

**Implications of Reforms and Technologisation on Commercial Banking  
Sector with Reference to Retail Banking in an Urban Market**

Thesis submitted for  
The Degree of Doctor of Philosophy

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## Declaration

I, hereby declare that the research carried in this thesis entitled, 'Implications of Reforms and Technologisation on Commercial Banking Sector with Reference to Retail Banking in an Urban Market', is an original work carried out by me for the award of degree of Doctor of Philosophy from the University of Hyderabad. I declare to the best of my knowledge that no part of this thesis was earlier submitted for the award of research degree of any other University. I also declare that, the external examiners suggestions have been incorporated in the thesis.

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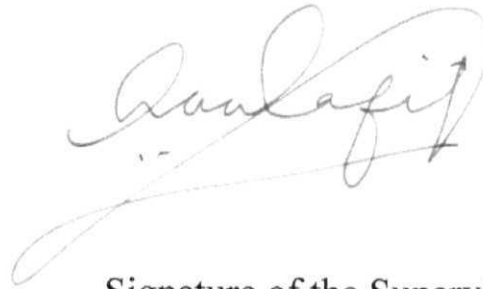
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## ABBREVIATIONS

|                 |   |
|-----------------|---|
| AIBEA           | - All India Bank Employee Association                                   |
| AFC             | - Average Fixed Cost  |
| ATC             | - Average Total Cost  |
| ATMs            | - Automatic Tellers Machines  |
| BFSI            | - Banking And Financial Sector Industry                                 |
| CAGR            | - Compounded Annual Growth Rate   |
| CAS             | - Capital Authorization Scheme  |
| CFMS            | - Centralised Funds Management System                                   |
| CM A            | - Credit Monitoring Arrangement   |
| CRAR            | - Capital to Risky- Weighted Assets Ratio                               |
| CRR             | - Cash Reserve Ratio  |
| CVC             | - Central Vigilance Commission  |
| DBOD            | - Department of Banking Operations and<br>Development                   |
| DFIs            | - Development Financial Institutions                                    |
| DRT             | - Debt Recovery Tribunals   |
| DSA             | - Direct Sales Associate  |
| E-banking       | - Electronic Banking  |
| EC              | - Establishment Cost  |
| ECS             | - Electronic Clearing Service   |
| EFT             | - Electronic Funds Transfer   |
| FCNR            | -Foreign Currency Non-Resident Accounts                                 |
| FRBs            | - Foreign Banks   |
| HDFC            | - Housing Development Finance Corporation Ltd.                          |
| HSBC            | - Hong Kong and Shanghai Bank   |
| IBA             | - Indian Bank's Association   |
| ICICI Bank Ltd. | - Industrial Credit and Investment Corporation of<br>India Bank Limited |
| IDBI            | - Industrial Development Bank of India                                  |
| INFINET         | - Indian Financial Network  |

|              |   |
|--------------|---|
| IT           | • Information Technology  |
| LIBOR        | • London Inter Bank Offered Rate  |
| MICR         | • Magnetic Ink Character Recognition  |
| MOU          | • Memorandum of Understanding   |
| MPFB         | - Maximum Permissible Bank Finance  |
| NBFCs        | • Non-Banking Financial Companies   |
| NCBE         | • National Confederation of Bank Employee   |
| NCR-1        | • Narasimham Committee Report-1   |
| NCR-II       | • Narasimham Committee Report-II  |
| NPAs         | • Non-Performing Assets   |
| NPBs         | • New Private Banks   |
| NRE          | • Non Resident External (Deposit)   |
| NRO          | • Non Resident Ordinary   |
| NRI          | Non-Resident Indian   |
| NRNR         | • Non - Resident Non Repatriable  |
| NRSR         | Non - Resident Special Rupee  |
| NSBs         | Nationalised Banks  |
| NTDL         | Net Demand and Time Liabilities   |
| OPBs         | Old Private Banks   |
| PER          | Prime Lending Rates   |
| PR           | Profits   |
| PSBs         | Private Sector Banks  |
| RBI          | Reserve Bank of India   |
| ROAs         | Return on Assets  |
| Rs.          | Rupee (US \$ 1= 45 rupees approx.)  |
| RTGS-        | Real Time Gross Settlement System   |
| SARFAESI Act | Securitisation and Reconstruction of Financial<br>Assets and Enforcement of Security Interest<br>Ordinance Act. |
| SBI          | State Bank of India   |
| SCBs         | Scheduled Commercial Banks  |

|          |  |
|----------|--|
| SFMS     | - Structured Financial Messaging Solution                            |
| SLR      | - Statutory Liquidity Ratio  |
| SWIFT    | - Society for World Wide Inter -Bank Financial<br>Telecommunications |
| SSI      | - Small Scale Industries   |
| UCO Bank | - United Commercial Bank   |
| VSAT     | - Very Small Aperture Terminal                                       |
| VRS      | - Voluntary Retirement Scheme  |

## CHAPTER- 1

### INTRODUCTION

The most important factor shaping today's world is globalisation. Firstly, companies are moving in search of low-cost markets, technology is driving growth in production and productivity, and competition is becoming more intense. A second factor is the faster growth in capital flows, notably short-term flows by banks and financial institutions, and foreign direct investments and equity. All this has been made possible by the explosion in communication technology, which has led to greater integration of financial markets across the world. To strengthen the Indian economy in the light of globalisation in an increasingly competitive environment, and guard it against financial fragility, financial sector reforms were initiated as part of the economic reforms launched in the country since 1991-92<sup>1</sup>. Significant progress has been made in the past few years to strengthen the Indian banking sector, make it more vibrant and bring it closer to international standards. In discussing the issue of globalisation in the Indian context, changes have been witnessed in two ways viz. the technological changes and associated policy changes (Jalan, 2002 b, pp.89-94). As a consequence, one of the major areas of the economy that has received renewed focus in recent times has been the financial sector. Within the broad ambit of the financial sector, the banking sector has been the cynosure of academics and policymakers alike. Among the various reasons attributed to the renewed interest in the Indian banking sector is the recent spurt of deregulation in the sector. With

<sup>1</sup> This issue was also brought into focus by the former governor of RBI, as stated by him "Despite the relatively inward-looking nature of the Indian economy, it cannot remain insulated from these international developments. The direct effects of these external developments on our banking system are expected to be limited. Indirect effects, especially through exports and subdued industrial activity could, however, impact upon the asset quality of our banking system and other segments of the financial system. The need to constantly monitor international developments and take appropriate and often, preemptive action add an entirely new dimension to the progress of our banking system towards its longer-term vision"(Jalan, 2002 a, p.71).

the growing importance given to financial stability by the Reserve Bank of India (RBI) at the same time, and the movements towards free market philosophy witnessed around the world, it is being increasingly realised that promoting healthy Indian banks remains a crucial policy challenge for RBI.

A substantial part of changes in the Indian banking sector since 1991 is related to the problems facing the nationalised banks which have dominated commercial banking in the last two decades. Despite impressive widening and deepening of the financial system, there was no denying that banks had not grown into sound, vibrant financial organisations, so much so that by 1990 there was serious concern about the poor financial condition of banks, especially nationalised banks, most of which had become unprofitable, undercapitalised and burdened with unsustainable level of non - performing loans on their books (Jalan, 2002 c). Against this background in which the banks operated, a series of reforms were initiated in the sector. The reform measures since 1992 can be divided into three categories based on their aims. The first category of measures seeks to strengthen the financial system and institute systems and processes to reduce its vulnerability. The second category of measures seeks to enable market players to respond to market signals in an optimal manner on the basis of commercial considerations, without external restrictions. The third set of measures is aimed at putting in place appropriate institutions and mechanisms to ensure a level playing field for all market participants (Kamesam, 2002, p.378). The recommendations of the Committee on financial system popularly known as Narasimham Committee (NCR-I) provided the blue print for the first generation reforms of the financial sector. The implementation of the

recommendations 'Reports of the Committee on Banking Sector Reforms-1998' (Narasimham Committee-II)<sup>2</sup> further augmented reforms in the sector.

What distinguishes the banking sector reforms in India from the financial liberalisation measures initiated in other developing countries are the elaborate arrangements to maintain stability at the institutional and systemic level such as preventing contamination and domino effect<sup>3</sup>. Financial liberalisation without proper prudential norms and appropriate supervisory oversight generally lead to misallocation of resources and severe financial problems. The financial sector reform strategy in India, in its gradualist approach and sequencing of measures, has been specifically framed to avert such situations (Kamesam, 2002, pp.375-391).

The process of liberalisation of the economy initiated in India since 1991-92 are aimed at raising the allocative efficiency of available saving, increasing the return on investments and promoting accelerated growth and development of the real sector. Towards this end, wide-ranging reforms were undertaken across the entire gamut of the financial system in order to promote a diversified, efficient and competitive financial system (Rangarajan, 1998).

It all resulted in far reaching changes such as new liberalised markets and domestic regulation in the banking sector, intensified competition from private and foreign banks, rapid innovation in financial products, and explosive growth in the utilisation of Information Technology (IT). Competition has created a situation where

" In 1997, the Government of India had set up the "Committee on Banking Sector Reforms " [Narasimham Committee-II] to review progress in reforms in the banking sector over the recommendation made by the " Committee on the Financial System Banking sector Reforms "[Narasimham Committee-I].

<sup>3</sup> If one banking institution collapses, it will lead to collapse of other banking institutions which in turn will lead to collapse of the banking sector; that in turn will lead to collapse of the economy. This is termed as domino effect in banking sector.

banks have to change in order to survive. In light of these trends, the banking sector is undergoing a change from being a mere supplier of services to a provider of quick, cost-effective and consumer centric services.

The period saw the implementation of prudential regulations<sup>4</sup> pertaining to capital adequacy, income recognition, and assets classifications and provisioning, exposure norms, etc. Two points in this regard are worth mentioning here. Firstly, the reforms in the financial sector were undertaken early in the reforms cycle. Secondly, the reforms in the financial structure were initiated in a well structured and phased manner with cautious and proper sequencing, mutually reinforcing measures, complementarity between reforms in banking sector and changes in fiscal, external and monetary policies, developing financial infrastructure, and developing financial markets (Reddy, 2000).

One of the major parts of the earlier set of reforms was the emphasis on economic deregulation of the banking sector. Another major part was the move towards market rate of interest on government borrowings. These aspects of the reforms led to shift in bank portfolios from business and industrial/agricultural advances to investment in government papers. At the same time, with the reduction in portfolio controls in the form of the Cash Reserve Ratio (CRR) and the Statutory Liquidity Ratio (SLR) (another related area of financial reforms) there have been additional resources in the hands of the banks which, in order to be loaned to out to industry, require strong credit assessments capacities, as the banks were already saddled with heavy non performing loans (D'Souza, 2000, pp.287-298). This resulted in the banks shifting focus to the retail segment.

<sup>4</sup> Prudential regulations refer to the set of laws and rules designed to minimise the risks banks assume and to ensure the safety and soundness of both individual institution and the system as a whole.

Nowhere is this compulsion of change felt more strongly than in the retail segment, where each bank wants to have an increased presence. The major force for a change in the retail banking segment is the increased competition among banks. This competition along with the explosive changes in utilisation of IT fuels the need for banks to innovate products, services and delivery channels. As mentioned above, the retail banking segment is undergoing a course of rapid changes in market share, technology and in the needs and wants of customers. Another area where changes are being witnessed is on the technology front, which is playing a key role in the conduct and performance of banks. Indian banks are spending a large amount on technology but there are still no comprehensive and conclusive studies on the payoffs associated with these investments.

A rapid change in IT is permitting banking organisations to make radical improvements in business processes and even completely reengineer their operations. These changes often result in significant changes in the nature of work for existing employees. As a result employees, require new skills to adapt to the changing environment. The banking organisations have redefined and relocated jobs, created new employee profiles for recruiting purposes and started giving new set of skills while training employees.

The final and perhaps the most important force of change in the banking sector is the rapid evolution of the customers' wants and desires. Customers are demanding anytime - anywhere delivery of financial services along with an increased variety of credit, deposit and investment products. Simultaneously, the banks are coming up with new and innovative products that further fuel the banking customers' desires for new **and** better financial products. In addition, customers are moving from the traditional use of

cash payments or cheques to other financial products such as credit / debit cards, Internet banking etc. Customers are also demanding and using a variety of service and delivery channels.

Growing customer demand and the fear of losing market share to new private and foreign banks are forcing Indian nationalised banks to invest heavily in banking technology. Collaborating with hardware, software, telecommunications and other companies, banks are introducing new ways for customers to access their balance account, transfer funds and, pay bills for services without using cash or cheques etc.

The aim of the present study is to analyse the multifaceted changes in Indian banking sector unleashed by technological and regulatory changes. Recent deregulation and advanced technology are allowing the banks to improve the variety, quality and speed of banking services. The banking sector made considerable progress in implementing banking and financial sector reforms (Jalan, 2002 a). The changing environment, the forces of globalisation and liberalisation and the advances in information and communication technology have major HR implications for the banks. Financial products are becoming increasingly complex and diverse, while the markets in which they trade get progressively deregulated. The need to adopt global best practices in financial sector regulations and supervision, and adapt them to the domestic environment places a premium on the skills and expertise of the banks' human and organisational resources.

At the same time, technology has demonstrated the potential to change the methods of marketing, advertising, designing, pricing and distributing banking products and services and cost savings in the form of electronic, self-service products and delivery

channels. These challenges call for a new, more dynamic, aggressive and challenging work culture to meet the demands of customer relationships, product differentiation, brand values, reputation, corporate governance and regulatory prescriptions. Technology holds the key to the future success of Indian banks.

Keeping this in the background, the study aims to analyse how, and in what ways, the deregulation and technological changes are affecting the Indian banking sector. The underlying hypotheses are that, firstly such changes are having significant and favourable impacts on the structure, conduct and performance of banks in general, and retail banking in particular. Secondly, it also has impact on attitudes of banks' employees and managers, and the satisfaction and expectation of banks' retail customers. Hence the specific objectives of this study are:

- (a) To analyse the major changes in the structure, conduct and performance in the banking sector in the background of liberalisation and technologisation.
- (b) To analyse the major changes in the structure, conduct and performance of the retail banking segment.
- (c) To assess the attitudes of employees and managers towards the recent technological changes in the banking sector.
- (d) To assess the changes in the level of customers' satisfaction and expectations towards the services provided by the banks.

In India there is a dearth of comprehensive empirical studies in respect of the improvements in the quality of services offered to customers or the usage of new of banking products and services offered by banks, specifically with respect of retail banks. The present study attempts to partially fill this gap by capturing and analysing these

forces of change and their impacts in the sector. The study is organised into 8 Chapters. In chapter 1 we briefly discuss the changes taking place in the banking sector. Chapter 2 presents a review of literature with respect to the complexities of the banking structure, conduct and performance, attitude of employees, managers and customers. In Chapter 3 the research methodology adopted and the samples selected for the study are discussed. Chapter 4 analyses the changes in the structure of the Indian banking sector due to regulatory and technological variables. Chapter 5 analyses the changes in the conduct of the Indian banking sector as a result of reforms and technology. Chapter 6 analyses how the employees and managers perceive changing IT opportunities, with special reference to retail banking. Chapter 7 reviews the performance of the banking sector in these respects. This chapter also measures the banks' performance in the retail segment through an empirical study conducted on retail banking customers. Chapter 8 provides a brief summary of the findings, conclusions and recommendations which emerged from the study.

## CHAPTER-2

### REVIEW OF LITERATURE

In this chapter, we attempt to study the structure, conduct and performance in the banking sector by reviewing the literature, focusing both on theoretical and empirical research, to help formulate the conceptual framework and empirical approach.

#### **2.1: Structure-Conduct-Performance in Banking Markets**

The banks have superior capability over other financial institutions because the banks can provide credit with inside information (Fama, 1985, pp.29-39). Diamond (1984, pp.393-414) states that the special role of banks is to minimize the agency costs between borrowers and lenders by monitoring the borrowers at low cost. Banks arise because of incomplete and asymmetric information in the financial markets. The theory of incomplete information and principal - agent problems<sup>1</sup> as an important branch of the new industrial economics has special reference to banking markets, being the basis for the microeconomics theory of financial intermediation (Neuberger, 1995, pp.253-265). Since banks are special players in the market for information, the conditions of this market are important in relation to their structure, conduct and performance. On discussing the supply side of banking sector, outputs and inputs of banks differ from those of industrial firms. Whereas the latter produce goods mainly by employing labor and physical capital, banks produce services primarily with labour and financial capital

It replaces the traditional view that banks are in the business of intermediation (transfer of households' funds to the borrower requiring funds). The banks play an active role in the types of investments that can be made by the different sectors. Here the bankers are active agents who make decisions on the basis of their risk preference and the incentives prevalent in the environment in which they operate.

(notably debt capital). A service is defined as a physical or an intellectual activity which satisfies a need at the moment of provision without the indirect way of a physical good (Kotler, 1998, pp.472-492; and for further details also see: Love, 2002, chapter 1, pp.3-31). A service cannot be isolated from its producer, cannot be held in stock, is non-material and is 'co-produced' by provider and user (Bandt, 1996, p.20). As a consequence, service markets are characterized by the following features- (a) image and trustworthiness of the suppliers are important for demand, (b) the distribution of services is important for supply, since the provision of a service often requires direct contact with the customer, (c) service company has to be located where its clients desire it and, (c) the production of service cannot be standardised.

The services of a bank comprise functions of providing liquidity, information and transformation (of risks, terms and size), which are done simultaneously by taking deposits and granting loans (Bhattacharya et al., 1993, pp.2-50), while deposits per se are inputs (debt capital) to banks, deposits with attributes such as 'liquid' or 'safe' may be conceived as outputs (Berger, 1995, pp.404-431). This explains why there are different approaches to the classification of inputs and outputs in banking studies. The 'asset approach' or 'intermediation approach' holds that banks produce loans and other investments from deposits, other funding sources, labour and materials. Alternatively, the 'production approach' views deposits and loans as outputs and only the 'non-interest expense' as inputs (e.g., Gilligan et al, 1984, pp.393-405). Different empirical approaches also try to differentiate banking services. The value-added approach classifies activities for which banks create high added value (loans, demand deposits, time and savings deposits) as outputs and labor, physical capital and purchased funds as inputs (e.g.,

Berger et al., 1993, pp.221-249). The user-cost approach, on the other hand, classifies bank assets as an output, if its financial return exceeds its opportunity cost, and a bank liability as an output if its financial cost falls short of its opportunity cost. Empirically, both the approaches lead to similar results, with the main exception of demand deposits, which are considered as an output in most user cost studies and as both an input and an output in value added studies (ibid.).

To discuss the basic demand conditions, it is important to distinguish between retail and wholesale banking activities. Wholesale banking is defined as the provision of financial services to large corporate customers, whereas the customers of retail banking are individuals and small firms run by self-employed. In the wholesale segment, there is little scope for banks to exert market power, because large corporations usually choose between different suppliers (including foreign banks, investment banks and the commercial paper market).

In the demand for retail banking services, demand substitutability will be lower because of asymmetric information and transaction costs. Often, retail banking customers are inadequately informed about the services which are 'experience goods' rather than 'search goods' and gathering information may be especially costly.

The search costs are high, when only little relevant information are publicly available or if the comparison of different offers are very complex. The expected return of search is low, if the acquisition of the banking service does not cost much, obtaining a small weight in the customers' budget.

Many banking services have these characteristics, which restrict the search for information, as represented in the Table - 2.1.

**Table 2.1 -Product Characteristic of Banking Services and their Features**

| No. | Products Characteristics             | Feature         |
|-----|--------------------------------------|-----------------|
| 01. | Availability of Products Information | Low             |
| 02. | Complexity                           | High            |
| 03. | Price Structure                      | Not Transparent |
| 04. | Frequency of Purchase                | Seldom          |

Source- Summarised from (Reidenbach, 1986, Chapter 13, pp.227-237) and presented in table form.

For example, 3, and 4 typically characterizes a bank account, which explains why customers mostly do not possess enough information to choose the most favorable account.

To analyze market structure, it is necessary to define the relevant market. Banks are typical multi products firms, being active on the deposit market, the loan market and the securities market to a limited extent. The products offered in each market are not homogeneous due to different preferences on the demand side and different activities and factor inputs on the supply side. As a consequence, the loan market and the deposit market are structurally segmented, with respect to their customer groups, as the sub markets of wholesale banking (big corporate customers) and retail banking (small sized firms and individuals). The customer preferences differ with respect to the value of search for information, the degree of risk aversion, and the need for liquidity. Segmentation according to bank product leads to; loan - sub markets (corporate loans, customer loans) and to deposit - sub markets (savings deposits, fixed deposit, and current account). Products, which define a market satisfy the needs such as liquidity, safety,

profitability, returns etc and are strongly related to substitutability. They are relatively homogeneous with respect to their physical attributes (e.g., deposits) but differentiated by qualities (e.g., branch networks, ATMs, and Tele banking, Internet banking). Having defined a product market, we have to proceed to determine the geographic extent of the market for information intensive retail banking products. The relevant market area is limited not only by transformation cost, but also by cost of information. Therefore the traditional approach to market definition in retail banking supposes that commercial banks mainly offer financial services through their local branches. It assumes that the cost of information and transformation would be prohibitive if customers searched for and used service of distant branches of banks (Elliehausen et al., 1990, pp.801-817).

In the international banking markets, structure- performance studies on retail banking segment focus on using concentration in local market area as a measure of market structure. Because comparable sub-market and micro data are typically not available in most countries, structure-performance studies in most of the countries consider the banking market as a whole, regarding each individual country as a local market (e.g., Goldberg et al., 1996, pp.745-771; Molyneux et al., 1994, pp. 445-459).

The number and the size of banks in a market depend on the public policy towards banks, economies of scale and scope in the production of banking services and entry barriers (Molyneux et al., op. cit.).

Barriers to entry specific to banking result not only from special regulations (e.g., minimum capital requirements) but also from economies of scale, available entrepreneurial skill set, product differentiation advantages and absolute cost advantages. The last two may arise from different investments to build up a clientele and a reputation

for solvency (e.g., investments in branches, ATMs system, and advertising) (Vives, 1991, pp.9-31).

These aspects of entry barriers apply only to retail banking segment based on a branch network. Wholesale banking markets, where switching costs are low and customers have access to alternative financial institutions or securities markets have properties of contestability. In the lending business, these apply to large corporations with access to the capital markets, and term - lending institutions /investments banks whereas the markets for small and medium-sized firms in need of bank loans are not likely to be contestable. Here, an entry may be impeded by bank costs of information gathering and the documentation. An incumbent bank obtains an informational advantage by knowing the characteristics of applicants first (Sharpe, 1990, pp. 1068-1087). In the case of price competition, uninformed entrants face the winners curse problem of attracting the loan applicants which have been evaluated as bad risks by the incumbents (Broecker, 1990, pp.429-452).

According to the theory of incomplete credit markets, prices do not adjust to eliminate situations of excess demand (Stiglitz et al., 1981, pp.393-410) and are highly dispersed because price competition hardly works. On the other hand, pricing of interest bearing products is inextricably linked to money market rates, and is strongly correlated with cyclical factors, thus limiting competition between banks in this area. This persuades banks to compete on quality related to interest business and on price for fee-based services.

Quality variables of bank competition are the density of the branch network, the density of ATMs, the reputation for solvency, and the quality of the staff (Neven, 1990,

pp.153-178). Quality, however, is also subject to asymmetric information. Because banking services are primarily experience goods with a low productivity of search for information by customers, advertising becomes an important instrument for banks to create a brand or an image.

Multi product nature of most banks is the source of price discrimination. Banks discriminate across products, i.e., they charge prices below costs for some services and prices in excess of costs for other services. This cross-subsidization is, however, difficult to estimate, because product specific costs cannot be easily calculated due to the joint production of many banking services.

The performance of organizations can be measured in terms of their productive (cost and profit) efficiency<sup>2</sup> and allocative efficiency (market power). To measure efficiency, inputs and outputs have to be related to each other. Here again, researchers of banking markets face the problems of how to define and measure and apportion output specific inputs. This explains why no technique for measuring efficiency has been generally accepted and why there are considerable differences in measured efficiency. As stated earlier it is not clear which financial services constitute inputs and which ones outputs to a banking firm. Moreover, there are different approaches to measuring inputs and outputs.

Earlier it was common to measure output by the number of accounts serviced whereas today output is mainly measured in terms of the rupee volume of loans or deposits, which includes interest. The multi products nature of most banks is a reason for

Cost efficiency is improved, if costs per unit of output are reduced for a given set of output quantities and input prices. This may be done by increasing scale efficiency, or x-efficiency (managerial efficiency). Profit efficiency is improved, if superior combination of inputs and outputs are realized (Akhavein et al 1997, pp.95-139).

measurement problems in banks. A problem fundamental to any service sector is that output consists to a large degree in quality, which is not taken into account if productivity is measured by volume or price (Bandt, 1996, pp. 19-33).

In the Indian banking sector the profitability was not the objective of banks, so there have not been many attempts at comparing profitability in the various categories (Mohan, 2002, p. 393). Most of the studies have focused on nationalised banks. Banks in India had some sort of convergence in performance and there is an increase in non-interest income (Das, 1999). Nationalised banks have not performed well in term efficiency, when compared to private and foreign banks (Sarker and Das, 1997). But according to another study (Bhattacharya et al., 1997) on the impact of liberalisation on Indian banks performance, the nationalised banks out performed private and foreign banks in term of productive efficiency. Empirical evidence from emerging markets suggests that foreign banks, on average, perform better than the domestic banks (Sarkar et al., 1998, pp.262-281), and contribute to the improvement of operative efficiency of the banking sector as a whole (Borajas et al., 2000, pp. 157-196).

The banking sector differs substantially from non-financial industries to an extent and kind of public policy. Banking markets are regulated in order to protect small depositors from wealth losses due to an under representation of their interests in the event of default of banks. Moreover the regulations prevent negative real effects of instabilities, liquidity shortages and bank runs and negative incentives caused by asymmetric information (D'Souza, op. cit.).

Regulation can be grouped into protective regulations, prudential regulations, and competition policy. Protective regulations aim to protect a bank from an impending default

or its depositors from a loss of their deposits in the event of default. This may be done by public deposit insurance or by a lender of last resort (RBI); the former is a contractual arrangement to ensure banks against unforeseen liquidity shortages and the latter is a discretionary policy to provide liquidity *ex post*. Deposit insurance scheme in place or RBI acting as the 'lender the of the last resort'<sup>1</sup> the division between 'protective regulations' and 'prudential regulations' is an artificial one, and one set of regulation converges with the other under equilibrium conditions .

Prudential regulation reduces the probability of a bank's bankruptcy. It consists in regulation of the bank portfolio (capital rules, liquidity rules, diversification rules and lending rules), entry requirements, information disclosure rules and accounting requirements (Ibid.).

Capital adequacy rules may be effective instruments in constraining asset substitution moral hazard. Capital requirement may also prevent bank runs as it credibly provides safety to depositors (Dowd, 1992, pp.107-132). A special type of entry regulation is a legal obstacle to the establishment of new private banks or branches. It reduces competition, as well as the scope of risk reduction by diversification. Competition policy towards banks may consist in price regulation (on interest) and area of operation . Moreover it induces distortions by suppressing price competition and inducing banks to complete through quality and to cross-subsidize products (Chiappori et al.. 1995, pp.889-918).

The separation of commercial banking from investment banking in India by RBI may be justified for prudential reasons or because it prevents conflict of interest in the commercial banking and investment banking. On the other hand it reduces scope efficiency of banks. Empirical support for higher efficiency, lower loss performance and hence superior profitability of universal banks compared to separated banks has been found (Steinher et al., 1994, pp. 271-306).

With regard to the public policy on Indian banking sector, the report of "Committee on Banking Sector Reforms" (Narasimham -II) is a landmark in shaping the public policy of the Indian banking sector. We would like to end this section by highlighting some of the recommendations of the Narasimham Committee-II, which have wide ramification on the way the banks are functioning in India. Some of the recommendations of Narasimham Committee-II to strengthen the banking sector are delineated below:

- (a) Capital Adequacy- The Committee recommended that the minimum capital to risk assets ratio be increased to 10 per cent, that is an intermediate minimum target of 9 per cent be achieved by the year 2000 and the ratio of 10 per cent by 2002. The committee was also of the view that, RBI should also have the authority to raise this ratio further in respect of individual banks, if, in its judgment, the situation with respect to their risk profile warrants such an increase. In respect of NSBs, the committee was of the view that the additional capital requirement will have to come from either the Government or the market. In view of the committee "With the many demands on the budget and the continuing imperative need for fiscal consolidation, subscription to bank capital funds cannot be regarded as a priority claim on budgetary resources. Those banks which are in a position to access the capital market at home or abroad should, therefore, be encouraged to do so" (RBI, 1998 b, Chapter III, Para 3.18, p. 23).
- (b) Asset quality and NPAs -The Committee recommended that an asset should be classified as 'doubtful' if it is in the 'substandard category' for 18 months in the first instance and eventually for 12 months and loss if it has been so identified but not written off (Ibid. Para 3.17).

The Narasimham Committee-II recommendations for prudential norms and disclosure requirements was of the view that banks should move towards international practices in this regard and recommended the introduction of the norm of 90 days for NPA classification in a phased manner by the year 2002. The committee felt that there were needs for disclosure, in a phased manner, of the maturity pattern of domestic assets and liabilities, foreign currency assets and liabilities, movements in provision account, and NPAs. In the words, of the committee "The RBI should direct banks to publish, in addition to financial statements of independent entities, a consolidated balance sheet to reveal the strength of the group. Full disclosure would also be required on lending to sensitive sectors. Furthermore, it should also ask banks to disclose loans given to related companies in the bank's balance sheets. Full disclosure of information should not be only a regulatory requirement. It would be necessary to enable a bank's creditors, investors and rating agencies to get a true picture of its functioning - an important requirement in a market driven financial sector"(Ibid. Para 3.38, p. 28).

## **2.2: Information Technology (IT) and Banks**

IT is at the heart of modern banking. It is difficult to envisage a bank operating without IT in today's environment. The challenges of banking sector is to manage IT cost effectively and use it for the benefit of customers and through that, the company .The impact of IT upon banking is so radical that it will be a key determinant of success or failure in the sector. IT has been defined as the use of computers, microelectronics and telecommunications to produce, store, obtain and send information in the form of pictures, words or numbers reliably, quickly and economically. However, its scope is

wider than the above definition, since it embraces the whole range of technology used in banking and is not limited purely to information systems. Similarly, the term 'banking' covers the widest range of financial service conglomerates providing an even wider range of financial services. The advent of global competition and technologies are altering the business paradigm and raising new and complex issues. Advanced technology is playing a major role in improving the services in the banking sector. Technological developments and financial liberalisation (deregulation) are viewed as the main forces influencing the financial sector's development (Jalan, 2002 a).

These changes have motivated banks to be aware of future trends in order to survive and compete effectively. Many banks face a huge challenge in reducing the number of branches they currently operate as down-sizing efforts bring with them complex post-merger problems such as social and political issues, organisational culture concerns, product modifications and IT integration (ibid).

Recently, technology has had a remarkable influence on the growth of service delivery options (Dabholkar et.al, 2002, pp. 184-201) and a profound effect on service marketing (Bitner et.al. 2000). In order to remain competitive, banks are increasing their technology based service options (Fitzsimmons and Fitzsimmons, 1997). More and more banks have adopted technology to deliver their services and this has resulted in: reduced costs, the creation of value added services for customers (Zhu et al. 2002), the facilitation of their employees' jobs and ultimately, the provision of self-service options for customers (Dabholkar, op.cit.).

Automated fund transfer, Internet banking, and electronic money transfer are all technological innovations that have helped banks to provide faster and easier access for

their customers (Sharma et al., 2000, pp.19-26). Receiving and making payments electronically include the low external and internal costs, certainty of payment date, improved cash flow projections, and reduced check fraud. Technology has allowed banks to deliver their products more cheaply than what has been obtained under traditional banking (ibid.).

Recent deregulation in India has allowed banks to merge and enhance the breadth of product line. But the nature of competition has changed due to entry of new private sector and foreign banks and other financial institutions that want to gainfully compete in today's' environment by strategically deploying IT and technology-skilled people across the sector. IT also has enhanced advantage of banks with technology providers (Thakor, 1999, pp.697-700).

There are approximately 29,000 banks in the world today and most can be categorized as retail banks, investment banks, wholesale banks, private banks or some combination of these (Haskin, 1997, p.82). Many of the world's largest banks operate in all of these areas of banking either in their own name or through a subsidiary. These same banks may also operate each function in multiple locations around the world.

It has been a matter of many debates whether or not investment in IT contributes to improvements in productivity and business efficiency. For several years scholars and policy makers lacked conclusive evidence that high level of spending on IT by business improved the productivity, leading to the coining of the term 'IT productivity paradox'. Other like Loveman (1994) posits that there is no conclusive evidence to refute the hypothesis that IT investment is inconsequential to productivity. Several studies over the years have been conducted worldwide level across different countries both at sector and

firm level to examine the impact of IT on productivity, like that of Brynjolfsson (1993, pp.541-548), which provided a review on business value of IT.

### **2.3: RBI Committee Reports on Technology in Banking Sector**

Various committees of the RBI from last decade onwards have examined the various issues pertaining to the technology upgradation in the banking sector, and suggested steps to facilitate technologisation in banking sector. Following are some of the committees that have dealt with technologisation issues in banking sector.

2.3.i: Reports of the Committee on Computerisation in Banks (Rangarajan Committee-1989).

2.3.ii: Committee on Technology Issue in the Banking Industry (W.S. Saraf Committee-1994).

2.3.iii: Reports of the Committee on Banking Sector Reforms (1998).

2.3.iv: Reports of the Committee on Technology Upgradation in the Banking Sector (Vasudevan Committee-1999).

2.3.v: Reports of the Working Group on Internet Banking in India (2001).

#### **2.3.i: Rangarajan Committee**

It was one of the earliest committee to analyse the issue of computerisation in banks. Its brief was to draw up a perspective plan for computerisation in the banking sector for the period of five years 1990-94, and consider other allied issues (RBI, 1989 a). The

committee submitted its report in 1989 with a wide range of recommendations pertaining to computerisation of banks. The major recommendations of the committee was:

- (a) Full utilization of the computer systems in the working of banks.
- (b) More proactive role of head office in branch networking.
- (c) Installation of BANKNET and setting up of ATMs.
- (d) Provision for providing adequate computer training facility to bank employees.

### 2.3.ii: W.S. Saraf Committee

RBI set up this committee under chairmanship of W.S Saraf to follow up and suggests new measure for computerisation in the banking sector and cover areas which Rangarajan Committee had not dealt. Committee suggested far reaching changes relating to payments systems, cheque clearing, settlements of securities transactions, adoption/expansion of communication technology and training in information technology for banking sector (RBI, 1995, p. 14).

### 2.3.iii. Reports of the Committee on Banking Sector Reforms

The committee also in its report dealt with in detail issues in technology upgradation and observed that most of the technologies that could be considered suitable for India have been introduced in some form or the other as a pilot. The committee was of the view that information and communications technology has a profound impact on the banking and financial systems and that IT & electronic funds transfer system have emerged as the twin pillars of modern banking development. The committee was of the view that the services or products offered by banks have moved away beyond conventional banking, and access

to these services has become a round the clock round the week routine. In the words of committee "...this phenomenon has largely bypassed India. While most technologies that could be considered suitable for India have been introduced in some diluted form as a pilot, requisite success has not been achieved"(RBI, 1998 b, op. cit. p.41). In terms of developing a state-of-the-art IT infrastructure for the banking sector, the committee was of the view that the issue needs to be considered in terms of serving the two major sectors in India that have slightly different priorities, viz., rural and urban. "...The rural segment, at least as of today, is less mobile and the focus is more on [fairness] of the system and adequacy of credit. In urban areas, on the other part, there is greater mobility of customers and a relatively higher frequency of use. Thus, access, convenience and time are of the essence" (Ibid. p.41). The committee suggested that data warehousing technology should be used to collect data on the credit profiles and payment of individuals, data mining and modeling tools to develop new products and the latest access technology to make the product accessible anywhere, anytime and anyhow. The committee also suggested setting up of payment system gateway.

#### 2.3. iv: Vasudevan Committee

The report is a landmark in the area of technology upgradation in the banking sector. In order to examine the various issues pertaining to technology upgradation in the banking sector and to suggest steps to facilitates implementation of the recommendation of the NCR-II, the RBI had set up this committee (RBI, 1999 b).

Some of the major recommendations of the committee are:

- (a) Enhancing of Communication Infrastructure.

- (b) Appropriate institutional arrangement for key management and authentication by way of a certification agency (it suggested that banks should adopt widely used standard of cryptography procedures to prevent data tampering during transmission).
- (c) Computerisation of Government transactions.
- (d) Data Warehousing, Data Mining, and Management Information System (MIS).
- (e) IT education to staff should be given due importance.

#### 2.3.v: Working Group on Internet Banking in India

With the spread of Internet and the forays being made by banks in the field of Internet banking, the RBI constituted a working group to examine the different issues relating to Internet banking and to recommend technology, security, legal and operational standards, keeping in view international best practices (RBI, 2001 e). Some of the major recommendations of the committee are:

- (a) On the issue of technology and security standards, the committee was of the view that latest version of the licensed software, with latest patches should be installed in the banks computer system. The committee suggested that access to network should be based on user groups, with access privileges as per their business roles (RBI, 2001 e, Para 6.2.4).
- (b) Committee recommended that proper system of backup of data and software should be in place and strictly adhered to, business continuity plans should be in place and frequently tested, and there has to be a robust system of keeping log of all network activities and analysing the same (Ibid.).

- (c) Banks should use the proxy server type of firewalls so that there is no direct connection between the Internet and the banks' system (Ibid. Para 6.4.3).
- (d) The banks should have a proper infrastructure and mechanism for backing up data (Ibid. Para 9.1.11).
- (e) The committee was of the view that before allowing Internet banking transaction to customer, bank should not only establish identity of customer but also make inquiries about integrity and reputation of the prospective customer (Ibid. Para 7.2.1).

#### **2.4: Technology and Employees' in Indian Banking Sector**

The pattern of employment in the Indian banking sector has changed markedly since the 1980s. As the size of the banking sector increased, the industry became difficult to manage. Computer technology offered a possible solution. In the initial phase of technologisation, banks in India as compared to other sector did not introduce computers on a large scale because of the fear that these would result in retrenchment and unemployment. In India, the main agents affecting the introduction of new technology in the early years of 1990's was the unions, management and the workforce. The government played a very indirect role in the process. In the early days of the massive introduction of computer technology into banking sector, union policies on new technology were basically defensive. They focused almost entirely on the immediate consequences of technological change on the workforce, especially the aspect of possible job losses.

However, these attitudes and the strategies of unions' vis-a-vis computerization began to change, since the 1990s. Bank management were able to convince workers and

unions that competition was increasing, and computerization is not only inevitable for the health and survival of the organisation but also beneficial to employees, because it may improve the competitiveness of the organisation , enhance job security and improve employment conditions. Many unions which initially consistently opposed computerization became part of the computerisation drive in the banking sector.

Consequently, unions were increasingly seeking to influence the process of technological changes so that new technology can be introduced in such a way as to benefit workers and minimise its adverse consequences. The last decade has seen several 'technology agreements' or 'computerization agreements'<sup>1</sup>, along with routine collective bargaining agreements that contain clauses related to technology. Despite these agreements, most managers in India, including those in the public sector, have consistently regarded all aspects of technological changes as matters falling within the area of managerial prerogative (Gothoskar, 1995).

If we briefly look at the history on negotiation of bank management with the banking trade union<sup>4</sup>, in 1983, two of the major banking unions - the All India Bank Employees Association (AIBEA) and the National Confederation of Banking Employees (NCBE) signed an agreement with the Indian Banks Association (IBA), representing 58 bank managements for phased implementation of computers in the banks.

<sup>4</sup> The trade union movement in Indian banks began in 1946 with the formation of an All India Bank Employees Association (AIBEA). At the start of the new Millennium, there were nine trade unions for officers and workmen in the banking sector. The Indian Banks' Association (IBA), which was also formed in 1946, is a service organisation which, from its inception, has been responsible for negotiating wage and salary contracts with unions and associations of bank employees, on behalf of bank management. In 1999, the AIBEA accounted for 50 per cent of organised workmen in the sector and the All India Bank Officers' Confederation (AIBOC) constituted 70 per cent of organised bank officers (Sarkar, 1999). In the post-independence period, PSB unions began to play an increasingly important role in bank decision-making and voiced strong opposition to the adoption of technology in bank branches.

Later in 1987 the AIBEA and NCBE signed a new settlement with the IBA. The settlement was similar in its approach and concerns to the 1983 agreement. Although it allowed for an extension of new technology in both the operations computerized and the equipment used, the concern was largely still with ways of restricting and controlling the use of computers to protect existing staff and preserve the prospects for future staff.

In the last decade (1993), the bank unions signed a Computerisation Settlement Agreement with the IBA that paved the way for the introduction of modern technology within PSBs. Under the guidelines of this agreement, 2,500 to 3,000 branches would be computerised in urban and metropolitan areas.

In March 1997, bank unions signed a new settlement with the IBA that allowed for an extension of new technology in operations and equipment. Although the management did not threaten to lay off workers, they did negotiate a freeze on further hiring. It is interesting to note that, in addition to chastising unions for their resistance to technology adoption, as mentioned earlier the Narasimhan Committee (1991) also documented that bank managers initially resisted the implementation of technology because of the lack of flexibility in restructuring employment in the face of automation (Sarkar,1999). Gothoskar (1995) writes that bank managers were not serious about computerization, as years of protection had dulled their perspective. Managers were nervous about the implications of computerisation in terms of the hierarchy and their own positions.

If we examine the international literature on problems associated with implementation of Information Technology, Ginzberg (1981) investigated how users' expectations of a pending information system significantly shaped their attitudes toward

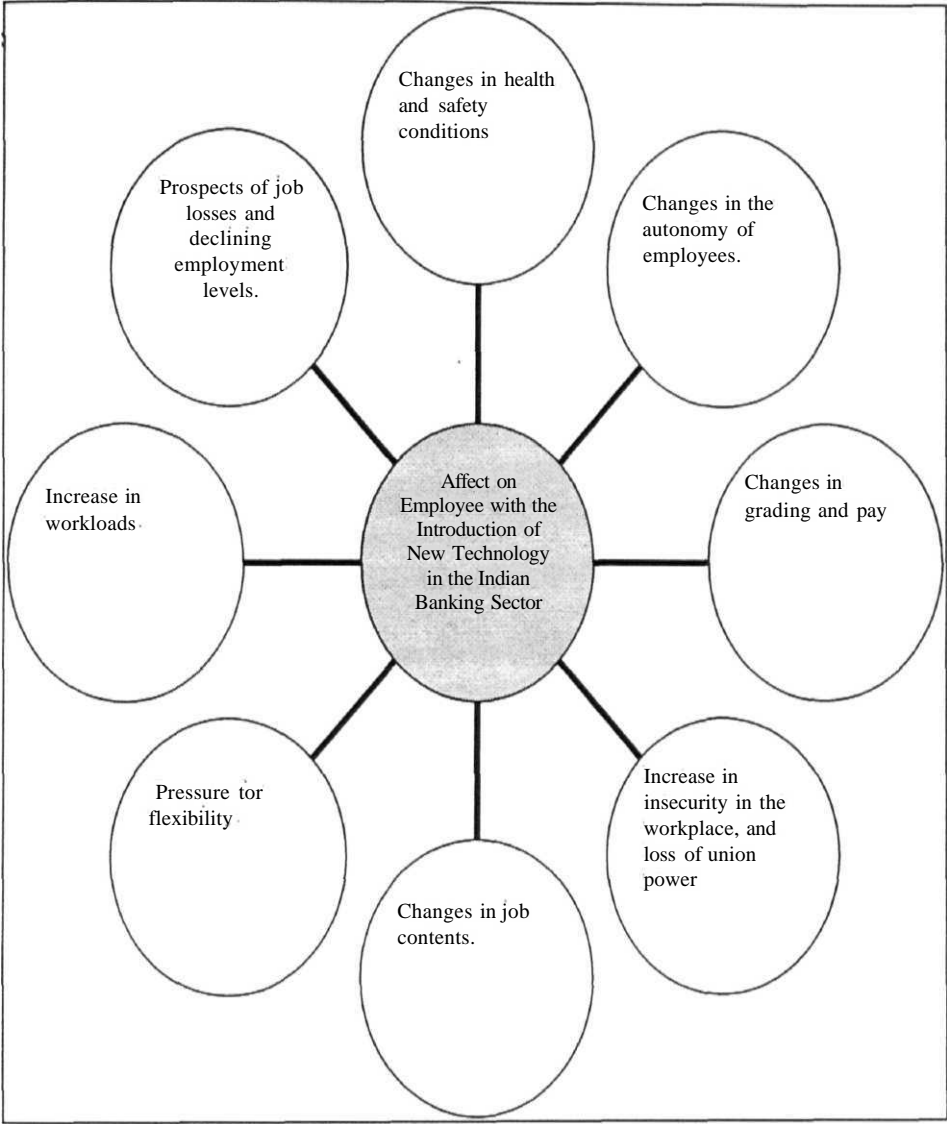
it. To interact with technology, people have to make sense of it; and in this sense-making process, they develop particular assumptions, expectations, and knowledge of the technology, which then serve to shape subsequent actions toward it. While these interpretations become taken-for-granted and are rarely brought to the surface and reflected on, they nevertheless remain significant in influencing how actors in organizations think about and act toward technology. Weick (1990, p. 17), for example, has noted that: "cognition and micro-level processes are keys to understanding the organizational impact of new technologies". To the extent that technology constitutes a core element in organizations.

A few researchers have proposed the idea that individuals have assumptions about and expectations of technology (Ginzberg 1981; Goodman et al. 1990). Bloomberg (1986) shows how users' perspective of a technology influenced and shaped the way in which it was embedded into their work process. The meaning of a technology "can only be described and its significance appreciated in the context of its uses and its users" (Bloomberg, 1986, p. 42).

Bloomberg [1986] shows how users<sup>1</sup> perspective of a technology influenced and shaped the way in which it was embedded into their work process. As she notes, the meaning of a technology "can only be described and its significance appreciated in the context of its uses and its users" (Bloomberg, 1986, p. 42).

We thus include the attitude of employee towards technology in an organization is very important factor in the implementation and executing technology in service delivery process Some of the general issues that have concerned unions and employees, especially

lower level, in the wake of the introduction of new technology in the banking and finance



**Chart 2: Affect of New Technology on Employee**

**2.5: Customer Satisfaction in Banking Sector**

The challenge of managing a successful bank is similar to commanding a small but powerful army. Fortunately, thanks to the technological advancements banks across India are in better position to win battles of 'customer choice' in the financial service arena. Private Banks are no longer devising strategies for merely hanging onto their customer

base; they are also looking for expanding their market share. This is not say that every bank with its technologies is on the path to guaranteed growth or expeditious expansion. There will be winners but there will also be some losers.

Even in the perpetually evolving world of financial products and services, there is a limit to expansions. Generally speaking, revenue growth at one bank within a geographic area comes at the expense of another institution. But in Indian banking sector, revenue growth of the banks doesn't come at the expense of another financial institution as the market still has unfulfilled potential.

The endeavor to establish service quality, as a key component of the managerial agenda, has been successful in the management field (Parasuraman, Zeithaml and Berry, 1985, pp.41-50; 1988, pp. 12-40). Research has given the business world many instruments to assess the effects of service quality both on customers and service providers. The establishment of this issue in service management has called for new research regarding the intended and unintended consequences of service quality on the whole range of organisational behavior. Latest research reports concentrate on the effect of service quality on alternative performance dimensions of the organization (see Rust et al., 1993, pp. 193-215).

Management and enhancement of customer orientation and service quality is commonly identified as one of the most effective means of building a competitive position in service industries as well as improving organizational performance (Lewis, 1993, pp 19-25). The transition from transaction to relationship -based marketing (as recognized by Berry, 1995, pp.236-245) is inextricably linked with the increased role of quality and satisfaction given in services. Relationship marketing requires the integration

of marketing, quality and customer service .The apparent distinction between core and overall product is widely used in services to differentiate the outcome of the service (technical quality) from the process of service delivery (functional quality) (Lehtinen et al., 1991, pp.287-303).

One key characteristic of relationship marketing is that, service quality assessments are considered to be a measure of the difference between customer expectations and customer perception. The lively debate regarding the adequacy of assessing service quality and customer satisfaction has led to the development of such testing instruments as SERVQUAL by Parasuraman, Zeithaml and Berry (1985, pp.41-50; 1988, pp. 12-37). Empirical findings concerning facts of service quality indicate acceptance of the SERVQUAL dimensions, subject to additional dimensions that emanate from sector specific contents (Carman, 1990, pp.33-35). Apart from studies adopting predetermined facts of service quality and customer satisfaction the research of Ennew and Binks (1998, pp.219-230) adopted tailor-made constructs of service quality and satisfaction that applied to the retail banking segment.

Customer satisfaction is recognized as being highly associated with 'value', and hence with "price<sup>1</sup>", whereas service quality is not generally considered to be dependent upon price (Anderson et al., 1994, pp.53-56). The more satisfied the customers are, the more tolerant to price increases (reduced price elasticity) they are likely to be, thus resulting in greater profits. Customer satisfaction is based conceptually on the amalgamation of service quality attributes with such attributes as price (Lewis 1993) and convenience (Cronin et al., 1992, pp.55-68). This debate also draws on the five dimensional instruments of Parasuraman, Zeithaml and Berry (1985), which evidently

needs verification when applied to particular industries. Banking specific research by Laroshe et al. (1986, pp.35-55) revealed speedy service, convenient location, staff competence and bank friendliness as important determinants of customer satisfaction. In a similar view, Le Blank and Nguyen (1988, pp. 19-25) proposed a five dimensional framework of customer satisfaction in the Canadian credit sector including such factors as corporate image, internal organization, physical environment, staff service and customer-personnel interaction. Finally Rust and Zahorik (1993, pp. 193-215) identified factors related to convenience, warmth and easy checking as determinants of retail banking customer satisfaction.

There are advantages for marketer in understanding customer behaviour as certain customer groups may have different expectations or perceptions towards service providers. Appreciation of segment specific focus in satisfaction related subjects could be found in the Ennew and Binks (1996, pp.219-230); a study that focused on the behavioral intention of particular business segments of commercial banking customers.

Cronin and Taylor (1992) suggest that convenience, price and availability might enhance customer satisfaction and subsequent favourable behaviour. Another important issue in customer satisfaction is the relationship between satisfaction, brand reputation and loyalty. Brand reputation is considered to be the perception of quality associated with the name of the product or the firm which provides a service. In banking services, brand reputation is mainly associated with customer satisfaction dimensions often termed as 'corporate quality'. The key function of brand name is that it can facilitate choice when the customer cannot distinguish and differentiate any features among the provided service

products. In services the brand name is more often associated with company reputation rather than individual products or services.

Athanassopoulos (2000, pp. 191-207) also tries to assess antecedence of customer satisfaction in the context of the emerging competitive financial markets in Greece. It was found that service quality and convenience plays an important role in retailing financial products. Banks may differ in their ability and willingness to provide service quality **that** leads to higher satisfaction. According to Vavra (1995, p.28) "Financial marketers appears to have overlooked the fundamental truth that the longer an institution keeps an customer the more profitable the customer becomes (Bank need)... to maximize the satisfaction with the institution".

In India there have not been many studies with regard to customer satisfaction in the banking sector. But RBI has been setting up committees from time to time for addressing the issues of enhancing customer satisfaction in Indian context. In the last decade, RBI had set up a committee, comprising bankers and representative of industries, depositors, employee's etc., under the chairmanship of M.N Goiporia, then Chairman SBI, to study the state of customer service in banks and suggest measures to improve the performance of banks in customer service (RBI, 1990 b). Following are some of the major recommendations of the committee:

- (a) Service at the Counters -The employees is expected to be at their seats at the commencement of the business hours and attend to all the customers who are in the branch prior to the close of business hours. Business hours for non-cash transactions should be extended.

- (b) Guidance to Customers- The committee recommended that all branches, except very small ones, should have 'Enquiry' or 'May I help you' counters. The committee was of the view that such counters may exclusively attend to enquiries or may be combined with other functions depending upon the requirement.
- (c) Updating Passbooks- The committee recommended that passbooks might be updated immediately on submission. If updating is not possible immediately due to a large number of entries, then paper tokens are issued for collection of passbooks on the next day.
- (d) Brochures/pamphlets for guidance of customers-banks were advised to make available, brochures/pamphlets in regional languages/Hindi /English giving details of various schemes available and terms and conditions thereof to the customers.
- (e) Dishonoured instruments- The committee recommended that banks may ensure that dishonoured instruments are returned/dispatched to the customer promptly without delay on the same day but in any case within 24 hours.

Recently the RBI set up Tarapore Committee on Banking Regulations Banks to formulate policy on depositors<sup>1</sup> rights (RBI 2004 b, Press Release: 2003-2004/1395). The Tarapore Committee submitted its reports between January and April 2004. The committee recommended that the RBI advise the banks to formulate by July 31, 2004 a transparent and comprehensive policy setting out the rights of depositors in general and small depositors in particular. The policy is required to cover all aspects of operations of deposit accounts, charges leviable and other related issues to facilitate interaction. The committee suggested RBI to issue a master circular on all aspects of maintenance of

deposit accounts and settlement of claims of deceased depositors after undertaking a thorough review of these areas in consultation with the IB A.

RBI has forwarded the recommendations of this committee to banks for follow-up action through their internal Ad hoc Committees on Procedures and Performance Audit on Public Services. The RBI has urged the Ad hoc Committees to initiate necessary steps for simplification of procedures and practices in these areas especially for transactions of individuals. It has also advised the bank level Ad hoc Committees to ensure the presence of trained and knowledgeable staff at the first point of interface with customers.

The other recommendations of the Tarapore Committee are:

- (a) Reverse the disenfranchisement of the depositor and start the process of empowering of the depositor.
- (b) Proactive behaviour by banks and the regulator to safe guard the depositors' right.
- (c) Appointment 'Quality Assurance Officers' both in RBI and banks. The role of officers is to ensure that the intent of policy is translated into the content and its eventual translation into proper procedures.
- (d) IBA should issue a comprehensive model operational procedure, which could be considered by banks.
- (e) The IBA should launch a countrywide customer education campaign informing customers of difficulties arising out of single accounts, accounts without nomination, and jointly operated accounts.
- (f) Training in technical areas of banking to the staff at delivery points must be intensified.

- (g) The IBA should forthwith evolve a model deposit policy recognising the rights of the depositor and circulate it among its members for adoption by the individual bank boards.

In this chapter we have made an attempt to review theoretical, empirical research and policy related literature on the various aspects of competition and technology in the banking sector. Summing up:

- (a) Technological developments and deregulation in the banking sector has increased the interest in structure, conduct and performance research in the last decade. The theoretical banking literature explains why competition is different in different segment of commercial banking sector. Wholesale banking products and services are relatively homogeneous. Retail banking products and services offered to individuals are heterogeneous and affected by market imperfection. The multi product nature of most banks is a reason for measurement problems in banks. In the Indian banking sector the profitability was not the objective of banks; so, there have not been many attempts at comparing profitability in the various categories.
- (b) IT is at the heart of modern banking. Advanced technology is playing a major role in improving the service in the banking sector. Technology has allowed banks to deliver their products more cheaply than what has been obtained under traditional banking.
- (c) Various committees of the RBI from last decade onwards have examined the various issues pertaining to the technology upgradation in the banking sector, and suggested steps to facilitate technologisation in banking sector. Recommendations of all the

committees covers issues related to the risks associated with computerisation, the technology and security standards for computerisation, legal issues relating to this new type of activity, computer literacy training to employees, the regulatory and supervisory concerns of the central bank with regard to computerisation,

- (d) Banking specific empirical research reveals speedy service, convenient location, staff competence and bank friendliness as important determinants of customer satisfaction. RBI also had set up various committees on to formulate policy on customer service.

It is seen that various concepts, methodologies and policies have been evolved in respect of structure, conduct and performance of banks in the context of liberalisation, technologisation and customer orientation. However there have not been any studies which comprehensively focus on the sectoral developments and assessment of retail banking in India in the contemporary environment, a gap that the study proposes to fill. In this background, we proceed in the next chapter to specify the research approach, design and methodology for this study, as per the objective articulated in Chapter 1.

## CHAPTER-3

### RESEARCH APPROACH AND METHODOLOGY

As observed previously, the aim of the present study is to analyse the multifaceted changes in the Indian banking sector in general and the retail banking segment in particular, as unleashed by the technological and regulatory changes. Recent deregulation and advanced technology are allowing the banks to alter the variety, quality and speed of services in bank. Keeping this in background the study aims to analyse how and in what ways the deregulation and technology are affecting the Indian banking sector. Towards this end we detail below our approach for the study.

#### **3.1: Study Levels**

The study is conducted at three levels: a) study undertakes a critical analysis of the impact of reforms and technologisation in the Indian banking sector; b) response of branch managers is elicited and are analysed to find out the attitude of the concerned employees towards the ongoing process of structural and technological transformation and; c) responses of customers are elicited, and analysed to assess the aspects of customer relationship and customer satisfaction.

#### **3.2: Scope of the Study**

Given the key role being played by the banks in the whole economy in general and specifically in the financial sector, it seems of great relevance to have a deeper knowledge of the changes that are occurring in the sector. The study uses the institutional

economics framework, according to which a bank as a firm is "a network of relational contracts between individuals...with the purpose of efficiently organising production " (Furubotn et al., 1998, p.272). So as the new institutional economics framework differentiates three fundamental type of institutions (the market, the firm, and the state) it is meaningful to treat the banking sector as consisting of the banking market, the bank and the monitoring authority.

The institutional framework affects the performance of the sector by its effect on the cost of exchange and production. Institutional frameworks influence the structure and conduct of a particular market/organisation by determining incentives which reward particular outcomes of the organisations. Thus the structure of the market will influence the conduct and which in turn will influence the performance of the organisations.

Speaking specifically, the scope of the study is fourfold, Firstly, the sector as whole, because the market has implication on the way the firm functions. So the banking sector has been studied with regard to structure, conduct and performance variables.

Secondly, the Indian banks have used the corporate and business segment of the market for lending and the retail banking for mobilising the saving. But with slow down industrial credit there has been a shift towards retail credit (RBI 2001b, p.37). With the recent advancement in technology driven by private and foreign sector banks in the Indian banking sector, the focus has been shifted to retail banking operation. Hence the purpose of the present study is to analyse thoroughly the changes that have characterized retail banking since mid 1990s.

The third important consideration is that in banking services, the employees play an important role in their delivery. Banking services depend on direct interaction between

customer and employees of banks. IT introduced has direct effect on the way the employees will function to deliver the product and service. So an attempt is made to study the technologisation from employees' perspective too.

The fourth aspect is, as quoted by (RBI, 1998 a, p.42) " An area which has to be in the forefront in the second phase of financial sector reforms is in the area of customer service. It is the IT component which is crucial to customer service, given the large number of deposit accounts and the magnitude of debits and credits to these accounts. It is necessary that bank adopt new IT strategies to improve banking service". Banks need to go back and ponder four elementary questions.

Who are customers?

What do our customers value?

What do our customers need?

How do our customers buy?

Therefore, to be successful in the future, banks will have to improvise the functioning of marketing and sales. Most banks in India did not give much emphasis to marketing function. Banks in India have always been process-focused and nothing was sold per se. Most customers in India still remain unaware of what banks really offer. Banks are eager in India to find new customers, eager to make current customer more profitable, eager to halt the exodus of customer to competitor, eager to fuel customer growth in the era of technologisation.

There are not many empirical studies about the customer relationship in Indian retail banking segment, of late; however, individual banks are conducting studies on these issues that are rarely published. The drawbacks of these studies are that they do not take into account the different banking services provided by different banks in different

geographic markets. So the last part of the study focuses on the customer in the Indian banking sectors, and the study is not restricted to a particular bank but covers nationalised banks, private banks (old and new) and foreign banks. Thus the present study makes an attempt to look at the banking sectors and retail banking segment from all perspectives, banking sector itself, the employees, and lastly the customers.

### 3.3: Research Designs

Research Design of the study adopts a descriptive approach<sup>1</sup>. The empirical study is designed to elicit likely impact of liberalisation and technologisation on the structure, conduct and performance of banks in general and retail banking in particular. Apart from these sector and organisation specific aspects, the study design attempts to elicit:

- (a) The various aspects of IT as perceived by branch managers of various banks. It attempts to elicit to what extent the managers perceive the relative importance of banking channels and the reasons for offering electronic banking.
- (b) The various aspects of customer relationship with the bank(s). It attempts to elicit what extent the customers are aware of and using the various banking services, and the level of satisfaction and the reasons for not using particular Electronic banking channels.

### 3.4: Selection of the Field

In accordance with the objective of empirical study for the chapters and research design, Hyderabad city was selected for the study. The rationale behind selecting the city, as field

site is, firstly, Hyderabad is one of the top ten banking centers in **India**. **At the end of** March 2002 it is ranked sixth<sup>2</sup> with regard to number of offices, total deposits and **total** credits. Secondly, most of the banks (i.e. nationalised, old private banks, new **private banks** and foreign banks) have presence in the city. It has 537 **banking offices with** deposits of Rs 21,860.34 crore and advances worth Rs 14,769.32 crore (IBA 2002a, p.364). The selection was also due to the fact that, it has been projected as the future capital of IT sector in India. As a result of several proactive policies of **the state** government, banking organisations have set up significant number of training institutes **in** the area of IT.

### **3.5: Sample Description**

**3.5.1: Banks** -For analysing the banking sector, the sample comprises of all commercial banks in India between the periods 1987-2001/02. The banks are further divided into nationalised banks, old private banks, new private banks and foreign banks. The nationalised banks are further divided into State Bank of India and its seven-associated **banks** and other nationalised banks. For selecting customers the following banks **are** identified:

- (a) State Bank of India, State Bank of Hyderabad and, Canara Bank (Nationalised Banks)
- (b) Jammu and Kashmir Bank Ltd. (Old Private Bank)
- (c) ICICI Bank Ltd. (New Private Bank)
- (d) Citibank N.A. (Foreign Bank)

<sup>1</sup> The major purpose of descriptive research is description of the state of affairs as it exists at present .It can be also called, as *ex post facto research* .The main characteristic of this method is that researcher has no control over the variable (Kothari, 2000, p.3).

<sup>2</sup> The top ten banking center in India at the end of March 2002 with regard to number of offices, total deposit and total credit are: (1) Mumbai. (2) Delhi. (3) Chennai. (4) Kolkota. (5) Bangalore. (6) Hyderabad. (7) Ahmedabad. (8) Chandigarh. (9) Pune. (10) Vadodra (IBA, 2002a, p. 364).

The reason for choosing the customers from a particular bank was due to the fact that, these banks are having highest asset base in their respective banking group. The particular banks actions and decisions to a large extent, shapes the fortunes of the whole banking sector. The Table-3.I gives a synoptic view of assets of different banking group and the selected banks for customers' survey (as on March 31, 2002).

**Table 3.1- Shares of Assets of Selected Banks in the SCBs Assets |For Customers Survey!**

| Banking Group            | Share of Assets of Banking Group in<br>Schedule Commercial Banks Total<br>Assets | Share of Selected bank |
|--------------------------|--|------------------------|
| SBI *                    | 20.4 %   | SBI - 20.4 %           |
| SBI Associates           | 8.9 %  | SBH – 23 %             |
| Other Nationalised Banks | 46 %   | Canara Bank – 10 %     |
| Old Private Banks        | 6.1 %  | J&K Bank - 15.19 %     |
| New Private Banks        | 11.4 %   | ICICI Bank - 58.58 %   |
| Foreign Banks            | 7.2 %  | CITIBANK N.A – 18.72 % |
| Total                    | Total Commercial Banking sector Assets - 100% (Rs 1295405Billions)               |                        |

Source: **RBI**, 2000 a; and **IBA**, 2002 a

For selecting branch managers the banking sector is divided in the following group:

- a) Nationalised Banks
- b) Old Private Banks
- c) New Private Banks
- d) Foreign Banks

**3.5.2: Branches** - It being the main delivery channel of banks, are of critical importance for the overall bank's success. Bank branches are the contact points between the customers and the banks. The branches in Indian banking sector were highly product oriented rather than customer-focused, and were fulfilling customer orders and needs instead of actively promoting and selling products/services to customers. The rationale for competing on geographical proximity with potential customers led the banks to constantly increase the number of their branches (Venkatachalam, 2003, pp.536-543).

For the empirical study of managers, sixty branches were selected from nationalised banks, old private banks, new private banks and foreign banks by using the purposive stratified non-probability sampling method. The nationalised banks were further divided into State Bank of India and its seven-associated banks and other nationalised banks.

The criterion for selection of the branches was that it should be a fully computerized. The branches constitute 10 per cent out of 537 branches of various banks operating in the city.

The total asset of Scheduled Commercial bank were Rs. 1,295,405 Billions at the end of March 2002, of this SBI Group and Associate Banks had a share of 29.3 per cent other Nationalised Banks had a share of 46 per cent (Combined share of Nationalised Banks - 75 per cent), share of Old Private Bank was 6.1 per cent, and share of New Private Banks and Foreign Banks was 11.4 per cent & 7.2 per cent respectively (see Table-3.1).

So the sample sizes of 60 branches were divided accordingly to the percentage share of the banking groups in the total assets of banking sector. The table- 3.II present a synoptic picture of the branches covered for empirical study of managers.

**Table 3.II -Number of Branches Selected for Branch Manager Survey**

| Bank Group               | Percentage Share of Respective Ranks in Total Assets of SCBs<br>(Percentage) | Branches Covered<br>(Numbers) |
|--------------------------|--|-------------------------------|
| SBI Group Banks          | 30 %   | 20                            |
| Other Nationalised Banks | 46%  | 15                            |
| Old Private Banks        | 6%   | 10                            |
| New Private Banks        | 11%  | 10                            |
| Foreign Banks            | 7 %  | 5                             |
| Total                    | 100%   | 60                            |

For the empirical study of customers, 28 branches are covered. The branches constitute more than 10 per cent of the total branches of selected banks operating in the city.

**Table 3.III -Number of Branches Selected for Customers Survey**

| Banking Group            | Number of Branches of selected bank in Hyderabad | Branches Covered |
|--------------------------|--|------------------|
| SBI                      | SBI-79 No  | 8 No.            |
| SBI Associates           | SBH - 93 No                                      | 9 No             |
| Other Nationalised Banks | Canara Bank - 44 No                              | 4 No.            |
| Old Private Banks        | J&K Bank - 2 No.                                 | 2 No.            |
| New Private Banks        | ICICI Bank - 11 No.                              | 4 No.            |
| Foreign Banks            | CITIBANK N.A.,-1 No.                             | 1 No.            |
| <b>Total</b>             | <b>230</b>                                       | <b>28</b>        |

3.5.3: Managers-Sixty branch managers are selected for the empirical study using purposive stratified non-probability sampling method (see Table-3.IV). The reason for choosing the branch manager were due to the fact that, to an outsider branch manager

represents the bank and his actions and decisions to a large extent, shape the fortunes of the whole bank. For a branch manager managing a branch, in modern times, in the context of volatile changes in the environment, regulation, technology and competitions requires on astute mind that can comprehend all the dimensions of management-be it financial or human resource, credit, international business, marketing and above all, business improvements and customer satisfaction. The pivotal role of the branch manager, in providing competent leadership to his dedicated team working with him is of great importance to bank success. So branch manager can be perceived as an important link and expert between bank and customers.

**Table 3.IV -Number of Branch Manager Selected From Each Banking Group.**

(Figure in Number)

| Bank Group               | MANAGERS SELECTED |
|--------------------------|-------------------|
| SBI Group Banks          | 20                |
| Other Nationalised Banks | 15                |
| Old Private Banks        | 10                |
| New Private Banks        | 10                |
| Foreign Banks            | 5                 |
| Total                    | 60                |

**3.5.4: Customers** -An empirical study on three hundred customers at 28 branches is conducted. The sample consisted of customers of nationalised banks; old private bank, new private bank and foreign bank by using study using purposive stratified non-probability sampling method (see Table -3.V).

**Table 3.V-Number of Customers Selected from Each Banks**

| Banking Group | Number of Customers Selected Form Each Bank in Hyderabad |    | Branches Covered |       |
|---------------|--|----|------------------|-------|
| SBI           | ~  | 50 | No.              | 8 No. |
| SBH           |  |    | 50No.            | 9 No. |
| Canara Bank   |  | 50 | No.              | 4 No. |
| J&K Bank      |  | 50 | No.              | 2 No. |
| ICICIBank     |  | 50 | No.              | 4 No. |
| CITIBANK N.A. |  | 50 | No.              | 1 No. |
| Total         |  |    | <b>300</b>       | 28    |

### **3.6: Method of Data Collection**

The primary data for the study is collected through questionnaire and interview methods from branch managers and customers. Primary data is generated for the empirical study with field visits from November 2002 to May 2003. Secondary data for the study is collected from the various issues of Report on Trend and Progress of Banking in India published by RBI and, Database on Indian Banks 1987-1998, Performance Highlights of Public and Private Sector Banks and, Performance Highlights of Foreign Sector Banks published by IBA.

### **3.7: Pilot Study**

Following a review of literature on IT and employees, customer relationship in general and their implication for banks in particular, the researcher conducted a pilot survey among 10 branch managers and 30 customers from nationalised banks, private banks and foreign banks using the purposive stratified random sampling method.

### **3.8: Design and Content of Questionnaires**

A structured questionnaire was administered to the sample population of managers and customers. The responses were sought on scale of 1 to 4 ... for branch managers (Sample questionnaire attached as Annex. -III) and a Liker scale (ranging from 1 - denoting poor quality to 5- denoting excellent quality) was used for customers (Sample questionnaire attached as Annex. -IV).

The questionnaire for branch managers was divided into four parts:

- (a) The first part elicited information from branch managers about the likely benefits of IT application, with regard to, the information availability to the bank about the customers and to customers about the bank, management control of services, product quality, mass customization, handling customers' complaints etc.
- (b) The second part focused on problems encountered with the usage of technology in the banks with respect to data security, customer access, functionality, reliability, technology training to employees and employees' resistance to change.
- (c) The third part investigated technology requirements for IT applications in the banking sector as perceived by the managers.
- (d) The last part focused on the expectations and perception towards E-banking by managers. It sought to construct qualitative perception towards Internet banking, importance of electronic banking channels and reasons for offering E-banking.

The questionnaire for customers was divided into four parts:

- (a) The first part elicited information about the personal details of respondents and the types of accounts the individual is having with one or more banks.

- (b) The second part focused on the relationship the individual is having with the bank(s), **and** how the individual rates the relationship.
- (c) The last part focused on measuring the perception towards E-banking (ATMs, Phone Banking, Internet Banking) by individual customers.

In addition to the questionnaire that was used to collect data from the managers and customers, personal in depth interview method was used to understand the attitude of managers and customers towards IT in the banking sector.

### **3.9: Analysis of Data**

The methodological approach in this study is descriptive, because the researcher attempt to identify and explain variables that exist in a given situation and to describe the relationship that exists between these variables in order to provide a picture of a particular phenomenon, but not to ferret out cause-effect relationships (Christensen, 1997).

After the data was collected, a number of closely related operations, such as establishment of categories, the application of these categories to raw data through coding, tabulation were performed. Data for the banking sector was categorised on the basis of ownership patterns of banks. Banking sector was categorised as nationalised banks, private banks and foreign banks. The nationalised banks were further divided into State Bank of India and its seven-associated banks and other nationalised banks. The private banks were divided as old and new generation private banks. Analysis of data for the banking sector was done through descriptive statistics. Managers are categorised on

the same pattern as done for banking sector. Customers are categorised into three groups, namely, those nationalised banks, private banks, and foreign banks. **Data on managers and** customers are analysed using percentages, mean frequency, corresponding ranks, Factor Analysis and ANOVA through SPSS statistical package.

SERVQUAL measure the service quality among five dimension *reliability* (**the** ability to perform the promised services accurately and dependably), *responsiveness* (The willingness to help customers and provide prompt service), *assurance* (the knowledge and courtesy of employees and their ability to convey trust and confidence), *tangibles* (the appearance of physical facilities, equipment, personnel and communication materials), *empathy* (the caring, individualized attention provided to the customer. **But the** scale has been subjected to some criticism (Buttle 1996, pp.8-32). Another reasons is banking service are unique, which restrict the search for information.

Taking the above mentioned factors into consideration and the broader objectives of the study, the difference between the three groups of banks with respect the service quality delivered to customers in Hyderabad city have been found by using ANOVA. In order to test the does any differences exist in the quality of services the following hypothesis has been tested:

*H1:* All the three banking group have the same level of service quality given that they are in the same region and compete for the same customer base.

### **3.10: Experience in the Field**

The researcher experienced major problems in convincing the branch managers to be part of the study. Most of the branch managers insisted that it is the organisation policy of the

bank not to be part of a study unless approved by regional office/head office. They were suspicious about the research intention. To establish rapport, I mentioned to managers that my purpose of study is purely academic. Another problem encountered was that, the branch managers refused to respond to any questions that would reveal their identity .So the questions on this area were removed after the pilot study. This modification helped the researcher to interact with the branch managers more freely.

The researcher did not experience any major problems in convincing the individual customers to be part of the study. Most of the customers were a bit hesitant to divulge family income. To establish rapport, the customers were informed that the purpose of study was purely academic. Another problem that surfaced during the pilot study was that certain customers were having multiple accounts with more than one bank. So the questions on type of accounts the individuals were having with the banks were modified to include several banks .The banking groups were divided into three groups: nationalised banks, private banks, and foreign banks. This modification removed the problem and helped the researcher to interact with the customers more informatively.

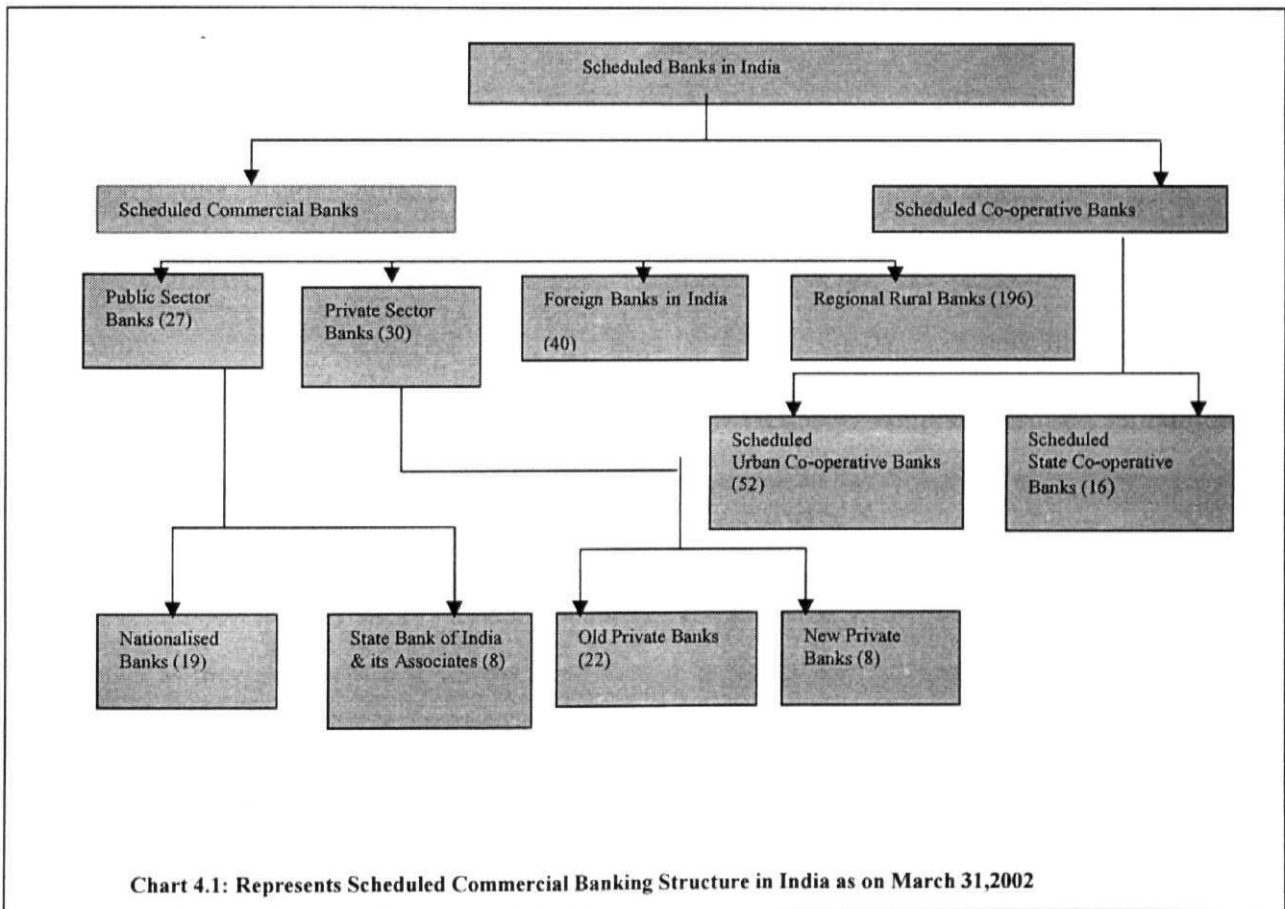
On the basis of the above research approach, sample and methodology, we now proceed, in the following chapters, to the analysis of the data, and interpretation of the results in respect of the sectoral, organisational, managerial and customer related dimensions in the banking sector in general and retail banking segment in particular.

## CHAPTER-4

### IMPLICATIONS OF REFORMS AND TECHNOLOGY ON STRUCTURE OF COMMERCIAL BANKING SECTOR

#### 4.1: The Evolving Structure of the Banking Sector

The banking system is an integral sub system of the financial system. It represents an important channel of collecting small savings from the household and lending it to the corporate and retail sector. As at the end of March 2002, 97 commercial banks, 196 Regional Rural Banks, 52 Scheduled Urban Cooperative Banks and 16 Scheduled Cooperative Banks operated in India as scheduled banks. The overall structure of the banking system in India is shown in chart 4.1 below.



Source: RBI, 2002 a, p.36

The banking system in India comprises of commercial and cooperative banks. The former includes foreign banks<sup>1</sup> operating in India, in addition to Indian banks<sup>2</sup> in the public and the private sector (New and Old)<sup>3</sup>. The public sector banks, in turn, comprise nationalised banks (the majority holding being with the Government) and the State Bank of India (the majority holding being with the RBI<sup>4</sup>) and its seven associate banks<sup>5</sup> (the majority holding being with the State Bank of India). Regional Rural Banks are subsidiaries of commercial banks that are specially set up in the rural areas to provide credit and other facilities to weaker sections for productive activities in agricultural, sector, trade, etc. The co-operative banks essentially follow the unit banking principle and provide short-term credit to the rural sector. Among the co-operative banks, while the Land Development Banks fund the activities related to capital formation in agriculture, urban co-operative banks finance small business in the urban areas. Additionally, Government-owned post-offices mobilize deposits, but do not undertake any lending activity. Besides, there is an extensive network of all-India and state-level development financial institutions<sup>6</sup>. In

These are banks that were registered outside India and originated in a foreign country.

<sup>2</sup> These banks are companies registered in India under the Companies Act 1956. Their place of origin is in India

<sup>3</sup>This group consists of banks that were established by the privy states, community organisations or by a group of professionals for the cause of economic betterment in their area of operations. Initially their operations were concentrated in a few regional areas. However, their branches slowly spread throughout the nation as they grew. The new private banks started operations after 1991, when the RBI opened the banking sector to the private sector.

<sup>4</sup>The RBI in its Monetary and Credit Policy Statement of April 2001 has announced the intention **to divest** its ownership in SBI (RBI, 2001c).

<sup>5</sup> This group comprises of the State Bank of India (SBI) and its seven subsidiaries viz., State Bank of Patiala, State Bank of Hyderabad, State Bank of Travancore, and State Bank of Bikaner and **Jaipur**, State Bank of Mysore, State Bank of Saurashtra, and State Bank of Indore.

<sup>6</sup> Development Financial Institutions are institutions set up to cater essentially to the medium and long **term** project financing requirements of the industrial sector.

addition, there are the investment institutions, catering to life and general insurance as well as non-bank financial companies, all engaged in mobilising resources and providing financial services as well as undertaking medium and long-term investment.

As shown in chart 4.1, the banking sector is dominated by scheduled commercial banks, which account for the bulk of all banking operations. Among the scheduled banks are the nationalised banks (NSBs) , namely, the State Bank of India and its seven associates (SBI & Associates) and the 19 other nationalised banks (NSBs), as well as 22 Old Private Banks (OPBs), 8 New Private Banks (NPBs), and 40 Foreign Banks (FRBs). In this chapter, an attempt is made to study the structure of the Indian commercial banking sector in the background of reforms and technologisation.

One of the core stone of reforms in the banking sector is creation of a competitive environment by allowing entry of new private and foreign banks, and directing nationalised banks to rely on the capital market for supplementing their equity base<sup>7</sup>. During 2003-04, keeping with the past few year trends, four public sector banks, namely UCO bank, Indian Overseas Bank, Vijaya Bank and Bank of Maharashtra, floated equity issues to the extent of Rs.950 crore. With these, the total amount of capital raised by PSBs through equity issues reached Rs.8, 224 crore till end-March 2004 (RBI, 2004 c).

<sup>7</sup> The Government's share in the capital of NSBs is being diluted gradually with several banks making public offerings of their equity shares. The banks are still controlled by Government. No NSBs have been sold to private owners, although sixteen banks have sold some equity in the capital market. Between 1993-94 and 2001-02, 12 public sector banks mobilised equity capital of Rs.6, 501 crore through this route, including a premia of Rs.5, 252 crore (as on November 31, 2002). Overall, thirty-two banks have been listed in the Mumbai Stock Exchange. In 2003-04, there was a strong market preference for bank scrips as evident from the sharp increases in turnover in respect of public sector and private sector banks. The share of public sector banks' turnover in total market turnover increased to 10.7 per cent in 2003-04 from 2.7 per cent in 2002-03. All public sector banks, which are listed in the NSE, recorded substantial increase in their stock prices. The major gainers in terms of average daily prices included Bank of Baroda, Canara Bank, Corporation Bank, Indian Overseas Bank, Oriental Bank of Commerce and Punjab National Bank. The private sector banks, which are listed in the NSE, also recorded significant gains in their stock prices. The most active scrips, in terms of daily turnover, were State Bank of India, Syndicate Bank, ICICI Bank, Bank of Baroda and Bank of India. [Report on Trend and Progress of Banking in India (Various Issues), RBI].

The Government shareholding in NSBs, which have raised equity capital, presently ranges from a low of 57.2 per cent to a high of 75 per cent. Within private sector banks group, the ICICI bank issued debt issues amounting to Rs.1, 251 crore during 2003-04 (RBI 2004 c). The reform process in India was not due to banking crisis, but due to various other factors<sup>8</sup>.

The structural transformation taking place in the banking sector in India is influenced by the technological innovations which, in turn, are influenced by deregulation of the banking sector. The structure of banking sector is changing due to (a) new norms for entry and operation of banking organisation brought about by reforms and, (b) a greater emphasis on competition.

There is a strong drive in the sector towards consolidation, in a quest for exploiting core competencies and for developing niche strategies. (Jalan, 2002 c) .The major structural change in the banking system has been the infusion of competition.

The entry of new private banks<sup>9</sup> in India resulted in bringing about major changes in the structure of the banking sector. On account of the entry of new private sector banks (due to new license policy) and expansion in business by foreign banks since 1992, a more competitive banking environment has now been put in place. The greater emphasis on competition in the banking system, by permitting entry of private sector banks and

<sup>8</sup> One reason for gradualism was simply that reforms were not introduced against a background of prolonged economic crisis or system collapse of the type which would have created a widespread desire for, and willingness to, accept radical restructuring. The reforms were introduced in June 1991 in the wake of a balance-of-payments crisis, which was certainly severe (Ahluwalia, 1993).

<sup>9</sup> The following private banking organisations started operations in India after 1991 reforms:(1) Bank of Punjab Ltd. (2) Centurion Bank Ltd. (3) Global Trust Bank Ltd.\* (Recently Merged with Oriental Commerce Bank) (4) HDFC Bank Ltd. (5) ICICI Banking Corporation Ltd. (6) IDBI Bank Ltd. (7) IndusInd Bank Ltd (8) Times Bank *Ud\*(Later Merged with HDFC Bank Ltd)* (9) UTI Bank Ltd. (10)

foreign banks<sup>10</sup>, has given a wider choice to customers (both lenders and borrowers). At the same time, it has created an incentive mechanism for banks to enhance their efficiency (Reddy, 2002 a).

The norm for starting new private bank in the sector is that, the initial minimum paid-up capital of the new bank should be Rs. 200 crore. The bank will have to increase the initial paid-up capital to Rs.300 crore within three years of starting business. The promoters<sup>1</sup> contribution would have to be maintained at a minimum of 40 per cent of the paid-up capital on a continuous basis. The initial capital, other than promoters' contribution, could be raised through public issue or private placement. In case the promoters' initial contribution is in excess of 40 per cent, they would have to dilute the excess stake after one year of the bank's operation. The promoters would have to take RBI's specific approval if they want to divest their excess holding in phases after one year, as stipulated. The promoters' contribution of 40 per cent of the initial capital would have a lock-in period of five years from the date of licensing of the bank. While raising the capital to Rs. 300 crore, the promoters would have to bring additional capital to ensure that their holding remains at least 40 per cent of fresh capital. When the private bank's co-promoter includes a foreign banking or finance company, including multilateral

Kotak Mahindra Bank Ltd.

<sup>10</sup> The Government of India has hiked foreign direct investment ceiling in the banking sector from 49 per cent to 74 per cent to enable global banks to set up shop in India. Foreign investment in private sector banks from all sources would be permissible up to a composite ceiling of 74 per cent of the paid-up capital of the bank. This would include FDI, investments under Portfolio Investment Scheme (PIS) by FIIs, NRIs and shares acquired prior to September 16, 2003 by OCBs, IPOs, private placements, GDRs/ADRs and acquisition of shares from existing shareholders. However, the FII investment limit cannot exceed 49 per cent, within the aggregate foreign investment ceiling of 74 per cent of the paid up capital and at all times, at least 26 per cent of the paid up capital would have to be held by residents. Detailed guidelines in this regard are under consideration of the Reserve Bank. This will facilitate the setting up of subsidiaries by foreign banks as well as for inviting investment in private banks. A foreign bank or its wholly owned subsidiary regulated by a financial sector regulator in the host country can now invest up to 100% in an Indian private sector bank. (Department of Industrial Policy and Promotion, 2004, Annexure-IV, p.38).

institutions, their equity participation would be restricted to 20 per cent within the overall ceiling of 40 per cent. The RBI norms restrict large industrial houses from directly promoting a bank. However, individual companies connected with industrial houses may take up equity of the new private sector bank up to maximum 10 per cent. The 10 per cent limit would apply to all inter-connected companies of large industrial houses and the final decision about which company belongs to an industrial house or was connected with it would rest with the RBI .The new private banking ventures would have to maintain a minimum capital adequacy ratio of 10 per cent on a continuous basis from the start of its operations. The new bank would have to adhere to lend 40 per cent of credit to priority sector as applicable to other domestic banks. They would also have to open 25 per cent of its branches in rural and semi-urban areas. The new entrants are not allowed to set up a mutual fund or subsidiary for at least three years from commencement of business. These banks could locate their headquarters anywhere in India (RBI, 2001 a).

Foreign banks<sup>11</sup> wishing to establish presence in India for the first time could either choose to operate through branch presence or set up a 100% wholly owned subsidiary (WOS). For new and existing foreign banks, RBI has relaxed the existing WTO commitment of 12 branches in a year. The number of branches permitted each year has already been higher than the WTO commitments. As for foreign banks, a new foreign bank is required to bring in a minimum assigned capital of US \$25 million, of which US \$10 million should be brought in at the opening of each of the first two branches and the balance of \$5 million at the opening of a third branch. Upon entry, the RBI examines dealings of the foreign bank with Indian parties, international and home country ranking

<sup>11</sup> A total of 40 foreign banks were operating in India as on September 30, 2002 with 203 branches in India (RBI, 2002 a, p.70).

(where available), international presence, and supervisory standards **prevalent in the** home country. The RBI in the year 2004 released the roadmap for presence of foreign banks in India and guidelines on ownership and governance in private sector banks. The roadmap is divided into two phases. During the first phase, between March 2005 and March 2009, foreign banks will be permitted to establish presence by way of setting up a wholly owned banking subsidiary (WOS) or conversion of the existing branches into a WOS. During this phase, permission for acquisition of share holding in Indian private sector banks by eligible foreign banks will be limited to banks identified by **RBI for** restructuring. RBI may if it is satisfied that such investment by the foreign **bank** concerned will be in the long term interest of all the stakeholders **in** the investee bank, permit such acquisition. Where such acquisition is by a foreign bank having presence in India, a maximum period of six months will be given for conforming to the 'one form of presence' concept. The second phase will commence in April 2009 after a review of the experience gained and after due consultation with all the stakeholders in the banking sector. The review would examine issues concerning extension of national treatment **to** WOS, dilution of stake and permitting mergers/acquisitions of any private sector banks in India by a foreign bank in the second phase ( RBI, 2004 d ).

In addition, non-banking financial companies (NBFCs) have emerged as competitive force in financial intermediation (RBI, 2003 b, Chapter 2, Para-2.1). In the rural areas, the competitive element has been reinforced with the operationalisation of Local Areas Banks<sup>12</sup> in the private sector, in addition to the Cooperative and Regional

<sup>12</sup> Local Area Banks are akin to the new private sector banks, with two important differences: (a) they are located in the rural areas and, (b) have a paid up capital of INR.50 crore ( RBI, 2002 ).

Rural Banks (RRBs). Market segmentation has been reduced<sup>13</sup> to a great extent by allowing both banks and DFIs to enter into each other's areas of operations, with banks allowed to advance term loans and DFIs allowed to make short-term finance<sup>14</sup>. On the liabilities side also, DFIs are permitted to undertake short-term borrowings through Commercial Papers and term deposits, with limits linked to their net worth. Another notable feature has been the privatisation program of the public sector banks. The Government has been reducing its stake in public sector banks over a period of time and is planning to allow major changes in the way the banks will function in the future. The amendment to the bill, the Banking Companies (Acquisition and Transfer of Undertakings) and Financial Institutions Laws (Amendment), which will reduce the prescribed minimum shareholding of the central Government from 51 to 33 percent in nationalised banks, is still awaiting the approval of the Parliament of India. It will also allow state-owned banks to buy its stake in other banks as part of its proposed banking sector reforms.

The move forms a part of the bill to reduce Government stake in state-run banks to 33 per cent from 51 per cent. According to the bill, the Government will remove restriction on transfer of its shares to allow mergers and acquisitions of state-run banks. Currently, only the shares not held by the Government are freely transferable. The bill

<sup>13</sup> Before the reforms in the banking sector the market for short-term funds was reserved for banks and the market for long-term funds was the exclusive domain of DFIs. Direct access of corporate borrowers to lenders (disintermediation) was strictly controlled and NBFCs were allowed to collect funds only for corporates.

<sup>14</sup> These convergences are in line with the Narasimham committee report. The Committee was of the view that with such convergence of activities between banks and DFIs, the DFIs should, over a period of time, convert themselves to banks. The Committee suggested only two forms of intermediaries, viz. banking companies and non-banking finance companies (RBI, 1998 b, Chapter V, Para 5.6, p.48).

also allows banks to merge with any bank, and non-banking financial companies. Banks will be able to offer a host of financial services including insurance, factoring, mutual funds, and credit cards. The bill will also allow the RBI to prescribe the SLR and CRR, below the set floor of 25 per cent and 3 per cent respectively (Mathur, 2002, pp.2245-2246).

There have been recent trends where the banks are contemplating moving towards universal banking. The phenomenon of universal banking, as distinct from narrow banking, came to the forefront in the Indian context with the second Narasimham Committee Report (1998) and later the Khan Committee (1998)<sup>15</sup> reports recommending consolidation of the banking sector through mergers and integration of financial activities.

The Narasimham Committee also addressed this issue and was of the view that mergers between banks, and between banks and DFIs and NBFCs, need to be based on synergies and locational and business specific complementarities of the concerned institutions and must obviously make sound commercial sense. The committee was of the view that Government should play a supporting role in mergers. It also recommended that such mergers should lead to rationalization of work force and branch network. The committee was very particular that mergers should not be seen as a means of bailing out weak banks.

<sup>15</sup> The Reserve Bank constituted on December 8, 1997, a Working Group under the Chairmanship of the then Chairman and Managing Director of Industrial Development Bank of India, S. H. Khan to review the role, structure and operations of DFI and commercial banks in emerging operating environment. The working group suggested changes like: (i) Progressive movement towards universal banking and the development of an enabling regulatory framework for the purpose, (ii) Granting full banking licence to DFIs.

In the words of committee "Mergers between strong banks would make for greater economic and commercial sense and would be a case where the whole is greater than the sum of its parts and have a force multiplier effect" (RBI, 1998 a, Chapter V, Para 5.13 - 5.15, p.50).

The RBI has been cautious in this matter and much progress has not been seen on this front. As quoted by a former governor of RBI "This issue was also addressed in the mid-term review of monetary and credit policy, October 1999 and the annual policy statements of April 2000 and April 2001 enunciated the broad approach to universal banking and the Reserve Bank's circular of April 2001 set out the operational and regulatory aspects of conversion of DFIs into universal banks. The need to proceed with planning and foresight is necessary for several reasons. The move towards universal banking would not provide a panacea for the endemic weaknesses of a DFI or its liquidity and solvency problems and/or operational difficulties arising from under-capitalisation, non-performing assets, and asset liability mismatches, etc (Jalan, 2002 c).

The overriding consideration should be the objectives and strategic interests of the financial institution concerned in the context of meeting the varied needs of customers, subject to normal prudential norms applicable to banks. Jalan (2002 a, pp.80-81) "From the point of view of the regulatory framework, the movement towards universal banking should entrench stability of the financial system, preserve the safety of public deposits, improve efficiency in financial intermediation, ensure healthy competition, and impart transparent and equitable regulation".

Within banking, competition has been encouraged by granting licenses **to new private** banks (two in 2002)<sup>16</sup> and new foreign banks (twenty-one between 1994 and 1999). **At the** same time, financial position of one of the new private bank 'Global Trust Bank Ltd. (GTB)' which was granted a license in September 1994 as a part of the policy to set up new private sector banks, started weakening in 2002 due to problem assets arising from very high exposure to capital market. As the financial position of the bank was deteriorating progressively and the solvency of the bank was being seriously affected, the RBI had to place the bank under moratorium on July 24, 2004 to protect the interests of small depositors of the bank and in the interest of the banking system. The bank was **later** merged with Oriental Bank of Commerce (OBC).

Consortium project lending led only by development finance institutions, was phased out and bank-led syndication's were allowed. The restriction on borrowers switching banks and the requirement that RBI should approve lending to large companies has been gradually phased out. Although competition has been infused in the sector, the NSBs still control a dominant seventy five per cent (RBI, 2002 a, p.40) of commercial bank's assets.

#### **4.2: Composition and Growth of Banks' Assets**

As discussed above, one major indicator of studying the Indian Commercial banking structure is to observe the asset composition each bank type; nationalised {eight state

<sup>16</sup> The RBI has granted license to Kotak Mahindra Finance Ltd. to set up its banking business. The bank is to be called Kotak Mahindra Bank and the organisation is already functioning. The RBI had given in-principle approvals for the setting up of two new private banks. Kotak Mahindra Finance was one of them. The other will be set up by Ashok Kapur and two other banking professionals, Harkirat Singh and Rana Kapoor and will be called as 'Yes Bank'.

banks (SBI and seven associates) and nineteen nationalised banks}, old private, new private and foreign over a period of time starting from 1987(pre-reforms period) to 2002 (post reforms). The changes in the structure of the Indian banking sector during the sample period are analysed using several indicators.

The affect of reforms and technology on the composition of structure banking sector is described by tracing the changes in assets of the each bank group over the sample period in three perspectives:

- (a) Assets share of each bank type in total SCBs assets.
- (b) Compounded annual growth rate (CAGR) of assets of each bank type.
- (c) Concentration ratio measured in terms of the share of top five banks in assets, deposits or profits.

The assets of scheduled banks have seen some variations over the last fifteen years<sup>17</sup> (see Table: 4.1). The variations can be seen significantly in the share of other nationalised banks assets (excluding SBI and Associates), which has declined by over 13 per cent in the total assets of scheduled commercial bank (SCB)<sup>18</sup>. The share of assets of SBI & Associates in the total assets of SCB in the year 1987 was around 32 per cent and this has increased to around 34 per cent in the year 2004. The SBI and Associates continue to occupy a dominant position in the total assets of nationalised banks. The OPBs asset share has been hovering around 6 per cent between the periods 1987-2004.

<sup>17</sup> The two round of nationalisation -first in 1969 of 14 major private sector banks with deposit liability of Rs. 0.50 billions or more and thereafter in 1980,of six major private sector banks with deposits not less than Rs 2 billions led to creation of nationalised banks having 90 per cent assets of SCB in 1992.

<sup>18</sup> At the banking sector level, 27 banks accounts for about 14 per cent of total assets of the banking system (RBI, 2003 b, Chapter-III, Para-3.49).

**Table 4.1 -Bank Group Wise Assets of Scheduled Commercial Banks in India from 1987-2002**

(Figures in Billions Rs)

| Year | Banking Group      |                     |                    |                  |                    |                   | SCBs              |
|------|--------------------|---------------------|--------------------|------------------|--------------------|-------------------|-------------------|
|      | SBI                | SBI<br>(Associates) | Other NSBs         | OPBs             | NPBs               | FRBs              |                   |
| 1987 | 471.44<br>(26.5)   | 110.43<br>(6.2)     | 1056.52<br>(59.40) | 68.37<br>(3.84)  | @                  | 72.47<br>(4.06)   | 1779.23<br>(100)  |
| 1992 | 985.35<br>(27.75)  | 211.61<br>(5.96)    | 1948.05<br>(54.87) | 149.15(4.20)     | @                  | 255.58<br>(7.19)  | 3549.74<br>(100)  |
| 1997 | 1708.19<br>(23.16) | 510.95<br>(7.06)    | 3735.16<br>(51.63) | 475.17<br>(6.56) | 177.60 (<br>2.45)  | 626.59<br>(8.66)  | 7233.66<br>(100)  |
| 2002 | 3584.05<br>(22.34) | 1071.43<br>(6.68)   | 7369.86<br>(45.95) | 983.82<br>(6.13) | 1799.64<br>(11.22) | 1229.27<br>(7.66) | 16038.07<br>(100) |
| 2004 | 5508.96<br>(26)    | 1750.2<br>(8)       | 9221.7<br>(43)     | 1207<br>(6)      | 2465.75<br>(11)    | 1363.15<br>(6)    | 21516.76<br>(100) |

Figures in the Parenthesis are percentage share in Total Assets

@- Not Applicable

Figures for 1987- December end and March end for the remaining year

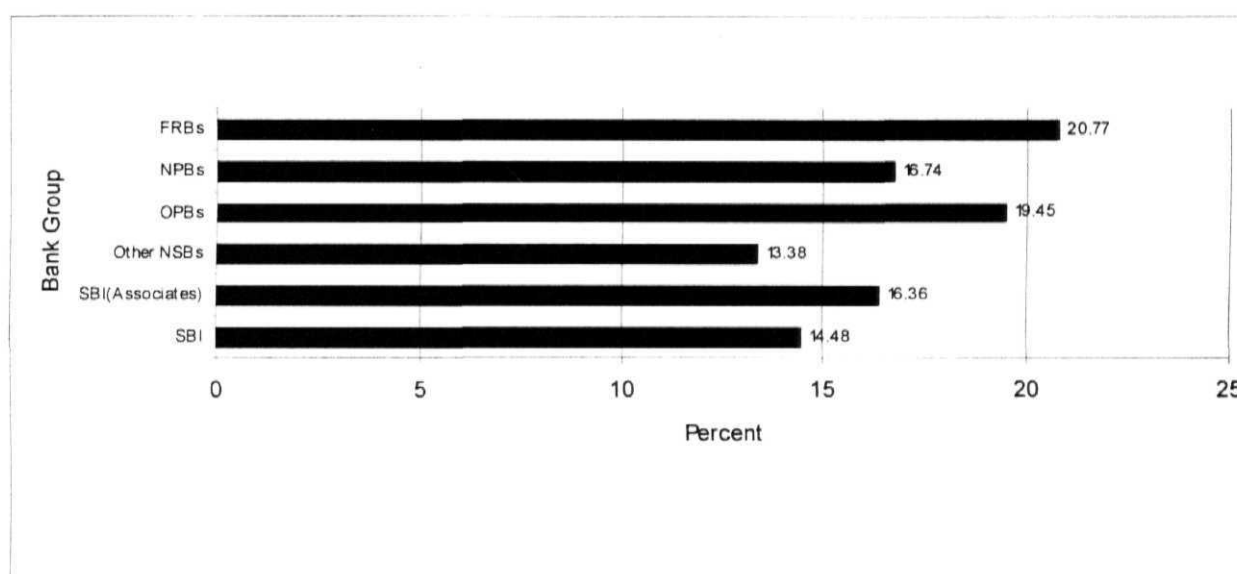
Source: Report on Trend and Progress of Banking in India (Various Issues), RBI

The biggest gainers have been the new private sector banks, which have increased its assets share from 2.3 per cent in the year 1997 to 11 percent in the year 2004. The assets share of foreign banks has been around 7 per cent for the last ten years. The size of the balance sheet of scheduled commercial banks (SCBs) recorded stronger growth during 2003-04; the growth rate of aggregate assets at 16.2 per cent was higher by nearly 6 percentage points over the growth of 2002-03 (RBI, 2004 c).

Another indicator to observe the structure is to verify how fast the assets of various banks in the sector grew over a period of time. The compounded annual growth rate (CAGR) can be a good indicator to measure the growth rate in the assets of banks

(see Chart: 4.II). The foreign banks have seen a CAGR of 20.77 percent in their assets size <sup>19</sup> between the years 1987-2002, which is the highest among the bank groups. The SBI Associates and NPBs have more or less the same growth rate in their assets sizes. The CAGR in the assets of old private banks has seen a growth rate of 19.45 per cent, which stands second after foreign banks.

**Chart 4.II Bank Group Wise Compounded Annual Growth Rate (CAGR) in Assets of Scheduled Commercial Banks in India From 1987-2002.**



Source: Authors own calculation from Table 4.1

An increase in the number of players in the banking sector led to increased competition, as is reflected in the bank concentration ratio, measured in terms of the share of top five banks in assets, deposits or profits of the sector. The share of top five banks in total assets declined from 51.73 per cent in 1991-92 to 43.5 per cent by 2001-02. Similar trends were evident in deposits and profits as well (Table 4.II.).

<sup>19</sup> Almost sixty eight per cent of the total assets of all the forty-two foreign banks operating in India are concentrated in five banks (Mathur, 2002, p. 2253).

**Table4.II-Share of Top Five Banks - Assets, Deposits and Profits**

| Parameter | 1991-92 | 1995-96 | 1998-99 | 2000-01 | 2001-02 |
|-----------|---------|---------|---------|---------|---------|
| Assets    | 51.73   | 45.92   | 44.76   | 43.96   | 43.53   |
| Deposits  | 49.05   | 45.23   | 44.34   | 43.49   | 43.23   |
| Profits   | 54.62   | 189.7   | 49.12   | 44.79   | 41.38   |

Figures are March end for the year

Source: Report on Trend and Progress of Banking in India (Various Issues), RBI.

The competitive nature of the banking sector has witnessed a significant improvement due to the increasing participation of new private sector and foreign banks In the Indian context<sup>20</sup>, an analysis of credit market concentration brings forth certain useful insights. Although the NSBs still dominate the banking sector, increased competition has reduced their dominance, since financial liberalization was initiated. One can witness a degree of mergers/acquisitions moves among the new private sector banks. Under the Banking Regulation Act, banking companies cannot merge without the approval of the RBI. There have been some mergers in the Indian banking sector, the selected one being the merger between Times Bank Ltd. and HDFC Bank Ltd. in the new private generation Bank. The Reserve Bank also approved the merger of ICICI Ltd. with ICICI Bank Ltd., subject to certain conditions and Benares State Bank Ltd. with Bank of Baroda. Recently the RBI has announced the merger between Global Trust Bank and Oriental Bank of Commerce.

<sup>20</sup> The World Bank database on regulation and supervision provides useful information about concentration of banking sector across countries. The study shows that among 121 countries, there were as many as 102 countries, which had five big banks accounting for more than fifty per cent of deposits. On the other hand, there were 112 countries out of 129 countries, which had five big banks accounting for more than fifty per cent of assets. According to the study, five largest banks in India accounted for about 41 per cent of banks' deposit and 44 per cent of assets. India's position was ranked better than that of Brazil, Chile, Mexico, Malaysia and France (RBI, 2004 c).

### 4.3: Structural Trends in Retail Banking

After having observed the assets composition, growth rate and share of top banks in the last section, we will make an attempt to observe the trends in structure of the India retail-banking segment. The issue of retail banking is extremely important and topical. Across the globe, retail lending has been a spectacular innovation in the commercial banking sector in recent years. The growth of retail lending, especially, in emerging economies, is attributable to the rapid advances in information technology, the evolving macroeconomic environment, financial market reform, and several micro-level demand and supply side factors.

India is experiencing a surge in retail banking. Retail loan is estimated to have accounted for nearly one-fifth of all bank credit (RBI, 2004 c). The retail loan market has decisively got transformed from a sellers' market to a buyers'<sup>1</sup> market. Retail banking in India is not a new phenomenon. It has always been prevalent in India in various forms. For the last few years it has become synonymous with mainstream banking for many banks. The typical products offered in the Indian retail banking segment are housing loans, consumption loans for purchase of durables, auto loans, credit cards and educational loans. The loans are marketed under attractive brand names to differentiate the products offered by different banks. As the *Report on Trend and Progress of India*,

<sup>21</sup> Retail banking is, however, quite broad in nature - it refers to the dealing of commercial banks with individual customers, both on liabilities and assets sides of the balance sheet. Fixed, current / savings accounts on the liabilities side; and mortgages, loans (e.g., personal, housing, auto, and educational) on the assets side, are the more important of the products offered by banks. Related ancillary services include credit cards, or depository services. Today's retail banking sector is characterized by three basic characteristics: (a) multiple products (deposits, credit cards, insurance, investments and securities);(b) multiple channels of distribution (call centre, branch, Internet and kiosk); and (c)multiple customer groups (consumer, small business).

2003-04 has shown that the loan values of these retail lending typically range between Rs.20, 000 to Rs.100 lakh. The loans are generally for duration of five to seven years with housing loans granted for a longer duration of 15 years. Credit card is another rapidly growing sub-segment of this product group.

In the past few years retail lending" has turned out to be a key profit driver for banks with retail portfolio constituting 21.5 per cent of total outstanding advances as on March 2004, but still retail loan constitute less than seven percent of India's GDP (ibid )

While new private sector banks have been able to create a niche in this regard, the public sector banks have not lagged behind. Leveraging their vast branch network and outreach, NSBs have aggressively forayed to garner a larger slice of the retail pie.

The following factors can be the main drivers for growth in of retail banking sector in India. First, economic prosperity and the consequent increase in purchasing power have given a fillip to a consumer boom. In the last 10 years after 1992, India's economy grew at an average rate of 6.8 percent and continues to grow at the almost the same rate. Second, changing consumer demographics indicate vast potential for growth in consumption both qualitatively and quantitatively. India is one of the countries having highest proportion (70%) of the population below 35 years of age (young population). The BRIC report of the Goldman-Sachs, which predicted a bright future for Brazil, Russia, India and China, mentioned Indian demographic advantage as an important positive factor for India. Third, technological factors played a major role. Convenience banking in the form of debit cards, internet and phone-banking, anywhere and anytime

<sup>22</sup> If we compare India's retail loans market with other Asian economies; South Korea has (55 per cent), Taiwan (52 per cent), Malaysia (33 per cent) and Thailand (18 per cent) of its GDP (RBI, 2004 c).

banking has attracted many new customers into the banking sector. Technological innovations relating to increasing use of credit / debit cards, ATMs, direct debits and phone banking has contributed to the growth of retail banking in India. Fourth, the Treasury income of the banks, which had strengthened the bottom lines of banks for the past few years, has been on the decline during the last two years (RBI, 2004 c). In such a scenario, retail banking sector provides a good vehicle of profit maximisation. Considering the fact that retail's share in impaired assets is far lower than the overall bank loans and advances, retail loans have put comparatively less provisioning burden on banks apart from diversifying their income streams ( ibid). Fifth, decline in interest rates have also contributed to the growth of retail credit by generating the demand for such credit.

The effect of reforms and technology on the composition of structure of retail banking segment is described over the sample period by:

- a) Public saving deposits and fixed deposits of each bank type from 1987-2004.
- b) Retail loan disbursed in various categories by Indian banking sector from 1994-2004.
- c) Share of retail lending in the bank credit from 1994-2004.
- d) Branch network of Banks from 1987-2004.

Retail banking segment of the Indian banks finds itself under substantial pressure to change the ways in which it does business. The changes are being witnessed on both the deposit front and, he lending front. Though traditionally, the deposit front has not seen much changes in gross domestic saving, due to the fact that bank deposits are always

considered as a safe investment, the bulk of the saving of household sector were in the form of financial assets (see Table 4.III) and bank deposits dominated the financial asset portfolio, but the loan assets of Indian banks has seen an increase in retail portfolio.

**Table 4.111 -Composition of Gross Domestic Saving**

(Figure in Percentage of GDP)

| Items                 | Years            |                  |            |             |           |
|-----------------------|------------------|------------------|------------|-------------|-----------|
|                       | 1970-71 to 74-75 | 1980-81 to 84-85 | 1990-91    | 1995-96     | 1999-2000 |
| 1, House Hold         | 12               | 14.1             | 19.3       | 18.1        | 19.8      |
| I.I Financial Saving  | 4                | 6.7              | 8.7        | 8.9         | 10.5      |
| Of Which"             |                  |                  |            |             |           |
| Bank Deposit          | 42.9             | 41.9             | 31.8       | 29.1        | 33.7      |
| Claims on             | 2.4              | 10.5             | 13.5       | 7.9         | 12.2      |
| Currency              | 15.2             | 12.3             | 10.6       | 13.8        | 8.9       |
| Share and             | 1.1              | 3.4              | 8.4        | 6.5         | 6.3       |
| Life Insurance Fund   | 10.2             | 7.3              | <b>9.5</b> | 11.6        | 11.4      |
| II. Private corporate | 1.7              | 1.6              | <b>2.7</b> | 4.9         | 3.7       |
| III. Public Sector    | 3                | 3.7              | 1.1        | <b>2</b>    | -1.2      |
| IV. Gross Domestic    | 16.6             | 19.4             | 23.1       | <b>25.1</b> | 22.3      |

a: as percent of financial saving

Source: Report on Trend and Progress of Banking in India (Various Issues), RBI.

Considering the extent of products/services offered by the banks in the retail banking segment, competition can be looked at from the deposit side and the lending side. If we look at the saving deposit (see: Table - 4.IV), the share of old private banks and FRBs in the deposit side has remained same during the last 15 years. The share of NSBs in deposits has come down from 93 per cent in 1990-91 to 86 per cent in 2003-04 while the share of new private sector banks has improved from 0.30 per cent in 1997 to 6 per cent in 2003-04.

With regard to fixed deposits (Table - 4.V), the share of nationalised banks has decreased, and the gainers have been the new private sector banks

**Table 4.IV -Saving Deposits from Public**

(Figures in Rs Crore)

| Banking Group | Year       |            |             |        |              |
|---------------|------------|------------|-------------|--------|--------------|
|               | 1987       | 1992       | 1997        | 2002   | 2004         |
| NSBs          | 30214(93)  | 52107(93)  | 102985(92)  | 228139 | 321017(86)   |
| OPBs          | 1433(4.0)  | 2758 (5.0) | 5611 (5.0)  | 11829  | 16984 (5)    |
| NPBs          | @          | @          | 342 (0.30)  | 8292   | 23109 (6)    |
| FRBs          | 628 (3.0)  | 1254(2.0)  | 2717(2.70)  | 7340   | 12568 (3)    |
| SCBs          | 32275(100) | 56118(100) | 111656(100) | 255600 | 373677 (100) |

- Figures in the Parenthesis are percentage share in Total Deposit
- Figures for 1987- December end and March end for the remaining years
- @- Not Applicable

Sources: Report on Trend and Progress of Banking in India (Various Issues), RBI, Data base on Indian Banks, IBA; Performance Highlights of Public, Private and Foreign banks (Various Issues), IBA; Indian Banking Year Book (Various Issues), IBA

**Table 4.V-Fixed Deposits from Public**

(Figures in Rs Crore)

| Banking Group | Year         |              |             |              |               |
|---------------|--------------|--------------|-------------|--------------|---------------|
|               | 1987         | 1992         | 1997        | 2002         | 2004          |
| NSBs          | 65507 (92.3) | 128523(88.5) | 259715(81)  | 590967 (80)  | 764,598 ( 77) |
| OPBs          | 3103 (4.3)   | 6924 (4.75)  | 25347       | 55297 (7.50) | 78554 ( 8)    |
| NPBs          | @            | @            | 9015(2.75)  | 56584 (7.6)  | 1,09,767(11)  |
| FRBs          | 2294(3.4)    | 9800 (6.75)  | 26374(8.35) | 34389 (4.9)  | 45404 (5)     |
| SCBs          | 70904(100)   | 145247(100)  | 320450(100) | 737237       | 998323 ( 100) |

- Figures in the Parenthesis are percentage share in Total Deposit  
 Figures for 1987- December end and March end for the remaining years  
 @- Not Applicable

Sources: Report on Trend and Progress of Banking in India (Various Issues), RBI, Data base on Indian Banks, IBA, Performance Highlights of Public, Private and Foreign banks (Various Issues), IBA, Indian Banking Year Book (Various Issues), IBA

Another way to look at the structure of retail banking segment is to observe the share of retail credit in total credit. The retail loan portfolio of banks has increased over a period of time. The boom in home loans and vehicle market loans enabled the commercial banks to expand their retail loan portfolio. The Table -4.VI below gives a synoptic picture of the retail lending by commercial banks in the last ten years.

**Table 4.VI -Retail Loan Disbursed by Indian Commercial Banking Sector**

| Year        | Retail Loans |                   |  | Gross <b>Bank Credit</b> |
|-------------|--------------|-------------------|--|--------------------------|
|             | Housing      | Consumer Durables | Individual Loans<br><b>against Share</b> |                          |
| 1994 -95    | 5299(2.69)   | 1178 (0.60)       | 1924 (0.98)                              | 196985(100)              |
| 1995-96     | 6303(6.16)   | 1476 (1.44)       | 1933 (1.89)                              | 102310 (100)             |
| 1996-97     | 7773 (5.61)  | 2297 (1.66)       | 2066 (1.50)                              | 138548 (100)             |
| 1997-98     | 9057 (5.62)  | 2527 (1.57)       | 1904 (1.18)                              | 161038 (100)             |
| 1998-99     | 11404(3.33)  | 3090 (0.90)       | 1625 (0.47)                              | 342012 (100)             |
| 1999 - 2000 | 14100(3.52)  | 3855 (0.96)       | 2146 (0.54)                              | 400818 (100)             |
| 2000 - 01   | 16143 (3.44) | 5566 (1.19)       | 1697 (0.36)                              | 469153 (100)             |
| 2001-02     | 22346(4.16)  | 7015 (1.30)       | 1520 (0.28)                              | 536727 (100)             |
| 2003-2004   | 89449 ( 10)  | 6256 ( 0.72)      | @  | 859092 ( 100)            |

Figures in the Parenthesis are percentage share in Total Gross Bank Credit.

- Figures are March end for the year
- @ Not Available

Source: Report on Trend and Progress of Banking in India (Various Issues), **RBI**

The share of housing loan in total credit was 2.69 per cent in 1995, which rose to 10 per cent of bank credit in the year 2004. Similarly, the share of consumer durables credit in 1995 stood at 0.60 per cent in bank credit, which increased to 1.30 per cent in 2002. As we can conclude from the table, the percentage share of housing and consumer durables

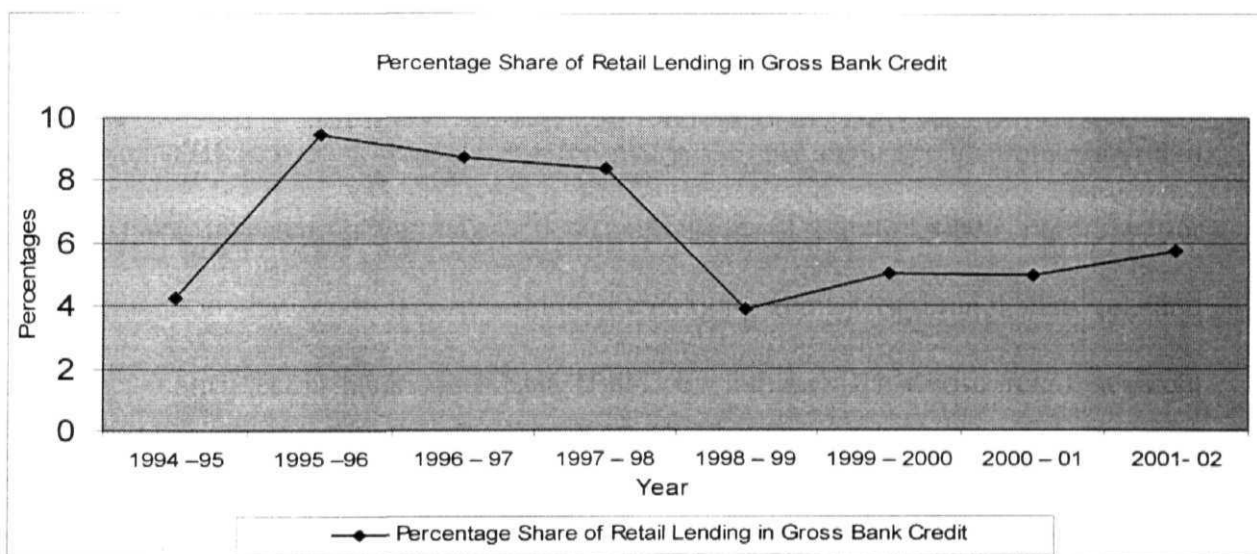
in gross bank credit has increased in the last few years. In the last few years , the two main specific area of retail lending in India, viz., (a) credit cards and (b) housing.

Housing credit<sup>23</sup> has increased substantially over last few years, but from a very low base. During the period 1993-2004, outstanding housing loans by scheduled commercial banks and housing finance companies grew at a trend rate of 23 per cent. The share of housing loans in total non-food credit of scheduled commercial banks has increased from about 3 per cent in 1992-93 to about 7 per cent in 2003-04. Recent data reveal that non-priority sector housing loans outstanding as on February 18, 2005 were around Rs. 74 thousand crore, which is, however, only 8.0 per cent of the gross bank credit (RBI, 2004 c). 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 had witnessed a quantum jump. The total number of cards issued by 42 banks and outstanding, increased from 2.69 crore as on end December 2003 to 4.33 crore as on end December 2004 (ibid). The actual usage too has registered increases both in terms of volume and value. Almost all the categories of banks issue credit cards. Credit cards have found greater acceptance in terms of usage in the major cities of the country, with the four major metropolitan cities accounting for the bulk of the transactions. The share of retail lending<sup>24</sup> in the bank credit has seen ups and down in the last ten years, and we can observe that, it increased again in the year 2002 and stood at 6 per cent (approx.) of the

<sup>23</sup>Direct housing loans up to Rs. 15 lakh irrespective of the location now qualify as priority sector lending; housing loans are understood to form a large component of such lending. In addition, housing credit is also being provided by housing finance companies, which in turn are also receiving some bank finance.

<sup>24</sup> Expressing concerns about the high growth witnessed in the consumer credit segments the RBI has a temporary measure, put in place risk containment measures and increased the risk weight from 100 per cent to 125 per cent in the case of consumer credit including personal loans and credit cards (mid-term Review of annual policy, 2004-05).

total bank gross bank credit (see Chart- 4.ITI).While Tetail banking has always been prevalent in various forms (for instance, co-operative banks, some of whom are over a century old, have always had the retail thrust), for the last few years it has become synonymous with mainstream banking for many banks. While new generation private sector banks (ICIC1 Bank, accounting for nearly 30 per cent of the domestic retail growth) have invested in creating and sustaining a retail brand, their public sector counterparts too, have not lagged behind. Leveraging their vast branch network and outreach, public sector banks like State Bank of India (SBI) whose retail segment constitutes 20 per cent of the total advances have aggressively forayed to garner a larger slice of the retail pie ( RBI, 2004 c ).



Source: Table 4. VI

There has been sectoral shift between the retail and the corporate /business credit market. The retail market has been a relative newcomer in the Indian banking sector and there is still a lot of unfilled potential. The important point is that even without the sectoral shift, bank credit would have flown into the retail sector anyway since it is a potentially growing and a higher profit sector.

Another way to look at the structure of retail banking segment is through the number of branches existing in the banking sector (see Table - 4.VII)

**Table 4.VII-Bank Group Wise Branches in Total Branches of Scheduled Commercial Banks in India from 1987-2002**

(Figure in Numbers)

| Year | Banking Group |                     |               |                |           |           | SCBs                  |
|------|---------------|---------------------|---------------|----------------|-----------|-----------|-----------------------|
|      | SBI           | SBI<br>(Associates) | Other NSBs    | OPBs           | NPBs      | FRBs      |                       |
| 1987 | 7577(18.73)   | 3488 (8.62)         | 25699(63.53)  | 3621 (8.95)    | @         | 135(0.33) | <b>40450</b><br>(100) |
| 1992 | 8627(18.87)   | 3773(8.16)          | 29364 (64.25) | 3794 (8.30)    | @         | 140(30)   | <b>45698</b><br>(100) |
| 1997 | 8888(17.98)   | 4266 (8.63)         | 31645 (64.04) | 4336(8.77)     | 137(0.27) | 175(0.35) | <b>49407</b><br>(100) |
| 2002 | 9085 (17.50)  | 4508 (8.68)         | 32791 (63.19) | 4323 (8.33)    | 988(1.90) | 194(0.37) | <b>51889</b><br>(100) |
| 2004 | 8947 ( 16.93) | 4558 ( 8.34)        | 33130(60.69)  | 5737* ( 10.50) |           | 2215(4)   | 54587<br>(100)        |

Figures in the Parenthesis are percentage share in Total Branches

@- Not Applicable/

Figures for 1987- December end and March end for the remaining year

\* Total number of branches for both OPBs and NPBs

Figures for 2004 as on June 30<sup>th</sup>

Sources: Data base on Indian Banks, IBA; Performance Highlights of Public, Private and Foreign banks (Various Issues), IBA

As shown in Table- 4. VII, the entire banking group has increased its branch network over a period of time<sup>25</sup>, but the most noticeable fact is that there is a marginal decline in the

<sup>25</sup> The numbers of branches opened in India by banks are - Rural: 1998-99 - 43 / 1999-2000- 59/2001-02-27; Semi Urban: 1998-99 - 169 / 1999-2000- 140/2001-02-87; Urban: 1998-99 - 258 / 1999-2000-192/2001-02-164; Metropolitan: 1998-99 - 299 / 1999-2000- 217/ 2001-02-167. Source: Report on Trend and Progress of Banking in India (Various Issues), RBI; Data base on Indian Banks, IBA; Performance Highlights of Public, Private and Foreign banks (Various Issues), IBA; Indian Banking Year Book (Various Issues), IBA.

share of nationalised bank group branches in the total branches of commercial banking sector. The share of new private banking group has increased in the last few years. **One** more noticeable fact is that, the share of foreign bank branches in the total branch network stood at 4 per cent in the year 2004. After achieving a phenomenal expansion in branch network during the first decade and a half of bank nationalisation at nearly 2,400 branches per year, the SCBs entered a consolidation phase in the mid-1980s. Thereafter, in the next 18 years or so, the number of bank branches increased but at a reduced pace of 835 or so per year (RBI 2004 c).

Summing up the implication of reforms and technology on the structure of Indian banking sector, we can conclude that:

- a) The nationalised banks lead the scheduled commercial banks sector in India.

Structure of the banking sector has changed with the introduction of reforms **and** technology in the last 15 years. There are now more players in the market. Some trend of mergers<sup>26</sup> was also noticed in the banking sector, with few mergers taking place in the sector during the period 1992-2004. The RBI are not promoting mergers and acquisitions in the sector nor acting as an impediment to mergers or acquisition. The banking regulations were relaxed by allowing entry of new private and foreign banks, and directing nationalized banks to rely on the capital market for supplementing their equity base. The accumulated effect of these

<sup>26</sup> The banks are having a variety of motivation for making mergers and acquisition increased scale economies are the most obvious, including but not limited to: reduced unit costs; higher per unit revenue; improved access to capital markets; the ability to make larger loans or offer broader product lines; the ability to attract and retain high quality managers and network benefits from integrating systems of branches and ATMs that cover distant geographic areas. For most of the existing bank especially new banks, acquiring existing banks is simply faster and easier than growing internally by building new physical assets (Bergeret. al., 1999).

relaxations greatly increased the assets composition of banks, and also changed the overall structure of the banking sector.

- b) The share of nationalised banks in the total assets of scheduled commercial banks has decreased with the implementation of reforms in the sector. The foreign banks have shown highest compounded annual growth rate (CAGR) of assets in the banking sector in the last fifteen years. With regard to concentration ratio, the share of top five banks in assets, deposits and profit has decreased considerably. This makes it apparent that reforms triggered high competition in the sector.
- c) In the retail banking segment the new private banks have increased share in the deposit and lending in the banking sector during the period 1995-2004. The share of retail credit in the total gross bank credit has increased in the last decade from 4 to 12 per cent. The credit in housing and consumer durable segments has seen largest increase. The branch network of nationalised banks has decreased marginally in the last decade, but foreign and new private banks are increasing their branch network in urban areas.

## **CHAPTERS**

### **IMPLICATIONS OF REFORMS AND TECHNOLOGY ON COMMERCIAL BANKING SECTOR**

Banking sector reforms have brought about significant progress in the use of IT, human resource management and development, supervision and regulation in the banking sector. In this chapter conduct of the banking sector is discussed from two aspects. First, we observe the conduct of the banking sector in the background of reforms. Second, affect of technology on the conduct of banking sector is analysed .

#### **5.1: Reforms in the Banking Sector**

The banking sector reforms, initiated in 1992, were aimed at increasing the profitability and efficiency of banks as well as at improving the safety and soundness of the sector. Recent empirical research conducted by RBI has found that over the period 1992-2003, there has been a discernible improvement in the efficiency of Indian banks due to reforms undertaken in the sector. The increasing trend in efficiency has been fairly uniform, irrespective of the ownership pattern. The research also reveals that nationalised and private sector banks in India did not differ significantly in terms of their efficiency measures. Foreign banks, on the other hand, recorded higher efficiency as compared with their Indian counterparts. The research also pointed out that all the bank groups registered efficiency gains, even in the face of increasing competition in the sector (RBI, 2003 b, Chapter-III, para-3.59).

The RBI, till date, has adopted a systematic approach towards reforms in the banking sector. This was done first through gradually reducing the CRR and the SLR to bring down the appropriation of bank resources, freeing interest rates on deposits

and loans , liberalizing branching policy, and eliminating quantitative restrictions on credit allocation by banks. Secondly, by improving the financial soundness and credibility of banks by instituting (a) internationally accepted capital adequacy norms requiring commercial banks to maintain a Capital to Risky Assets Ratio (CRAR) of not less than 8 percent, and (b) new norms of income recognition, asset classification and provisioning, to reflect accurately the quality of banks<sup>1</sup> loan portfolios. Thirdly, the RBI has strengthened the institutional framework for supervision and monitoring, and creating new institutions such as Ombudsman and Debt Recovery Tribunals (DRT). We will discuss in the next section some of the key aspects of the reforms.

#### 5.1. i: Reduction in Reserve Ratios

A significant feature of the post-reforms policy framework has been the gradual reduction in reserve ratios<sup>2</sup>- the CRR and the SLR, to decrease the implicit taxation of the banking system and shore up its profitability. While these requirements serve as instruments of monetary control, they also pre-empt lendable resources of banks.

As these reserves earn no, or relatively low, rates of interest, the maintenance of high reserve ratios impinges on the income earning potential of banks. Often, this leads to high interest spreads as banks, being able to lend only part of the deposits mobilized. Due to changing macroeconomic situation, the CRR was increased by one-half of one percentage point of the net demand and time liabilities (NDTL) in two

<sup>1</sup> Another area the reforms have focused is the move towards market rate rates of interest on government borrowings (D'Souza, op. cit.).

<sup>2</sup> The CRR, which was 15 percent in 1991-92, has been gradually reduced over the years 1997(December)->10per cent; 1999(November)->9per cent; 2000(August) ->8.5per cent; 2001 (May)-\* 7.5per cent} and was 4.50 per cent in 2003. The SLR that stood at 38.5 percent in 1991-92 has also been reduced to a uniform level of 25 percent [Report on Trends and Progress of Banking in Indian (Various Issues), RBI].

stages - to 4.75 per cent effective September 18, 2004 and further to 5.0 per cent effective October 2, 2004 (RBI, 2004 c).

### **5.1. ii: Interest Rate Deregulation and Flexibility in Operations**

Prior to the reforms, interest rates on both deposits and loans were completely administered by the RBI. The RBI stipulated maximum deposit rates on both savings and time deposits of all maturities, as well as minimum lending rates on loans of all maturities and sizes. This guaranteed banks a minimum interest rate spread and a measure of protection against increasing cost of operation. Along with interest rate regulation, RBI also regulated credit allocation by banks through various mechanisms as the Capital Authorization scheme (CAS)<sup>3</sup>, Credit Monitoring Arrangement (CMA) , Consortium Financing<sup>4</sup> and the lead bank system. Besides establishing credit allocation mechanisms for the large borrower, the RBI also prescribed norms for working capital loans by industrial sub-sector and firm location under the Maximum Permissible Bank Finance (MPFB) scheme<sup>6</sup>.

Interest rate controls as well as stringent credit allocation mechanisms eliminated the scope of any price competition among banks and destroyed their

<sup>3</sup> Under the CAS, banks were expected to obtain prior authorization from the RBI before additional credit limits to large clients were sanctioned.

<sup>4</sup> Under the CMA, which replaced CAS in 1988, banks were required to report to the RBI credit facilities sanctioned to large borrowers, i.e., those enjoying term loans of Rs.50 million or above, for post-sanction scrutiny.

<sup>5</sup> Under the scheme of consortium financing, the RBI ruled that if the credit limit of a single borrower from any bank exceeded 15 percent of that bank's deposits, then formation of a consortium was obligatory to reduce the bank's credit risk. The largest lender in the consortium was designated to act as the lead bank which was responsible for credit appraisal, monitoring and supervision, sharing other banking business of the borrower with participant banks in agreed proportions and taking the lead in arranging for reconstruction or rehabilitation of problem accounts.

<sup>6</sup> Under the MPBF, the RBI in effect decided how much of working capital a bank could lend to each and every borrower, and laid down inventory norms stipulating exactly how much stock of raw materials, finished goods and receivables would be financed by banks in a vast majority of industries.

incentive to allocate resources according to the highest value use. To this extent, **the** phased deregulation of interest rates has been one of the cornerstones of the reform process. Deregulation of interest rates was also expected to enable **banks to compete** more effectively for funds with the capital market and other financial intermediaries that had no restrictions on their pricing of loans. The process of deregulation was carried forward with the withdrawal of the minimum lending rate in October **1994**, thereby providing banks full freedom to determine lending rates for loans above Rs.2 lakh. Banks were only required to announce their prime lending rates (PLR); subsequently, in October 1996, in view of the high spreads over the PLR and to impart a degree of transparency, banks were advised to announce the maximum spread over the PLR. Banks were later permitted to operate different PLRs for different maturities and lend at sub-PLR<sup>7</sup> to creditworthy borrowers.

Recently, banks were advised to charge interest on loans for purchase of customer durables without reference to their PLR, regardless of size of the loan amount. It was observed by RBI that some of the banks were providing low / zero per cent interest rates on customer durables advances to borrowers through adjustment of discount available from manufacturers / dealers of customer goods. Since such loan schemes lacked transparency in operations and distorted pricing mechanism of loan products, banks were advised by RBI to refrain from offering such products (RBI, 2003 b, Chapter-1, para-2.133).

Deposit rate deregulation was more gradual; the process began in April 1992 by replacing the existing maturity-wise prescription by a single ceiling rate, which

<sup>7</sup> Banks have been lending at sub PLR rates in home loan, customer loan and retail loan, which lead to cross- subsidisation of sub PLR rate lending by other borrowers. To remove disparity, the RBI has recommended banks to declare the spread over PLR and it should not exceed over three per cent over PLR. Later the banks were asked by RBI to declare the PLR. As per the guidelines of RBI in its mid - year review of monetary policy for 2003-04, IBA has come out with guidelines for calculating **PLR**

was subsequently varied in line with the modifications in the minimum lending rate and the evolving macro-economic developments followed by complete deregulation in October 1997 (see Table 5.1).

**Table 5.1. - Interest Rates on Domestic Term Deposits: Deregulation**

| Month /Year   | Measure   |
|---------------|---|
| April 1992    | The existing maturity-wise prescription replaced by a single ceiling rate of 13 <b>per cent</b> for <b>all deposits</b> above 46 days of maturity |
| November 1994 | The ceiling rate brought down to 10.0 per cent  |
| April 1995    | The ceiling rate raised to 12.0 per cent  |
| October 1995  | Deposits of maturity of over two years exempted from the ceiling.   |
| July 1996     | Deposits of maturity of over one year exempted from the ceiling.  |
| April 1997    | The ceiling rate for deposits of '30 days up to one year' linked to the Bank Rate <i>less</i> 200 basis <b>points</b>                             |
| April 1998    | Deposit rates fully deregulated by removing the linkage to the Bank Rate.   |

Source: Report on Trend and Progress of Banking in India (Various Issues), RBI.

Deregulation of term deposit rates first took place with RBI switching from prescribing a single rate for each category of term deposit (determined by maturity period) to announcing a ceiling rate below which banks were free to fix their deposit rates. Since July 1996, the RBI has began abolishing the ceiling for deposits of different maturities<sup>8</sup>, starting from those with the highest maturity, and by April 1998, interest rates on deposits beyond 15 days have been freed. Banks can now charge

that should take into consideration the average cost of fund, average cost of operations, appropriate provision and profit margin.

<sup>8</sup> The term deposit rates of public sector banks for maturities up to 1-year moved down from a range of 4.25-7.50 per cent in March 2002 to 4.00-6.00 per cent by March 2003. The reduction in deposit rates was more pronounced for longer-term deposits as the public sector banks have reduced their deposit rates above 1-year from a range of 7.25-8.75 per cent in March 2002 to 5.25-7.00 per cent by March 2003. While the typical short-term deposit rate (15-29 days) of the public sector banks declined by 50 basis points during 2002-03, the rate for longer term deposits (over 3 years) declined by as much as 200 basis points. The typical interest rate on 3-month and 1-year certificates of deposit (CDs) also declined from 7.38 per cent and 10.0 per cent in March 2002 to 5.25 per cent and 5.75 per cent, respectively, by March 2003 (RBI, 2003 e).

differential rates on deposits of similar maturity, but of different sizes. The interest rates on NRI term deposits under the NRE schemes have also been deregulated, and banks have been given the freedom to determine their own interest rates on deposits under FCNR scheme subject to a ceiling that is prescribed by the RBI from time to time. Besides, banks are no longer required to obtain prior concurrence of the IBA or prior approval of the RBI for introducing new deposit mobilization schemes, except for NRI deposits. However, the banks are required to obtain prior approval of their respective boards and follow the directives on interest rates, premature withdrawal, sanction of loans and advances against deposits, etc., issued by the RBI from time to time.

At present, the only domestic deposit rate that continues to be prescribed is the savings deposit rate (3.5 per cent on March 2003). The deposit rates with respect to non-resident rupee deposits were also deregulated on broadly similar lines while foreign currency deposits is subjected to a ceiling rate linked to London Inter Bank Offered Rate (LIBOR). The maturity period of fresh NRE deposits, with effect from April 2003 will normally be one year to three years. This will also apply to NRE deposits renewed after their present maturity period (RBI 2003 d).

The RBI decided that the interest rates on NRE (rupee) deposits<sup>9</sup> for one to three years should not exceed the LIBOR / SWAP<sup>10</sup> rates for U.S. dollar of corresponding maturity. This move would now block all arbitrage advantages the non-

<sup>9</sup> Banks in India were offering FCNR(B) deposits in foreign currency and NRE deposits in domestic currency to the NRIs. While the interest rates on the former were linked to LIBOR/SWAP rates, interest rates on the latter were at par with domestic deposit rates. Given the fact that NRE deposits are fully repatriable, in order to provide consistency in the interest rates offered to NRIs,

<sup>10</sup> An exchange of streams of payments over time according to specified terms. The most common type is an interest rate SWAP, in which one party agrees to pay a fixed interest rate in return for receiving an adjustable rate from another party.

resident Indians (NRIs) had earlier. This interest rate is applicable in case the maturity period exceeds three years. The changes in interest rates will also be applicable to NRE deposits renewed after their present maturity period. In the last year, the **RBI** narrowed down the difference in the interest rates in three stages. First, interest rates on these deposits were reduced from 250 basis points (0.25 per cent) above LIBOR/SWAP rates of corresponding maturity to 100 basis points above LIBOR/SWAP rates of corresponding maturity on September 2003 and later to 25 basis points above LIBOR/SWAP rates of corresponding maturity on October 2003. Second, the interest rates on NRE term deposits for one to three years were reduced to LIBOR /SWAP rates for US dollar of corresponding maturity from April 2004. Third, ceiling on interest rate on NRE savings deposits was fixed at six-month US dollar LIBOR /SWAP rate and no lien on these accounts, direct or indirect is permitted.

The deposit schemes available to the NRIs have been streamlined and currently three schemes, *viz.*, Foreign Currency (Non-Resident) Account (Banks) [FCNR(B)] Scheme, Non-Resident (External) Rupee [NRE] Account Scheme and the Non-Resident (Ordinary) [NRO] Account Scheme are under operation . Fresh deposits under Non-Resident (Non-Repatriable) Rupee [NRNR] Account Scheme or the Non-Resident (Special) Rupee [NRSR] Account Scheme were discontinued with effect from April 1, 2002, and existing deposits were to continue only up to the date of maturity. On maturity of the existing deposits under the NRNR Account Scheme and NRSR Account Scheme, the maturity proceeds would be credited to the account holder's NRE Account and NRO Account, respectively.

Deregulation in lending rates has also been accompanied by liberalisation of

various quantitative restrictions on credit allocation<sup>11</sup> for giving banks **more** operational freedom to evolve their own methods of assessing working capital requirements of borrowers, but within the prudential guidelines and exposure norms prescribed by the RBI. Accordingly, all instructions relating to MPBF and CMA have been withdrawn since April 1997. Similar deregulation has also occurred with respect to term finance, where the RBI has withdrawn its stipulations both on the time and quantum of loans that can be granted by banks either individually or in consortia for a single project.

### **5.1. iii: Bank Rate**

Bank rate is the rate at which RBI rediscounts bills of exchange presented by **the** commercial banks. The Bank rate influences the cost of credit of refinance and other financial accommodation extended to commercial banks and other specified financial institutions. The efficacy of the Bank rate as a monetary policy instrument depends essentially upon the commercial bank's dependence on the RBI for funds and the influence it wields on other interest rates. In the context of deregulation of interest rates, Bank rate is operationalised as a reference rate for the entire financial system.

As discussed above, Bank rate is the minimum rate at which the central bank provides loans to the commercial banks. It is also called the Discount Rate. The banking system draws substantial amount of money from the RBI at this rate. Most of this is drawn as refinance entitlement in lieu of providing cheap finance to industries. There is an intimate relationship between the bank rate and the other interest rates

<sup>11</sup> Banks are subjected to lend a specific amount in the total credit to a particular segment of borrowers; this is termed as priority sector lending. At present, the priority sector broadly comprises the following (a) Agriculture; (b) Small Scale Industries and (c) Other activities / borrowers (such as small business, retail trade, small transport operators, professional and self employed persons, housing, education loans, micro credit etc.).

prevailing in the money markets. It acts as a benchmark rate in the money markets. Usually, an increase in bank rate results in commercial banks increasing their lending rates. Changes in bank rate affect credit creation by banks through altering the cost of credit. The Bank rate has been used more sharply between 1998- 2003 - eight times, as against eight times during the eight years of 1992-2000-, thus indicating the growing significance of the rate variables in the reforms policy of banking sector (see Table 5.II). This development is reflective of the heightened financial sector developments and the increase in financial innovations. The significant change introduced in operating monetary policy is reactivating the Bank Rate by linking it to other rates including the RBFs refinance rates (Monetary Policy April 1997<sup>12</sup>). During this period, the reactivation of the Bank Rate served as an effective signaling device and a reference rate for the entire financial system. Thus, in operating the monetary policy since April 1997, Bank rate has emerged as an effective signaling instrument.

**Table 5.II - Change in the Bank Rate during the Reform Period**

| Years     | Bank Rate                    |
|-----------|------------------------------|
| 1980-90   | 1(10 per cent - 9 per cent)  |
| 1990-2000 | 15(12 per cent - 7 per cent) |
| 1990-92   | 2(12 per cent - 10 per cent) |
| 1992-2000 | 8(12 per cent - 7 per cent)  |
| 1998-2003 | 8 (1 per cent - 7 per cent)  |
| 2003-2004 | 4 (1 per cent - 7 per cent)  |

Source: Report on Trend and Progress of Banking in India (Various Issues), RBI.

<sup>12</sup> The policy statements of the Reserve Bank, announced twice during a year, were known as the Credit Policy Statements till 1992 - the year which marked the initiation of financial sector reforms. With the move towards a more market oriented financial system and operating procedures for monetary policy, the policy was renamed as the Monetary and Credit Policy so as to highlight the growing linkages between the two. Apart from credit pricing and credit delivery, regulatory policies were also recognised to be important for channelling the flow of credit. In the succeeding years, the Reserve Bank policy statements became increasingly comprehensive discerning the links between monetary policy, credit policy and regulatory regime in a dynamic situation involving overall structural transformation of the real sector, the financial sector and the opening of the economy.

### **5.1. iv: Branch Liberalisations Policy**

Following the NCR-I recommendations governing branch licensing restrictions, **the RBI** changed its licensing policy in 1992 in order to provide banks with operational autonomy to rationalize their branch networks. Banks are allowed to shift **their** existing branches within the same locality, open certain types of specialized **branches**, convert existing nonviable rural branches into satellite offices, spin off business of a branch, and open extension counters and administrative units without prior **approval** of the **RBI**. Banks that attained the stipulated capital adequacy requirement and followed appropriate accounting standards were permitted to establish **new** branch offices and upgrade extension counters into full-fledged branches without prior approval of the RBI.

In the year 1993-94, banks were permitted to close one loss-making branch at rural centers serviced by two commercial bank (excluding regional rural bank) branches by mutual consent with approval of the RBI. The RBI required new private sector banks that entered the banking sector in 1994 to open 25 per cent of their total branches in rural or semi-urban areas. In the year 1994-95, the RBI advised banks to submit a plan of action for opening new branches or upgrading existing extension counters, provided that a bank attained a capital adequacy ratio of 8 per cent, earned net profit for three consecutive years, had NPAs not exceeding 15 per cent of total outstanding loans, and owned funds of a minimum amount of Rs.1 billion. In the same year, banks were advised to open at least one specialized agricultural finance branch that would focus on high technology-based agricultural financing in each **state**. **In** the year 1998-99, old and new foreign banks were permitted to open up to 12 branches a year, **as** against the earlier stipulation of 8 branches. In the recent **period**, the policy for branches has been substantially liberalised. Banks' boards have **been**

empowered to decide on the policy and strategy for setting up of new branches and the closing and shifting of existing branches, subject to certain conditions. In order to encourage more efficient banking services all over the country, it is proposed to provide further flexibility in the branch licensing policy. Accordingly, RBI will consider favorably any proposal for transfer of branches in rural and semi-urban centers from one commercial bank to another by mutual agreement. Banks will be expected to ensure that such mutually agreed transfers do not adversely affect the available banking services in that area (RBI 2003 e).

### **5.1. v: Capital Adequacy and Asset Quality—**

Since banks are highly leveraged and exposed to risks, the capital adequacy requirements provide them with the financial cushion to cope with adverse effects on their portfolio. A bank's capital, also known as equity, is the margin by which creditors would be covered if the bank's assets were liquidated. A measure of a bank's financial health is capital/asset ratio, which is required to be above a prescribed minimum. When a bank creates a deposit to fund a loan, assets and liabilities increase equally, with no increase in equity. That causes capital ratio to drop. Thus the capital requirement limits the total amount of credit that a bank may issue. It is important to note that the capital requirement applies to assets while the reserve requirement applies to liabilities. From 1992 banks in India, have adopted the capital requirements established by the Bank for International Settlements (BIS) in a phased manner. The BIS rules set requirements on two categories of capital, Tier 1 & Tier 2 capital and Total capital: Tier 1 capital is the book value of its stock plus retained earnings. Tier 2 capital is loan-loss reserves plus subordinated debt (Subordinated debt is long term

<sup>13</sup> See Annex. -I on the Capital Adequacy guidelines issued by RBI.

debt that, in case of insolvency, is paid off only after depositors and other creditors have been paid). Total capital is the sum of Tier 1 and Tier 2 capital. Tier 1 capital must be at least 4 per cent of total risk-weighted assets. Total capital must be at least 8 per cent of total risk-weighted assets.

Following the NCR-I, the RBI issued guidelines in the year 1992-93 on income recognition, asset classification, and provisioning. In particular, the RBI required domestic banks with an international presence, to meet the capital adequacy ratio of 8 per cent by the end of March 1994, while foreign banks in India were told to meet the same requirement by the end of March 1993. All other banks were told to achieve a 4 per cent ratio by the end of March 1993 and 8 per cent by the end of March 1996. The total amount of Tier II capital was limited to a maximum of 100 per cent of Tier I capital. In the year 1993-94, domestic banks with international presence were given a one-year extension to fulfill the requirement by the end of 1995. In the year 1994-95, revaluation reserves were treated as part of Tier II capital at a discount rate of 55 per cent instead of the 25 per cent imposed earlier.

In the year 1995-96, banks were advised to maintain 5 per cent of Tier 1 capital funds for the foreign exposure open position limit. In the year 1996-97, banks were instructed that subordinated debt instruments included in Tier II capital should be discounted at rates ranging from 20 per cent (four to five years) to 100 per cent (less than one year) based on the remaining maturity period of the instrument. The NCR- II recommended that (a) a 5 per cent weight should be given to market risk for government and approved securities; (b) the same risk weight should be applied for government guaranteed advances and other advances; (c) a 100 per cent risk weight should be imposed on the foreign exchange open position limit; (d) a minimum

capital adequacy ratio of 9 per cent and 10 per cent should be achieved in 2000 and 2002, respectively; (e) an asset should be classified as 'doubtful' if it is in the substandard category for 18 months in the first instance (this period to be shortened later to 12 months) and 'loss' if it has been so identified but not written off; (f) a 1 per cent provision should be made on standard assets; (g) bonds issued by banks for Tier II capital that would make these bonds eligible for the SLR could be guaranteed by the Government; and (h) banks should disclose their maturity pattern of assets and liabilities, foreign currency assets and liabilities, provision, NPAs, and exposure to any particular sectors sensitive to asset price fluctuations. In response to some of these recommendations, the RBI advised banks in the year 1999-2000 to disclose the details of the maturity profile of deposits and borrowings, loans and investments, provisions, etc. Further, banks were advised to submit a report to the RBI on details of subordinated debt issued for raising Tier II capital. With respect to the risk weight on government-guaranteed advances, banks were advised in the year 2000-01 to assign a risk weight of 100 per cent only on those government-guaranteed securities issued by the defaulting entities and not all the securities issued or guaranteed by the government. While banks are permitted to issue bonds to augment their Tier II capital, the government currently takes the view that guaranteeing these bonds is not necessary.

In the year 1999-2000, further, a 100 per cent risk weight was applied for open foreign exchange and gold positions, while a 2.5 per cent risk weight was introduced for market risk on government and other securities in the year 1998-99. Banks were required to disclose the maturity pattern of their loans and advances, investment securities, deposits and borrowings, foreign currency assets and liabilities, NPAs, and lending to sensitive sectors in the same year. Banks were also advised not to

participate in the equity of any financial services venture, such as portfolio investments in the equity of financial companies (including stock exchanges), without prior approval of the RBI. In addition, they were advised not to provide loans to companies for buyback of shares and securities.

An exposure of 15 per cent and above of bank's capital funds is treated as large credit. Banks are required to adhere to prudential exposure limit of twenty five per cent for individual borrowers and five per cent for groups of borrowers. In the year 2000-01, the exposure limit on loans to an individual borrower was lowered from 25 per cent to 20 per cent of a bank's capital funds, with a view to moving closer to the international standard of 15 per cent.

With the introduction of capital to risk-weighted asset ratio (CRAR) norms in 1992, significant improvement was noticed in the capital position of banks operating in India. The overall CRAR of SCBs improved marginally to 12.9 per cent in 2003-04 from 12.7 per cent in 2002-03. In 2003-04, all but two commercial banks complied with the regulatory minimum CRAR of 9 per cent. Global Trust Bank and Centurion Bank, which did not comply with the regulatory minimum, accounted for a negligible 0.5 per cent of total assets of scheduled commercial banks in 2003-04. CRAR of five largest banks, which accounted for about 41 per cent of total assets of scheduled commercial banks, showed a further improvement in 2003-04. Among bank groups, CRAR as at 2004 was higher than the March 2002 levels for NSBs and old private sector banks.

While in 1995-96, 75 out of 92 banks had a CRAR of above eight per cent, as on March 31, 2002, 92 out of 97 banks operating in India had CRAR above the statutory minimum level of nine per cent. There has been an improvement in overall capital adequacy of banks after the introduction of CRAR norms.

**Table 5.IH-Distribution of Scheduled Commercial Banks by CRAR**

| S.N. | Years        | NSBs      |            | Private Banks |     | FRBs | SCBs |
|------|--------------|-----------|------------|---------------|-----|------|------|
|      |              | SBI Group | Other NSBs | Old           | New |      |      |
| 1    | 1995-96      |           |            |               |     |      |      |
|      | < 8 per cent | -         | 8          | 6             |     | 3    | 17   |
|      | 8 per cent < | 8         | 11         | 19            | 9   | 28   | 75   |
| 2    | 1996-97      |           |            |               |     |      |      |
|      | < 8 per cent | -         | 2          | 4             | -   | -    | 6    |
|      | 8 per cent < | 8         | 17         | 21            | 9   | 39   | 94   |
| 3    | 1997-98      |           |            |               |     |      |      |
|      | < 8 per cent | -         | 1          | 4             | -   | -    | 5    |
|      | 8 per cent < | 8         | 18         | 21            | 9   | 42   | 98   |
| 4    | 1998-99      |           |            |               |     |      |      |
|      | < 8 per cent |           | 1          | 5             | 1   | -    | 7    |
|      | 8 per cent < | 8         | 18         | 20            | 8   | 43   | 97   |
| 5    | 1999-2000    |           |            |               |     |      |      |
|      | < 9 per cent | -         | 1          | 4             | -   | -    | 5    |
|      | 9 per cent < | 8         | 18         | 20            | 8   | 42   | 96   |
| 6    | 2000-01      |           |            |               |     |      |      |
|      | < 9 per cent | -         | 2          | 3             | -   | -    | 5    |
|      | 9 per cent < | 8         | 17         | 20            | 8   | 42   | 95   |
| 7    | 2001-02      |           |            |               |     |      |      |
|      | < 9 per cent | -         | 2          | 1             | 1   | 1    | 5    |
|      | 9 per cent < | 8         | 17         | 21            | 7   | 39   | 92   |
| 8    | 2003-04      |           |            |               |     |      |      |
|      | < 9 per cent | -         | -          | -             | 2   | -    | -    |
|      | 9 per cent < | 8         | 19         | 20            | 8   | 33   | 88   |

Source: Report on Trend and Progress of Banking in India (Various Issues), RBI.

As for regulatory supervision, the RBI developed a rating model for banks based on capital, assets, management, earnings, and liquidity (CAMEL) in the year 1999-2000 in order to improve its assessment on the performance of each bank and the aggregate strength and soundness of the banking system. Further, the RBI issued detailed

guidelines for risk management system in banks. The guidelines broadly cover management of credit, market, and operation risks.

### **5.1. vi: Recapitalisation**

Liquidation was not considered as an option in the beginning by the monitoring authority to cope with the problems of NSBs. As liquidation involved allocating losses to shareholders and depositors, it implied that either the government, as the sole owner of these banks, or a large number of depositors would have to pay the cost. Since both options were not regarded as politically possible, the government envisaged gradual privatization of these banks. To promote privatization, the balance sheet of these banks was cleaned up, to begin with. For this reason, the government decided to make capital injections out of its budget to NSBs.

The government provided Rs. 40 billion for recapitalisation of 19 NSBs between the years 1991- 93. During the year 1993-1999, the Government engaged in additional recapitalisation programs for 19 NSBs by spending Rs. 164.5 billions. The capital infusion was made through the issue of bonds directly to recapitalised banks, carrying fixed coupon rates, initially at the rate of 7.75 per cent per annum, and in subsequent issues, at 10 per cent. These coupon rates were relatively lower than those applied to general government bonds at the time of issue. Such practices helped banks to clean up their balance sheets, enabling some of them to make a public issue of equity. After the introduction of banking sector reforms in 1992, an amount of Rs.17, 746 crore was infused as recapitalisation support to nationalised banks till March 31, 2002 (RBI, 2003 a, Chapter VI.pp.5).

To help avoid moral hazard problems arising from recapitalisation programs<sup>14</sup>, the RBI introduced a set of performance obligations and commitments (including deposit mobilization, improvement of investment yield, expansion and diversification of credit, reduction of NPAs, and cost reduction). These performance agreements, which were contained in the Memorandum of Understanding (MOU), were supposed to be fulfilled by NSBs receiving recapitalisation within the same year.

The RBI monitored recapitalised banks by reviewing their performance in meeting targets at the end of the year and identifying reasons for banks not achieving the targets. Later, the RBI removed the purview of the MOU arrangement from a few NSBs that had performed well and had been partially privatized.

In the year 1997-98, autonomy with respect to branch expansion, recruitment of new staff, and fresh capital expenditure was granted to NSBs provided that they had attained a capital adequacy ratio of 8 per cent, profits for three consecutive years, net NPA ratios of below 9 per cent, and minimum owned funds of Rs1 billion. These eligible banks were also exempted from the MOU exercise.

Among the recapitalised nationalised banks, some returned capital to the Government. So far, five banks have done this with the total amount being Rs69 billion. In the year 1996-97, the Bank of Baroda, Corporation Bank, and the Bank of India returned capital of Rs. 3.8 billion, Rs300 million, and Rs. 900 million, respectively. In the year 1997-98, the Punjab National Bank returned capital of Rs. 1.4 billion, while in the year 2000-01, Andhra Bank returned capital of Rs. 500 million to the government. Banks that have returned capital in the past have done so

<sup>14</sup> The recapitalisation issues nationalised banks are also coming into sharp focus. The RBI has estimated that, given the present growth rate of the economy and the extent of capital adequacy norms, the nationalised banks, barring the weak banks, would need Rs. 100 billion in additional capital in the coming five years (Jalan, 2000).

by adjusting the amount against the recapitalisation bonds issued against previous capital infusion by the government.

Simultaneously, the dividend received by the Government on the amount of capital returned was adjusted against the interest paid by the Government to the bank on the recap bonds. But recently, there has been some controversy<sup>15</sup> going on between the banks and government on the return of capital. The government has been primarily looking at reworking the existing formula of return of capital under which the banks till date have been undertaking the exercise.

### **5.1 vii: Non-Performing Assets<sup>16</sup>**

With the new guidelines, putative incomes from NPAs have no longer been treated as income. In the year 1992-93, NPAs was defined as loans in which interest has remained unpaid for four quarters. This period was shortened to three quarters in the year 1993-94 and to two quarters in the year 1994-95. The provisioning requirement has been set at 10 per cent for substandard loans, 20-50 per cent for doubtful loans, and 100 per cent for loss loans. In the year 1999-2000, the RBI also required banks to treat assets as doubtful if they had remained in the 'substandard category' for 18 months, tightening the definition from the 24-month period applied earlier. In the same year, banks were also instructed to make a 0.25 per cent provision on 'standard assets'. The information on distribution of SCBs in terms of the ratio of net NPAs to net advances is set out in (Table 5.IV.). The gross NPAs of SCBs stood at Rs. 70,904

<sup>15</sup> As some of the recapitalised banks showing good results, the Government has recently hinted that it would demand its fair share in the proposed capital return deals; the transactions might not be eventually directly linked to the prevalent market price of the respective bank shares. It is felt that linking the pricing of the returned capital to the market price could be a risky affair in view of the heavy volatility that the shares of any particular sector could show during turbulent times in the share market

<sup>16</sup> See Annex. -II. On the Prudential Norms on Income Recognition, Asset Classification and Provisioning pertaining to Advances, guidelines issued by RBI.

crore as on March 31, 2002 (RBI, 2002 a, pp. 63-68). A particular characteristic of NPAs in India is the extraordinarily wide cross sectional variations between banks. Rajaraman et al. (1999) also highlighted this in their paper. Foreign banks of Asian origin were no better than OPBs, but foreign banks originating in Europe and the US were to found have significantly lower NPAs. In terms of other ownership categories new domestic privately owned banks also had significantly lower NPAs. NSBs were the only category with higher NPAs. The number of domestic banks with net NPAs above 10 per cent of net advances declined between 1996 and 2002. The reduction in the number of banks with high net NPAs was particularly noticeable for NSBs. The number of foreign banks with net NPAs above 10 per cent, however, increased in recent years. This could be due to the fact that credit concentration (in term of credit extended to top 20 corporate as percentage to total credit) appeared to be significant for foreign banks, and secondly, due to relatively high NPA ratio of smaller foreign banks (RBI, 2002, a,p.35).

NPAs both gross and net<sup>17</sup> - as a proportion of advances/assets have declined since the early 1990s. Net NPAs as percentage of net advances in NSBs declined gradually from 10.7 per cent in 1994-95 to 5.8 percent in 2001-02. There was also a wide divergence between gross NPAs to total assets (4.6 per cent) and net NPAs to total assets (2.3 per cent) for SCBs as at end of March 2002 (RBI, 2002 a, pp. 63-68). The problems of NPAs are closely associated with banks' lending to sick companies (defined as those in which accumulated losses are equal to or exceed the total paid-up capital and free reserves).

<sup>17</sup> Gross NPA is the total outstanding of all the borrowers classified as substandard, doubtful and loss assets. Net NPA is the gross NPA minus (i) balance in interest suspense account, i.e. interest due but not received; (ii) claims received from credit guarantors and kept in suspense account pending final settlements, (iii) part payments received and kept in suspense account, and (iv) total provision held (RBI, 1997, p. 13).

In the case of NSBs, about 45 per cent of NPAs are related to advances to the priority sectors and only 3 per cent related to loans to the public sector. Out of 45 per cent of NPAs arising from priority sector lending, about 43 per cent are attributable to advances to SSIs. On the other hand, only 28 per cent of NPAs are related to advances to the priority sectors in the case of private sector banks, of which 55 per cent was attributed to advances to SSIs (RBI, 2003 e).

There was an increase in the shares of NPAs on account of small-scale industries and other priority sector as well as their overall NPAs for the priority sector (RBI 2004) .The impact of switch over to the 90-day delinquency norms was evident from the record growth in provisions made toward NPAs. The amount of provisions held against NPAs increased by 40 per cent in 2003-04 as against an increase of 21 per cent in 2002-03.

During the year, a major part of total provisions of SCBs was accounted for by NSBs, which recorded sharp increases on account of loan loss provisions, both in percentage terms and also as a ratio to total expenses. The net NPAs to net advances ratio of SCBs improved to 2.5 per cent in the first half of 2004-05 as against 4 per cent in the comparable period of 2003-04. The net NPAs ratio showed improvement for all the bank groups (RBI, 2004 c).

A common perspective is that banks' non-performing loans are influenced by structural nature of the economy. The structural nature of India's financial sector has undergone significant changes due to financial sector reforms. Government intervention in the credit market has eased significantly. Statutory pre-emption of banks' funds has been reduced through lowering of CRR and SLR. Interest rates have been deregulated in order to facilitate price discovery and foster market mechanism. Banks have been given freedom to charge lending rates.

**Table 5.IV-Distribution of Scheduled Commercial Banks by Net NPAs to Net Advances**

(Figures: Number of Banks)

| S.N.     | Bank Group       | Years |      |      |      |      |      |      |      |
|----------|------------------|-------|------|------|------|------|------|------|------|
|          |                  | 1996  | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2004 |
| <b>1</b> | NSBs             |       |      |      |      |      |      |      |      |
|          | < 10 per cent    | 19    | 17   | 17   | 18   | 22   | 22   | 24   | 27   |
|          | 10 - 20 per cent | 6     | 9    | 9    | 8    | 5    | 5    | 3    | -    |
|          | 20 per cent <    | 2     | 1    | 1    | 1    | -    | -    | -    | -    |
| <b>2</b> | OPBs             |       | 17   |      |      |      |      |      |      |
|          | < 10 per cent    | 22    | 22   | 21   | 17   | 18   | 16   | 17   | 18   |
|          | 10 - 20 per cent | -     | 3    | 4    | 5    | 5    | 4    | 3    | 2    |
|          | 20 per cent <    | -     | -    | -    | 3    | 1    | 3    | 2    | -    |
| <b>3</b> | NPBs             |       |      |      |      |      |      |      |      |
|          | < 10 per cent    | 9     | 9    | 9    | 9    | 8    | 8    | 8    | 9    |
|          | 10-20 per cent   | -     | -    | -    | -    | -    | -    | -    | -    |
|          | 20 per cent <    | -     | -    | -    | -    | -    | -    | -    | 1    |
| <b>4</b> | FRBs             |       |      |      |      |      |      |      |      |
|          | < 10 per cent    | 30    | 36   | 34   | 27   | 31   | 31   | 26   | 27   |
|          | 10-20 per cent   | 1     | 1    | 6    | 11   | 7    | 6    | 5    | 2    |
|          | 20 per cent <    | -     | 2    | 2    | 3    | 4    | 5    | 9    | 4    |

Source. Report on Trends and Progress of Banking in Indian (Various Issues), RBI.

Studies in the Indian banking sector have shown that NPAs have two components; the overhang component and the incremental component (Munniappan, 2002). The overhang component arises due to infirmities in structural and institutional environment while the increment component arises from factors internal to banks' management and credit culture. At the international level, several studies have identified a range of factors influencing NPAs of banks. Some have argued that the problem of NPAs could be due to plain bad luck attributing to business cycle, and unanticipated shocks such as business failures of producing firms, and disruption of activities due to various calamities. Another viewpoint is that the problem of NPAs

may be due to bad management by banks (Caprio and Klingebiel. 2000). According to the latter view, in an increasingly competitive financial market, economic factors have evolved as the key influences on banks' non-performing loans. In this context, various studies have underscored the role of banks' lending policy in general and the 'terms of credit' defined over, *inter alia*, cost, maturity, and collateral in influencing the movement of banks non-performing loans (Reddy, 2004 ; Mohan, 2003). In the Indian context, during the period 1993-2004, the ratio of banks' gross non-performing loans to advances has declined from about 24-25 per cent to 7-8 per cent amidst significant improvement in the lending terms. A comparative position of gross NPAs to advances ratio and the terms of credit variables including maturity (share of term loans in total advances), interest cost of deposits, operating expenses to asset ratio, total expenses to assets ratio, lending rates and credit-deposit ratio of public sector banks during the last ten years provide useful insights. There is evidence that, for the public sector banks, the gross NPA ratio has declined from 23 per cent in 1992-93 to 7.8 per cent in 2003-04. The prime-lending rate of interest of banks has declined by 500-750 basis points during period 1992-93 to 2003-04. The maturity terms of loans, defined as the ratio of term loans to advances, has improved from about 30 per cent to about 45 per cent. The credit orientation of banks, measured by credit-deposit ratio, which declined during the period 1993-99, has improved in the recent years. The proportion of secured loans has remained at high level, reflecting the stability in banks' approach to risk management. Besides, bank size induced risk element has moderated with stronger balance sheets ( RBI, 2004c ) . Rajaraman and Vasishtha (2002) in an empirical study provided evidence of significant bivariate relationship between operating inefficiency indicator and problem loans of India's public sector banks. Das and Ghosh (2003) made an empirical analysis of non-performing loans of India's

public sector banks relating to various indicators such as asset size, credit growth and macroeconomic condition, and operating efficiency indicators. Their analysis suggests that besides supporting policy environment, banks have to devise appropriate lending terms taking account the cost of credit, cost of funds, maturity of loans, credit orientation among other factors so as to induce lower defaults on borrowers.

### **5.1. viii: Debt Recovery Tribunal (DRT), Asset Reconstruction Company and Banking Ombudsman Scheme**

To cope with NPAs problem in the banking sector, the government passed the Recovery of Debts Act in the year 1993-94 and tribunals were established in major cities. The DRT has been conferred the jurisdiction to try and entertain an application for recovery of debts due to banks and financial institutions. An Appellate Tribunal has also been constituted to entertain appeals from orders of the DRT. Suits instituted by banks and financial institutions of value exceeding the sum of Rs. 10 lakhs are liable to be transferred to the Debt Recovery Tribunal.

To solve the problem of bad loans, several institutions have initiated steps towards establishment of ARCs, which takeover non-performing loans of banks and Financial Institutions (FI) at discounted rate, and manage and dispose such assets. The RBI has granted certificate of registration (CoR) to three ARCs so far out of which ARCIL has already started its operations. In order that ARCs have a sound capital base and a stake in the management of the NPAs acquired, the requirement of owned funds for commencement of business has been stipulated as not less than 15 per cent of the assets acquired or Rs.100 crore, whichever is less.

As on June 2003, out of 57,915 cases (involving Rs.82, 266 crore) filed by banks to the DRTs, 22,163 cases (involving Rs.19, 633 crore) have been adjudicated

and the amount recovered so far stood at Rs. 5,787 crore [RBI, 'Report on Trends and Progress of Banking in India' (1993-94/2002-03)].

To further reduce the NPAs in the banking sector "The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Ordinance, (SARFAESI Act) 2002" was promulgated on 21st June 2002 to regulate securitisation and reconstruction of financial assets and enforcement of security interest and for matters connected therewith or incidental thereto. The provisions of the Ordinance would enable banks and financial institutions to realize long-term assets, manage problems of liquidity, asset liability mismatches and improve recovery by exercising powers to take possession of securities, sell them and reduce non-performing assets by adopting measures for recovery or reconstruction. Since the commencement / enforcement of the SARFAESI Act till end-June 2003, NSBs have issued 33,736 notices for an outstanding amount of Rs. 12147 crore and have recovered Rs.499.20 crore from 9,946 cases (RBI, 2003 b, chapter-3, and para-3.67).

RBI came up with the Banking Ombudsman scheme in the year 1995 with the objective to provide a forum for the redressal of grievances against deficiency in banking services, concerning loans and advances and other specified matters. RBI has set up the offices of the Ombudsman at various places in India to provide speedy settlement of complaints pertaining to the banking services. This was also done to ensure that the directions and circulars issued by it are implemented and complied with by the banks.

The RBI has introduced a new Banking Ombudsman Scheme, 2002 with wider coverage and enlarged authority/functions to the ombudsman. The scheme has been revised to enable the Banking Ombudsman to function as an arbitrator on references to him of disputes either between banks and their customers or between

two banks. The value of the subject matter of individual disputes under arbitration will not exceed Rs.10 lakhs. The new Banking Ombudsman Scheme, 2002 covers all the regional rural banks in addition to all commercial banks and scheduled primary co-operative banks (RBI, 'Report on Trends and Progress of Banking in India' (1994-95/2002-03)).

## **5.2: Technologisation in Banking Sector**

We have been witnessing from the mid nineties the phenomenon of widespread use<sup>18</sup> of computers and communication technology in the Indian banking sector. This has result in faster movement of funds within nations and across borders. The financial liberalization within the banking sector has opened new opportunities of growth for techno-savvy banking institutions. IT is providing the banks with access to wide range of information<sup>19</sup> and helping in the effective use of that information. Banks are functioning in a dynamic environment; IT plays a crucial role in areas like information about financial markets, and helps in improving the transparency in operation and better assets /liability management. The banking sector has, over the past few years, become a forerunner in automation. The trend, which began with the arrival of the foreign banking institutions, found favor with Indian banks, which have been investing aggressively in IT-enabling their operations.

<sup>18</sup>If we look at the brief history of computerization in the banking sector, RBI installed its first computer in 1968. But banks like United Commercial Bank and Standard Chartered Bank etc had installed accounting and other machines before 1966.Operation such as payroll had been computerized fairly early on. Some head offices began to use computers by the beginning of the 1980 (IB A, 1981).

<sup>19</sup> One of the area were IT is going to play a dominant role is with regard to curbing of NPAs. With a view to provide an institutional mechanism for sharing of information on borrowers/ potential borrowers by banks and Financial Institutions, the Credit Information Bureau (India) Ltd. (CIBIL) was launched. The Bureau provides a framework for collecting, processing and sharing credit information on borrowers of credit institutions. Housing Development Finance Corporation Ltd. (HDFC), State Bank of India (SBI), Dun & Bradstreet Information Services India Pvt. Ltd. (DB) and Trans Union International Inc. (TU) signed the Shareholders' Agreement to subscribe to the equity of the Credit Information Bureau (India) Ltd. (CIBIL) the first credit information bureau being established in India (RBI, 2003 b).

Whether it is telephone banking, the ATM revolution, the move to Internet-based transactions, or banking through the mobile phone, technology has been the choice of the banking sector to enhance value-added offerings to customers.

Banks in India, including Standard Chartered, Grindlays, the Hong Kong and Shanghai Bank, Bank of Tokyo, Bank of America, ICICI Bank, HDFC Bank, UTI Bank, State Bank of India, the Punjab National Bank, the ABN Amro Bank etc., are all deploying multiple delivery channels, including ATM networks and Internet-based banking to provide better and more efficient services to customers. IT spending by the Banking and Financial Sector Industry (BFSI) segment, jumped by a healthy 18 percent during 2002-03 to touch Rs. 60 billion (US\$1.24 billion). Indian banks are estimated to spend over Rs. 15 billion on software and hardware for core and Internet banking services, on an average (Nasscom, 2004). The BFSI segment accounts for around 10 percent of the total IT industry and about 28 percent of the domestic IT market. Spending by the BFSI segment is expected to jump to Rs. 98 billion during the 2004-05 fiscal (ibid.). Deployment of hardware, software and connectivity infrastructure continues to remain the focus of this sector, which has also actively implemented CRM (Customer Relationship Management) solutions to add value to the customer experience.

As part of restructuring of the banking sector, special emphasis has been accorded to improvements in payment and settlement systems. Prominent among the measures initiated in these areas are introduction of Electronic Funds Transfer (EFT), Real Time Gross Settlement System (RTGS), Centralized Funds Management System (CFMS), and the Structured Financial Messaging Solution (SFMS). The SFMS is the backbone for all message-based communication over the Indian Financial Network (INFINET). A holistic approach has been adopted towards designing and

development of a modern, robust, efficient, secure and integrated payment and settlement system taking into account certain aspects relating to potential risks, legal framework<sup>20</sup> and the impact on the operational framework of monetary policy. The approach to the modernisation of the payment and settlement system in India has been three pronged:(a) consolidation, (b) development and, (c) integration (Jalan 2002a, pp.80-81). This section gives a brief summary of the progress made in the usage of IT and how it is affecting the conduct of the Indian banking sector.

- a) Electronic Funds Transfer (EFT) - RBI introduced the EFT Scheme in 1995 for quick movement of funds across branches of banks. Currently the EFT scheme is available at thirteen centers (Ahmedabad, Bangalore, Bhubaneshwar, Chandigarh, Chennai, Guwahati, Hyderabad, Jaipur, Kolkata, Mumbai, Nagpur, New Delhi and Thriuvananthapuram) where RBI manages the clearing houses. With a view to enhance the coverage of EFT scheme, the RBI has enhanced the limit for the individual transactions under the EFT scheme from Rs. 5 Lakhs to Rs. 2 Crore per transaction. (From: 1.10.2001.)<sup>21</sup> The growth in usage of non-conventional modes of retail funds transfer system has been substantial. EFT<sup>22</sup> using the RBI-EFT scheme has shown the highest jump with a ten-fold rise both in terms of volume and value during 2002-03 as compared with 2001-02 (RBI, 2003, Chapter-II, para-2.120).With affect from November, 2004 the existing limit on EFT transaction has been removed .

<sup>20</sup> The Information Technology Bill 2000 has been passed in parliament and has come into effect. The IT Bill is aimed at bringing in structure, legal validity and authenticity for transacting online.

<sup>21</sup> The processing charge for EFT collected by RBI from the banks has been reduced from Rs. 5 to Rs. 2 per transaction with effect from 01.01.2003.

b) Real Time Gross Settlement System (RTGS)<sup>23</sup> -The work on operationalisation of RTGS system has been continuing for long time. The live operations of RTGS system, which commenced on March 26, 2004, has since stabilised with 25 banks. RBI expected that most of the commercial banks would be on the RTGS system by the year-end 2004 (RBI, 2004a). With a view to bringing about further institutional development and improve the operational efficiency of the financial system, the RBI has been developing the RTGS system and this has since gone live from 2004. For the time-being inter-bank transactions are being put through select banks, which have participated in the trial run and efforts, are being made for entry of other banks after assessing their readiness. Customer related transfers would be enabled later under the system. The system which was initially started with four banks, besides the RBI, as participants, now has about 94 participants, comprising of scheduled commercial banks and primary dealers, with average daily turnover of about Rs.24, 000 crore. As on November 19, 2004, 51 banks offer RTGS payment services through 1,451 branches located in 152 cities and towns. The coverage will be extended to about 500 centres comprising commercially important centres, capital market intensive centres and e-commerce centres (RBI, 2004 c).

<sup>22</sup> With a view to promoting electronic fund transfer (EFT) and encouraging electronic clearing service (ECS), the RBI has proposed to waive service charges on banks for both ECS and EFT transactions up to March 31, 2006 (RBI, 2004 a).

<sup>23</sup> A working group on electronic funds transfers for capital market consisting of representatives of SEBI, stock exchanges, National Securities Depository Limited and Insurance Regulatory and Development Authority has been constituted by RBI. The Group would assess the existing EFT facilities and make recommendations for increasing its coverage to facilitate T+1 settlement {transaction in shares, bond, or mutual fund for the capital market plus one day settlements}(RBI, 2004a.).

- c) Centralised Funds Management System (CFMS) -The CFMS would enable the funds and treasury managers of commercial banks to obtain the consolidated account-wise, center-wise position of their balances with all the 17 Deposit Accounts Departments (DAD) of the Reserve Bank. The system has been tested prior to installation and phase-wise implementation commenced from November 2001. The CFMS would enable better funds management by constituent current account holders of the Reserve Bank.
- d) Structured Financial Messaging Solution (SFMS) -At the base of all inter-bank message transfers using the INFINET is the SFMS. It serves as a safe, secure communication carrier built with templates for transmission of intra and inter-bank messages in fixed message formats. SFMS comprises the central server in the form of a hub located at the Institute for Development and Research in Banking Technology (IDRBT), Hyderabad and individual bank gateways to which the branches of the banks is connected with a provision for banks to have multiple bank level gateways. The SFMS is to provide for all inter-bank transactions to be stored and switched at the central hub, while intra-bank messages will be switched and stored by the bank gateway. Adequate security in the form of smart card authentication apart from the Public Key Infrastructure (PKI) is an integral part of the SFMS.
- c) Electronic Clearing Service (ECS)-Nationalised banks are offering ECS to the corporate customers; many corporates are currently availing the ECS facility for mass / wholesale payments, such as interest / dividend to depositors / investors directly to their accounts without resorting to paper instruments. ECS is a great tool to customer service and also to the banks since frauds through paper instruments are eliminated. While ECS (credit) transfers

recorded a transactions volume of 198.64 lakh during the period April 2004-October 2004, ECS (debit) recorded a volume of 75.95 lakh transactions and SEFT volume rose to 1.71 lakh- all of which indicate increasing customer acceptance for electronic modes of funds movement. RBI has decided to remove the existing limit per transaction for ECS with effect from November 1, 2004 so as to facilitate the usage of these facilities on a larger scale and to take care of the various segments of the financial sector, including the securities markets.

**Table 5.V- Transactions through Electronic Payment Methods in Indian Banking sector between the period 2003-04**

| <b>Type</b>  | <b>Volume of transactions<br/>(000's)</b> | <b>Growth in volume over<br/>Previous ( per cennt)</b> | <b>Value of transactions<br/>(Rs. crore)</b> | <b>Growth in value over<br/>Previous ( per cent)</b> |
|--------------|---|--|--|--|
| HCS-Credit   | 20,315                                    | 8.3  | 9,676  | <b>41.0</b>  |
| ECS-Debit    | 7.874                                     | 73.5   | 2,241  | <b>116.9</b>   |
| EFT          | <b>775</b>                                | 109.5  | 15,711                                       | <b>575.2</b>   |
| Credit Cards | 97,405                                    | 118.6  | 17,268                                       | 128.6  |
| Debit Cards  | 86,379                                    | 138.6  | 18,513                                       | 132.2  |
| Smart Cards  | 1.717                                     | 101.0  | 89   | (-56)  |

Source: RB I (2004 c).

- f) Cheque Clearing-Magnetic Ink Character Recognition (MICR) based cheque-clearing accounts for the bulk of the value of cheques processed in the country.
- g) Branch Automation- While NPBs and FRBs have gone for total networking of branches and has connected almost all their branches with network as on March 31, 2000, the pace of networking of branches is slow in case of NSBs and OPBs. The number of networked branches was less than 1 per cent as on March 31, 2000 in case of these banks. As indicated in the Table-5.V though the percentage of NSBs and OPBs is very low as compared to NPBs and FRBs, this proportion has been progressively increasing over the last five years. NPBs and FRBs have fully computerised almost all their branches. The

banking sector has clearly taken cognizance of the imperatives of financial liberalisation and has therefore attempted to computerise branches that are located in commercially important centers across the country and accounting for major share of banking business.

**Table 5.V1 -Fully Computerised Branches as Percentage of Total Branches**

(Figures in Percent)

| Bank Group | Year   |        |        |        |        |
|------------|--------|--------|--------|--------|--------|
|            | 1996   | 1997   | 1998   | 1999   | 2000   |
| NSBs       | 3.14   | 5.26   | 7.84   | 10.31  | 13.79  |
| OPBs       | 8.38   | 12.01  | 16.60  | 23.78  | 30.74  |
| NPBs       | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| FRBs       | 97.89  | 97.96  | 98.02  | 97.73  | 97.87  |
| SCBs       | 3.73   | 6.01   | 8.79   | 11.62  | 15.46  |

Source: RBI 2002 b, Table -4, p. 855

Following the order of Central Vigilance Commissioner mandating banks to computerise 70 per cent of the total banking business in the country by January 2001, computerisation drive has gathered momentum in banking industry especially in NSBs (see-table-5. VI) . At the end of 30<sup>th</sup> September 2002, of 13,078 branches of NSBs accounting for 30 per cent of total number of their branches have been fully computerised. Banks have attempted computerisation at different levels viz. branch offices, service branches , regional / zonal offices and head office. The impact of computerisation may have to be viewed accordingly. For example, computerisation of service operations has certainly contributed to the reduction in the reconciliation problems in the clearing operations. Similarly, the use of IT at regional offices and head office levels is improving the functioning of banks. In the year 1997

<sup>24</sup> This is the branch, which deals in one of the specific areas mentioned- (a) Industrial Finance branches, (b) Overseas branches, (c) SIB/SSI branches (d) Treasury branches, and (e) NRI branches.

barely 10 per cent of the branches of NSBs were computerized, which has risen to 30 per cent in the year 2002 (see Table-5.VII).

**Table 5.VII - Computerisation of Branches in NSB -Some Statistics**

(Figure in Number)

|   |        |
|---|--------|
| Total Number of Branches                            | 46528  |
| No. Of Fully Computerised Branches                  | 13,078 |
| On-line terminals at Corporate sites installed      | 5980   |
| Branches covered under RBI's EFT Scheme             | 3978   |
| Corporate Customers availing of ECS-Credit Clearing | 3281   |
| Corporate Customers (Utility Services) under ECS    | 72     |
| Nodes on internal Captive network in Banks          | 3965   |
| Branches connected to other Networks                | 2,658  |
| Nodes on VSAT Network for Industry                  | 3876   |
| Branches connected to SWIFT                         | 1107   |
| E-Mail Connections                                  | 14576  |

Source: Source: Report on Trend and Progress of Banking in India (Various Issues), **RBI**; Data base on Indian Banks, IBA; Performance Highlights of Public, Private and Foreign banks (Various Issues);,IBA ;Indian Banking Year Book (Various Issues), **IBA**.

#### 5. VIII - Computerisation of NSBs Branches between the periods 1987-2002

(Figures in Number)

| Year                  | 1997  | 2002  |
|-----------------------|-------|-------|
| Computerised Branches | 3383  | 13078 |
| Branches              | 44759 | 46528 |

Source: Source: Report on Trend and Progress of Banking in India (Various Issues), RBI; Data base on Indian Banks, IBA; Performance Highlights of Public, Private and Foreign banks (Various Issues), IBA; Indian Banking Year Book (Various Issues), **IBA**

### **5.3: Conduct in Retail Segment of the Indian Banking Sector**

The conduct in the retail segment of the Indian Commercial banking sector **are** discussed from four aspects:

5.3 i: Market Segmentation

5.3 ii: New Product / Service

5.3 iii: New Delivery System

5.3 iv: Promotional Objectives.

#### **5.3 i: Market Segmentation**

The Indian banking customers' needs and wants are diverse. Satisfying these wants requires a successful marketing segmentation of retail banking segment. Banks are assessing the different potentials and different needs within the customer base. The idea behind the use of segmentation is that each group / segment is more homogeneous with specific financial need than the overall market. Before we identify and discuss some of the segmentation approaches, it is important to note that segmentation is a creative process and involves a search for the variables that produces the most effective bases for dividing up an aggregate heterogeneous retail banking market into smaller and homogeneous segments. Given below are some of the segmentation variables currently used by the banks:

- a) Geographic Segmentation -Banking organisations have segmented the market into different geographical markets, such as urban, semi urban, rural areas. Most of the foreign and new private banks are operating only in urban areas with a limited or no presence in rural area \*.

<sup>25</sup> Only two branches of FRBs are operating in rural area. (Mathur, 2002, p. 2250).

- b) Demographic Segmentation - Banking organisations have segmented the retail market on the basis of demographic variables such as age, family size, family life cycle, gender, income, occupations, and education. Banks like Corporation Bank identified the senior citizen as a potential segment that requires different products and introduced saving account, where the account fetched 0.50 per cent more interest rate compared to other saving account. Gender segmentation has long been applied in other sectors, but retail banking segment has seen some opportunity; Andhra Bank has introduced special wedding loan scheme for women customers.
- c) Behavioral Segmentation -Banks has segmented the market on the basis of knowledge, attitude towards the banking products and service. The floating rate schemes for housing loan introduced by the banking organization were for this segment.

#### 5.3 ii: New Products / Services

Growing customers' demand and fear of loosing market share in a highly competitive market is leading banks in India to come up with new products and services. Banks in India are collaborating with hardware, software, telecommunications and other organizations to introduce new and innovative products. One of the new products that have emerged in the banking sector in the last decade has been the usage of credit card. In recent years the large scale usage of cards by customers of banks in India has been witnessed only during the last decade. The first entrant in the card sector was the credit card, which has witnessed large-scale acceptance as a medium of usage at many Points of Sale (PoS), across different merchant establishments.As at the end of October 2004, 112.02 lakh credit cards have been issued by banks to their customers ( RBI. 2004 c ) . Almost all the categories of banks issue credit cards, with the largest

shares being accounted for by three large banks in the country - ICICI Bank, Citibank and State Bank of India. Most of the card based payment authorisations take place in an online mode, with the reach covering about 10 lakh merchant establishments across the country. Credit cards have found greater acceptance in terms of usage in the major cities of the country, with the four major metropolitan cities accounting for the bulk of the transactions. Issue of credit cards by banks are subject to their own internal prudential norms such as income recognition and asset classification. The RBI has introduced various liberalisation measures such as the permission for banks to issue international credit cards to resident Indians. Apart from being a source of revenue for banks, credit cards play an important role in the country in reducing the cost of currency management, increasing the safety of transactions, providing for traceability of transactions, *etc.* Banks have been issuing other types of cards also like Debit cards, ATM cards and smart cards. In recent years, the growth of debit cards issuance and usage have gained greater momentum. As at the end of October 2004, banks in India had issued 378.52 lakh cards. Given below are some of the innovations in retail banking market undertaken by various banks. [Primary source of the below mentioned information came out of the branch managers survey undertaken by researcher.]

- a) The Dutch ABN Amro bank has tied up with the Barista chain of coffee shops to open its first Ban cafe in Bangalore. Now, there are three others, two in Delhi and one in Kolkata. While the bank branch attached to the coffee shop opens at 1000 hrs and closes at 1900 hrs, the coffee shop is open from 0730 hrs to 2300 hrs. Here, a customer can walk in anytime and look at the interactive screen on insurance and mutual fund products and strike deals for car loans or personal

loans for foreign travel as the customer sips hot coffee with a travel agent sitting next to him.

- b) State Bank of India has tied up with Indian railways to offer its customers online railway booking.
- c) SBI has introduced a product called 'Teacher Plus', where the teaching community is offered a bundle of products like home loans, car loans, and personal loans and so on at a concessional rate. Similar products have been subsequently introduced for lawyers, doctors and policemen.
- d) HDFC Bank introduced the concept of supply chain management where, manufacturing company, product distributors, suppliers and end users are kept in the same loop.
- e) Another new private bank, IDBI Bank, is also playing hard to feature on the innovation index. Two years ago, for instance, it introduced instant account opening to its customers. The account holders are given account numbers, ATM cards and cheque books as soon as they filled in their account opening forms.
- f) IDBI has introduced 110 per cent home loans. IDBI Bank's home loan allows customers to buy their home and use the additional 10 per cent to furnish it and add amenities immediately.
- g) IDBI Bank has introduced 'ATM Next' -- possibly the first service of its kind in India. The bank downloads information from the Internet and makes it available to its customers at the ATMs. This includes live cricket scores, news headlines, local movie listings and emergency contact numbers.
- h) Home loans seem to be one area where most of the innovations are taking place. At least three financial intermediaries' -- HDFC, ICICI Bank and HSBC -- claim

to have been the first to start home loans with floating rate interest. Today, **most** of the home loans are disbursed at floating rates.

- i) Standard Chartered Bank has linked its' customer's home loan account with a current account, where the principal amount of the loan gets reduced on a daily basis as the excess cash in the current account automatically flows in towards repaying the home loan.
- j) Car loans are another turf where competition is forcing innovation. For instance, Standard Chartered is offering loans of up to 75 per cent of the value of a car less than five years old. Even though it is classified as a personal loan, the rate is cheaper because the loan is secured against the car and the money can be used for anything.
- k) Standard Chartered's 'M-alert' is a similar product, but with a difference. Here, the country's largest foreign bank alerts its customers on the exchange rates twice a day. The objective is to meet clients' treasury requirements.
- l) A StanChart customer can also access his account through the mobile phone by sending an SMS. ABN Amro uses mobile phones to alert customers on their credit card transactions. 'Card Alerts', which come in the form of an SMS, are **not** necessarily a customer demand; Mobile phones are playing an important role in Indian banking -- both directly and indirectly. It is increasingly being used both as a banking channel and for other services.
- m) While StanChart sends mini-account statements through SMS, Citibank and IDBI Banks e-mails its clients' statements. ABN Amro, on its part, is offering a statement analyzer which allows a customer to analyze his spending pattern -- how much money he has spent on food, entertainment, education, traveling and **so** on.

- n) Citibank launched possibly the greatest innovation in Indian banking a few years back when it decided to take the bank to the suburbs by introducing the 'Suvidha' scheme in Bangalore, which was later expanded to other metros. Low net-worth individuals were given access to sophisticated multi-channel banking through Suvidha. Citibank was the first to launch debit card in India through this scheme.
- o) Citibank in India has launched a product called 'Junior Package', where the bank's specially trained investment counselors help parents to create wealth to meet the long-term needs of their children through regular investment schemes. It also allows the child to learn money management through India's first child ATM/debit card.
- p) ICICI bank customer gets SMS alert as soon as a transaction takes place in the individual account.
- q) One of the innovative uses of ATMs is that, customers can buy and sell mutual funds through ATMs. HDFC Mutual Fund has launched Any Time Mutual Fund (ATMF) that enables the investor to buy/sell mutual fund units through HDFC ATMs. A special card is issued to the investor, which is something like debit/credit card.

### 5.3 iii: New Delivery Systems

In the contemporary competitive environment the channel through which banks conduct business assumes tremendous significance. Recently, banks in India used only one service channel i.e., the Branch, but with the coming of newer technologies, many channels came into the picture that have led to the emergence of multiple channels through which customers are serviced. The four major new channels which

are being introduced in the Indian banking sector are - (a) ATMs, (b) Internet Banking , (c) Call Centers and, (d) E-payments and Bills.

- a) Automated Teller Machines (ATMs)- Just a decade ago, an ATM was an absolute novelty in Indian bank branches. But with the entry of aggressive NPBs in 1995, ATMs have mushroomed in the Indian cities. Caught in a war of survival, NSBs are also moving up a gear in embracing technological innovation. One such innovation is the ATMs, today's most preferred mode of delivery channels in almost all banks. All the new private banks (ICICI Bank, UTI Bank and HDFC Bank) are deploying ATMs aggressively and have seen their customer base swell. Subsequently, even NSBs are following suit with an increasing number of ATMs. ATMs form an integral part of the total computerisation plan of banks. ATMs are based on computer technology which can perform a variety of functions, the primary one being cash dispensing. ATMs are instrumental in providing "high technology front end" service to the customers. The NSBs in India do not charge, except minimum balance, (around Rs. 1000) for usage of the service. Banks are using ATMs as a tool to acquire new customers and retain them by providing a range of services. Banks are slowly realising the ATM's potential as a serious marketing tool (Venkatachalam, 2002, pp.595-600). Banks are also earning sizeable revenue by using ATMs to advertise products of other companies. A few banks are offering utility bill payment facilities on their ATM machines too. Apart from that, banks are providing a variety of services ranging from booking air , railway and cinema tickets to dispensing of mobile phone smart cards as part of the strategy to attract customers and thereby earn

extra revenue for the banks. We are witnessing two distinct trends—NSBs are installing ATMs to help ensure that they do not lose customers, and to cut costs, while NPBs and FRBs are using them to acquire and service acquire new customers. Again, the availability of ATM branches helps banks to service high net worth customers and increase their profit margins. These trends reflect the dynamics of market adjustments within the banking sector. Recognizing this opportunity, SBI and associates, NPBs and FRBs have installed many ATMs, while other NSBs and OPBs have been slow in setting up ATMs as reflected in the Table 5.IXA and 5.IXB. However, it may be seen that these banks have progressively increased the number of ATMs in the period 1996-2000. An interesting trend is that FRBs have aggressively increased their ATM presence in the country and now have more ATMs than branches, which may be indicative of the branching strategy they would pursue in the coming years. With the IB A promoted 'Swadhan' (Shared Payment Network Services) having wound up operations in December 2003, banks have been forming their own ATM network-sharing alliances. In the mean time banks are aggressively going for sharing of ATMs network. SBI, ICICI Bank and HDFC Bank have come together to share their ATM networks, making it the biggest such alliance so far in the fiercely competitive Indian banking sector. Recently, Canara Bank, Central Bank of India, Indian Overseas Bank, UCO Bank and Union Bank of India have launched a co-branded ATM network called 'Cash Online'. The Bank of India, Union Bank of India, Indian Bank, United Bank of India and Syndicate Bank has launched a shared ATM network scheme for customers called a 'Cash Tree'.

Another group includes Citibank, the IDBI, Standard Chartered Bank and UTI Bank. Sharing of ATM network will minimise geographical overlap of ATMs and provide better coverage to customers also helps the banks to develop economies of scale and minimise the cost of servicing customers.

**Table 5.IXA - ATMs as Percentage of Total Branches**

(Figures in Percent)

| Bank Group | 19%   | 1997  | 1998  | 1999  | 2000          |
|------------|-------|-------|-------|-------|---------------|
| NSBs       | 0.11  | 0.24  | 0.38  | 0.49  | 0.80          |
| OPBs       | 0.00  | 0.11  | 0.15  | 0.29  | 0.39          |
| NTBS       | 89.19 | 87.67 | 91.53 | 89.01 | 95.09         |
| FRBs       | 14.74 | 55.10 | 72.28 | 90.91 | <b>113.83</b> |
| SCBs       | 0.21  | 0.49  | 0.76  | 1.0   | <b>1.54</b>   |

Source: RBI, 2002 c. Table -5, p. 856

**Table - 5.IXB - Showing the ATMs Installation by Major Banks as on 31st August 2003**

| Banks                | Number of ATMs | Average Daily Transaction (Crore) |
|----------------------|----------------|-----------------------------------|
| SBI                  | 2064           | 30                                |
| ICICI BANK           | 1700           | 285                               |
| UTI BANK             | 975            | 120                               |
| IIDFCBANK            | 950            | 220                               |
| CORPORATION BANK     | 600            | 35                                |
| PUNJAB NATIONAL BANK | 300            | 40                                |
| IDBI BANK            | 286            | 220                               |
| GLOBAL TRUST         | 267            | 100                               |
| CITIBANK             | 179            | 250                               |
| BANK OF INDIA        | 160            | 120                               |
| CENTURION BANK       | 141            | 100                               |
| HSBC                 | 130            | 200                               |

Sources: Report on Trend and Progress of Banking in India (Various Issues), RBI; Data base on Indian Banks, IBA; Performance Highlights of Public, Private and Foreign banks (Various Issues), IBA; Indian Banking Year Book (Various Issues), IBA; Annual Reports (Various Issues) of Respective Banks; and BECON Conference Proceedings (Various Issues) IBA.

b) Internet Banking -With the popularity of PCs, with an easy access to Internet and World Wide Web (WWW), banks are increasingly making use of Internet as a channel for receiving instructions and delivering their products and services to their customers. Although the range of products and services

offered by banks through Internet in India is varying widely both in their content and sophistication<sup>26</sup>, Banks in India are at different stages of the web-enabled banking cycle. Still many banks in India are still in the initial stage of Internet banking operations. With gradual adoption of IT many banks are putting up their web-sites that are providing general information of the respective banks, its branches location, services available like, loans and deposits products, application forms for downloading and e-mail option for enquiries and feedback from bank. It is largely a marketing or advertising tool. Some of the banks are also permitting customers to interact and transact electronically with them through the Internet. Such services include request for opening of accounts, requisition for cheque books, stop payment of cheques, viewing statements of accounts, querying on status of requests, instructions for opening of letters of credit and bank guarantees etc. Certain banks like ICICI bank have gone a step further in their transactional service of Internet banking by allowing transfer of funds by an account holder to any other account holder of the bank. ICICI has gone a step further by offering the facility of receipt, review and payment of bills on-line. These banks have tied up with a number of utility companies. Banks providing Internet banking services has 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

<sup>26</sup> Broadly, the levels of banking services offered through Internet in the sector can be categorised in three types: The basic level service are those banks' websites which are disseminating information on different products and services offered to customers and members of public in general. In the next level are simple transactional websites of certain banks which are allowing customers to submit their instructions, applications for different services, queries on their account balances, etc, but do not permit any fund-based transactions on their accounts. The third level fully transactional websites of certain banks which are allowing the customers to operate on their accounts for transfer of funds, payment of different bills, subscribing to other products of the bank and to transact purchase and sale of securities, etc(IBA, 2002a,p.158).

balance and charges, authority to the bank for carrying out transactions performed through the service, liabilities of the user and the bank, disclosure of personal information for statistical analysis and credit scoring also, non-transferability of the facility, notices, termination etc.

- a) Call Centers - Dramatic changes are taking place in the retail segment of Indian banking sector. Banks are introducing call centers to handle routine customer transactions and inquiry about specific products or services. All the major banks in the sectors are operating calls centers.
- b) E-payments and Bills- In fact, it seems quite surprising that the electronic bill payment market has not picked up in India when vast potential exists, after all, India's with its humungous population, any in-person method of bill payments definitely brings lots of hardship to customers. In Indian metro cities, this facility has seen some growth. Customers are using this facility for paying utilities bill like; telephones, power, cellular services, and insurance, etc. Since customers would prefer a service that offers the ability to pay bills for different utilities, service providers offering consolidated bill payment are expected to dominate this Electronic Bills Payment (EBP) market. Players like Billjunction (from the ICICI group), BillPay (from the HDFC stable), Citibank, and even SBI online are now the leaders in this area, while some smaller players are starting to make their presence felt. EBP involves payment over the Internet, a slightly complicated prospect in India, considering the level of net penetration here. Currently Billjunction.com and BillPay have tied up with telephone, electricity supply provider and also insurance sector. Both these players have a significant presence in almost all major regions in India. ICICI Bank, HDFC Bank, and Citibank have undoubtedly started this service

as a value added service, with other banks following them. In order to get customers used to the concept of EBP, most of the providers are charging a nominal amount for the service provided. Billjunction uses RBI's Electronic Clearing Service (ECS) mechanism to enable bill payments. There is no mandatory requirement of an ICICI Bank account for customers using this facility. However, HDFC Bank still has an advantage in that, the BillPay facility is a free model. Unlike other banks, BillPay is not restricted to payment of bills over the Internet alone. HDFC Bank customers can also pay their bills through the ATM, landline phone using Phone Banking and SMS-based Mobile Banking, apart from the Net Banking service. Banks like ICICI Bank, HDFC Bank and Citibank have realised that EBP is a strategic decision and not just a value-added service. Despite the growth of EBP in India, there have been many issues which have affected the EBP market. One of the main issues is undoubtedly the low level of Internet penetration and overcoming customer disdain for online payment. In addition, there are technology issues like providing online instantaneous credit to the bank account of the utility company, and confirmation from utility to customer on completion of a transaction.

### **5.3 iv: Promotional Objectives**

The selection of communication medium would begin with formal consideration of communication objectives. Few banks in India have yet to begin major promotional campaigns that might compare to those by other industries. Advertising expense has the largest share in the total promotional expenses of the Indian banking sector. In the

following section we briefly describe; advertising, public relations, sales promotion, personal sales and, increasing role of telephone marketing used by Indian banks

- a) Advertising- It is the most economical mode of communication for most of the banks in India. Both institutional advertising and product-oriented advertising can be seen in the advertisement campaigns. The most meaningful advertising goals that can be seen in the advertisement campaign are related to creating and increasing customers' awareness of a new products / services. The bottom line goal is to increase the deposit base and retail loan portfolio for the banks. Regarding the media selection during the last decade, television advertising has been more relied on compared to print advertisement. The other important advertising tool used by banks is outdoor advertising. Billboards and signs have long been in lead for promoting banking products and services. Banks especially new private sector banks and foreign banks are also using direct mail to promote products and service.
- b) Publicity-It is extremely important tool for Indian banks, both as a part of a particular promotional campaign and as a component of banks overall promotional and positioning strategy. In Indian banking sector publicity carried out by banks may be classified -informational release viz.; RBI relaxation on foreign exchange norms for resident Indian, special events like conducting housing loans market for retail customer, and participation in news worthy activities.
- c) Personal Sales- Many banks in India have started to emphasis on personal sales to the customers. Business quotas and in some cases sales training are becoming more common in the Indian banking sector. One more important change has been seen in the re-establishment of tellers as customer service

representatives. Another being the growing use of Direct Sales Associate (DSA) for selling retail products.

- d) Sales Promotion-Sales promotion in Indian banking sector usually includes point of purchase display in bank branches. Some banks have started premium account where individual is insured by a large amount. Recently as a part of sales promotion strategy, FRBs have started providing merchandise to customers.
- e) Tele- Marketing - NPBs and FRBs have started using telemarketing to sell products and service to customers in India. Though marketing of products and services through this medium is in its infancy stage.

Marketing is very crucial for the success of any banks. These activities cover research into customer attitudes in the sector, to the bank products or services, and also the promotion of the products or services to potential customers.

Advertising, since, it focuses on the second of the two activities, is only one part of marketing behavior. When banking organization advertises, why some people start using more of their products or services compared to other competitors. Some of authors have argued that advertising is solely for the purpose of persuasion; customer's preferences are manipulated such that they buy goods or services that give little utility. Another alternative view is that, advertising is a source of information. According to this view, market works if best it customers are informed to make optional choice (Krugman, 1975, pp.96-103).

In this section we are not discussing the mechanism of how banks in India set their advertising budgets. We concentrate on determinants of advertising activity in Indian banking sector. From the (Table- 5.IX) given below, it is apparent that amount

spend by the various banking groups for advertisement has increased over a period of time and the bulk of spending is done by foreign and private banks.

**Table 5.X -Advertising Expenditure by Banks**

(Figures in Crore)

| Banking Group | Year |      |      |      |
|---------------|------|------|------|------|
|               | 1987 | 1992 | 1997 | 2002 |
| NSBs          | 6    | 23   | 51   | 93   |
| OPBs          | @    | 4    | 17   | 19   |
| NPBs          | -    | -    | 7    | 58   |
| FRBs          | @    | 24   | 103  | 147  |
| Total         | 6    | 51   | 168  | 297  |

(-) Not Applicable/to) Negligible (Less <1 Crore)

Source: Source: Report on Trend and Progress of Banking in India (Various Issues), RBI; Data base on Indian Banks, **IBA**; Performance Highlights of Public, Private and Foreign banks (Various Issues), IBA; Indian Banking Year Book (Various Issues), IBA

To sum up the implication of reforms and technology for banking organizations, we can conclude that:

- a) Owing to banks' poor lending strategy and lack of risk management under government ownership, many banks became unprofitable, inefficient, and unsound. Against this background, the government launched comprehensive banking sector reforms in 1991.
- b) Interest rates became flexible with respect to almost all term deposit rates and lending rates. At present, the only domestic deposit rate that continues to be prescribed is the savings deposit rate (3.5 per cent on March 2003). Banks are no longer required to obtain prior concurrence of the IBA or prior approval of the RBI for introducing new deposit mobilization schemes, except for NRI deposits

- c) CRR declined from 15 per cent in 1991 to 5 percent in 2004. The SLR also declined, from 38.5% in 1991 to 25% in 1997, at which level it has remained till date.
- d) Deregulation in lending rates has also been accompanied by liberalisation of various quantitative restrictions on credit allocation for giving banks more operational freedom to evolve their own methods of assessing working capital requirements of borrowers.
- e) NSBs were allowed to rationalise some branches, while branch licensing was policy was decentralised.
- f) Various prudential norms and more appropriate accounting standards were introduced. Better accounting standards have revealed the extent of banks NPAs problems. This not only increased the pressure on them to improve their balance sheets, but also called for appropriate government policies to deal with NPAs problems.
- g) The number of domestic banks with net NPAs above 10 per cent of net advances declined between 1996 and 2004. The reduction in the number of banks with high net NPAs was particularly noticeable for nationalised banks.
- h) To cope with NPAs, the government passed the Recovery of Debts Act in the year 1993-94 and, SARFAESI Act- 2002 has been promulgated.
- i) With the introduction of Capital to Risk-Weighted Asset Ratio (CRAR) norms in 1992, significant improvement was noticed in the capital position of banks operating in India. While in 1995-96, 75 out of 92 banks had a CRAR of above 8 per cent, as on March 31, 2004, except two banks, all other banks operating in India had CRAR above the statutory minimum level of 9 per cent.

- j) The government recapitalised nationalised banks and partially privatised some public sector banks. After the introduction of banking sector reforms in 1992, an amount of Rs.17, 746 crore was infused as recapitalisation support to nationalised banks till the year 2003. Some banks have returned the recapitalised amount to the government.
- k) With regard to IT policy in the banking and financial sectors, the introduction of electronic technology for transactions, settlement of accounts, book-keeping and all other related functions is now an imperative. Initiatives for technological change have been an integral part of the reform process. In response to the compulsions imposed by the technological environment, the banking sector is accelerating the pace of computerisation of branch operations, controlling offices and head offices. In the year 1997 barely 10 per cent of the branches of NSBs were computerised which has risen to 30 per cent in the year 2002.
- 1) There has been a progress towards automation in the banking system, especially in relation to computerisation of payment systems, cheque clearing and electronic fund transfer. Repeated rounds of branch expansion have left many banking organisations with numerous branches, subsidiaries, and affiliates located far away from headquarters. This has resulted in considerable difficulty in monitoring activities at these far-flung installations, and has increased costs for banks. Faster and less expensive communication technologies like Structured Financial Messaging Solution (SFMS), Electronic Fund Transfer and Centralised Funds Management System (CFMS) are helping the banking organisation to function more smoothly. The Indian banking sector has a great advantage in being a late starter, in the sense that it

does not have to go through the incremental process of improving by stages and progressively investing in equipments, with its high rate of obsolescence.

- m) While these changes are happening at the sector level, the retail banking segment is also witnessing windfall changes. An analysis of the effects of technology in retail banking segment in the sector also makes it apparent that new private banks and foreign banks are coming up with new products and services in the sector. The study observed that most of the banking organisations have started investing heavily in e-finance technologies (e.g. website on the internet) as a means to distribute their products to retail customers in an effective manner. Banks in India are using the Internet as an alternative means to distribute their traditional credit and payments products to retail customers.
- n) All the NPBs and FRBs offer balance inquiry and fund transfers, bill payments and credit applications online to the customers. In contrast, fewer banks with transactional website offer brokerage, cash management, fiduciary or insurance services online. The rapid increase in the use of the Internet represents a continuation of banks' efforts to replace their costly branch network with alternative distribution channels. Nevertheless, having said that, the number of branches of banks continues to grow, albeit slowly. It was also found that large banks like SBI and ICICI had adopted these technologies very aggressively during the late 1990s.
- o) Another type of electronic technology that banks are investing is the ATM; that allows depositors remote access to their bank accounts at any time of the day. Although ATMs have existed since the mid of the 1990s, their extent has grown dramatically only in very recent times. While the number of bank

offices of new private banks has continued to rise gradually over the past five years, the number of ATMs has risen from one in 1996 to around 5000 today. The number of ATM locations in India has increased much faster than the number of branches. ATMs have added to the convenience of the customers, but they do not seem to substitute for the branch, rather it seems they only complement each other. It can be also noticed that electronic payment systems has started playing a dominant role in the Indian banking sector for interbank transactions, though the same cannot be said for customer transactions. With regard to the marketing aspect, the 4Ps of retail banking segment in the sector, we could gauge that new products, new delivery channels, new promotion strategies and new pricing strategies are being introduced in the segment. Banks in India have started to offer various new products and services to different customers, based on the principle of convenience banking,

- p) The impetus for this change has come from both within the banks and from customers who are demanding greater control and convenience over banking transactions. Customers are increasingly looking for 'anytime and anywhere banking'<sup>1</sup>. Simultaneously, the changing economic environment, marked by falling interest rates has fostered this growth in retail banking.

## **CHAPTER-6**

### **IMPLICATIONS OF INFORMATION TECHNOLOGY ON EMPLOYEES OF COMMERCIAL BANKING SECTOR**

As pointed out earlier, technology and reforms have emerged as the key driving forces of change in the banking sector, thereby becoming the crucial factor for adjudging the effectiveness and accomplishment of banks. It is a well-known fact in management that, no matter what level of technological sophistication organizations attain, the dependency on human resource will continue, as technology alone cannot generate service. True to this fact, banks in India have been striving to upgrade the skills of their existing manpower. IT is acting as a facilitator to amplify the competence of manpower to enable the services of banking to be more pleasant and satisfactory.

The steady upward movement of the number of computer literate personnel in the Indian banking sector can be considered as a fitting indicator of the positive and gratifying influence of IT on the human resource in the sector. In tandem with the increasing levels of computerization, the percentage of computer literate employees has tripled over the five years from the year 1996 to 2000, in NSBs and OPBs.

Both these categories of banks have imparted training to increase the level of computer literacy among their employees, while NPBs which were intended to be fully computerized right from their inception, have started with a hundred per cent stock of computer literate staff (see Table 6.1). The percentage of IT specialists in the banking sector has also increased over the period between 1996 -2000, but still remains low at 0.5 per cent of the staff as seen in Table 6.II.

**Table.6.1 - Computer Literate Employee as a Percentage of Total Staff**

(Figures in per cent)

| Bank Group | Year  |       |       |       |              |
|------------|-------|-------|-------|-------|--------------|
|            | 1996  | 1997  | 1998  | 1999  | 2000         |
| NSB        | 7.92  | 10.64 | 14.02 | 20.01 | <b>21.51</b> |
| OPB        | 11.62 | 16.14 | 21.37 | 28.63 | <b>34.03</b> |
| NPB        | 100   | 100   | 100   | 100   | <b>100</b>   |
| FRB        | 84.33 | 85.37 | 87.42 | 87.82 | 88.58        |
| SCBs       | 8.41  | 11.31 | 14.86 | 20.95 | 23           |

Source: RBI, 2002 b, Table-7. p. 857

**Table 6.II - IT Specialist as a Percentage of Total Staff**

(Figures in percent)

| Bank Group | Year |      |      |      |      |
|------------|------|------|------|------|------|
|            | 1996 | 1997 | 1998 | 1999 | 2000 |
| NSB        | 0.1) | 0.24 | 0.33 | 0.39 | 0.47 |
| OPB        | 0.52 | 0.55 | 0.81 | 1.2  | 1.5  |
| NPB        | 4.95 | 4.52 | 4.83 | 4.49 | 3.87 |
| I-RB       | 3.28 | 3.52 | 2.88 | 3.02 | 2.7  |
| SCBs       | 0.22 | 0.27 | 0.37 | 0.45 | 0.55 |

Source: RBI, 2002 b, Table -8, p. 857

Another result of technology and reforms on human resources is the introduction of Voluntary Retirement Scheme (VRS) introduced in the banking sector by NSBs to optimise utilization of human resource. 26 NSBs introduced the VRS schemes in the year 2000-01, resulting in nearly twelve per cent reduction in the staff strength (RBI, 2002, p.59).

In such a context of intense application of IT in banking sector, it is essential to look into the role of IT in working of banks from the perspective of employees in detail. An attempt is made in this chapter to analyse:

- a) Application of IT and the benefits brought about by the same in the Indian banking sector.
- b) The problems encountered with the usage of IT in banks.
- c) The technology requirements necessary for the deployment of IT in banks.
- d) The expectations and perceptions of branch managers towards E- banking.

The data collected from the branch managers is presented and analysed in the following ways:

- Data pertaining to expected benefits of IT in the banking sector.
- Data pertaining to problems encountered with the usage of IT.
- Data pertaining to technology requirements for IT application in various banking groups.
- Data pertaining to expectations and perceptions towards E-banking in various banking groups.

Throughout the 1990s, the focus of Indian banks was to capture new markets and increase revenue by reducing labour cost, which resulted in banks investing highly in IT. Indian banks were traditionally organised around product lines. Coordination among departments was loose. This has changed to a large extent with the coming of IT. An attempt is made to study the benefits of IT for banks from a Branch Managers perspective.

From the table 6.111 it becomes clear that managers in the Indian banking sector believe that IT in the banking sector will improve the competitive advantage of banks. The managers in the SBI group and other nationalised banks believe that IT will also help the banks in reducing the cost at a substantial rate. The managers in the OPB group believe that the second most important likely benefit of IT is an improvement in the efficiency of the banking staff. The new generation banks (MPB group & FRB group) managers believe that IT will benefit banks in handling customer complaints efficiently, offering more customized attention, quickly identifying market segments, and improving staffs' efficiency. According to the managers of foreign banks the most important benefit of IT is that it is acting as a facilitator for informing the customers about the products and services offered by the banks. A close analysis of the response given by the managers in the various groups reveals that, there is significant difference in perception with regard to the contribution of IT to the banks. The private bank managers and foreign bank managers consider the capabilities of IT as a tool providing pivotal benefits such as supporting access to automatic order of service, the ability to identify market segments and control of services. The managers of nationalised and state banks perceive the same benefits as comparatively low and little. One of the reasons could be the fact that the new generation banks have started operating only in the last decade and have a low customer base and hence private and foreign banks managers perceive that IT will help in identifying new segments. But with regard to SBI & associates and nationalised banks, which have a large customer base, the likely benefits of IT are mostly perceived in the domain of cost reduction and improving competitive advantage. Another important and surprising result that emerges is that managers of all banks consider that IT will not benefit mass

customization. The other area that has shown unexpected results is role of IT in products and services design, as the managers perceive IT will not much help, the organisations in involving customers' participation in product & service design. This is surprising, because mass customization is considered an important strategy for all service sectors. This could probably be attributed to the fact that mass customization and the use of IT to engage customers in service design in banking sector are relatively new concepts and their advantages and impacts have not yet been fully understood. Further, in a financial sector, an individual is not always in a position to make appropriate decisions about the financial aspects, due to asymmetric information available.

**Table 6.1 II - Mean Frequencies of Branch Managers Responses to the Likely Benefits from IT for the Banks \***

| IT BENEFITS                                   | SBI GROUP<br>(20- Respondents) |      |      | Other NSB GROUP<br>(15-Respondents) |      |      | OPB Group<br>(10 - Resoondents) |      |      | NPB GROUP<br>(10 - Respondents) |      |      | FRB GROUP<br>(5 - Respondents) |      |      |
|---|--------------------------------|------|------|-------------------------------------|------|------|---------------------------------|------|------|---------------------------------|------|------|--------------------------------|------|------|
|   | Mean                           | Rank | S.D. | Mean                                | Rank | S.D. | Mean                            | Rank | S.D. | Mean                            | Rank | S.D. | Mean                           | Rank | S.D  |
| Supports Automatic Payments                   | 2.2                            | 9    | 0.7  | 1.3                                 | 15   | 0.5  | 2.6                             | 8    | 0.5  | 2.3                             | 11   | 1.2  | 2.2                            | 12   | 0.79 |
| On Time Product Delivery                      | 2.9                            | 6    | 0.6  | 2.3                                 | 11   | 0.5  | 2.3                             | 10   | 0.5  | 2.6                             | 10   | 0.8  | 3.2                            | 6    | 0.42 |
| Information about Product to User             | 3.4                            | 3    | 0.5  | 3.3                                 | 3    | 0.5  | 3.3                             | 3    | 0.5  | 3.5                             | 3    | 0.5  | 3.9                            | 1    | 0.32 |
| Build IT in The Product & Service             | 3.0                            | 5    | 1.1  | 2.6                                 | 8    | 1.3  | 2.1                             | 11   | 0.7  | 3.1                             | 7    | 0.7  | 3.7                            | 2    | 0.67 |
| Control of Service                            | 2.2                            | 9    | 0.8  | 2.7                                 | 7    | 0.8  | 2.7                             | 7    | 0.7  | 3.3                             | 5    | 0.8  | 3.4                            | 5    | 0.7  |
| Improve Product Quality                       | 2.4                            | 9    | 1.2  | 3.25                                | 4    | 1.0  | 2.0                             | 12   | 0.9  | 3.1                             | 8    | 0.7  | 3.5                            | 4    | 0.84 |
| Use IT to Identify Market Segment             | 2.5                            | 8    | 0.9  | 2.7                                 | 7    | 0.8  | 3.3                             | 3    | 0.8  | 4.0                             | 1    | 0    | 3.7                            | 2    | 0.48 |
| Use IT to Improve Staff Efficiency            | 3.0                            | 5    | 1.1  | 3.0                                 | 6    | 1.3  | 3.5                             | 2    | 0.7  | 4.0                             | 1    | 0    | 3.0                            | 7    | 0.82 |
| Support Access to Automatic Order of Service  | 2.6                            | 7    | 0.5  | 2.0                                 | 12   | 0.7  | 2.9                             | 6    | 1.0  | 3.5                             | 3    | 0.9  | 3.0                            | 7    | 0.5  |
| Offer Customer to Manage Finance              | 1.6                            | 11   | 0.5  | 1.83                                | 13   | 1.2  | 2.9                             | 5    | 1.2  | 3.1                             | 7    | 0.8  | 2.3                            | 11   | 0.5  |
| Support Mass Customization                    | 2.5                            | 8    | 1.1  | 2.4                                 | 10   | 0.5  | 2.8                             | 6    | 0.9  | 3.4                             | 4    | 0.5  | 2.9                            | 8    | 0.88 |
| Handling Customer Complaints                  | 3.3                            | 4    | 0.8  | 2.3                                 | 11   | 0.5  | 2.8                             | 6    | 0.6  | 4.0                             | 1    | 0    | 3.6                            | 3    | 0.52 |
| Use IT to Offer Customized Attention          | 3.5                            | 2    | 1.1  | 2.5                                 | 9    | 1.1  | 3.0                             | 4    | 0.7  | 4.0                             | 1    | 0    | 3.7                            | 2    | 0.5  |
| Customer Training to Use IT System            | 1.9                            | 10   | 1.6  | 1.5                                 | 14   | 0.8  | 2.4                             | 9    | 0.9  | 2.9                             | 9    | 0.8  | 1.8                            | 14   | 0.97 |
| Involve Customers in Product & Service Design | 1.9                            | 10   | 1.3  | 2.5                                 | 9    | 1.4  | 2.1                             | 11   | 0.7  | 1.8                             | 12   | 0.4  | 2.0                            | 13   | 0.47 |
| Support Customers to Choose the right Product | 3.3                            | 4    | 1.2  | 3.2                                 | 5    | 1.2  | 3.3                             | 3    | 1.0  | 3.2                             | 6    | 1.0  | 2.6                            | 10   | 0.97 |
| Cost Reduction                                | 3.5                            | 2    | 0.9  | 3.75                                | 2    | 0.5  | 3.9                             | 1    | 0.3  | 3.6                             | 2    | 0.8  | 2.6                            | 10   | 0.92 |
| Improve Competitive Advantage                 | 3.8                            | 1    | 0.6  | 3.8                                 | 1    | 0.4  | 3.9                             | 1    | 0.3  | 4.0                             | 1    | 0    | 2.7                            | 9    | 1.25 |

\* Scale; 1=Not at all, 2=Little, 3= Moderate, 4=Strongly.

Despite the heightened attention to the IT, banks still have a hard time getting it precisely right. There are problems everywhere, right from the implementation stage of IT to using IT in day-to-day functioning of the branches. Identifying the problems is especially important given the fact that IT is becoming an integral part of banks. The Table-6. IV reports the different problems encountered by banks within the usage of IT as perceived by the managers.

The main problem as perceived by the managers of SBI group, NSB group and OPB group, as expected, is lack of know-how and functionality with regard to the usage of IT in banks, especially as it is mostly outsourced. The main problems for new generation banks with regard to usage of IT were data security and inaccessibility of the customers to the network<sup>1</sup>.

**Table 6.IV - Mean Frequencies of Branch Managers Responses to Problems Encountered with the Usage of Information Technology Application in the Banks\***

| IT PROBLEMS  | SBI GROUP<br>(20 - Respondents) |      |      | Other NSB GROUP<br>(15-Respondents) |      |      | OPB Group<br>(10 - Respondents) |      |      | NPB GROUP<br>(10- Respondents) |      |      | FRB GROUP<br>(5 - Respondents) |      |      |
|--|---------------------------------|------|------|-------------------------------------|------|------|---------------------------------|------|------|--------------------------------|------|------|--------------------------------|------|------|
|  | Mean                            | Rank | S.D. | Mean                                | Rank | S.D. | Mean                            | Rank | S.D. | Mean                           | Rank | S.D. | Mean                           | Rank | S.D. |
| Data Security                                      | 3.40                            | 2    | .75  | 2.30                                | 8    | .48  | 2.10                            | 10   | .99  | 2.50                           | 1    | 1.58 | 1.30                           | 6    | .95  |
| Customers don't have access to network             | 3.20                            | 3    | 1.51 | 3.00                                | 5    | 1.15 | 3.30                            | 3    | .95  | 1.50                           | 4    | .53  | 2.40                           | 1    | .70  |
| Lack of Customer confidence to use the Reliability | 3.40                            | 2    | 1.43 | 3.14                                | 3    | .90  | 3.50                            | 5    | .93  | 2.00                           | 2    | .00  | 1.40                           | 5    | .70  |
| Performance  | 2.85                            | 7    | .93  | 2.63                                |      | .52  | 2.60                            | 5    | .70  | 1.80                           | 3    | .92  | 1.10                           |      | .32  |
| Lack of Know-how-                                  | 2.95                            | 5    | .89  | 2.60                                | 7    | 1.43 | 3.70                            | 1    | .67  | 2.00                           | 2    | .67  | 1.90                           | 2    | .57  |
| Functionality                                      | 3.55                            | 1    | .76  | 2.75                                | 6    | .46  | 3.00                            | 4    | .94  | 1.20                           |      | .42  | 1.50                           | 4    | .53  |
| Don't-Know Customer requirements                   | 2.60                            | 8    | .68  | 3.33                                | 1    | .87  | 2.57                            | 6    | .98  | 1.80                           | 3    | .42  | 1.70                           | 3    | .95  |
| Lack Of Employees Confidence                       | 2.95                            | 5    | .89  | 3.10                                | 4    | 1.20 | 2.30                            | 8    | 1.42 | 1.20                           | 5    | .42  | 1.20                           | 6    | .42  |
| Sufficient Training to Employees is not            | 3.05                            | 4    | .83  | 3.25                                | 2    | .46  | 2.50                            | 7    | .71  | 1.40                           | 5    | .84  | 1.90                           | 2    | .57  |
| Employees resistance to change                     | 2.90                            | 6    | 1.48 | 2.29                                | 9    | 1.11 | 2.25                            | 9    | 1.49 | 1.20                           | 5    | .42  | 1.10                           | 7    | .32  |
|  | 2.90                            | 6    | 1.17 | 3.10                                | 4    | .88  | 2.57                            | 6    | .98  | 1.20                           | 5    | .42  | 1.10                           | 7    | .32  |

Scale: 1=Not at all, 2=Little, 3= Moderate, 4=Strongly.

<sup>1</sup> The problem of customers not having access to network is viewed in the sense that, new generation banks are giving much emphasis on Internet banking, and still the penetration of Internet user per household for India is among lowest in the world.

The managers of the new generation banks felt that customer's familiarity **with**, and access to, network are important factors for deriving the maximum the benefits from IT implementation. The attitude of employee resistance to technology has seen a radical shift and this part is being ranked low by the managers from all banking groups. Overall it can be seen that the major problems with IT usage are its functionality and data security.

There has been lot of debate on what sort of technology is required for IT application in the banks. In Indian banking sector, most of the times it is the top management that makes the decisions with regard to the technologies required by banks. We looked at the technology requirements for banks from the perspective of branch managers. In this regard, the SBI group managers feel that reliance on a private network would be a better option for further improvement (see Table-6.V) This could be due to the fact that being the largest banking group<sup>2</sup>, connecting all the branches will be a priority; so the managers perceive that a private network will help the bank in the long run in pace and efficiency rather than relying on a public network. The managers of the NSB group perceive that tele-video conferencing is an immediate requirement for banks, as this will help them in making instant decisions, especially by communicating with the head office on matters of urgency. Data Base<sup>3</sup> and Data Warehouse<sup>4</sup> are the other

<sup>2</sup> As on March 2003 the SBI Group consisting of SBI and its Seven Associate Banks had 13593 branches spread across the country. This could be one of the reasons for managers emphasizing more on private network.

<sup>3</sup> Data Base and Data Warehouse rank high in the list of technology requirements due to the sheer size of customers that Indian banks cater to.

<sup>4</sup> A Data Warehouse is a subject-oriented, integrated, time-variant, and nonvolatile collection of data in support of management's decision-making process. This definition reflects the main purpose, a Data Warehouse contains data, which supports and delivers it to executives as knowledge, and they can build their decisions upon (for further details see: W.H. Inmon et al., 1997).

technologies which are high on priority of new technologies. Technologies like virtual reality and voice recognition that were included in the questionnaires had lot of missing frequency. Most of the managers replied that these technologies are in an embryonic stage and require more functional and mature IT infrastructure and that the Indian banking is not ready for it right now. With regard to Optical Character recognition it is already put in use for cheques clearance by banks.

Table 6.V - Mean Frequencies of Branch Managers Response to Technology Requirements for Information Technology Application in the Banks \*

| IT Technology Requirements       | SBI GROUP<br>(20 - Respondents) |      |      | Other NSB GROUP<br>(15 - Respondents) |      |      | OPB Group<br>(10 - Respondents) |      |      | NPB GROUP<br>(10 - Respondents) |      |     | FRB GROUP<br>(5 - Respondents) |      |      |
|----------------------------------|---------------------------------|------|------|---------------------------------------|------|------|---------------------------------|------|------|---------------------------------|------|-----|--------------------------------|------|------|
|                                  | Mean                            | Rank | S.D. | Mean                                  | Rank | S.D. | Mean                            | Rank | S.D. | Mean                            | Rank | SD  | Mean                           | Rank | S.D. |
| Data Base                        | 3.15                            | -)   | .83  | 2.30                                  | 4    | .82  | 3.00                            | 3    | .94  | 3.60                            | 2    | .84 | 3.80                           | 1    | .63  |
| Data Warehouse                   | 2.55                            | 4    | .67  | 2.70                                  | 2    | .95  | 3.50                            | 2    | .71  | 4.00                            | 1    | .00 | 3.30                           | 2    | .48  |
| Private Network                  | 3.50                            | 1    | .76  | 1.80                                  | 5    | .79  | 1.90                            | 4    | .99  | 3.50                            | 3    | .53 | 3.60                           | 2    | .52  |
| Tele-Video Conferencing          | 2.85                            | 3    | .83  | 3.60                                  | 1    | .84  | 3.50                            |      | .71  | 3.60                            | 2    | .52 | 3.80                           | 2    | .42  |
| Hardware Reliability/Maintenance | 2.85                            | 3    | .93  | 2.50                                  | 3    | .97  | 3.60                            | 1    | .70  | 3.60                            | 2    | .84 | 3.50                           | 3    | .71  |

\* Scale 1=Not at all, 2=Little, 3= Moderate, 4=Strongly.

We made an attempt to study how managers perceive the introduction of E-banking in Indian banking sector (see Table 6.VI). The word E-banking implies provision of banking products and services through electronic channels (ATMs, Telephone Banking and Internet Banking).

The SBI group managers perceive E-banking as a medium to inform the customers and an important channel for professional communication between the bank and customers. The other nationalised group managers also share the same view as their

SBI counterparts. The manager in OPB group believes that E-banking will help the banks in developing a self-service channel.

The NPB group managers lay emphasis on the usage of E-banking as a tool to strengthen the relationship between banks and customers and this will help the banks in delivering a more individualized service to the customers.

The managers were of the view that though the E-banking channel can be used as a tool to provide better service to customers, it will not help banks in migrating customers from traditional bank branches to E-banking. Overall, the branch managers were of the opinion that E-banking is yet another channel offered by banks to have a better customer relationship.

**Table 6.VI - Mean Frequencies of Branch Managers Responses to Expectations and Perceptions towards E-banking \***

| Perceptions  | SBI GROUP<br>(20 - Respondents) |      |      | Other NSB<br>GROUP<br>(15 - Respondents) |      |      | OPB Group<br>(10 - Respondents) |      |      | NPB GROUP<br>(10 - Respondents) |      |      | FRB GROUP<br>(5 - Respondents) |      |     |
|--|---------------------------------|------|------|--|------|------|---------------------------------|------|------|---------------------------------|------|------|--------------------------------|------|-----|
|  | Mean                            | Rank | S.D. | Mean                                     | Rank | S.D. | Mean                            | Rank | S.D. | Mean                            | Rank | S D  | Mean                           | Rank | SD  |
| Medium to inform the Customers                               | 3.70                            | 1    | 1.45 | 3.40                                     | 2    | 1.51 | 2.70                            | 4    | 1.16 | 3.00                            | 4    | 1.05 | 3.70                           | 2    | .67 |
| A Self-Service Channel                                       | 2.70                            | 5    | 1.38 | 2.40                                     | 6    | .97  | 3.40                            | 2    | .84  | 2.30                            | 5    | .82  | 2.60                           | 6    | .84 |
| Strengthen the relationship between bank and customers.      | 3.00                            | 3    | .92  | 2.60                                     | 4    | .97  | 2.30                            | 5    | 1.16 | 4.00                            | 1    | .00  | 3.60                           | 4    | .52 |
| More individualized service to customer.                     | 2.70                            | 5    | .47  | 2.80                                     | 3    | .92  | 3.10                            | 3    | .88  | 4.00                            | 2    | .00  | 4.00                           | 1    | .00 |
| Important media for communication between bank and customers | 3.25                            | 2    | 1.33 | 4.00                                     | 1    | 1.63 | 3.60                            | 1    | 1.65 | 3.80                            | 3    | .42  | 2.80                           | 5    | .79 |
| Itreat to bank close relationship with customers.            | 2.85                            | 4    | 1.46 | 2.50                                     | 5    | 1.27 | 2.70                            | 4    | 1.49 | 1.60                            | 6    | 1.26 | 3.30                           | 3    | .95 |

\* Scale: 1=Not at all, 2=Little, 3= Moderate, 4=Strongly.

As the importance given to Internet banking is growing at a high pace, it is also important to study the future of Internet banking<sup>5</sup> (see Table 6. VII.). The managers of the SBI group are a bit skeptical about a possibility of Internet banking becoming the important medium between banks and customers. The nationalised and old private banks group believes that Internet banking would become an important media between customers and banks in the days to come. The new private banks group managers are quite sure that in future their banks would deliver more products and services through Internet banking. But the most astonishing fact is that respondents of new private banks too dismissed the possibility of Internet banking becoming the most important media between banks and customers. With regard to the foreign bank group, the managers believe strongly that their competitors would deliver more products through Internet banking in the days to come. The reason stated by managers is that, as competition increases in the retail segment of banks and as foreign banks deliver more products and services through this channel, other banks will certainly try to imitate the foreign banks .The foreign banks were pioneers in introducing new and innovative products and services through Internet banking in the Indian banking sector.

Table 6.VII - Mean Frequencies of Branch Managers Responses to Future Scenario in Internet banking<sup>^</sup>

| Usage of Internet banking  | SBI GROUP<br>(20 - Respondents) |      |      | Other NSB GROUP<br>(15 - Respondents) |      |      | OPB Group<br>(10 - Respondents) |      |      | NPB GROUP<br>(10 - Respondents) |      |      | FRB GROUP<br>(5 - Respondents) |      |      |
|--|---------------------------------|------|------|---------------------------------------|------|------|---------------------------------|------|------|---------------------------------|------|------|--------------------------------|------|------|
|  | Mean                            | Rank | S.D. | Mean                                  | Rank | S.D. | Mean                            | Rank | S.D. | Mean                            | Rank | S.D. | Mean                           | Rank | S.D. |
| Deliver more Product and Service   | 4.00                            | 1    | 1.03 | 3.20                                  | 2    | 1.40 | 3.60                            | 2    | .70  | 4.00                            | 2    | .00  | <b>3.60</b>                    | 2    | .52  |
| Important media between Bank and Customers in the future                   | 3.30                            | 2    | 1.56 | 3.40                                  | 1    | .84  | 4.20                            | 1    | .63  | 2.90                            | 3    | .74  | <b>3.30</b>                    | 3    | .95  |
| Competitors will Deliver more Product and Service through Internet banking | 3.10                            | 3    | 1.07 | 3.20                                  | 2    | .92  | 3.50                            | 3    | 1.35 | 4.20                            | 1    | .92  | 4.10                           | 1    | .32  |

" Scale: 1=Not at all, 2=Little , 3= Moderate , 4=Strongly.

<sup>5</sup> Internet banking has a very short history of few years in India. **ICICI bank in India was the first bank to offer this service (IBA, 2002, pp. 158-59).**

Banks in India are introducing new channels to serve the customers, and all the channels are attempting to serve the same end user. Table 6.VIII compares the managers' perception towards different channels and their significance in the future. ATMs are perceived as the most important and viable channel today by most of the respondents. SBI group and NPB group managers perceive the Internet Banking channel as the second most important channel. The most important fact that emerged through the survey is that the managers of FRB group believe that telephone banking and branch banking are the most important channels in the present day scenario.

**Table 6.VIII- Branch Managers Responses to Importance of Banking Channels in the Present Environment**

| Banks                |   |   |                                 |   |   |
|----------------------|---|---|---------------------------------|---|---|
| Rank                 | SBI GROUP<br>(20 - Respondents)           | Other NSB GROUP<br>(15 - Respondents)     | OPB Group<br>(10 - Respondents) | NPB GROUP<br>(10 - Respondents)           | FRB GROUP<br>(5 - Respondents)            |
| 1 <sup>st</sup> Rank | ATMs.                                     | ATMs                                      | ATMs.                           | ATMs                                      | Telephone Banking                         |
| 2 <sup>nd</sup> Rank | Internet Banking.                         | Telephone Banking /<br>Internet Banking   | Face-to-Face<br>Banking         | Internet Banking.                         | Face-to-Face Banking.<br>(Branch Banking) |
| 3 <sup>rd</sup> Rank | Telephone Banking                         | Face-to-Face Banking.<br>(Branch Banking) | Telephone<br>Banking            | Any Branch Banking                        | ATMs                                      |
| 4 <sup>th</sup> Rank | Face-to-Face Banking.<br>(Branch Banking) | Any Branch Banking                        | Internet Banking.               | Telephone Banking                         | Internet Banking.                         |
| 5 <sup>th</sup> Rank | Any Branch<br>banking                     |   | Any Branch<br>Banking           | Face-to-Face Banking.<br>(Branch Banking) | Any Branch Banking                        |

There are many reasons cited for banks offering E-banking, but we made an attempt to study the same. The reasons for offering E-banking are not one, but a variety of reasons (see Table 6.IX). The expected cost reduction ranks as the most important reason for offering E-banking by managers in SBI, NSB, OPB and NPB due to the fact

that it may replace many of the expensive branches and thus reduce the overall cost of the banking establishment.

The second reason is the changing customer needs and wants that drive the introduction of E-banking and diversification with regard to services. This indicates that the introduction and promotion of E-banking are primarily driven by a market-orientated logic. Banks are forced to introduce E-banking in order to stay in business in the fast changing world. Competitive pressure is also an important factor for offering E-Banking. The expected shortage of employees ranks lowest due the availability of abundant educated and skilled manpower. This also amply shows that banking organizations are concentrating on reduction of cost as one of their primary objectives for the deployment of E-banking.

Table 6.IX - Branch Managers Responses to Reason for Offering E-banking

| Rank                 | Banks                             |  |                                   |   |                                   |
|----------------------|-----------------------------------|--|-----------------------------------|---|-----------------------------------|
|                      | SBI GROUP<br>(20 - Respondents)   | Other NSB<br>GROUP<br>(15 - Respondents) | OPB Group<br>(10 - Respondents)   | NPB GROUP<br>(10 - Respondents)                               | FRB GROUP<br>(5 - Respondents)    |
| 1 <sup>st</sup> Rank | Expected Cost<br>Reduction        | Expected Cost<br>Reduction               | Expected Cost<br>Reduction        | Expected Cost<br>Reduction                                    | Customer Needs                    |
| 2 <sup>nd</sup> Rank | Customer Needs                    | Customer Needs                           | Customer Needs                    | Customer Needs  | Expected Cost Reduction           |
| 3 <sup>rd</sup> Rank | Competitive<br>Pressure           | Competitive<br>Pressure                  | Competitive<br>Pressure           | Expected shortage<br>of Employees/<br>Competitive<br>Pressure | Expected shortage of<br>Employees |
| 4 <sup>th</sup> Rank | Expected shortage<br>of Employees | Expected shortage<br>of Employees        | Expected shortage<br>of Employees | -   | Competitive Pressure              |

IT is playing a pivotal role in shaping the policies of banks in contemporary India and has thereby become a top priority for banks in India. IT has brought changes in the

way banks function and the way customers approach banks. Although the banks have already started using IT such as in E-Banking, the question of how the branch managers perceive the role of IT in the banking sector has not been addressed.

This chapter reports the results of the opinion survey conducted amongst branch managers of Indian banks on this issue. Different aspects of IT are examined with respect to their contribution to customers from the perspective of managers and to what level the IT development has taken place in Indian banks.

The *manerg* felt that IT will soon become a competitive tool in the Indian banking sector. Another factor that emerged was, most of the nationalised banks' branch managers face problems with regard to the know-how of IT, compared to new generation banks. The managers in new generation banks feel that they have the right technology with them but for them, customer access to this technology is the major concern.

Banks have different kinds of customers with whom they interact. Customers have unique wants and needs, and if they are not given the products and services they want, they are likely to switch to another bank. Therefore if the banks want loyal customers they have to adopt and customize their offerings. This may be done at the bank branches when the customers interact face to face with the staff of banks, but it is also possible with Internet banking at a significantly lower cost. But due the low usage of Internet banking in India, it is therefore not surprising that the study finds that managers in Indian banks using this channel as a medium to inform the customers. Some managers are very positive towards this channel whereas others seem more skeptical. If Internet banking becomes the most important marketing channel for the banking sector, then the banks which entered at a relative early stage are more likely to capture the customers

interface, and build upon customer relationships, brand name and awareness among the internet users. On the other hand, late movers may learn from the mistakes of the early movers and thus lower their entry cost.

Thus, the question of when to enter with an Internet bank and how heavily to promote it to customers is an important one for most managers in Indian banks. As argued above, the manager's perception and expectations of Internet banking are important for predicting the immediate future of Internet banking. They seem to have a varied view of Internet -banking while looking ahead. Most respondents regard it as a self-service channel, an important media for communication between the banks and their customers and a possibility for building relationships. These indicate that significant resources would be allocated to the development of Internet banking in the future. However a few banks' managers also perceived Internet banking as a threat to the banks' close relationship with their customers. The banking sector has seen a change from a unified branch based distribution channel to a multiple channels system where ATMs and Internet banking, etc. will dominate in the future in terms of number of transactions. To sum up the implication of IT on employees:

- a) The steady upward movement of the number of computer literate personnel in the Indian banking sector can be considered as a fitting indicator of the positive and gratifying influence of IT on the human resource in the sector. In tandem with the increasing levels of computerization, the percentage of computer literate employees has tripled over the five years, from 1996 to 2000, in NSBs and OPBs. The percentage of IT specialists in the banking sector has also increased.

- b) Due to the growing use of IT, 26 NSBs introduced the VRS schemes in 2000-01. This resulted in a nearly twelve per cent reduction in the staff strength
- c) Managers in the Indian banking sector believe that IT will improve the competitive advantage of the banks
- d) The main problem as perceived by the managers of SBI group, NSB group and OPB group is lack of know-how and functionality with to regard to the usage of IT in banks, especially as it is mostly outsourced. The main problem as perceived by managers of new private and foreign banks is customers' lack of access to network.
- e) Nationalised managers perceive E-banking as a medium to inform the customers. NPBs and FRBs managers view E-banking as a tool for relationship marketing.
- f) Most managers believe that Internet banking will become an important medium between customers and banks in coming years.
- g) NSB managers view E-banking as an effective tool for cost reduction. NPB and FRB mangers view E-banking as a means to satisfying customers need and wants.

Advances in technology should continue to have the most significant effect on employment in the banking industry. Demand for computer specialists will grow as more banks make their services available electronically and eliminate much of the paperwork involved in many banking transactions.

On the other hand, these changes in technology will reduce the need for several office and administrative support occupations. Employment of tellers will grow more slowly than average as customers increasingly use ATMs, direct deposit, debit cards, and

telephone and internet banking to perform routine transactions. Other technological improvements, such as digital imaging and computer networking, are likely to lead to a decrease or change in the nature of employment of the 'back-office' clerical workers who process checks and other bank statements. Employment of customer service representatives, however, is expected to increase as bank hire more of these workers to staff call centers and respond to e-mails, as well as to promote new products and services.

Finally, it is worth remembering that the new scenario brought about by IT will help the Indian banking organizations to create synergies between IT, HRM practices and resource allocations; at the same time they have to give their employees the capability to provide good personal services. How this can be done within the given economic and social -cultural environment in India is a matter for another study.

## CHAPTER-7

### IMPLICATION OF REFORMS AND TECHNOLOGY ON PERFORMANCE OF COMMERCIAL BANKING SECTOR

This chapter analyses the performance of the Indian banking sector from 1987 -2004 in the background of reforms and technologisation. The performance of the banking groups in the sector and that of banking groups as perceived by the customers are analysed.

#### **7.1: Performance of Banking Groups in the Sector**

The reforms in the sector have promoted competition among banks which in turn have affected the performance of banks .The performance is measured with respect to four variables;

- (a) Number of Profit Making Banks in the Sector in the Post Reform Period from 1995 - 2002 (Table -7.1)
- (b) Return on Assets of Banks from 1987 -2004 (Table -7.II)
- (c) Intermediation Cost from 1987 -2004 (Table -7.III)
- (d) Evolution of Cost and Profitability of the Banking Sector from 1987 -2004 (Table - 7.IV)

Despite the fact that banks are required to follow income recognition and provisioning norms and with the intensification of competition, all major banking groups in India by and large remained profitable. There is also significant increase in the number of profit-making NSBs over the last decade.

**Table 7.I - Number of Profit and Loss-Making Banks from 1995-2002**

| S.N.      | Year          | (hgurcs in numbers) |                    |                   |          |
|-----------|---------------|---------------------|--------------------|-------------------|----------|
|           |               | NSBs<br>(27 Banks)  | OPBs<br>(23 Banks) | NPBs<br>(8 Banks) | FRBs*    |
| 1.        | 1995-96       |                     |                    |                   |          |
|           | Profit-making | 19                  | 22                 | 8                 | 27       |
|           | Loss-making   | 8                   | 1                  | -                 | 5        |
| <b>2.</b> | 1996-97       |                     |                    |                   |          |
|           | Profit-making | 24                  | 22                 | 8                 | 31       |
|           | Loss-making   | 3                   | -                  | -                 | 5        |
| 3.        | 1997-98       |                     |                    |                   |          |
|           | Profit-making | 25                  | 21                 | 8                 | 29       |
|           | Loss-making   | 2                   | 1                  | -                 | 9        |
| 4.        | 1998-99       |                     |                    |                   |          |
|           | Profit-making | 25                  | 21                 | 8                 | 30       |
|           | Loss-making   | 2                   | 1                  | -                 | 10       |
| 5.        | 1999-2000     |                     |                    |                   |          |
|           | Profit-making | 26                  | 22                 | <b>8</b>          | 31       |
|           | Loss-making   | 1                   | -                  | -                 | <b>9</b> |
| 6.        | 2000-01       |                     |                    |                   |          |
|           | Profit-making | 25                  | 19                 | <b>8</b>          | 30       |
|           | Loss-making   | 2                   | 3                  | -                 | 10       |
| 7.        | 2001-02       |                     |                    |                   |          |
|           | Profit-making | 27                  | 22                 | <b>7</b>          | 29       |
|           | Loss-making   | -                   | -                  | 1                 | 11       |

\* Total Numbers of FRBs in the banking sector has varied each year.

Source Report on Trends and Progress of Banking in Indian (Various Issues), RBI.

In the year 1995-96 thirty per cent of (eight out of twenty seven) nationalised banks were making losses in their operations. In the year 2002 all the nationalised banks were

making profits. Observing the performance of foreign banks in the sector, there has been an increase in the loss making foreign banks.

During the last two years the SCBs continued to maintain a robust momentum in profits. Operating profit, the structural measure of profitability, increased by 29.5 per cent in 2003-04 as against an increase of 36.3 per cent recorded in 2002-03. Among bank groups, the operating profits of NSBs and foreign banks increased by 32.8 per cent and 33.8 per cent, respectively, in 2003-04. The rate of increase in operating profits of private sector banks was relatively lower at 13.4 per cent in 2003-04 as compared with 55.7 per cent recorded in 2002-03 (RBI, 2004 c).

The return on equity (ROA) indicator of banks provides information about the conduct of business by banks in the interest of various stakeholders. Since the 1990s, profitability of SCBs, as measured by Return on Assets (ROA) has not showed a definite trend and has hovered in the range of 0.5-1.13 percent<sup>1</sup> (Table-7.11).

**Table 7.11 - Return on Assets of SCBs from 1987 -2004**

(Figures in percent)

| Banks              | Years       |             |             |             |             |             |            |             |             |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|-------------|
|                    | 1987        | 1992-93     | 1996-97     | 1997-98     | 1998-99     | 1999-2000   | 2000-01    | 2001-02     | 2003-04     |
| Nationalised Banks | 0.15        | 0.26        | 0.57        | 0.77        | 0.42        | 0.57        | 0.42       | 0.72        | 1.18        |
| Old Private Banks  | 0.19        | 0.54        | 0.91        | 0.8         | 0.48        | 0.81        | 0.62       | 1.08        | 1.20        |
| New Private Banks  | @           | @           | 1.73        | 1.55        | 1.03        | 0.97        | 0.81       | 0.44        | 0.83        |
| Foreign Banks      | 0.84        | 1.51        | 1.19        | 0.96        | 0.69        | 1.17        | 0.93       | 1.33        | 1.65        |
| <b>SCBs</b>        | <b>0.18</b> | <b>0.36</b> | <b>0.67</b> | <b>0.82</b> | <b>0.47</b> | <b>0.66</b> | <b>0.5</b> | <b>0.75</b> | <b>1.13</b> |

Source; Report on Trends and Progress of Banking in Indian (Various Issues), **RBI**

<sup>1</sup> If we compare the profitability of Indian SCBs with the banks elsewhere, ROA of banks in European countries ranged between -0.80 +1.07 in 1998. The ROA of banking organisations in Scandinavian countries was in the range of 0.9 to 0.95. In the United Kingdom ROA of banks were higher at 1.19, while the Japan recorded miserable - 0.74. In United States the ROA for banks was 1.42 (BIS, 1999, p. 44).

The ROA of new private sector banks, however, declined during the same period. The ROA of old private sector banks have increased over the period of reforms. The ROA of the banking system was high at 13 per cent as at end-March 2004 as against 0.18 per cent as at end of the year 1987.

If we observe the intermediation costs in the sector (see Table 7.III), there has been a sizeable decline in the intermediation costs of SCBs from 3.02 per cent in the year 1987 to 2.20 per cent in the year 2004. The average operating cost in the UK were 2.12 per cent and European countries like Sweden, Austria, Germany and France had operating cost less 2 per cent (RBI 2004 c). Thus Indian banks are not doing bad when compared with banks in other countries. Among the bank groups foreign banks (0.95 per cent) recorded the highest order of decline in intermediation cost from 1987 to 2002<sup>2</sup>. For old private banks there were a decrease of 0.30 per cent between the periods 1987-2004.

Intermediation costs of new private banks reduced by 0.82 per cent during the period from 1997-2002. For the nationalised banks there was a substantial decline of 0.34 per cent during the period 1992-2002. The stability in growth of operating expenses relative to assets was evident in 2003-04 since the ratio of operating expenses to assets remained more or less at the same level, albeit with a marginal decline compared with 2001-02.

Across bank groups, the ratio of operating expenses to assets declined for NSBs OPBs and FRBs but increased marginally for NPBs during 2003-04 when compared with 2002-03. Among bank groups, nationalised banks, new private sector banks and foreign

<sup>2</sup> One of the reasons could be due the fact that, foreign banking organisations are successful in containment in their wage bill, which is generally low among bank groups (RBI, 2003 b, Chapter-III, para-3.52).

banks more or less maintained their profitability while old private sector banks had shown a great increase.

**Table 7.HI - Intermediation Cost\* of SCBs from 1987 -2004**

(Figures in per cent)

| Banks | Years |         |         |         |         |           |         |         |         |
|-------|-------|---------|---------|---------|---------|-----------|---------|---------|---------|
|       | 1987  | 1992-93 | 1996-97 | 1997-98 | 1998-99 | 1999-2000 | 2000-01 | 2001-02 | 2003-04 |
| NSBs  | 2.21  | 2.63    | 2.88    | 2.66    | 2.66    | 2.52      | 2.72    | 2.29    | 2.20    |
| OPBs  | 2.88  | 2.73    | 2.52    | 2.31    | 2.26    | 2.18      | 1.99    | 2.08    | 1.97    |
| NPBs  | @     |         | 1.94    | .76     | .74     | 1.42      | 1.75    | 1.12    | 2.04    |
| FRRs  | 3.98  | 2.70    | 3.0     | 2.97    | 3.59    | 3.21      | 3.05    | 3.03    | 2.75    |
| SCBs  | 3.02  | 2.64    | 2.85    | 2.63    | 2.67    | 2.49      | 2.64    | 2.19    | 2.20    |

\* Intermediation Cost = Operating Expense as a Proportion of Total Assets

Source: Report on Trends and Progress of Banking in Indian (Various Issues). RBI

Another way to infer the performance of Indian banking sector in the backdrop of changing deregulation and technology is to look at the cost margin and profits. The Table -7.1V shows the evolution of average cost ratios and profit ratio between 1987 and 2002. A more complete analysis shows that both average operating and financial cost decreased, at the same time profit increased.

Observed reduced cost and increased profit favor the assumption of increasing efficiency in the Indian banking sector. Though the competition has increased but the profit of the sector has not decreased but instead it has increased. The average cost of the SCBs declined in a sizeable way from 11.15 per cent in 1992 to 8.17 per cent in 2004. In

the same period profit of SCBs rose from 0.77 per cent to 2.65 per cent. As we can infer from the table -7.IV, the reduction in cost and significant hike in profits can also be easily read as an accelerator of efficiency in the Indian banking sector.

**Table 7.IV - Evolution of Cost and Profitability of SCBs during the Period 1987- 2004**

(Figures in per cent)

| YEAR | BANKING     |              | ITEM        |             |             |
|------|-------------|--------------|-------------|-------------|-------------|
|      | GROUP       | ATC          | EC          | AFC         | PR          |
| 1987 | NSBs        | 7.83         | 2.56        | 5.32        | 0.12        |
|      | OPBs        | 8.25         | 2.88        | 5.36        | 0.18        |
|      | NPBs        | -            | -           | .           | .           |
|      | FRBs        | 9.19         | 3.98        | 5.09        | 0.84        |
|      | <b>SCBs</b> | <b>8.42</b>  | <b>3.14</b> | <b>5.25</b> | <b>0.38</b> |
| 1992 | NSBs        | 11.00        | 2.59        | 6.47        | 0.27        |
|      | OPBs        | 9.56         | 2.75        | 5.39        | 0.54        |
|      | NPBs        | -            | -           | -           | -           |
|      | FRBs        | 12.9         | 2.14        | 7.42        | 1.51        |
|      | SCBs        | <b>11.15</b> | 2.49        | <b>6.43</b> | <b>1.22</b> |
| 1997 | NSBs        | 9.93         | 2.71        | 6.07        | 0.60        |
|      | OPBs        | 10.47        | 2.33        | 7.22        | 0.85        |
|      | NPBs        | 9.56         | 1.77        | 6.64        | 1.58        |
|      | FRBs        | 11.08        | 2.67        | 6.21        | 1.06        |
|      | SCBs        | <b>10.26</b> | <b>ML</b>   | <b>6.54</b> | <b>1.42</b> |
| 2002 | NSBs        | 9.05         | 2.19        | 5.75        | 0.69        |
|      | OPBs        | 10.10        | 1.96        | 6.60        | 1.02        |
|      | NPBs        | 5.09         | 1.08        | 3.23        | 0.39        |
|      | FRBs        | 9.32         | 2.76        | 4.92        | 2.85        |
|      | SCBs        | 8.39         | 1.99        | 5.12        | 1.23        |
| 2004 | NSBs        | 8.22         | 1.52        | 4.4         | 2.68        |
|      | OPBs        | 8.37         | 1.15        | 4.95        | 2.64        |
|      | NPBs        | 7.93         | 0.47        | 4.68        | 2.03        |
|      | IRBs        | 7.9          | .88         | 3.13        | 3.16        |
|      | SCBs        | 8.17         | <b>1.32</b> | <b>4.43</b> | <b>2.66</b> |

Ratio:

ATC= Total Cost / Total Assets

EC = Personnel Expense / Total Assets

AFC = Interest Expense / Total Assets

PR = (Income - Expenditure) / Total Assets

Source: Authors Own Calculation

In 2003-04, the performance of the banking sector exhibited several improvements. The momentum of high growth in the profitability of SCBs was maintained as seen in the last few years. But the sources of increase in income and profits during 2003-04 were different from those of 2001-02. The high growth of operating profit was achieved mainly due to a substantial increase in non-interest income (or other income) and a significant containment of expenditure in general coupled with a decline in interest expenses on deposits in particular. Although interest income recorded a low growth, it still made a positive contribution to banks' overall earnings (RBI, 2004 c).

## **7.2: Performance of the Banking Groups Based on Customers' Survey**

In order to understand the drivers of performance in the banking sector, one must first confront the fact that the services are different from manufacturing- why? One major reason is co-production, the fact that the customers are often adding labor to the creation of the services. In addition, the scope of the banks is typically quite vast, with components of the service production process including production and delivery of the service. It is useful to distinguish producing service from dispensing them. In the banking sector, it is clear that the banks as a whole produce the services. To put it simply, customers do not have any interaction with a production assembly plant, but they do participate in the processes of the bank. As participants in this co-productive process, customers care far more about the inner-workings of the bank than of the factory.

Along with the active participation of the customers in bank service, one must be aware that the quality of the services provided is forever changing. In measuring service productivity, there hangs the ubiquitous issue of quality change. The problem is because

of the underlying heterogeneity of transactions; the difficulty of making comparisons across time and space is even greater for service.

Productivity gains from human resource improvements or technology investments may not show up in standard performance measures but rather, can be used to improve the quality of the service provided. The introduction of new technologies in banking services has resulted in major automation in the sector. But all these have not resulted in the disappearance of the service dimension (i.e. relations and assistance). The simplest part of the service is partly automated, but there is at the same time an expansion of the most relational and most complex part of the service.

In the earlier section we compared the performance of the banks on Number of Profit Making Banks in the Sector in the Post Reform Period, ROA, Intermediation Cost and Evolution of Cost and Profitability of the Banking Sector from pre reform period to post reform period. These ranking were based on financial aspect rather than on quality of service delivered by various banks. Customer service aspects have always been neglected to a large extent in country like India.

Technology is playing a key role in the performance of banks in the banking sector but it is difficult to associate the payoffs from this investment. Unfortunately, results for banking sector are not available (mainly due to the measurement problems)<sup>3</sup>.

For example, the speed with which the processing of a loan application is completed is an indicator of service that is important to the applicant, as is the 24-hour availability ATMs

<sup>3</sup> A serious limitation of the applicability of standard economic analysis to banking relates to the inadequacies of the database. Absence of long time series data storage in the banking industry often poses serious problems to the quest for the formal analytical relationships between variables. Even if such data exist, the presence of structural breaks may blur meaningful analysis based on traditional formulation (Jalan, 2002 a, p. 86).

of many deposit and withdrawal services previously accessible only during bank hours. Neither of these services is captured as higher banking output at the macroeconomic level. While hard and fast data are not yet available, it is believed that Indian banking services are at the brink of major performance improvements due to technology. Within this framework an empirical study was conducted on the customers'.

The objectives of this section are:

- a) Relationship of customers with the banks;
- b) To identify customer perception towards the technological changes happening in the Indian banking sector; and
- c) To give a detailed assessment of service quality in the three groups of banks (NSBs, PSBs and FRBs).

The data is presented and analyzed in the following ways:

- i. Data Pertaining to Socio- Economic Profile of Customers
- ii. Data Pertaining to Relationship of Individual Customer with Bank(s)
- iii. Data Pertaining to Customers Usage of E- Banking
- iv. Data Pertaining to Factor Analysis and Testing of Hypothesis

#### i. Socio Economic Profile of Customers

The respondents are categorized and analysed in three groups that consist of customers of nationalised, private and foreign banks. The annexure V- table 7.1 shows the sample distribution of respondents between the three banking groups as it relates to age, gender, education, occupation, family status, earning members and income characteristics. It is worth noting that most of the respondents in the foreign banks are in the age bracket of

25 - 45 years, and this could be due the fact that, people in this group mostly prefers foreign banks, while sex disparities in various activities tend to be higher in developing countries and India is not exception to this, which can be also seen in the accounts maintained by women in banks.

Seventy four per cent (74%) of respondents are men and twenty six (26%) are women. Representation of men is nearly three times higher than that of women.

The influence of literacy on the social behavior suggests that education is one of the important variables that determine behavior of people in various activities undertaken by individual (Hasley, 1997). The data implies that most of the respondents are educationally qualified with graduate and postgraduate degrees.

Marriage is one of the basic institutions of the Indian society. The social significance attached to marriage by diverse social groups irrespective of their caste, class, religion and region is immense. From the table we can infer that fifty three per cent (53%) respondents are married and forty seven per cent (47%) are unmarried. The number of married women and married men is more compared to unmarried due to the fact that marriage brings more responsibility and more interfaces with volume of financial transaction *per se*, and this leads invariably to having an account with the bank. Occupation is an important indicator related to the volume of financial transactions. Here the occupations are broadly classified under six groups:

- a) Students include individuals pursuing education.
- b) Professionals consist of doctors, engineers, lawyers and teachers.
- c) Managers include individuals with administrative background and have authority.
- d) Self-employed consist of business persons and practitioners of traditional occupation.

- e) Support staffs include individuals who work as clerks and other such jobs.
- f) Retired people include individuals who are presently not working and whose source of income is pension alone

The annexure V: table-7. I show that thirty per cent (30 % approx.) of the respondents belong to the group of professionals followed by self-employed (19.30%), support staff (16%), students (14.70%), managers (10 %) and retired persons (8.3%).

Income is another important factor, determining financial transactions. The data reveals that more than seventy per cent of the respondents mentioned that family income is above twenty thousand per month.

The analysis of the socio- economic profile of the respondents revealed that education, occupation, family status and, income characteristic play an important role in influencing their access to banks in India. Most of the individuals having account in the banks have comparatively high education and income. Although the findings are based on sample, it may be generalized that this trend is noticeable in banking sector as a whole.

## ii. Relationship of Customer with the Bank

The relationship that an individual is having with the banks is a formal relationship, in which each customer is known to the organisation (in technical term atleast to the computers) and all individual transactions are specifically recorded. The reason why the relationship is termed as formal is due to the fact that in some services, the customer undertakes a service and disappears (so knowing a customer is quite difficult). In a study Reichheld and Sasser analysed the profit per customer in different service businesses,

accordingly by the number of year that a customer had been with the firm. They found that the longer the customer remained with the organisation, the more profitable they became to serve (Reichheld et al.1995, pp.59-79).

The annexure V: table-7. II presents the relationship an individual is having with banks. The criteria chosen is the customer saving account with the bank. The saving account is considered because it involves multiple transactions and it requires reciprocal recognition and knowledge between organization and customer. The table indicates that more than eighty per cent (80 %) of the respondents are having relationship with more than one bank. The trend is more visible with the respondents of private and foreign banks having multiple accounts than respondents in the nationalised banks. The respondents are not sticking to one bank but prefer to deal with many banks. So we can infer that allegiance towards a single bank is low in the bank sector.

An attempt is made to study the reason for choosing a particular bank by the customer. The data (annexure V: table-7. III A) indicates that for respondents in NSBs, the most frequently mentioned reason for choosing the particular bank was its suitable location. In general the criteria given by the respondents for choosing the nationalised bank are ranked as follows: (a) suitable location of the bank, (b) credibility of the bank, (c) range of banking services and, (d) banking hours.

The annexure V: table-7. III B indicates that most important reason given by the respondents for choosing the private bank is its range of banking services (39 per cent). The second most important criteria are banking hours (35 per cent). Again, range of banking service was the reason for the respondents of nationalised banks who are having relationship with private banks. With regard to respondents of foreign bank (annexure V:

table-7. III C) the reason for having a relationship with a private bank was also its range of banking service. So overall the range of banking service provided by the private banks is the most important reason for having relationship with the bank. The reasons for maintaining a relationship with foreign banks are range of banking services (76 per cent), suitable location (12 per cent) and banking hours (12 per cent).

In the banking sector, customers are making their choices between the various banking groups on the basis of perceived differences. This can be gauged from the fact that the respondents are having bank account both with private and foreign banks though both provide customers with more or less similar arrays of banking services and products.

Range of banking services was the determinant attribute for selection of private banks and foreign banks, and suitable location and credibility for nationalised bank. Most of the customers in the survey maintain regular contact with their banks. Around fifty two per cent (52%) of individuals visit the branch at least once in a month (see annexure V: table-7. IV).

The role of information about banking products and services is crucial to both the organisation and the customers. The banking services require active contact between the organization and customers. This often results in the customer scouting for active information about the banking products and service to reduce the cost of information gathering. For most of the respondents word of mouth is the source of information about the banking products and services. For the respondents of foreign banks, the most important source is the mailers from the banks (see annexure V: table-7. V). Development in technology has also helped banks to provide information to the customers through e-mails. The reason for having the word of mouth as the most

important source of information can be due to the fact that in banking being service sector the customers has always contact with the human(s) in one form or other most of the time, when the service is availed.

However, some of the private and foreign banks are encouraging their customers to increasingly use ATMs, call centers/voice mail, email, Internet etc, thus reducing employee-customer face to face contacts and their costs.

The other reason could be due to the fact that comments and recommendations that customers make about their service experience can be a powerful source of information about the banking products and services, one more reason could be the non availability of technology to vast section of population.

Being part of the service delivery process, customers continually scout for information about the service options available. The role of publicity on banking products, rules and regulations in the banking sector is very important. Most of the respondents rated the quality and frequency of publicity done by the foreign banks as the best followed by the private banks and nationalised banks. Respondents rated the quality and frequency of information on banking rule and procedure done by foreign banks as best followed by nationalised banks and private banks (see annexure V: table-7. **VI**).

### **iii. Data pertaining to Customer Usage of E- banking (ATMs, Internet Banking & Phone Banking)**

New technologies are helping the banks to deliver the products and services in new and better way. We looked at the customer usage of new technology that are been introduced in the Indian banking sector in the last five years and found some interesting results.

Thirty -seven (37%) of the respondents in the nationalised banks are using ATMs. Overall sixteen nine per cent (69%) of the respondents in all banking groups are using the ATMs. The most interesting fact is that only eleven per cent (11%) and four per cent of respondents are using Internet and phone banking respectively (see annexure V: table-7.VII).

The reason for not using a particular E-banking facility by respondents ranges from facility not available to never felt the need. The most important reason sighted by the customers for non-usage of Internet banking is unfamiliarity with technology (fifty four per cent) and for phone banking and any branch banking the reason is the non-availability of the service (see annexure V: table-7. VIII).

More than forty three per cent (43%) of respondents in the nationalised banks are using the ATMs facility in the range of less than five times a month, while for private banks and foreign banks it is sixty nine per cent (69%) and seventy-eight (78%), respectively.

Nineteen per cent (19%) respondents each in nationalised banks and private banks are using ATMs facility between five to ten times in a month. Very few respondents are using ATMs above ten times a month. This could be due to the fact that in private and foreign banks a service charge is levied if the individual uses ATMs facility more than ten times a month. Most of the respondents (ninety eight per cent) are not using the Internet banking facility (see annexure V: table-7. IX).

The most important usage of E-banking facility is the withdrawal of cash through ATMs. Very few respondents in foreign banks are using ATMs for deposit of cheque and cash (thirteen per cent only). The retail customers are using Internet banking for checking

**the** account and few also mentioned that Internet banking has been used for bills payment. So overall the most frequent usage of E-banking is restricted to withdrawal of cash through ATMs (see annexure V: table- 7.X).

#### **iv. Data pertaining to Factor Analysis and Testing of Hypothesis**

The factor analysis was derived from component analysis with a VARIMAX rotation of the bank customers perception of various banks in Hyderabad City. Regarding the adequacy of the sample size, there is 42 to 1 ratio of observations to variables, which falls within the acceptable limit. Also the sample size of 300 respondents provides an adequate basis for the calculation of the correlation between variables. The inspection of the correlation matrix reveals that 12 of the 21 correlation (57 %) are significant at the .01 level [see table 7 .V (a) and 7.V (b)]. This provides an adequate basis for proceeding to the next level, the empirical examination of adequacy for factor analysis.

The next step is to assess the overall significance of the correlation matrix with the Bartlett test. The overall correlations are significant. But these correlations only test for non-zero correlation and not the pattern of these correlations. When observing the overall Measure of Sampling Adequacy (MSA) 0.469 which is below acceptable range 0.50.

Further, examination of values for each variables in Table: 7.V (b), two variables ( $X_i$  and  $X_5$ ) that have values under 0.50. Because  $X_5$  has the lowest MSA value, it will be omitted in an attempt to obtain a set of variables that can exceed the minimum acceptable MSA levels.

**Table: 7.V (a) Assessing the Appropriateness of Factor Analysis: Correlation**

| Variables   | <u>Correlation Among Variables</u> |                |                |                |                |                |                |
|---|------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|   | X <sub>1</sub>                     | X <sub>2</sub> | X <sub>3</sub> | X <sub>4</sub> | X <sub>5</sub> | X <sub>6</sub> | X <sub>7</sub> |
| X <sub>1</sub> Quality and Frequency of Publicity on Bank products & services | 1.00                               | .45*           | -.22*          | .19            | .04            | .64*           | .53            |
| X <sub>2</sub> Quality and frequency of publicity on Bank rules / procedures  |                                    | 1.00           | .49            | .35            | .10            | .51            | .48            |
| X <sub>3</sub> Response Time/efficiency                                       |                                    |                | 1.00           | .76*           | .20            | .63*           | .64*           |
| X <sub>4</sub> Personalised Service   |                                    |                |                | 1.00           | .20            | .52*           | .39            |
| X <sub>5</sub> Trust - Worthiness   |                                    |                |                |                | 1.00           | .31            | .20            |
| X <sub>6</sub> Customer - Friendliness/Helpfulness                            |                                    |                |                |                |                | 1.00           | .64*           |
| X <sub>7</sub> Procedural Simplification                                      |                                    |                |                |                |                |                | 1.00           |

- Indicate correlation significant at the .01 level
- Overall Measure of Sampling Adequacy : .469
- Bartlett Test of Sphericity : 569.5

**Table: 7.V (b) Assessing the Appropriateness of Factor Analysis: Measure of Sampling Adequacy (MSA) and Partial Correlation among Variables**

| Variables   | <u>Correlation Among Variables</u> |                |                |                |                |                |                |
|---|------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|   | X <sub>1</sub>                     | X <sub>2</sub> | X <sub>3</sub> | X <sub>4</sub> | X <sub>5</sub> | X <sub>6</sub> | X <sub>7</sub> |
| X <sub>1</sub> Quality and Frequency of Publicity on Bank products & services | .452                               |                |                |                |                |                |                |
| X <sub>2</sub> Quality and frequency of publicity on Bank rules / procedures  | .897                               | .512           |                |                |                |                |                |
| X <sub>3</sub> Response Time/Efficiency                                       | .021                               | -.192          | .762           |                |                |                |                |
| X <sub>4</sub> Personalised Service   | -.156                              | -.172          | -.421          | .572           |                |                |                |
| X <sub>5</sub> Trust - Worthiness   | -.321                              | -.448          | -.262          | -.132          | .327           |                |                |
| X <sub>6</sub> Customer - Friendliness/Helpfulness                            | -.734                              | -.634          | -.831          | -.924          | -.829          | -.629          |                |
| X <sub>7</sub> Procedural Simplification                                      | -.725                              | -.637          | -.683          | -.756          | -.431          | -.224          | .538           |

- Diagonal values are measures of sampling adequacy for individual variables; off-diagonal values are anti-image correlation (negative partial correlation).

Table: 7.VI (a) contains the correlation matrix for the revised set of variables ( $X_1, X_2, X_3, X_4, X_6, X_7$ ) along with MSA and Bartlett Test value. In the reduced correlation matrix 11 of 15 correlations are significant [see Table 7.VI (a) and 7.VI (b)]. The Bartlett test shows that non zero correlation exist at the significance level of .0001. The reduced set of variables collectively meet the necessary threshold of sampling adequacy with an MSA value of .559. Each variable also exceeds the threshold value, indicating that the reduced set of variables meets the fundamental requirements of factor analysis.

**Table: 7.VI (a) Assessing the Appropriateness of Factor Analysis: Correlation**

| Variables   | Correlation Among Variables |             |             |             |             |             |
|---|-----------------------------|-------------|-------------|-------------|-------------|-------------|
|   | $X_1$                       | $X_2$       | $X_3$       | $X_4$       | $X_6$       | $X_7$       |
| $X_1$ Quality and Frequency of Publicity on Bank products & | 1.00                        | .45*        | -.56*       | .19         | .64*        | .53*        |
| $X_2$ Quality and frequency of publicity on Bank rules /    |                             | <b>1.00</b> | .49*        | .35         | .51*        | .48*        |
| $X_3$ Response Time/Efficiency                              |                             |             | <b>1.00</b> | .76*        | .63*        | .64*        |
| $X_4$ Personalised Service                                  |                             |             |             | <b>1.00</b> | .52*        | .39         |
| $X_6$ Customer-   |                             |             |             |             | <b>1.00</b> | .64*        |
| $X_7$ Procedural Simplification                             |                             |             |             |             |             | <b>1.00</b> |

- Indicate correlation significant at the .01 level
- Overall Measure of Sampling Adequacy : .559
- Bartlett Test of Sphericity : 302.864

Table: 7.VI (b) Assessing the Appropriateness of Factor Analysis: Measure of Sampling Adequacy (MSA) and Partial Correlation among Variables

| Variables   | <u>Correlation Among Variables</u> |             |             |             |             |             |
|---|------------------------------------|-------------|-------------|-------------|-------------|-------------|
|   | $\lambda_1$                        | $\lambda_2$ | $\lambda_3$ | $\lambda_4$ | $\lambda_5$ | $\lambda_7$ |
| X <sub>1</sub> Quality and Frequency of Publicity on Bank products & services | .77                                |             |             |             |             |             |
| X <sub>2</sub> Quality and frequency of publicity on Bank rules / nrocedures  | .80                                | -.301       |             |             |             |             |
| X <sub>3</sub> Response Time/Efficiency                                       | .392                               | -.301       | .787        |             |             |             |
| X <sub>4</sub> Personalised Service   | -.091                              | -.226       | -.086       | .596        |             |             |
| X <sub>6</sub> Customer-Friendliness/Helpfulness                              | -.323                              | -.213       | -.092       | -.233       | .548        |             |
| X <sub>7</sub> Procedural Simplification                                      | -.421                              | -.037       | -.151       | -.421       | .739        | .728        |

- Diagonal values are measure of sampling adequacy for individual variables, off-diagonal values are anti-image correlation (negative partial correlation),

The correlation matrix is transformed through estimation of factor model to obtain a factor matrix. The Table: 7. VII contains the information regarding the six possible factors and their relative explanatory power expressed by their eigenvalue. By applying the latent root criterion, two components were retained. The two factors retained represent 72.85 per cent of the variance of six variables.

Table: 7. VII Results for the Extraction of Component Factors

| Factors | Eigenvalue | Percent of Variance | Cumulative Percent of Variance |
|---------|------------|---------------------|--------------------------------|
| 1       | 2.4373     | 40.62               | 40.62                          |
| 2       | 1.9341     | 32.23               | 72.85                          |
| 3       | .6734      | 11.22               | 84.07                          |
| 4       | .5438      | 9.06                | 93.13                          |
| 5       | .3129      | 5.21                | 98.36                          |
| 6       | .0985      | 1.64                | 100.0                          |

The first factor accounts for the largest amount of variance and is a general factor, with every variable having high loading (see Table: 7. VIII). The loading on the second factor shows three variables ( $X_1$ ,  $X_4$ , and  $X_6$ ).

**Table: 7. VIII** Inrotated Component Analysis **Factor Matrix**

| Variables  | Factors  |             | Communality |
|--|----------|-------------|-------------|
|  | Factor 1 | Factor 2    |             |
| $X_1$ Quality and Frequency of Publicity on Bank products & services | -.610    | .528        | <b>.65</b>  |
| $X_2$ Quality and frequency of publicity on Bank rules / procedures  | -.749    | .069        | .59         |
| $X_3$ Response Time/Efficiency                                       | .729     | .327        | <b>.63</b>  |
| $X_4$ Personalised Service   | .489     | <b>.798</b> | .83         |
| $X_6$ Customer - Friendliness/Helpfulness                            | .417     | .823        | <b>.86</b>  |
| $X_7$ Procedural Simplification                                      | .757     | <b>.164</b> | .61         |
| Sum of squares ( Eigenvalue)   | 2.50     | <b>1.72</b> | Total       |
| Percentage of trace *  | 40.62    | 32.33       | 72.85       |

Based on the factor loading, interpretation will be difficult, so we proceed to rotate the factor matrix to redistribute the variance from earlier factor to the later factor, by applying orthogonal (VARIMAX) rotation (see Table: 7. IX).

The factor solution was derived from component analysis with a VARIMAX rotation of the bank customers' perception of banks in Hyderabad City. Factor 1 has four ( $X_1$ ,  $X_2$ ,  $X_3$  and  $X_7$ ). The four variables are grouped together and can be termed as Activity variables. Turning to Factor 2,  $X_4$  (Personalised Service) and  $X_6$  (Customer - Friendliness/Helpfulness) both relate to the human behaviour component of staff and can be termed as image component. In a highly interactive service environment such as of

retail banking customers determine very often their positions concerning the bank from information availability and attitude towards staff competence.

**Table: 7.IX VARIMAX Rotated Component Analysis Factor Matrix**

| Variables   | <u>VARIMAX - Rotated</u> |          |                      |
|---|--------------------------|----------|----------------------|
|   | Loading                  |          | Communality          |
|   | Factor 1                 | Factor 2 |                      |
| X <sub>1</sub> Quality and Frequency of Publicity on Bank products & services | .788                     | .194     | .65                  |
| X <sub>2</sub> Quality and frequency of publicity on Bank rules / procedures  | .714                     | .266     | .59                  |
| X <sub>3</sub> Response Time/Efficiency                                       | .803                     | .011     | .63                  |
| X <sub>4</sub> Personalised Service   | .164                     | .933     | .83                  |
| X <sub>6</sub> Customer - Friendliness/Helpfulness                            | .025                     | .934     | .86                  |
| X <sub>7</sub> Procedural Simplification                                      | .125                     | .934     | .61                  |
| Sum of squares ( eigenvalue)  | 2.36                     | 1.86     | <u>Total</u><br>4.22 |
| Percentage of trace   | 39.4                     | 33.45    | 72.85                |

An attempt is also made here to study the level of service quality (from the viewpoint of customers) in the Indian banking sector. The differences between the three groups of banks with respect to service quality delivered to customers have been found by using ANOVA along with the post hoc test of Bonferroni. The results of ANOVA and the post hoc test of Bonferroni for the seven factors are summarised in Table: X. It can be inferred from the F Values that there is significant difference between the three groups of banks

with respect to all the factors. Further The Bonferroni comparisons have revealed significance differences between NSBs , PSBs and FRBs with respect to four variables .

**Table: X Results of ANOVA and Bonferroni to test for the significance between three groups of banks in term of service quality with respect to four variables.**

| S.No | Critical Dimension                  | ANOVA ( F ) Bonferroni comparisons                        |
|------|-------------------------------------|---|
| 1    | Response Time/Efficiency            | 7.02 ** NSBs-PSBs, NSBs-FRBs*, PSBs- FRBs <sup>NS</sup>   |
| 2    | Personalised Service                | 50.34 ** NSBs-PSBs*, NSBs-FRBs*, PSBs- FRBs <sup>NS</sup> |
| 3    | Customer - Friendliness/Helpfulness | 42.18** NSBs-PSBs*, NSBs-FRBs*, PSBs- FRBs*               |
| 4    | Procedural Simplification           | 53.87 ** NSBs-PSBs*, NSBs-FRBs*, PSBs- FRBs*              |

Note: \* significant at the 0.05 level; \*\*significant at 0.01 level; NS: not significant

The above finding reveals that the three groups of banks seem to vary significantly in the level of service quality they deliver to their customers. These results actually go along anticipated lines as there is bound to be significant differences among three groups of banks from view point of customers, because the three groups of banks are fundamentally different with respect to the nature and scope of their operation and management of the same.

The services offered by the foreign banks were rated the best, followed by those of the private banks and the nationalised banks. But the most noticeable feature is that the respondents trust the nationalised banks the most. This is happening even though the

respondents of the nationalised bank are not satisfied with the customer friendliness and response time of NSBs (see annexure V: Table- 7.XI).

With regard to customer perception towards role of technology in the improvement of working of banking organizations, the majority of bank retail customers agree that technology is improving the working of banks (see annexure V: Table-7.XII). Few respondents (around two per cent) did not agree that technology has improved the performance of banks and another twelve per cent (12%) were undecided.

The sample survey among the retail customers of the Indian banks is carried out for studying the bank choice by customer, reason for choosing a particular bank, customer contact, evaluating the range and quality of bank services and activities. The sample size of 300 individuals is sufficient for making generalisations and conclusions, as the sample is also representative. Some more important conclusions from the study of customers' attitudes and perceptions are as follows.

- a) Suitable location of the bank and credibility / trustworthiness of the bank dominated the various criteria for choosing the nationalised banks by retail customers. The relevant criteria for choosing foreign and private banks are the range of banking services and banking hours. These amply demonstrate that in the retail market of the banking sector the two most important factors are convenience and the service offering. The nationalised banks score high on the convenience factor and private and foreign banks score high on service offering.
- b) About three fourth of the customers in the retail banking segment are using ATMs, but the usage of Internet banking, phone banking and any branch banking

are comparatively less. One reason for low use of Internet banking could be due to low Internet subscriber base.

- c) The retail customers rated quite highly, the quality of products and services provided by foreign banks followed by private and nationalised banks. The response time / efficiency, procedural simplicity, customer friendliness and personalized services of foreign and private banks were evaluated quite highly by the retail customer. Most of the retail banking customers trusts the nationalised banks, followed by foreign and private banks.
- d) Retail customers are satisfied in general with the information received from the bank, especially through the word of mouth. Surprisingly, large proportions of retail customers are not interested about the availability and/ or quality of financial statements and reports.
- e) Perceptions of customers towards service in Indian retail banking urban market are influenced by two factors. The first factor is termed as 'Activity Factors' and the second factor is termed as 'Image Factors'. The factors identified are in line with findings reported in previous studies mentioned earlier in the review of literature.
- f) The ANOVA test showed that three groups of banks seem to vary significantly in the level of service quality that they deliver to their customers.

Since the imposition of banking sector reforms in 1991, banking sector has seen favorable changes. This also chapter has assessed the implication of these reforms by examining changes in the performance of the banking sector.

- a) The performance of NSBs improved in the second half of the 1990s. In the year 1995, eight out of twenty seven NSBs were making losses and by the year 2002 all the NSBs were making profits.
- b) Profitability (measured by ROA) of nationalised banks increased over the reforms period. In the year 2004, the FRBs had the highest ROA of 1.65 per cent followed by OPBs (1.20 per cent).
- c) There has been a sizeable decline in the intermediation costs of SCBs from 3.02 per cent in 1987 to 2.20 percent in 2004.
- d) NSBs and SBI banks have steadily improved their cost efficiency over the reform period. Even though foreign banks and private sector banks generally performed better than public sector banks in terms of profitability, earnings efficiency and cost efficiency in the initial stage, such differences have diminished as public sector banks have improved profitability and cost efficiency. This suggests that the banking sector reforms since 1991 have exerted increased pressure and, thus, had a positive impact on the performance of nationalised banks.

Summing up the chapter regarding the performance of banks in the sector, our analysis of the customer responses clearly indicates that foreign banks scores better in performance variables compared to new private banks and nationalised banks both in return of assets and customer satisfaction. The next chapter summarises the conclusions of the study and makes some recommendation to the policy makers in the banking sector.

## CHAPTERS

### CONCLUSIONS AND RECOMMENDATIONS

This final chapter has two objectives. One is to submit the limitation of the present study. The second is to summarise the major findings and recommendations of the study by way of its contributions, and to outline some pertinent issues for further research.

#### 8.1: Limitations of the Study

- a) There is an enormous difficulty in linking technological progress to the performance of the retail banking segment, as comparable data on technological investments done by various banks are not available.
- b) The sample respondents are drawn from the largest banks in each of the banking groups. Hence the study does not cover respondents from the other banks in the scheduled commercial banking sector.
- c) The respondents are drawn from the city of Hyderabad alone. Hence, the study findings may not be necessarily generalisable for other urban markets.
- d) Though there is a huge customer base and around 550 branch managers in Hyderabad, due to various constraints of a doctoral research, the sample size for customers is restricted to 300 respondents, and that of branch managers is restricted to 60.
- e) The present study on employees' perception towards technology accords greater importance to branch managers, and other employees of the bank are excluded from the purview of study.

- f) The present study is confined to retail urban customers and the findings cannot be generalised for rural customers.
- g) The structure of assets and liability of banks (Asset Liability Management) has not been covered under the present study.

## **8.2:Major Findings and Recapitulation of the Results**

Reforms in the financial sector, especially in the banking sector are mainly aimed at removal of structural bottlenecks, promotion of new players/ instruments, free pricing of financial products and assets, relaxation of quantitative restrictions, improvement in trading, clearing and settlement practices, enhanced transparency, adoption of best global practices etc. Reforms have encompassed regulatory and legal changes, building up of institutional infrastructure, refinement of market microstructure and technological upgradation. In response to reforms, the Indian banking sector has undergone radical transformation during the 1990s. Reforms have altered the ownership pattern and domain of operations of banks and infused competition into the banking sector.

As per the objectives enunciated in Chapter 1, in the second chapter through a review of literature, we examined various conceptual and empirical studies and policy documents on the structure, conduct and performance in the banking sector by different scholars and institutions and the way they have focused on the area.

It is seen that various concepts, methodologies and policies have been evolved in respect of structure, conduct and performance of banks in the context of liberalisation, technologisation and customer orientation. However there have not been any studies which comprehensively focus on the developments and assessment of retail banking in

India in the contemporary environment. It is in such a background that the present study has attempted to comprehensively look at the structure, conduct and performance of the banking sector in the context of reforms and technological changes. The research approach and methodology being utilised for the study is enunciated in Chapter 3.

In Chapter 4, we took up the discussion of how deregulation and technological forces are changing the structure of the sector. The following major conclusions are drawn out of the discussion:

- a) The nationalized banks lead the scheduled commercial banking sector in India. Structure of the banking sector has changed with introduction of reforms and technology in the last ten years with the coming of NPBs and FRBs. There are now more players in the market. The number of NPBs has increased from nil to eight in the last nine years with the opening of the banking sector for private players. Some trend of mergers is also noticed in the banking sector, with few mergers taking place in the sector during the period 1992-2002.
- b) The regulators in the banking sector are not promoting mergers and acquisitions in the sector nor acting as an impediment to mergers or acquisition. The banking regulations are relaxed by allowing entry of new private and foreign banks, and directing nationalized banks to rely on the capital market for supplementing their equity base.
- c) The accumulated effect of this relaxation greatly increased the assets composition of banks as a whole, and also changed the overall structure of the banking sector. The share of other nationalised banks in the total assets of scheduled commercial banking sector has decreased from 56 per cent to 46 per cent with the

implementation of reforms in the sector. The foreign banks have shown highest compound annual growth rate (CAGR) of 20.77 per annum in their assets in the last fifteen years. With regard to concentration ratio the share of top five banks in assets, deposits and profit has decreased considerably. The share of top five banks in assets has decreased from 51 per cent to 43 per cent, in deposit it has decreased from 49 per cent to 43 per cent and, in profit it has decreased from 54 to 41 percent. This makes it apparent that reforms triggered some decentralisation and high competition in the sector.

- d) In the retail banking the new private banks have significantly increased their share in the deposits and lendings in the banking sector during the period 1995-2002. The share of retail credit has increased from 4 per cent to 6 per cent in the total gross bank credit in the last decade. The credit in housing and consumer durable segment has registered the largest increase. The branch network of nationalised banks in term of number has decreased marginally in the last decade, but foreign and new private banks are increasing and strengthening their branch network especially in the urban area.

In the chapter 5 we posed the question as to how the reforms and technology have affected the conduct of the banking sector. Owing to banks' relatively poor lending strategies and relative lack of risk management under Government ownership, many banks became unprofitable, inefficient, and unsound prior to reforms. Against this background, the Government launched comprehensive banking sector reforms in 1991. Most of the recommendations of the Narsimham Committee II have that been accepted

and introduced, although significant, are in the nature of ratios, rates and accounting norms. The same progress has not been attained with regard to structural and systemic aspects of the reform agenda. Interest rates have been deregulated and became more flexible with respect to almost all term deposit rates and lending rates. Banks are no longer required to obtain prior concurrence of the Indian Banks' Association (IBA) or prior approval of the RBI for introducing new deposit mobilization schemes, except for NRI deposits. CRR declined from 15 per cent in 1991 to 5 percent in 2004. The SLR also declined, from 38.5 per cent in 1991 to 25 percent in 1997, at which level it has remained till date. Banks are given right to make decisions on credit allocations and this has resulted in more operational freedom to evolve their own methods of assessing working capital requirements of the borrowers. Liberalisation in branch licensing policy has lead nationalised banks to rationalise some of their branches.

One of the areas of the Indian financial system that has attracted most of the policy makers has been the level of NPAs. The total number of NSBs with net NPAs above 10 per cent of net advances declined from 8 banks to 3 banks between the period 1996 and 2002. During the same period the number of FRBs increased from 1 bank to 13 banks with regard to net NPAs above 10 per cent of net advances. To cope with NPAs, the Government passed the 'Recovery of Debts Act' in the year 1993-94 and, 'SARFAESI Act' has been promulgated in the year 2002.

The introduction of Capital to Risk-Weighted Asset Ratio (CRAR) norms in 1992 has resulted in significant improvements in the capital position of banks operating in India. While in 1995-96, 75 out of 92 banks had a CRAR of above 8 per cent, as on March 31 2002, 92 out of 97 banks operating in India had CRAR above the statutory

minimum level of 9 per cent. The banks that couldn't comply with capital adequacy norms were recapitalised. The recapitalisation was undertaken for nationalised banks.

After the introduction of banking sector reforms in 1992, an amount of Rs.17, 746 crore was infused as recapitalisation support to nationalised banks till the year 2003. Majority of the banks have returned the recapitalised amount to the Government.

With regard to IT Policy in the banking and financial sectors, the introduction of electronic technology for transactions, settlement of accounts, book-keeping and all other related functions has revolutionised the sector. In response to the compulsions imposed by the technological environment, the banking sector is accelerating the pace of computerisation of branch operations, controlling offices and head offices. In the year 1997 barely 10 per cent of the branches of NSBs were computerised which has risen to 30 per cent in the year 2002. There is a progress towards automation in the banking system, especially in relation to computerisation of payment systems, cheque clearing. Faster and less expensive communication technologies like Structured Financial Messaging Solution (SFMS), Electronic Funds Transfer (EFT) and Centralised Funds Management System (CFMS) are helping the banking organisations to function more smoothly and efficiently. While these changes are happening at the sectoral level, the retail banking segment is also witnessing windfall changes. The study has pointed out that most of the banking organisations have started investing heavily in e-technologies (e.g. website on the internet) as a means to promote and distribute their products to retail customers in an effective manner. Banks in India are using the Internet as an alternative means to distribute their traditional credit and payments products to retail customers. All the new private banks and foreign banks offer balance inquiry and fund transfers, bill

payments and credit applications online to the customers. In contrast, fewer banks with transactional websites offer brokerage, cash management, fiduciary or insurance services online. The rapid increase in the use of the Internet represents a continuation of banks' efforts to replace their costly branch network with alternative distribution channels. It was also found that large banks like SBI and ICICI had adopted these technologies very aggressively during the late 1990s.

Another type of electronic technology that banks are investing in is the Automated Teller Machines (ATMs) that allow depositors remote access to their bank accounts at any time of the day. Although ATMs have existed since the mid of the 1990s, their extent has grown dramatically only in very recent times. While the number of bank offices of new private banks has continued to rise gradually over the past five years, the number of ATMs has exploded from one in 1996 to around 5000 today. The number of ATM locations in India has increased much faster than the number of branches. ATMs have added to the convenience of the customers, but they do not seem to substitute for the branch, rather it seems that, they only complement each other. It can be also noticed that electronic payment systems has started playing a dominant role in the Indian banking sector for inter-bank transactions, though the same cannot be said for customer transactions. With regard to the marketing aspect, the 4Ps of retail banking segment in the sector, we could gauge that new products, new delivery channels (place), new promotion strategies and new pricing strategies are being introduced in the segment. The impetus for this change has come from both within the banks and from customers who are demanding greater control, security, and convenience over banking transactions. Customers are increasingly looking for anytime and anywhere banking. Simultaneously, the changing

economic environment, marked by falling interest rates has fostered this growth in retail banking.

In the Chapter 6 we addressed the issue of employees perception towards technology through an empirical study. There has been an upward movement of the number of computer literate personnel in the Indian banking sector from 8 percent to 23 per cent, which can be considered as a fitting indicator of the positive and gratifying influence of IT on the human resources in the sector. In tandem with the increasing levels of computerization, the percentage of computer literate employees has tripled over the five years, from 1996 to 2000, in NSBs and OPBs. The percentage of IT specialists in the banking sector has also increased from 0.22 per cent to 0.55 per cent during the period 1996-2000. With the growing use of IT, 26 NSBs introduced the VRS schemes in 2000-01. This resulted in a nearly twelve per cent reduction in the staff strength. In the empirical study of branch managers, following perspectives emerged with regard to the the implementation of IT in the banking sector

- a) Managers in the Indian banking sector overwhelmingly believe that IT will certainly improve the competitive advantage of the banks
- b) The main problem as perceived by the managers of SBI group, NSB group and OPB group is lack of know-how and functionality with to regard to the usage of IT in banks, especially as it is mostly outsourced. The main problem as perceived by managers of new private and foreign banks is customers' lack of access to network.

- c) NSB group managers perceive E-banking as a medium to inform the customers. NPB and FRB group managers view E-banking as a tool for relationship marketing.
- d) Most managers believe that Internet banking will become an important medium between customers and banks in coming years.
- e) NSB managers view E-banking as an effective tool for cost reduction. NPB and FRB group managers view E-banking as a means to satisfy customers' needs and wants in a better way.

In the Chapter 7 we discussed the implication of reforms performance of the banking sector. The performance of NSBs in term of ROA and cost, improved in the second half of the 1990s. After the reforms were initiated, by the year 2002 all the NSBs were making profits. ROA of nationalised banks increased over the reforms period. The ROA of the banking system was high at 1.3 per cent as at end-March 2004 as against 0.18 per cent as at end of the year 1987. The intermediation costs of SCBs declined from 3.02 per cent in 1987 to 2.20 percent in 2004. NSBs and SBI banks have steadily improved in cost efficiency over the reform period. Even though foreign banks and private sector banks generally performed better than public sector banks in terms of profitability, earnings efficiency and cost efficiency in the initial stage, such differences have diminished as nationalised banks have improved profitability and cost efficiency. This suggests that the banking sector reforms since 1991 have exerted increased pressure and, thereby, had a positive impact on the performance of nationalised banks.

Summing up the performance of banks in the sector, as seen by the customer, in Chapter 7 clearly indicates that foreign banks score better in performance variables compared to new private banks and nationalised banks in customer satisfaction in respect of retail banking. Some important conclusions from the analysis of customers' attitudes and perceptions are as follows:

- a) Suitable location of the bank and credibility / trustworthiness of the bank dominated the various criteria for choosing the nationalised banks by retail customers. The relevant criteria for choosing foreign and private banks are the range of banking services and banking hours. These amply demonstrate that in the retail market of the banking sector the two most important deciding factors are convenience and the service offerings. The nationalised banks score high on the convenience factor and private and foreign banks score high on service offerings.
- b) About three fourth of the customers in the retail banking segment are using ATMs, but the usage of Internet banking, phone banking and any branch banking are comparatively less. One reason for low use of Internet banking could be low Internet subscriber base.
- c) The retail customers rated quite highly the quality of products and services provided by foreign banks, followed by private and nationalised banks. The response time / efficiency, procedural simplicity, customer friendliness and personalized services of foreign and private banks are rated quite highly by the 70 per cent retail customer. Most of the retail banking customers trusts the nationalised banks, followed by foreign and private banks.

- d) Retail customers are satisfied in general with the information received from the banks, especially through the word of mouth. Surprisingly, large proportions of retail customers are not interested in the availability and/ or quality of financial statements and reports.
- e) This study showed that first factor termed as 'Activity Factor' and the second factor termed as image Factor<sup>1</sup> influence customers perception in Indian banking sector. The factors identified are in line with findings reported in previous studies mentioned earlier in the review of literature.
- i) The ANOVA test showed that three groups of banks seem to vary significantly in the level of service quality delivered to its customers.

Now finally let us turn to the major contributions of the present study. Though, there is a large literature on the reform actions in the banking sector in India. There is, however, yet, little unified enunciation of the rationale and strategies underlying these changes; these are mostly available in scattered articles and speeches. An observer of the Indian banking sector may be hard pressed to find a work which has systematically covered all areas of banking sector reforms in the context of retail banking. The attempt of the study is to bring the banking sector more or less as whole under scrutiny by paying attention to changes in retail banking segment and human resource management with the greater use of IT.

So one contribution is continuously underlining the importance of reforms and technology in the Indian banking sector. Earlier studies, as pointed out, did not look at the sector from all the aspects- the sector, employees and the customers. There have not been

many studies covering all the three areas at a time in its entirety. The study attempts to give a more holistic picture of the banking sector in the background of reforms and technologisation and their implication for retail banking.

Secondly the study gives a picture of the developments occurring in the sector chronologically and how reforms and technology have affected the structure, conduct and performance of sector as a whole. We have done this by dividing our study into different stages. First, the sector is studied, and then the retail segment of the banking sector is looked into. Then we conducted an empirical study to gauge the employee's perspective, and last but not the least the customer's perspective to technologisation. What follows are certain recommendations for the future on the basis of the present study.

### 8.3: Recommendations

- a) Nationalised banks enjoy scale advantages because of their nationwide branch networks (especially compared with private sector banks, which tend to compete in the retail market), the current approach of improving their performance without rationalizing them may not have further and substantial benefits for the banking sector. As ten years have passed since the reforms were initiated and nationalised banks have been exposed to the new structural and regulatory environments and pressures, it may be time for the Government to take a further step in this direction by promoting mergers and acquisitions of banks and/or branches and closing of unviable nationalised banks and/or branches, keeping in view the social and developmental need to provide accessibility to actual and potential customers.

- b) External growth strategies based on mergers, acquisition, joint venture, etc need to be cautiously explored. However strategies for internally - led growth areas may be more feasible in the emerging scenario. Such growth will typically require new products and new delivery channels, and effective advertising and marketing expenditures, an area where the banks have to pay more attention. It may be more immediately feasible for the banks to shift their strategic growth objective from wholesale acquisition of other banks to the acquisition of individual customers of other banks.
- c) Banks need to find ways to cut back-office costs as most of the value moves to the front end. Banks should explore new businesses and joint ventures aimed at sharing activities such as external sourcing, operations, and transaction processing. Such ventures can help institutions gain scale as well as strip out costs in areas from which value is migrating.
- d) As most of the branch managers have pointed out the issue of lack of know-how in IT, the managements of Indian banks, especially of the NSBs, need urgently to review the training programs and incorporate more IT related training programs by taking their respective business environments into consideration.
- e) The nationalised banks need to give more emphasis on the data security aspects, as this is one of the major areas of concern for the branch managers.
- f) The nationalised banks also need to explore the option of introducing internal facilities like tele-video conferencing, which would facilitate quick decision-making.

- g) The study also observed that banks that attempt to use websites as their primary means for interacting with customers have not been completely successful so far, suggesting that E-banking technologies cannot replace traditional distribution channels entirely. This suggests a slightly broader question: Are banks using the Internet to enhance their existing delivery channels ('bricks and clicks') or to supplant them ('bricks or clicks')? In other words, are branches and websites substitutes or complements? In the light of rising technological sophistication and the divergence of the needs of individual customers, banks should make differentiated distribution of services both feasible and crucial. The banks should integrate new distribution channels and tailor the existing branch network to the needs of specific customer groups. All banks could integrate their Internet channel with their traditional brick and mortar branches, using a "click and mortar" distribution strategy. Increasing differentiation will also mean increasing complexity and cost, which will call for more efficient inter-branch and intra-bank coordination of the distribution channels with greater efficiency. The task is thus three fold -segmentation, integration, and restructuring.
- h) The new private and foreign banks should come out with effective promotional strategies aimed at improving their customers their trustworthiness, relative to nationalised banks
- i) The current climate of low growth and high uncertainty has put banking revenues and margins under greater pressure. Retail customers have become more demanding and more financially sophisticated. Finding themselves in a buyer's market, they not only are more vocal in expressing dissatisfaction with their

financial relationships, but also feel empowered by favorable regulatory developments. Moreover, they are increasingly willing to switch institutions if they feel neglected, and they will keep switching until they are fully satisfied that their banking and financial-planning needs are being properly looked after. It is becoming clear that strategies based on customer acquisition, which have been highly useful during a period when low interest rates encouraged people to borrow, must now take greater account of retention. Indeed, customers, many of whose levels of debt have risen sharply, are confident enough to move to other institutions that hold out the promise of better service. So the banks in India should come out with customer relationship and customer retention strategies,

- j) A major demographic shift is occurring, particularly in India, as more young individuals are joining the working class. Banks face an imperative to develop innovative products that address the needs of the expanding young group along with the means to deliver and service those offerings. As this segment will require in the future pension plans, banks should come out with products that integrate pension plans and investments into traditional savings products.

#### 8.4: Suggestions for Future Research

There are some interesting topics for future research emerging from the current research. Notably, one of the most important topics that requires more attention is what kind of measurable impact the investments in technologies have made on the productivity of banks. Another area for future research is to map products and service development processes in the banking sector, and also to analyse whether they are segment specific.

Thus, hopefully, this thesis on 'Implications of Reforms and Technologisation on Commercial Banking Sector with Reference to Retail Banking in an Urban Market' will provide the essential empirical basis for future studies, like the implication of new channels and services. We hope that both at empirical and conceptual levels we have taken the initial step to present the role of technology and reforms in banking sector from the aspects of the sector itself, the employees and the customer. It is now for future studies to explore the full potential of this theme at the micro level of the banking sector.

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**Annexure-I**  
**Prudential Norms on Capital Adequacy**

**General**

1.1 With a view to adopting the Basle Committee framework on capital adequacy norms which takes into account the elements of risk in various types of assets in the balance sheet as well as off-balance sheet business and also to strengthen the capital base of banks, Reserve Bank of India decided in April 1992 to introduce a risk asset ratio system for banks (including foreign banks) in India as a capital adequacy measure.

1.2 Essentially, under the above system the balance sheet assets, non-funded items and other off-balance sheet exposures are assigned weights according to the prescribed risk weights and banks have to maintain unimpaired minimum capital funds equivalent to the prescribed ratio on the aggregate of the risk weighted assets and other exposures on an ongoing basis. The broad details of the capital adequacy framework are detailed below.

2. Capital funds

2.1 Capital funds of Indian banks

For Indian banks, 'capital funds' would include the following elements:

2.1.1 Elements of Tier I capital

- i) Paid-up capital, statutory reserves, and other disclosed free reserves, if any.
- ii) Capital reserves representing surplus arising out of sale proceeds of assets.

2.1.2 Equity investments in subsidiaries, intangible assets and losses in the current period and those brought forward from previous periods, should be deducted from Tier I capital.

2.1.3 In the case of public sector banks that have introduced Voluntary Retirement Scheme (VRS), in view of the extra-ordinary nature of the event, the VRS related Deferred Revenue Expenditure would not be reduced from Tier I capital.

2.1.4 Creation of deferred tax asset (DTA) results in an increase in Tier I capital of a bank without any tangible asset being added to the banks' balance sheet. Therefore, DTA, which is an intangible asset, should be deducted from Tier I capital.

2.1.5 Elements of Tier II capital

- i) Undisclosed reserves and cumulative perpetual preference shares  
These often have characteristics similar to equity and disclosed reserves. These elements have the capacity to absorb unexpected losses and can be included in capital, if they represent accumulations of post-tax profits and not encumbered by any known liability and should not be routinely used for absorbing normal loss or operating losses. Cumulative perpetual preference shares should be fully paid-up and should not contain clauses that permit redemption by the holder.
- ii) Revaluation reserves  
These reserves often serve as a cushion against unexpected losses, but they are less permanent in nature and cannot be considered as 'Core Capital'. Revaluation reserves arise from revaluation of assets that are undervalued on the bank's books, typically bank premises and marketable securities. The extent to which the revaluation reserves can be relied upon as a cushion for unexpected losses depends mainly upon the level of certainty that can be placed on estimates of the market values of the relevant assets, the subsequent deterioration in values under difficult market conditions or in a forced sale, potential for actual liquidation at those values, tax consequences of revaluation,

etc. Therefore, it would be prudent to consider revaluation reserves at a discount of 55 percent while determining their value for inclusion in Tier II capital. Such reserves will have to be reflected on the face of the Balance Sheet as revaluation reserves.

iii) General provisions and loss reserves

Such reserves, if they are not attributable to the actual diminution in value or identifiable potential loss in any specific asset and are available to meet unexpected losses, can be included in Tier II capital. Adequate care must be taken to see that sufficient provisions have been made to meet all known losses and foreseeable potential losses before considering general provisions and loss reserves to be part of Tier II capital. General provisions/loss reserves will be admitted up to a maximum of 1.25 percent of total risk weighted assets.

iv) Hybrid debt capital instruments

In this category, fall a number of capital instruments which combine certain characteristics of equity and certain characteristics of debt. Each has a particular feature which can be considered to affect its quality as capital. Where these instruments have close similarities to equity, in particular when they are able to support losses on an ongoing basis without triggering liquidation, they may be included in Tier II capital.

v) Subordinated debt

(a) To be eligible for inclusion in Tier II capital, the instrument should be fully paid-up, unsecured, subordinated to the claims of other creditors, free of restrictive clauses, and should not be redeemable at the initiative of the holder or without the consent of the Reserve Bank of India. They often carry a fixed maturity, and as they approach maturity, they should be subjected to progressive discount, for inclusion in Tier II capital. Instruments with an initial maturity of less than 5 years or with a remaining maturity of one year should not be included as part of Tier II capital. Subordinated debt instruments eligible to be reckoned as Tier II capital will be limited to 50 percent of Tier I capital.

b) In the case of public sector banks, the bonds issued to the VRS employees as a part of the compensation package, net of the unamortised VRS Deferred Revenue Expenditure, could be treated as Tier II capital, subject to compliance with the terms and conditions stipulated in para 2.4 below.

c) The subordinated debt instruments included in Tier II capital may be subjected to discount at the rates shown below:

| Remaining Maturity of Instruments             | Rate of Discount (%) |
|---|----------------------|
| Less than one year                            | 100                  |
| One year and more but less than two years     | 80                   |
| Two years and more but less than three years  | 60                   |
| Three years and more but less than four years | 40                   |
| Four years and more but less than five years  | 20                   |

d) Banks should indicate the amount of subordinated debt raised as Tier II capital by way of explanatory notes/ remarks in the Balance Sheet as well as in Schedule 5 under 'Other Liabilities & Provisions'.

vi) The Investment Fluctuation Reserve (IFR) would continue to be treated as Tier II capital but it would not be subject to the ceiling of 1.25 per cent of the total risk

weighted assets. The above treatment would be effective from March 31, 2003 onwards.

- vn) Banks are allowed to include the 'General Provisions on Standard Assets' and 'provisions held for country exposures' in Tier II capital. However, the provisions on 'standard assets together with other 'general provisions/ loss reserves' and 'provisions held for country exposures' will be admitted as Tier II capital up to a maximum of 1.25 per cent of the total risk-weighted assets.

2.1.6 Tier II elements should be limited to a maximum of 100 percent of total Tier I elements for the purpose of compliance with the norms.

2.1.7 A bank's aggregate investment in Tier II bonds issued by other banks and financial institutions shall be permitted upto 10 percent of the investing banks total capital. The total capital for this purpose will be the same as reckoned for the purpose of Capital Adequacy.

## 2.2 Capital funds of foreign banks operating in India

For foreign banks, 'capital funds' would include the following elements:

### 2.2.1 Elements of Tier I capital

- i) Interest-free funds from Head Office kept in a separate account in Indian books specifically for the purpose of meeting the capital adequacy norms.
- ii) Statutory reserves kept in Indian books.
- iii) Remittable surplus retained in Indian books which is not repatriable so long as the bank functions in India.

Notes:

- a) The foreign banks are required to furnish to Reserve Bank, (if not already done), an undertaking to the effect that the banks will not remit abroad the remittable surplus retained in India and included in Tier I capital as long as the banks function in India.
- b) These funds may be retained in a separate account titled as 'Amount Retained in India for Meeting Capital to Risk-weighted Asset Ratio (CRAR) Requirements' under 'Capital Funds'.
- c) An auditor's certificate to the effect that these funds represent surplus remittable to Head Office once tax assessments are completed or tax appeals are decided and do not include funds in the nature of provisions towards tax or for any other contingency may also be furnished to Reserve Bank.
- d) Foreign banks operating in India are permitted to hedge their Tier I capital held in Indian books. These banks are free to make their own decision as regards the timing of the hedge transactions subject to compliance with all other terms and conditions contained in Exchange Control Department's circular No.EC.CO.FMD.6/02.03.75/2002-2003 dated November 20, 2002.
- iv) Capital reserve representing surplus arising out of sale of assets in India held in a separate account and which is not eligible for repatriation so long as the bank functions in India.
- v) Interest-free funds remitted from abroad for the purpose of acquisition of property and held in a separate account in Indian books.

- vi) The net credit balance, if any, in the inter-office account with Head Office/overseas branches will not be reckoned as capital funds. However, any debit balance in Head Office account will have to be set-off against the capital.

#### 2.2.2 Elements of Tier II capital

To the extent relevant, elements of Tier II capital as indicated above in paragraph 2.1.4 in respect of Indian banks will be eligible.

2.2.3 The elements of Tier I & Tier II capital do not include foreign currency loans granted to Indian parties.

#### 2.3 Minimum requirement of capital funds

Banks were required to maintain a minimum Capital to Risk-weighted Assets Ratio (CRAR) norm of 8 percent on an ongoing basis up to the year ending 31 March 1999. With effect from the year ending 31 March 2000, banks are required to maintain a minimum CRAR of 9 percent on an ongoing basis.

#### 2.4 Issue of subordinated debt for raising Tier II capital

2.4.1 The Reserve Bank has given autonomy to Indian banks to raise rupee subordinated debt as Tier II capital, subject to the certain terms and conditions.

2.4.2 RBI has issued detailed guidelines on the standard requirements and conditions for Head Office borrowings in foreign currency raised by foreign banks operating in India for Inclusion , as subordinated debt in Tier II capital .

#### 3. Risk adjusted assets and off-balance sheet items

3.1 Risk adjusted assets would mean weighted aggregate of funded and non-funded items. Degrees of credit risk expressed as percentage weightings, have been assigned to balance sheet assets and conversion factors to off-balance sheet items.

3.2 Banks' investments in all securities should be assigned a risk weight of 2.5 percent for market risk. This will be in addition to the risk weights assigned towards credit risk since, in line with best practices, some capital cushion should also be provided for market risk in addition to credit risk.

3.3 The value of each asset/ item shall be multiplied by the relevant weights to produce risk-adjusted values of assets and off-balance sheet items. The aggregate will be taken into account for reckoning the minimum capital ratio.

3.4 The risk-weights allotted to each of the items of assets and off-balance sheet items are furnished below -.

#### Risk Weights for Calculation of CRAR

##### I. Domestic Operations

##### A *Funded Risk Assets*

| Sr. No. | Item of asset or liability                     | Risk Weight % |
|---------|--|---------------|
| I       | Balances                                       |               |
| 1.      | Cash, balances with RBI                        | 0             |
| 2.      | i Balances in current account with other banks | 20            |
|         | ii. Claims on Bank/FIs                         | <b>20</b>     |

|     |  |        |
|-----|--|--------|
|     |  |        |
| II  | investments  |        |
| 1.  | Investments in Government Securities   | 2.5    |
| 2.  | investments in other approved securities guaranteed by Central/ State Government.  | 2.5    |
| 3.  | Investments in other securities where payment of interest and repayment of principal are guaranteed by Central Govt. (This will include investments in Indira/Kisan Vikas Patra (IVP/KVP) and investments in Bonds and Debentures where payment of interest and principal is guaranteed by Central Govt.)  | 2.5    |
| 4.  | Investments in other securities where payment of interest and repayment of principal are guaranteed by State Governments.<br><i>Note:</i> Where guarantee has been invoked and the concerned State Government has remained in default, banks should assign 102.5% risk weight. However the banks need to assign 102.5% risk weight only on those State Government guaranteed securities issued by the defaulting entities and not on all the securities issued or guaranteed by that State Government. | 2.5    |
| 5.  | Investments in other approved securities where payment of interest and repayment of principal are not guaranteed by Central/State Govt.  | 22.50  |
| 6.  | Investments in Government guaranteed securities of Government Undertakings which do not form part of the approved market borrowing programme.  | 22.50  |
| 7.  | Claims on commercial banks and public financial institutions   | 22.50  |
| 8.  | Investments in bonds issued by other banks/PFIs .  | 22.50  |
| 9.  | Investments in securities which are guaranteed by banks or PFIs as to payment of interest and repayment of principal.  | 22.50  |
| 10. | Investments in subordinated debt instruments and bonds issued by other banks or Public Financial Institutions for their Tier II capital.   | 102.50 |
| 11. | Deposits placed with SIDBI/NABARD in lieu of shortfall in lending to priority sector.  | 102.50 |
| 12. | Investment in Mortgage Backed Securities (MBS) of residential assets of Housing Finance Companies (HFCs) which are recognised and supervised by National Housing Bank (subject to satisfying terms & conditions given in.  | 52.50  |
| 13. | Investment in securitised paper pertaining to an infrastructure facility.  | 52.50  |
| 14. | Investments in debentures/ bonds/ security receipts/ Pass Through Certificates issued by Securitisation Company / Reconstruction Company and held by banks as investment   | 102.50 |
| 15. | All other investments  | 102.50 |
|     | <i>Note:</i> Equity investments in subsidiaries, intangible assets and losses deducted from Tier I capital should be assigned zero weight  |        |
| III | Loans & Advances including bills purchased and discounted and other credit facilities  |        |
| 1.  | Loans guaranteed by Govt. of India   | 0      |
| 2.  | Loans guaranteed by State Govts.<br><i>Note:</i> Loans guaranteed by State Govts. where guarantee has been invoked and the concerned State Govt. has remained in default for a period of more than 180 days (or more than 90 days with effect from March 31, 2004) after invocation of the state government guarantee a risk weight of 100 percent should be assigned.   | 0      |

|           |  |                                |
|-----------|--|--------------------------------|
| 3.        | Loans granted to public sector undertakings of Govt of India   | 100                            |
| 4.        | Loans granted to public sector undertakings of State Govts   | 100                            |
| 5.        | For the purpose of credit exposure, bills purchased / discounted / negotiated under LCs or otherwise should be reckoned on the bank's borrower constituent. Accordingly, the exposure should attract a risk weight appropriate to the borrower constituent for capital adequacy purposes, as under.<br><br>(i) Government<br><br>(ii) Banks/PFIs<br>(iii) Firms, individuals, corporates etc.        | 0<br><br>20<br><br>100         |
| 6.        | Others   | 100                            |
| 7.        | Leased assets  | 100                            |
| 8.        | Advances covered by DICGC/ECGC<br><i>Note:</i> The risk weight of 50% should be limited to the amount guaranteed and not the entire outstanding balance in the accounts. In other words, the outstandings in excess of the amount guaranteed, will carry 100% risk weight.   | 50                             |
| 9.        | SSI Advances Guaranteed by Credit Guarantee Fund Trust for Small Industries (CGTSI) up to the guaranteed portion.<br><i>Note:</i> Banks may assign zero risk weight for the guaranteed portion. The balance outstanding in excess of the guaranteed portion would attract a risk-weight as appropriate to the counter-party. Two illustrative examples are given in <i>Annexure 2B</i> .             | 0                              |
| 10.       | Insurance cover under Business Credit Shield the product of New India Assurance Company Ltd. (Subject to Conditions given in Annexure 4)<br><br><i>/Vote.</i> The risk weight of 50% should be limited to the amount guaranteed and not the entire outstanding balance in the accounts. In other words, the outstandings in excess of the amount guaranteed, will carry 100% risk weight.            | 50                             |
| 11        | Advances against term deposits, Life policies, NSCs, IVPs and KVPs where adequate margin is available.   | 0                              |
| 12.       | Loans and Advances granted to staff of banks that are fully covered by superannuation benefits and mortgage of flat/house.   | 20                             |
| 13.       | Housing loans to individuals against the mortgage of residential housing properties.   | 50                             |
| 14.       | Takeout Finance<br>(i) Unconditional takeover (in the books lending institution)<br>(a) Where full credit risk is assumed by the taking over institution<br>(b) Where only partial credit risk is assumed by taking over institution<br>i) The amount to be taken over<br>ii) The amount not to be taken over<br><br>fin Conditional take-over (in the books of lending and Taking over institution) | 20<br><br>20<br>100<br><br>100 |
| <b>IV</b> | <b>Other Assets</b>  |                                |
| <b>1.</b> | Premises, furniture and fixtures   | 100                            |
| <b>2</b>  | (i) Income tax deducted at source (net of provision)   | 0                              |

|  |  |     |
|--|--|-----|
|  | (ii) Advance tax paid (net of provision)   | 0   |
|  | (iii) Interest due on Government securities  | 0   |
|  | (iv) Accrued interest on CRR balances and claims on RBI on account of Government transactions (net of claims of Government/RBI on banks on account of such transactions) | 0   |
|  | (v) All other assets   | 100 |

Source - Circular No. -Department of Banking Operations and Development DBOD No. BP.BC.20/21.01.002 / 2003- 2004. Reserve Bank of India (2003)

## Annexure-11

### Prudential Norms on Income Recognition, Asset Classification and Provisioning pertaining to Advances

#### 1. General

1.1. In line with the international practices and as per the recommendations made by the Committee on the Financial System (Chairman Shri M. Narasimham), the Reserve Bank of India has introduced, in a phased manner, prudential norms for income recognition, asset classification and provisioning for the advances portfolio of the banks so as to move towards greater consistency and transparency in the published accounts.

1.2 The policy of income recognition should be objective and based on record of recovery rather than on any subjective considerations. Likewise, the classification of assets of banks has to be done on the basis of objective criteria which would ensure a uniform and consistent application of the norms. Also, the provisioning should be made on the basis of the classification of assets based on the period for which the asset has remained non-performing and the availability of security and the realisable value thereof.

1.3 With the introduction of prudential norms, the Health Code-based system for classification of advances has ceased to be a subject of supervisory interest. As such, all related reporting requirements, etc. under the Health Code system also cease to be a supervisory requirement. Banks may, however, continue the system at their discretion as a management information tool.

#### 2. Definitions

##### 2.1 Non-performing assets

2.1.1 An asset, including a leased asset, becomes non-performing when it ceases to generate income for the bank. A 'non-performing asset' (NPA) was defined as a credit facility in respect of which the interest and/ or instalment of principal has remained 'past due' for a specified period of time. The specified period was reduced in a phased manner as under:

| Year ending March 31 | Specified period |
|----------------------|------------------|
| 1993                 | four quarters    |
| 1994                 | three quarters   |
| 1995 onwards         | two quarters     |

2.1.2 An amount due under any credit facility is treated as "past due" when it has not been paid within 30 days from the due date. Due to the improvements in the payment and settlement systems, recovery climate, upgradation of technology in the banking system, etc., it was decided to dispense with 'past due' concept, with effect from March 31, 2001. Accordingly, as from that date, a Non-performing Asset (NPA) shall be an advance where

- interest and/or instalment of principal remain overdue for a period of more than 180 days in respect of a Term Loan,
- the account remains 'out of order' as indicated at paragraph 2.2 below, in respect of an Overdraft/Cash Credit (OD/CC),
- the bill remains overdue for a period of more than 180 days in the case of bills purchased and discounted,
- interest and/or instalment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purposes, and

any amount to be received remains overdue for a period of more than 180 days in respect of other accounts.

^.'3With a view to moving towards international best practices and to ensure greater transparency, RBI has been decided to adopt the '90 days<sup>1</sup> overdue' norm for identification of NPAs, from the year ending March 31, 2004. Accordingly, with effect from March 31, 2004, a non-performing asset (NPA) shall be a loan or an advance where;

- Interest and/ or instalment of principal remain overdue for a period of more than 90 days in respect of a term loan,
- The account remains 'out of order' as indicated at paragraph 2.2 below, in respect of an Overdraft/Cash Credit (OD/CC),
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted,
- Interest and/or instalment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purposes, and
- Any amount to be received remains overdue for a period of more than 90 days in respect of other accounts.

As a facilitating measure for smooth transition to 90 days norm, banks have been advised to move over to charging of interest at monthly rests, by April 1, 2002. However, the date of classification of an advance as NPA should not be changed on account of charging of interest at monthly rests. Banks should, therefore, continue to classify an account as NPA only if the interest charged during any quarter is not serviced fully within 180 days from the end of the quarter with effect from April 1, 2002 and 90 days from the end of the quarter with effect from March 31, 2004.

2.2 'Out of Order' status-An account should be treated as 'out of order' if the outstanding balance remains continuously in excess of the sanctioned limit/drawing power. In cases where the outstanding balance in the principal operating account is less than the sanctioned limit/drawing power, but there are no credits continuously for 180 days (to be reduced to 90 days, with effect from March 31, 2004) as on the date of Balance Sheet or credits are not enough to cover the interest debited during the same period, these accounts should be treated as 'out of order'.

2.3 'Overdue' -Any amount due to the bank under any credit facility is 'overdue' if it is not paid on the due date fixed by the bank.

### 3. Income Recognition

#### 3.1 Income recognition - Policy-

3.1.1 The policy of income recognition has to be objective and based on the record of recovery. Internationally income from non-performing assets (NPA) is not recognised on accrual basis but is booked as income only when it is actually received. Therefore, the banks should not charge and take to income account interest on any NPA.

3.1.2 However, interest on advances against term deposits, NSCs, IVPs, KVPs and Life policies may be taken to income account on the due date, provided adequate margin is available in the accounts.

3.1.3 Fees and commissions earned by the banks as a result of re-negotiations or rescheduling of outstanding debts should be recognised on an accrual basis over the period of time covered by the re-negotiated or rescheduled extension of credit.

3 1 4 If Government guaranteed advances become NPA, the interest on such advances should not be taken to income account unless the interest has been realised.

### 3.2. Appropriation of recovery in NPAs

3.2.1 Interest realised on NPAs may be taken to income account provided the credits in the accounts towards interest are not out of fresh/ additional credit facilities sanctioned to the borrower concerned.

3.2.2 In the absence of a clear agreement between the bank and the borrower for the purpose of appropriation of recoveries in NPAs (i.e. towards principal or interest due), banks should adopt an accounting principle and exercise the right of appropriation of recoveries in a uniform and consistent manner.

### 3.3 Interest Application

There is no objection to the banks using their own discretion in debiting interest to an NPA account taking the same to Interest Suspense Account or maintaining only a record of such interest in proforma accounts.

### 3.4. Reporting of NPAs

3.4.1 Banks are required to furnish a Report on NPAs as on 31<sup>st</sup> March each year after completion of audit. The NPAs would relate to the banks' global portfolio, including the advances at the foreign branches. The Report should be furnished as per the prescribed format given in the

3.4.2 While reporting NPA figures to RBI, the amount held in interest suspense account, should be shown as a deduction from gross NPAs as well as gross advances while arriving at the net NPAs. Banks which do not maintain Interest Suspense account for parking interest due on non-performing advance accounts, may furnish the amount of interest receivable on NPAs as a foot note to the Report.

3.5.3 Whenever NPAs are reported to RBI, the amount of technical write off, if any, should be reduced from the outstanding gross advances and gross NPAs to eliminate any distortion in the quantum of NPAs being reported.

## 4. Asset Classification

### 4.1 Categories of NPAs

Banks are required to classify non-performing assets further into the following three categories based on the period for which the asset has remained non-performing and the readability of the dues:

- Sub-standard Assets
- Doubtful Assets
- Loss Assets

4.1.1 Sub-standard Assets-A sub-standard asset was one, which was classified as NPA for a period not exceeding two years. With effect from 31 March 2001, a sub-standard asset is one, which has remained NPA for a period less than or equal to 18 months. In such cases, the current net worth of the borrower/ guarantor or the current market value of the security charged is not enough to ensure recovery of the dues to the banks in full. In other words, such an asset will have well defined credit weaknesses that jeopardise the liquidation of the debt and are characterised by the distinct possibility that the banks will sustain some loss, if deficiencies are not corrected.

With effect from 31 March 2005, a sub-standard asset would be one, which has remained NPA for a period less than or equal to 12 months.

4.1.2 Doubtful Assets-A doubtful asset was one, which remained NPA for a period exceeding two

years. With effect from 31 March 2001, an asset is to be classified as doubtful, if it has remained NPA for a period exceeding 18 months. A loan classified as doubtful has all the weaknesses inherent in assets that were classified as sub-standard, with the added characteristic that the weaknesses make collection or liquidation in full, - on the basis of currently known facts, conditions and values - highly questionable and improbable. With effect from March 31, 2005, an asset would be classified as doubtful if it remained in the sub-standard category for 12 months.

4.1.3 Loss Assets-A loss asset is one where the bank or internal or external auditors have identified loss or the RBI inspection, but the amount has not been written off wholly. In other words, such an asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage or recovery value.

#### 4.2 Guidelines for classification of assets

4.2.1 Broadly speaking, classification of assets into above categories should be done taking into account the degree of well-defined credit weaknesses and the extent of dependence on collateral security for realisation of dues.

4.2.2 Banks should establish appropriate internal systems to eliminate the tendency to delay or postpone the identification of NPAs, especially in respect of high value accounts. The banks may fix a minimum cut off point to decide what would constitute a high value account depending upon their respective business levels. The cut off point should be valid for the entire accounting year. Responsibility and validation levels for ensuring proper asset classification may be fixed by the banks. The system should ensure that doubts in asset classification due to any reason are settled through specified internal channels within one month from the date on which the account would have been classified as NPA as per extant guidelines.

#### 4.2.3 Accounts with temporary deficiencies

The classification of an asset as NPA should be based on the record of recovery. Bank should not classify an advance account as NPA merely due to the existence of some deficiencies which are temporary in nature such as non-availability of adequate drawing power based on the latest available stock statement, balance outstanding exceeding the limit temporarily, non-submission of stock statements and non-renewal of the limits on the due date, etc. In the matter of classification of accounts with such deficiencies banks may follow the following guidelines:

- Banks should ensure that drawings in the working capital accounts are covered by the adequacy of current assets, since current assets are first appropriated in times of distress. Drawing power is required to be arrived at based on the stock statement which is current. However, considering the difficulties of large borrowers, stock statements relied upon by the banks for determining drawing power should not be older than three months. The outstanding in the account based on drawing power calculated from stock statements older than three months, would be deemed as irregular. A working capital borrowal account will become NPA if such irregular drawings are permitted in the account for a continuous period of 180 days even though the unit may be working or the borrower's financial position is satisfactory. With effect from March 31, 2004, a working capital borrowal account will become NPA if such irregular drawings are permitted in the account for a continuous period of 90 days even though the unit may be working or the borrower's financial position is satisfactory.
- Regular and ad hoc credit limits need to be reviewed/ regularised not later than three months from the due date/date of ad hoc sanction. In case of constraints such as non-availability of financial statements and other data from the borrowers, the branch should furnish evidence to show that renewal/ review of credit limits is already on and would be completed soon. In any case, delay beyond six months is not considered desirable as a general discipline. Hence, an account where the regular/ ad hoc credit limits have not been reviewed/ renewed within 180 days from the due date/

date of ad hoc sanction will be treated as NPA.

#### 4.2.4 Upgradation of loan accounts classified as NPAs

If arrears of interest and principal are paid by the borrower in the case of loan accounts classified as NPAs, the account should no longer be treated as non-performing and may be classified as 'standard' accounts.

Source - Circular No. -Department of Banking Operations and Development (DBOD1 No. BP. BC. 15 / 21.04.048 / 2003- 2004, Reserve Bank of India (2003)

### Annexure-III.

Manage™

schedule for collection of data for Ph.D. research from the Branch

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PURPOSE ONLY; A STRICT CONFIDENTIALITY WILL BE

V. Balaji Venkatachalam  
Research Scholar  
School of Management Studies  
University of Hyderabad.  
Email: 2kmbph01@uohvd.ernet.in

Date:

Place:

Mark the appropriate Number in the box.

|   |              |
|---|--------------|
| 1 | > Not at All |
| 2 | > Little     |
| 3 | > Moderate   |
| 4 | Strongly     |
| 5 | Do not Know  |

1- Development of Customer oriented banking; application in Indian commercial banking sector.

1.1 Information Technology application: Likely benefits

- a. Support automatic payments
- b. On time product delivery
- c. Give information about/product etc to users
- d. Build IT in the product and service
- e. Control of Service
- f. Product Quality
- g. Use of Information technology to identify market segment
- h. Use of IT to improve Staff competence/efficiency
- i. Use of IT to support accessibility automatic order of service
- j. Offer customer/ Financial management support (To manage finance)
- k. Support of mass customization
- Handling customer complaints
- m. Use of IT to offer customized and individualized attention.
- n. Offer customer training to use your IT system or products.
- o. Use of IT to involve customer in the product design and customization
- p. Support customer to choose the right product for them.
- Cost reduction
- r. Improve competitive advantage

2. Problems encountered with the usage of technology in the bank

|    |  |  |
|----|--|--|
|    | Problems   |  |
| a. | Data Security                                    |  |
| b. | Customer don't have access to network            |  |
| c. | Lack of customer confidence to use the systems   |  |
| d. | Reliability                                      |  |
| e. | Performance                                      |  |
| t. | Lack of Know how                                 |  |
| g. | Functionality                                    |  |
| h. | Don't know customer requirements                 |  |
| l. | Lack of employee confidence                      |  |
| J. | Sufficient training to employees is not provided |  |
| k. | Employees resistance to change/attitude          |  |

3. Technology Requirements for IT application

|    |  |  |
|----|--|--|
|    | Technology Requirement   |  |
| a. | Data base  |  |
| b. | Internet connectivity<br>Intra - bank<br>Inter - bank<br>Inter-city<br>International |  |
| c. | Data Warehouse   |  |
| d. | Groupware and decision support system with customer                                  |  |
| e. | Private net work   |  |
| f. | Image Processing   |  |
| p. | Tele/Video Conferencing  |  |
| h. | Multimedia   |  |
| i. | Optical Character Recognition  |  |
| i. | Virtual reality  |  |
| k. | Voice Recognition  |  |
| l. | Hardware reliability/maintenance   |  |

4. Expectation and perception of E-banking (Rank the following Questions)

4.1 In your Bank the Internet is perceived as-

|    |  |  |
|----|--|--|
| a. | A medium to inform the customer  |  |
| b. | A Self-Service Channel   |  |
| c. | A medium to strengthen the relationship and the contact with individual customer |  |
| d. | A possibility for delivering more individualized service to customer.            |  |
| e. | An important media for communication between bank and customer                   |  |
| f. | A threat to the Bank close relationship with its customer.                       |  |

4.2 In the future your bank expects-

|    |   |  |
|----|---|--|
| a. | To deliver more products / Services through E-banking                           |  |
| b. | E-banking will become more important media directly between the customer & Bank |  |
| c. | Competitor will deliver more products/ services to this media.                  |  |

4.3. Importance of Banking Channels Today

|    |                                  |  |
|----|----------------------------------|--|
| a. | Branch banking/Any where banking |  |
| b. | ATM                              |  |
| c. | Telephone Banking                |  |
| d. | Internet banking                 |  |
| e. | Face to face banking             |  |

4.4.Reason for offering E-banking

|    |                               |  |
|----|-------------------------------|--|
| a. | Expected cost reduction       |  |
| b. | Customers need                |  |
| c. | Expected shortage of employee |  |
| d. | Competitive pressure          |  |

#### Annexure-IV.

This is an Interview -Schedule for collection of data for Ph.D. research from the Retail Customers of Banks.

{Information provided will be used for research purpose only, a strict confidentiality will be maintained.}

V. Balaji Venkatachalam  
Research Scholar  
School of Management Studies  
University of Hyderabad  
Email: 2kmbphQl(a)uohvd.ernet.in

Date:

Place:

Section: 1. PERSONAL PROFILE {Tick in the Appropriate Box}

|                                   |                      |
|-----------------------------------|----------------------|
| 1.1. Age                          |                      |
| a) < 25 yrs                       |                      |
| b) 25 - 40 yrs                    |                      |
| c) 40-55 yrs                      |                      |
| d) > 55 yrs                       |                      |
| 1.2. Sex                          | Male          Female |
| 1.3. Education                    |                      |
| a) None                           |                      |
| b) Primary School                 |                      |
| c) Secondary School               |                      |
| d) Graduation                     |                      |
| e) Post Graduation & Above        |                      |
| f) Training (Duration in months)  |                      |
| 1.4. Occupation                   |                      |
| a) Student                        |                      |
| b) Professional (Doctor/Engineer) |                      |
| c) Manager / Administrator        |                      |
| d) Self employed                  |                      |
| e) Clerk/Support staff            |                      |
| f) Retired Person                 |                      |
| g) Other (specify)                |                      |
| 1.5. Family Size                  |                      |
| a) Unmarried                      |                      |
| b) Married                        |                      |
| c) Spouse alive                   |                      |
| d) Children (No)                  |                      |
| e) Dependent children (No)        |                      |
| f) Other dependents (No)          |                      |
| g) Earning members (No)           |                      |
| 1.6. Family Income per month      |                      |
| a) > 5000 Rs.                     |                      |
| b) 5000-10000 Rs.                 |                      |
| c) 10000-20000 Rs.                |                      |
| d) > 20000 Rs.                    |                      |

| 1.7. You have account with    |              |                   |         |
|-------------------------------|--------------|-------------------|---------|
| Type of Account \ Bank        | Private Bank | Nationalized Bank | Foreign |
| a) Saving Account             |              |                   |         |
| b) Fixed Deposit              |              |                   |         |
| c) Current Account            |              |                   |         |
| d) Credit/Debit Card Account  |              |                   |         |
| e) Any other (Please specify) |              |                   |         |

Section: 2. RELATIONSHIP WITH THE BANK {Tick in the appropriate boxes}

| 2.1. Reason for choosing the Bank                              | Private Bank Bank | Nationalised Bank | Foreign Bank |
|--|-------------------|-------------------|--------------|
| a) Credibility of the Bank                                     |                   |                   |              |
| b) Suitable Location of the Bank                               |                   |                   |              |
| c) Range of Bank Services                                      |                   |                   |              |
| d) Banking Hours   |                   |                   |              |
| e) Parking facility  |                   |                   |              |
| 2.2. Frequency of Contact with Bank:                           |                   |                   |              |
| a) Every day   |                   |                   |              |
| b) 2-4 times week  |                   |                   |              |
| c) Once a week   |                   |                   |              |
| d) Once in Month   |                   |                   |              |
| e) Less often  |                   |                   |              |
| 2.3. Information about banks products is available to you by : |                   |                   |              |
| a. News papers   |                   |                   |              |
| b. Television  |                   |                   |              |
| c. Hoarding  |                   |                   |              |
| d. Mailers from Bank   |                   |                   |              |
| e. Word of Mouth   |                   |                   |              |
| f. E-mail  |                   |                   |              |

Section: 3. E-BANKING

| 3.1. Usage                         | ATMs | Phone Banking | Internet Banking | Any Branch Banking |
|------------------------------------|------|---------------|------------------|--------------------|
| a) 10 or more times a month        |      |               |                  |                    |
| b) 5 to 10 times a month           |      |               |                  |                    |
| c) 1 to 5 times a month            |      |               |                  |                    |
| d) Infrequently                    |      |               |                  |                    |
| 3.2. Reasons For Not Using         |      |               |                  |                    |
| a) Facility not available          |      |               |                  |                    |
| b) Not applied for                 |      |               |                  |                    |
| c) Unfamiliarity with technologies |      |               |                  |                    |
| d) Prepare to deal with Bank Staff |      |               |                  |                    |
| e) Never felt the need             |      |               |                  |                    |
| f) Unsure of Viability/Security    |      |               |                  |                    |

| 3.3. Usage                  | ATMs | Phone Banking | Internet Banking | Any Branch Banking |
|-----------------------------|------|---------------|------------------|--------------------|
| a) Withdrawal of cash       |      |               |                  |                    |
| b) Deposit of cash          |      |               |                  |                    |
| c) Bills payment            |      |               |                  |                    |
| d) Open new account         |      |               |                  |                    |
| e) Checking the account     |      |               |                  |                    |
| f) Transfer                 |      |               |                  |                    |
| g) Depositing cheque/draft  |      |               |                  |                    |
| h) Issue of Demand Draft    |      |               |                  |                    |
| i) Issue of new cheque book |      |               |                  |                    |

4. Customer Perception (Rate the Quality satisfaction on Scale 1... 5, {1 -> denoting poor quality and 5 -^denoting excellent quality})

| Banks ->   | Nationalised | Private | Foreign |
|--|--------------|---------|---------|
| 4.1. Information Availability                                      |              |         |         |
| a) Quality and Frequency of Publicity on Bank products & services  |              |         |         |
| b) Quantity and frequency of publicity on Bank rules / procedures. |              |         |         |
| 4.2. Quality of Services   |              |         |         |
| a) Response Time/Efficiency  |              |         |         |
| b) Procedural Simplification                                       |              |         |         |
| c) Customer - Friendliness/Helpfulness                             |              |         |         |
| d) Trust - Worthiness  |              |         |         |
| e) Personalised Service  |              |         |         |

| 4.3. Technology has strongly improved the working is Banking organization. {Tick in the appropriate box} |  |
|--|--|
| a. Strongly agree  |  |
| b. At^ree  |  |
| c. Undecided   |  |
| d. Disagree  |  |
| e. Strongly disagree   |  |

Annex. Table: 7. II - Profile of the Customers

|                    | BANKING GROUP             |                     |               | TOTAL<br>(300)  |                   |
|--------------------|---------------------------|---------------------|---------------|-----------------|-------------------|
|                    |                           | Nationalised Banks* | Private Banks |                 | Foreign Bank      |
| AGE                | < 25 years                | 29(9.7)             | 21(7.0)       | 11(3.70)        | 61 (20.3.0)       |
|                    | 25-40 years               | 74 (24.70)          | 42(14.0)      | 34(11.30)       | 150(50.0)         |
|                    | 40-55 years               | 30(10.0)            | 23 (7.70)     | 0(0)            | <b>53(18.0)</b>   |
|                    | '-' 55 years              | 17(5.7)             | 14(4.75)      | 5(1.70)         | 36(12.0)          |
|                    |                           |                     |               |                 |                   |
| Gender             | Male                      | 107(35.70)          | 77 (25.70)    | 39(13.0)        | 223 (74.30)       |
|                    | Female                    | 43(14.30)           | 23 (7.70)     | 11(3.70)        | 77 (25.70)        |
| Education          | Illiterate                | -                   |               |                 |                   |
|                    | Primary School            |                     | 2 (0.70)      |                 | 2 (0.70)          |
|                    | Secondary School          | 2(0.70)             | 2 (0.70)      |                 | 4(1.30)           |
|                    | Graduation                | 78(26.0)            | 16(5.30)      | 28 (9.30)       | 122(40.70)        |
|                    | Post Graduation and Above | 61(20.30)           | 72 (24.0)     | 22 (7.30)       | 155(51.70)        |
|                    | Training                  | 9(3.0)              | 8 (2.7 0)     |                 | 17(5.70)          |
| OCCUPATION         | Student                   | 25(8.30)            | 13(4.30)      | 6 (2.0)         | 44(14.60)         |
|                    | Professional              | 41 (13.70)          | 33(11.0)      | 18(6.0)         | 92 (30.60)        |
|                    | Manager                   | 7 (2.30)            | 12(4.0)       | 11(3.70)        | 30(10.0)          |
|                    | Self Employed             | 38(12.70)           | 15(5.0)       | 5(1.70)         | 58(19.30)         |
|                    | Clerk/Support Staff*      | 26(8.70)            | 17(5.70)      | 5(1.70)         | 48(11.0)          |
|                    | Retired Person            | 13(4.30)            | 10(3.30)      | 5(1.70)         | 28 (9.33)         |
| FAMILY STATUS      | Unmarried/Single          | 64(21.30)           | 52(17.30)     | 16(5.30)        | 140(46.70)        |
|                    | Married                   | 86 (28.70)          | 48(16.0)      | 34(11.30)       | 160(53.3)         |
| EARNING MEMBER (S) | One Earning Member        | 10 (3.30)           | 13(4.30)      | 5(1.70)         | <b>28 (9.30)</b>  |
|                    | Two Earning Members       | 74 (24.70)          | 50(16.70)     | 18(6.0)         | 142(47.3)         |
|                    | Three Earning Members     | 48 (16.0)           | 30(10.0)      | 16(5.30)        | 94(31.30)         |
|                    | Four Earning Members      | 18 (6.0)            | 7 (2.30)      | 11 (3.70)       | 36(12.0)          |
| FAMILY INCOME      | < 5000 Rupees             | -                   | -             | -               | --                |
|                    | 5000-10000 Rupees         | 4 (1.30)            | 5(1.70)       |                 | 9 (3.0)           |
|                    | 10000-15000 Rupees        | 16(5.3)             | 12 (4.0)      | -               | 28 (9.30)         |
|                    | 15000-20000 Rupees        | 27 (9.0)            | 13 (4.30)     | 5(1.70)         | <b>45(15.0)</b>   |
|                    | > 20000 Rupees            | 103(34.3)           | 70 (23.30)    | <b>45(15.0)</b> | <b>218(72.70)</b> |

\* Figures in the parenthesis are percentage

NSB Group -+ Nationalised Banks, PSB Group -> Private Banks, FRB Group -> Foreign Banks

**Annexure: Table: 7.IH - Relationship of Customer with the Banks**

| Occupation                         | Bank Account(s) |                  |                  |                 |                  |                 |                 |                                |
|------------------------------------|-----------------|------------------|------------------|-----------------|------------------|-----------------|-----------------|--------------------------------|
|                                    |                 | NSB Only *       | PSB only         | FRB only        | NSB & PSB        | NSB & FRB       | PSB & FRB       | All                            |
| <b>Students /Bank Group</b>        | <i>NSB</i>      | 25 (56.8)        |                  |                 |                  |                 |                 | 25 (56.8)                      |
|                                    | <i>PSB</i>      |                  | 13 (29.5)        |                 |                  |                 |                 | <b>13(29.5)</b>                |
|                                    | <i>FRB</i>      |                  |                  | 6(13.6)         |                  |                 |                 | <b>6(13.6)</b>                 |
|                                    | <b>Total</b>    | <b>25 (56)</b>   | <b>13 (29.5)</b> | <b>6 (13.6)</b> |                  |                 |                 | <b>44 (100)</b>                |
| <b>Professional / Bank Group</b>   | <i>NSB</i>      | 11(12)           |                  |                 | 16(17.4)         | 12(13)          |                 | 2 (2.2) <b>41(44.6)</b>        |
|                                    | <i>PSB</i>      |                  | 5 (5.4)          |                 | 23 (25)          |                 | 3 (3.3)         | <b>2 (2.2)</b> 33 (35.9)       |
|                                    | <i>FRB</i>      |                  |                  | 6(6.5)          |                  | 6(6.5)          | 6(6.5)          | 18(19.6)                       |
|                                    | <b>Total</b>    | <b>11 (12)</b>   | <b>5 (5.4)</b>   | <b>6 (6.5)</b>  | <b>39 (42.4)</b> | <b>18(19.6)</b> | <b>9 (9.8)</b>  | <b>4 (4.3)</b> <b>92 (100)</b> |
| <b>Manager / Bank Group</b>        | <i>NSB</i>      |                  |                  |                 | 7(23.3)          |                 |                 | 7 (23.3)                       |
|                                    | <i>PSB</i>      |                  |                  |                 | 12(40)           |                 |                 | 12(40)                         |
|                                    | <i>FRB</i>      |                  |                  | 5(16.7)         |                  | 6(20)           |                 | 11 (36.7)                      |
|                                    | <b>Total</b>    |                  |                  | <b>5 (16.7)</b> | <b>19(63.3)</b>  | <b>6 (20)</b>   |                 | <b>70 (100)</b>                |
| <b>Self Employed /Bank Group</b>   | <i>NSB</i>      | 7 (12.1)         |                  |                 | 19 (32.8)        | 12 (20)         |                 | 38(65.5)                       |
|                                    | <i>PSB</i>      |                  | 4 (6.9)          |                 | 4 (6.90)         |                 | 7(12.1)         | 15(25.9)                       |
|                                    | <i>FRB</i>      |                  |                  |                 |                  |                 |                 | 5 (8.6)                        |
|                                    | <b>Total</b>    | <b>7 (12.1)</b>  | <b>4 (6.9)</b>   |                 | <b>23 (39.7)</b> | <b>12(20.7)</b> | <b>7 (12.1)</b> | <b>5 (8.6)</b> <b>58 (100)</b> |
| <b>Support Staff/Bank Group</b>    | <i>NSB</i>      | 26 (54.2)        |                  |                 |                  |                 |                 | 26(54.2)                       |
|                                    | <i>PSB</i>      |                  | 13(27.1)         |                 | 4 (8.30)         |                 |                 | 17(35.4)                       |
|                                    | <i>FRB</i>      |                  |                  | 5(10.4)         |                  |                 |                 | 5(10.4)                        |
|                                    | <b>Total</b>    | <b>26 (54.2)</b> | <b>13(27.1)</b>  | <b>5 (10.4)</b> | <b>4 (8.3)</b>   |                 |                 | <b>48 (100)</b>                |
| <b>Retired Person / Bank Group</b> | <i>NSB</i>      | 7(25)            |                  |                 | 6(21.4)          |                 |                 | 13(46.4)                       |
|                                    | <i>PSB</i>      |                  |                  |                 | 7(25)            |                 | 3(10.7)         | 10(35.7)                       |
|                                    | <i>FRB</i>      |                  |                  |                 |                  | 5(17)           |                 | 5(17.9)                        |
|                                    | <b>Total</b>    | <b>7(25)</b>     |                  |                 | <b>13(46.4)</b>  | <b>5(17.9)</b>  | <b>3 (10.7)</b> | <b>28 (100)</b>                |

\*Figures in the parenthesis are percentage

NSB Group -> Nationalised Banks. PSB Group -> Private Banks. FRB Group -> Foreign Banks

**Annex Table: 7. III.A- Customer Response to Reason for Choosing the Nationalised Banks.**

|  | Reason                     |                         |                               |                       |                |                 |
|--|----------------------------|-------------------------|-------------------------------|-----------------------|----------------|-----------------|
|  | Occupation                 | Credibility of the Bank | Suitable Location of the Bank | Range of Bank Service | Banking Hours  |                 |
| <b>Respondent in Nationalised Bank</b> | <b>Student</b>             | 12(8)                   | 10(6.7)                       |                       | 3(2)           | <b>25(16.7)</b> |
|  | <i>Professional</i>        | 34(22.7)                | 6(4)                          |                       | 1(0.70)        | <b>41(27.3)</b> |
|  | <i>Manager</i>             | 6(4)                    | 1(0.70)                       |                       |                | <b>7(4.70)</b>  |
|  | <i>Self Employed</i>       | 25(16.7)                | 12(8.0)                       | 1(0.70)               |                | <b>38(25.3)</b> |
|  | <i>Support Staff</i>       | 15(10)                  | 11(7.3)                       |                       |                | <b>26(17.3)</b> |
|  | <i>Retired Person</i>      | 12(8)                   | 1(0.70)                       |                       |                | <b>13(8.7)</b>  |
|  | <b>Total</b>               | <b>104(69.3)</b>        | <b>41(27.3)</b>               | <b>1(0.70)</b>        | <b>4(2.70)</b> | <b>150(100)</b> |
|  | <i>Student</i>             |                         |                               |                       |                |                 |
| <b>Respondent in Private Bank</b>      | <i>Professional</i>        | 4(7.7)                  | 21(40.4)                      |                       |                | <b>25(48)</b>   |
|  | <i>Manager</i>             | <b>8(15.4)</b>          | 4(7.7)                        |                       |                | <b>12(23.1)</b> |
|  | <i>Self Employed</i>       |                         | 4(7.7)                        |                       |                | <b>4(7.7)</b>   |
|  | <i>Clerk/Support Staff</i> |                         | 4(7.7)                        |                       |                | <b>4 (7.7)</b>  |
|  | <i>Retired Person</i>      |                         | <b>7(13.5)</b>                |                       |                | <b>7(13.5)</b>  |
|  | <b>Total</b>               | <b>12(23.1)</b>         | <b>40(76.9)</b>               |                       |                | <b>52(100)</b>  |
|  | <i>Student</i>             |                         |                               |                       |                |                 |
| <b>Respondent in Foreign Bank</b>      | <i>Professional</i>        | 6(27.3)                 |                               |                       |                | 6(27.3)         |
|  | <i>Manager</i>             |                         | 6(27.3)                       |                       |                | 6(27.3)         |
|  | <i>Self Employed</i>       |                         | 5(22.7)                       |                       |                | 5(22.7)         |
|  | <i>Support Staff</i>       |                         |                               |                       |                |                 |
|  | <i>Retired Person</i>      |                         | 5(22.7)                       |                       |                | 5(22.7)         |
|  | <b>Total</b>               | 6(27.3)                 | <b>16(72.7)</b>               |                       |                | <b>22(100)</b>  |

•Figures in the parenthesis are percentage

**Annex.: Table: 7. IILB-C customers Response to Reason for rhnnsinp the Private Banks.**

|  |                            | Reasons                 |                               |                       |                |                 |
|--|----------------------------|-------------------------|-------------------------------|-----------------------|----------------|-----------------|
|  | Occupation                 | Credibility of the Bank | Suitable Location of the Bank | Range of Bank Service | Banking Hours  |                 |
| <b>Respondent in Nationalised Bank</b> | <i>Student</i>             | -                       | -                             | .                     | .              | -               |
|  | <i>Professional</i>        | -                       | 4(80)                         | 14(28)                | .              | 18(36)          |
|  | <i>Manager</i>             | -                       | -                             | 7(14)                 |                | <b>7(14)</b>    |
|  | <i>Self Employed</i>       | -                       | 1(2)                          | 17(34)                | 1(2)           | 19(38)          |
|  | <i>Support Staff</i>       | -                       | -                             | -                     | -              | -               |
|  | <i>Retired Person</i>      |                         |                               | 6                     |                | 6(12)           |
|  | <b>Total</b>               |                         |                               | <b>5(10)</b>          | <b>44 (88)</b> | 1(2)            |
| <b>Respondent in Private Bank</b>      | <i>Student</i>             | <b>2</b>                | 7(7)                          | 4(4)                  | -              | 13(13)          |
|  | <i>Professional</i>        |                         | 27(27)                        | 6(6)                  | -              | 33 (33)         |
|  | <i>Manager</i>             |                         |                               | 4(4)                  | 8(8)           | 12(12)          |
|  | <i>Self Employed</i>       |                         |                               | 9(9)                  | 6 (6)          | 15(15)          |
|  | <i>Clerk/Support Staff</i> |                         |                               | 9(9)                  | 8(8)           | 17(17)          |
|  | <i>Retired Person</i>      |                         |                               | 7(7)                  | 3 (3)          | 10(10)          |
|  | <b>Total</b>               | <b>2(2)</b>             | <b>34 (34)</b>                | 39 (39)               | 25(25)         | <b>100(100)</b> |
| <b>Respondent in Foreign Bank</b>      | <i>Student</i>             |                         |                               |                       |                |                 |
|  | <i>Professional</i>        |                         |                               | 6(54)                 |                | 6(54)           |
|  | <i>Manager</i>             |                         |                               |                       |                |                 |
|  | <i>Self Employed</i>       |                         | 5(46)                         |                       |                | 5(46)           |
|  | <i>Support Staff</i>       |                         |                               |                       |                |                 |
|  | <i>Retired Person</i>      |                         |                               |                       |                |                 |
|  | <b>Total</b>               |                         | <b>5(46)</b>                  | 6(54)                 |                | <b>11(100)</b>  |

•Figures in the parenthesis are percentage

**Annexure: Table: 7.III.C- Customers Response to Reason for Choosing the Foreign Banks**

|                                   |                            | Reasons                                |                                      |                              |                      |                |
|-----------------------------------|----------------------------|--|--------------------------------------|------------------------------|----------------------|----------------|
|                                   | o<br><b>I</b><br>o         | <i>Credibility of the Bank</i>         | <i>Suitable Location of the Bank</i> | <i>Range of Bank Service</i> | <i>Banking Hours</i> |                |
|                                   |                            | <b>Respondent in Nationalised Bank</b> | <i>Student</i>                       | -                            | -                    | -              |
| <i>Professional</i>               |                            |  | <b>1 (3)</b>                         | 9(35)                        | <b>4(16)</b>         | <b>14(54)</b>  |
| <i>Manager</i>                    |                            |  |                                      |                              |                      |                |
| <i>Self Employed</i>              |                            |  | 5(19)                                | <b>7 (27)</b>                |                      | <b>12(46)</b>  |
| <i>Support Staff</i>              |                            |  |                                      |                              |                      |                |
| <i>Retired Person</i>             |                            |  |                                      |                              |                      |                |
| <b>Total</b>                      |                            |  |                                      | <b>6(22)</b>                 | <b>16(62)</b>        | <b>4(16)</b>   |
| <b>Respondent in Private Bank</b> | <i>Student</i>             | -                                      | -                                    | -                            | -                    | -              |
|                                   | <i>Professional</i>        | -                                      | -                                    | -                            | 5(33)                | 5(33)          |
|                                   | <i>Manager</i>             | -                                      | -                                    | -                            | -                    | -              |
|                                   | <i>Self Employed</i>       | -                                      | -                                    | 6(40)                        | <b>1(7)</b>          | 7(46)          |
|                                   | <i>Clerk/Support Staff</i> | -                                      | -                                    | -                            | -                    | -              |
|                                   | <i>Retired Person</i>      | -                                      | -                                    | <b>3 (20)</b>                | -                    | 3(20)          |
|                                   | <b>Total</b>               | -                                      | -                                    | <b>9 (60)</b>                | <b>6(40)</b>         | <b>15(100)</b> |
| <b>Respondent in Foreign Bank</b> | <i>Student</i>             | -                                      |                                      | 6(12)                        | -                    | 6(12)          |
|                                   | <i>Professional</i>        |  | 6(12)                                | 6(12)                        | 6(12)                | 18(36)         |
|                                   | <i>Manager</i>             | -                                      | -                                    | <b>11 (22)</b>               | -                    | <b>11 (22)</b> |
|                                   | <i>Self Employed</i>       | -                                      | -                                    | 5(10)                        | -                    | 5(10)          |
|                                   | <i>Support Staff</i>       | -                                      | -                                    | 5(10)                        | -                    | 5(10)          |
|                                   | <i>Retired Person</i>      | -                                      | -                                    | 5(10)                        | -                    | 5(10)          |
|                                   | <b>Total</b>               | -                                      | <b>6(12)</b>                         | <b>38 (76)</b>               | <b>6(12)</b>         | <b>50(100)</b> |

•Figures in the parenthesis are percentage

**Annexure: Table: 7.IV- Customers Response to Frequency of Contact with the Branch(s)**

| Contact                  | Respondent in Banking Group |                 |                 |                 |
|--------------------------|-----------------------------|-----------------|-----------------|-----------------|
|                          | NSB*                        | PSB             | FRB             |                 |
| <i>Every Day</i>         | <b>37(12)</b>               | <b>15(5)</b>    | <b>5(1.7)</b>   | <b>57(19)</b>   |
| <i>2-4 times in week</i> | <b>7(2)</b>                 | <b>5(1.70)</b>  | <b>4(1.3)</b>   | <b>16 (5)</b>   |
| <i>Once in a week</i>    | <b>8(3)</b>                 | <b>6(2)</b>     | <b>2(0.7)</b>   | <b>16(5)</b>    |
| <i>Once in a Month</i>   | <b>67(22)</b>               | <b>54(18)</b>   | <b>34(11)</b>   | <b>155(52)</b>  |
| <i>Twice in a Month</i>  | <b>22(7)</b>                | <b>18(6)</b>    | <b>5 (2. 3)</b> | <b>45(15)</b>   |
| <i>Infrequently</i>      | <b>9 (3)</b>                | <b>2 (0.70)</b> | <b>-</b>        | <b>11(4)</b>    |
| <b>Total</b>             | <b>150(50)</b>              | <b>100(33)</b>  | <b>50(17)</b>   | <b>300(100)</b> |

•Figures in the parenthesis are percentage

NSB Group -> Nationalised Banks, PSB Group -\* Private Banks, FRB Group -> Foreign Banks

**Annexure Table: 7.V. - Customers Response to Information Availability about Banking Products and Services**

| Source(s)                                 | Nationalised Banks | Private Banks    | Foreign Banks   |
|---|--------------------|------------------|-----------------|
| <i>News Paper</i>                         | <b>9(4)</b>        | <b>19(12)</b>    | <b>-</b>        |
| <i>Television</i>                         | <b>5(2)</b>        | <b>11(7)</b>     | <b>-</b>        |
| <i>Hoarding</i>                           | <b>21(9)</b>       | <b>14(9)</b>     | <b>-</b>        |
| <i>Mailers from Bank</i>                  | <b>-</b>           | <b>37 (23)</b>   | <b>65(71)</b>   |
| <i>Word ofMouth</i>                       | <b>104(46)</b>     | <b>39 (24)</b>   | <b>16(17)</b>   |
| <i>E-mails</i>                            | <b>-</b>           | <b>17(11)</b>    | <b>4(5)</b>     |
| <i>Newspaper, Television and Hoarding</i> | <b>85 (39)</b>     | <b>24(14)</b>    | <b>6(7)</b>     |
| <b>Total</b>                              | <b>224(100)</b>    | <b>161 (100)</b> | <b>91 (100)</b> |

•Figures in the parenthesis are percentage

NSB Group -\* Nationalised Banks, PSB Group -> Private Banks, FRB Group -> Foreign Banks

**Annexure: Table: 7.VI. - Mean Frequencies of Customers Response to Information Availability about Banks**

| Banking Group | Quality and Frequency of Publicity on Banks Products and Service |             |             | Quality and Frequency of Publicity on Banks Rules and Procedure |             |             |
|---------------|--|-------------|-------------|---|-------------|-------------|
|               | <i>Mean</i>  | <i>Rank</i> | <i>S.D.</i> | <i>Mean</i>   | <i>Rank</i> | <i>S.D.</i> |
| <b>NSB*</b>   | 2.85   | <b>3</b>    | 0.59        | 3.21  | <b>2</b>    | 0.79        |
| <b>PSB</b>    | 3.21   | <b>2</b>    | 0.76        | 3.00  | <b>3</b>    | 0.65        |
| <b>FRB</b>    | 3.64   | <b>1</b>    | 0.54        | 3.54  | <b>1</b>    | 0.50        |

a Scale 1 Very Poor Satisfaction , 2\*Poor Satisfaction . 3= Average Satisfaction , 4= Good Satisfaction, 5~ Excellent Satisfaction

\* NSB Group -> Nationalised Banks, PSB Group -> Private Banks, FRB Group -> Foreign Banks

**Annexure: Table: 7.VII. - Usage of E-banking by Customers**

| Respondent in Banking Group | <u>Yes</u>  |                         |                      |                         |          | <u>NO</u>  |                  |               |                    | Total                |
|-----------------------------|-------------|-------------------------|----------------------|-------------------------|----------|------------|------------------|---------------|--------------------|----------------------|
|                             | Only ATMs   | ATMs & Internet Banking | ATMs & Phone Banking | ATMs Any Branch Banking | ALL      | Only ATMs  | Internet Banking | Phone Banking | Any Branch Banking |                      |
| <b>Nationalised</b>         | 112<br>(37) | 7<br>(2)                | 5<br>(1.6)           | -                       | -        | 26<br>(8)  | 143<br>(47)      | 145<br>(48)   | 150<br>(50)        | 150<br>(50)          |
| <b>Private</b>              | 69<br>(23)  | 14<br>(4)               | 2<br>(0.66)          | -                       |          | 15<br>(5)  | 86<br>(28)       | 98<br>(32)    | 100<br>(33)        | 100<br>(33)          |
| <b>Foreign</b>              | 27<br>(9)   | 12<br>(4)               | 5<br>(1.6)           | -                       | 4<br>(1) | 2<br>(0.6) | 34<br>(11)       | 41<br>(13)    | 46<br>(15)         | 50<br>(17)           |
|                             | 208<br>(69) | 33<br>(11)              | 12<br>(4)            | -                       | 4<br>(1) | 43<br>(14) | 263<br>(87)      | 284<br>(94)   | 296<br>(98)        | <b>300<br/>(100)</b> |

\*Figures in the parenthesis are percentage

**Annexure: Table: 7.VIII. - Reason for Non Usage of E-banking by Customers**

| <b>Reasons for not Using E-banking</b> | <b>Only ATMs</b> | <b>Only Internet Banking</b> | <b>Only Phone Banking</b> | <b>Only Any Branch Banking</b> |
|--|------------------|------------------------------|---------------------------|--------------------------------|
| <i>Facility Not Available</i>          | 15(35)           | 29(11)                       | 122(43)                   | <b>148(50)</b>                 |
| <i>Not Applied for</i>                 | 13(30)           | 57(19)                       | 78 (26)                   | 79(27)                         |
| <i>Unfamiliarity with Technologies</i> | 9(21)            | 146(54)                      | 39(13)                    | -                              |
| <i>Prefer to deal with bank staff</i>  |                  | 4(2)                         | 22(7)                     | -                              |
| <i>Never felt the need</i>             | 6(14)            | 20(8)                        | 23(11)                    | 69 (33)                        |
| <i>Unsure of Viability/Security</i>    | -                | 7(6)                         | -                         | -                              |
| <b>Total</b>                           | <b>43(100)</b>   | <b>263 (100)</b>             | <b>284(100)</b>           | <b>296(100)</b>                |

\*Figures in the parenthesis are percentage

**Annexure: Table: 7.IX. - Frequency of Usage of E-banking by Customers**

| Respondent in banking Group | Usage of E-banking in a Month | Onl) ATMs            | Internet Banking | Phone Banking | Any Branch Banking |
|-----------------------------|-------------------------------|----------------------|------------------|---------------|--------------------|
| <b>Nationalised</b>         | <i>Infrequently</i>           | 13<br>(12)           | 3 (43)           | -             | -                  |
|                             | <i>&lt; 5 times</i>           | 48(43)               | 4(57)            | -             | -                  |
|                             | <i>5 To 10 time</i>           | 31(26)               | -                | -             | -                  |
|                             | <i>&gt; 10 times</i>          | 20(19)               | -                | -             | -                  |
|                             | <b>Total</b>                  | <b>112<br/>(100)</b> | <b>7(100)</b>    | -             | -                  |
| <b>Private</b>              | <i>Infrequently</i>           | 9(13)                | <b>5 (36)</b>    | 2(100)        | -                  |
|                             | <i>&lt; 5 times</i>           | 47(68)               | 2(14)            | -             | -                  |
|                             | <i>5 To 10 times</i>          | 13(19)               | 7(50)            | -             | -                  |
|                             | <i>&gt; 10 times</i>          | -                    | -                | -             | -                  |
|                             | <b>Total</b>                  | <b>69<br/>(100)</b>  | <b>14(100)</b>   | <b>2(100)</b> | -                  |
| <b>Foreign</b>              | <i>Infrequently</i>           | 3(11)                | <b>5 42</b>      | 360           | <b>3 (75)</b>      |
|                             | <i>&lt; 5 times</i>           | 21 (78)              | <b>7 58</b>      | <b>2 40</b>   | 1(25)              |
|                             | <i>5 To 10 times</i>          | 3(11)                | -                | -             | -                  |
|                             | <i>&gt; 10 times</i>          | -                    | -                | -             | -                  |
|                             | <b>Total</b>                  | <b>27<br/>(100)</b>  | <b>12(100)</b>   | <b>5(100)</b> | <b>4(100)</b>      |

'Figures in the parenthesis are percentage

**Annexure: Table: 7. X. - Reason for Using K-bankinn hv Customers**

| <b>Responden<br/>tin<br/>banking<br/>Group</b> | <b>Reasons for<br/>Using E-banking</b>  | <b>Only<br/>ATMs</b> | <b>Internet<br/>Banking</b> | <b>Phone<br/>Banking</b> | <b>Any<br/>Branch<br/>Banking</b> | <b>Total</b>    |
|--|---|----------------------|-----------------------------|--------------------------|-----------------------------------|-----------------|
| <b>Z</b><br>ational sed                        | <i>Withdrawal of<br/>Cash / Checking<br/>the Account</i>                                      | 112<br>(100)         | -                           | -                        | -                                 | <b>112(100)</b> |
|  | <i>Deposit of Cash/<br/>Cheque / Demand<br/>Draft</i>   | -                    | -                           | -                        | -                                 | -               |
|  | <i>Bills Payment</i>  | -                    | -                           | -                        | -                                 | -               |
|  | <i>Checking the<br/>Account</i>   | -                    | <b>7</b><br>(100)           | -                        | -                                 | <b>7(100)</b>   |
|  | <i>Issue of Cheque<br/>Book or Draft/<br/>Transfer of<br/>Amount/ Opening<br/>new Account</i> | -                    | -                           | -                        | -                                 | *               |
|  | <i>Both Withdrawal<br/>Cash and deposit<br/>of Cash/Cheque</i>                                | -                    | -                           | -                        | -                                 | -               |
| <b>*rivat</b>                                  | <i>Withdrawal of<br/>Cash / Checking<br/>the Account</i>                                      | <b>56</b><br>(100)   | -                           | -                        | -                                 | <b>56(100)</b>  |
|  | <i>Deposit of Cash/<br/>Cheque / Demand<br/>Draft</i>   | -                    | -                           | -                        | -                                 | -               |
|  | <i>Bills Payments</i>   | -                    | <b>3</b><br>(100)           | -                        | -                                 | <b>3(100)</b>   |
|  | <i>Checking the<br/>Account</i>   | -                    | 10<br>(100)                 | -                        | -                                 | <b>10(100)</b>  |
|  | <i>Issue of Cheque<br/>Book or Draft/<br/>Transfer of<br/>Amount /Opening<br/>new Account</i> | -                    | 1(33)                       | <b>2(67)</b>             | -                                 | <b>3(100)</b>   |
|  | <i>Both Withdrawal<br/>Cash and deposit<br/>of Cash/Cheque</i>                                | <b>13</b><br>(100)   | -                           | -                        | -                                 | <b>13(100)</b>  |
| <b>U</b><br>o reign                            | <i>Withdrawal of<br/>Cash / Checking<br/>the Account</i>                                      | <b>23</b><br>(100)   | -                           | -                        | -                                 | <b>23(100)</b>  |
|  | <i>Deposit of Cash/<br/>Cheque / Demand<br/>Draft</i>   | -                    | -                           | -                        | -                                 | -               |
|  | <i>Bills Payment</i>  | -                    | -                           | -                        | -                                 | -               |
|  | <i>Checking the<br/>Account</i>   | -                    | <b>9</b><br>(100)           | -                        | -                                 | <b>9(100)</b>   |
|  | <i>Issue of Cheque<br/>Bdok or Draft/<br/>Transfer of<br/>Amount/ Opening<br/>new Account</i> | -                    | <b>3(38)</b>                | <b>5(42)</b>             | •                                 | <b>8(100)</b>   |
|  | <i>Both Withdrawal<br/>Cash and Deposit<br/>of Cash/Cheque</i>                                | 4(50)                | -                           | -                        | <b>4(50)</b>                      | <b>8(100)</b>   |

jkHgues in theparenthesis arc percentage

**Annexure: Table: - 7.XI. -Mean Frequencies of Customer Response to Expectation and Perception towards Quality of Service Provided by Banks \***

| Bank Group | Response Time / Efficiency in the Banks. |      |      | Procedural Simplification in the Banks |      |      | Customers Friendliness in the Banks |      |      | Trust Worthiness in the Banks |      |      | Personalized Service in The Banks. |      |      |
|------------|--|------|------|--|------|------|-------------------------------------|------|------|-------------------------------|------|------|------------------------------------|------|------|
|            | Mean                                     | Rank | ci   | Mean                                   | Rank | ci   | Mean                                | Rank | Q    | Mean                          | Rank | ci   | Mean                               | Rank | S.D. |
| NSB        | 2.92                                     | 3    | 0.54 | 3.03                                   | 3    | 0.64 | 2.73                                | 3    | 0.60 | 3.34                          | 1    | 0.89 | 2.95                               | 3    | 0.89 |
| PSB        | 2.97                                     | 2    | 0.65 | 3.10                                   | 2    | 0.64 | 3.22                                | 2    | 0.72 | 3.26                          | 3    | 0.74 | 3.41                               | 2    | 0.84 |
| FRB        | 3.39                                     | 1    | 0.62 | 3.57                                   | 1    | 0.56 | 3.54                                | 1    | 0.63 | 3.32                          | 2    | 0.60 | 3.45                               | 1    | 0.72 |

a Scale 1 - Very Poor Quality , 2-Poor Quality , 3 = Average Quality , 4- Good Quality. 5= Excellent Quality

•Figures in the parenthesis are percentage

NSB Group -> Nationalised Banks, PSB Group -> Private Banks. FRB Group -> foreign Banks

Annexure: Table: 7.X.II. - Customers Perception towards the Role of Technology in the Working of Banking Organisations

| Banking Group <sup>-*</sup><br>Item<br><i>I</i> | Nationalised Bank | Private Bank | Foreign Bank | Total      |
|---|-------------------|--------------|--------------|------------|
| Strongly Disagree                               | -                 | •            | -            | -          |
| Disagree  | 8(2.7)            | -            | -            | 8 (2.7)    |
| Undecided                                       | 19(6.3)           | 14(4.7)      | 3(1)         | 36(12)     |
| Agree   | 46(15.3)          | 67 (22.3)    | 18(6)        | 131 (43.3) |
| Strongly Agree                                  | 77 (25.7)         | 19(6)        | 29(10)       | 125(42)    |
| Total   | 150(50)           | 100(33)      | 50(17)       | 300(100)   |

\*Figures in the paientthesis arc percentage