthcoming chapter deals with profile of the study area and the socio economic status of bank employees in Virudhunagar district.