INDIAN BANKING: A TRANSITION TOWARDS UNIVERSAL BANKING FRAMEWORK

A Thesis submitted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy

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ABSTRACT

Title of the Thesis	:	Indian Banking: A Transition Towards Universal Banking Framework.
Researcher	:	Ms. Nilanjana Deb
Principal Supervisor	:	Dr. (Mrs.) Chandana Goswami, Professor, Department of Business Administration, Tezpur University, Tezpur, Assam
Periodicity of the Research	:	The research covers a period from FY 2002-03 to FY 2008-09.

Objectives of the Research:

The objectives of the research are –

1. To position a bank in terms of the progress made by it in the direction of Universal Banking.
2. To examine the risk exposure of banks.
3. To critically examine the existing debate on Universal banking in the context of the samples studied.

Research Methodology:

The research was based on primary as well as secondary data.

For Objective # 1: The research aimed to position a sample bank with respect to Universal Bank and as such a 6-point positioning scale was developed. Services were grouped under different points of the scale so that it reflected the evolution of commercial banks in the direction of Universal banking framework. Thereafter, the sample banks were positioned on the

scale in order to know where a bank lay in course of its transition. The data used was from secondary source.

***For Objective # 2*:** In order to assess the financial health as well as risk exposure of banks, C.A.M.E.L Model was used. The sample banks were rated on a scale of 1-5 (as per CAMEL standards) based on the financial ratios under the different components of the Model. The financial ratios were calculated and ratings assigned based on pre-determined ranges. For calculation of financial ratios, data from Annual Reports of banks were used.

***For Objective #3*:** In view of the Objective No. 3, primary data was gathered by using 2 sets of questionnaire. Attempt was made to know the perception of bank managers on Universal Banking and of the customers on the need of having Universal Banks. Samples of 100 bank managers and 270 bank customers were drawn by using judgemental and convenience sampling techniques respectively. The sample size was decided as per general guidelines on sample size and also based on similar studies.

Limitation of the Research:

The research has the following limitation –

1. The research was based on secondary as well as primary data. The primary data required for research *Objective No. 3* was collected from the samples based in Guwahati city. Although Guwahati is one of the most important cities of the country and a commercial hub of North East India, samples selected from the city cannot be considered as a proper representation of the population of the country.

However, the objective of the survey was to check the mood/perception of the bank managers as well as customers of the bank with regard to the concept of Universal banking. Thus, this may not create hindrance in achieving the desired objective even if Guwahati city cannot replicate other major banking hubs of the country.

Findings:

A summary of the findings of the research is given below –

1. In India, most of the commercial banks are on the verge of becoming Universal Banks. When commercial banks – both in public sector as well as private sector were positioned on a scale of 0-5 in terms of services offered with respect to ICICI Bank – the first Indian Universal Bank - it was found that all the banks were placed on the upper half of the scale (with a composite score of more than 3.5). This implies that in near future, as these banks start adding a few more services in their product bouquet, they would slowly emerge as Universal Banks.

2. When risk exposure of Indian commercial banks was assessed, it was found that all the sample Indian commercial banks were having a rating of 3 on the CAMEL Scale. Trend analysis of the CAMEL ratings of all the sample banks reveals that except a few, all banks had been maintaining a composite CAMEL rating of 3 since FY 2002-03. However, an interesting fact that came to light from the trend analysis of Indian banks is that new generation private sector banks namely, Axis Bank, HDFC Bank and ICICI Bank each had elevated themselves to a rating of above 3 at least in one financial year (over the seven year period of study) but were not successful to retain this position and eventually reverted to a rating of 3 in the very next financial year itself. The other banks in this group were IndusInd Bank and Kotak Mahindra Bank which enjoyed a CAMEL rating of 2 (the highest among ratings of Indian banks). IndusInd Bank had this rating in the FY 2003-04 while Kotak

Mahindra Bank had a rating of 2 in FY 2002-03 and FY 2004-05. But unfortunately, these two banks also could not retain their rating and eventually degraded to a rating of 3.

As far as public sector banks are concerned, IDBI Bank in the very first year of its transformation as a bank showed a positive sign with a rating of above 3 (it was in between 2 and 3) in the FY 2005-06. However, similar to the other private sector banks, IDBI's CAMEL rating had also degraded to 3 in subsequent years.

Central Bank of India, however, showed its rating to dip beyond 3 in FY 2006-07 & FY 2007-08 and UCO Bank was the only Indian bank to have a worst rating of 4 in FY 2007-08.

Therefore, as almost all sample banks were rated 3 on the CAMEL Scale, these banks need more supervision because the weaknesses they suffer from, if not rectified timely, may result in failure.

3. Universal Banking concept can be successfully implemented in India only when the bank managers as well as customers have a positive attitude towards the concepts. Primary survey carried out among bank manager and customers revealed that both the groups have a positive attitude towards the concept. Thus, it can be perceived that with active participation of bank managers and support from the bank customers, Indian banks can slowly and successfully make their transition towards Universal Banking framework. However, the survey also brings to light that majority of the customers of banks are not aware of many of the services (beyond traditional banking services) that are presently being offered by the bank. Therefore, if banks lack in proper promotion of the available services, then they may find very few takers. As a result of this, it may not be beneficial to them if they make a transition towards Universal banking framework, rather they may face various problems like diseconomies of scale and loss of core competence in their specialised fields etc.

Conclusion:

Conclusively, it can be said that almost all Indian commercial banks are in the process of becoming Universal banks in near future. This is because when they are compared in terms of services offered by ICICI Bank, most of them have already been providing identical services and in the days to come they are expected to add a few more services to their list. Moreover, as all the sample banks are rated 3 on the CAMEL Scale, risk exposure is comparatively less. If proper and constant monitoring is done by the Reserve Bank of India and at the same time, if the banks are proactive with appropriate risk management system, all the banks can become financially stronger. Lastly, it has also been seen that the both the bank managers as well as the customers of the banks have a supportive attitude towards transformation of banks into Universal banks but what is lacking is poor awareness of the available services among bank customers.

DECLARATION

I, hereby, declare that the thesis entitled "**Indian Banking: A Transition Towards Universal Banking Framework**" is a bona fide research undertaken by me under the guidance of ***Dr. (Mrs) Chandana Goswami***, Professor, Department of Business Administration, Tezpur University, Tezpur and the thesis has neither been submitted previously nor is currently being submitted elsewhere for the award of any Degree, Diploma or other qualification. The work embodies the result of my original research and reflects advancement in this area of research.

I also certify that, to the best of my knowledge, any help received in preparing this thesis, and all sources used have been acknowledged in this thesis.

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(NILANJANA DEB)

Date : June 6, 2012
Place : Tezpur University, Tezpur.

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Certificate

This is to certify that the thesis entitled '**Indian Banking: A Transition Towards Universal Banking Framework**' submitted to the Tezpur University in the Department of **Business Administration** under the School of **Management Sciences** in partial fulfilment for the award of the degree of Doctor of Philosophy in **Business Administration** is a record of research work carried out by **Ms. Nilanjana Deb** under my personal supervision and guidance.

All helps received by her from various sources have been duly acknowledged.

No part of this thesis has been reproduced elsewhere for award of any other degree.

Date: 6/6/12
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PREFACE

The world of banking and finance is changing very fast. Since the last decade, the Indian banking sector has witnessed the emergence of a handful of financial conglomerates (both banks and NBFCs) with interests in everything - from banking to insurance, from housing finance to investment banking, from funds management to securities trading, etc. To be more specific, it was with the introduction of financial sector reforms in early 1990s that has brought a radical change in the sector. Post reforms era saw the emergence of new generation private sector banks and within a short span of time, these banks gained popularity as they have technology edge and better business models when compared to public sector banks. In fact, the new generation Private sector banks are able to attract more business volumes simply because they meet their customers' requirements under one roof. The advent of these banks has laid the foundation of a new genre of financial organisations (both in the public and private sector) that are capable of satisfying the varied needs of its customers. These institutions which are offering a variety of financial services under one-roof are gradually transforming themselves from mere commercial banks to '*Universal Banks*'.

Thus, financial concerns, especially banks have transformed themselves from being a concern offering merely tradition banking services to one which is able to provide hybrid products and satisfy the varied needs of its customers. In fact, banks are transforming themselves with the focus on knowledge pertaining to customers' needs and the disposal income in their hands. This is deemed necessary to enable themselves (i.e., commercial banks) to fit into the new emerging system, where cut-throat competition is order of the day.

Moreover, the Indian Financial Services Sector is huge; it is growing and is of critical significance to the health of the global economy. With diversification to areas of business which was not a part of the traditional banking ambit, the risk exposure of Indian banks has also increased considerably. It is worth mentioning that banks are fragile institutions which are built on trust, reputation and dangerous leverage. In times of trouble, banks can collapse like a pack of cards. As banks sit at the heart of an economy's payments system, failure of even one bank can send shock waves right through the economy. Therefore, banks need policing and financial conglomerates need even more of it, so as to ensure that there is no increase in systemic risk.

The research attempts to highlight the position of a commercial bank with respect to ICICI Bank – the only Indian Universal Bank in terms of services offered presently by them and also the transition process. Apart from this, through the research an attempt has been made to highlight the financial health as well as risk exposure of banks and the perception of bank managers and bank customers on 'Universal banking' concept.

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Undertaking a research work and completing it within a specified period of time requires immense help and encouragement from near and dear ones. First of all, I would like to acknowledge my deepest gratitude to my Guide - ***Dr. (Mrs) Chandana Goswami***, Professor, Department of Business Administration, Tezpur University for her unbelievable help, valuable advices and suggestions. *Thank you, Ma'am!*

This thesis could not have been done without the inputs and contributions of many people especially my respected teachers in Tezpur University, who taught me in my Post Graduate programme as well as guided and encouraged me during my research work. In this context, I would like to acknowledge my sincere thanks to my "Sirs" – ***Dr. Mrinmoy K. Sarma, Dr. Subhrangshu Sekhar Sarkar*** and ***Dr. Chandan Goswami***, Faculty Members, Department of Business Administration, Tezpur University for their valuable advices and help during the period of my research work. My sincere thanks also go to ***Prof. Tusar Kanti Bhattacharjee***, Retired Principal of Jorhat Engineering College and presently Principal, Girijananda Chowdhury Institute of Management & Technology (GIMT), Guwahati, who is also my teacher, for his encouragement during the final stage of preparation of the thesis.

Special thanks go to all my ex-colleagues - especially ***Mr. Zakir Hussain,*** Director, NEF Group of Colleges, ***Mr. Biswajeet Sarkar, Ms. Kakoli Das Choudhury, Ms. Hema Gogoi, Ms. Upasana Das*** and many others for their encouragement and support while I was working in *NEF College of Management and Technology*, Guwàhati. I would also like to thank ***my colleagues*** of the Department of Business Administration, ***Girijananda Chowdhury Institute of Management & Technology***, Guwahati – 17 for their encouragement.

I am also indebted to many Bank Officers for their help in my research work. To name a few, they are ***Mr. Utpal Baruah, Mr. Dipak Mazumder, Ms. Anjali Lyngdoh*** and ***Ms. Rajni Bala,*** all from State Bank of India, ***Mr. Anup Khanna*** of Allahabad Bank and ***Mr. Davis*** of Federal Bank Ltd. Apart from them, I would like to express my sincere thanks to my cousin ***Mr. S.K. Dey***, an Officer of Bank of Baroda who helped me in the initial phase of my research work.

Last but not the least, I would like to express my sincere gratitude to my parents – ***Mr. Himadri Deb*** and ***Mrs. Nilima Deb*** for their unconditional love and support, and for everything they have provided me. In fact, whatever little I have achieved so far in my life is due to them. "*Thank you Bapy, thank you Ma!*" Thanks also go to my brother ***Dr. Niladri Deb***, who has been a helping hand since childhood days. In spite of being busy with his studies as well as professional commitments, my brother tried to help me in the best possible manner he could manage.

Special thanks are also due to all the ***respondents*** who helped me to gather the data required in completing the research.

Apart from the above, I would like to express my sincere thanks to the Library staff of ***Tezpur University*** for providing necessary reference materials and e-resources. I would also like to thank the staff of ***IIBM Library*** and ***IIE Library*** for providing necessary support during my research work.

Moreover, it is needless to mention that while I acknowledge and thank all for their support and help in course of my research work, nobody shares any shortcomings of this research. The shortcomings belong entirely to me.

Nilanjana Deb

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LIST OF ABBREVIATIONS

ALM	:	Asset Liability Management
ALCO	:	Asset Liability Committee
BFS	:	Board for Financial Supervision
BIS	:	Bank for International Settlements
CAMEL	:	Capital Adequacy, Asset Quality, Management, Earnings Quality, and Liquidity
CAR	:	Capital Adequacy Ratio
CRM	:	Customer Relationship Management
DFI	:	Development Financial Institutions
DICGC	:	Deposit Insurance and Credit Guarantee Corporation
EFT	:	Electronic Fund Transfer
FDI	:	Foreign Direct Investment
FDIC	:	Federal Deposit Insurance Corporation
FSA	:	Financial Services Authority
FERA	:	Foreign Exchange Regulation Act
GLBA	:	Gramm-Leach-Bliley Act
IRB	:	Internal Rating Based
IRDA	:	Insurance Regulatory and Development Authority
IRR	:	Interest Rate Risk
KYC	:	Know Your Customer
LPG	:	Liberalisation, Privatisation and Globalisation
MIBOR	:	Mumbai Inter Bank Offer Rate
MVE	:	Market Value of Equity
NBFC	:	Non Banking Financial Company
NEFT	:	National Electronic Funds Transfer
NHB	:	National Housing Bank
NII	:	Net Interest Income
NPA	:	Non Performing Assets
NSE	:	National Stock Exchange
PFRDA	:	Pension Fund Regulatory and Development Authority

RFIs	:	Refinancing Financial Institutions
ROA	:	Return on Assets
ROE	:	Return on Equity
RRBs	:	Regional Rural Banks
RTGS	:	Real Time Gross Settlement
SEBI	:	Securities Exchange Board of India

Chapter – 1

Introduction and Overview

INTRODUCTION AND OVERVIEW

1.1. Prologue

In India, the Commercial Banking sector, as in many developing countries, has been the dominant element in the country's financial system. This sector has performed the key functions of providing liquidity and payment services to the real sector, and has accounted for bulk of the financial intermediation process. Besides institutionalising savings, the banking sector has contributed to the process of economic development by serving as a major source of credit to households, Government, business, and to weaker sections of the economy like Village and Small-scale industries, and agriculture.

An important landmark in the development of the Indian Banking sector in recent years has been the initiation of the reforms following the recommendations of the first Narasimham Committee on Financial System. This Committee was set up in August 1991 by the Government of India as a part of its economy-wide structural adjustment programme, and in response to the unsatisfactory economic and qualitative performance of the Public Sector Banks (Sarkar, 1999) owing to lack of competition, low capital base, low productivity and high intermediation cost. The Financial sector reforms, which started in early 1990s, have uprooted many of the outdated regulatory fences within which banks were required to carry out their activities. This provided more liberty to banks and they started exploiting different areas of operation. Gradually, many of the banks, apart from their indigenous function i.e., banking, started having substantial interests in all sorts of financial businesses like insurance, funds management, mutual funds, securities trading etc. Eventually, such a bank acquired the status of Financial Conglomerate and slowly began moving towards Universal Banking framework. All these have a marked change in the structure of a bank.

Simultaneously, in the global banking system, there has also been a structural and functional change of profound magnitude. Large-scale mergers, amalgamations and acquisitions among banks and financial institutions resulted in the growth of size and competitive strengths of the merged entities. Thus, with all these developments, there emerged new financial conglomerates that could maximise economies of scale and scope by 'bundling' the production of financial services. This heralded the advent of a new financial services organisation i.e., Universal Banking, bridging the gap between banking and financial-service-providing institutions.

Universal Banking can be defined as a multi-purpose and multi-functional supermarket providing both banking and financial services through a single window. In simple words, a Universal bank is a super store for financial products. Under one roof, corporates can get loans and avail of other handy services, while individuals can bank and borrow. It can be said that Universal banks are a new breed of financial concerns which entertain, in addition to normal banking functions, other services that are traditionally non-banking in character such as investment financing, insurance, mortgage financing, securitisation etc. Therefore in a nutshell, Universal Bank has been in the form of group-concerns offering a variety of financial services like deposits, short-term and long-term loans, insurance, and investment banking etc. under an umbrella brand.

With the advent of Universal banking concept in the Indian banking sector, commercial banks – both in the public sector as well as private sector are focusing on product innovation to meet customer satisfaction effectively. In view of these objectives, commercial banks have opted for diversification into allied areas of banking business. In this process, their risk exposures have also increased considerably and this has invited the need for regulations by the Government. Moreover, as Indian Financial Sector encompasses a diverse and to some extent, disparate group/ set of financial intermediaries and service providers – banks, developmental financial institutions, primary dealers, non-banking financial companies, mutual funds, housing finance companies, venture capital funds, insurance companies (both life as well as non-life), rating agencies, accounting firms, brokers, depositories, asset reconstruction companies, trustees etc. offering financial services to one or more categories of customers simultaneously – effective regulation is essential. Significantly, in India, regulations are rather stringent and an entity to convert itself into a Universal bank has to negotiate several regulatory authorities viz. Reserve Bank of India (RBI), Securities Exchange Board of India (SEBI) and Insurance Regulatory Development Authority (IRDA), National Bank for Agriculture and Rural Development (NABARD), National Housing Bank (NHB) and Pension Fund Regulatory and Development Authority (PFRDA)[1]. This has been made mandatory so as to prevent bank failures because failure of banks can tumble the entire economic set-up of a country.

Moreover, the decision of the Government of India to open the banking sector to the foreign participants after 2009, has thrown an open challenge before Indian Banks to attain operational efficiency. Thus, to meet these challenges, Indian Banks need to shore up their Balance Sheet in time, fund sectors of the economy that need the money the most, and merge and acquire a scale that will permit it to face the competition with Foreign banks; all these demand a proactive strategy with logical exposure to different businesses.

1.2. The Indian Banking System

In India, there are marked disparities in income, industrial growth and development among its regions. The Policy makers, in order to address the issues of equitable growth and development of all the regions as well as the people, have combined both Socialistic and Capitalistic features in the country's economic policy framework since Independence. This is evident from the large investments of the Public sector in infrastructure, manufacturing and the service sectors and also from the role assigned to the Banking sector. Thus, in India, the Banking sector has had to serve the goals of the economic policies enunciated in successive Five-Year Development Plans, particularly concerning equitable income distribution, balanced regional economic growth and reduction and elimination of private sector monopolies in trade and industry.

[1] **Source**: Report of the Working Group on Conflicts of Interest in the Financial Sector. (http: www.rbidocs.rbi.org.in/rdocs/content/pdfs/68210.pdf.)

Significantly, as the Indian banking sector had been assigned the role of providing support to other economic sectors such as agriculture, small-scale industries, exports, etc., they remained occupied with domestic priorities, especially massive branch expansion, attracting more people to the system and ensuring elimination of economic disparities. Thus, with the emphasis on social and development banking, margins on loans and advances had narrowed down and profitability of commercial banks declined. Apart from this, during this period, many Indian banks also remained internationally isolated (few Indian banks had presence abroad in international financial centres). The reason for which the banking system remained isolated from the international arena, however, can be attributed to strict branch licensing controls on foreign banks already operating in the country as well as entry restrictions facing new foreign banks. A criterion of reciprocity was required for any Indian bank to open an office abroad (Deolalkar, 1999). Unfortunately, all these resulted in low profitability for Indian commercial banks. In view of low profitability of banks, the Government of India had initiated a series of reforms since early 1990s.

It is worth mentioning that the pace of development for the Indian banking industry has been tremendous over the past decade. Recent time has witnessed the world economy develop serious difficulties in terms of lapse of banking & financial institutions and plunging demand. Prospects became very uncertain causing recession in major economies. However, amidst all this chaos India's banking sector has been amongst the few to maintain resilience (FICCI, 2010).

1.3. The Evolution of Indian Banking System

The indigenous system of banking had existed in India for many centuries and catered to the credit needs of the economy of that time (Leeladhar, 2007). The famous Kautilya's *Arthashastra*, which is ascribed to be dating back to the 4th century BC, contains references to creditors and lending. For instance, it says "*If anyone became bankrupt, debts owed to the state had priority over other creditors*". Similarly, there is also a reference to "*Interest on commodities loaned*" (*Prayog Pratyadanam*) to be accounted as revenue of the state. Even

Manu, the great Hindu jurist, devoted a section of his work to deposits and advances and laid down rules relating to rates of interest to be paid or charged (Bedi & Hardikar, 1983). Thus, in the medieval India, it appears that lending activities were not entirely unknown and the concepts such as 'priority of claims of creditors' and 'commodity lending' were established business practices even during that time.

For more than a century, in many developing countries, the Banking system remains the focal point in its financial set-up and as such banks are regarded as special in view of their specialised functions in the financial intermediation and payment system of a country (Samal, 2001). The Indian Banking System is no such exception and in fact, in India too, economic development has evolved around the banking system. However, the Indian Banking System is unique and perhaps has no parallels in the banking history of any country in the world (Velayudham, 2002). This is because, over the last five decades, Indian Banking has witnessed a gradual and remarkable growth in terms of resource mobilisation, branch expansion, and its command over financial assets and also in terms of the services it offers. Thus, the progress of Indian Banking is tremendous and it is not only significant for the country's economy but at the same time, it gives us interesting dimensions on the various phases of its growth especially in the light of macro economic developments, monetary and banking policies of the government and the external situation which influenced the evolution of Indian banking in different ways and in different periods. A historical glance on the development of Indian Banking Industry reveals that it has passed through various distinctive phases of growth, which may be classified under different phases. These phases are discussed below-

1.3.1. Evolutionary Phase: Banking before Nationalisation (1948-1968)

During the pre-independence era, India witnessed a turbulent politico-economic scenario due to the outbreak of Second World War and subsequent intensifying of national freedom movement of our country (Singh, 2005). With the dawn of independence, India faced the herculean task of rebuilding the economy, which was in a state of despair. In view of this situational requirement and specially to provide the much needed stimulus and direction to the economy, the Government of India as well as State Governments have formulated various policies for faster and orderly growth of the economy through optimum utilisation of available resources – natural, physical, human and financial.

As the financial sector provides necessary impetus for a sound economy, the policies of the Government had been directed for the upliftment and strengthening of this sector. And the first step in this direction was nationalisation of Reserve Bank of India in 1948, followed by the enactment of the Banking Regulation Act, 1949 for amendment and consolidation of the laws relating to banking companies. This was deemed necessary as independent India inherited a banking system that was patterned on the British Banking System and during that period, there were many joint stock companies doing banking business especially in major cities. However, due to lack of uniform law governing banking activities in our country, there was mushroom-like growth of banking companies. This eventually lead to the failure of as many as 55 banks in the year 1949 and these banks either went into liquidation or went out of banking business (Velayudham, 2002). Thus, the enactment of Banking Regulation Act with its subsequent enforcement in March 1949 imposed certain discipline on the joint stock companies doing banking business in India and thereby provided the legal framework for the regulation of the banking system by RBI. As a result, the banking industry came to be organised for the first time on certain uniform parameter.

With the introduction of economic planning in 1951, a strong need was felt for aligning monetary and banking activity with the requirements of planning. This need had arisen due to the fact that the banking system was deficient in the following respects –

(a) The banks were largely urban-oriented and remained beyond the reach of the rural population, which then constituted a major percent of total Indian population. Thus, bank's rural penetration was grossly inadequate.

(b) Agriculture – the backbone of Indian economy was not considered an economic proposition by banks and as such credit in-flow to this sector was inadequate. Thus, this crucial sector of the Indian economy was not supported by the banking system in any form.

(c) Initially, the focus of banks was entirely on short-term credit. During that period, there were neither any prominent source of long term finance (except for Industrial Finance Corporation of India which was set-up in 1948) nor the capital market was as developed as it is today. As a result of this, industries suffered due to dearth of long-term finance.

With a view to overcome the above lacunae, RBI constituted All India Rural Credit Survey Committee in 1954 to review the rural credit scheme. The recommendations of the Committee led to nationalisation of Imperial Bank of India and it was rechristened as State Bank of India from July 1955. The State Bank of India was given the responsibility of expanding its rural branch network. This, in fact, was the first step taken to induct the commercial banks into rural credit – a domain, which till the other day was under the hold of co-operative credit agencies.

1.3.2. Expansion Phase: Nationalisation and after (1969-1984)

The expansion phase began in a sedate manner with the appointment of the Banking Commission in 1969. The Commission was given the responsibility to recommend changes in structure, procedures and policy for the Indian Banking system. However, the Commission did not have much time to complete its task as it was overtaken by swift politico-economic developments, which culminated in the nationalisation of banks in 1969 (Velayudham, 2002). The Government, headed by then Prime Minister of India, Mrs Indira Gandhi, issued an ordinance and accordingly 14 major Schedule Commercial banks in the private sector was nationalised with effect from the midnight of July 19, 1969. In fact, this move of the Government came into effect after the paper entitled '*Stray thoughts on Bank Nationalisation*' presented by Mrs. Gandhi in the annual conference of the All India Congress Meeting was received with positive enthusiasm. Subsequently on

April 15, 1980, 6 more private sector banks were nationalised, and with this the GOI controlled around 91% of the banking business of India. In other words, the second round of nationalisation extended further the area of public control over the Indian banking system.

In fact, the Indian Banking system gained much strength and cohesiveness after the first round of nationalisation of banks as nationalisation has improved the environment in respect of formulation and implementation of the monetary and banking policies (Dhar, 2004). With nationalisation of the banks, the management of the banks was taken over by the Government of India, which is now being run by the Board of Directors comprising persons of eminence in the field of agriculture, trade & industry, academics, banking and social services etc. and banking activities were initiated mainly to bring large areas of economic activity within the organised banking system. Therefore, the two significant aspects of nationalisation were –

- Rapid branch expansion
- Channelling credit according to priorities

During this phase, there was phenomenal growth in the number of bank branches covering the un-banked and remote areas of the country thereby making the banks accessible to the common people by adding to the length, width and depth of the banking services. In fact, in terms of the branch licensing policy laid down by the RBI, the accent was on the opening of branches in rural and semi-urban areas, backward regions and under- banked states so that inter-regional disparities could be reduced. All these initiatives of the Government and RBI lead to an increase in the number of bank branches by about 733.36 % from 8,262 branches as on June, 1969 to 68,852 branches as on March, 2010. Similarly, the total deposit mobilised by banks went up from Rs. 4,646 crores as on June, 1969 to Rs. 45,14,603 crores as on March, 2010, while bank credit went up from Rs. 3,599 crores as on June, 1969 to Rs. 33,33,794 crores as on March, 2009[2].

[2] **Source**: NEDFi Databank Quarterly, April 2004 and Report on Trend and Progress of Banking in India, 2009-2010.

However, during this phase, the dominance of social considerations over commercial judgement in Government-directed bank policy led to compromise on the quality of the credit leading to poor profitability of the banks and resulting into booking of losses by the nationalised banks. Moreover, during this phase, banks were required to work under administered price regime wherein the RBI determined the rate of interest, service charges, other fees and charges in consultation with the Government of India. This, in fact, acted as a limiting factor for banks thereby adversely affecting their profitability and which necessitated consolidation of weaker banks.

1.3.3. Consolidation Phase (1985-1990)

The phenomenonal growth of the Indian Banking system over the last two decades prior to reforms, gave rise to several problems which became more visible from the mid-eighties (Velayudham, 2002). The emergence of social banking i.e., the use of banking as an instrument of promoting socio-economic objectives of the Government and rapid branch expansion initiatives of banks thereafter had rendered the banking system unwieldy. In fact, the expansion phase after nationalisation, which was marked by geographical and numerical proliferation of bank branches, developed some weakness such as low profitability, poor customer service, mounting non-performing assets, over staffing etc. Besides these, the banking sector was exposed to several weaknesses. These were low operational efficiency, inadequate capital base, unhealthy balance sheets, unsatisfactory customer service etc. In short, the very viability of the banking system came in for scrutiny.

In view of all these developments, the need for consolidation of the banking system was felt. Individual banks had started to prepare action plans covering organisation and structure, housekeeping, training, customer service, credit management, recovery of loans, productivity and profitability. In the back drop of these developments, the Rangaranjan Committee on Computerisation in banks put forward its recommendations. On the basis of these recommendations, Reserve Bank of India asked banks to introduce in a phased manner, modern technology in banking operations. Simultaneously, banks started rationalising their branch network by shifting, merging and closing down the non viable branches; new branches were opened based purely on business/ profitability considerations. Moreover, increasing competition made the banks more customer-oriented and at the same time, led to shrinkage of profit margin, which eventually resulted in voluntary merger of many banks so as to gain competitive edge. Significantly, during this phase, merger of Bank of Madura with ICICI Bank, Times Bank with HDFC Bank, ICICI Ltd with ICICI Bank etc. took place. These mergers took place because 'size does matter' as it helps to bring down per unit cost of technology and various overhead costs (Das & Das, 2007). In short, the motive to enjoy substantial cut in cost per unit of production and at the same time to remain competitive was one of the reasons for consolidation taking place in the banking industry.

During this phase, apart from India, M&A activity was seen in various countries and these were largely a response to the deregulation of the industry as exemplified by the abolition of geographic restrictions on banks and demolition of demarcation lines between different types of financial services (Hagendorff, Collins & Keasey, 2007). In fact, deregulation of the sector initiated the process of consolidation of the banking system not only in developing nations like India but also in developed nations like the USA, Italy, and Germany.

1.3.4. Reforms Phase – the regime of reforms (1991-2002)

In India, economic reforms programmes began as a response to macro-economic crisis that developed in early 1991. The crisis manifested itself in rising inflation, high level fiscal deficit, low growth and unsustainable current account deficit, and the Gulf war of 1990 further precipitated the Balance of Payment crisis. The Government of India, faced with the most serious BOP problems, initiated measures for stabilisation and structural adjustment with far reaching consequences. However, economic reforms in the real sectors of the economy would not succeed without parallel reforms in the financial sector and also the banking system cannot become viable or sustainable in the long run unless it adequately responds to the needs of the market-oriented economy. In view of this need, the Government felt the need for financial sector reforms. Another significant reason which made the Government of India to introduce financial liberalisation programmes in 1991 was the decline in public sector profitability, coupled with policy prescriptions of the 'Washington Consensus'[3] (Howcroft & Ali, 2006).

The basis of financial sector reforms was provided by the first Narasimham Committee on Financial System which made its recommendations in November, 1991. These recommendations are a landmark in the evolution of banking policy of the country because reform measures have uprooted many of the outdated regulatory fences within which banks were required to operate. Apart from this, the reform measures specifically aimed to improve overall monetary policy framework, strengthening the financial institutions and gradual integration of the domestic financial system into the global economy. In other words, the primary objective of this initiative was to establish a more profitable, efficient and robust commercial banking system by creating a competitive environment through deregulation of interest rates and state-directed credit policies, the removal of entry barriers and privatisation of public sector banks. Therefore, this phase can be regarded as second banking revolution (Samal, 2001).

As a result of introduction of financial reforms, this phase began with a radical departure from regulated banking towards market-oriented banking. Moreover, this phase witnesses the liberal entry of private and foreign banks, operational freedom to the banks, deregulation of interest rates, reduction in the statutory reserve requirements of SLR and CRR, introduction of international norms of accounting in terms of capital adequacy, income recognition, asset classification and provisioning etc. All these changes brought competitiveness and 'profitability' became the core of business objective of the banking sector (Singh, 2005).

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[3] **Washington Consensus**: The term Washington Consensus was initially coined in 1989 by John Williamson to describe a set of ten specific economic policy prescriptions that he considered should constitute the "standard" reform package promoted for crisis-wracked developing countries by Washington, D.C.-based institutions such as the International Monetary Fund (IMF), World Bank, and the US Treasury Department.
(http: www.en.wikipedia.org/wiki/Washington_Consensus)

Again, the Government of India, to review the implementation of the reforms recommended by the earlier Committee and to look ahead and chart the reforms necessary in the years ahead to make Indian Banking strong and better equipped to compete effectively in the fast-changing environment, appointed a second high-level – '*Committee on Banking Sector Reforms*' headed by Mr. M Narasimham. The Committee submitted its report in April 1998 and made wide-ranging recommendations covering various aspects of banking policy, institutional, supervisory and legislative dimensions. The Committee came out with recommendations with regard to capital adequacy; asset quality; non performing assets; directed credit; prudential norms; disclosure requirements; asset liability management; earnings and profitability; systems and methods in banks; restructuring including mergers and amalgamations; reduction of Government and RBI holdings to 33% in the public sector banks; devising effective regulatory norms and the review of the banking sector laws. In follow up of Narasimham Committee's (1998) reference to weak banks in the context of restructuring of banks, Verma Committee was appointed in 1999 with the specific task of identifying weak public sector banks, examining their problems and suggesting strategies for restructuring them.

Simultaneously, in 1998, a Working Group chaired by S.H. Khan on '*Harmonising the Roles and Operations of Development Financial Institutions and Banks*' was formed by the Government. This Working Group explicitly recommended for a progressive movement towards Universal Banks, especially for DFIs.

Thus, the most significant achievement of the financial sector reforms has been the marked improvement in the financial health of the commercial banks in terms of capital adequacy, profitability and asset quality as also greater attention to risk management (Purwar, 2003). Further, deregulation has opened up new opportunities to banks to increase revenues by diversifying into investment banking, insurance, credit cards, depository services, mortgage financing, securitisation etc. At the same time, liberalisation has brought greater competition among banks both domestic and foreign, as well as competition from mutual funds, Non Banking Financial Companies, post office etc.

To sum up, it can be said that the first part of this phase may be termed as 'curative'. This is because during this period, the issues of cleansing the balance sheet of banks and putting them on a recovery path (Kohli, 2001) were addressed. The second generation reforms, which started in 1998, can be termed as 'preventive' as it aimed at building a strong and robust banking system which can withstand the pressures of globalisation. Thus, during this phase, with legislative changes taking place for making the banks more transparent and viable and international accounting standards being introduced in a phased manner, the objective, in fact, was to make the Indian banks internationally competitive with sound capital base.

1.3.5. The Era of Innovative Banking and New Challenges (Beyond 2002)

Reforms in the Banking sector (especially after the first phase of Financial reforms) laid the basis for a sound banking system (Velayudham, 2002) and at the same time provided the much required impetus to Indian banks to carry out their business operations in the competitive and deregulated environment. In fact deregulation has triggered competition and this is presumed to intensify in 2009 and beyond when the Indian Banking sector would be thrown open to foreign participants (Rajadhyaksha, 2004). Thus, it is evident that competition, here, does not mean just in terms of number of competitors, but it is in terms of proliferation of innovations, specialised markets, cross-border trade in financial services and capital flows – all of which are to be supported by adequate information and communication technology.

A striking feature of this phase is that profitability has become the main criterion of working of the banks. Banks have moved from branch expansion to branch rationalisation and from mass recruitment to Voluntary Retirement Schemes (VRS) with selective recruitment and finally from least technology driven to total branch automation and inter-branch linking (Lakshminarasimha &

Murali, 2004). This was deemed necessary because competition in the banking sector has increased tremendously. With blurred product boundary, banks are facing competition not only from domestic private and public sector banks but also from foreign banks, Non Banking Financial Companies, DFIs as well as Mutual Funds and Insurance Companies.

With increased competition in the banking sector as well as margins on traditional business have been eaten away, today, banking is no longer limited to borrowing and lending of funds (Singh, 2001) but it is seen as a business related to information on financial transactions. Significantly, the last decade of the 20^{th} century have seen banks diversify into new areas to widen their business horizons. Modern banking has seen the banks diversifying along product and business lines, which considerably enlarged the operations of the various public and private sector banks. Banks have ventured into new areas like merchant banking, leasing, factoring, mutual funds, portfolio management, venture capital, housing finance, stock trading, securitisation of debts etc., thereby proliferating in multi-directional way as well as in multi-dimensional manner.

Another area where banks have started emphasising upon is customer satisfaction. In fact, one of the biggest challenges for a service organisation like a bank is to meet rising customer expectations (Khan, 2004). Today, customers expect information and advice on tailor-made asset management, operations management and high technology services incorporating instruments such as derivatives (Singh, 2001). And it is believed that Information Technology plays a significant role in providing better customer service, presumably at a lower cost. Therefore, several innovative IT based services such as ATM, Electronic Fund transfer, Anywhere-Anytime banking, Smart cards, Net banking etc. are adopted by banks (Sureshchandar, Rajandran & Anantharaman, 2003) to facilitate customers in availing the products of their choice.

Thus, in the Era of Innovative banking, Indian banks need to shore up their Balance Sheet in time, fund sectors of the economy that need the money the most, and merge and acquire to get the scale to take on competition especially in post 2009 so as to retain its customer-base.

1.4. Institutional set-up of the Indian Commercial Banking Sector

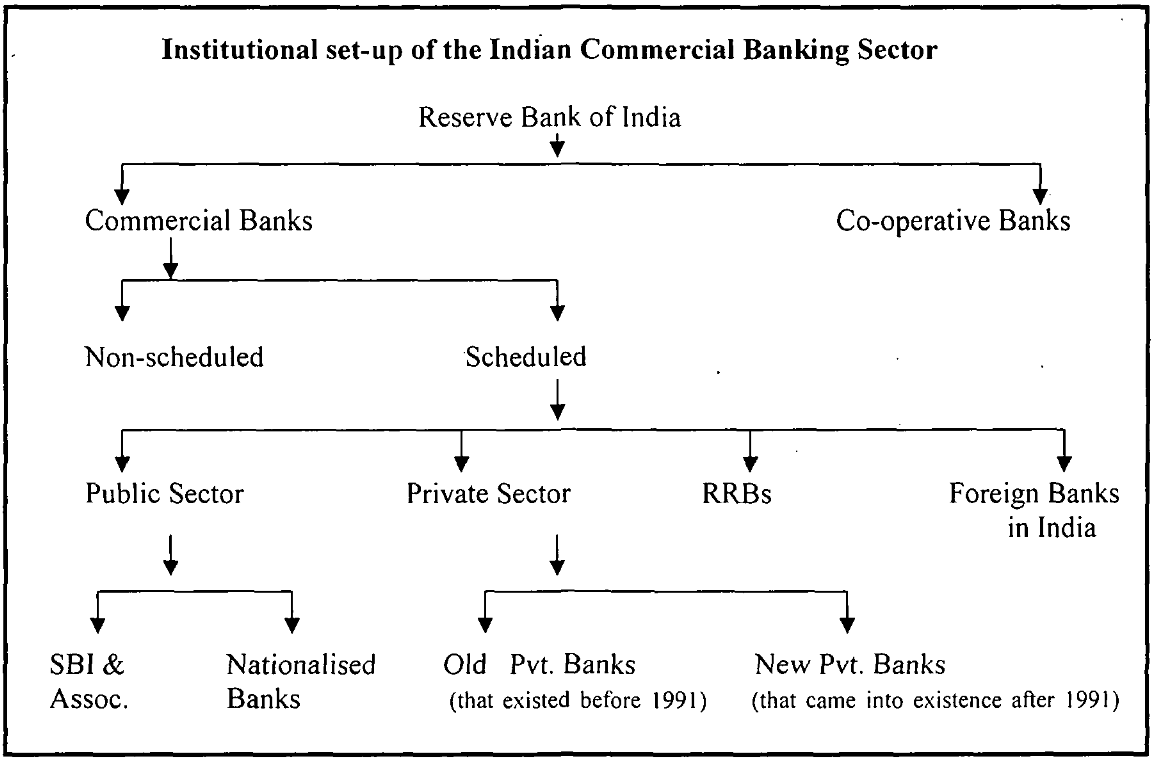
The Commercial Banking sector in India, as in many developing countries, has been the dominant element in the country's financial system. Commercial banks which conduct the business of banking in India and which –

(a) have paid up capital and reserves of not less than Rs.5 lakh and

(b) satisfy the Reserve Bank of India that their affairs are not being conducted in a manner detrimental to the interest of their depositors,

are eligible for inclusion in the Second Schedule to the Reserve Bank of India Act, 1934, and when included are known as '*Scheduled Commercial Banks*'. Commercial Banks include foreign banks operating in India in addition to Indian banks in the public sector and the private sector, including the Regional Rural Banks. Significantly, the banking sector in India is dominated by Scheduled Commercial banks and among these the largest banks accounting for a predominant share of bank deposits are owned by the Government.

Fig. 1.1 : Institutional set-up of the Indian Commercial Banking Sector



Source: NEDFi Databank Quarterly, April, 2004

Thus, banking in India, has witnesses a tremendous progress, both quantitatively and qualitatively, since the initial round of Nationalisation of banks in July, 1969. The number of commercial banks at that time was only 89 and it has grown to 292 as on March, 2003. Significantly, the bank branches have grown from 8,262 in 1969 to over 68,561 in March, 2003. The population served per branch has improved substantially to 16,000 from 64,000 in 1969[4].

Today, the key driving force underlying developments in banks is the momentum of innovation in a broad range of information processing technology including telecommunications and computer technology and providing innovative tailor-made products so as to retain customer-base and survive competition in the environment. Moreover, with the country's emerging economy, ongoing reforms of the financial sector, ever-increasing levels of FDI, a positive regulatory climate and a diverse demographic profile have led India to emerge as one of the fastest growing banking markets worldwide (Singh, 2009).

1.5. Overview of the Thesis

The Thesis consists of 9 (nine) chapters. A brief on each chapter is as below –

Chapter I : Introduction and Overview

In this chapter, a brief introduction on the topic is given. It highlights the evolution of the Indian Banking System over the years as well as the existing institutional set-up of the Indian Commercial Banking sector.

Chapter II : Review of Literature

The chapter – Review of Literature briefs the past studies conducted in this area of research as well as publications made in the area of banking and financial management.

Chapter III : Objectives, Scope and Limitations of the Research

The third chapter of the thesis is on the objectives of the research, the scope and the limitations of the research.

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[4] **Source**: NEDFi Databank Quarterly, April 2004.

Chapter IV : Research Methodology

The fourth chapter is on Research Methodology. This chapter gives detailed information on how the research process was carried out.

Chapter V : Banking Sector Diversification and Rise of Universal Banks

The basic theme underlying this research is Universal Banking. In this Chapter, an effort is made to provide detailed information on Universal Banking framework, the challenges before Indian banks on becoming Universal Banks, the advantages and disadvantages of Universal Banking and the structure of Universal Banks.

Chapter VI : Risk and Risk Management in the Banking Sector

Risk in the banking sector has increased substantially over the years as banks have gone for diversification. In Chapter VI of the thesis, a detailed outline is given on the types of risks encountered by the banks and how these risks are managed.

Chapter VII : Indian Banking Sector - Emerging Challenges

Chapter VII highlights the emerging challenges that banks are facing due to financial sector reforms initiated by the Government since early 1990s and also due to diversification of business activities by banks.

Chapter VIII : Analysis & Findings

Chapter VIII is on Analysis and Findings of the research.

Chapter IX : Conclusion and Recommendations

On the basis of findings of the research, conclusion of the research is derived and accordingly recommendations are put forwarded. These are elaborated under Chapter IX of the thesis.

Chapter – 2

Review of Literature

REVIEW OF LITERATURE

In the light of global experience of diversification taken by the Banking sector as well as the emergence of the Universal Banking concept, an attempt has been made through the review of literature to trace the extent of diversification made by banks in the Indian Banking horizon and their eventual transition to Universal Banking framework, opportunities and challenges before domestic banks, the risks confronted in course of this transition and the regulatory and supervisory issues that are likely to arise in the Indian context on resorting to Universal Banking framework.

2.1. Diversification of Banking Activities in India – A Move Towards Universal Banking Framework

The Indian Banking system has gained much strength and cohesion after the first round of nationalisation of banks in 1969. The nationalisation has improved the environment in respect of formulation and implementation of the monetary and banking policies (Dhar, 2004). Post nationalisation period has witnessed rapid branch expansion, increase in credit facilities to the priority sectors, and increase in the volume of deposit mobilisation and introduction of various schemes like Lead Bank Scheme, Integrated Rural Development Programme etc.

However, since early 1980s, in India, there has been explosive growth of financial markets. According to Rajadhyaksha (2004), these developments in the Indian Financial sector has allowed Companies and sometimes even customers to bypass banks and get money directly from those who save it – a process called disintermediation. This has forced banks to enter new business in order to hang on to their precious customers. Moreover, product boundaries have blurred which is also another striking reason for banks to enter into new areas to meet customer needs. And above all, new network technology has allowed banks to exploit economies of scale and offer wider range of financial products. All these made banks to offer a variety of innovative services in anticipation of materials gains, following a cost-benefit analysis (Ho, 2006). In fact, the focus of banks while offering diversified services is on customers' demand and satisfying their needs in a best possible way and also on reducing transaction costs and to yield higher profits. Moreover, as customers demand for variety, convenience, and new services, banks want to provide products that can meet their precise, individual needs. Significantly, the market shifted from being 'seller-centric' to 'buyer-centric' and customers were flooded with offers of a variety of tailor-made products like insurance, mutual fund, stock trading, housing finance etc. under 'one-roof' along with their traditional products (Darshan, 2006). Thus, diversification of banking activities of Commercial banks has eventually led to the emergence of Universal Banks in the Indian Financial System. Rao (2004) has noted that deregulation and globalisation of the financial market in India since early 1990s, marked by interest rate competition, relaxation of exchange control and development of I.T. have largely facilitated international pooling of financial resources across the world markets. Amidst all these developments, banks started placing more emphasis on new sources of non-interest incomes. This has lead to diversification of banking activities even in India.

Kannan (2002) mentions that the first impulses of a more diversified financial intermediation was witnessed in the late 1980s and early 1990s, when banks were allowed to undertake leasing, investment banking, mutual funds, factoring, hire-purchase activities through separate subsidiaries. By the mid 1990s, all restrictions on project finance were removed and banks were allowed to undertake several activities in-house. According to the author, reforms in the Insurance sector in the late 1990s and opening up of this field to private and foreign players, also resulted in permitting banks to undertake sale of insurance products. All these have resulted in gradual metamorphosis of Indian commercial banks into Universal banks, offering a variety of financial services.

Another significant fact pointed out by Karunagaran (2005) is that in India, though there is no legislative distinction between Commercial banking and Investment banking or any explicit legislative restriction for the banks to operate in investment banking activities, the banks have traditionally been maintaining the 'arms length' distance from investment banking. However, with the financial sector reforms beginning in 1990s, banks were given abundant freedom to go much beyond their traditional conservative commercial banking and these facilitated banks in providing a host of financial products to meet customer needs. But the more tangible momentum for the emergence of Universal banking concept in India seems to have set in only after the second Narasimham Committee Report (1998) recommending Development Financial Institutions, over a period of time to convert themselves into banks (implicitly Universal banks) and that there should eventually be only two forms of intermediation - Banking companies and Non Banking Financial Companies. Moreover, this was followed by a Working Group chaired by S.H.Khan on '*Harmonising the Roles and Operations of Development Financial Institutions and Banks*' (1998), which made it more explicit by recommending for a progressive movement towards Universal banking for the DFIs. Significantly, by that time Commercial banks were already permitted to enter diversified areas of financial businesses.

The other driving force behind banks opting for diversification is the development in the field of Information Technology. In fact, it has been IT that has enabled banks to offer a variety of services under one-roof and that too in cost-effective and speedy manner. Many regard computerisation in the banking industry as a key ingredient of the financial sector reform process and it aims to improve customer service, house-keeping, decision-making and productivity and profitability (Suneja, 1994). The RBI, in view of the need of I.T in banking, had formed two high-level committees – one in 1983 under Dr. C Rangarajan and another in the year 1988. Moreover, the enactment of Information Technology Act 2000 by the Government had facilitated the use of IT in the Banking sector. The I.T Act as provided by Section 93 in the Fourth Schedule makes amendment to the Reserve Bank of India Act, 1934 and a new clause pertaining to building a basic legal framework for e-commerce has been incorporated in Section 58 in sub section (2), after clause (p). In fact, I.T has paved the way to speed up the process of banking operations and reduce the drudgery and the time taken in normal banking operations (Vittal, 2001). The introduction of I.T in banking activities has facilitated banks in diversifying their business activities and in turn made the transition path easier for commercial banks in the direction of Universal banking.

Moreover, competition in liberalised markets requires flexibility and reliable information and the Financial System being information intensive, needs a well designed Management Information System (MIS) to serve as a tool for not only risk management but for effective operational management (Murty, 2001). In fact, for effective business decisions, banks need to carry out predictive analysis with *'what if'* simulations. With deregulation, many of the barriers to globalisation have vanished and the banking operations are no more restricted to domestic market but have become more global and carried out 24 hours × 7 days a week (Ramaswamy, 2005). With large functional and geographical spread of banks, there has been a sharp growth in the number of accounts in the areas of operation of banks (Talwar, 2000). Thus, increased customer-base, complex products and round the clock services to the customers necessitate the need of modern technology in the banking sector.

In short, it can be said that diversification in the banking sector has been possible due to financial sector reforms initiated by the Government and Information Technology revolution that swept the country in early 1980s. However, in true terms, diversification in the Banking sector and the acceptance of Universal Banking concept, as different from narrow banking, actually came to the forefront in the Indian context with the second Narasimham Committee (1998) and later the Khan Committee (1998) reports.

Significantly, the recommendations of Narasimham Committee and Khan Committee for consolidation of banking through mergers and amalgamations have brought about a change in the functioning of commercial banks and gradually they are marching towards Universal banking framework (Bhaskar, 2005).

2.2. Opportunities and Challenges before Indian Banks

The gales of financial sector reforms, which started in early 1990s, have uprooted many of the outdated regulatory fences within which banks were required to operate. This provided more liberty to banks (Rajadhyaksha, 2004) and they started to diversify their business areas as per permission granted to the banks by the Government under section 6 of the Banking Regulation Act, 1949 (Dhar, 2004). Simultaneously, in the global banking system, there were structural and financial changes, which resulted in large-scale mergers, amalgamations and acquisitions among banks and financial institutions. This led to diversification of business areas of banks, even in India, so as to maximise economies of scale and scope by 'bundling' the production of financial service (Kannan, 2002; Karunagaran, 2005) because the synergies in joint production of financial and non-financial services increase economic efficiency, reduce cost and increase earnings (Bhole, 2004). Moreover, the trend towards Universal banking will result in cost savings in sharing Technology, Information Systems, Accounting Services and Fixed costs (Bhaskar, 2005). It enables cross selling and increases customer base, reduces transaction costs (in collaboration with Strategic Alliances) and generates more business. Apart from reducing transaction costs and increasing the speed of economic activity, it ensures continuity of earning revenue with less risk. Another advantage of diversification as pointed out by Ajit (1997) is that in case of low profit/loss in one business, it can be offset by good business in the other area/ units.

Bhalla (2002) asserts that the deregulation of the Indian Financial sector has thrown up a number of business opportunities. According to him, recent developments both in the regulatory front as well as from a demographic perspective, would give rise to growing demand for certain categories of financial services including insurance and pension funds management, outsourcing, asset management and wealth management etc. Patnaik (2003) opines that the fee-based income can be increased substantially if only banks use their creativity in finding possibility of intermediation, although disintermediation of banking has taken place in case of lending to large corporate. Thus, financial sector reforms have provided ample opportunities for banks to diversify and offer a host of financial services under one roof, as it is essential for sustenance and to remain competitive. The author also mentions that, for this, banks need to go for product innovation, enter into strategic alliance with service providers of various kinds, bring revolution in the distribution channels of their products and open subsidiaries with different focus. Mukherjee, Nath and Pal, (2002) feel that the focus of banking institutions should be on understanding the drivers of success, like better utilisation of its resources (like technology, infrastructure and employees), process of delivering quality service to its customers and performance benchmarking or else it would be difficult for them to survive and adapt to the changing environment.

Leeladhar (2006) points out that globalisation has thrown up lot of opportunities before Indian banks but it is accompanied by challenges. According to the author, banks today face challenges of enhancement of customer service, application of technology, implementation of BASEL II norms, improvement of risk management systems, implementation of accounting standards, enhancement of transparency and disclosures and compliance with Know Your Customer (KYC) aspects in the domestic market while the global challenges include enhancing corporate governance, alignment of regulatory and accounting requirements, outsourcing risks and application of advanced technology.

Sarkar (1999) mentions that with the progressive dismantling of exchange control under the capital account convertibility of rupee, retaining clientele-base would be a challenge to Indian banks. This is because there would be an increase in the flow of both portfolio and foreign direct investment, thereby putting a downward pressure on lending rates. A bank's ability to respond to supply pressures would depend on its cost of funds and operations and failure to remain competitive would lead to loss of clientele, with Corporate and individuals accessing financial markets abroad. Khan (2004) also mentions that in this age of global competition, one of the biggest challenges any service organisation like a bank would face is to meet rising customer expectations. In this context, Lavender (2004) feels that information about customers is the key to increasing sales and instituting profitable relationships, so banks need to organise these data to easily differentiate their key customers and prospects and to grow relationships by offering relevant services.

Meanwhile the decision of the Government of India to open the banking sector to foreign participants after 2009, has thrown an open challenge to Indian banks to attain operational efficiency (Rajadhyaksha, 2005). With this, competition in the banking sector was expected to go up further and with the emergence of Private Sector Banks and Foreign Banks in the country, Indian Non Banking Financial Companies and Financial Institutions have also caught up with the idea of transforming into Universal Banks for sustenance. Again with the lowering of entry barriers and blurring product lines of banks and non-banks, since the financial sector reforms, banks are functioning increasingly under competitive pressures. Hence, it is imperative that banks maintain a loyal customer base (Choudhury, 2007). To achieve this and improve their market and profit positions, many retail banks have to direct their strategies towards increasing customer satisfaction and loyalty through improved service quality. Furthermore, with the advent of international banking, trend towards larger bank holding companies, and innovations in the marketplace, customers are confronting greater and greater difficulty in selecting one banking institution from another. Therefore, the current problem or rather a challenge for the Indian banking industry is to determine the dimensionality of customer-perceived service quality. This is because if service quality dimensions can be identified, service managers should be able to improve the delivery of customer perceived quality during the service process and have greater control over the overall outcome.

Thus, the Banking industry in India is now a much matured one and banks are being forced to change rapidly as a result of open market forces such as the threat of competition, customer demand, and technological innovations like the growth of Internet. If banks are to retain their competitiveness, they must focus on customer retention and relationship management, upgrade and offer integrated and value added services, form strong alliance and joint ventures with other Non-Banking entities. In short, banks need to adopt innovative banking (Mithani, 1992) for deposit mobilisation and deployment of credit and that too, through customised products.

2.3. Risks Confronted by Banks

Deregulation and globalisation of Indian Banking sector has provided ample opportunities for growth of banks. In the course of financial intermediation, banks are confronted with various kinds of financial and non-financial risks viz., credit, interest rate, foreign exchange rate, liquidity, equity price, commodity price, legal, regulatory, reputation, operational etc. The risks referred to above are interconnected and interdependent and these risks faced by banks arise on account of a number of factors like the policies pursued by the Government, increased competition, reduced spreads, more and more sophisticated clients and last but not the least, the developments in information technology and telecommunications (Joshi & Joshi, 2002).

With diversification of banking operations, banks started having substantial interests in all sorts of financial businesses. Gradually, these banks began moving towards the Universal banking framework. Such an entity then happens to be a dominant player in the economy and its failure results in emergence of systemic risk (Herring & Litan, 2003; Rajadhyaksha, 2004). However, effective regulatory initiative to identify the system weaknesses and understand early signals can contribute to substantial reduction in system risk and as such banks have to be managed and regulated with great care. Moreover, when an entity offers diversified financial services under one-roof, it raises additional supervisory concerns due to the emergence of additional risks. The principal additional risks arise because of contagion, conflicts of interest, lack of transparency and regulatory arbitrage (Sundararajan & Baldwin, 2005). Contagion arises when financial problems are transmitted among the group entities as well as between groups. Again banks within the conglomerate are at a risk of a loss of confidence arising from negative publicity about the activities of an affiliate or they may be drawn into the problems of an affiliate if group management pressures the bank to support the troubled affiliate. Such conflicts of interest are often faced by the management of financial groups and the decisions that benefit the group as a whole may not be in the best interest of a particular group entity. In such instances, there is a probability that banks may suffer either from reputation risk or from additional risks that arises not because of its own business operations but for being a part of a financial group.

As banks are being allowed to go for diversification of businesses, banks world over, are continuing their efforts to diversify their income source and as such they need to manage diversification risk i.e., managing the risk arising from the new intermediation activities (Yam, 2004). Furthermore, Yam (2004) points out that awareness of customers about their consumer rights have increased, thus exposing banks to greater compliance, legal and reputation risks, when venturing into new areas of activities.

Another important fact which bankers cannot ignore is that 'safe and efficient payments systems' are critical to the effective functioning of any financial system (Clacher, Doriye, Mohamed & Satta, 2006). If they are poorly designed then shocks can be transmitted between markets and institutions. Where default occurs in transactions, then the effect is amplified and may spread due to structural inefficiencies in the system. The effect is that institutions may experience liquidity and credit problems, which could endanger the stability of the payments systems and wider financial markets. Again, in many emerging markets like India, the majority of transactions are through paper, cheques, and drafts and therefore, the inefficiency is obvious. This eventually can lead to financial crisis.

With increased competition in the Indian Banking sector, banking is no longer regarded as a business dealing with money transactions alone, but is also seen as a business related to information on financial transactions. It is believed that I.T. plays a significant role in providing better customer service, presumably at a lower cost. Several innovative I.T-enabled services such as ATM, Electronic fund transfer, Anywhere-Anytime banking, Smart cards, Net Banking etc. are adopted by banks (Sureshchandar et al., 2003). This exposes banks to technology risk as well as operation risk.

Moreover, market volatility, corporate irregularities and troubled capital markets have shaken the banking industry and highlighted the dangers of poor risk management. Traditional risk systems cannot capture the interrelationship between various risks types across geographies, departments, and lines of business. And the new BASEL Capital Accord is driving banks to adopt more comprehensive risk management systems to survive and succeed. In the aspect, Fell and Devine (2003) mention that as banks have substantial interests in various financial businesses, they confront credit, market, operational, insurance, liquidity, and group risks, which are also brought under the purview of the FSA Integrated Prudential Sourcebook for ensuring stability of the system.

Efforts are made by the Bank Management as well as Regulators across globe to manage risk of the banking sector effectively. In India, the RBI uses the CAMEL Model (as suggested by BIS) to assess the risk exposure of banks so as to ensure stability of the Indian Financial System. C.A.M.E.L.S is an acronym and stands for Capital Adequacy, Asset Quality, Management Quality, Earnings, Liquidity and Sensitivity to Market Risk. The C.A.M.E.L.S model is used to assess the health of a financial institute. However, in many countries the CAMEL Model is used instead of the CAMELS Model. The rating of a financial institute under CAMEL(S) Model is highly confidential. A bank's C.A.M.E.L(S) rating is directly known only by the bank's senior management and the appropriate supervisory staff. C.A.M.E.L.S ratings are never released by supervisory agencies, even on a lagged basis (Hirtle & Lopez, 1999). While results of bank evaluation by using C.A.M.E.L.S. model are confidential, the public may infer such supervisory information on bank conditions based on subsequent bank actions or specific disclosures. Overall, the private supervisory information gathered during a bank examination is not disclosed to the public by supervisors, although studies show that it does filter into the financial markets. Moreover, CAMELS ratings, assigned by examiners at the end of an onsite examination, are 'snapshot' evaluations of a bank at a given point in time, and are thus perishable quantities (Cole & Gunther, 1995). This is because of the dynamic nature of the financial industry and the underlying factors on which the ratings are based begin to change in some ways, immediately after the rating is given. Due to these facts, research involving CAMELS rating is limited due to the restricted nature of the ratings. (Barr, 2002)

2.4. The Regulatory System for Monitoring Banks Offering Diversified Financial Services

Banks, unlike other organisations, are different due to plasticity of assets and high debt/equity ratios (Hickson & Turner, 1996). And it is an acknowledged fact worldwide that banks are very fragile institutions, which are built on trust, reputation and dangerous leverage. In times of trouble, banks can collapse like a pack of cards and failure of one bank can send shock waves right through the economy. Therefore, banks are subjected to statutory regulations so as to ensure that banking and financial activities do not lead to 'moral hazard'. As most of the banks are often 'too big to fail', it is likely that they may take more risks under the assumption that the Government will step in with a bail out in case something goes wrong (Rajadhyaksha, 2004). Such general inertia, according to Karunagaran (2005), would only encourage the banks especially those of Universal Banking framework to indulge in high-risk activities. Moreover, the theory 'too big to fail' has lost its relevance (Karunagaran, 2005). It is because of this reason that Financial System, world over, has been stringently regulated, even in case of open economy, where market takes a leading role. The rationale behind such requirement was that regulation and supervision was required to correct 'market failure' as banks tend to take more risks than the prudent limit, which will in turn have an adverse impact on the system. And India is no exception to this.

Herring and Litan (2003) states that as far as regulation is concerned, there is no settled model: some nations will pursue consolidated supervision, with authority over entire conglomerates vested in a single authority like the Financial Services Authority of the U.K., while others will still regulate the pieces of diversified financial enterprises along structural lines like in India, where such an entity is required to report to different authorities like Reserve Bank India (RBI), Securities Exchange Board of India (SEBI), Insurance Regulatory & Development Authority (IRDA), National Housing Bank (NHB) and Pension Fund Regulatory and Development Authority (PFRDA). While the specific objective of these regulators may vary from depositor protection and investor protection to market regulation, their common concern is maintaining financial stability (Reddy, 2001).

The Financial Service Authority is the single regulator in the United Kingdoms for banks and financial services companies following the merger of 10 former bodies. It is a statutory body governed by Financial Services & Markets Act, 2000 and is an independent and non government body concerned with maintaining confidence in the financial system, promoting public understanding of the system, securing the appropriate degree of protection for consumers and reducing financial crime (Slattery & Nellis, 2005). Even in the USA, the Gramm Leach Bliley Act (GLBA) had also proposed for an integrated supervisory model called the Federal Reserve, which acts as an umbrella regulator – especially aimed at supervising the financial system or conglomerates (Rajadhyaksha, 2004; Karunagaran, 2005). Thus, it is felt that in India, regulatory arbitrage could be minimised if a unified Regulatory Authority, as against the present system of multiple regulators, regulates the System. In fact, the arguments in favour of unification of regulatory agencies are based on the fact that a unified regulator would ensure competitive neutrality in the light of the blurring distinctions between the various classes of financial institutions (Sundararajan & Baldwin, 2005).

However, according to Sundararajan and Baldwin (2005), there are certain arguments against unification. This basis being that unification will result in unclear objectives for the regulatory agency and even diseconomies of scale may arise because a unified agency is effectively a regulatory monopoly and may give rise to the type of inefficiencies usually associated with monopolies. Above all, it may extend moral hazard concerns across the whole financial services sector as the public will tend to assume that all creditors of institutions supervised by a given regulatory agency will receive equal protection. In spite of these arguments against unification, in India, the adoption of principles of consolidated supervision is being progressively bridged.

According to Sharma and Vashishtha (2007), the recent developments in the financial sector, in particular, the emergence of financial conglomerates, have led to an appreciation of the limitations of the present segmental approach to financial regulation. The need for addressing the risks associated with conglomeration is being widely appreciated. A debate is going around as regards the ways and means of ensuring an effective regulatory system, which has the qualities of neutrality, cost-effectiveness, transparency and accountability, and above all which suits the political and social structures and commitments as well as the government, industry and societal inter-relations. Thus, according to the authors, in this on-going debate, there is a consensus on adopting a consolidated, holistic supervisory approach to financial regulation and supervision, irrespective of its structural design. The RBI, recognising the relevance and effectiveness of regulatory problems posed by the emergence and growth of financial conglomerates, took the first step towards consolidated supervision of banking entities by issuing guidelines to the Banks in February 2003 on the basis of Working Group Report (RBI, 2004). In the light of these, the authors have suggested a model. The model is termed as holistic in a sense that it attempts to look at financial markets as continuously evolving entities, irrespective of traditional sectoral distinctions and accordingly delivers supervision which is more effective in handling the challenges of regulatory arbitrage, financial conglomerates and cross border integration of domestic financial sector.

2.5. Research Gap

From the review of literature, the following facts came to light –

First, Indian commercial banks have been offering a range of banking and financial services under 'one roof' and gradually they are on the verge of becoming Universal banks. However, the researcher is not aware of any study done in India or elsewhere to place them on a scale, which would reflect their relative position with respect to a Universal bank.

Secondly, several studies have been conducted to evaluate the CAMEL score of banks, but no such effort has been made to position sample banks on a matrix on the basis of their CAMEL score and their scores on the positioning scale. The score on the positioning scale depicts the progress made by commercial banks in the direction of Universal banking.

Thirdly, the success of Universal banking depends on the perception of Bank managers and customers on Universal banking concept. Although several studies have been conducted to know the perception of customers on service quality of banks, no such studies had been done to know customers' perception on universal banking. Moreover, perceptual studies on bank managers on Universal banking concept had not been conducted either in India or abroad.

2.6. Conclusion

Financial sector reforms in early 1990s has provided the Indian banking sector the much need impetus for growth and diversification into different areas of business. Banks opted for diversification so as to maximise 'economies of scale and scope' (Kannan, 2002; Karunagaran, 2005) because the synergies in joint production of financial and non-financial services increase economic efficiency, reduce cost and increase earnings (Bhole, 2004). Moreover, globalisation, deregulation and advances in Information Technology in recent years have brought about a significant change in the operating environment for banks. Even Government of India had been stressing for commercial banks and financial institutions to convert into 'universal banks' (Mallikarjunan, 2002). This has facilitated many of Indian banks to have substantial interests in different financial businesses so as to maximise economies of scale and scope. Thus, in other words, it can be said that deregulation of Indian Financial System has paved the way for diversification and rise of financial conglomerates. And the phenomenon of financial conglomerates has necessitated serious consideration of a shift in regulatory paradigm (Sharma & Vashishtha, 2007).

Although there are several benefits of Universal banking, these benefits have to be weighed out against the problems. The obvious drawback, according to Sensarma (2001), is that Universal banking leads to a loss in economies of specialisation. In fact, diversification of banking activities need not always result in economies of scale and scope especially if banks were not of appropriate size (Herring & Litan, 2003; Karunagaran, 2005). On the contrary, it might even lead to be more expensive, if sufficient number of transactions in each of the specialised financial activity is not even up to the 'breakeven' level. Moreover, Harissis, Merikas, Mutenga & Staikouras, (2009) points out that banks and insurers across Europe and worldwide have rushed into mergers with one another, hoping to reap economies of scale and boost revenues by cross-selling. But unfortunately the phenomenon has not been welcomed in all geographic regions, and cross-selling has turned out to be more difficult than expected. Moreover, according to Costanzo and Ashton (2006) bank customers are often unfamiliar with, and lack confidence when, buying savings products. And as the financial market is flooded with undifferentiated products, consumers may find it even more difficult to make a straightforward comparison between products. Thus, offering diversified products may not result in increased revenue for banks. Again there is a possibility that the multi-product banks would lose sight of their core competence and would face greater risk by participating in untested activities. Bhole (2004) has pointed out that diversification of banking activities and their eventual transition towards Universal Banking framework would aggravate the problem of concentration of financial and economic power, creation of financial and industrial oligopolies and conglomerates. This might maximise private commercial gains but not social benefits, as large combinations and their unrestricted growth do not lead to socially best allocation of resources.

Moreover, as the country's banking system is exposed to structural reforms, performance and efficiency issues are gradually emerging as the touchstone of success (Saha & Ravisankar, 2000). Meanwhile, RBI's second phase of the road map for presence of foreign banks which was supposed to start from April 2009 was halted due to global financial market turmoil but once the second phase of the roadmap takes off, competition in the Indian Banking sector is bound to increase manifold. This is because in the second phase, with the removal of limitations on the operations of the wholly-owned subsidiary (WOS) of foreign banks and treating them on par with domestic banks, as well as permitting foreign banks to enter into merger and acquisition transactions with any private sector bank in India, Indian commercial banks are bound to face a tough competition from their foreign counterparts. Therefore, Indian Commercial banks need to be proactive in strategy formulation with focus on how to retain their market share. This may lead to large scale mergers and amalgamation among small Indian banks (as seen in the international arena) so as to acquire the much-required size to match with the foreign competitors. Apart from consolidation in the Indian banking sector, other areas which would be the focal point of all banking strategies is product innovation and customer retention and enhancing their level of satisfaction. Thus, the key drivers in the banking sector are product innovation and diversification into allied areas of banking business, customer retention through efficient service, acquire and grow in terms of assets, deposit mobilisation and also through Mergers & Acquisitions and Joint Ventures.

Chapter – 3

Objectives, Scope and Limitations of the study

OBJECTIVES, SCOPE AND LIMITATIONS OF THE RESEARCH

Banking is no longer a business restricted to borrowing and lending of funds. Recent years have seen Indian commercial banks – both in the public sector and private sector diversify into new areas to widen their business horizons. As banks started offering diversified services ranging from insurance to mutual funds, from stock-broking to housing finance, from merchant banking to portfolio management under one 'umbrella-brand', they gradually metamorphosed from being business organisations having prime focus on money transactions to a business related to information on financial transactions. Thus, with this transition, banks gradually moved towards becoming 'Universal banks'.

3.1. Objectives of the Research: The objectives of the research are the following –

1. To position a bank in terms of the progress made by it in the direction of Universal Banking.
2. To examine the risk exposure of banks.
3. To critically examine the existing debate on Universal banking in the context of the samples studied.

3.2. Scope of the Research: The research has the following scope –

1. The research would highlight the comparative position of a sample commercial bank with respect to ICICI Bank - the first Indian Universal Bank, which would help the concerned banks to know where it stands with respect to Universal Bank.
2. The research would enumerate the financial health and risk exposure of sample commercial banks in terms of the CAMEL Model. This

would be helpful to understand the relative strength and risk exposure of Indian commercial banks.

3. The research would also point out the perception of Bank Managers on Universal banking concept and at the same time would also bring to light the perception of customers of banks regarding the awareness and demand of various services presently offered by the banks.
4. The research can be used as a base for Post-doctoral research work.

3.3. **Limitations of the Research**: In spite of best of efforts to minimise all limitations that might creep in course of the research, there were certain constraints within which the research was completed. These are discussed below –

1. The research was based on secondary as well as primary data. The primary data required for research objective No. 3 was collected from the samples based in Guwahati city. Although Guwahati is one of the most important cities of the country and a commercial hub of North East India, samples selected from the city cannot be considered as a proper representation of the population of the country.

   However, the objective of the survey was to check the mood/perception of the bank managers as well as customers of the bank with regard to the concept of Universal banking. Thus, this may not create hindrance in achieving the desired objective even if Guwahati city cannot replicate other major banking hubs of the country.

2. For primary data, non response error cannot be ruled out.

Chapter – 4
Research Methodology

RESEARCH METHODOLOGY

The Research Methodology section is inclusive of all those techniques that were adopted in course of the research. The research was conducted mainly to understand the position of a Commercial Bank with respect to Universal Bank in terms of services offered. The research also aims at measuring the risk exposure of commercial banks in course of offering diversified services under 'one-roof' and also the perception of Managers and Customers of Commercial Banks on Universal Banking concept. So, the research is both exploratory and descriptive in nature.

4.1. Focus Group Discussion

A Focus group discussion was organised in Tezpur with the practicing Bank Managers of both Public Sector and Private Sector banks. The discussion took place in the month of November, 2006 in the premises of a Commercial Bank of Tezpur. Altogether 5 (five) Bank Managers participated in the discussion which lasted for nearly about 2 (two) hours. The purpose of the discussion was –

- To explore the variety of banking and financial services presently offered by commercial banks in India.
- To group these services offered by banks under different points of a Six-point scale so that it can reflect the progress of a Commercial bank in the direction of Universal banking.

4.2. Delphi Method

In order to group the services offered presently by the commercial banks under different points of a Six-point scale, a Delphi Panel was formed. The Panel comprised of 6 (six) Officers of different commercial banks, who have substantial knowledge in this field and at the same time, were willing to share their expertise with the researcher.

A preliminary grouping of the services offered by commercial banks was done on a Six-point scale. The grouping was done on the basis of the Focus group discussion. A questionnaire (please refer *Annexure-II*) was prepared accordingly and in order to eliminate any bias on the part of the monitoring team, each Panel member was given a Code Number. They were requested to regroup the services, if they felt necessary.

At the end of the first round, the responses obtained were analysed and the findings communicated to the members along with the new grouping of services, so as to obtain a Panel-consensus on the grouping of services. The second round sought to obtain clarifications as well as consensus on grouping of the services and especially to clarify some of the member's position pertaining to grouping of one service namely credit card securitisation. However, after completion of the second round, no further rounds were necessary as there was consensus on the groupings made in the second round. This led to the creation of the positioning scale. Please refer *Annexure - III.*

Moreover, efforts were also made to know from the Panel members their perception on Universal banking. These were taken as inputs to construct the questionnaire (for Bank Managers) that was used to collect data required for the third objective of the study.

4.3. Sources of Data

The study aims to position sample commercial banks on a positioning scale so as to know their relative position with respect to Universal bank in terms of services offered by the banks. For positioning a sample commercial bank, the ICICI Bank – the first Indian universal bank[1] – was taken as a benchmark.

An attempt was also made to examine the risk exposure of sample commercial banks but risk of sample banks were assessed on a stand-alone basis by using the CAMEL Model without making any reference to or compare the CAMEL ratings of sample banks with ICICI Bank. Further, efforts were also made to know the perception of Bank Managers and Customers on Universal banking. Therefore, the study was based on both primary and secondary data.

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[1] **Source**: Leeladhar, V. (2005, April 13). Contemporary and Future Issues in Indian Banking. (pp. 321-323). Reserve Bank of India Bulletin

4.3.1. Primary Data: Primary data used in the research were collected from Managers and Customers of commercial banks through survey method by using questionnaires.

4.3.2. Secondary Data: Secondary data used in the research were obtained from Annual Reports of commercial banks, various books, journals and web sites. (Please refer Bibliography).

4.4. Selection of Geographical Area

The area covered in the research was Guwahati city, where there are a number of commercial banks with several branches offering various banking as well as financial services. Moreover, as Guwahati is one of the most important cities of the country and a commercial hub of North East India, all major commercial banks have got operational presence in the city.

4.5. Universe of the Study

The universe of the study includes all the listed Public sector and Private sector banks operating in the state of Assam. Listed commercial banks were chosen for the study because unlike unlisted banks, listed banks do have greater commitment and exposure to investors in respect of mandatory and voluntary reporting (Khan & Ali, 2010).

Thus, the segment-wise number of banks considered for the research was as below-

(a) Public sector bank	20 (twenty)
(b) Private sector bank	07 (seven)
Total	**27** (twenty seven)

4.6. Positioning Methodology

In view of the research objective # 1, i.e., to position a sample commercial bank with respect to Universal bank, the basis of positioning was '*banking and financial services*' offered by a commercial bank.

The banking and financial services offered at present by each commercial bank were grouped under different points of the 6-point scale (*Please refer Annexure III*). The positioning was done on the basis of a bank's composite score. For deriving the composite score of a sample bank, the following steps were adopted –

Step I : Assigning Weights to the Services under a point of the Positioning Scale and Determining the Score

All the services under respective points of the scale were assigned equal weights and then weighted average score of a Bank was calculated for each point of the scale.

Score under a given Point, $S_p = \sum w^* s_i$

where

w = weight assigned to each service[2]

s_i = services under a point of the scale

$i = 1, 2, \ldots. n$ (denotes number of services under a point of the scale)

$p = 1, 2, 3, 4, 5$ (five different points on the scale)[3]

Step II : Calculation of Composite Score of a Bank

The **composite score** ($S_1+S_2+S_3+S_4+S_5$) was then calculated. This composite score was the basis of positioning a bank on the scale and highlights where a sample bank lies with respect to the Universal Bank. The lowest and the highest score that can be obtained are 1 and 5 respectively.

4.7. C.A.M.E.L Model

In order to fulfil research objective # 2, i.e., to critically examine the risk exposure of commercial banks in course of their business activities, C.A.M.E.L Model was used.

[2] Equal weights were assigned to all the services under a point of the Positioning Scale

[3] The services under Point 0 are 'accepting deposits and making advances'. These two services are the minimum services that an entity should offer to obtain the status of a commercial bank. Since commercial banks were positioned on the scale, Point 0 was ignored in computing the positioning score.

The C.A.M.E.L.S Model consists of 6 (six) components. However, in this research C.A.M.E.L Model is used. This Model is based on 5 (five) components and under each component, there are different parameters – all expressed in terms of financial/ performance ratios. The risk exposure as well as how financially sound a bank is, can be assessed in terms of composite C.A.M.E.L score of the bank. For obtaining composite C.A.M.E.L score, the following steps were involved –

Step I : Calculation of Parameter Ratios under the Components of C.A.M.E.L Model

The C.A.M.E.L Model consists of 5 (five) components namely, Capital Adequacy, Asset Quality, Management, Earnings Quality, and Liquidity. Within each of these components, there are several parameters. These parameters are expressed in terms of financial ratios derived from the Balance Sheet and Profit and Loss Account of a bank.

The following ratios were calculated –

1. **Capital Adequacy**

   Capital adequacy reflects the overall financial condition of a bank and also the ability of the management to meet the need for additional capital. The parameters under this component were –

   - Capital Adequacy Ratio
   - Debt-Equity Ratio
   - Advances to Assets

2. **Asset Quality**

   The prime motto behind measuring the asset quality is to ascertain the component of non-performing assets as a percentage of the total assets. In addition, the component also ascertains the NPA movement and the amount locked up in investments as a percentage of the total assets. The parameters under this component were –

- Net NPAs to Total Assets
- Net NPAs to Net Advances
- Total Investments to Total Assets

3. **Management**

It involves a subjective analysis for measuring the efficiency of the management. To measure the efficiency of the management, the parameters used were –

- Total Advances to Total Deposits
- Profit per Employee
- Business per Employee
- Return on Net Worth

4. **Earnings Quality**

This component gains importance in the light of the argument that much of the bank's income is earned through non-core activities, treasury operations, and corporate advisory services and so on. The parameters were –

- Operating Profit by Average Working Funds
- Spread (as a percentage of Assets)
- Net Profit/ Average Assets
- Interest Income/ Total Income
- Non-interest Income/ Total Income

5. **Liquidity**

It refers to the risk stemming from the lack of marketability of an investment that cannot be bought or sold quickly enough to prevent or minimise a loss. The parameters were –

- Liquid Assets/ Total Deposits
- Liquid Assets/ Total Assets

Step II : Determining the Parameter Rating Range

For each financial year, the parameter ranges were determined so that parameters relating to a sample bank could be assigned a score between 1 and 5. Therefore, the number of class intervals required was 5.

In order to obtain the required class intervals, first, the **mean value (μ)** and **standard deviation (σ)** of the population[4] were calculated for each parameter under the CAMEL components. Thereafter, the class interval was determined by taking μ +/- 1σ, μ +/- 2σ, μ +/- 3σ, as below –

Table 4.1 : Class Interval for Parameters

Score	Class Intervals	
	Where High value of the ratio is considered to be better	**Where Low value of the ratio is considered to be better**
1	(μ + 2 σ) to (μ + 3 σ)	(μ - 2 σ) to (μ - 3 σ)
2	(μ + 1 σ) to (μ + 2 σ)	(μ - 1 σ) to (μ - 2 σ)
3	(μ - 1 σ) to (μ + 1 σ)	(μ - 1 σ) to (μ + 1 σ)
4	(μ - 1 σ) to (μ - 2 σ)	(μ + 1 σ) to (μ + 2 σ)
5	(μ - 2 σ) to (μ - 3 σ)	(μ + 2 σ) to (μ + 3 σ)

Step III : Determining the Component Score

Referring to Table 4.1, the rating for each of the parameters under a component of the C.A.M.E.L Model was obtained. Thereafter, the scores for each C.A.M.E.L component were determined by taking the average of the parameter scores of that component.

Step IV : Determining Composite C.A.M.E.L Score

For calculating the composite CAMEL score of a bank, weighted average of the rates assigned against all the components were taken into consideration. The

[4] The population consists of all the listed public sector and private sector banks in India. The number of such banks in FY 2008-09 was 39 (thirty nine) excluding the Punjab & Sind Bank and the United Bank of India, which have been recently listed. However, the number of banks considered for calculation of Mean and Standard deviation for the FY 2004-05 was 38 (absence of Yes Bank) and for FY 2002-03 and FY 2003-04 was 37 (absence of Yes Bank and IDBI Bank).

weights assigned to the components of the C.A.M.E.L.S Model as suggested by FDIC Deposit Insurance Assessments are as given in the table below –

Table 4.2 : Weights Assigned to CAMEL Components

Components	Weights assigned
Capital Adequacy	25%
Asset Quality	20%
Management	25%
Earnings Quality	10%
Liquidity	10%
Sensitivity to Market Risk	10%
TOTAL	100%

Source: FDIC Deposit Insurance Assessments (www.ddfconsulting.com)

However, in this research, 'Sensitivity to Market Risk' was not taken into account and hence the weight assigned to the sixth component – S (i.e., 10%) was evenly distributed among all the five components – C, A, M, E and L. Thus, the revised weights assigned to the components of C.A.M.E.L are shown in the table below –

Table 4.3 : Revised Weights Assigned to CAMEL Components

Components	Weights assigned
Capital Adequacy	27%
Asset Quality	22%
Management	27%
Earnings Quality	12%
Liquidity	12%
TOTAL	100%

The weighted average score was calculated as follows –

$$CS_B = C_B*W_C + A_B*W_A + M_B*W_B + E_B*W_E + L_B*W_L$$

where,

CS_B is the weighted average CAMEL score of a sample bank

C_B, A_B, M_B, E_B, L_B are the component score of Capital Adequacy, Asset Quality, Management, Earnings Quality and Liquidity respectively of a sample bank.

W_C, W_A, W_B, W_E, W_L are the weights assigned to Capital Adequacy, Asset Quality, Management, Earnings Quality and Liquidity respectively

Step V : Determining the Composite C.A.M.E.L Rating

On obtaining the CAMEL score of a sample bank, it was rated as per the rating ranges and the rating scales given below –

Table 4.4 : Composite C.A.M.E.L and their Interpretation

Rating Scale	Rating range	Rating Analysis	Rating analysis Interpretation
1	1.0-1.4	Strong	Sound in every respect, no supervisory responses required.
2	1.6-2.4	Satisfactory	Fundamentally sound with modest correctable weakness, supervisory response limited.
3	2.6-3.4	Fair (watch category)	Combination of weaknesses if not redirected will become severe. Watch category. Requires more than normal supervision.
4	3.6-4.4	Marginal (some risk of failure)	Immoderate weakness unless properly addressed could impair future viability of the bank. Needs close supervision.
5	4.6-5.0	Unsatisfactory (high degree of failure evident)	High risk of failure in the near term. Under constant supervision/cease and desist order.

Source: BASEL COMMITTEE ON BANKING SUPERVISION, WORKING PAPERS No. 4 – December 2000

The ratings of the sample banks will highlight their soundness, risk exposure and the quantum of monitoring needed by the Reserve Bank of India to minimise the probability of failures of banks. Moreover, the composite C.A.M.E.L Score was calculated for 07 (seven) Financial Years i.e., from 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08 and 2008-09. This is for the purpose of getting a *better picture on the degree of risk exposure by analysing the trend.* Moreover, data from FY 2002-03 has been taken into consideration because it is believed that the financial position of Indian banks has improved considerably since 2002 – the year which witnessed benign credit policy amidst strong economic growth (Bhoumik, 2007).

4.8. Sample Survey

In the light of the third objective of the research i.e., to critically examine the existing debate on Universal banking in the context of the samples studied, it was necessary to know the perception of *Bank Managers* and *Customers* of banks on Universal Banking concept. Accordingly, a survey was conducted.

4.8.1. Selection of Sample

There are two categories of samples used in this research - managers and customers of commercial banks as well as ICICI Bank.

Category A: Managers of Commercial Banks

Definition of Population

The population in this research were managers (*element*) of commercial banks (*sampling unit*) in Guwahati city of Assam (*extent*) during 2007-08 (*time*).

Sampling Frame

The sampling frame in this research consists of the list of Banks as obtained from the web site of Reserve Bank of India.

Sampling Technique

The sampling technique adopted in this research was a combination of *Stratified Sampling Technique* and *Judgmental Sampling* Technique. First, the banks were categorised into two groups on the basis of ownership of banks – Public & Private sector banks and then the samples were selected on judgmental basis. The criterion for selecting the samples was that the individuals held managerial position in his/her organisation.

Sample Size (of Bank Managers)

The sample size (of bank managers) was **100**. The sample size was chosen based on the general guidelines for sample size that depends on the number of variables involved in the study. The questionnaire for Bank Managers had 11 items. Nunnally, 1978 (as cited in Rye & Smith-Jackson, 2006; Kumar, Kee, & Charles, 2010) suggested a rule of thumb that the number of subjects to item ratio should be at least 10:1. However, Gorsuch (1983) and Hatcher (1994) (as cited in Rye & Smith-Jackson, 2006) recommend 5:1. In this research, the total number of respondents was 100 and the ratio of respondents to items (statements) was approximately **9:1**.

Category B: Customers of Commercial Banks

Definition of Population

The population in this research were customers (*element*) of commercial banks (*sampling unit*) in Guwahati city of Assam (*extent*) during 2007-08 (*time*).

Sampling Frame

There was no definite sampling frame available and as such the sampling frame for this research consists of the customers visiting a commercial bank on a day for any bank transaction.

Sampling Technique

The sampling technique adopted in this research was *Convenient sampling* technique. Here, samples were selected from among the customers visiting a bank for any banking/financial transaction.

Sample Size (of Customers)

The sample size (of bank customers) was **270**. The decision on sample size was based on general guidelines for sample size (which depends on the variables involved) as well as similar studies on attitudes and perception of customers. As the questionnaire used in this study to know the perception of bank customers on Universal banking has 7 items (statements), the required sample size should be approximately 70 respondents (subjects), i.e., ten times of the total number of items. Moreover, similar studies on customer attitude involved sample sizes between 114 to 1,167 respondents (Laforet & Li, 2005). Therefore, in this study the sample size was as per the existing literature and the ratio of respondents to items (statements) was approximately **39:1**.

4.8.2. Research Instruments

The 'personal-contact' approach was adopted for the research, i.e., the respondents were approached personally and given a detailed explanation about the survey (including its purpose, the meaning of the items and what is expected of them). The data required for the research was collected through-

- Personally administered questionnaire
- Structured interview

In this research, for the collection of data, emphasis was given on personally administered questionnaire and structured interview because the respondents, especially the Bank managers' hectic job schedule as well as low awareness of the customers on the range of services offered by banks, on many a occasion, posed a problem in collection of data.

4.8.3. Designing of Questionnaire

There were two sets of questionnaire - one for managers and the other for the customers of commercial banks. After preparation of the draft questionnaire, a **pilot survey** was conducted involving 10 (ten) bank managers and 10 (ten) customers of commercial banks in Guwahati city.

The final questionnaires were prepared after incorporating the required changes after the pilot survey. The questionnaire for the Managers of commercial banks was prepared to identify different services presently offered by the concerned bank and also their perception on Universal banking concept. All the questions in the questionnaire were close-ended and Likert scales were used for questions under Part C.

The questionnaire, for collecting data from the Customers, was prepared with a view to know their awareness about the various services offered by a commercial bank as on date and also their (customers') need of various banking and financial services. The questions in the questionnaire were all close-ended with Likert scales introduced against almost all the questions under Part C.

4.8.4. Analysis of Data

The collected data was carefully studied and analysed as follows –

The five point Likert Scale had values from -2 to +2 associated with it. '*Profile analysis*' was undertaken, with each item in the questionnaire analysed on an item-by-item basis. Then a summated approach was used for obtaining a final score against each question given in the questionnaire so as to know the perception of the samples (Managers & Customers of the banks).

Chapter – 5

Banking Sector Diversification and Rise of Universal Banks

BANKING SECTOR DIVERSIFICATION AND RISE OF UNIVERSAL BANKS

In recent years, it has been seen that commercial banks are no longer restricted to providing traditional services of 'accepting deposits and making advances', but are engaged in diverse kinds of banking and financial business like insurance, mutual funds, investment banking, housing finance, factoring etc. Such banking entities which are offering various services under one-roof are referred to as Universal banks. In fact, Universal banks are financial conglomerates, which function as part of financial supermarkets (Gurusamy, 2009).

The concept of Universal banking is of recent origin in India and came to fore-front after the financial sector reforms. However, at the global level, Universal banks have been operating for quite some time in Germany, Austria and Switzerland. Universal banking has its origin in Germany where it originated in 1850s, while it existed in the US prior to 1920s.

In India, financial sector reforms which started in early 1990s have uprooted many of the outdated regulatory fences within which banks were required to operate (Rajadhyaksha, 2004). The first step in this respect was deregulation and opening up of the banking sector to private and foreign players. Licenses were granted to many foreign and new generation private sector banks. The All India Development Financial Institutions (DFIs) like the ICICI, IDBI etc. jumped into the fray of core commercial banking. Public sector banks were allowed to divest the controlling stakes of the Government by encouraging them to come up with Initial Public Offers (IPOs) and Public-Private Partnership (PPP) started elbowing out the predominantly State ruled organisational structures (Darshan, 2006).

With the organisation structural changes and increase in the number of players, competition, which was a non-entity in the Indian Banking context after 1969, set in. Competition in the banking sector reduced the profit-share of banks and forced individual banks to identify avenues to earn profit through diversified activities – which do not fall under the purview of core banking. Competition also made banks to be more customer-centric and focus on customer satisfaction and retention. In view of these, a variety of banking and financial services are being offered by the banks to meet customers' needs more effectively. Simultaneously, during this period i.e., 1990s, there was another silent revolution in the country – the advent of Information Technology. Information Technology enabled Services (ITeS) have facilitated banks to bring in a visible change in their service delivery process – making it less time consuming, less cumbersome, and more customer friendly. Thus, with increased competition in the banking sector and all these developments have forced banks to formulate business strategies with focus on customer needs and their satisfaction. This eventually led to the emergence of a new breed of organisations named Universal Banks – offering a variety of banking and financial products under an umbrella brand.

5.1. The Indian Situation and Diversification of Banking Business

Independent India follows a mixed economic system, where there is wide latitude for government participation (Cherunilam, 1994). The Government, since 1950s, had been regulating the economic activities of the country to ensure balanced economic development through Five-year plans. The objective of planned economic development is such that social orientation of banking was considered a must i.e., banks have to move into rural and far flung areas so as to ensure balanced economic growth and equitable distribution of wealth among the population. Accordingly as a part of this obligation of social banking, the domestic banks moved into rural areas and interior locations despite inadequate infrastructure and communication facilities. In this process of meeting social obligations as per government policies, the margins of banks on loans and advances narrowed down and their profitability badly affected. The banking system had such a low level of profitability and it appeared that in their effort of transfusion of money to treat financial anaemia of the economy, the banking system might itself become seriously sick (Suneja, 1994). It became clear that the viability of the banking system was under a grave threat of an increasingly competitive business environment and that if the system was to continue to serve the social objectives, bank should be allowed to come out with new products to become commercially viable units, apart from taking various other steps to improve their productivity and profitability. In view of all these developments, the Government felt the necessity of economic liberalisation followed by financial reforms. Financial reforms have given banks enough freedom to start diversifying their activities into ancillary business or para banking apart from core banking activities.

Simultaneously, the foreign banks having operational presence in India were also caught up with the idea of diversification and product innovation to enhance their profitability and increase their market share. In view of innovative marketing strategies adopted by foreign banks and also due to increased competition in the domestic market, Indian commercial banks too came forward with aggressive marketing strategies, with focus into product innovation and diversification into ancillary business areas.

Another striking reason which made Indian banks to opt for diversification is the development of Capital Market. In fact, during early 1980s India witnessed an explosive growth of financial markets. According to Rajadhyaksha (2004), these developments in the Indian Financial sector allowed Companies and sometimes even customers to bypass banks and get money directly from those who save it – a process called disintermediation. This has also forced banks to enter new business in order to retain their precious customers through diversification and product innovation. In view of all these developments in India, banks were allowed to undertake para banking activities since 1983 (Ajit, 1997) through subsidiaries (such as leasing, merchant banking, mutual funds, capital markets activities, factoring, housing finance, etc) and in-house in fields such as money market mutual funds, credit cards, etc. Further, technology also played a crucial role in product innovation as well as in diversification in the banking sector. In fact, Information Technology (I.T) has paved the way to speed up the process of banking operations and it can be said that the introduction of

I.T in banking activities has made the transition path easier for commercial banks in the direction of Universal banking.

Thus, in response to national and international economic environment, there have been many significant changes in the economy of our country as well as in the banking sector. Therefore, the major factors behind changes in the activities of commercial banks are deregulation resulting in increased competition and innovation; disintermediation and its counterpart 'securitisation'; and unprecedented technological advances and use of sophisticated communication in business operations resulting in globalisation of financial markets (Suneja, 1994). Apart from all these factors, the motive for which banks started entering into para banking activities include the need for a profit centre, diversification of earnings, maximisation of economies of scale, the desire to have leading market positions in all financial services, etc. (Ajit, 1997).

5.2. Definition of Universal Bank

Universal Banking, a concept that has gained a lot of credence in recent times, can be defined as a multi-purpose and multi-functional supermarket providing both banking and financial services through a single window. In simple words, a Universal Bank is a super store for financial products. Under one roof, Corporates can get loans and avail of other handy services, while individuals can bank and borrow.

As mentioned in the Discussion Paper by *Reserve Bank of India*, the term Universal banking in general refers to the combination of commercial banking and Investment banking i.e., issuing underwriting, investing and trading in securities. In a broad sense, however, the term Universal banking refers to those banks that offer a wide variety of financial services especially insurance (Reddy, 2000).

As per the *World Bank*, 'In Universal Banking, large banks operate extensive network of branches, provide many different services, hold several claims on firms (including equity and debt) and participate directly in the Corporate

Governance of firms that rely on the banks for funding or as insurance underwriters (Katkar, 2006).

In simple words, Universal Banking means the financial entities – the commercial banks, Financial Institutions, NBFCs – that undertake multiple financial activities under one roof, thereby creating a financial supermarket (Chaitanya, 2005). The entities focus on leveraging their large branch network and offer wide range of services under single brand name.

5.3. Activities of Universal Bank

Presently, all the banking organisations are marching towards Universal banking and as such the distinction in the operations of Commercial banks, Development Financial Institutions and Non Banking Financial Companies (NBFC) is gradually blurring. The motive of these entities behind their transition towards Universal banks is to earn as much as profit by way of interest, fee-based income and commission through various diversified activities (Bhaskar, 2005). In this process, Universal banking adapts, adopts and achieves the basic objectives of business through technology.

Universal Banks are characterised by the presence in the breadth and depth of different segments of the financial market particularly debt market (Gurusamy, 2009). Banks in India are present in the following areas of the universal banking activity –

1. Credit market
2. Consumer finance market
3. Savings market
4. Money market
5. Capital market
6. Forex market
7. Commodities market
8. International banking
9. Advisory service market (merchant banking)
10. Investment banking

11. Insurance market
12. Factoring
13. Credit, Debit and Smart cards
14. Pension market
15. Project financing
16. Venture capital
17. On-line share broking
18. Internet banking
19. Telephone banking
20. Mobile banking
21. Securitisation

In India, most of the commercial banks are rendering almost all the activities mention above. Except for the ICICI Bank Limited, which enjoys the status of Indian Universal Banks, the other banks which are also rendering the above mentioned services, however, do not enjoy the same status.

5.4. Types of Universal Bank

There are four different types of Universal Banks in the world. They are as follows–

1. **Fully Integrated Universal Banks**: Fully integrated Universal banks are those banks which function as a single institutional entity offering a complete range of banking and financial products and services.

2. **Partly Integrated Financial Conglomerates**: It is an institutional set-up where the bank offers a range of services, with some of the services such as mortgage banking, leasing, and insurance being provided through wholly owned or partially owned subsidiaries.

3. **Bank Subsidiary Structure**: These are the banks that offer functions such as investment banking and insurance in addition to focussing on regular commercial banking functions.

4. **Bank Holding Company Structure**: Bank holding company structure is an institutional set-up where banking and financial products are offered through a financial holding company that owns both banking and non banking subsidiaries that are legally separate.

The concept of Universal banking is based on two models. One is the **German Model**, in which banks carry comprehensive banking activities including commercial banking as well as other services such as securities and insurance. The other is the **British Model**. According to this model, universal banks by way of financial conglomerates offer full range of financial service in accordance with change of financial environment, pursuing diversification in securities and investment.

5.5. Structure followed in India

In India, the financial services sector has been witnessing a growth in the emergence of financial conglomerates. With increased competition in the financial sector, the banking as well as non banking entities have felt the need to opt for diversification of their business line. In the process of offering both banking and financial products, they started to experiment with organisational structures hitherto unfamiliar in India.

However, it has been seen that in India, the Holding Company structure is being commonly followed. Internationally there are mainly two holding company models for bank related conglomerates viz., Bank Holding Company Model and Financial Holding Company Model.

(a) ***Bank Holding Company Model***: Bank Holding Companies (BHCs) are companies that own or control one or more banks. In USA these are regulated by the Federal Reserve. These companies were first introduced in Bank Holding Company Act of 1956. These companies can make only limited investments in the non-banking companies.

(b) ***Financial Holding Company Model***: Financial Holding Companies (FHCs) are companies that own or control one or more banks or non-bank financial companies. In USA, FHCs were created by the Gramm-Leach-Bliley Act (GLBA) as a way to expand the financial services activities of BHCs. GLBA permits banks, securities firms and insurance companies to affiliate with each other through the FHC structure. FHCs can engage in activities other than banking as long as they are financial in nature. The most important of these are securities underwriting and dealing, insurance underwriting, insurance agency activities and merchant banking. The requirement to have bank in the financial group is pre-requisite for qualifying as an FHC in USA.

In India, as per Reserve Bank of India, there are major motivations for banks/ financial institutions to opt for BHCs/ FHCs.

(a) *First*, in terms of existing instructions of RBI, a bank's aggregate investment in the financial services companies including subsidiaries is limited to 20% of the paid up capital and reserves of the bank. In a BHC/FHC structure, this restriction will not apply as the investment in subsidiaries and associates will be made directly by the BHC/FHC. Once the subsidiaries are separated from the banks, the growth of the subsidiaries/associates would not be constrained on account of capital.

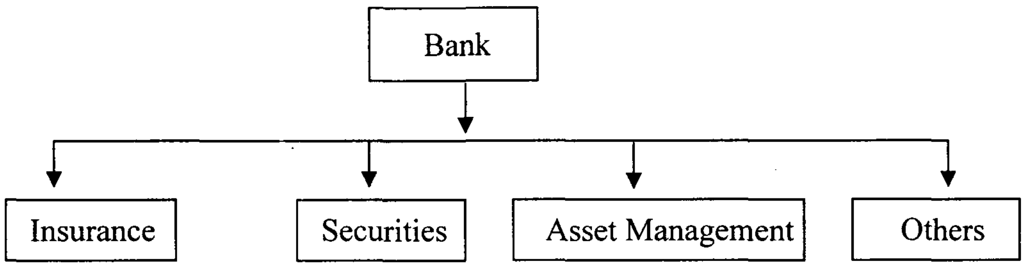
(b) *Secondly*, in the context of public sector banks, the Government holding through a BHC/FHC will not be possible in the existing statutes. However, if statutes are amended to count for effective holding then, the most important advantage in shifting to BHC/FHC model would be that the capital requirements of banks' subsidiaries would be de-linked from the banks' capital.

(c) *Thirdly*, since the non-banking entities within the banking group would be directly owned by the BHC, the contagion and reputation risk on account of affiliates for the bank is perceived to be less severe as compared to the organisational structure where a bank is directly into the non banking business.

Thus, it is anticipated that due to the above motivational factors, financial entities offering diversified products would opt for Holding Company structure. In a banking or financial group, a holding company can be the parent of the group or an intermediate holding company. A multi-layered financial conglomerate may also have a few tiers of intermediate holding companies apart from the holding company at the top. The following are the holding company structures put forward by Reserve Bank of India –

A typical bank-centric organisation structure (also known as Bank Subsidiary Model) is shown in the Fig. 5.1 –

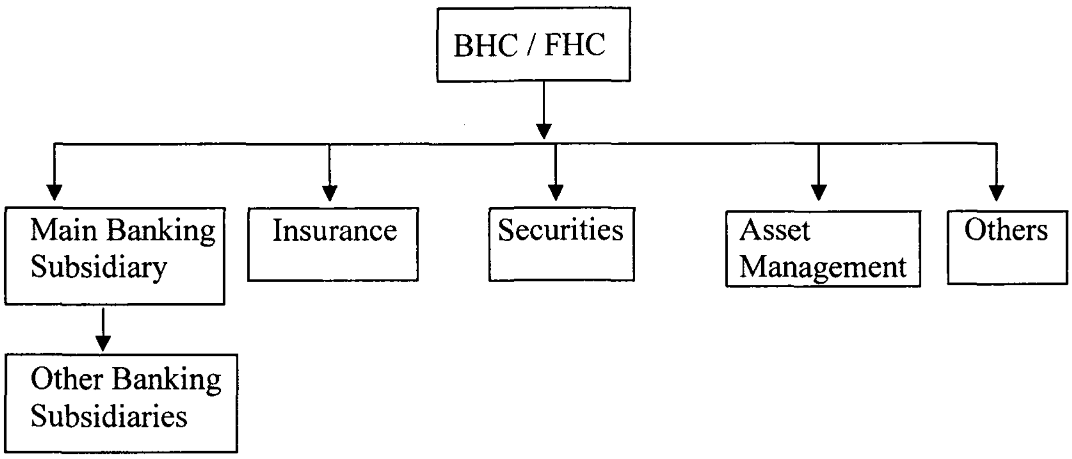
Fig. 5.1 : A Typical Bank-centric Organisation Structure - Bank Subsidiary Model



Source: RBI Discussion Paper on Holding Companies in Banking Groups (2007, August)

Organisational structure of a typical FHC with a main banking subsidiary, other banking subsidiaries and other non-banking financial subsidiaries is given in figure below –

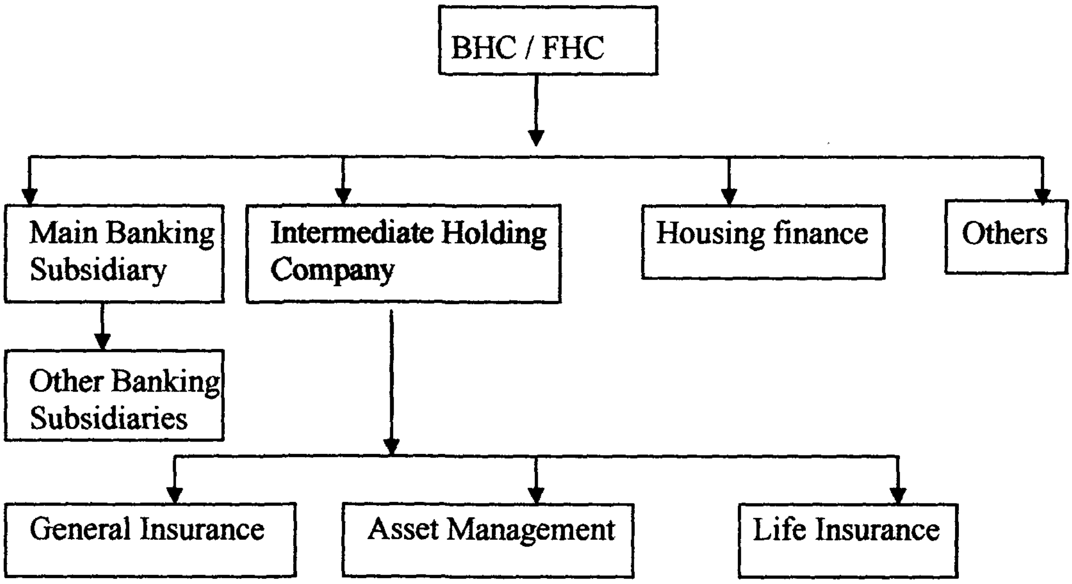
Fig. 5.2 : A Financial Conglomerate with Holding Company at the top



Source: RBI Discussion Paper on Holding Companies in Banking Groups (2007, August)

A financial conglomerate with a parent holding company can also have an intermediate holding company. Generally, the organisational model involving intermediate holding companies has been mainly used by multinational corporations to take tax advantage by setting up the intermediate holding companies in tax havens. The intermediate holding companies have also been used for regulatory arbitrage. An intermediate holding company or companies are key building blocks for achieving a multilayered corporate structure. An intermediate holding company can find place in all the three basic types of conglomerates i.e., the Universal Bank, the Bank Subsidiary Model and the Bank Holding Company model.

Fig. 5.3 : Financial Conglomerate with Holding Company at the top as well as an Intermediate Holding Company



Source: RBI Discussion Paper on Holding Companies in Banking Groups (2007, August)

Of the above three alternative Holding Company Structures, the Bank Subsidiary Model (A typical bank-centric organisation structure as shown under Fig. 5.1) is currently followed in India.

5.6. Difference between Universal Banking and Financial Conglomerates

In recent years, the financial services sector in India has been witnessing a growth in the emergence of Financial Conglomerates. A financial conglomerate is a company or a group of companies that have substantial interests in all sorts of financial businesses – banking, insurance, funds management, mutual funds and securities trading (Rajadhyaksha, 2004). However, Financial Conglomerates are different from Universal Banking in the sense that in respect of Financial Conglomerates various activities are undertaken through different subsidiaries, whereas in the case of Universal Banking, the bank is free to choose the activities it wants to carry out subject to certain regulations (Gurusamy, 2009).

As per Reserve Bank of India, a group would be designed as a 'financial conglomerate' if –

(a) any group entity coming under the jurisdiction of specified regulators (namely, RBI, SEBI and IRDA for the present and the Pension Fund Regulatory Authority may be included subsequently) and having a significant presence in the respective financial market segment, and

(b) the group is having operations in at least one more financial market segment.

Table 5.1 shows the financial market segments and the level of presence of a group to be designated as a Financial Conglomerate –

Table 5.1 : Significant Presence in the Respective Financial Market Segment

Financial market segment	Significant presence
Bank	Included in the top 70% of the segment in terms of asset base
Insurance Company	Turnover more than Rs.100 crore
Mutual Fund	Included in the top 70% of the segment in terms of asset under management
NBFC (deposit taking)	Included in the top 70% of the segment in terms of deposit base
NBFC (non-deposit taking)	Asset base more than Rs.2000 crores.
Primary Dealer	Included in the top 70% of the segment in terms of total turnover

Source: Reserve Bank of India –Report on Monitoring of Financial Conglomerates (2004, June)

The RBI has clarified that the above framework also covers entities having an overseas parent or holding company (e.g. Foreign banks) and satisfying the specified criteria.

5.7. Universal Banking – A SWOT Analysis

A SWOT analysis of Universal banking system as given below reveals to what extent these organisational structures would be beneficial to the country's economy as a whole and the financial sector in particular.

Strengths

1. **Economies of scale and scope**: One of the main advantages of Universal banking is that such an entity can maximise economies of scale and scope by 'bundling' the production of financial services (Kannan, 2002). This would result in greater efficiency in the form of lower cost, higher output and better products.

2. **One stop shop**: A Universal bank would act as 'one-stop shop' for its customers. This would save a lot of transaction costs and increase the speed of economic activities and thereby enhance profitability of the bank through sale of different financial products. Moreover, customers would enjoy the benefit of getting various financial products under one-roof.

3. **Diversification with profit motive**: The main objective behind Universal banking is to earn as much profit by way of interest, fees based income and commission through various diversified activities (Bhaskar, 2005). Thus, banks are diversifying into allied areas of business with a motive to enhance profitability of the organisation. This is because synergies in joint production of financial and non financial services increase economic efficiency, reduce cost and increase earnings (Bhole, 2004).

4. **Optimum utilisation of resource**: A bank possesses the information on the risk characteristics of the clients, which it can use to pursue other

activities with the same clients (Sensarma, 2001). This eventually saves cost compared to the case of different entities catering to the different needs of the same clients. Moreover, a bank through its existing network of branches can opt for cross-selling their other products like insurance, mutual funds etc. to its clients. Again, as a part of its business operations, the bank would collect information pertaining to the market trends, risk and return associated with portfolios of Mutual Funds and it can provide these information to its clients also at no extra cost.

5. **Advantage of established Brand name**: A Universal bank, with an already established brand name, can sell different products like insurance, mutual funds etc. under the same brand through its existing network of branches. As such investment on building a new brand and product marketing would be very less and at the same time its brand reputation in the market would be a key driver in increasing the sales of its new diversified products.

6. **Positive message to the investors**: As a part of its business activities, Universal bank is going to hold stakes in other firms also. In such instances, it is going to send positive message to the investors because the lending bank is in a better position to monitor the firm's activities.

Weaknesses

1. **More expensive**: In fact, diversification of banking activities need not always result in economies of scale and scope especially if banks are not of appropriate size (Herring & Litan, 2003; Karunagaran, 2005). Sometimes it turns out to be more expensive. This happens when sufficient number of transactions in each of the specialised financial activity is not even up to the 'breakeven' level.

2. **Loss of core competence**: When a bank offers a variety of products under an umbrella brand, there is a possibility that the multi-product bank would lose sight of their core competence and would face greater risk by participating in untested activities.

3. **Grey area of Universal Bank**: The transition path for DFI towards Universal banking is laden with obstacles. The stringent regulatory requirements laid down by the Reserve Bank of India for the DFIs are the major cause of hindrance in the transition process. The burning issue about universal banking had been about how the institution would go about garnering Rs 18,000 crore to meet statutory obligations and the degree of concessions they would be able to obtain from RBI about the magnitude of CRR, SLR and priority sector lending (Sen, 2002).

   Moreover, there happen to be differences in regulatory requirements for a bank and DFI in the process of becoming a Universal bank. Unlike banks, DFIs are not required to keep a portion of their deposits as cash reserves.

4. **Problem in long term lending**: Project finance has been a domain of DFIs since long. In fact, DFIs were established by the Government to finance projects which had long gestation period. Such financing are done through long term funds. Therefore, a DFI transforming to a bank may not be of much benefit in lending long term funds as banks have access to short term resources and not to long term resources.

5. **The problem of NPA**: There exists a major problem of NPAs in the DFIs. The problem arose either due to improper use of the funds availed by borrower from the DFIs or due a sharp change in operating environment and poor project appraisals by the DFIs (Katkar, 2006). Whatever be the reason, the problem is likely to be aggravated if a DFI transforms itself into a Universal bank. This is because there is a chance that due to the sudden expansion in activities, it may fail to make thorough study of the actual need of the party concerned, the prospect of the business in which it is engaged, its track record, the quality of the management, etc. This may affect the loan recovery process and generate more NPAs.

Opportunities

1. **To increase operational efficiency**: Financial sector reforms have given banks a free hand in formulating their business plans. Presently the focus of banks is on profits rather than on the size of the balance sheet and as such banks are trying to tap lower cost funds by enhancing their fee based incomes. Moreover, as liberalisation brought in new opportunities for banks, it also increased competition in the banking sector. Thus, to face the increased competition and at the same time for sustenance, banks will need to improve their efficiency and productivity, which will lead to new products and better services (Katkar, 2006).

2. **To have significant presence in the global market**: When compared with other banks of the world in terms of total asset base and net worth, the Indian banks' position is miserable. In fact, State Bank of India (ranked 380) is the only Indian bank to appear in the list of 'Fortune 500' (from the July 21, 2008 issue of Fortune magazine) based on sales, profits, asset and market value. Thus, it can be anticipated that pure traditional banking operations alone cannot take the Indian banks into the league of the Top 100 banks in the world. Therefore, there is a real need of universal banking that would offer a wide range of financial services in addition to the commercial banking functions and help in enhancing overall profitability.

3. **Financial Inclusion**: There are certain sectors in the economy and certain stratum of the country's population who are outside the banking net. Once banks and DFIs are transformed into a Universal Bank, with the help of retail and personal banking services it can reach those sections easily.

Threats

1. **Big Empires**: Mergers and acquisitions in the financial sector lead to the formation of Universal Banks. As for example, the reverse merger of ICICI with its bank led to the formation of India's first Universal bank on March 31, 2002. Bhole (2004) has pointed out that diversification of

banking activities and their eventual transition towards Universal banking framework would aggravate the problem of concentration of financial and economic power, creation of financial and industrial oligopolies and conglomerates. This might maximise private commercial gains but not social benefits, as large combinations and their unrestricted growth do not lead to socially best allocation of resources.

Moreover, as Universal banks will be large banks, by their asset base, income level and profitability, there is a danger of 'price distortion'. It might take place by manipulating interests of the bank for the self interest motive instead of social interest. Eventually, there is a threat to the overall quality of the products of the bank. Again there is possibility of turning all the strengths of the Universal Banking into weaknesses. For example, the strength of 'economies of scale', which a Universal Bank would enjoy may lead to over expansion which may in turn result into the degradation of qualities of bank products as well as service efficiency.

Thus, in spite of certain malice associated with this type of organisational structures in an economy, Universal banking proves to have enough potential for strengthening the financial sector. With most of the banks turning to the global market, the key to sustenance would be diversification of its product-mix and enhancing efficiency in rendering services with focus on customers' needs and their satisfaction.

5.8. The Need of Universal Banking

In India, the concept of Universal banking has gained the momentum only after the second Narasimham Committee Report (1998) which recommended that the Development Financial Institutions, over a period of time should convert themselves into banks (implicitly Universal banks) and that there should eventually be only two forms of intermediation – Banking companies and Non Banking Financial Companies. Moreover, this was followed by a Working Group chaired by S.H.Khan on '*Harmonising the Roles and Operations of*

Development Financial Institutions and Banks' (1998), which made it more explicit by recommending for a progressive movement towards Universal banking for the DFIs.

In fact, the pressure in favour of Universal banking comes from the DFIs, with the banks being noticeably reticent in the matter (Rao, 2004). One of the main reasons for which DFIs are making a move towards Universal banking is due to the fact that long term resources are not available to them. To be more specific, the long-term resources earlier provided to the DFIs by the Government are no longer available. In such a circumstance, the DFIs only have access to short-term resources to fund term loans and as such they are confronted with the problem of Asset-Liability mismatch. This is because their assets are long term while their liabilities are short term. In order to overcome such a problem, the DFIs have little option but to go in for increasing the amount of short-term lending. The obvious step is to transform the DFI into a Universal bank.

Moreover, economic growth of country requires a sound infrastructure and for infrastructure projects, long term lending is absolutely necessary. This is the reason why DFIs are set up by the Government. These DFIs should be allowed greater access to long term funds either from insurance companies or from provident funds so that they can finance projects with term loans. In contrast to this, a commercial bank with its insufficient asset base and net worth is not able to fund a large project like Greenfield and Brownfield projects solely. In many occasions, to overcome this problem, they form a consortium of lender (especially with other nationalised banks) for funding those projects. Thus, it implies that there is a need of developing a strong and stable financial sector to cater the need of the infrastructure as well as corporate sector. This is possible only when banks/ financial institutions have strong capital/asset base. Thus, it fortifies the need for Universal Banking.

5.9. Universal Banking in India

The explosive growth of the financial market since early 1980s has resulted in the process of disintermediation (Rajadhyaksha, 2004). As a result of the disintermediation process, there had been exciting and progressive changes in the banking business (Suneja, 1994) and Indian banks have resorted to diversification in a big way. Moreover, the disintermediation process has been followed by financial sector reforms, which was initiated in early 1990s after the First Narasimham Committee recommendation. In fact, disintermediation process and reforms in the financial sector paved the way for diversification of business activities in the banking sector. Today, the financial services industry has become entirely market oriented (Suneja, 1994). Innovation of new services and development of new instruments have become an integral and essential part of this market.

In India, although there is no legislative distinction between Commercial banking and Investment banking or any explicit legislative restriction for the banks to operate in investment banking activities, the banks have traditionally been maintaining the 'arms length' distance from investment banking (Karunagaran, 2005). In fact, in India, DFIs and RFIs were meeting needs of specific sectors of the economy and also providing long-term resources at concessional terms, while the commercial banks in general, by and large, were confined to their core banking function of accepting deposits and providing working capital finance to industry, trade and agriculture. However, with the financial sector reforms beginning in 1990s, banks were given abundant freedom to go much beyond their traditional conservative commercial banking and this has facilitated banks in providing a host of financial products to meet customer needs. At the same time, there has been blurring of distinction between the commercial banking and investment banking.

In sequel to these developments, the Reserve Bank of India constituted on December 8, 1997, a Working Group under the Chairmanship of Mr. S.H. Khan to bring about greater clarity in the respective roles of banks and financial institutions for greater harmonisation of facilities and obligations. Also report of the Committee on Banking Sector Reforms or the Second Narasimham Committee (NC) has major bearing on the issues considered by the Khan Working Group.

Later in the year 2000, the issue of universal banking resurfaced after ICICI gave a presentation to RBI to discuss the time frame and possible options for transforming itself into a Universal bank. Reserve Bank of India also spelt out to Parliamentary Standing Committee on Finance, its policy for universal banking. Eventually the first Indian Universal bank was born on March 31, 2002 with the ICICI Bank formally given the recognition by the Reserve Bank of India. Another mega financial institution, IDBI has also adopted the same strategy, and has transformed itself into a universal bank (Leeladhar, 2005). Simultaneously, Export Import Bank (EXIM Bank), Industrial Finance Corporation of India (IFCI) and Industrial Investment Bank of India (IIBI) also plunged into the race of becoming Universal banks but things did not materialise.

It is quite interesting to note that in India, although many of the banks are offering a host of banking and financial services like a universal bank but they formally do not enjoy the status similar to the ICICI Bank. For example, the State Bank of India (SBI) – the largest bank in India has been offering similar services like the ICICI Bank and when compared to it in terms of assets, the ICICI Bank is second next to it, but it is yet to acquire the status of Universal bank. This is because for conversion into a Universal bank, an organisation (banks as well as DFIs) need to apply to the Government formally and at the same time it should meet all the regulatory issues laid down by the Government of India.

5.10. Government of India Regulations on Universal Banking

The Indian financial sector has seen major changes over the past decade. With product boundaries between banking, securities and insurance sectors becoming thin and blurred, banks have begun to move towards Universal banking structure (Sharma & Vashishtha, 2007). At the same time, competitive pressures have resulted in a growing number of mergers, the emergence of financial conglomerates, growing instances of regulatory arbitrage and overlapping and duplicacy of regulations. These changes have important implications for both financial intermediaries and financial regulators. Moreover, the financial services industry, historically, has been one of the most highly segmented and most regulated (Sundararajan & Baldwin, 2005). The sector comprising of banks, securities and insurance firms, is highly segmented in the sense that it offers products with distinct liquidity, maturity and risk characteristics. Therefore, to ensure financial stability, minimise systemic risk, promoting efficient, transparent and fair markets, and protecting depositors, investors and insurance policy holders, the sector has to be regulated by the Government.

Financial sector reforms in early 1990s brought in a radical change in the Indian Banking sector. With the recommendations given by Second Narasimham Committee in 1998 and followed by the recommendations given by S.H. Khan Committee in the same year, DFIs were encouraged to transform into either Non Banking Financial Companies or Universal banks. In view of this, the Reserve Bank of India has forwarded the following salient operational and regulatory issues to be addressed by the Financial Institutions for conversion into a Universal Bank.

Table 5.2 : Salient Operational and Regulatory Issues to be Addressed by the FIs for Conversion into a Universal Bank [RBI circular]

The salient operational and regulatory issues to be addressed by the FIs for conversion into a Universal Bank as per RBI Circular are as follows –

1. **Reserve requirements:** Compliance with the cash reserve ratio and statutory liquidity ratio requirements (under Section 42 of RBI Act, 1934, and Section 24 of the Banking Regulation Act, 1949, respectively) would be mandatory for an FI after its conversion into a universal bank.
2. **Permissible activities**: Any activity of an FI currently undertaken but not permissible for a bank under Section 6(1) of the B. R. Act, 1949, may have to be stopped or divested after its conversion into a universal bank.
3. **Disposal of non-banking assets**: Any immovable property, howsoever acquired by an FI, would, after its conversion into a universal bank, be required to be disposed of within the maximum period of 7 years from the date of acquisition, in terms of Section 9 of the Banking Regulation Act.
4. **Composition of the Board**: Changing the composition of the Board of

Directors might become necessary for some of the FIs after their conversion into a universal bank, to ensure compliance with the provisions of Section 10(A) of the B. R. Act, which requires at least 51% of the total number of directors to have special knowledge and experience.

5. **Prohibition on floating charge of assets**: The floating charge, if created by an FI, over its assets, would require, after its conversion into a universal bank, ratification by the Reserve Bank of India under Section 14(A) of the Banking Regulation Act, since a banking company is not allowed to create a floating charge on the undertaking or any property of the company unless duly certified by RBI as required under the Section.

6. **Nature of subsidiaries**: If any of the existing subsidiaries of an FI is engaged in an activity not permitted under Section 6(1) of the B R Act, then on conversion of the FI into a universal bank, delinking of such subsidiary / activity from the operations of the universal bank would become necessary since Section 19 of the Act permits a bank to have subsidiaries only for one or more of the activities permitted under Section 6(1) of Banking Regulation Act.

7. **Restriction on investments**: An FI with equity investment in companies in excess of 30 per cent of the paid up share capital of that company or 30 per cent of its own paid-up share capital and reserves, whichever is less, on its conversion into a universal bank, would need to divest such excess holdings to secure compliance with the provisions of Section 19(2) of the Banking Regulation Act, which prohibits a bank from holding shares in a company in excess of these limits.

8. **Connected lending**: Section 20 of the Banking Regulation Act prohibits grant of loans and advances by a bank on security of its own shares or grant of loans or advances on behalf of any of its directors or to any firm in which its director/manager or employee or guarantor is interested. The compliance with these provisions would be mandatory after conversion of an FI to a universal bank.

9. **Licensing**: An FI converting into a Universal Bank would be required to obtain a banking license from RBI under Section 22 of the Banking

Regulation Act, for carrying on banking business in India, after complying with the applicable conditions.

10. **Branch network:** An FI, after its conversion into a bank, would also be required to comply with extant branch licensing policy of RBI under which the new banks are required to allot at least 25 per cent of their total number of branches in semi-urban and rural areas.

11. **Assets in India**: An FI after its conversion into a universal bank, will be required to ensure that at the close of business on the last Friday of every quarter, its total assets held in India are not less than 75 per cent of its total demand and time liabilities in India, as required of a bank under Section 25 of the Banking Regulation Act.

12. **Format of annual reports**: After converting into a universal bank, an FI will be required to publish its annual balance sheet and profit and loss account in the forms set out in the Third Schedule to the B R Act, as prescribed for a banking company under Section 29 and Section 30 of the Banking Regulation Act.

13. **Managerial remuneration of the Chief Executive Officers**: On conversion into a universal bank, the appointment and remuneration of the existing Chief Executive Officers may have to be reviewed with the approval of RBI in terms of the provisions of Section 35 B of the Banking Regulation Act. The Section stipulates fixation of remuneration of the Chairman and Managing Director of a bank by Reserve Bank of India taking into account the profitability, net NPAs and other financial parameters. Under the Section, prior approval of RBI would also be required for appointment of Chairman and Managing Director.

14. **Deposit insurance**: An FI, on conversion into a universal bank, would also be required to comply with the requirement of compulsory deposit insurance from DICGC up to a maximum of Rs.1 lakh per account, as applicable to the banks.

15. **Authorised Dealer's License**: Some of the FIs at present hold restricted AD license from RBI, Exchange Control Department to enable them to

undertake transactions necessary for or incidental to their prescribed functions. On conversion into a universal bank, the new bank would normally be eligible for full-fledged authorised dealer license and would also attract the full rigour of the Exchange Control Regulations applicable to the banks at present, including prohibition on raising resources through external commercial borrowings.

16. **Priority sector lending**: On conversion of an FI to a universal bank, the obligation for lending to 'priority sector' up to a prescribed percentage of their 'net bank credit' would also become applicable to it.

17. **Prudential norms**: After conversion of an FI in to a bank, the extant prudential norms of RBI for the all-India financial institutions would no longer be applicable but the norms as applicable to banks would be attracted and will need to be fully complied with.

Source: Approach to Universal Banking – Excerpt from the Mid-term Review of the Monetary and Credit Policy of Reserve Bank of India for 1999-2000 (http://www.rbi.org.in/scripts/NotificationUser.aspx?Id=368&Mode=0)

5.11. Conclusion

The rise of Universal banking or the universalisation of banking is the anticipated result of rapid expansion of banks and their diversification into new financial and ancillary banking services. With financial sector reforms and increase in competition in the Indian Financial System, presently the business focus of the large entities that would emerge would be on profitable lines, such as trade finance, credit cards, consumer finance, foreign exchange dealings, treasury and stock market operations, where the payback period is short and risk is less compared to the traditional project and working capital financing (Srinivasan, 2000). However, with increased growth, there would be a marked reluctance to enter the smaller end of retail banking. The small borrowers, especially in the rural areas, would find it difficult to access the bank's services as they may not be significant to the banks' business volumes or profits.

The success of Universal banking would depend to what extent the banking process is technology-driven. With implementation of Information Technology

Act, 2000 by the Government, introduction of IT in the banking sector had been possible. Due to these development, 'Brick and Mortar' banking has almost given way to 'Click and Mouse' banking (Darshan, 2006). Technology has paved the way to banks to minimise the human interface (and the associated staff costs) with the customer, through ATMs and virtual banking enabling the banks to reduce costs. However, in the rural areas, such technology-led cost reduction would not be possible because of the high infrastructure costs involved and the level of literacy necessary for customers to use the electronic interface. What this portends for rural banking does not seem to be in consonance with the national priorities.

Although the Government of India is toying with the idea of converting banks and DFIs into Universal Banks, the country would be benefited only when the benefits of such transition outweigh the costs. However, the focus of some banks on growth and increasing the balance-sheet size through increased profitability may be adverse to certain sectors of economic activity, and the likely economic costs thereof would be more than the gains of the positive impact on the benefiting banks and financial institutions. In fact, if reforms are warranted, then universal banking has to make adjustments and ensure that financial services are available to all sections of the population at affordable costs and at the same time it should be ensured that access to financial services should not become an elitist privilege.

Chapter – 6

Risk and Risk Management in the Banking Sector

RISKS AND RISK MANAGEMENT IN THE BANKING SECTOR

The Banking sector has a pivotal role in the development of an economy. It is the key driver of economic growth of the country and has a dynamic role to play in converting the idle capital resources for their optimum utilisation so as to attain maximum productivity (Sharma, 2003). In fact, the foundation of a sound economy depends on how sound the Banking sector is and vice versa.

In India, the banking sector is considerably strong at present but at the same time, banking is considered to be a very risky business. Financial institutions must take risk, but they must do so consciously (Carey, 2001). However, it should be borne in mind that banks are very fragile institutions which are built on customers' trust, brand reputation and above all dangerous leverage. In case something goes wrong, banks can collapse and failure of one bank is sufficient to send shock waves right through the economy (Rajadhyaksha, 2004). Therefore, bank management must take utmost care in identifying the type as well as the degree of its risk exposure and tackle those effectively. Moreover, bankers must see risk management as an ongoing and valued activity with the board setting the example.

As risk is directly proportionate to return, the more risk a bank takes, it can expect to make more money. However, greater risk also increases the danger that the bank may incur huge losses and be forced out of business. In fact, today, a bank must run its operations with two goals in mind – to generate profit and to stay in business (Marrison, 2005). Banks, therefore, try to ensure that their risk taking is informed and prudent. Thus, maintaining a trade-off between risk and return is the business of risk management. Moreover, risk management in the banking sector is a key issue linked to financial system stability. Unsound risk management practices governing bank lending often plays a central role in financial turmoil, most notably seen during the Asian financial crisis of 1997-98[1].

6.1. Definition of Risk

A risk can be defined as an unplanned event with financial consequences resulting in loss or reduced earnings (Vasavada, Kumar, Rao & Pai, 2005). An activity which may give profits or result in loss may be called a risky proposition due to uncertainty or unpredictability of the activity of trade in future. In other words, it can be defined as the uncertainty of the outcome.

Risk refers to 'a condition where there is a possibility of undesirable occurrence of a particular result which is known or best quantifiable and therefore insurable' (Periasamy, 2008). Risk may mean that there is a possibility of loss or damage which, may or may not happen.

Risks may be defined as uncertainties resulting in adverse outcome, adverse in relation to planned objective or expectations (Kumar, Chatterjee, Chandrasekhar & Patwardhan 2005).

In the simplest words, risk may be defined as possibility of loss. It may be financial loss or loss to the reputation/ image (Sharma, 2003).

Although the terms risk and uncertainty are often used synonymously, there is difference between the two (Sharan, 2009). Uncertainty is the case when the decision-maker knows all the possible outcomes of a particular act, but does not have an idea of the probabilities of the outcomes. On the contrary, risk is related to a situation in which the decision-maker knows the probabilities of the various outcomes. In short, risk is a quantifiable uncertainty.

[1] **Asian Financial Crisis:** The **Asian Financial Crisis** was a period of financial crisis that gripped much of Asia beginning in July 1997, and raised fears of a worldwide economic meltdown due to financial contagion. The crisis started in Thailand with the financial collapse of the Thai baht caused by the decision of the Thai government to float the baht, cutting its peg to the USD, after exhaustive efforts to support it in the face of a severe financial over extension that was in part real estate driven. At the time, Thailand had acquired a burden of foreign debt that made the country effectively bankrupt even before the collapse of its currency. As the crisis spread, most of Southeast Asia and Japan saw slumping currencies, devalued stock markets and other asset prices, and a precipitous rise in private debt.
(**Source:** http://en.wikipedia.org/wiki/1997_Asian_Financial_Crisis)

6.2. Risk in Banking Business

In the post LPG period, the banking sector has witnessed tremendous competition not only from the domestic banks but from foreign banks alike. In fact, competition in the banking sector has emerged due to disintermediation and deregulation. The liberalised economic scenario of the country has opened various new avenues for increasing revenues of banks. In order to grab this opportunity, Indian commercial banks have launched several new and innovated products, introduced facilities like ATMs, Credit Cards, Mobile banking, Internet banking etc. Apart from the traditional banking products, it is seen that Mutual Funds, Insurance etc. are being designed/ upgraded and served to attract more customers to their fold.

In the backdrop of all these developments i.e., deregulation in the Indian economy and product/ technological innovation, risk exposure of banks has also increased considerably. Thus, this has forced banks to focus their attention to risk management (Sharma, 2003). In fact, the importance of risk management of banks has been elevated by technological developments, the emergence of new financial instruments, deregulation and heightened capital market volatility (Mishra, 1997).

In short, the two most important developments that have made it imperative for Indian commercial banks to give emphasise on risk management are discussed below –

(a) **Deregulation**: The era of financial sector reforms which started in early 1990s has culminated in deregulation in a phased manner. Deregulation has given banks more autonomy in areas like lending, investment, interest rate structure etc. As a result of these developments, banks are required to manage their own business themselves and at the same time maintain liquidity and profitability. This has made it imperative for banks to pay more attention to risk management.

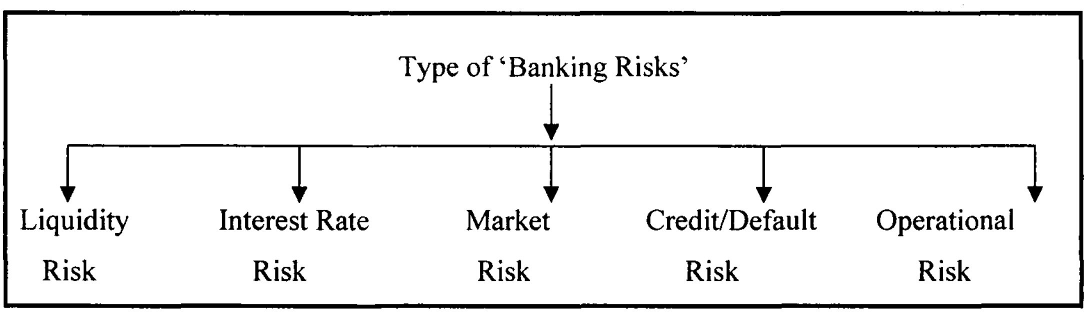
(b) **Technological innovation**: Technological innovations have provided a platform to the banks for creating an environment for efficient customer services as also for designing new products. In fact, it is technological innovation that has helped banks to manage the assets and liabilities in a better way, providing various delivery channels, reducing processing time of transactions, reducing manual intervention in back office functions etc. However, all these developments have also increased the diversity and complexity of risks, which need to be managed professionally so that the opportunities provided by the technology are not negated.

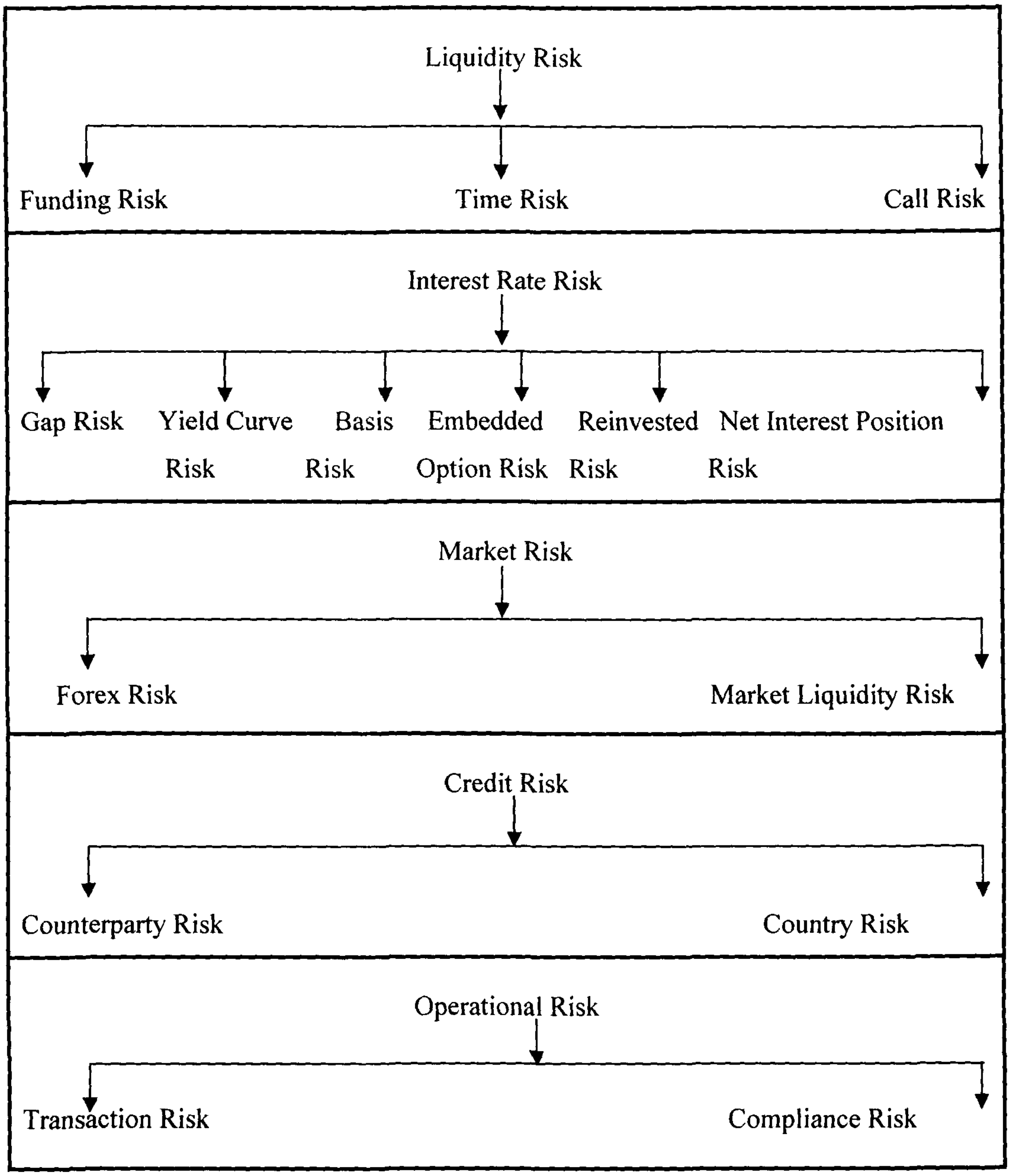
6.3. Type of Risks

Risk may be defined as 'possibility of loss', which may be financial loss or loss to the image or reputation. Banks like any other commercial organisation also intend to take risk, which is inherent in any business. Higher the risk taken, higher the gain would be. But higher risks may also result into higher losses. However, banks are prudent enough to identify, measure and price risk, and maintain appropriate capital to take care of any eventuality. The major risks in banking business or 'banking risks', as commonly referred, are listed below –

- Liquidity Risk
- Interest Rate Risk
- Market Risk
- Credit or Default Risk
- Operational Risk

Fig. 6.1 : **Type of Risks**





6.3.1. Liquidity Risk

The liquidity risk of banks arises from funding of long-term assets by short-term liabilities, thereby making the liabilities subject to rollover or refinancing risk (Kumar et al., 2005). It can be also defined as the possibility that an institution may be unable to meet its maturing commitments or may do so only by borrowing funds at prohibitive costs or by disposing assets at rock bottom prices. The liquidity risk in banks manifest in different dimensions -

(a) ***Funding Risk***: Funding Liquidity Risk is defined as the inability to obtain funds to meet cash flow obligations. For banks, funding liquidity risk is crucial. This arises from the need to replace net outflows due to unanticipated withdrawal/ non-renewal of deposits (wholesale and retail).

(b) ***Time Risk***: Time risk arises from the need to compensate for non-receipt of expected inflows of funds i.e., performing assets turning into non-performing assets.

(c) ***Call Risk***: Call risk arises due to crystallisation of contingent liabilities. It may also arise when a bank may not be able to undertake profitable business opportunities when it arises.

6.3.2. Interest Rate Risk

Interest Rate Risk arises when the Net Interest Margin or the Market Value of Equity (MVE) of an institution is affected due to changes in the interest rates. In other words, the risk of an adverse impact on Net Interest Income (NII) due to variations of interest rate may be called Interest Rate Risk (Sharma, 2003). It is the exposure of a Bank's financial condition to adverse movements in interest rates.

IRR can be viewed in two ways – its impact is on the earnings of the bank or its impact on the economic value of the bank's assets, liabilities and Off-Balance Sheet (OBS) positions. Interest rate Risk can take different forms. The following are the types of Interest Rate Risk –

(a) ***Gap or Mismatch Risk***: A gap or mismatch risk arises from holding assets and liabilities and Off-Balance Sheet items with different principal amounts, maturity dates or re-pricing dates, thereby creating exposure to unexpected changes in the level of market interest rates.

(b) ***Yield Curve Risk***: Banks, in a floating interest scenario, may price their assets and liabilities based on different benchmarks, i.e., treasury bills' yields, fixed deposit rates, call market rates, MIBOR etc. In case the banks use two different instruments maturing at different time horizon for pricing their assets and liabilities then any non-parallel movements in the yield curves, which is rather frequent, would affect the NII. Thus, banks should evaluate the movement in yield curves and the impact of that on the portfolio values and income.

An example would be when a liability raised at a rate linked to say 91 days T Bill is used to fund an asset linked to 364 days T Bills. In a raising rate scenario both, 91 days and 364 days T Bills may increase but not identically due to non-parallel movement of yield curve creating a variation in net interest earned (Kumar et al., 2005).

(c) ***Basis Risk***: Basis Risk is the risk that arises when the interest rate of different assets, liabilities and off-balance sheet items may change in different magnitude. For example, in a rising interest rate scenario, asset interest rate may rise in different magnitude than the interest rate on corresponding liability, thereby creating variation in net interest income.

The degree of basis risk is fairly high in respect of banks that create composite assets out of composite liabilities. The loan book in India is funded out of a composite liability portfolio and is exposed to a considerable degree of basis risk. The basis risk is quite visible in volatile interest rate scenarios (Kumar et al., 2005). When the variation in market interest rate causes the NII to expand, the banks have experienced favourable basis shifts and if the interest rate movement causes the NII to contract, the basis has moved against the banks.

(d) ***Embedded Option Risk***: Significant changes in market interest rates create the source of risk to banks' profitability by encouraging prepayment of cash credit/demand loans, term loans and exercise of call/put options on bonds/ debentures and/ or premature withdrawal of term deposits before their stated maturities. The embedded option risk is experienced in volatile situations and is becoming a reality in India. The faster and higher the magnitude of changes in interest rate, the greater will be the embedded option risk to the banks' Net Interest Income. The result is the reduction of projected cash flow and the income for the bank.

(e) ***Reinvested Risk***: Reinvestment risk is the risk arising out of uncertainty with regard to interest rate at which the future cash flows could be reinvested. Any mismatches in cash flows i.e., inflow and outflow would expose the banks to variation in Net Interest Income. This is because market interest received on loan and to be paid on deposits move in different directions.

(f) ***Net Interest Position Risk***: Net Interest Position Risk arises when the market interest rates adjust downwards and where banks have more earning assets than paying liabilities. Such banks will experience a reduction in NII as the market interest rate declines and the NII increases when interest rate rises. Its impact is on the earnings of the bank or its impact is on the economic value of the banks' assets, liabilities and OBS positions.

6.3.3. Market Risk

The risk of adverse deviations of the mark-to-market value of the trading portfolio, due to market movements, during the period required to liquidate the transactions is termed as Market Risk (Kumar et al., 2005). This risk results from adverse movements in the level or volatility of the market prices of interest rate instruments, equities, commodities, and currencies. It is also referred to as Price Risk.

Price risk occurs when assets are sold before their stated maturities. In the financial market, bond prices and yields are inversely related. The price risk is closely associated with the trading book, which is created for making profit out of short-term movements in interest rates.

The term Market risk applies to (i) that part of IRR which affects the price of interest rate instruments, (ii) Pricing risk for all other assets/ portfolio that are held in the trading book of the bank and (iii) Foreign Currency Risk.

(a) ***Forex Risk***: Forex risk is the risk that a bank may suffer losses as a result of adverse exchange rate movements during a period in which it has an open position either spot or forward, or a combination of the two, in an individual foreign currency.

(b) ***Market Liquidity Risk***: Market liquidity risk arises when a bank is unable to conclude a large transaction in a particular instrument near the current market price.

6.3.4. Default or Credit Risk

Credit risk is more simply defined as the potential of a bank borrower or counterparty to fail to meet its obligations in accordance with the agreed terms. In other words, credit risk can be defined as the risk that the interest or principal or both will not be paid as promised and is estimated by observing the proportion of assets that are below standard. Credit risk is borne by all lenders and will lead to serious problems, if excessive. For most banks, loans are the largest and most obvious source of credit risk. It is the most significant risk, more so in the Indian scenario where the NPA level of the banking system is significantly high (Sharma, 2003). The Asian Financial crisis, which emerged due to rise in NPAs to over 30% of the total assets of the financial system of Indonesia, Malaysia, South Korea and Thailand, highlights the importance of management of credit risk.

There are two variants of credit risk which are discussed below –

(a) ***Counterparty Risk***: This is a variant of Credit risk and is related to non-performance of the trading partners due to counterparty's refusal and or inability to perform. The counterparty risk is generally viewed as a transient financial risk associated with trading rather than standard credit risk.

(b) ***Country Risk***: This is also a type of credit risk where non-performance of a borrower or counterparty arises due to constraints or restrictions imposed by a country. Here, the reason of non-performance is external factors on which the borrower or the counterparty has no control.

Credit Risk depends on both external and internal factors. The internal factors include –

1. Deficiency in credit policy and administration of loan portfolio.
2. Deficiency in appraising borrower's financial position prior to lending.
3. Excessive dependence on collaterals.
4. Bank's failure in post-sanction follow-up, etc.

The major external factors –

1. The state of economy
2. Swings in commodity price, foreign exchange rates and interest rates, etc.

Credit Risk can't be avoided but has to be managed by applying various risk mitigating processes –

1. Banks should assess the credit worthiness of the borrower before sanctioning loan i.e., credit rating of the borrower should be done beforehand. Credit rating is main tool of measuring credit risk and it also facilitates pricing the loan.

By applying a regular evaluation and rating system of all investment opportunities, banks can reduce its credit risk as it can get vital information of the inherent weaknesses of the account.

2. Banks should fix prudential limits on various aspects of credit – benchmarking Current Ratio, Debt Equity Ratio, Debt Service Coverage Ratio, Profitability Ratio etc.
3. There should be maximum limit exposure for single/ group borrower.
4. There should be provision for flexibility to allow variations for very special circumstances.
5. Alertness on the part of operating staff at all stages of credit dispensation – appraisal, disbursement, review/ renewal, post-sanction follow-up can also be useful for avoiding credit risk.

6.3.5. Operational Risk

Basel Committee for Banking Supervision has defined operational risk as 'the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events'. Thus, operational loss has mainly three exposure classes namely people, processes and systems.

Managing operational risk has become important for banks due to the following reasons –

1. Higher level of automation in rendering banking and financial services
2. Increase in global financial inter-linkages

Scope of operational risk is very wide because of the above mentioned reasons. Two of the most common operational risks are discussed below –

(a) ***Transaction Risk***: Transaction risk is the risk arising from fraud, both internal and external, failed business processes and the inability to maintain business continuity and manage information.

(b) ***Compliance Risk***: Compliance risk is the risk of legal or regulatory sanction, financial loss or reputation loss that a bank may suffer as a result of its failure to comply with any or all of the applicable laws, regulations, codes of conduct and standards of good practice. It is also called integrity risk since a bank's reputation is closely linked to its adherence to principles of integrity and fair dealing.

6.3.6. Other Risks

Apart from the above mentioned risks, following are the other risks confronted by Banks in course of their business operations (Kumar et al., 2005) –

(a) ***Strategic Risk***: Strategic Risk is the risk arising from adverse business decisions, improper implementation of decisions or lack of responsiveness to industry changes. This risk is a function of the compatibility of an organisation's strategic goals, the business strategies developed to achieve those goals, the resources deployed against these goals and the quality of implementation.

(b) ***Reputation Risk***: Reputation Risk is the risk arising from negative public opinion. This risk may expose the institution to litigation, financial loss or decline in customer base.

6.4. Risk Management Practices in India

Risk Management, according to the knowledge theorists, is actually a combination of management of uncertainty, risk, equivocality and error (Mohan, 2003). Uncertainty – where outcome cannot be estimated even randomly, arises due to lack of information and this uncertainty gets transformed into risk (where estimation of outcome is possible) as information gathering progresses. As information about markets and knowledge about possible outcomes increases, risk management provides solution for controlling risk. Equivocality arises due to conflicting interpretations and the resultant lack of judgment. This happens despite adequate knowledge of the situation. That is why, banking as well as other institutions develop control systems to reduce errors, information systems to reduce uncertainty, incentive system to manage agency problems in risk-reward framework and cultural systems to deal with equivocality.

Initially, the Indian banks have used risk control systems that kept pace with legal environment and Indian accounting standards. But with the growing pace of deregulation and associated changes in the customer's behaviour, banks are exposed to mark-to-market accounting (Mishra, 1997). Therefore, the challenge of Indian banks is to establish a coherent framework for measuring and managing risk consistent with corporate goals and responsive to the developments in the market. As the market is dynamic, banks should maintain vigil on the convergence of regulatory frameworks in the country, changes in the international accounting standards and finally and most importantly changes in the clients' business practices. Therefore, the need of the hour is to follow certain risk management norms suggested by the RBI and BIS.

6.5. Role of RBI in Risk Management in Banks

The Reserve Bank of India has been using CAMELS rating to evaluate the financial soundness of the Banks. The CAMELS Model consists of six components namely Capital Adequacy, Asset Quality, Management, Earnings Quality, Liquidity and Sensitivity to Market risk

In 1988, The Basel Committee on Banking Supervision of the Bank for International Settlements (BIS) has recommended using capital adequacy, assets quality, management quality, earnings and liquidity (CAMEL) as criteria for assessing a Financial Institution. The sixth component, sensitivity to market risk (S) was added to CAMEL in 1997 (Gilbert, Meyer & Vaughan, 2000). However, most of the developing countries are using CAMEL instead of CAMELS in the performance evaluation of the FIs. The Central Banks in some of the countries like Nepal, Kenya use CAEL instead of CAMELS (Baral, 2005). CAMELS framework is a common method for evaluating the soundness of Financial Institutions.

In India, the focus of the statutory regulation of commercial banks by RBI until the early 1990s was mainly on licensing, administration of minimum capital requirements, pricing of services including administration of interest rates on deposits as well as credit, reserves and liquid asset requirements (Kannan, 2004). In these circumstances, the supervision had to focus essentially on solvency issues. After the evolution of the BIS prudential norms in 1988, the RBI took a series of measures to realign its supervisory and regulatory standards and bring it at par with international best practices. At the same time, it also took care to keep in view the socio-economic conditions of the country, the business practices, payment systems prevalent in the country and the predominantly agrarian nature of the economy, and ensured that the prudential norms were applied over the period and across different segments of the financial sector in a phased manner.

Finally, it was in the year 1999 that RBI recognised the need of an appropriate risk management and issued guidelines to banks regarding assets liability management, management of credit, market and operational risks. The entire supervisory mechanism has been realigned since 1994 under the directions of a newly constituted Board for Financial Supervision (BFS), which functions under the aegis of the RBI, to suit the demanding needs of a strong and stable financial system. The supervisory jurisdiction of the BFS now extends to the entire financial system barring the capital market institutions and the insurance sector. The periodical on-site inspections, and also the targeted appraisals by the Reserve Bank, are now supplemented by off-site surveillance which particularly focuses on the risk profile of the supervised institution. A process of rating of banks on the basis of CAMELS in respect of Indian banks and CACS (Capital, Asset Quality, Compliance and Systems & Control) in respect of foreign banks has been put in place from 1999.

Since then, the RBI has moved towards more stringent capital adequacy norms and adopted the CAMEL (Capital adequacy, Asset quality, Management, Earnings, Liquidity) based rating system for evaluating the soundness of Indian banks. The Reserve Bank's regulatory and supervisory responsibility has been widened to include financial institutions and non-banking financial companies. As a result, considering the changes in the Banking industry, the thrust lies upon Risk - Based Supervision (RBS). The main supervisory issues addressed by Board for Financial Supervision (BFS) relate to on-site and off-site supervision of banks.

The on-site supervision system for banks is on an annual cycle and is based on the 'CAMEL' model. It focuses on core assessments in accordance with the statutory mandate, i.e., solvency, liquidity, operational soundness and management prudence. Thus, banks are rated on this basis. Moreover, in view of the recent trends towards financial integration, competition, globalisation, it has become necessary for the BFS to supplement on-site supervision with off-site surveillance so as to capture 'early warning signals' from off-site monitoring that would be helpful to avert the likes of East Asian financial crisis (Sireesha, 2008). The off-site monitoring system consists of capital adequacy, asset quality, large credit and concentration, connected lending, earnings and risk exposures viz., currency, liquidity and interest rate risks. Apart from this, the fundamental and technical analysis of stock of banks in the secondary market will serve as a supplementary indicator of financial performance of banks.

Thus, on the basis of RBS, a risk profile of individual Bank will be prepared. A high-risk sensitive bank will be subjected to more intensive supervision by shorter periodicity with greater use of supervisory tools aimed on structural meetings, additional off site surveillance, regular on site inspection etc. This will be undertaken in order to ensure the stability of the Indian Financial System.

6.6. The BASEL Committee on Banking Supervision

At the end of 1974, the Central Bank Governors of the Group of Ten countries formed a Committee of banking supervisory authorities. As this Committee usually meets at the Bank of International Settlement (BIS) in Basel, Switzerland, this Committee came to be known as the Basel Committee. The

Committee's members came from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, United Kingdoms and the United States. Countries are represented by their central banks and also by the authority with formal responsibility for the prudential supervision of banking business where this is not the central bank.

The Basel Committee does not possess any formal supra-national supervisory authority, and its conclusions do not, and were never intended to, have legal force. Rather, it formulates broad supervisory standards and guidelines and recommends the statements of best practice in the expectation that individual authorities will take steps to implement them through detailed arrangements – statutory or otherwise – which are best suited to their own national systems (NEDfi Databank Quarterly, 2004). In this way, the Committee encourages convergence towards common approaches and common standards without attempting detailed harmonisation of member countries' supervisory techniques.

The Committee reports to the central bank Governors of the Group of Ten countries and seeks the Governors' endorsement for its major initiatives. In addition, however, since the Committee contains representatives from institutions, which are not central banks, the decision involves the commitment of many national authorities outside the central banking fraternity. These decisions cover a very wide range of financial issues.

One important objective of the Committee's work has been to close gaps in international supervisory coverage in pursuit of two basic principles – that no foreign banking establishment should escape supervision and the supervision should be adequate. To achieve this, the Committee has issued a long series of documents since 1975.

6.6.1. BASEL I

In 1988, the BASEL Committee decided to introduce a capital measurement system (BASEL I) commonly referred to as the ***Basel Capital Accord***. Since 1988, this framework has been progressively introduced not only in member countries but also in virtually all other countries with active international banks. Towards the end of 1992, this system provided for the implementation of a credit risk measurement framework with minimum capital standard of 8%.

The basic achievement of Basel I has been to define bank capital and the so-called bank capital ratio. Basel I is a ratio of capital to risk-weighted assets. The numerator, Capital, is divided into Tier 1 (equity capital plus disclosed reserves minus goodwill) and Tier 2 (asset revaluation reserves, undisclosed reserves, general loan loss reserves, hybrid capital instrument and subordinated term debt). Tier 1 capital ought to constitute at least 50 per cent of the total capital base. Subordinated debt (with a minimum fixed term to maturity of five years, available in the event of liquidation, but not available to participate in the losses of a bank which is still continuing its activities) is limited to a maximum of 50 per cent of Tier 1.

The denominator of the Basel I formula is the sum of risk-adjusted assets plus off-balance sheet items adjusted to risk. There are five credit risk weights: 0 per cent, 10 per cent, 20 per cent, 50 per cent and 100 per cent and equivalent credit conversion factors for off-balance sheet items. Some of the risk weights are rather 'arbitrary' (for example, 0 % for government or central bank claims, 20 % for Organisation for Economic Cooperation and Development (OECD) inter-bank claims, 50 % for residential mortgages, 100 % for all commercial and consumer loans). The weights represent a compromise between differing views, and are not 'stated truths' about the risk profile of the asset portfolio, but rather the result of bargaining on the basis of historical data available at that time on loan performance and judgments about the level of risk of certain parts of counterpart, guarantor or collateral (Lastra, 2004). The risk weights have created opportunities for regulatory arbitrage.

Interestingly, there is no strong theory for the 'target' ratio 8 per cent of capital (tier 1 plus tier 2) to risk-adjusted assets plus off-balance sheet items. The 8% figure has been derived based on the median value in existing good practice at the time (US/UK 1986 Accord): the UK and the USA bank around 7.5 per cent, Switzerland 10 per cent and France and Japan 3 per cent etc. Basel I was a simple ratio, despite the rather 'arbitrary' nature of the definition of Tier 2 capital, the risk weights and the 8 % target ratio. It is a standard broadly accepted by the industry and by the authorities in both developed and developing countries.

6.6.2. BASEL II (Revised International Capital Framework)

Central bank Governors and the heads of bank supervisory authorities in the Group of Ten (G10) countries endorsed the publication of '*International Convergence of Capital Measurement and Capital Standards: a Revised Framework*', the new capital adequacy framework commonly known as **Basel II**. The Committee intends that the revised framework would be implemented by the end of year 2006.

In principle, the new approach (Basel II) is not intended to raise or lower the overall level of regulatory capital currently held by banks, but to make it more risk sensitive. The spirit of the new Accord is to encourage the use of internal systems for measuring risks and allocating capital. The new Accord also wishes to align regulatory capital more closely with economic capital. The proposed capital framework consists of three pillars –

Pillar 1	-	Minimum capital requirements
Pillar 2	-	Supervisory review process
Pillar 3	-	Market discipline

Pillar 1: Minimum Capital Requirements

Pillar 1 of the new capital framework revises the 1988 Accord's guidelines by aligning the minimum capital requirements more closely to each bank's actual risk of economic loss. The minimum capital adequacy ratio would continue to be 8% of the risk-weighted assets (as per RBI, it is 9%), which will cover capital requirements for credit, market and operational risks.

Estimating Capital required for Credit Risks

For estimating the capital required for credit risks, a range of approaches such as Standardised, Foundation Internal Rating Based (IRB) and Advanced IRB are suggested.

Under the Standardised Approach, preferential weights ranging from 0% to 150% would be assigned to assets based on the external credit rating agencies, approved by the national supervisors in accordance with the criteria defined by the Committee.

Under Internal Rating Based (IRB) Approach, banks would be allowed to estimate their own Probability of Default (PD) instead of standard percentages such as 20%, 50%, 100% etc. For this purpose, two approaches namely Foundation IRB and Advanced IRB are suggested. In case of Foundation IRB approach, RBI is required to set rules for estimating the value of Loss Given Default (LGD) and Exposure at Default (EAD), while under Advanced IRB approach, banks would be allowed to use their own estimates of LGD and EAD.

Estimating Capital required for Market Risks

The Narasimham Committee II on Banking Sector Reforms had recommended that in order to capture market risk in the investment portfolio, a risk-weight of 5% should be applied for Government[2] and other approved securities for the purpose of capital adequacy. The Reserve Bank of India has prescribed 2.5% risk-weight for capital adequacy for market risk on SLR and non-SLR securities with effect from March 2000 and 2001 respectively, in addition to appropriate risk-weights for credit risk. Further the banks in India are required to apply the 2.5% risk-weight for capital charges for market risk for the whole investment portfolio and 100 % risk-weight on open gold and forex position limits.

Estimating Capital required for Operational Risks

For operational risk, three approaches namely Basic Indicator, Standardised and Internal measurement have been provided.

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[2] **Source**: http: www.rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/24157.pdf

Under the Basic Indicator approach, banks have to hold capital for operational risk equal to the fixed percentage (Alpha) of average annual gross income over the previous three years.

$$K_{BIA} = GI \times \alpha$$

Where

K_{BIA} = the capital charge under the Basic Indicator Approach

GI = average annual gross income over the previous three years.

α = fixed percentage

In fact, under the above approach, the additional capital required for operational risk is 20% of the minimum regulatory capital (i.e., 20 % of 9 % = 1.8 % of the total risk weighted assets)

The standardised approach builds on the basic indicator approach. It divides the bank's activities into 8 business lines – corporate finance, trading and sales, retail banking, commercial banking, payment and settlement, agency services, asset management and retail brokerage. The capital charge for operational risk is arrived at based on fixed percentage for each business line.

The Internal measurement approach allows individual banks to use their own data to determine capital required for operational risk

Thus, under BASEL II, the denominator of the minimum capital ratio will consist of three parts – the sum of all risk weighted assets for credit risk, plus 12.5 times (reciprocal of 8 % minimum risk based capital ratio) the sum of the capital charges for market risk and operational risk. The multiplicatory factor of 12.5 has been introduced in order to enable banks to create a numerical link between the calculation of capital requirement for credit risk and the capital requirement for operational and market risks. In case of capital requirement for credit risk, calculation of capital is based on the risk weighted assets. However, for calculating capital requirement for operational and market risk, the capital charge itself is calculated directly.

$$\frac{\text{Regulatory Capital}}{\text{Risk weight Asset for Credit Risk} \times 12.5\,(\text{Market + Operational Risks})} = \text{Desired Capital Ratio (CAR)}$$

Hence, the regulatory requirements cover three types of risks, credit risk, market and operational risks.

Pillar 2: Supervisory Review Process

Pillar 2 of the new capital framework recognises the necessity of exercising effective supervisory review of banks' internal assessments of their overall risks to ensure that bank management is exercising sound judgment and had set aside adequate capital for these risks. To be more specific –

- Supervisors will evaluate the activities and risk profiles of individual banks to determine whether those organisations should hold higher levels of capital than the minimum requirements in Pillar 1 would specify and to see whether there is any need for remedial actions.
- The committee expects that, when supervisors engage banks in a dialogue about their internal processes for measuring and managing their risks, they will help to create implicit incentives for organisations to develop sound control structures and to improve those processes.

Thus, the supervisory review process is intended not only to ensure that banks have adequate capital to support all the risks in their business, but also to encourage banks to develop and use better risk management techniques in monitoring and managing their risks.

There are three main areas that might be particularly suited to treatment under Pillar 2.

Risks considered under Pillar 1 that are not fully captured by the Pillar 1 process (e.g. the proposed Operational risk in Pillar 1 may not adequately cover all the specific risks of any given institution).

- Those factors not taken into account by the Pillar 1 process e.g. interest rate risk
- Factor external to the bank e.g. business cycle effects.

Pillar 3: Market Discipline

Pillar 3 leverages the ability of market discipline to motivate prudent management by enhancing the degree of transparency in banks' public reporting. It sets out the public disclosures that banks must make that lend greater insight into the adequacy of their capitalisation. The Committee believes that, when market place participants have a sufficient understanding of a bank's activities and the controls it has in place to manage its exposures, they are better able to distinguish between banking organisations so that they can reward those that manage their risks prudently and penalise those that do not (NEDfi Databank Quarterly, 2004).

Thus, adequate disclosure of information to public brings in market discipline and in the process promotes safety and soundness in the financial system. The Committee proposes two types of disclosures namely Core and Supplementary. Core disclosures are those which convey vital information for all institutions while Supplementary disclosures are those required for some. The Committee recommends that all sophisticated internationally active banks should make the full range of core and supplementary information publicly available. The Committee also has emphasised the importance of timeliness of information. For the purpose, it has recommended disclosure on semi-annual basis and for internationally active banks on a quarterly basis.

6.7. Global Financial Crisis and the Indian Banking Sector

The impact of the global crisis has been transmitted to the Indian economy through three distinct channels, viz., the financial sector, exports and exchange rates. Fortunately, India, like most of the emerging economies, was lucky to avoid the first round of adverse affects because its banks were not overly exposed to subprime lending (Vashisht and Pathak, 2009). Only one of the larger private sector banks, the ICICI Bank, was partly exposed but it managed to counter the crisis through a strong balance sheet and timely government action. Excellent regulations by RBI and the decision not to allow investment banking on the US model were the two main reasons that helped to overcome the adverse situation. Further, RBI has also enforced the prudential and capital adequacy norms without fear or favour. RBI regulations are equally applicable to all the Indian Banks, both in the public and private sector. Indian commercial banks are professionally managed and proper risk management systems are put in place. In short, it can be said that strict regulation and conservative policies adopted by the Reserve Bank of India have ensured that banks in India are relatively insulated from the travails of their western counterparts (Kundu 2008). Contrary to the situation in India, in U.S., certain relaxations were permitted in the case of large banks which were considered 'too big to fail' and this relaxation ultimately triggered the crisis. Thus, eventually it was proved that it is not the size that matters, but prudence and proper risk management systems. Interestingly, while the developed world, including the U.S, the Euro Zone and Japan, have plunged into recession, the Indian Economy is being affected by the spill-over effects of the global financial crisis only (Chidambaram 2008). In fact, the financial sector has emerged without much damage and this was possible due to our strong regulatory framework and in part on account of state ownership of most of the banking sector (Kundu, 2008).

Although, Indian banks escaped the contagion because they were highly regulated at home and not too integrated with the global financial system in terms of sharing the risks inherent in the trillions of dollars of worthless financial products (Venu, 2010), but the global financial crisis and its aftermath forced banks to introspect about the kind of financial sector architecture India should have in the years ahead apart from quantification of risk and appropriate risk management models.

Interestingly, over the years, there were significant developments in the area of quantification of risk and presently, the focus has shifted to statistical aspects of risk management – especially to risk modeling and other computational techniques of risk measurement. Although academic research advocates the use of VaR for market risk assessment, in respect of credit risk, there is no single 'best practice' model for credit risk capital assessment (Gopinath, 2006). The Basel II 'Internal Rating Based' methodology provides a portfolio model for credit risk management but bank managements will have to focus on the determinants of credit risk factors, the dependency between risk factors, the integration of credit risk to market risk, data integrity issues like consistency of data over long periods, accuracy and so on. Likewise, models for assessing and managing other types of risk in the banking business need to be developed and simultaneously data availability and reliability issues with respect to the models need to be resolved.

Although researches are on to develop risk management models that can be used universally for assessing and managing risk, remarkable headway is yet to be seen. As far private sector banks are concerned, it was seen that irrational loan advances, and investments are prominent more than public sector banks. Therefore, private sector banks need strong and effective risk control systems. However, the in-built risk control systems that are being followed presently are equally strong for public and foreign sector banks (Subramanyam and Reddy, 2008).

6.8. Conclusion

Thus, as risk is indispensable for banking business, proper assessment of risk is an integral part of a bank's risk management system. Banks are focusing on the magnitude of their risk exposure and formulating strategies to tackle those effectively. In the context of risk management practices, the introduction of Basel II norms and its subsequent adoption by RBI is a significant measure that promises to promote sound risk management practices. BASEL II seeks to enhance the risk sensitivity of capital requirements, promote a comprehensive coverage of risks, offer a more flexible approach through a menu of options, and is intended to be applied to banks worldwide.

Moreover, the RBI has adopted a series of steps to ensure that individual banks tackle risks effectively by setting up risk management cells and also through internal assessment of their risk exposure. Apart from this, RBI has opted for on-site and off-site surveillance methods for effective risk management in the Indian Banking sector, so that systemic risk and financial turmoil can be averted in the country.

Chapter – 7

Indian Banking Sector – Emerging Challenges

INDIAN BANKING SECTOR - EMERGING CHALLENGES

In the early 1990s the Indian economy, which was hitherto protected, saw the forces of liberalisation, privatisation and globalisation being unleashed in the business environment. Earlier, till the nineties, the insulated economy provided comforts to public sector banks in areas of liquidity management while in an administered interest regime the discretion of management being limited, the risk parameters in these spheres were hazy and not quantifiable. Unfortunately the public sector banks, which had a useful role to play earlier on, faced deteriorating performance during that period. In fact, the nationalised sector had outlived its utility. The public sector banks became burdened with unwelcome legacies; customer service faced casualty; need for computerisation along with networking among the vast branch network was urgently felt. At the backdrop of all these, the first Narasimham Committee on Financial Sector Reforms put forward its recommendations. These recommendations have given public sector banks a new lease of life.

Contemporary to all these developments, the Indian Banking sector saw the advent of a new generation of banks – the private sector banks. The private banking in that context was viewed as a brand new approach as these banks were able to bypass the structural and other shortcomings of the public sector. A few of the new ones that were promoted by the institutions such as the IDBI and ICICI did establish themselves (although their size and scale of business operations varied) and survived the market upheavals of the 1990. Apart from other factors, the professional approach of some of the new generation private sector banks helped them stay clear of the pitfalls associated with public sector banks.

However, in less than a decade after the advent of these new generation banks and with the initiation of financial sector reforms, commercial banks (even successful ones) are being forced to change organisationally. These changes are deemed necessary in the light of the increased competition in the sector – not only among domestic commercial banks and non banking financial companies but also from the foreign counterparts having operational presence in India.

Moreover, in view of increased competition, the structure of Indian banking system is expected to undergo a transformation and the main drivers of which will be consolidation, convergence, and technology (Kamath, Kohli, Shenoy, Kumar, Nayak & Kuppuswamy, 2003). The changes in structure would also have its impact on the banking strategy and the focus of the banks would be to reduce overcapacity in the Indian banking system through consolidation. Apart from consolidation in the banking sector, banks are expected to grow out of their narrow focus on banking services to become financial service providers – offering a variety of services under 'one-roof'. Thus, the one-stop-shop approach would enable them to provide, besides banking services, a host of other financial products, both to the retail as well as corporate customers.

7.1. Indian Banking – The Future Ahead

India is well positioned to become the fourth-largest economy in the world by 2025 with a GDP growth rate of 7 - 8 % a year[1]. This robust economic growth would be possible if the banking sector is able to adequately and efficiently meet the needs of a growing economy. Moreover, the Indian Economic Environment has witnessed path breaking reform measures initiated by the Government (Murty, 2001) since early 1990s. As the socio economic development of a country depends on how strong the banking sector is and vice versa, reforms measures were also targeted towards the financial sector. In fact, the banking sector – the dominating segment of any Financial System – affects the economic performance of a country and there exist a causal link between the banking sector and the real sector (Yuncu, Akdeniz & Aydogan, 2008). The causal link is, however, quite significant. Thus, the Indian banking system too, has been acting as an important agent of economic growth and intermingles with different segment of the financial sector. Therefore, it can be anticipated that in the light

[1] McKinsey & Company's Report on 'India Banking 2010 – towards a high-performing sector', October, 2005.

of the present economic situation and its increased industrial financing requirements, the Indian banking system will further grow in size and complexity while acting as a change agent (Samal, 2001). However, as banks grow in size and complexity, they now have to function increasingly under competitive pressures.

Furthermore, with economic reform initiatives undertaken by the Government since early 1990s and subsequent implementation of wide range of financial sector reforms, Indian banking has also undergone complete metamorphosis. All these have brought in a sea-change in the operating environment of the banks (Singh, 2001). Moreover, increasing emphasis on globalisation of the Indian economy has opened up new avenues and challenges for Indian banks but at the same time profit margin is reduced. In view of these developments, Indian banks are subjected to tremendous pressures for enhancing profitability to sustain competition in the market. These pressures may emanate from within the banking system as well as from non-banking institutions because the product boundaries have blurred, the number of players in the sector has increased and more importantly there has been increasing participation of shareholders even in case of public sector banks. Thus, all these factors are mounting pressures on the performance of banks and in their quest to remain competitive, Indian banks are now more concerned for enhanced profitability and they have become even more accountable to their stakeholders.

7.2. The Emerging Challenges Before Indian Banks and the Focus Areas

Financial sector reforms and liberalisation of prudential regulations have thrown in a lot of opportunities for Indian bank to grow and diversify their areas of business operations. There is no doubt that deregulation has opened up new vistas for banks to augment revenues but it has entailed greater competition and consequently greater risks and a chain of challenges. These challenges emerged as a result of emergence of new banks, new financial institutions, new instruments and new opportunities in the environment. Moreover, globalisation has ushered in restructuring of the banking and financial sector through a series of mergers and amalgamations and eventually brought in convergence of different activities and businesses in the banking sector (Deshpandey, 2001). With globalisation, newer technologies and techniques in areas like fund management and security creation has been introduced. Also innovative products which are tailor-made to meet the varied requirements of customers are introduced in the market to cater the needs of the customers in a better way. Thus, today, banks are subjected to cut-throat competition and in order to survive, Indian banks need to be proactive in meeting these emerging challenges. Moreover, competition has resulted in extending the frontiers of banking activities, which calls for understanding and upgradation of skills in various areas and more importantly in the area of risk management. Although the Indian banking industry is one of the best in Asia in terms of efficiency (Shen, Liao & Weyman-Jones, 2009), the industry has to go a long to compete with other non-Asian banks. Therefore, the following are the areas on which banks need to focus for their sustenance –

7.2.1. Capital Adequacy Norms

The Indian banking companies were required to ensure full implementation of Basel II guidelines – the revised capital norms mandated by the Bank for International Settlements (BIS) by March 31, 2009 (Chadrasekar, 2008) and with Basel II norms that came into force in 2009, maintaining adequate capital reserves have become a priority for banks. Basel II mandates Capital to Risk Weighted Assets Ratio (CRAR) of 8%. However, the RBI has stated that Indian banks must have a CRAR of minimum 9%, effective March 31, 2009. Further, the Government of India has stated that public sector banks must have a capital cushion with a CRAR of at least 12%, higher than the threshold of 9% prescribed by the RBI (Anand, 2009). Significantly, the level of capital ratio in the Indian banking system compares quite well with the banking system in many other countries (Leeladhar, 2008). However, although all Indian commercial banks complied with this statutory requirement with a CRAR of more than the stipulated requirement, a few banks had to raise capital from the market through public issues to meet this requirement.

7.2.2. Product Innovation

As the Indian banks moved gradually towards universal banking and as they positioned themselves as financial service providers, banking business had been redefined (Kohli, 2001). Oke (2007) points out that in view of intense competition in the business environment, the banking sector emphasised on product innovations over service innovations. Thus, product innovation is of utmost importance as competition in the sector has increased tremendously and product boundaries have blurred. Moreover, the distinction between various players in the financial segment is also getting blurred and banks are facing competition from foreign banks, financial institutions, mutual funds, NBFCs, provident funds and pension funds etc. Therefore, to stay ahead in the race, banks will have to leverage technology for innovative product development including developing sophisticated financial products (Ballabh, 2001).

Interestingly the Indian banking market is seeing discontinuous growth driven by new products and services that include opportunities in credit cards, consumer finance and wealth management on the retail side, and in fee-based income and investment banking on the wholesale banking side (Balasubramanian, Kamal, Puri & Sengupta, 2005). And as customers are now insisting on products which suit their individual requirements, banks are forced to opt for product innovation in order to hang on to their precious customers. Moreover, given the demographic shifts resulting from changes in age profile and household income, Indian consumers will increasingly demand enhanced institutional capabilities and service level from banks. Thus, the challenge for Indian banks is on how to assess the needs of their clientele and offer customised products to meet their satisfaction.

There are many advantages of providing and developing existing ancillary services and introducing new services by banks like generation of additional income, more staff-customer contact which would help in further product innovation, and creation of a new differentiated market positions through developing new business opportunities and by providing a unique set of customer packages (Suneja, 1994).

7.2.3. Application of Information Technology in Service Delivery Process

The decade of 90s has witnessed a sea change in the way banking is done in India and technology has brought in this change in the functioning of the banks (Shastri, 2001). Till 1980s, banks had only one delivery channel which is the branch presence. However, technology has opened up options for various delivery channels. Technology aided products like ATMs, Point of Sale devices, Anywhere Banking, Smart cards, Internet Banking etc., have given the customer to choose his channel of getting catered to his requirements. Apart from customers' privilege, studies show that the profitability of banks increases when services are provided through e-channels like ATMs (Kondo, 2010). However, the implementation and functioning of e-channels or ITeS in the banking sector seem to be relatively smooth in the developed economies (Guraau, 2002) but in developing or transition economies, it may not be so. Thus, the challenge before Indian banks is how to go for 'convergence' of all the delivery channels so as to provide anything, anywhere and through any mode.

Along with the change in the way of functioning of the banks, an important issue has started cropping up and it is going to pose certain problems in the near future especially for the public sector banks. The issue is - the extent to which banks would be able to use technology in its service delivery process. Significantly, the new generation banks are backed by Information Technology. Unlike public sector banks, they are yet to acquire banking experience but they are technologically sound and as a result they are in a better position to offer techno-driven services to their customers. The private sector banks as well as foreign banks have embraced technology right from the inception of their operations and therefore, they have adapted themselves to the changes in the technology easily. On the other hand, the middle and top level staffs of public sector banks have vast and rich experience but they may not have sufficient knowledge in the area of IT or may not be familiar with technological tools that can be used in the service delivery process. As technology has become indispensable in banking operations, the challenge for the banks is on how effectively they are able to use technology in banking operations. In other words, as technology ingrains itself in all aspects of a bank's functioning, the challenge before Indian banks at present is on how to exploit the potential for profiting from investments made in technology.

7.2.4. Risk Management

In emerging markets, risk management, has become a greater concern with the modernisation of banking sector and financial markets. This is due to the new risks that institutions face with greater exposure to the global banking sector as well as under the new payments systems which demand greater efficiency with quicker transactions, lower levels of fraud and transaction errors (Clacher et al., 2006). Thus, Risk management has become an important area of focus of bank management.

Under BASEL I, banks were focused on credit risk and market risk and their risk management strategies were focused on managing these risks individually in isolation. However, BASEL II has brought into focus a large number of risks which banks need to tackle. In fact, BASEL II has highlighted the inter-linkages of a large number of risks like credit risk, liquidity risk, market risk, operational risk etc., with a view to achieve a more comprehensive risk management framework. Therefore, implementation of BASEL II is being increasingly seen as a medium through which banks constantly endeavour to upgrade the risk management systems to address the changing environment. Moreover, BASEL II underlines the need for enterprise-wide risk management system. Therefore, the challenge for banks is on how to opt for risk integration across the entity and for this banks are required to allocate significant resources.

7.2.5. Risk-based Business Segmentation and Use of Technology

In the present day situation, business segmentation based on risk would become necessary for sustenance. There are certain areas of banking business like investment banking, venture capital financing, which carry high risk and for such areas, better techniques and skills and external advice from specialised agencies may be necessary and even banks may also have to set up their own R & D to have independent advice (Pai, 2001). On the other hand, there are business areas that involve low risk and for decision making in such areas, programmed decision making techniques based on computer technology need to be evolved. Thus, risk based business segmentation would help a bank to strengthen their position in the market.

7.2.6. Development of Knowledge and Skills of its Human Resources

For any service organisation, Human Resource Development is the most important need and banks are no exceptions. To meet the challenges of a fast growing knowledge economy, the trust needs to be on Human Resource Development for which the existing training systems of banks need to be revamped. This is felt necessary in order to keep pace with the fast-changing banking environment at home and abroad.

It is commonly observed that in public sector banks especially, there are certain rigidities. In matters of recruitment, it has been seen that initially the public sector banks were able to attract the educated manpower but not the specialists. Thus, the focus must shift from generalist orientation of the staff to specialist orientation i.e., recruiting those who have the ability to imbibe and absorb technology (Velayudham, 2002). In the light of this requirements there need to be thorough improvements in the existing practices of recruitment, training and redeployment. Therefore, large investments will have to be made both in Information Technology and Human Resource Development for imparting knowledge and skill which in turn would reduce response time and accelerate credit delivery and decision making as well as to expand ancillary business (Pai, 2001).

Moreover, David C. McClelland attributed India's slow economic development to the lack of people with the need for achievement (Kunnanatt, 2008). Thus, investment on Human Resource is deemed necessary because in competitive sectors like banking, managers need to possess achievement orientation attribute in adequate measures, and those possessing more of this attribute tend to perform well and produce better results for their organisations.

7.2.7. Enhancing Corporate Governance

Banks are special organisations because their managers have a fiduciary duty to (more risk averse) depositors as well as (more risk prone) shareholders and thus a solution to the 'principal-agent problem' aimed at maximising shareholder value is inappropriate (Mullineux, 2006). Therefore, the good Corporate Governance of banks requires regulation to balance the interests of depositors and taxpayers with those of the shareholders.

Moreover, banks are important participants in the payment and settlement system and as such corporate governance is highly relevant for them. Corporate governance has become more relevant for banks since they not only accept and deploy large amount of uncollateralized public funds in fiduciary capacity but also leverage such funds through credit creation.

For financial stability, banks need to have sound corporate governance not only in the level of the individual banks, but it is also a critical ingredient at the system level. Effective risk management systems determine the health of the financial system and its ability to survive economic shocks. Research shows that many risk management failures are due to breakdown in corporate governance which arises due to poor management of conflicts of interest, inadequate understanding of key banking risks and poor Board oversight of the mechanisms for risk management and internal audit. Therefore, it can be said that corporate governance is the foundation of effective risk managements in banks and thus the foundation for a sound financial system.

Moreover, with privatisation move initiated by the Government in Indian economy, there is a gradual dilution in the Government's equity in public sector banks. However, privatisation and autonomy never comes free (Gupta, 2001). They entail considerable amount of accountability to the shareholders as well. A sound corporate governance mechanism, involving transparency and accountability of operations, is central to survival in a competitive market. Therefore, banks have to necessarily reorient their systems, procedures and operations in consonance with this. Moreover, it should be noted that the hallmark of good corporate governance at all times cannot be beyond honesty, integrity, values and ethics (Ghosh Ray, 2009).

7.2.8. Customer Relationship Management

Customer Relationship Marketing (CRM) is the latest buzzword and banks are using this tool to acquire new customers, to retain the old customers and to service the existing and new customers. Customer loyalty seems to be a thing of the past and banks as well as other organisations are offering many incentives to enhance customer loyalty. This is because customer loyalty results in positive behaviours which include an increase in repurchase intentions, an increase in repetition sales, an increase in cross sales, a decrease in price sensitivity, a decrease in costs, and an increase in positive word of mouth communications (Varela-Neira, 2010). As such this is one of the challenging areas that banks need to focus.

There are two important aspects of CRM – one, that CRM does not view customers in totality and two, the devising of banking products (Velayudham, 2002). Regarding the first, customers' needs and demands, and business styles vary and therefore, it is necessary to consider segments of customers and build customer profiles to evolve strategies. Moreover, as banking products are intangible, personal selling of products is a must. As regard to the second, once the need of a market segment is recognised, product differentiation becomes important. Thus, in short it implies that evolving products and then looking for customers may not give desired result; rather the products should be evolved based on customers' need and demand.

Therefore, in view of the present situation, banks need to activate their otherwise dormant data warehouse to do a purposeful study into the behavioural patterns of the customers, analyse their needs and accordingly develop products to suit their requirements. In this context, data mining has become an important tool for decision making by the bank management. Through data mining, the Executive Information System (EIS), Decision Support System (DSS) have become faster and more accurate (Shastri, 2001). Thus, banks need to be customer-centric in order to acquire and retain customers. And for this, a bank need to appoint Customer Relationship Managers, field-level sales force, help desk, call centres, interactive voice response systems, kiosks, interactive television and e-mail.

7.2.9. Increasing Profit and Customer Orientation

In a competitive environment, banks are required to work on thin margins and the focus should be on cost minimisation. Resource mobilisation should be guided by availability of opportunity for fund deployment in a profitable manner (Pai, 2001). Moreover, as customers are the source of business for banks, the activities and strategies of the banks should be customer-centric. Marketing should receive a major thrust and customised products should be developed to meet customers' expectations.

Again liberalisation policy of the Government for the banking sector has given wide scope and opportunities. Introduction of ITeS services like EFT, NEFT, RTGS etc. have reduced administrative costs, increased efficiency, simplified book-keeping, and enhanced security for customer payments. Significantly, banks can make use of the ITeS infrastructure for introducing new payment/ cash management products. The focus should be to increase the avenues for income by providing various innovative and customised products.

7.2.10. Need for Branch Rationalisation

Banks, in order to reduce its administrative costs, need to rationalise the branch networking by consolidating the number of branches within a local area into a single profit centre without affecting customer service. Moreover, at the industry level, strategic alliances and mergers of even healthy banks would also become necessary (Pai, 2001).

7.2.11. Need for Greater Prudence

Future banking has to be based on prudence. New bloods with new skills are to be inducted to face the coming challenges. Business will have to be organised on more commercial lines with focus on income and profit centres and on Information Technology. Prudent policies for provisioning have to be adopted apart from norms laid down by the RBI for investments and credit.

7.2.12. Asset Liability Management

All commercial banks should give utmost importance to Asset Liability Management from the view point of liquidity as well as interest rate sensitivity. In fact, an effective Asset Liability Management technique aims to manage the volume, mix, maturity, rate sensitivity, quality and liquidity of assets and liabilities as a whole so as to attain a predetermined acceptable risk/ reward ratio (Kumar et al., 2005). Thus, the purpose of ALM is to enhance the asset quality; quantify risks associated with the assets and liabilities and further manage them. Asset Liability Management is deemed necessary because asset-liability mismatches expose the banks to various types of risks i.e., risks of illiquidity and insolvency; risks arising from globalisation and deregulation.

In the context of the Indian economy getting integrated with that of international economy and the banking system getting exposed to more and more doses of transparency, Asset Liability Management Committee (ALCO) of the individual banks should practically customise and parameterise their approaches and actions and strike a balance between risk and reward (Murthy, 2001).

7.2.13. Brand Building and Management

It takes years to build a brand. A brand is a name, term, sign, symbol or design or a combination of these intended to identify the goods or services of one seller or a group of sellers and to differentiate them from those of competitors (Kotler & Armstrong, 1997). Brand building has become a major issue in product strategy. Therefore, marketing and image research studies should be given the same attention as the monthly financial figures and should be treated with the same respect and should feed into strategic decision making (Worcester, 1997).

As banks offer a variety of services under an umbrella brand, building a brand and managing it has become a challenge. Banks should focus on building a powerful brand that has high brand equity. This is because a brand with high brand equity implies that they have higher brand loyalty, name awareness, perceived quality and strong brand associations. Therefore, huge investment of resources – both monetary and time – is required to build a brand and for its management.

7.2.14. Transparency

The Reserve Bank of India has made it mandatory for all commercial banks to disclose additional information on maturity pattern of loans and advances, investment securities, deposits and borrowings, foreign currency, assets and liabilities, movements in NPAs and lending to sensitive sectors in the balance sheet. Moreover, our country has also made considerable progress in harmonising domestic accounting standards and the legal system with international standards, enhancing financial sector transparency by complying with the special data dissemination standards and subjecting the financial system to external assessment under the Fund-Bank Financial Sector Assessment Program (Neumann & Turner, 2005). Thus, all vital information which were hitherto not disclosed by banks earlier are now required to be disclosed, thereby putting pressure on banks to be transparent and more accountable to their stakeholders.

7.2.15. Synergy out of Mergers and Acquisitions

It has been seen that public sector banks have inherent disadvantages like limited IT infrastructure, excess manpower, huge brick and mortar branch network etc. (Chopra, 2001). With these disadvantages, they need to compete with new generation private sector banks as well as foreign banks. As a result of their inherent disadvantages, they suffer from competitive disadvantage and unless they gear themselves to cope up with this challenges and competition, they may have to lose large share of their remaining clientele. Therefore, banks, especially public sector banks need to opt for mergers and acquisitions with compatible entities to acquire synergy. This is deemed necessary because technology adoption, offering innovated and customised products at the doorsteps of the customers are the need of the hour.

Moreover, it is significant to note that mergers and acquisitions will result in creation of large balance sheets and broadening of the customer base and thereby lending those banks a stamp of universality. Therefore, in the present day context, small is no more necessarily considered to be beautiful (Kamesam, 2001).

7.2.16. Enhancing Shareholders' Value

In a knowledge economy, shareholders of banks are increasingly taking interest in the affairs of the banks. The Committee on Banking Sector Reforms (BSR), chaired by M. Narasimham, recommended that the minimum shareholding by Government/ Reserve Bank of India in the equity of nationalised banks and the State Bank of India be brought down from 51 per cent to 33 per cent (Mazumdar, 2002). Therefore, the participation of shareholders of public sector banks which was limited till the other day, will not remain so any anymore. The shareholders expect to earn higher dividend or optimise appreciation of the scrip at the stock market (Singh, 2001). Therefore, one of the challenges banks face is how to meet the expectations of the shareholders and enhance the value of the bank. Therefore, banks have to devise ways and means as to how to optimise the shareholders value in each and every business activity they undertake.

7.2.17. Financial Inclusion

Bank nationalisation in India marked a paradigm shift in the focus of banking as Government, through nationalisation, intended to shift the focus of banks from class banking to mass banking. However, there are still many states in India where a large percentage of population are yet to be brought under the ambit of banking. Therefore, in the light of Government policies, one of the challenges before Indian banks is to redesign their business strategies so as to incorporate specific plans to promote financial inclusion of low income group by treating it as a business opportunity as well as a corporate social responsibility. In January 2006, banks were permitted to utilise the services of non-governmental organisations (NGOs/SHGs), micro-finance institutions and other civil society organisations as intermediaries in providing financial and banking services through the use of business facilitator and business correspondent (BC) models. The BC model allows banks to do 'cash in - cash out' transactions at the location of the BC and allows branchless banking (Leeladhar, 2006). At present, it may appear that taking banking to the unprivileged and unbanked sections may not be profitable but gradually it can emerge as commercial profitable business.

7.3. Conclusion

Thus, banking in the days to come will be a challenging one, which will be marked by high expectations of customers, who are well informed and possess the technical knowledge to conduct banking transaction from home or office or while on move. Although IT plays an important role in banking business, yet personalised service will continue to have relevance in Indian banking – where a large proportion of the country's population is still illiterate. To sum up, it can be said that with increased competition, Indian banks face the challenge of sustenance and for these they need to develop proactive strategies with focus on product innovation, off-balance sheet activities to increase their income from non-core activity, efficiency in service delivery process, effective risk management etc. and more importantly on customer satisfaction through tailor-made product packages. Moreover, competition should not necessarily be viewed with trepidation. In fact it should be seen by Indian banks as an opportunity to enter global financial intermediation and provision of financial services (Patel, 1997). As the economic importance of (financial) services increases in terms of (global) value added, international banking operations should be viewed as a (potentially) lucrative profit opportunity by Indian banks.

Chapter – 8
Analysis and Findings

ANALYSIS AND FINDINGS

Indian commercial banking has evolved over the ages since the establishment of the General Bank of India in 1786. Today, a commercial bank is no longer restricted to accepting deposits and making advances but encouraged to provide (after financial sector reforms and liberalisation of certain statutes) a host of financial services ranging across insurance, merchant banking, mutual funds, investment banking etc. With the addition of various banking and financial services in its bouquet, a bank is considered to be making a steady and gradual transition towards the Universal Banking framework. However, a Commercial Bank's successful transition into a Universal Bank would depend on the perception and attitude of Bank Managers towards Universal banking concept as well as being aware of what their customers' expect in terms of banking and financial services. Interestingly, as commercial banks opted to diversify into different areas of business, risk exposure of banks also increased significantly.

In view of the objectives of the research, the data collected were analysed and the findings are presented under 03 (three) parts. These are discussed below in brief-

Part I : Positioning of a Sample Commercial Bank on a Six-point Positioning Scale

In view of Research Objective # 1, a positioning scale was developed and a sample bank was positioned on the scale based on its composite score. The score was calculated on the basis of services that are presently offered by the bank.

Part II : Measuring the Risk Exposure of Banks

While offering various banking and financial services under one-roof, the risk exposure of commercial banks have apparently increased. Though diversification and eventually offering various services under one-roof would ensure 'economies of scale and scope', but at the same time it would mean loss of core competencies and also increases risk exposure of banks due to venturing into untested business areas.

Thus, in Part II of this chapter the focus is on calculation of CAMEL score and assessing the financial health and risk exposure of sample banks (Research Objective # 2).

Part III : Perception of Bank Managers and Customers on Universal Banking Concept

Universal banking concept is likely to be successful only when there is active participation from the managers of various branches of banks. This is because all policy implementations of a bank depend entirely on the Branch manager. At the same time, the customers of the banks should be aware about the various services offered by the banks so that they can accordingly select the services they need. Thus, as per the Research Objective # 3, an attempt is made to know about the perception of managers and customers of banks on Universal banking concept.

For this, primary data was collected by using 02 (two) sets of Questionnaire, one from the bank managers and the other from the customers of banks. The collected data was analysed and the findings are presented under Part III of this Chapter.

PART I

POSITIONING OF A SAMPLE COMMERCIAL BANK ON A SIX-POINT POSITIONING SCALE

(Research Objective # 1)

Presently Commercial Banks offer a variety of services under its umbrella-brand. These services encompass insurance, mutual fund, housing finance, stock broking, merchant banking, investment banking, etc. Over the years, as banks started to offer a variety of new services along with other value-added services, they eventually started to make a transition towards Universal banking framework. However, in this process all the commercial banks did not make the same level of progress. For some banks, it was a steady movement while for some others it was not so.

8.1.1. The Positioning Scale

In this research, an effort has been made to analysis the position of a commercial bank with respect to ICICI Bank – the first Indian Universal bank. In this regard, a positioning scale with 0 – 5 points has been used. The services that are offered by banks are grouped under different points of the positioning scale. The grouping of services has been done in order to reflect the progress trend of a commercial bank in the direction of becoming a Universal bank.

The following are the services that are grouped under different points of the Positioning Scale –

Services under Point 0 (Commercial Bank):

1. Accepting deposits
2. Making advances

Service under Point 1

1. Retail loans
2. Pension payments
3. Traveler cheques
4. Gift cheques

5. Locker facility
6. Business overdraft facilities
7. Agriculture & rural credit

<u>Services under Point 2</u>

1. Loan against gold
2. Housing loans
3. Loan against shares/ debentures
4. Kisan credit card
5. Export finance
6. Tax payment
7. Forex remittances

<u>Services under Point 3</u>

1. Telephone & Electricity bills payment
2. School tuition fee payment
3. Sale of Entrance exam forms
4. Cash Management services
5. Letter of Credit & Export bill negotiation
6. NRE & NRO Account facilities
7. Facilitates donation for charity
8. Recharging pre-paid Mobiles
9. Pre-paid cards for payment disbursements
10. Micro-finance

<u>Services under Point 4</u>

1. Credit card
2. ATM card
3. Debit card
4. Depository services
5. Consultancy services/ Trade services
6. Investment banking
7. Insurance (Life & General)

8. Phone banking
9. Mutual funds
10. Health cards
11. NRI Investment
12. Online stock trading
13. Online bill payment
14. Online cash remittances
15. Online Ticket (Air & Railway) booking
16. Derivative and Forward contract
17. Electronic fund transfer
18. RTGS

Services under Point 5

1. Credit card securitisation
2. Home Search (lease, purchase and sell house property)

8.1.2. Calculation of the Composite Score

A sample bank is positioned on the positioning scale on the basis of its composite score. In order to obtain the composite score, data from primary as well as secondary sources were used. Primary data were collected from Bank Managers by using questionnaire (the responses under Part–B of the questionnaire, placed in *Annexure - IV*). Further, the responses obtained from the Bank Managers pertaining to the services that are presently offered by banks were tallied against the secondary data on banking and financial services that were obtained from the web site of the sample banks.

For deriving the composite score of a sample bank, equal weights were first assigned to the services under a point of the positioning scale. Thereafter, the weighted score of a sample commercial bank under the point was obtained. Finally, the composite score of sample bank was obtained by adding all the weighted scores under different points of the positioning scale.

8.1.3. Findings of the Research

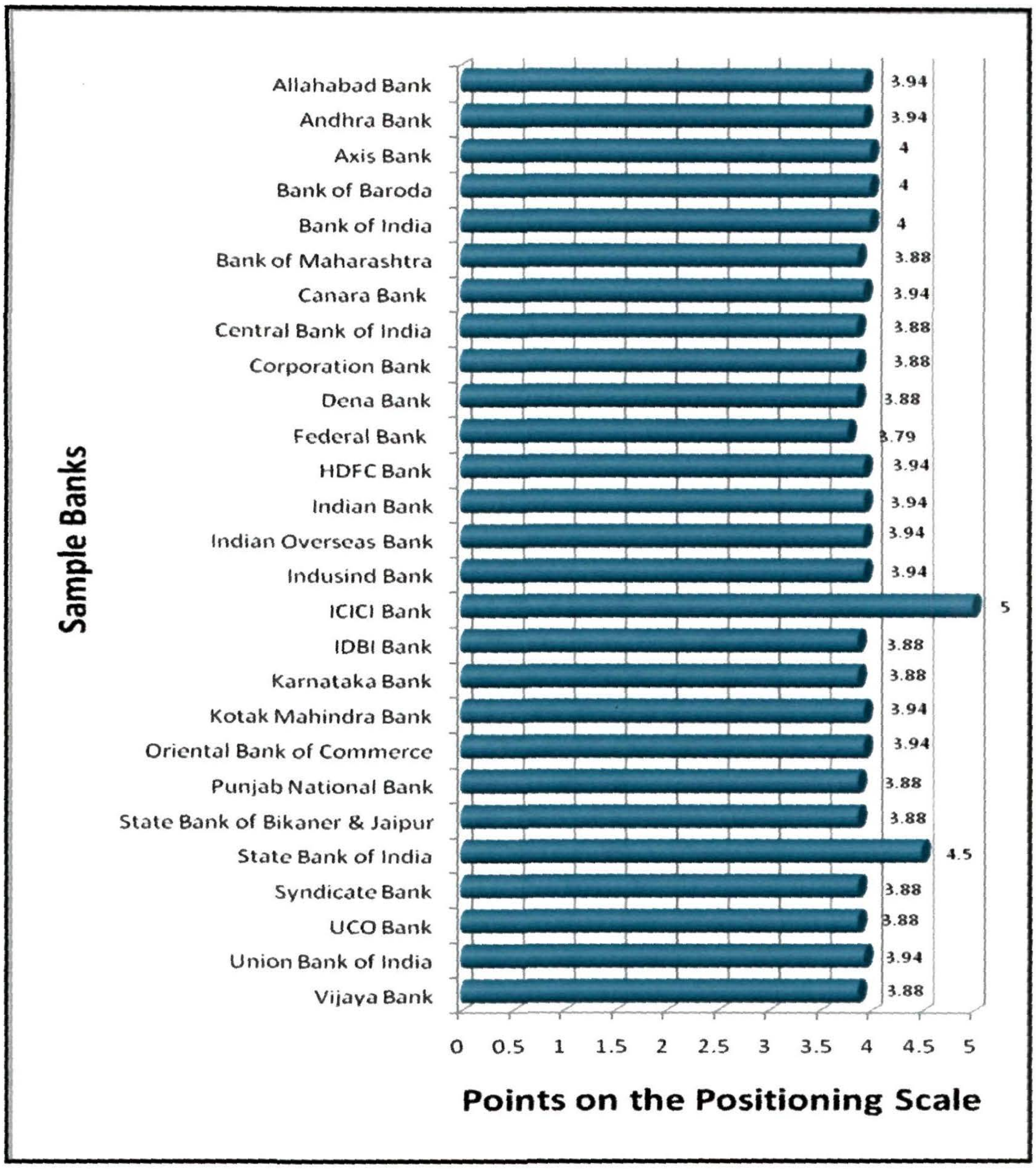
The research shows that almost all the banks have been offering diversified services like insurance, mutual funds, housing finance, investment banking, stock trading etc. apart from traditional banking services. As most of the commercial banks have been offering a wide array of service under one-roof, it can be anticipated that many of these banks would acquire the status of a Universal bank in the near future. The following table shows the brief scores of sample banks on the positioning scale –

Table 8.1.1 : Composite Score of Banks on the Positioning Scale

Sl. No	BANKS	Score
1.	ICICI Bank	5.00
2.	State Bank of India	4.50
3.	Bank of Baroda	4.00
4.	Bank of India	4.00
5.	Axis Bank	4.00
6.	Allahabad Bank	3.94
7.	Andhra Bank	3.94
8.	Canara Bank	3.94
9.	Indian Bank	3.94
10.	Indian Overseas Bank	3.94
11.	Oriental Bank of Commerce	3.94
12.	Union Bank of India	3.94
13.	HDFC Bank	3.94
14.	Indusind Bank	3.94
15.	Kotak Mahindra Bank	3.94
16.	Bank of Maharashtra	3.88
17.	Central Bank of India	3.88
18.	Corporation Bank	3.88
19.	Dena Bank	3.88
20.	Punjab National Bank	3.88
21.	State Bank of Bikaner & Jaipur	3.88
22.	Syndicate Bank	3.88
23.	UCO Bank	3.88
24.	Vijaya Bank	3.88
25.	IDBI Bank	3.88
26.	Karnataka Bank	3.88
27.	Federal Bank	3.79

Source: Calculated.
Note: The score would change as and when a bank introduces a new service.

Fig. 8.1.1 : Position of a Bank on the Positioning Scale



8.1.4. Conclusion

Analysis of the progress trend of Indian commercial banks in terms of services they offer reveals that almost all the banks have made considerable progress in the direction of becoming a Universal Bank. With regard to the positioning scale (with points 0 – 5) used to identify where a sample bank falls with respect to the Universal bank, it was found that most of the banks were in the upper half of the scale i.e., above point 3. Thus, it can be concluded that in India, most of the commercial banks are on the verge of becoming Universal Banks in the very near future.

Part II

MEASURING THE RISK EXPOSURE OF BANKS

(Research Objective # 2)

Banking institutions are the pillars of a strong and sound economy. However, banks all over the globe are comparably fragile institutions, which are built on customers' trust, brand reputation and more importantly dangerous leverage. In case of any trouble, banks can collapse and significantly, failure of one bank can trigger crisis in the economy. That is why banks need constant policing by the Central bank so as to assess their risk exposure as well as their financial health.

The Basel Committee on Banking Supervision of the Bank of International Settlements (BIS) has recommended using capital adequacy, assets quality, management quality, earnings and liquidity (C.A.M.E.L) as criteria for assessing a FI in 1988. The sixth component, Sensitivity to market risk (S) was added to CAMEL in 1997. However, many developing countries are using C.A.M.E.L instead of C.A.M.E.L.S in the performance evaluation of the FIs. The central banks in some of the countries like Nepal, Kenya use C.A.E.L instead of C.A.M.E.L.S (Baral, 2005).

8.2.1. The C.A.M.E.L Model

The C.A.M.E.L Model is a tool used by many regulatory agencies for measuring the performance of banks. In fact, it is an international bank-rating system where bank supervisory authorities rate institutions according to six factors namely –

1. **C - Capital Adequacy**

   Capital Adequacy reflects the overall financial condition of bank & also the ability of the management to meet the need for additional capital.

2. **A - Asset Quality**

   Asset Quality ascertains the component of non performing assets as a percentage of the total asset.

3. **M – Management**

   This component of the Model measures the efficiency of the management.

4. **E - Earnings Quality**

   The component 'Earnings Quality' assess the quality of income generated by core activity.

5. **L – Liquidity**

   Liquidity measures the ability of a bank to meet the demand from demand deposits in a particular year.

6. **S - Sensitivity to Market Risk**

   This component of the C.A.M.E.L.S model highlights the impact on earnings or the economic value of capital as result of changes in Interest Rates, Foreign-Exchange Rates and Prices.

C.A.M.E.L.S framework is a common method for evaluating the soundness of FIs. This system was developed by regulatory authorities of the U.S banks. The Federal Reserve Bank, the Comptroller of the Currency and the Federal Deposit Insurance Corporation all use this system. Monetary authorities in most of the countries are using this system to check up the health of an individual FI. In addition, International Monetary Fund also is using the aggregated indicators of individual FIs to assess the financial system

C.A.M.E.L.S ratings are normally assessed every year. In the case of problem banks (those with a C.A.M.E.L.S rating of 4 or 5), the ratings may be assessed more frequently, as these banks are subject to more frequent on-site examination. Conversely, in the case of sound banks (those with a C.A.M.E.L.S rating of 1 or 2), on-site examinations may be conducted after an interval of 18 months, and the ratings would accordingly be updated once every one and a half years (Sahajwala & Van den Bergh, 2002).

However, C.A.M.E.L.S ratings are highly confidential. A bank's C.A.M.E.L.S rating are directly known only by the bank's senior management and the appropriate supervisory staff. C.A.M.E.L.S ratings are never released by supervisory agencies, even on a lagged basis (Hirtle & Lopez, 1999). While results of bank evaluation by using C.A.M.E.L.S. model are confidential, the public may infer such supervisory information on bank conditions based on subsequent bank actions or specific disclosures. Overall, the private supervisory information gathered during a bank examination is not disclosed to the public by supervisors, although studies show that it does filter into the financial markets. Moreover, CAMELS ratings, assigned by examiners at the end of an onsite examination, are "snapshot" evaluations of a bank at a given point in time, and are thus perishable quantities (Cole & Gunther, 1995). This is because of the dynamic nature of the financial industry and the underlying factors on which the ratings are based begin to change in some ways immediately after the rating is given. In spite of this, research involving CAMELS rating is limited due to the restricted nature of the ratings (Barr, 2002).

8.2.2. Calculation of Composite C.A.M.E.L Score of Banks

For calculating the composite rating of a banks using C.A.M.E.L, first the component ratings are to be obtained. It is important to note that Composite rating is not necessarily the average of individual component ratings. In other words, the *composite rating is not the arithmetic average of the component ratings*. Some components are given more weight than others, depending on how critical they are to the overall health of the bank. For example, the management component is factored in very heavily, because weaknesses in management oversight can affect every aspect of the bank. Also, examiners typically place more emphasis on asset quality when assigning a composite rating. This is because of the "domino" effect that asset problems can have on a bank. For instance, problem loans can directly impact earnings through lost interest income, higher collection expenses, and higher provisions for loan losses. Furthermore, additional capital may be necessary for the bank's increased risk profile.

Therefore, the weights assigned to the components of CAMELS for calculating the composite score of a bank are as shown as in Table 4.2. However, in this research, the sixth component of CAMELS i.e., 'Sensitivity to Market

Risk' is not taken into account and as such the weight assigned to the sixth component – S (i.e., 10%) is evenly distributed among all the five components – C, A, M, E and L. Table 4.3 shows the revised weights assigned to the components of CAMEL that was used in the study for ratings of commercial banks. Thus, by using the revised weights, the Composite CAMEL score of a bank was calculated and then by referring to Table 4.4, the position of the bank i.e., Composite CAMEL rating of a sample bank was obtained.

8.2.3. The Component of C.A.M.E.L Model with Parameters and Range

The CAMEL Model stands for Capital Adequacy, Asset Quality, Management, Earnings Quality and Liquidity. The following are the various ratios calculated under different aspects of the CAMEL Model –

Capital Adequacy

1. **Capital Adequacy**: Capital Adequacy reflects the overall financial condition of a bank and also the ability of the management to meet the need for additional capital. The parameters that are considered under the Capital Adequacy component of the C.A.M.E.L Model are – Capital Adequacy Ratio (CAR), Total Debt-Equity Ratio and Advances to Assets. These parameters are discussed below –

(a) ***Capital Adequacy Ratio (%)***: It is mandatory for all Indian banks to maintain a capital adequacy ratio of 9% as per the RBI norms[1]. It is arrived by dividing the sum of Tier I and Tier II capital by the risk weighted assets. While Tier I capital includes equity capital and free reserves, Tier II capital comprises subordinated debt of 5 – 7 year tenure. Thus, higher the CAR, the stronger is the bank.

For the Financial Year 2008 – 09, CAR of all banks (population) that are listed in Stock Exchanges were considered and from the data set, the following were obtained -

[1] **Source**: RBI's Master Circular No. DBOD. BP. BC. 2/ 21.01.002/ 2002- 2003 dated July 5, 2002

N	=	39 banks
Mean	=	13.778 %
	=	13.78 %
Standard Deviation (σ)	=	1.931 %
	=	1.93 %
2 σ	=	3.86 %
3 σ	=	5.79 %

Based on the above, the class interval was determined.

Table 8.2.1 : Rating Scale for Capital Adequacy Ratio

Rating Scale	Rating range	Rating Analysis
1	17.64 % to 19.57 %	Strong
2	15.71 % to 17.64 %	Satisfactory
3	11.85 % to 15.71 %	Fair (watch category)
4	9.92 % to 11.85 %	Marginal (some risk of failure)
5	7.99 % to 9.92 %	Unsatisfactory (high degree of failure evident)

(b) **Debt Equity Ratio**: Debt-Equity ratio is arrived at by dividing the total borrowings and deposits by shareholders' net worth, which includes equity capital and reserves and surpluses.

For the Financial Year 2008 – 09, the Debt-equity ratio of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	16.003
	=	16.00
Standard Deviation (σ)	=	7.114
	=	7.11
2 σ	=	14.22
3 σ	=	21.33

Based on the above, the class interval was determined.

Table 8.2.2 : Rating Scale for Debt Equity Ratio

Rating Scale	Rating range	Rating Analysis
1	(-5.33) to 1.78	Strong
2	1.78 to 8.89	Satisfactory
3	8.89 to 23.11	Fair (watch category)
4	23.11 to 30.22	Marginal (some risk of failure)
5	30.22 to 37.33	Unsatisfactory (high degree of failure evident)

(c) **Advances to Assets**: This is a ratio of total advances to total assets. Total advances also include receivables. The value of total assets excludes the revaluation of total assets.

For the Financial Year 2008 – 09, the Advance to Assets of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	58.891 %
	=	58.89 %
Standard Deviation (σ)	=	4.159 %
	=	4.16 %
2 σ	=	8.32 %
3 σ	=	12.48 %

Based on the above, the class interval was determined.

Table 8.2.3 : Rating Scale for Advances to Assets

Rating Scale	Rating range	Rating Analysis
1	67.21 % to 71.37 %	Strong
2	63.05 % to 67.21 %	Satisfactory
3	54.73 % to 63.05 %	Fair (watch category)
4	50.57 % to 54.73 %	Marginal (some risk of failure)
5	46.41 % to 50.57 %	Unsatisfactory (high degree of failure evident)

On the basis of the rating range of the parameters, the Capital component for the banks were calculated as below –

Table 8.2.4 : Component Ratings for Capital of Banks for the Financial Year 2008 - 09

Banks	Component Rating for Banks for Capital						Average Component Rating
	CAR %	Rating	Total Debt – Equity	Rating	Advances to Assets (%)	Rating	
Allahabad Bank	13.11	3	14.52	3	60.22	3	3.00
Andhra Bank	13.22	3	16.28	3	64.47	2	2.67
Axis Bank	13.69	3	11.49	3	55.21	3	3.00
Bank of Baroda	14.05	3	14.99	3	63.32	2	2.67
Bank of India	13.01	3	16.10	3	63.37	2	2.67
Bank of Maharashtra	12.05	3	25.31	4	58.09	3	3.33
Canara Bank	14.10	3	18.62	3	62.93	3	3.00
Central Bank of India	13.12	3	37.92*	5	57.89	3	3.67
Corporation Bank	13.61	3	15.11	3	55.82	3	3.00
Dena Bank	12.07	3	22.09	3	59.59	3	3.00
Federal Bank	20.22*	1	7.45	2	57.64	3	2.00
HDFC Bank	15.70	3	9.75	3	53.95	4	3.33
Indian Bank	13.27	3	13.32	3	61.18	3	3.00
Indian Overseas Bank	13.20	3	16.85	3	61.85	3	3.00
Indusind Bank	12.55	3	15.48	3	57.11	3	3.00
ICICI Bank	15.53	3	4.42	2	57.56	3	2.67
IDBI Bank	11.57	4	15.10	3	59.99	3	3.33
Karnataka Bank	13.48	3	12.98	3	51.67	4	3.33
Kotak Mahindra Bank	20.01*	1	4.01	2	57.90	3	2.00
Oriental Bank of Commerce	12.98	3	15.25	3	60.84	3	3.00
Punjab National Bank	14.03	3	15.96	3	62.65	3	3.00
State Bank of Bikaner & Jaipur	14.52	3	19.19	3	64.37	2	2.67
State Bank of India	14.25	3	12.81	3	56.25	3	3.00
Syndicate Bank	12.68	3	25.22	4	62.59	3	3.33
UCO Bank	11.93	3	36.11	5	61.62	3	3.67
Union Bank of India	13.27	3	19.66	3	59.97	3	3.00
Vijaya Bank	13.15	3	23.74	4	56.86	3	3.33

Source: Annual Reports of Banks
* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Asset Quality

2. **Asset Quality**: The prime motto behind measuring the asset quality is to ascertain the component of non-performing assets as percentage of the total assets. In addition the component also ascertains the NPA movement and the amount locked up in investments as a percentage of the total assets. The parameters that are included under Asset Quality component are – Net NPAs to Total Assets, Net NPAs to Net Advances and Total Investments to Total Assets.

(a) **Net NPAs to Total Assets**: It is the measure of quality of assets in a situation, where the management has not provided for loss on NPAs. Here, the Net NPAs are measured as a percentage of total assets. The lower the ratio is, the better is the quality of advances.

For the Financial Year 2008 – 09, Net NPAs to Total Assets of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	0.473 %
	=	0.47 %
Standard Deviation (σ)	=	0.360 %
	=	0.36 %
2 σ	=	0.72 %
3 σ	=	1.08 %

Based on the above, the class interval was determined.

Table 8.2.5 : Rating Scale for Net NPAs to Total Assets

Rating Scale	Rating range	Rating Analysis
1	(-0.61) % to (-0.25) %	Strong
2	(-0.25) % to 0.11 %	Satisfactory
3	0.11 % to 0.83 %	Fair (watch category)
4	0.83 % to 1.19 %	Marginal (some risk of failure)
5	1.19 % to 1.55 %	Unsatisfactory (high degree of failure evident)

(b) **Net NPA to Net Advances**: Net NPAs are gross NPAs' net of provisions on NPAs and suspense account. In this ratio too, net NPAs are measured as a percentage of net advances.

For the Financial Year 2008 – 09, Net NPAs to Net Advances of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	0.933 %
	=	0.93 %
Standard Deviation (σ)	=	0.692 %
	=	0.69 %
2 σ	=	1.38 %
3 σ	=	2.07 %

Based on the above, the class interval was determined.

Table 8.2.6 : Rating Scale for Net NPAs to Net Advances

Rating Scale	Rating range	Rating Analysis
1	(-1.14) % to (-0.45) %	Strong
2	(-0.45) % to 0.24 %	Satisfactory
3	0.24 % to 1.62 %	Fair (watch category)
4	1.62 % to 2.31 %	Marginal (some risk of failure)
5	2.31 % to 3.00 %	Unsatisfactory (high degree of failure evident)

(c) **Total Investments to Total Assets**: This ratio is used as a tool to measure the percentage of total assets locked up in investments, which by conventional definition, does not form part of the core income of the bank. It is arrived at by dividing total investments by total assets.

For the Financial Year 2008-09, Total Advances to Total Assets of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	28.247 %
	=	28.25 %
Standard Deviation (σ)	=	3.690 %
	=	3.69 %
2 σ	=	7.38 %
3 σ	=	11.07 %

Based on the above, the class interval was determined.

Table 8.2.7 : Rating Scale for Total Investment to Total Assets

Rating Scale	Rating range	Rating Analysis
1	17.18 % to 20.87 %	Strong
2	20.87 % to 24.56 %	Satisfactory
3	24.56 % to 31.94 %	Fair (watch category)
4	31.94 % to 35.63 %	Marginal (some risk of failure)
5	35.63 % to 39.32 %	Unsatisfactory (high degree of failure evident)

On the basis of the above mentioned rating range, the ratings against each parameter under the Asset Quality Component were calculated as below –

Table 8.2.8 : Component Rating for Asset Quality of Banks for the Financial Year 2008- 09

Banks	Component Rating for Banks for Asset Quality						Average Component Rating
	Net NPAs to Total Assets (%)	Rating	Net NPA to Net Advances (%)	Rating	Total Investment to Total Assets (%)	Rating	
Allahabad Bank	0.43	3	0.72	3	30.37	3	3.00
Andhra Bank	0.12	3	0.18	2	24.70	3	2.67
Axis Bank	0.22	3	0.40	3	31.36	3	3.00
Bank of Baroda	0.20	3	0.31	3	23.06	2	2.67
Bank of India	0.28	3	0.44	3	23.33	2	2.67
Bank of Maharashtra	0.46	3	0.79	3	31.14	3	3.00
Canara Bank	0.69	3	1.09	3	26.30	3	3.00
Central Bank of India	0.72	3	1.22	3	29.16	3	3.00
Corporation Bank	0.16	3	0.29	3	28.70	3	3.00
Dena Bank	0.64	3	1.09	3	25.74	3	3.00
Federal Bank	0.17	3	0.30	3	31.19	3	3.00
HDFC Bank	0.34	3	0.63	3	32.09	4	3.33
Indian Bank	0.11	3	0.34	3	27.10	3	3.00
Indian Overseas Bank	0.82	3	1.33	3	25.78	3	3.00
Indusind Bank	0.27	3	1.14	3	29.27	3	3.00
ICICI Bank	0.12	3	2.09	4	27.17	3	3.33
IDBI Bank	0.55	3	0.92	3	29.03	3	3.00
Karnataka Bank	0.51	3	0.98	3	39.21	5	3.67
Kotak Mahindra Bank	0.14	3	2.39	5	31.73	3	3.67
OBC	0.39	3	0.65	3	25.30	3	3.00
Punjab National Bank	0.11	3	0.17	2	25.67	3	2.67
SBBJ	0.55	3	0.85	3	23.72	2	2.67
State Bank of India	0.99	4	1.76	4	28.61	3	3.67
Syndicate Bank	0.49	3	0.77	3	23.44	2	2.67
UCO Bank	0.73	3	1.18	3	26.32	3	3.00
Union Bank of India	0.20	3	0.34	3	26.71	3	3.00
Vijaya Bank	0.47	3	0.82	3	27.87	3	3.00

Source: Annual Reports of Banks

Management

3. **Management**: It involves a subjective analysis for measuring the efficiency of the management. To measure the efficiency of the management, the parameters that are used are total advances to total deposits, profit per employee, business per employee and return on net worth.

(a) **Total Advances to Total Deposits**: The ratio measures the efficiency of the management in converting the deposits available with the bank (excluding other funds like equity capital etc.) into advances. Total deposits include demand deposits, savings deposits, term deposits and deposits of other banks. Total advances also include receivables.

For the Financial Year 2008 – 09, Total Advances to Total Deposits of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	71.858 %
	=	71.86 %
Standard Deviation (σ)	=	9.616 %
	=	9.62 %
2σ	=	19.24 %
3σ	=	28.86 %

Based on the above, the class interval was determined.

Table 8.2.9 : Rating Scale for Total Advances to Total Deposits

Rating Scale	Rating range	Rating Analysis
1	91.10 % to 100.72 %	Strong
2	81.48 % to 91.10 %	Satisfactory
3	62.24 % to 81.48 %	Fair (watch category)
4	52.62 % to 62.24 %	Marginal (some risk of failure)
5	43.00 % to 52.62 %	Unsatisfactory (high degree of failure evident)

(b) **Profit per Employee (in Lakhs)**: This measures the efficiency of the employees at the branch level. It also gives valuable inputs to assess the real strength of a bank's branch network. It is arrived at by dividing the net profit earned by the bank by the total number of employees. The higher is the ratio, the higher is the efficiency of the management.

For the Financial Year 2008 – 09, Profit per Employee of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	Rs. 4.812 lakhs
	=	Rs. 4.81 lakhs
Standard Deviation (σ)	=	Rs. 2.70 lakhs
2 σ	=	Rs. 5.40 lakhs
3 σ	=	Rs. 8.10 lakhs

Based on the above, the class interval was determined.

Table 8.2.10 : Rating Scale for Profit per Employee

Rating Scale	Rating range	Rating Analysis
1	10.21 to 12.91 lakhs	Strong
2	7.51 to 10.21 lakhs	Satisfactory
3	2.11 to 7.51 lakhs	Fair (watch category)
4	(-0.59) to 2.11 lakhs	Marginal (some risk of failure)
5	(-3.29) to (-0.59) lakhs	Unsatisfactory (high degree of failure evident)

(c) **Business per Employee (in Crores)**: This tool measures the efficiency of all the employees of the bank in generating business for the bank. It is arrived at by dividing the total business by the total number of the employees. By business, it means the sum of total advances and total deposits in a particular year.

For the Financial Year 2008 – 09, Business per Employee of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	Rs. 6.963 crores
	=	Rs. 6.96 crores
Standard Deviation (σ)	=	Rs. 2.061 crores
	=	Rs. 2.06 crores
2 σ	=	Rs.4.12 crores
3 σ	=	Rs. 6.18 crores

Based on the above, the class interval was determined.

Table 8.2.11 : Rating Scale for Business per Employee

Rating Scale	Rating range	Rating Analysis
1	11.08 to 13.14 crores	Strong
2	9.02 to 11.08 crores	Satisfactory
3	4.90 to 9.02 crores	Fair (watch category)
4	2.84 to 4.90 crores	Marginal (some risk of failure)
5	0.78 to 2.84 crores	Unsatisfactory (high degree of failure evident)

(d) **Return on Net Worth**: It is a measure of the profitability of a company. PAT is expressed as a percentage of average net worth.

For the Financial Year 2008 – 09, Return on Net Worth of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	16.129 %
	=	16.13 %
Standard Deviation (σ)	=	7.036 %
	=	7.04 %
2 σ	=	14.08 %
3 σ	=	21.12 %

Based on the above, the class interval was determined.

Table 8.2.12 : Rating Scale for Return on Net Worth

Rating Scale	Rating range	Rating Analysis
1	30.21 % to 37.25 %	Strong
2	23.17 % to 30.21 %	Satisfactory
3	9.09 % to 23.17 %	Fair (watch category)
4	2.05 % to 9.09 %	Marginal (some risk of failure)
5	(-4.99) % to 2.05 %	Unsatisfactory (high degree of failure evident)

The component rating for Management under CAMEL Model was calculated by calculating the ratings against each of the parameters under the component.

Table 8.2.13 : Component Rating for Management of Banks for the Financial Year 2008 – 09

Banks	Component Rating for Banks for Management								Average Component Rating
	Total Advances to Total Deposits (%)	Rating	Profit per employee (Rs. in Lakhs)	Rating	Business per employee (Rs. in crores)	Rating	Return on Net Worth (%)	Rating	
Allahabad Bank	69.20	3	3.75	3	7.06	3	13.13	3	3.00
Andhra Bank	74.32	3	4.58	3	7.28	3	17.91	3	3.00
Axis Bank	69.48	3	10.02	2	10.60	2	17.77	3	2.50
Bank of Baroda	74.84	3	6.05	3	9.14	2	17.35	3	2.75
Bank of India	75.33	3	7.49	3	8.33	3	25.51	2	2.75
Bank of Maharashtra	65.62	3	2.76	3	6.36	3	18.16	3	3.00
Canara Bank	73.96	3	4.97	3	7.80	3	20.64	3	3.00
Central Bank of India	65.12	3	1.72	4	5.60	3	14.43	3	3.25
Corporation Bank	65.57	3	7.64	2	10.49	2	18.23	3	2.50
Dena Bank	67.08	3	4.28	3	7.14	3	21.68	3	3.00
Federal Bank	69.54	3	6.90	3	7.50	3	11.58	3	3.00
HDFC Bank	69.24	3	4.18	3	4.46	4	15.32	3	3.25
Indian Bank	70.91	3	6.28	3	8.61	3	22.03	3	3.00
Indian Overseas Bank	74.80	3	5.20	3	6.90	3	22.31	3	3.00
Indusind Bank	71.33	3	3.49	3	8.36	3	10.38	3	3.00
ICICI Bank	99.98	1	11.00	1	11.50	1	7.58	4	1.75
IDBI Bank	92.02	1	8.42	2	2.03	5	11.53	3	2.75
Karnataka Bank	58.08	4	5.00	3	6.49	3	17.01	3	3.25
Kotak Mahindra Bank	106.27*	1	3.00	3	3.47	4	7.06	4	3.00
OBC	69.64	3	6.18	3	11.42	1	14.03	3	2.50
Punjab National Bank	73.75	3	2.95	3	6.64	3	23.52	2	2.75
SBBJ	76.10	3	3.55	3	5.55	3	19.71	3	3.00
State Bank of India	73.11	3	4.73	3	5.56	3	15.74	3	3.00
Syndicate Bank	70.36	3	4.18	3	7.93	3	19.86	3	3.00
UCO Bank	68.65	3	2.33	3	7.09	3	19.95	3	3.00
Union Bank of India	69.60	3	6.28	3	8.61	3	24.47	2	2.75
Vijaya Bank	65.04	3	2.19	3	7.56	3	11.31	3	3.00

Source: Annual Reports of Banks

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Earnings Quality

4. **Earnings Quality**: This parameter gains importance in the light of the argument that much of a bank's income is earned through non-core activities like investments, treasury operations, corporate advisory services and so on. In this section, we try to assess the quality of income in terms of income generated by core activity – income from lending operations.

   The parameters included under this Component are Operating Income as a percentage of Working Funds, Spread (as % of Assets), Net profit/ Average Assets, Interest Income/ Total Income, and Non Interest Income/ Total Income.

(a) **Operating Profit by Average Working Funds**: This is arrived at by dividing the operating profit by average working funds. Working funds is the daily average of total assets during the year.

For the Financial Year 2008–09, Operating Profit by Average Funds of all the banks were considered and from the data set, the following were obtained-

N	=	39 banks
Mean	=	2.090 %
	=	2.09 %
Standard Deviation (σ)	=	0.632 %
	=	0.63 %
2 σ	=	1.26 %
3 σ	=	1.89 %

Based on the above, the class interval was determined.

Table 8.2.14 : Rating Scale for Operating Profit/ Average Working Funds

Rating Scale	Rating range	Rating Analysis
1	3.35 % to 3.98 %	Strong
2	2.72 % to 3.35 %	Satisfactory
3	1.46 % to 2.72 %	Fair (watch category)
4	0.83 % to 1.46 %	Marginal (some risk of failure)
5	0.20 % to 0.83 %	Unsatisfactory (high degree of failure evident)

(b) **Spread (as % of Assets)**: It is an important measure of a bank's core income (income from lending operations). It is the difference between the interest income and interest expended as a percentage of total assets. Interest income includes dividend income. Interest expended includes interest paid on deposits, loans from RBI, and other short-term and long-term loans.

For the Financial Year 2008 – 09, Spread (as % of Assets) of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	2.380 %
	=	2.38 %
Standard Deviation (σ)	=	0.734 %
	=	0.73 %
2 σ	=	1.46 %
3 σ	=	2.19 %

Based on the above, the class interval was determined.

Table 8.2.15 : Rating Scale for Spread (as a % of Assets)

Rating Scale	Rating range	Rating Analysis
1	3.84 % to 4.57 %	Strong
2	3.11 % to 3.84 %	Satisfactory
3	1.65 % to 3.11 %	Fair (watch category)
4	0.92 % to 1.65 %	Marginal (some risk of failure)
5	0.19 % to 0.92 %	Unsatisfactory (high degree of failure evident)

(c) **Net Profit / Average Assets**: This ratio measures return on assets employed or the efficiency in utilisation of the assets. It is arrived at by dividing the net profit by average assets, which is the average of total assets in the current year and the previous year.

For the Financial Year 2008 – 09, Net Profit by Average Assets of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	0.979 %
	=	0.98 %

Standard Deviation (σ) = 0.489 %

= 0.49 %

2σ = 0.98 %

3σ = 1.47 %

Based on the above, the class interval was determined.

Table 8.2.16 : Rating Scale for Net Profit/ Average Assets

Rating Scale	Rating range	Rating Analysis
1	1.96 % to 2.45 %	Strong
2	1.47 % to 1.96 %	Satisfactory
3	0.49 % to 1.47 %	Fair (watch category)
4	0 % to 0.49 %	Marginal (some risk of failure)
5	(-0.49) % to 0 %	Unsatisfactory (high degree of failure evident)

(d) **Interest Income/ Total Income**: The ratio measures the income from lending operations as a percentage of the total income generated by the bank in a year. Interest income includes income on advances, interest on deposits with RBI and dividend income.

For the Financial Year 2008 – 09, Interest Income by Total Income of all the banks were considered and from the data set, the following were obtained -

N = 39 banks

Mean = 86.524 %

= 86.52 %

Standard Deviation (σ) = 3.185 %

= 3.19 %

2σ = 6.38 %

3σ = 9.57 %

Based on the above, the class interval was determined.

Table 8.2.17 : Rating Scale for Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	92.90 % to 96.09 %	Strong
2	89.71 % to 92.90 %	Satisfactory
3	83.33 % to 89.71 %	Fair (watch category)
4	80.14 % to 83.33 %	Marginal (some risk of failure)
5	76.95 % to 80.14 %	Unsatisfactory (high degree of failure evident)

(e) **Non Interest Income / Total Income**: This measures the income from operations other than lending as a percentage of total income. Non-interest income is the interest income earned by the bank excluding income on advances and deposits with RBI. This may be from traditional as well as non-traditional activities. Non-interest income from traditional activities include fee generated from services like cash management, safe-keeping services like insured deposit accounts and locker facilities etc. while sources of non-interest income from non-traditional activities include income for rendering services like investment banking, securities brokerage, insurance agency and underwriting, and mutual fund sales etc.

For the Financial Year 2008–09, Non Interest Income by Total Income of all the banks were considered and from the data set, the following were obtained-

N	=	39 banks
Mean	=	13.487 %
	=	13.49 %
Standard Deviation (σ)	=	3.168 %
	=	3.17 %
2 σ	=	6.34 %
3 σ	=	9.51 %

Based on the above, the class interval was determined.

Table 8.2.18 : Rating Scale for Non Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	3.98 % to 7.15 %	Strong
2	7.15 % to 10.32 %	Satisfactory
3	10.32 % to 16.66 %	Fair (watch category)
4	16.66 % to 19.83 %	Marginal (some risk of failure)
5	19.83 % to 23.00 %	Unsatisfactory (high degree of failure evident)

On the basis of the rating range of the parameters, the Earnings Quality component for the banks were calculated as below –

Table 8.2.19 : Component Rating for Earnings Quality of Banks for the Financial Year 2008 – 09

Banks	Component Rating for Banks for Earnings Quality										Average Component Rating
	Operating Profit/ Avg. Working Funds (%)	Rating	Spread (as a % of Assets)	Rating	Net Profit/ Average Assets (%)	Rating	Interest Income/ Total Income (%)	Rating	Non Interest Income/ Total Income (%)	Rating	
Allahabad Bank	2.24	3	2.21	3	0.85	3	85.43	3	14.57	3	3.00
Andhra Bank	2.15	3	2.38	3	1.04	3	87.53	3	12.47	3	3.00
Axis Bank	2.95	2	2.50	3	1.41	3	78.90	5	21.10	5	3.60
Bank of Baroda	2.22	3	2.25	3	1.09	3	84.55	3	15.45	3	3.00
Bank of India	2.70	3	2.44	3	1.49	2	84.27	3	15.73	3	2.80
Bank of Maharashtra	1.53	3	2.13	3	0.68	3	89.56	3	10.44	3	3.00
Canara Bank	2.02	3	2.41	3	1.04	3	88.11	3	11.89	3	3.00
Central Bank of India	1.13	4	1.51	4	0.42	4	90.72	2	9.28	2	3.20
Corporation Bank	2.50	3	1.95	3	1.04	3	85.66	3	14.34	3	3.00
Dena Bank	1.75	3	2.20	3	0.97	3	88.91	3	11.09	3	3.00
Federal Bank	3.72	1	3.39	2	1.40	3	86.54	3	13.46	3	2.40
HDFC Bank	2.94	2	4.05	1	1.42	3	82.47	4	17.53	4	2.80
Indian Bank	3.12	2	3.10	3	1.61	2	86.84	3	13.16	3	2.60
Indian Overseas Bank	2.55	3	2.37	3	1.19	3	84.91	3	15.09	3	3.00
Indusind Bank	1.45	4	1.66	3	0.58	3	83.50	3	16.50	3	3.20
ICICI Bank	2.33	3	2.21	3	0.96	3	79.30	5	20.70	5	3.80
IDBI Bank	0.97	4	0.77	5	0.57	3	88.74	3	11.26	3	3.60
Karnataka Bank	2.25	3	2.07	3	1.26	3	84.45	3	15.55	3	3.00
Kotak Mahindra Bank	2.54	3	5.29*	1	0.97	3	89.55	3	10.45	3	2.60
Oriental Bank of Commerce	1.63	3	1.77	3	0.89	3	89.21	3	10.79	3	3.00
Punjab National Bank	2.58	3	2.85	3	1.39	3	86.88	3	13.12	3	3.00
SBBJ	2.04	3	2.38	3	0.92	3	86.85	3	13.15	3	3.00
State Bank of India	2.05	3	2.16	3	1.08	3	83.41	3	16.59	3	3.00
Syndicate Bank	1.34	4	2.00	3	0.77	3	91.34	2	8.66	2	2.80
UCO Bank	1.28	4	1.47	4	0.55	3	88.84	3	11.16	3	3.40
Union Bank of India	2.28	3	2.82	3	1.21	3	88.91	3	11.09	3	3.00
Vijaya Bank	1.28	4	1.80	3	0.35	4	88.23	3	11.77	3	3.20

Source: Annual Reports of Banks * These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Liquidity

5. **Liquidity**: It refers to the risk stemming from the lack of marketability of an investment that cannot be bought or sold quickly enough to prevent or minimise a loss. *Usually reflected in a wide bid-ask spread or large price movements.*

The parameters under this Component are – Liquid Assets/ Total Deposits and Liquid Assets/ Total Assets.

(a) **Liquid Assets / Total Deposits**: This ratio measures the liquidity available to the deposits of the bank. Liquid assets include cash in hand, balance with RBI, balance with other banks (both in Indian and abroad), and money at call and short notice. Total deposits include demand deposits, saving deposits, term deposits and deposits of other financial institutions.

For the Financial Year 2008 – 09, Liquid Assets by Total Deposits of all the banks were considered and from the data set, the following were obtained -

N	=	39 banks
Mean	=	10.908 %
	=	10.91 %
Standard Deviation (σ)	=	2.431 %
	=	2.43 %
2 σ	=	4.86 %
3 σ	=	7.29 %

Based on the above, the class interval was determined.

Table 8.2.20 : Rating Scale for Liquid Assets/ Total Deposits

Rating Scale	Rating range	Rating Analysis
1	15.77 % to 18.20 %	Strong
2	13.34 % to 15.77 %	Satisfactory
3	8.48 % to 13.34 %	Fair (watch category)
4	6.05 % to 8.48 %	Marginal (some risk of failure)
5	3.62 % to 6.05 %	Unsatisfactory (high degree of failure evident)

(b) **Liquid Assets / Total Assets**: The ratio is arrived at by dividing liquid assets by total assets. Liquid assets include cash in hand, balance with RBI, balance with other banks (both in India and abroad), and money at call and short notice.

N	=	39 banks
Mean	=	8.913 %
	=	8.91 %
Standard Deviation (σ)	=	2.379 %
	=	2.38 %
2σ	=	4.76 %
3σ	=	7.14 %

Based on the above, the class interval was determined.

Table 8.2.21 : Rating Scale for Liquid Assets/ Total Assets

Rating Scale	Rating range	Rating Analysis
1	13.67 % to 16.05 %	Strong
2	11.29 % to 13.67 %	Satisfactory
3	6.53 % to 11.29 %	Fair (watch category)
4	4.15 % to 6.53 %	Marginal (some risk of failure)
5	1.77 % to 4.15 %	Unsatisfactory (high degree of failure evident)

On the basis of the rating range of the parameters, the Liquidity component for the banks were calculated as below –

Table 8.2.22 : Component Rating for Liquidity of Banks for the Financial Year 2008 - 09

Banks	Component Rating for Banks for Liquidity				Average Component Rating
	Liquid Assets/ Total Deposits (%)	Rating	Liquid Assets/ Total Assets (%)	Rating	
Allahabad Bank	7.81	4	6.80	3	3.50
Andhra Bank	8.90	3	7.72	3	3.00
Axis Bank	12.79	3	10.17	3	3.00
Bank of Baroda	12.52	3	10.59	3	3.00
Bank of India	11.47	3	9.65	3	3.00
Bank of Maharashtra	7.86	4	6.95	3	3.50
Canara Bank	8.91	3	7.58	3	3.00
Central Bank of India	9.33	3	8.30	3	3.00
Corporation Bank	14.25	2	12.13	2	2.00
Dena Bank	13.61	2	12.09	2	2.00
Federal Bank	10.67	3	8.85	3	3.00
HDFC Bank	12.26	3	9.55	3	3.00
Indian Bank	9.21	3	7.95	3	3.00
Indian Overseas Bank	10.91	3	9.02	3	3.00
Indusind Bank	8.70	3	6.97	3	3.00
ICICI Bank	13.72	2	7.90	3	2.50
IDBI Bank	9.98	3	6.51	4	3.50
Karnataka Bank	7.18	4	6.39	4	4.00
Kotak Mahindra Bank	7.29	4	3.97	5	4.50
Oriental Bank of Commerce	12.43	3	10.86	3	3.00
Punjab National Bank	10.21	3	8.67	3	3.00
SBBJ	11.01	3	9.31	3	3.00
State Bank of India	14.07	2	10.83	3	2.50
Syndicate Bank	12.43	3	11.06	3	3.00
UCO Bank	10.83	3	9.72	3	3.00
Union Bank of India	11.52	3	9.93	3	3.00
Vijaya Bank	14.07	2	12.30	2	2.00

Source: Annual Reports of Banks

Table 8.2.23 : Composite Rating under C.A.M.E.L Model for the FY 2008-09

Banks	Composite Rating of a Bank					Weighted Average Composite Rating Points	WACR (rounded up to one decimal point)	Composite Rating
	Capital Adequacy	Asset Quality	Management	Earnings Quality	Liquidity			
Allahabad Bank	3.00	3.00	3.00	3.00	3.50	3.0600	3.1	3
Andhra Bank	2.67	2.67	3.00	3.00	3.00	2.8383	2.8	3
Axis Bank	3.00	3.00	2.50	3.60	3.00	2.9370	2.9	3
Bank of Baroda	2.67	2.67	2.75	3.00	3.00	2.7708	2.8	3
Bank of India	2.67	2.67	2.75	2.80	3.00	2.7468	2.7	3
Bank of Maharashtra	3.33	3.00	3.00	3.00	3.50	3.1491	3.1	3
Canara Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Central Bank of India	3.67	3.00	3.25	3.20	3.00	3.2724	3.3	3
Corporation Bank	3.00	3.00	2.50	3.00	2.00	2.7450	2.7	3
Dena Bank	3.00	3.00	3.00	3.00	2.00	2.8800	2.9	3
Federal Bank	2.00	3.00	3.00	2.40	3.00	2.6580	2.7	3
HDFC Bank	3.33	3.33	3.25	2.80	3.00	3.2052	3.2	3
Indian Bank	3.00	3.00	3.00	2.60	3.00	2.9520	3.0	3
Indian Overseas Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Indusind Bank	3.00	3.00	3.00	3.20	3.00	3.0240	3.0	3
ICICI Bank	2.67	3.33	1.75	3.80	2.50	2.6820	2.7	3
IDBI Bank	3.33	3.00	2.75	3.60	3.50	3.1536	3.2	3
Karnataka Bank	3.33	3.67	3.25	3.00	4.00	3.4240	3.4	3
Kotak Mahindra Bank	2.00	3.00	3.00	2.60	4.50	2.8620	2.9	3
OBC	3.00	3.00	2.50	3.00	3.00	2.8650	2.9	3
Punjab National Bank	3.00	3.00	2.75	3.00	3.00	2.9325	2.9	3
SBBJ	2.67	2.67	3.00	3.00	3.00	2.8383	2.8	3
State Bank of India	3.00	3.67	3.00	3.00	2.50	3.0874	3.1	3
Syndicate Bank	3.33	2.67	3.00	2.80	3.00	2.9925	3.0	3
UCO Bank	3.67	3.00	3.00	3.40	3.00	3.2289	3.2	3
Union Bank of India	3.00	3.00	2.75	3.00	3.00	2.9325	2.9	3
Vijaya Bank	3.33	3.00	3.00	3.20	2.00	2.9931	3.0	3

Source: Calculated

8.2.4. Composite Rating of Banks from the FY 2002 – 03 to 2008 - 09 under C.A.M.E.L Model

Composite CAMEL rating of banks from the FY 2002-03 to FY 2008-09 (*refer Annexure VIII for detailed CAMEL Ratings*) are tabulated below –

Table 8.2.24 : Annual Composite Ratings under CAMEL Model

Banks	Annual Composite Ratings under C.A.M.E.L Model						
	2008-2009	2007 – 2008	2006 – 2007	2005-2006	2004-2005	2003-2004	2002-2003
Allahabad Bank	3	3	3	3	3	3	3
Andhra Bank	3	3	3	3	3	3	3
Axis Bank	3	3	3	3	3	2.5*	2.5*
Bank of Baroda	3	3	3	3	3	3	3
Bank of India	3	3	3	3	3	3	3
Bank of Maharashtra	3	3	3	3	3	3	3
Canara Bank	3	3	3	3	3	3	3
Central Bank of India	3	3.5*	3.5*	3	3	3	3
Corporation Bank	3	3	3	3	3	3	3
Dena Bank	3	3	3	3	3	3	3
Federal Bank	3	3	3	3	3	3	3
HDFC Bank	3	3	3	3	2.5*	3	3
Indian Bank	3	3	3	3	3	3	3
Indian Overseas Bank	3	3	3	3	3	3	3
Indusind Bank	3	3	3	3	3	2	3
ICICI Bank	3	3	3	3	2.5*	3	3
IDBI Bank	3	3	3	2.5*	-	-	-
Karnataka Bank	3	3	3	3	3	3	3
Kotak Mahindra Bank	3	3	3	3	2	3	2
OBC	3	3	3	3	3	3	3
Punjab National Bank	3	3	3	3	3	3	3
SBBJ	3	3	3	3	3	3	3
State Bank of India	3	3	3	3	3	3	3
Syndicate Bank	3	3	3	3	3	3	3
UCO Bank	3	4	3	3	3	3	3
Union Bank of India	3	3	3	3	3	3	3
Vijaya Bank	3	3	3	3	3	3	3

*Banks that are in transition from one phase to the other.
Note: IDBI turned into a bank in September, 2004

8.2.5. Findings of the Study

On the basis of the CAMEL Ratings of the banks over a period of 7 years considered for the research, the following facts have come to light –

1. Out of 27 banks considered for the study, none of the banks were rated either 1 or 5. All the sample banks have a composite CAMEL rating that ranges from 2 to 4 and majority had a CAMEL rating of 3. Even the State Bank of India and the ICICI Bank, the largest bank in the public sector and the private sector respectively, were also rated 3.

2. Trend analysis of the CAMEL ratings of all the sample banks from FY 2002-03 to FY 2008-09 revealed that except a few, all banks had been maintaining a composite CAMEL rating of 3 since FY 2002-03. However, an interesting fact that came to light from the trend analysis of CAMEL ratings was that new generation private sector banks namely, Axis bank, HDFC Bank and ICICI Bank each had elevated themselves to a rating of above 3 (but not 2) at least in one financial year (over the seven year period of study) but were not successful to retain that position and eventually reverted to a rating of 3 in the very next financial year itself. The other two private sector banks in this group to enjoy a composite CAMEL rating of 2 (the highest among ratings of all banks) were IndusInd Bank and Kotak Mahindra Bank. IndusInd Bank had this rating in the FY 2003-04 while Kotak Mahindra Bank had a rating of 2 in FY 2002-03 and FY 2004-05. But unfortunately, these two banks also could not retain their rating and eventually degraded to a rating of 3.

3. As far as public sector banks were concerned, IDBI Bank in the very first year of its transformation as a bank showed a positive sign with a rating of above 3 (it was between 2 and 3) in the FY 2005-06. However, similar to the other private sector banks, this public sector bank's CAMEL rating had also degraded to 3 in next financial year.

4. Central Bank of India, however, showed its rating to dip beyond 3 in FY 2006-07 and 2007-08 and UCO Bank was the only bank to have a worst rating of 4 in FY 2007-08.

8.2.6. Conclusion

CAMEL ratings, which are assigned by examiners at the conclusion of an examination, are numerical ratings of the quality of a bank's financial condition, risk profile, and overall performance. The trend analysis of C.A.M.E.L rating of banks from 2002-03 to 2008-09 reveals that, in 2008-09, on an average all the sample Indian commercial banks had a CAMEL rating of 3.

The banks in this group (i.e., with a CAMEL rating of 3) exhibit some degree of supervisory concern in one or more of the component areas. These banks exhibit a combination of weaknesses that may range from moderate to severe. However, the magnitude of the deficiencies *generally* will not cause a component to be rated more severely than 4. Management may lack the ability or willingness to effectively address weaknesses within appropriate time frames. Banks in this group generally are less capable of withstanding business fluctuations and are more vulnerable to external influences than those banks rated a composite 1 or 2. Additionally, these banks may be in significant non-compliance with laws and regulations. Risk management practices may be less than satisfactory relative to the institution's size, complexity, and risk profile. These banks require more than normal supervision, which may include formal or informal enforcement actions. Failure appears unlikely, however, given the overall strength and financial capacity of these banks (Central Bank of Liberia, 2005).

Thus, as almost all sample banks with a composite rating of 3 falls under fair category and have weaknesses, which if left unmonitored, may result in failure of banks or even led to degradation to group 4 or 5. Therefore, these banks need utmost monitoring so that they do not fail. Although C.A.M.E.L rating is carried out annually but in case of those banks that are having a composite rating of 3, half-yearly assessment is deemed necessary. Such assessments would ensure that these banks are meeting compliance and statutory requirements and at the same time it would exert some pressure on the banks to improve their performance and thereby contribute towards its stability. However, it is worth mentioning that C.A.M.E.L rating may not be sole basis of assessing the risk profile of banks. This is because, commercial banks like State Bank of India, although had a rating of 3 in the FY 2008-09 and fell under Fair (watch) category, the probability of its failure is negligible. SBI, with its large network of branches (11,448 branches) and assets worth Rs. 964,432 crores as on March 2009, is strong enough to absorb minor crisis. Moreover, SBI is the only Indian bank to find a place in the Fortune Global 500 list (placed at 380 in the FY 2008-09), only Indian bank among the top 100 banks in the world, ranked 8th in top 25 banks in Asia and also placed at 150th spot in the Forbes 2000 list of largest companies in the world (in FY 2008-09)[2]. Furthermore, in India, the deposits in commercial banks are guaranteed by the Government and given the prudential norms banks are required to adhere to, there is a remote possibility that failure of one bank would result in systematic risk. In fact, in India, there are several strong banks like SBI that are capable of weathering minor crises. It is also worth mentioning that the strength of our banks and other financial institutions coupled with conservative and sound regulation by the Reserve Bank of India has made us better equipped to face challenges.

[2] **Source**: SBI Annual Report 2008-09

PART III

PERCEPTION OF BANK MANAGERS AND CUSTOMERS ON UNIVERSAL BANKING CONCEPT

(Research Objective # 3)

The success of Universal banking concept depends to some extent on how the services are being offered by the concerned banks and also about the awareness and demand of these services from existing and potential customers of banks. Therefore, an attempt was made through this research to (i) know the perception of Bank Managers on Universal Banking concept and (ii) customers' awareness of and need for diversified services that are on offer. This is deemed necessary as both the employees of banks (especially the Bank Managers) and the customers of banks are the two vital pillars necessary to make Universal Banking in India a success.

8.3.1. Findings of Survey on Bank Managers

Sample Size : 100 Bank Managers of Public and Private sector banks

8.3.2. Profile of Indian Bank Managers[1]

The profile of Bank Managers shows that majority of them are –

- Males;
- Professionally qualified (CAIIB, Law, MBA etc.);
- Have experience of minimum 10 years; a few had more than 15 years of service.

8.3.3. Perception of Bank Managers[2]

(i) Services

Majority of the sample (about 88%) believes that to remain competitive as well as to retain its market position, a bank needs to provide a host of innovative banking and financial services under 'one-roof'. However, a small percentage of the sample (12%) thinks that apart from variety of services, brand name and efficient service delivery process of banks play important role in retaining their competitive position.

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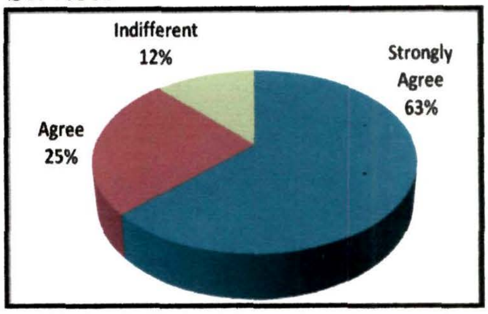
[1] Refer Annexure IV (Part A)
[2] Refer Annexure IV (Part C)

Table 8.3.1: *Need to offer diversified Services*

Responses	No. of Respondents
Strongly Agree	63
Agree	25
Indifferent	12
Disagree	0
Strongly Disagree	0

Fig. 8.3.1: *Need to offer diversified Services*



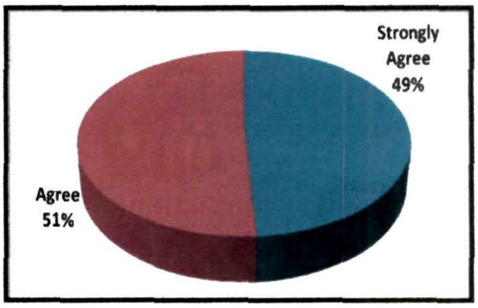
(ii) Transaction Cost

All the respondents agreed that as and when banks would start to offer diversified services, they would save tranPPsaction costs considerably.

Table 8.3.2 : *Offering Diversified Services saves Transaction Costs.*

Responses	No. of Respondents
Strongly Agree	49
Agree	51
Indifferent	0
Disagree	0
Strongly Disagree	0

Fig. 8.3.2: *Offering Diversified Services saves Transaction Costs.*



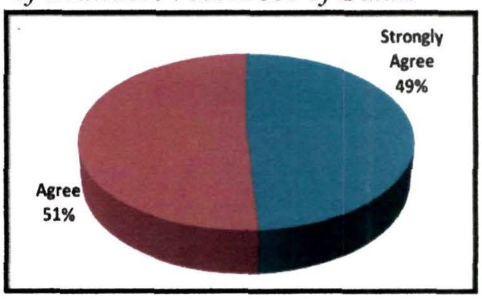
(iii) Resource Utilisation

All the respondents agree that while providing diversified services under 'one-roof', a bank can make optimum utilisation of resources and the responses so obtained are depicted below –

Table 8.3.3: *Optimum utilisation of available resources of Banks*

Responses	No. of Respondents
Strongly Agree	49
Agree	51
Indifferent	0
Disagree	0
Strongly Disagree	0

Fig. 8.3.3: *Optimum utilisation of available resources of Banks*



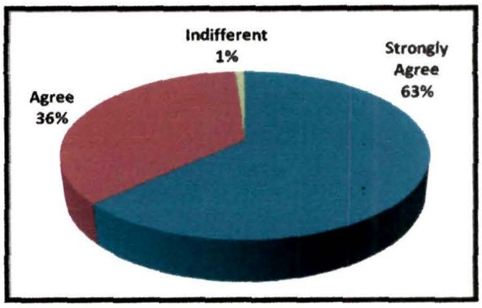
(iv) Opportunities associated with Universal Bank

All the respondents believed that the transition of a bank from a traditional bank to a Universal bank is going to bring about opportunities for the existing employees (for example, a higher pay scale or promotion etc.).

Table 8.3.4: *Universal Bank will increase opportunities*

Responses	No. of Respondents
Strongly Agree	63
Agree	36
Indifferent	1
Disagree	0
Strongly Disagree	0

Fig. 8.3.4: *Universal increase will increase opportunities*



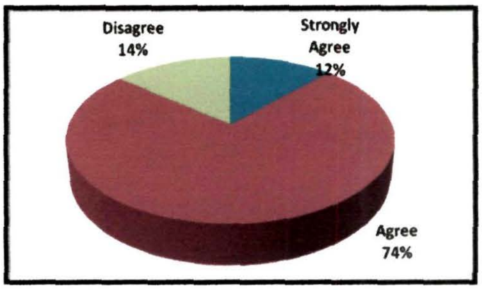
(v) Workload associated with Universal Banking

Interestingly, majority of the respondents (86 %) feel that a commercial bank's transformation into a Universal bank will increase their work load. However, 14 % of the respondents believe that their work load would be significantly reduced when a bank makes this transition.

Table 8.3.5: *Universal Banking will increase work load of Employees*

Responses	No. of Respondents
Strongly Agree	12
Agree	74
Indifferent	0
Disagree	14
Strongly Disagree	0

Fig. 8.3.5: *Universal Banking will increase work load of Employees*



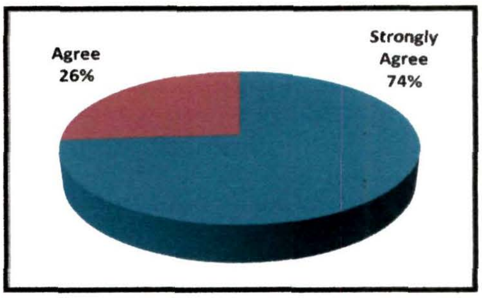
(vi) Technology

The research brings to light that all the bank managers agree that as banks would be offering a variety of products under Universal banking framework, their dependence on latest technology would definitely increase – about 74% of the respondents strongly agreed with the statement while the remaining 26% simply agreed with it.

Table 8.3.6 : *Universal banking will increase dependence on latest Technology*

Responses	No. of Respondents
Strongly Agree	74
Agree	26
Indifferent	0
Disagree	0
Strongly Disagree	0

Fig. 8.3.6: *Universal banking will increase dependence on latest Technology*



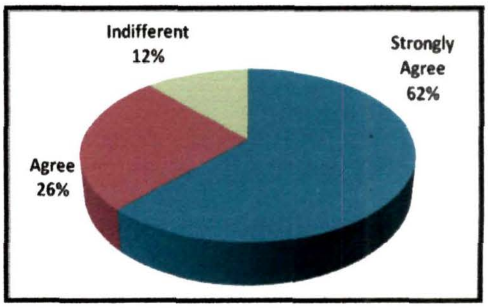
(vii) Training & Development

Majority of the respondents (about 88%) felt that their banks gave highest importance on training and development of the existing staff so as to make them capable of handling their job responsibilities efficiently in a technology-intensive banking environment. However, according to the remaining minority of the respondents (12%), their banks did not give too much priority to training and development of their work-force but at the same time they have mentioned that their organisation generally provided need-based training to the staff.

Table 8.3.7 : *Importance given to Training & Development of Staff*

Responses	No. of Respondents
Strongly Agree	62
Agree	26
Indifferent	12
Disagree	0
Strongly Disagree	0

Fig. 8.3.7: *Importance Training Training & Development of Staff*



(viii) Customer-base

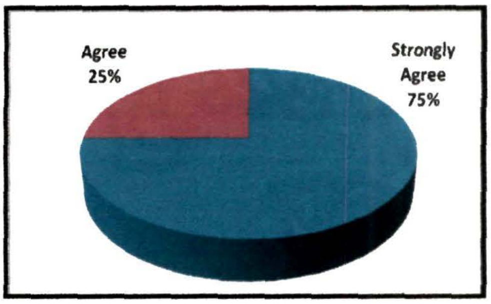
Banks, under Universal banking framework, would offer a variety of tailor-made products – like credit cards, housing finance, investment banking, stock trading, insurance, mutual funds etc. to their customers apart from their traditional products.

All the respondents agreed that as banks begin offering diversified products under Universal banking framework, a bank would definitely increase its customer-base.

Table 8.3.8: *Universal Banking will increase Customer-base*

Responses	No. of Respondents
Strongly Agree	75
Agree	25
Indifferent	0
Disagree	0
Strongly Disagree	0

Fig. 8.3.8: *Universal Banking will increase Customer-base*



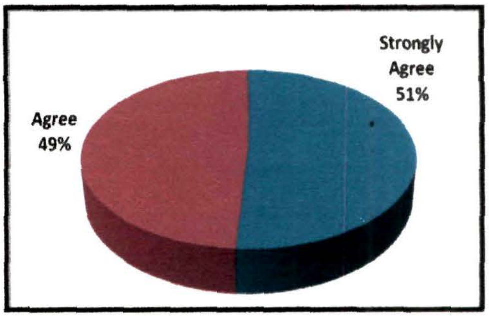
(ix) Customer Satisfaction

The respondents unanimously agreed that customer satisfaction under Universal banking would be higher as banks will opt for cross selling products.

Table 8.3.9: *Customer Satisfaction under Universal Banking will be higher*

Responses	No. of Respondents
Strongly Agree	51
Agree	49
Indifferent	0
Disagree	0
Strongly Disagree	0

Fig. 8.3.9: *Customer Satisfaction under Universal Banking will be higher*



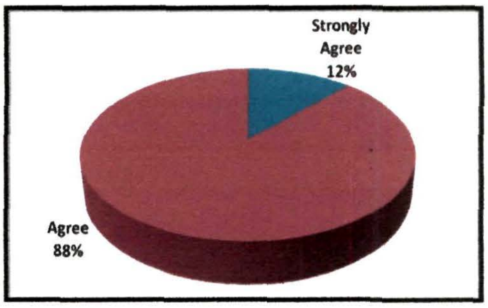
(x) Concentration of Economic Power

The respondents felt that banks' transition towards Universal banking framework may result in concentration of financial and economic power in the banking sector because of the diverse financial services under one roof.

Table 8.3.10 : *Universal Banking will lead to concentration of Financial and Economic Power.*

Responses	No. of Respondents
Strongly Agree	12
Agree	88
Indifferent	0
Disagree	0
Strongly Disagree	0

Fig. 8.3.10.: *Universal Banking will lead to concentration of Financial & Economic Power.*



(xi) Core Competence

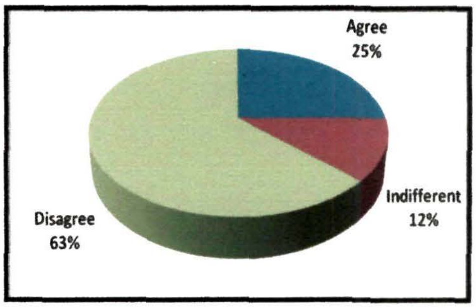
Experts opine that in course of offering multi-products, there is a possibility that the banks would lose sight of their core competence and would face greater risk by participating in untested activities.

Majority of the respondents (63%) disagree that while providing diversified service, a bank would lose its 'core competence' while 25% of the respondents feel that banks might lose their 'core competence' when they provide diversified services under Universal banking framework.

Table 8.3.11 : *Bank will lose its Core Competence while offering Diversified Products*

Responses	No. of Respondents
Strongly Agree	0
Agree	25
Indifferent	12
Disagree	63
Strongly Disagree	0

Fig. 8.3.11: *Banks will lose its Core Competence while offering Diversified Products*



8.3.4. Quantifying the Perceptual Responses

The responses to the eleven statements made on the five-point Likert Scale is quantified as follows –

The statements are classified into favourable and unfavourable items. Each favourable item is given a weight of +2, +1, 0, -1, -2 and each unfavourable item is given numerical weight of -2, -1, 0, +1, +2. The total score of the respondents is obtained by adding the weighted score on individual statements.

Table 8.3.12 : The various statements and their numerical weights[3]

Sl. No.	Statement	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree	Total Weighted Score
1.	Need to offer a variety of services to remain competitive	63 (+2)	25 (+1)	12 (0)	0 (-1)	0 (-2)	151
2.	Optimum utilisation of resources possible through Universal banking	49 (+2)	51 (+1)	0 (0)	0 (-1)	0 (-2)	149
3.	Variety of services reduces transaction costs	49 (+2)	51 (+1)	0 (0)	0 (-1)	0 (-2)	149
4.	Opportunities for existing Bank employees increases in Universal banks	63 (+2)	36 (+1)	1 (0)	0 (-1)	0 (-2)	162
5.	Work load of employee will increase in Universal banks	12 (-2)	74 (-1)	0 (0)	14 (+1)	0 (+2)	-84
6.	Dependence on technology increases	74 (+2)	26 (+1)	0 (0)	0 (-1)	0 (-2)	174
7.	Banks pay importance on training of their workforce to make them competent.	62 (+2)	26 (+1)	12 (0)	0 (-1)	0 (-2)	150
8.	Customer-base increases in case a bank offers diversified services	75 (+2)	25 (+1)	0 (0)	0 (-1)	0 (-2)	175
9	Customer satisfaction under Universal banking is high	51 (+2)	49 (+1)	0 (0)	0 (-1)	0 (-2)	151
10.	Universal banking will lead to concentration of economic power.	12 (-2)	88 (-1)	0 (0)	0 (+1)	0 (+2)	-112
11.	Offering diversified services will lead to loss of core competence.	0 (-2)	25 (-1)	12 (0)	63 (+1)	0 (+2)	38
	Total Score of all respondents						**+1103**

The range of weighted score could have varied between -2200 and +2200. As the total score obtained is **+1103**, which is positive and comparatively high, it can be inferred that the perception of Bank Managers on Universal Banking is positive. At the same time, it can be anticipated that a positive response and support from their side would facilitate the banks' transition towards becoming a Universal Bank.

[3] The figures in the parentheses show the weights given to each option

8.3.5. Findings of Survey on Customers of Banks

Sample size : 270 customers of Public and Private sector banks

8.3.6. The Profile of Bank Customers[4]

The customers of banks are –

- Males as well as females;
- Educated – graduate as well as post graduate;
- Majority of them fall in the age group of 21 – 50 years.
- Educated – graduate as well as post graduate;
- Majority of them fall in the age group of 21 – 50 years.
- Working class.
- Average Annual Household Income ranges between Rs. 1,00,000 and Rs. 5,00,000

8.3.7. Awareness about Services presently offered by Banks

A commercial bank offers a variety of services that are listed under *Annexure - III*. It is deemed necessary that the customers should be aware about the services that are presently offered by banks so as to ensure that it is availed by them. Through this study, an attempt is made to know the level of awareness on various services that are presently offered by banks.

The following table shows the responses of the sample bank customers –

Table 8.3.13 : Awareness about Banking and Financial Services

Sl. No.	Banking and Financial Services	Responses (in percentage)		
		Yes (knows that the service is offered by their bank)	No (knows that the service is not offered by their bank)	Cannot say (does not know whether the service is being offered or not by the bank)
1.	Retail loans	**71.11**	4.81	24.07
2.	Pension payments	19.26	35.19	45.56

[4] Please refer to Annexure V (Part A)

3.	Travellers cheque / card	8.15	28.15	63.70
4.	Gift cheque	2.22	22.59	**75.19**
5.	Locker facility	**72.96**	13.70	13.33
6.	Business overdraft facilities	4.07	13.70	**82.22**
7.	Agriculture and Rural Credit	**70**	8.52	21.48
8.	Loan against gold	5.56	16.67	**77.78**
9.	Housing loans	**91.11**	6.30	2.59
10.	Loan against shares/ debentures	8.89	7.41	**83.70**
11.	Kisan credit card	6.30	22.59	**71.11**
12.	Export finance	6.30	15.93	**77.78**
13.	Tax payment	11.11	16.67	**72.59**
14.	Forex remittances	6.30	9.63	**84.07**
15.	Telephone & Electricity bills payment	**70**	16.67	13.33
16.	School tuition fee payment	**70.74**	7.04	22.22
17.	Sale of Entrance exam forms	18.52	4.07	**77.41**
18.	Cash Management services	1.48	7.04	**91.48**
19.	Letter of Credit & Export bill negotiation	4.81	6.30	**88.89**
20.	NRE & NRO Account facilities	0.74	5.56	**93.70**
21.	Facilitates donation for charity	0	2.59	**97.41**
22.	Recharging pre-paid Mobiles	1.48	2.59	**95.93**
23.	Pre-paid cards for payment disbursements (Smart Card)	1.48	2.22	**96.30**
24.	Microfinance	65.56	7.78	26.66
25.	Credit card	67.04	20.74	12.22
26.	ATM card	**81.85**	11.85	6.30
27.	Debit card	57.41	35.56	7.41
28.	Depository services	5.56	5.56	**88.89**
29.	Consultancy services/ Trade services	0.74	2.59	**96.67**
30.	Investment banking	1.48	11.11	**87.41**
31.	Phone banking	4.07	11.85	**84.07**

32.	Insurance (Life & General)	22.59	5.56	**71.85**
33.	Mutual funds	24.07	7.41	68.52
34.	Health cards	0.74	11.85	**87.41**
35.	NRI Investment	2.22	7.41	**90.37**
36.	Online stock trading	1.48	5.56	**92.96**
37.	Online bill payment	8.15	24.81	67.04
38.	Online cash remittances	2.22	3.33	**94.44**
39.	Online Ticket (Air & Railway) booking	11.85	8.15	**80**
40.	Derivative and Forward contract	0	2.59	**97.41**
41.	Electronic fund transfer	**72.22**	7.78	20
42.	RTGS	5.56	15.93	**78.52**
43.	Credit card securitisation	0.74	3.33	**95.93**
44.	Home Search (lease, purchase and sell house property)	0	2.22	**97.78**

In this study, in order to know whether the customers of banks are aware about various banking and financial services that are presently offered by banks, 70 % response was considered as the cut-off rate to differentiate between awareness and ignorance. Thus, to know the customers' awareness about banking and financial services, a response rate of 70 % and above against the option – 'Yes' (as shown in the above table) was considered for accepting that majority of the customers were aware about that service. Similarly, the services that had a response of 70 % and above against the option – 'Cannot Say', was considered for accepting that the majority of the customers were ignorant about that service.

The research brought to light that majority of the customers was not aware about the variety of services that are presently offered by the bank. Except for the services like retail loans (71.11 %), locker facility (72.96 %), agriculture and rural credit (70 %), housing loan (91.11 %), telephone and electric bill payment (70 %), school tuition fee payment (70.74 %), ATM card (81.85 %) and electronic fund transfer (72.22 %), the awareness on the availability of other services was comparatively very low. However, to some extent, customers were aware about the availability of services like microfinance (65.56 %), credit cards (67.04 %), debit cards (57.41 %) etc.

It is interesting to note that while many of the sample banks offer services like gift cheques, bank overdraft facility, loan against gold, Loan against shares/debentures, Kisan credit card, export finance, tax payment, Forex remittances, Sale of Entrance exam forms, cash management services, letter of credit & Export bill negotiation, NRE & NRO Account facilities, health cards, NRI Investment etc., majority of the customers was not aware about any of those services.

Thus, from the study, it was observed that majority of the respondents were not aware about majority of the services that are offered by their bank.

The requirement of the services by the customers of bank is shown below –

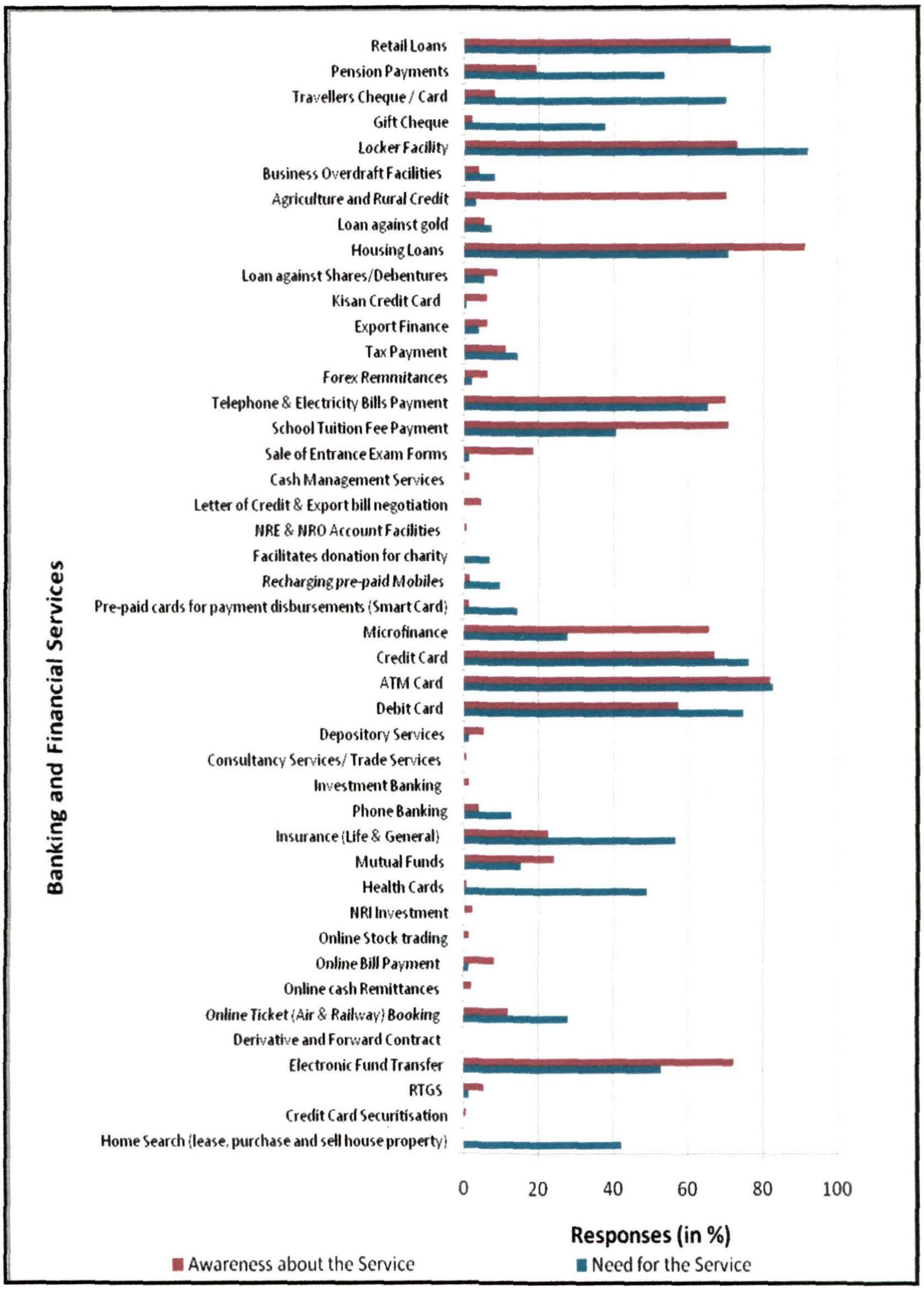
Table 8.3.14 : Customers' need of various Banking and Financial Services

Sl. No.	Banking and Financial Services	Needs the Service (Responses in percentage)
1.	Retail loans	**81.85**
2.	Pension payments	53.70
3.	Travellers cheque / card	**70.00**
4.	Gift cheque	37.78
5.	Locker facility	**91.85**
6.	Business overdraft facilities	8.15
7.	Agriculture and Rural Credit	3.33
8.	Loan against gold	7.41
9.	Housing loans	**70.74**
10.	Loan against shares/debentures	5.56
11.	Kisan credit card	0.74
12.	Export finance	4.07
13.	Tax payment	14.44
14.	Forex remittances	2.22

15.	Telephone & Electricity bills payment	65.19
16.	School tuition fee payment	40.74
17.	Sale of Entrance exam forms	1.48
18.	Cash Management services	0
19.	Letter of Credit & Export bill negotiation	0
20.	NRE & NRO Account facilities	0
21.	Facilitates donation for charity	7.04
22.	Recharging pre-paid Mobiles	9.63
23.	Pre-paid cards for payment disbursements (Smart Card)	14.44
24.	Microfinance	27.78
25.	Credit card	**76.30**
26.	ATM card	**82.59**
27.	Debit card	**74.81**
28.	Depository services	1.48
29.	Consultancy services/ Trade services	0
30.	Investment banking	0
31.	Phone banking	12.59
32.	Insurance (Life & General)	56.67
33.	Mutual funds	15.19
34.	Health cards	48.89
35.	NRI Investment	0
36.	Online stock trading	0
37.	Online bill payment	1.48
38.	Online cash remittances	0
39.	Online Ticket (Air & Railway) booking	28.15
40.	Derivative and Forward contract	0
41.	Electronic fund transfer	52.96
42.	RTGS	1.48
43.	Credit card securitization	0
44.	Home Search (lease, purchase and sell house property)	42.22

The customers' awareness (Refer Table 8.3.13.) and customers' need (Refer Table 8.3.14) of various Banking and Financial Services is graphically depicted in Fig. 8.3.12.

Fig. 8.3.12 : Customers' Awareness of & Need for various Banking and Financial Services



Although customers' awareness about various banking and financial services were poor, from the research, it came to light that even those who were aware about it were not much interested in availing these services. This can possibly be attributed to the fact that because of lack of awareness, customers have restricted themselves to availing only the conventional banking services. It can therefore be presumed that most of the services that the banks would be offering under Universal banking framework will have few takers, if awareness level is low. Hence, it would have no positive impact on either 'economics of scale and scope' or reduced transaction cost. Therefore, all these strongly pinpoint the need of financial education programme to be undertaken by banks so as to generate awareness about the available services of the banks among the masses.

8.3.8. Location of a Bank Branch

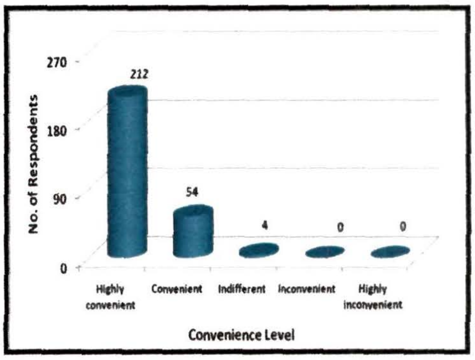
Location of the bank branch is considered as one of the 18 patronage factors or attributes which the customers consider for selecting a Bank (Khan, 2004). In fact, in his study, Khan (2004) points out that high rating of convenient location suggest an important strategic implication for branch expansion into those areas with high concentration of current customers. Thus, it is an important criterion for bank selection.

Majority of the respondents (98.52%) felt that their bank was located at a convenient place.

Table 8.3.15 : *Location of the Bank Branch*

Responses	No. of Respondents	% of Respondents
Highly convenient	212	78.52
Convenient	54	20.00
Indifferent	4	1.48
Inconvenient	0	0
Highly inconvenient	0	0

Fig. 8.3.13: *Location of the Bank Branch*



Location of a bank, if it is proper, ensures continuous inflow of customers to avail various services that are offered. Moreover, under Universal banking framework, a bank is going to offer a variety of services under 'one-roof' and if the location is not convenient to the potential customers, in spite of availability of the services, there shall be no takers. Thus, location of a branch of a bank is one of the crucial factors that would have an impact on the profitability and success of the bank.

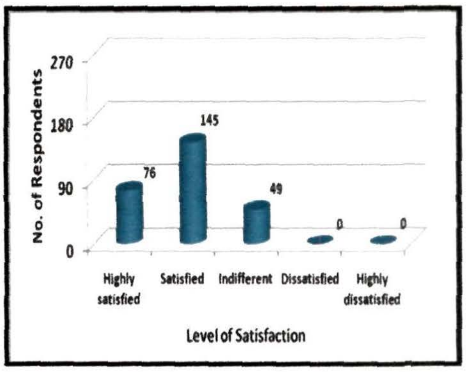
8.3.9. Customer Satisfaction with the variety of Services offered by Banks

Almost all the banks have been offering services ranging from insurance to housing finance, from credit/ debit cards to mutual funds etc. All these services that are offered by banks are available under an umbrella brand and also under 'one-roof'. Majority of the respondents (81.52%) are satisfied with the services that are presently offered by banks.

Table 8.3.16 : *Level of Satisfaction with the variety of Services offered by the Bank*

Responses	No. of Respondents	% of Respondents
Highly satisfied	76	28.15
Satisfied	145	53.37
Indifferent	49	18.15
Dissatisfied	0	0
Highly dissatisfied	0	0

Fig. 8.3.14: *Level of Satisfaction with the variety of Services offered by the Bank*



As majority of the respondents are satisfied with the services that are offered by banks, it can be considered as a positive indication that banks in the sample would be able to carry out its business operations successfully and earn profit.

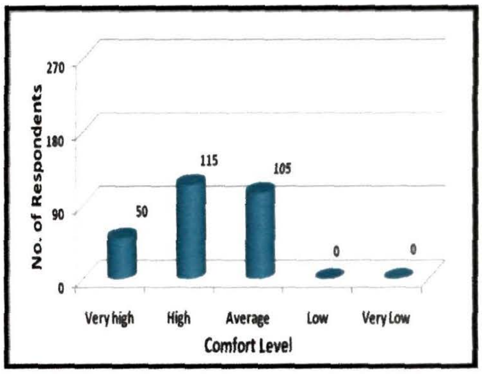
8.3.10. Comfort and Convenience with the manner the Services are provided by Banks

The previous responses were in terms of availability of different services, while this statement tries to understand customers' comfort level with the process of service delivery. A bank might be offering a 'bouquet of services' which are presently of demand in the market. But if these services are offered through a procedure/ manner which is not comfortable or convenient to customers, then the bank would not find any takers of its products. Therefore, utmost importance is to be given on the service delivery process.

Table 8.3.17 : *Level of Comfort/ Convenience with the Services offered by Banks*

Responses	No. of Respondents	% of Respondents
Very high	50	18.52
High	115	42.59
Average	105	38.89
Low	0	0
Very Low	0	0

Fig. 8.3.15: *Level of Comfort/ Convenience with the Services offered by Banks*



The research brings to light that a small percentage of the respondents (around 18.52 %) are highly satisfied with the service delivery process and 42.59 % consider it high, and 38.89 % of the respondents think that the level of comfort/ convenience with the existing service delivery process is average.

8.3.11. Use of Technology

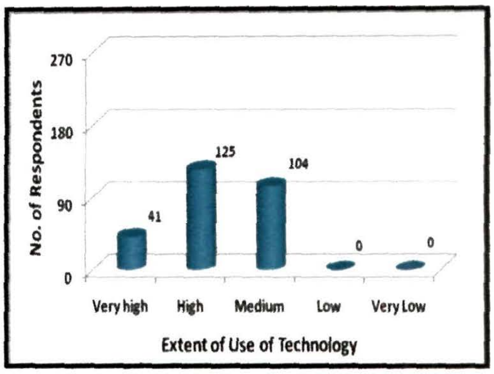
In the present day context, it can be said that most of the services offered by banks are backed by appropriate technology. Among the wide array of available examples, the simplest of these ranges from the facility of withdrawal of money through ATMs to Net Banking, from credit/ debit card to RTGS/NEFT etc. In fact, banks are gearing up to introduce modern technology to facilitate prompt customer service.

Majority of the respondents (61.48 %) feel that their banks are making use of modern technology to a high extent while delivering its services, while 38.52 % of the respondents perceive that the extent of use of technology by the bank in delivering its services to the customers is medium.

Table 8.3.18 : *Extent of use of Technology by the Bank in its Service Delivery Process*

Responses	No. of Respondents	% of Respondents
Very high	41	15.18
High	125	46.30
Medium	104	38.52
Low	0	0
Very Low	0	0

Fig. 8.3.16: *Extent of use of Technology by the Bank in its Service Delivery Process*



As per information available in the website of banks and from the managers' responses, many banks had RTGS, EFT, online bill payment, online cash remittance, online trading in place. However, some of these technology-driven services are restricted to some specific branches of a bank and awareness about and need for these services were relatively poor among the customers of banks. Although majority of the respondents (61.48 %) feels that their bank was making extensive use of technology, their perception of this statement was mainly based on technology used by banks to offer services like ATM/ Debit cards, Credit cards etc.

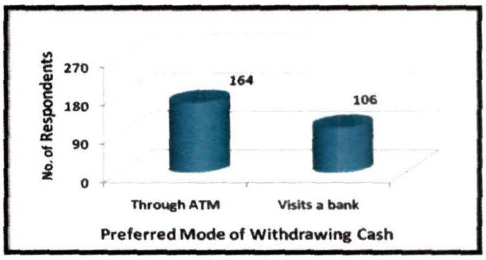
8.3.12. Mode of Cash Withdrawal

The study brings to light that 60.74 % of the respondents use ATMs to withdraw money and the remaining 39.26 % of the respondents still prefer to use the traditional method of withdrawing money by visiting a bank branch.

Table 8.3.19 : *Preferred Mode of Cash withdrawal from the Bank*

Responses	No. of Respondents	% of Respondents
Through ATM	164	60.74
Visits a bank	106	39.26

Fig. 8.3.17: *Preferred Mode of Cash withdrawal from the Bank*



Moreover, out of those respondents who make use of ATMs, majority of them fall in the age group of 20 – 50 years. On the other hand, in case of respondents who do not use ATMs, majority of them fall in the age group of 51 – 60 years and above.

Table 8.3.20 : *Age-group of Customers who use ATMs*

Age group of Customers	No. of Respondents
Above 60 years	10
51 – 60 years	15
41 – 50 years	35
31 – 40 years	50
21 – 30 years	41
Below 21 years	13

Fig. 8.3.18 : *Age-group of Customers who use ATMs*

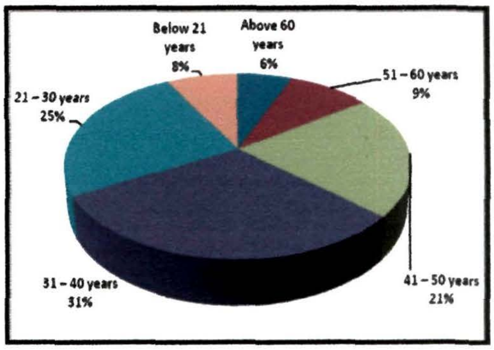
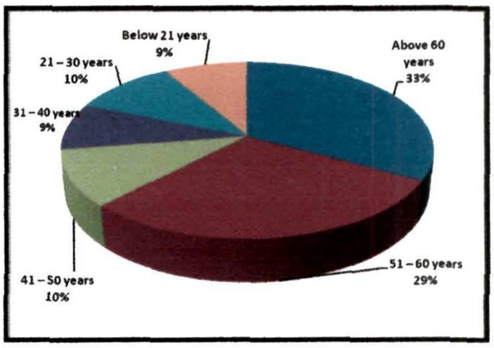


Table 8.3.21: *Age group of Customers who visit a bank branch for cash withdrawal*

Age group of Customers	No. of Respondents
Above 60 years	35
51 – 60 years	31
41 – 50 years	11
31 – 40 years	09
21 – 30 years	11
Below 21 years	09

Fig. 8.3.19 : *Age group of Customers who visit a bank branch for cash withdrawal*



Thus, it seems that there is a relation between age of a customer and the use of technology.

In order to infer whether use of technology and age of the customer is dependent or not, Chi-square test was performed.

The hypotheses were as below –

H_0: Mode of cash withdrawal and age are independent.

H_1: Mode of cash withdrawal and age are not independent.

Table 8.3.22. Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	69.238[a]	5	.000
Likelihood Ratio	71.549	5	.000
Linear-by-Linear Association	40.083	1	.000
N of Valid Cases	270		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.64.

Source: Output of SPSS 16.0

The observed level of significance of Chi Square test (p= .000) is less than the expected level of significance ($\alpha = 0.01$). Hence, the outcomes of Chi Square test suggest reject of H_0 (at 99% confidence level) and acceptance of the alternative hypothesis H_1 instead. Thus, it can be said that there exist a relation between the age of customers of banks and their preferred mode of cash withdrawal.

From the research, it comes to light that customers who fall in a higher age bracket (i.e., mid-fifties and above) prefer traditional way of cash withdrawal. On the other hand, the younger lot prefers just the opposite. Thus, it can be anticipated that when this younger lot would move to the higher age group, they would still prefer to make use of technology-driven services and slowly with the passage of time, the demand of availing services backed by modern technology would be high in comparison to the services offered through traditional means. However, traditional methods would have to be retained for senior citizens. Therefore, in view of this, banks need to make sure that the services they offer to their customer are to be backed by appropriate technology.

8.3.13. Degree of fast & efficient Customer Service of the Bank

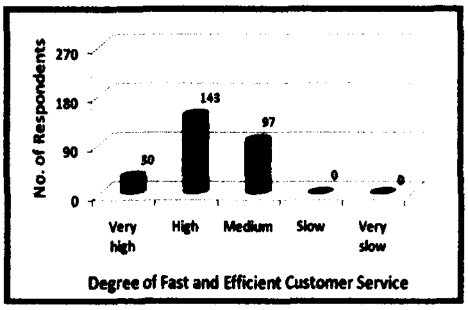
Another aspect that has to be given importance for the success of a service organisation like a bank is the degree of fast and efficient customer service of the bank. If time taken for a transaction is very long, there would be longer waiting time. This would be a demotivating factor for a potential client of a bank to avail a service from the bank.

Majority of the respondents (64.07 %) think that the customer services of the bank is fast and at the same time it is efficient. However, 35.93 % of the respondents feel that there are avenues for improvement and banks need to work in this aspect.

Table 8.3.23 : *Degree of Fast and Efficient Customer Service of the Bank*

Responses	No. of Respondents	% of Respondents
Very high	30	11.11
High	143	52.96
Medium	97	35.93
Slow	0	0
Very slow	0	0

Fig. 8.3.20: *Degree of Fast and Efficient Customer Service of the Bank*



Thus, a bank would have to make sure that the customer service offered by banks should be fast and efficient in case it wants to retain its existing customers and at the same time increase its customer-base.

8.3.14. Attitude of Bank Personnel

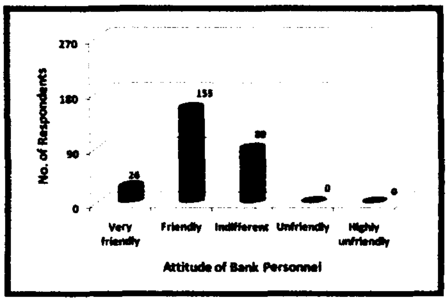
The profitability of the banks, today, depends to some extent on its customer relation policies. This is because, courtesy shown to the customer matters a lot in striking a business deal. Thus, customer relation is another crucial area on which banks are increasingly paying attention.

The research highlights that although a major percentage of the respondents (67%) feel that the personnel of the banks are friendly, yet a significant 33% of the respondents felt that they had not seen any friendly gestures on the part of the bank personnel while dealing with them.

Table 8.3.24 : *Attitude of Bank Personnel*

Responses	No. of Respondents	% of Respondents
Very friendly	26	9.63
Friendly	155	57.41
Indifferent	89	32.96
Unfriendly	0	0
Highly unfriendly	0	0

Fig. 8.3.21: *Attitude of Bank Personnel*



8.3.15. Advertisement & Awareness

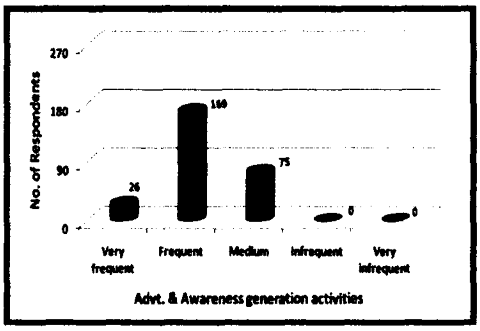
Advertisement creates demand and eventually facilitates the sale for such products which have got a latent demand in the market. Moreover, advertisement generates awareness of the available products of the banks and how these can be availed.

Majority of the respondents (72%) think that their banks generate awareness on the available products of the bank through frequent advertisement. However, 28% of the respondents feel that advertisement and awareness generation programme undertaken by their banks are average.

Table 8.3.25: *Advertisement & Awareness generation activities of Banking Services*

Responses	No. of Respondents	% of Respondents
Very frequent	26	9.63
Frequent	169	62.59
Medium	75	27.78
Infrequent	0	0
Very infrequent	0	0

Fig. 8.3.22: *Advertisement & Awareness generation activities of Banking Services*



8.3.16. Quantifying the Perceptual Responses

The responses to the seven statements, made on the five-point Likert scale, is quantified as follows –

The statements are classified into favourable and unfavourable. However, unlike the survey on Bank managers, in case of this survey, all the items were favourable and each favourable item is given a weight of +2, +1, 0, -1, -2. The total score of the respondents is obtained by adding the weighted score on individual statements.

Table 8.3.26. : The various statements and their numerical weights[5]

Sl. No.	Statement	Highly positive	Positive	Medium	Negative	Highly negative	Total Weighted Score
1.	Location of the bank	212 (+2)	54 (+1)	4 (0)	0 (-1)	0 (-2)	478
2.	Customer satisfaction on the variety services offered by banks	76 (+2)	145 (+1)	49 (0)	0 (-1)	0 (-2)	297
3.	Comfort and convenience with the manner the services are provided by banks	50 (+2)	115 (+1)	105 (0)	0 (-1)	0 (-2)	215
4.	Degree of fast and efficient customer service of the bank	30 (+2)	143 (+1)	97 (0)	0 (-1)	0 (-2)	203
5.	The extent of use of technology while rendering services.	41 (+2)	125 (+1)	104 (0)	0 (-1)	0 (-2)	207
6.	Customer relations	26 (+2)	155 (+1)	89 (0)	0 (-1)	0 (-2)	207
7.	Advertising & awareness generation activities of banking services.	26 (+2)	169 (+1)	75 (0)	0 (-1)	0 (-2)	221
		Total Score of all the Respondents					**+1828**

The range of weighted score could have varied between -3780 and +3780. The total score obtained is **+1828**, which is highly positive and as such it implies that customers are likely to continue to avail service of the bank if it decides to convert into a Universal Bank.

8.3.17. Conclusion

The 'Universal Banking' concept can be successful only when the implementers i.e., Bank Managers and the customers have a positive attitude towards it. It is important that customers are aware of whatever services the banks have in their bouquet so that they can make their choice beyond the traditional banking products. However, it is unfortunate that majority of the bankers often assume that the basic consumer benefits of their products are known (Saunders,

[5] The figures in the parentheses show the weights given to each option

Bendixen & Abratt, 2007), and they neglect the need for generating awareness of their products. Awareness is important because without the knowledge of a product or about its availability, customers normally would not ask for it and rather they would prefer to avail it from other outlets or even from the competitors of the bank. In such a case, banks are bound to lose their customers and their loyalty, and also business and profit. Therefore, it can be anticipated that active involvement of the bank managers to educate and create awareness on the variety of products that are available is of utmost importance in the sustenance of banking business as well as in facilitating the banks in their transition towards becoming a Universal Bank.

Thus, conclusively, it can be said from the survey that both the Bank Managers and the customers of the banks have the right attitude and it can be expected that in the years to come their support (both managers and customers of banks) would facilitate a few more banks to metamorphose into Universal Banks. However, it can also be concluded that the degree of awareness on availability of services that are presently offered by the banks among the customers of bank is very low, which can be an obstacle in the transition process of the banks.

Chapter – 9
Conclusion and Recommendations

CONCLUSION AND RECOMMENDATIONS

9.1. Epilogue

The research was undertaken to know the position of a commercial bank with respect to a Universal bank and also its financial health and risk exposure. In other words, an attempt is made to know the progress made by a commercial bank in the direction of universal banking framework and the rating it enjoys as per CAMEL Model. Thus, in short, the objective is to understand the transitory phase of banks as they move towards Universal banking framework.

9.2. Conclusion

On the basis of findings of the study, the following conclusion can be derived –

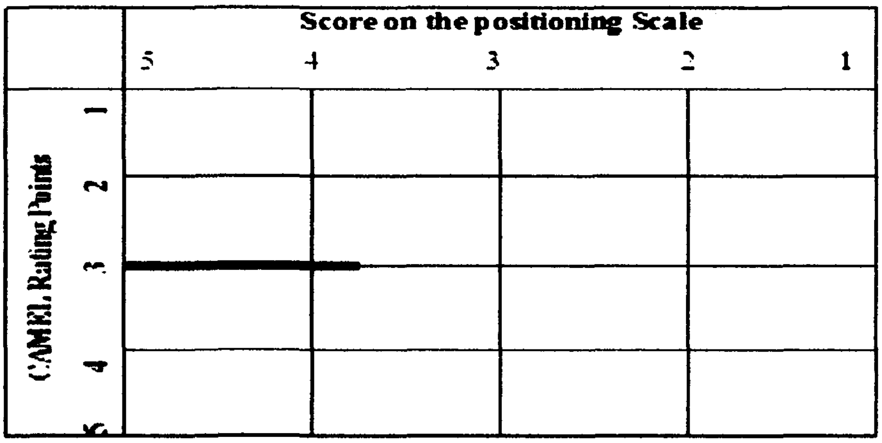
First, in order to know the position of a commercial bank in the direction of Universal Banking framework, a 6-point positioning scale was used and it was found that all the sample banks were positioned on the upper half of the positioning scale (with a composite score of more than 3.5). This implies that almost all the banks have started their journey towards becoming a Universal Bank and in the years to come, Indian Banking sector can boast of having a few more Universal banks.

Second, it was found that Indian banks are not sound as far as their financial health is concerned. This is because all the sample Indian commercial banks were rated 3 on the CAMEL Scale. Even the State Bank of India and the ICICI Bank, the largest bank in the public sector and the private sector respectively, were also rated 3. However, the new generation private sector banks like the Axis Bank, HDFC Bank, ICICI Bank and Kotak Mahindra Bank each had elevated themselves to a rating of above 3 at least in one financial year (over the seven year period of study) but were not successful in retaining this position and eventually reverted to a rating of 3 in the very next financial year itself. On the other hand amongst the public sector banks, IDBI Bank in the very first year of its transformation as a bank showed a positive sign with a rating of above 3 (it was in between 2 and 3) in the FY 2004-05. However, similar to the other private sector banks, this public sector bank's CAMEL rating had also degraded to 3 in subsequent years.

UCO Bank was the only Indian bank to have a worst rating of 4 on the CAMEL scale in FY 2007-08 while Central Bank of India showed its rating to dip beyond 3 in FY 2006-07 and FY 2007-08.

Third, when the CAMEL score of sample banks and their scores on the positioning scale (with regard to the progress made by them in the direction of Universal banking) were plotted on a matrix, it was found that most of the Indian commercial banks were concentrated in one area of the grid. This is shown in the figure below -

Fig. 9.1 : Matrix Showing the CAMEL Rating and Score on the Positioning Scale (Based on FY 2008-09)



However, in order to have a strong financial system that would be capable of supporting the country's economic growth, we need more banks to move higher up the CAMEL scale. Although the composite score on the positioning scale of the sample banks were somewhat satisfactory, with all the banks having a score of above 3.5, but the CAMEL rating of 3 of all the sample banks is a matter of concern. Banks with a rating of 3 do exhibit some degree of supervisory concern. This is because, such banks fall under fair category and have weaknesses, which if left unmonitored, may result in failure of banks or even led to degradation to group 4 or 5. Therefore, Indian commercial banks do need some degree of monitoring so that they do not fail.

Fourth, as a commercial bank has started to offer a variety of products under an 'umbrella brand', the structure of banks has changed. Initially, when banks were offering only the traditional banking services, the organisational structure was quite simple, but with the introduction of services like insurance, mutual funds, investments banking etc., banks are required to opt for a different structure. In India, almost all banks have been following the Bank Holding Company structure. In BHC structure, apart from a banking subsidiary, the other areas of business activities are carried out through intermediate holding companies.

Fifth, universal banking concept can be successfully implemented only when the bank managers have a positive attitude towards it. This is deemed important as the bank managers are the ultimate authority to create awareness on the variety of services that are offered by the bank and at the same time popularise those services among customers of banks so as to generate demand. From the primary data analysis, it was found that bank managers, in general, have a favourable attitude towards universal banking concept. Thus, it can be concluded that it is a positive sign which would ultimately help the banks in their transition towards universal banking framework.

Sixth, while the cooperation of bank managers in facilitating the transition of a commercial bank into a universal bank is deemed necessary, it can be considered as only one aspect, the other side being the support rendered by the customers of the bank. From the survey conducted, it came to light that the customers of the banks have a favourable attitude and would facilitate banks transition into a universal bank.

Seventh, it is rather very unfortunate to note that although bank managers and customers have a positive attitude towards Universal Banking concept, what is lacking is the level of awareness among the bank customers on the variety of services that are presently offered by the banks. A bank can successfully function as a Universal bank and sustain that status only when it has sufficient transactions in each of its specialised unit/ area of business. Since the awareness of banking and financial services among the existing or the potential customers is less, it is indeed a matter of concern for the individual bank management. Thus, this can be a major obstacle and a demotivating factor in the transition process for the banks because if there are few takers of the services that are offered by the banks, such a transformation may not be cost effective.

Lastly, in India, apart from ICICI Bank – the first Indian Universal Bank, all banks are on the edge of becoming a Universal Bank in near future. Findings of the research show that, although commercial banks in India at present do not enjoy the status of Universal Bank technically, they are virtually functioning as Universal banks. This is because the services that are offered by banks presently are in the line of Universal Banks. Thus, even if they are not technically known as Universal Banks, their way of functioning and the service-mix reflects their strong affiliation towards the Universal banking framework.

9.3. Recommendations

Based on the conclusion derived from the research, the following recommendations are put forwarded–

1. As most of the Indian commercial banks are in a transition stage of becoming a Universal bank, utmost care should be taken so that only those banks that are financially strong (as depicted by their CAMEL ratings) make the transition. Universal Banks happen to be larger banks when compared with commercial banks or specialised bank and as such failure of a Universal Bank is going to trigger the emergence of systemic risk in the economy. Therefore, utmost care should be taken by RBI to allow only those banks which are financial stable and strong to make the transition. Constant periodical monitoring is necessary to ensure that the health and risk exposure of banks do not deteriorate. For such an exercise, the regulators should make use of on site monitoring by using

CAMEL/ CAMELS Model along with other off site monitoring system which consists of capital adequacy, asset quality, large credit and concentration, connected lending, earnings and risk exposures (currency, liquidity and interest rate risks) etc..

2. A crucial fact that came to light in course of the research is that most of the customers are not aware about the variety of services that are presently offered by banks. Lack of awareness on the part of the customers with regard to the services that are presently offered by the banks will negate the possibility of earning more profit after their transition to Universal banks. As a result, they many not enjoy the benefit of 'economies of scale' which they are supposed to enjoy in case of their transition, rather it can increase the overall cost (if the number of transactions in each specialised unit are not up to the break-even level) of the bank. Thus, it is recommended that banks should focus on generating awareness on the variety of services that they offer through proper advertisement and appropriate marketing strategies. This is deemed necessary because banks with their present marketing strategies are yet to be successful in generating the required level of awareness of their products as reflected from the customer survey undertaken in this study.

3. Before adding new and innovated services in the product bouquet, banks should assess the market to know the needs of financial products of potential customers. There is no doubt that banks would enjoy the benefit of 'economics of scale and scope' when they provide a wide variety of services under one-roof, but the benefit in terms of lower transaction cost may not be always there, especially when the number of transactions in each of the specialised area/ unit is low. Therefore, proper assessment of financial market is deemed necessary.

9.4. Recommendations for Future Research

The Indian Financial Sector is ever changing and the Government of India is formulating new regulations from time to time with an intention of catering to the needs of the Indian economy as well as to keep pace with the changes in the global financial scenario. In this context, it is worth mentioning that in 2005, RBI, in order to increase the efficiency and stability of the Indian Banking Sector, released the '*Road map for presence of foreign banks in India*'. The roadmap was divided into two phases – the first phase covered the period March 2005 – March 2009 and the second phase was proposed to start from April, 2009. In the first phase the focus, however, was to bring consolidation of the domestic banking system, both in private and public sectors while in the second phase, RBI was expected to remove limitations on the operations of the Wholly-Owned Subsidiary (WOS) of foreign banks and enhance the gradual presence of foreign banks in India in a synchronised manner.

However, the second phase was supposed to start after a review of the experience gained in the first phase. When the time came to review the experience gained in the first phase, global financial markets were in turmoil and there were uncertainties surrounding the financial strength of banks around the world. In view of this, RBI had decided to halt the initiation of the second phase of the Roadmap. However, on January 21, 2011 RBI released the '*Discussion Paper on Presence of Foreign Banks in India*'[1] and based on the feedback received on the approach outlined in the discussion paper, the Reserve Bank is expected to frame detailed guidelines on the presence of foreign banks in India. Thus, sooner or later, foreign banks would have their presence felt in the Indian Banking sector. As a result of the presence of foreign banks, Indian commercial banks are bound to face stiff competition from their global counterparts and they need to be proactive to the changing situation through enhanced profitability and effective risk management.

Although an attempt is made through this research to project the position of Indian banks in the direction of Universal banking framework and at the same time the risk exposure of banks was highlighted by rating banks by using CAMEL Model, the study covers a period of 7 (seven) years which is too short a period to give the actual position of Indian banks. Therefore, a humble effort is

[1] **Source**: http: www.rbidocs.rbi.org.in/rdocs/Content/PDFs/SFBD210111.pdf

made to recommend a few areas of research pertaining to the Banking Sector in India. This is deemed necessary due to advancements in this area of research.

By considering the constraints within which the research has been completed and the constant advancement in the field of banking, the following areas are recommended for the further research –

- As technology happens to be a driving force in the process of a commercial bank's transition towards Universal banking framework, 'impact of technology on the service delivery process of the bank' can be studied. Research can also be undertaken on the impact of ITeS of commercial banks and its level of acceptance by the customers of banks.

- Banks, today, are trying to do away with 'brick and mortar' structure and are opting to become a virtual entity. However, in India, a chunk of bank customers still prefer to visit a branch to avail banking services. Therefore, research can be undertaken on customers' banking preference and also on how to minimise the waiting line for customer availing bank services by using Queuing Theory.

- The Reserve Bank of India has released the '*Discussion Paper on Presence of Foreign Banks in India*' on January 21, 2011 and based on the feedback obtained from its stakeholders, RBI is expected to frame detailed guidelines on the presence of foreign banks in India. With limitations expected to be removed by RBI on the operations of the wholly-owned subsidy of foreign banks, they (Foreign banks) would be treated on par with domestic banks. Moreover, as all restrictions on the functioning of branches of a foreign bank are also expected to be eliminated, foreign banks would have their presence felt in the Indian Banking sector. Thus, it can be anticipated that in the years to come competition in the Indian banking sector in going to increase. And to cope up with competition, the Indian banks need to strengthen their balance sheet through mergers and amalgamations. Therefore, research can be done on financial implications of mergers and amalgamations in the banking sector. Apart from this, research can be carried on the functioning and financial health of Indian banks in comparison to their foreign counterparts.

- As Indian banks are slowly making a transition towards Universal banking framework, an array of banking and financial services are being offered by them. With increased competition in the sector and wide range of options for a customer, research can be undertaken on how a bank prices its services in the market.

As the macro environmental factors influencing business activities are highly fluctuating, therefore apart from the areas mentioned above, research can be undertaken on relevant topics based on the prevailing environmental situation.

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www.syndicatebank.in
www.ucobank.com
www.unionbankofindia.co.in

www.vijayabank.com

www.shcil.com

www.equitymaster.com

www.rediffmoney.com

CONFERENCE/ NEWSPAPER / EDITORIAL ARTICLES

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Srinivasan, N. (2000, August 11). *Universal banking, for whom?* Business Line.

Venu, M.K. (2010, March). *Indian banks need to scale up.* The Financial Express, p 4.

Annexure

Annexure - I

LIST OF BANKS COVERED UNDER THE STUDY

- Allahabad Bank - www.allahabadbank.com
- Andhra Bank - www.andhrabank.in
- Axis Bank - www.axisbank.com
- Bank of Baroda - www.bankofbaroda.com
- Bank of India - www.bankofindia.com
- Bank of Maharashtra - www.bankofmaharashtra.in
- Canara Bank - www.canbankindia.com
- Central Bank of India - www.centralbankofindia.com.in
- Corporation Bank - www.corpbank.com
- Dena Bank - www.denabank.com
- Federal Bank - www.federalbank.co.in
- HDFC Bank - www.hdfcbank.com
- ICICI Bank - www.icicibank.com
- Indian Bank - www.indian-bank.com
- Indian Overseas Bank - www.iob.in
- IDBI Bank - www.idbi.com
- Indusind Bank - www.indusind.com
- Karnataka Bank - www.karnatakabank.com
- Kotak Mahindra Bank - www.kotak.com
- Oriental Bank of Commerce - www.obcindia.co.in
- Punjab National Bank - www.pnbindia.com
- State Bank of India - www.statebankofindia.com
- State Bank of Bikaner & Jaipur - www.sbbjbank.com
- Syndicate Bank - www.syndicatebank.in
- UCO Bank - www.ucobank.com
- Union Bank of India - www.unionbankofindia.co.in
- Vijaya Bank - www.vijayabank.com

Annexure- II

QUESTIONNAIRE FOR DELPHI STUDY

A. Objectives of the Study:

1. To position a bank in terms of the progress made by it in the direction of Universal banking.
2. To examine the risk exposure of banks.
3. To critically examine the existing debate on Universal banking in the context of the samples studied.

B. Code Number:

In order to preserve anonymity of opinions of the Experts and at the same time to prevent any sort of biasness that might creep on in course of the monitoring the study, it has been decided to assign a Code Number to each of the participating Experts.

The Code Number assigned to you is ______________

C. General instructions to the participating Experts:

1. Two copies of each questionnaire will be sent to you in each round. In both the copies of the questionnaire, you are requested to prepare your responses. Please send one of the copies to us and retain the other copy for future reference and duplication in case the other copy does not reach us.
2. In case you feel the space provided for each question is not sufficient, please use extra sheet for preparing your responses.
3. Kindly return your responses within one week after the date of receipt of the questionnaire or earlier, if possible.

DELPHI STUDY

CODE NO. __________

QUESTIONNAIRE NO. 1

1. Do you think banks can maximise 'economies of scale and scope' while offering a variety of banking and financial services as a Universal bank? If so, why?

____

____

____

____

____

____

2. The following financial services offered by Commercial banks (given in the next page) are grouped into different clusters on a scale on 0-5. This is done in order to trace the progress of banks made in the direction of Universal Banking framework. Please regroup these services (if you feel that these are not grouped properly) so that they reflect the evolution of Commercial banks from Traditional banking to Universal banking. (*Please write the Scale Number i.e., 0 to 5 by the side of the concerned services, whenever you make a change*).

The following services of Commercial banks are categorised into different groups on a scale of 0-5. The groupings are made in a manner so as to trace the progress made by Commercial banks in the direction of Universal banking.

0 (Com. Banks)	1	2	3	4	5 (Universal Bank)
• Accepting deposits • Making advances	• Retail loans • Pension payments • Traveler cheques • Gift cheques • Locker facility • Business overdraft facilities • Agriculture and Rural Credit	• Loan against gold • Housing loans • Loan against shares/ debentures • Kisan credit card • Export finance • Tax payment • Forex remittances	• Telephone & Electricity bills payment • School tuition fee payment • Sale of Entrance exam forms • Cash Management services • Letter of Credit & Export bill negotiation • NRE & NRO Account facilities • Facilitates donation for charity • Recharging pre-paid Mobiles • Pre-paid cards for payment disbursements • Microfinance	• Credit card • ATM card • Debit card • Depository services • Consultancy services/ Trade services • Investment banking • Phone banking • Insurance (Life & General) • Mutual funds • Health cards • NRI Investment • Online stock trading • Online bill payment • Online cash remittances • Online Ticket (Air & Railway) booking • Derivative and Forward contract • Electronic fund transfer • RTGS • Credit card securitisation	• Home Search (lease, purchase and sell house property)

ANNEXURE -III

The following services of Commercial banks are categorised into different groups on a scale of 0-5. The groupings are made in a manner so as to trace the progress made by Commercial banks in the direction of Universal banking.

0 (Com. Banks)	**1**	**2**	**3**	**4**	**5 (Universal Bank)**
• Accepting deposits • Making advances	• Retail loans • Pension payments • Traveler cheques • Gift cheques • Locker facility • Business overdraft facilities • Agriculture & Rural credit	• Loan against gold • Housing loans • Loan against shares/ debentures • Kisan credit card • Export finance • Tax payment • Forex remittances	• Telephone & Electricity bills payment • School tuition fee payment • Sale of Entrance exam forms • Cash Management services • Letter of Credit & Export bill negotiation • NRE & NRO Account facilities • Facilitates donation for charity • Recharging pre-paid Mobiles • Pre-paid cards for payment disbursements • Microfinance	• Credit card • ATM card • Debit card • Depository services • Consultancy services/ Trade services • Investment banking • Phone banking • Insurance (Life & General) • Mutual funds • Health cards • NRI Investment • Online stock trading • Online bill payment • Online cash remittances • Online Ticket (Air & Railway) booking • Derivative and Forward contract • Electronic fund transfer • RTGS	• Credit card securitisation • Home Search (lease, purchase and sell house property)

Dear Respondent, **Annexure - IV**

This is an opportunity to greet you and solicit your kind patronage in conducting a research work on the topic '***Indian Banking: A transition towards Universal Banking framework***'. The aim of the survey is to know the various banking and financial services offered by Banks at present and the perception of Bankers about Universal Banking.

This 3-page questionnaire comprises of 18 questions. All the questions are close-ended with given options, and are easy to respond and will require approximately 5 minutes. It is worth mentioning that there is no right or wrong response. We just want you to share your views which would eventually help us in completing the research work.

This survey is carried out in pure academic interest and the responses will be treated in strict confidentiality.

Yours sincerely,
Nilanjana Deb,
Research Scholar, Dept. of Bus. Admn.
Tezpur University (Assam)

B-S ☐

QUESTIONNAIRE

Part - A

1. Bank & Branch :____
2. Designation :____
3. Educational Qualification:

   ☐ Doctorate ☐ Professional Degree ☐ Post Graduate ☐ Graduate

   ☐ Others (Pl. specify) _______________

4. Gender : ☐ Male ☐ Female
5. Duration of service in the bank:

   ☐ Less than 5 years ☐ 5 -10 years ☐ 11-15 years. ☐ More than 15 years

Part – B

6. Which of the following services are offered by your Bank? (***Please tick [√] in the appropriate boxes***)

- ☐ Retail loans
- ☐ Pension payments
- ☐ Travellers cheque/ card
- ☐ Gift cheque
- ☐ Locker facility
- ☐ Business overdraft facilities
- ☐ Agriculture & Rural Credit
- ☐ Loan against gold
- ☐ Housing loans
- ☐ Loan against shares/debentures
- ☐ Kisan credit card
- ☐ Export finance
- ☐ Tax payment
- ☐ Forex remittances
- ☐ Telephone & Electricity bills
- ☐ School tuition fee payment
- ☐ Sale of Entrance exam forms
- ☐ Cash Management services
- ☐ Letter of Credit & Export bill negotiation
- ☐ NRE & NRO Account facilities
- ☐ Facilitates donation for charity
- ☐ Recharging pre-paid Mobiles
- ☐ Mirco finance
- ☐ Pre-paid cards for payment disbursements (Smart Card)
- ☐ Credit card
- ☐ ATM card
- ☐ Debit card
- ☐ Depository services
- ☐ Consultancy services/ Trade services
- ☐ Investment banking
- ☐ Phone banking
- ☐ Insurance (Life & General)
- ☐ Mutual funds
- ☐ Health cards
- ☐ NRI Investment
- ☐ Online stock trading
- ☐ Online bill payment
- ☐ Online cash remittances
- ☐ Online Ticket (Air & Railway) booking
- ☐ Derivative and Forward contract
- ☐ Electronic fund transfer
- ☐ RTGS
- ☐ Credit card securitization
- ☐ Home Search (lease, purchase & sell house property.)

Part - C

Please tick [√] in the appropriate box.

7. To remain competitive, banks need to offer a host of banking and financial services under 'one-roof'.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

8. When a bank provides services like Insurance, Mutual Funds etc. under 'one-roof', it saves transaction costs.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

9. A bank providing diversified services can make optimum utilization of resources - both manpower and infrastructural.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

10. A Commercial Bank's transition to a Universal Bank will increase opportunities for the existing employees.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

11. Universal banking framework will increase the work-load of the existing employees.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

12. As a bank shifts to Universal Banking framework, its dependence on latest technology increases

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

13. Your bank gives highest importance on training & development of existing staff to enable them to render services backed by appropriate technology.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

14. By providing diversified services, a bank can increase its customer-base.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

15. Customer satisfaction under Universal Banking framework will be higher as banks opt for cross selling products.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

16. If all Commercial banks provide diversified services, it will lead to concentration of financial and economic power in the banking sector.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

17. While providing diversified services, a bank is bound to lose its 'core competence'.

☐ Strongly agree ☐ Agree ☐ Indifferent ☐ Disagree ☐ Strongly disagree

THANK YOU FOR YOUR KIND CO-OPERATION.

Dear Respondent, **Annexure - V**

This is an opportunity to greet you and solicit your kind patronage in conducting a research work on the topic '***Indian Banking: A transition towards Universal Banking framework***'. The aim of the survey is to know about the customers' awareness and need of various banking and financial services offered by a Bank.

This 3-page questionnaire comprises of 15 questions. All the questions are close-ended with given options, and are easy to respond and will require approximately 10 minutes. It is worth mentioning that there is no right or wrong response. We just want you to share your views which would eventually help us in completing the research work.

This survey is carried out in pure academic interest and the responses will be treated in strict confidentiality.

Yours sincerely,
Nilanjana Deb,
Research Scholar, Dept. of Bus. Admn.,
Tezpur University (Assam)

C-S ☐

QUESTIONNAIRE

Part-A

1. Name of your Bank:____

2. Gender : ☐ Male ☐ Female

3. Age group :

   ☐ Below 21 years ☐ 21-30 years ☐ 31-40 years ☐ 41-50 years ☐ 51-60 years

   ☐ Above 60 years

4. Educational Qualification:

   ☐ Professional Degree ☐ Post Graduate ☐ Graduate ☐ Others (Pl. specify)______________

5. Occupation :

   ☐ Student ☐ Service ☐ Self Employed ☐ Housewife ☐ Retired

6. Annual Household Income:

   ☐Less than Rs.1 Lakh ☐Rs.1-Rs.5 Lakh ☐Rs. 5–Rs.10 Lakh ☐Above Rs.10 Lakh

Part-B

7. Please tick [√] in the appropriate boxes.

Sl. No.	Banking & Financial Services	Does your Bank offer the Service?	Do you need the Service?
1.	Retail loans	□ Yes □ No □ Can't say	□Yes □No
2.	Pension payments	□ Yes □ No □ Can't say	□Yes □No
3.	Travellers cheque / card	□ Yes □ No □ Can't say	□Yes □No
4.	Gift cheque	□ Yes □ No □ Can't say	□Yes □No
5.	Locker facility	□ Yes □ No □ Can't say	□Yes □No
6.	Business overdraft facilities	□ Yes □ No □ Can't say	□Yes □No
7.	Agriculture and Rural Credit	□ Yes □ No □ Can't say	□Yes □No
8.	Loan against gold	□ Yes □ No □ Can't say	□Yes □No
9.	Housing loans	□ Yes □ No □ Can't say	□Yes □No
10.	Loan against shares/debentures	□ Yes □ No □ Can't say	□Yes □No
11.	Kisan credit card	□ Yes □ No □ Can't say	□Yes □No
12.	Export finance	□ Yes □ No □ Can't say	□Yes □No
13.	Tax payment	□ Yes □ No □ Can't say	□Yes □No
14.	Forex remittances	□ Yes □ No □ Can't say	□Yes □No
15.	Telephone & Electricity bills payment	□ Yes □ No □ Can't say	□Yes □No
16.	School tuition fee payment	□ Yes □ No □ Can't say	□Yes □No
17.	Sale of Entrance exam forms	□ Yes □ No □ Can't say	□Yes □No
18.	Cash Management services	□ Yes □ No □ Can't say	□Yes □No
19.	Letter of Credit & Export bill negotiation	□ Yes □ No □ Can't say	□Yes □No
20.	NRE & NRO Account facilities	□ Yes □ No □ Can't say	□Yes □No
21.	Facilitates donation for charity	□ Yes □ No □ Can't say	□Yes □No
22.	Recharging pre-paid Mobiles	□ Yes □ No □ Can't say	□Yes □No
23.	Pre-paid cards for payment disbursements (Smart Card)	□ Yes □ No □ Can't say	□Yes □No
24.	Microfinance	□ Yes □ No □ Can't say	□Yes □No
25.	Credit card	□ Yes □ No □ Can't say	□Yes □No
26.	ATM card	□ Yes □ No □ Can't say	□Yes □No
27.	Debit card	□ Yes □ No □ Can't say	□Yes □No
28.	Depository services	□ Yes □ No □ Can't say	□Yes □No
29.	Consultancy services/ Trade services	□ Yes □ No □ Can't say	□Yes □No
30.	Investment banking	□ Yes □ No □ Can't say	□Yes □No
31.	Phone banking	□ Yes □ No □ Can't say	□Yes □No
32.	Insurance (Life & General)	□ Yes □ No □ Can't say	□Yes □No
33.	Mutual funds	□ Yes □ No □ Can't say	□Yes □No
34.	Health cards	□ Yes □ No □ Can't say	□Yes □No
35.	NRI Investment	□ Yes □ No □ Can't say	□Yes □No

36.	Online stock trading	□ Yes □ No □ Can't say	□Yes □No
37.	Online bill payment	□ Yes □ No □ Can't say	□Yes □No
38.	Online cash remittances	□ Yes □ No □ Can't say	□Yes □No
39.	Online Ticket (Air & Railway) booking	□ Yes □ No □ Can't say	□Yes □No
40.	Derivative and Forward contract	□ Yes □ No □ Can't say	□Yes □No
41.	Electronic fund transfer	□ Yes □ No □ Can't say	□Yes □No
42.	RTGS	□ Yes □ No □ Can't say	□Yes □No
43.	Credit card securitization	□ Yes □ No □ Can't say	□Yes □No
44.	Home Search (lease, purchase and sell house property)	□ Yes □ No □ Can't say	□Yes □No

Part-C

Please tick [√] in the appropriate box.

8. Convenient location of the bank.

☐ Highly convenient ☐ Convenient ☐ Indifferent ☐ Inconvenient ☐ Highly inconvenient

9. Your level of satisfaction with the variety of services offered by the bank.

☐ Highly satisfied ☐ Satisfied ☐ Indifferent ☐ Dissatisfied ☐ Highly dissatisfied

10. Your level of comfort/ convenience with the manner the services are offered by the bank.

☐ Very high ☐ High ☐ Average ☐ Low ☐ Very low

11. The extent of use of technology by the bank while rendering its services.

☐ Very high ☐ High ☐ Medium ☐ Low ☐ Very low

12. How would you prefer to withdraw cash from the bank?

☐ By visiting a bank branch ☐ By using ATM / Debit card.

13. *The degree of fast and efficient customer service of the bank.*

☐ Very high ☐ High ☐ Medium ☐ Slow ☐ Very slow

14. Friendliness of personnel of the bank.

☐ Very friendly ☐ Friendly ☐ Indifferent ☐ Unfriendly ☐ Highly unfriendly

15. Advertising & awareness generation activities of banking services conducted by the bank.

☐ Very frequent ☐ Frequent ☐ Indifferent ☐ Infrequent ☐ Very infrequent

THANK YOU FOR YOUR KIND CO-OPERATION.

Annexure VI

ALLAHABAD BANK

Consolidated Balance Sheet for the year ended March 31 (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	25,463.38	31,476.61	40,762.07	48,499.69	59,543.66	71,616.38	84,971.79
Total Liabilities	28,050.93	34,704.27	45,144.93	55,291.99	67,663.74	82,939.33	97,648.00
Assets							
Cash & Balances with RBI	1,545.76	2,155.78	2,427.16	2,662.06	4,067.94	6,288.86	5,115.38
Balance with Banks, Money at Call	464.06	440.52	888.29	1,727.92	874.03	753.24	1,521.38
Advances	12,543.60	15,341.54	21,150.82	29,147.78	41,290.03	49,720.47	58,801.76
Investments	12,371.72	15,554.81	18,988.28	17,984.65	18,746.07	23,400.25	29,651.05
Total Assets	28,050.93	34,704.27	45,144.93	55,291.99	67,663.74	82,939.33	97,648.00

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	2,570.33	2,668.67	3,185.60	3,767.24	4,883.86	6,279.67	7,364.73
Other Income	524.36	749.81	639.88	606.69	481.95	964.76	1,255.57
Total Income	3,094.69	3,418.48	3,825.48	4,373.93	5,365.81	7,244.43	8,620.30
Net Profit for the Year	165.99	358.38	541.79	706.13	750.14	974.74	768.60

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	11.15	12.52	12.53	13.37	12.52	12.04	13.11
Debt Equity Ratio	21.80	20.28	17.51	13.33	13.30	13.65	14.52
Net NPAs to Total Assets (%)	3.16	1.05	0.60	0.45	0.65	0.48	0.43
Net NPAs to Net Advances (%)	7.07	2.37	1.28	0.84	1.07	0.80	0.72
Op. Profit/ Average Working Funds (%)	1.87	2.73	2.64	2.05	1.84	2.00	2.24
Profit per Employee (Rs. in lakhs)	0.87	2.46	2.86	3.69	3.68	4.85	3.75
Business per Employee (Rs. in Crores)	1.83	2.15	2.82	3.36	4.95	6.04	7.06
Return on Net Worth (%)	14.18	26.33	27.93	23.67	18.49	18.57	13.13
Spread (as a % of Assets)	3.24	3.13	3.02	2.85	2.59	2.15	2.21

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***

Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

ANDHRA BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	21,061.85	22,940.52	27,550.71	33,922.41	41,454.02	49,436.55	59,390.02
Total Liabilities	24,678.36	27,008.95	32,728.68	40,669.34	47,541.00	56,592.40	68,469.21
Assets							
Cash & Balances with RBI	1,292.16	2,044.61	2,073.93	3,860.71	2,949.06	4,901.67	4,853.34
Balance with Banks, Money at Call	380.58	528.62	1,449.36	1,278.69	1,075.12	792.65	434.16
Advances	11,512.94	12,885.47	17,516.84	22,100.43	27,889.07	34,238.39	44,139.26
Investments	10,517.65	10,317.36	10,646.28	11,444.15	14,300.72	14,898.24	16,911.11
Total Assets	24,678.36	27,008.95	32,728.68	40,669.34	47,541.00	56,592.40	68,469.21

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	2,195.02	2,227.26	2,273.46	2,674.37	3,315.33	4,289.87	5,374.62
Other Income	603.70	682.61	753.35	458.07	522.46	661.65	765.38
Total Income	2,798.72	2,909.87	3,026.81	3,132.44	3,837.79	4,951.52	6,140.00
Net Profit for the Year	493.09	467.46	586.57	552.02	537.90	575.57	653.05

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	13.62	13.71	12.11	14.00	11.33	11.61	13.22
Debt Equity Ratio	19.77	15.79	15.00	11.72	13.13	15.21	16.28
Net NPAs to Total Assets (%)	0.84	0.44	0.15	0.13	0.10	0.09	0.12
Net NPAs to Net Advances (%)	1.79	0.93	0.28	0.24	0.17	0.15	0.18
Op. Profit/ Average Working Funds (%)	3.06	3.69	3.25	2.18	2.27	1.17	2.15
Profit per Employee (Rs. in lakhs)	3.10	3.54	3.97	3.69	4.14	4.30	4.58
Business per Employee (Rs. in Crores)	2.27	2.77	3.46	4.27	5.36	6.27	7.28
Return on Net Worth (%)	36.13	36.41	13.66	23.34	17.78	17.71	17.91
Spread (as a % of Assets)	3.05	3.37	3.27	2.87	2.98	2.51	2.38

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

AXIS BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	16,964.72	20,953.90	31,712.00	40,113.53	58,785.60	87,626.22	117,374.11
Total Liabilities	19,612.36	24,150.17	37,743.70	49,731.13	73,257.21	109,577.84	147,722.06
Assets							
Cash & Balances with RBI	1,600.03	3,776.94	3,448.74	2,429.40	4,661.03	7,305.66	9,419.21
Balance with Banks, Money at Call	1,969.68	1,886.27	1,827.27	1,212.45	2,257.27	5,198.58	5,597.69
Advances	7,179.92	9,452.38	15,602.92	22,314.23	36,876.48	59,661.14	81,556.77
Investments	7,841.02	7,792.76	14,274.95	21,527.35	26,897.16	33,705.10	46,330.35
Total Assets	19,612.36	24,150.17	37,743.70	49,731.13	73,257.21	109,577.84	147,722.06

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	1,464.81	1,586.71	1,924.16	2,888.79	4,560.40	7,005.32	10,835.49
Other Income	409.79	532.96	403.51	713.71	986.49	1,750.59	2,896.88
Total Income	1,874.60	2,119.67	2,327.67	3,602.50	5,546.89	8,755.91	13,732.37
Net Profit for the Year	193.39	271.38	323.78	485.08	659.03	1,071.03	1,815.36

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	10.90	11.21	12.66	11.08	11.57	13.73	13.69
Debt Equity Ratio	19.24	18.44	13.17	13.97	17.32	9.99	11.49
Net NPAs to Total Assets (%)	0.83	0.46	0.58	0.44	0.36	0.23	0.22
Net NPAs to Net Advances (%)	2.26	1.29	1.39	0.98	0.72	0.42	0.40
Op. Profit/ Average Working Funds (%)	2.50	3.53	2.04	2.43	2.27	2.57	2.95
Profit per Employee (Rs. in lakhs)	8.22	8.07	8.02	8.69	7.59	8.39	10.02
Business per Employee (Rs. in Crores)	9.26	8.08	10.21	10.20	10.24	11.17	10.60
Return on Net Worth (%)	21.05	26.39	18.19	18.28	20.96	12.21	17.77
Spread (as a % of Assets)	1.64	2.39	1.94	2.17	2.00	2.36	2.50

__Note__: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
__Source__: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

BANK OF BARODA

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	66,366.37	72,967.32	81,333.46	93,661.99	124,915.98	152,034.13	192,396.95
Total Liabilities	76,417.84	85,108.66	94,664.23	113,392.53	143,146.18	179,599.50	227,406.73
Assets							
Cash & Balances with RBI	3,465.82	3,056.78	2,712.32	3,333.43	6,413.52	9,369.72	10,596.34
Balance with Banks, Money at Call	3,351.28	4,210.03	6,541.88	10,121.21	11,866.85	12,929.56	13,490.77
Advances	35,348.08	35,600.88	43,400.38	59,911.78	83,620.87	106,701.32	143,985.90
Investments	30,179.38	38,018.81	37,074.44	35,114.22	34,943.63	43,870.07	52,445.88
Total Assets	76,417.84	85.108.66	94,664.23	113,392.53	143,146.18	179,599.50	227,406.73

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	6,097.56	6,147.07	6,431.42	7,100.00	9,212.64	11,813.48	15,091.58
Other Income	1,261.70	1,719.01	1,304.83	1,191.69	1,381.79	2,051.04	2,757.66
Total Income	7,359.26	7,866.08	7,736.25	8,291.69	10,594.43	13,864.52	17,849.24
Net Profit for the Year	772.78	967.00	676.80	1,050.07	1,026.46	1,435.52	2,227.20

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	12.65	13.91	12.61	13.65	11.80	12.91	14.05
Debt Equity Ratio	15.27	14.22	14.45	11.94	14.44	13.77	14.99
Net NPAs to Total Assets (%)	2.22	2.07	0.65	0.46	0.35	0.27	0.20
Net NPAs to Net Advances (%)	4.81	2.99	1.45	0.87	0.60	0.47	0.31
Op. Profit/ Average Working Funds (%)	2.25	3.00	2.45	1.92	1.94	1.96	2.22
Profit per Employee (Rs. in lakhs)	1.92	2.43	1.71	2.13	2.73	3.94	6.05
Business per Employee (Rs. in Crores)	2.38	2.53	3.10	3.96	5.55	7.10	9.14
Return on Net Worth (%)	17.62	20.32	12.58	10.54	11.86	12.99	17.35
Spread (as a % of Assets)	2.75	3.02	3.15	2.80	2.50	2.18	2.25

<u>Note</u>: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
<u>Source</u>: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

BANK OF INDIA

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	64,453.60	71,003.12	78,821.44	93,932.03	119,881.74	150,011.98	189,708.48
Total Liabilities	76,626.76	84,860.00	94,978.18	112,274.28	141,636.99	178,830.00	225,501.75
Assets							
Cash & Balances with RBI	3,349.79	4,230.94	3,904.72	5,588.42	7,196.89	11,741.85	8,915.28
Balance with Banks, Money at Call	3,648.16	4,327.01	3,621.53	5,857.57	10,208.65	5,975.54	12,845.97
Advances	42,633.18	45,855.90	56,012.58	65,173.74	84,935.89	113,476.33	142,909.37
Investments	24,434.84	27,162.89	28,202.62	31,781.75	35,492.76	41,802.88	52,607.18
Total Assets	76,626.76	84,860.00	94,978.18	112,274.28	141,636.99	178,830.00	225,501.75

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	5,928.22	5,795.90	6,031.53	7,028.70	9,180.33	12,355.22	16,347.36
Other Income	1,642.37	1,791.99	1,155.80	1,184.38	1,562.95	2,116.93	3,051.86
Total Income	7,570.59	7,587.89	7,187.33	8,213.08	10,743.28	14,472.15	19,399.22
Net Profit for the Year	851.00	1,008.32	340.05	701.44	1,123.17	2,009.40	3,007.35

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	12.02	13.01	11.52	10.75	11.58	12.59	13.01
Debt Equity Ratio	19.34	18.51	18.33	19.46	20.86	17.00	16.10
Net NPAs to Total Assets (%)	3.11	2.43	1.64	0.86	0.45	0.33	0.28
Net NPAs to Net Advances (%)	5.36	4.50	2.80	1.49	0.74	0.52	0.44
Op. Profit/ Average Working Funds (%)	2.77	2.78	1.62	1.64	1.89	2.31	2.70
Profit per Employee (Rs. in lakhs)	1.97	2.35	0.80	1.66	2.71	4.95	7.49
Business per Employee (Rs. in Crores)	2.43	2.67	3.20	3.81	4.98	6.52	8.33
Return on Net Worth (%)	24.03	28.04	8.36	15.37	21.25	22.76	25.51
Spread (as a % of Assets)	2.66	2.59	2.36	2.34	2.43	2.36	2.44

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***

Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

BANK OF MAHARASHTRA

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	22,175.75	26,445.93	28,844.17	26,906.19	33,919.34	41,758.33	52,254.92
Total Liabilities	24,904.63	32,212.98	32,884.83	31,214.52	39,009.47	48,150.91	59,030.36
Assets							
Cash & Balances with RBI	1,925.70	4,538.78	2,129.32	1,873.33	2,270.20	3,893.88	3,881.42
Balance with Banks, Money at Call	611.63	1,076.47	1,744.02	515.40	1,071.18	332.05	223.92
Advances	9,508.14	11,731.51	13,061.64	16,469.73	22,919.38	29,285.81	34,290.77
Investments	11,801.53	13,943.02	14,479.55	11,354.26	11,298.40	12,282.95	18,382.14
Total Assets	24,904.63	32,212.98	32,884.83	31,214.52	39,009.47	48,150.91	59,030.36

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	2,081.68	2,203.40	2,367.69	2,349.46	2,722.04	3,540.58	4,291.56
Other Income	360.47	465.22	385.24	165.28	378.52	380.29	500.02
Total Income	2,442.15	2,668.62	2,752.93	2,514.74	3,100.56	3,920.87	4,791.58
Net Profit for the Year	222.02	275.96	128.69	62.44	228.15	325.59	362.40

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	11.76	11.88	12.68	11.27	12.06	10.26	12.05
Debt Equity Ratio	22.94	18.82	19.06	17.42	19.77	23.65	25.31
Net NPAs to Total Assets (%)	1.84	0.89	0.85	1.07	0.71	0.53	0.46
Net NPAs to Net Advances (%)	4.83	2.46	2.15	2.03	1.21	0.87	0.79
Op. Profit/ Average Working Funds (%)	2.32	2.48	1.71	1.13	1.72	1.54	1.53
Profit per Employee (Rs. in lakhs)	1.58	2.16	1.25	0.36	1.95	2.36	2.76
Business per Employee (Rs. in Crores)	2.22	2.69	2.95	3.06	4.05	5.16	6.36
Return on Net Worth (%)	22.65	23.45	8.82	4.08	14.00	18.60	18.16
Spread (as a % of Assets)	2.71	2.38	2.68	3.11	2.80	2.55	2.13

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

CANARA BANK

Consolidated Balance Sheet for the year ended March 31 (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	72,094.82	86,344.56	96,908.42	116,803.23	142,381.45	154,072.42	186,892.51
Total Liabilities	82,054.93	99,539.40	110,305.16	132,821.86	165,961.04	180,528.69	219,645.80
Assets							
Cash & Balances with RBI	5,607.51	6,890.94	4,984.38	7,914.00	9,095.19	13,364.79	10,036.79
Balance with Banks, Money at Call	2,089.64	5,136.08	3,684.35	4,909.56	7,278.74	4,513.25	6,622.99
Advances	40,471.60	47,638.63	60,421.40	79,425.70	98,505.69	107,238.04	138,219.40
Investments	30,458.24	35,792.99	38,053.88	36,974.18	45,225.54	49,811.57	57,776.90
Total Assets	82,054.93	99,539.40	110,305.16	132,821.86	165,961.04	180,528.69	219,645.80

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	6,657.72	7,006.92	7,571.97	8,711.51	11,364.56	14,200.74	17,119.05
Other Income	1,512.13	2,072.91	1,543.83	1,377.51	1,511.80	2,308.31	2,427.10
Total Income	8,169.85	9,079.83	9,115.80	10,089.02	12,876.36	16,509.05	19,546.15
Net Profit for the Year	1,018.89	1,338.01	1,109.50	1,343.22	1,420.81	1,565.01	2,072.42

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	12.50	12.66	12.78	11.22	13.50	13.25	14.10
Debt Equity Ratio	17.40	16.83	16.17	16.64	17.55	18.57	18.62
Net NPAs to Total Assets (%)	1.77	1.38	1.02	0.66	0.56	0.50	0.69
Net NPAs to Net Advances (%)	3.59	2.89	1.88	1.10	0.94	0.84	1.09
Op. Profit/ Average Working Funds (%)	2.63	3.23	2.48	2.19	2.01	1.73	2.02
Profit per Employee (Rs. in lakhs)	2.26	2.97	2.48	3.02	3.24	3.65	4.97
Business per Employee (Rs. in Crores)	2.50	2.98	3.51	4.42	5.49	6.09	7.80
Return on Net Worth (%)	24.56	29.23	19.95	20.65	18.78	18.86	20.64
Spread (as a % of Assets)	2.72	2.76	2.86	2.70	2.43	1.96	2.41

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

CENTRAL BANK OF INDIA

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	51,165.12	55,908.60	60,751.67	66,482.65	82,776.28	110,319.67	131,271.85
Total Liabilities	57,105.16	63,345.35	68,595.90	74,681.04	93,008.09	123,955.79	147,655.24
Assets							
Cash & Balances with RBI	3,691.02	3,428.55	5,571.81	3,382.86	5,473.67	11,537.19	11,036.91
Balance with Banks, Money at Call	1,722.65	1,653.51	1,481.13	1,411.23	3,339.22	1,302.05	1,214.34
Advances	22,251.75	22,804.11	27,277.32	37,483.48	51,795.47	72,997.43	85,483.20
Investments	26,045.35	31,405.13	30,834.76	28,639.09	27,741.89	31,455.19	43,060.72
Total Assets	57,105.16	63,345.35	68,595.90	74,681.04	93,008.09	123,955.79	147,655.24

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	5,073.00	5,063.72	5,204.88	5,385.58	6,234.21	7,995.54	10,455.19
Other Income	586.75	989.80	938.87	551.24	561.83	902.35	1,069.97
Total Income	5,659.75	6,053.52	6,143.75	5,936.82	6,796.04	8,897.89	11,525.16
Net Profit for the Year	305.52	617.73	301.50	257.42	498.01	550.16	571.24

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	10.51	12.43	12.15	11.03	10.40	10.42	13.12
Debt Equity Ratio	21.17	22.97	22.16	22.66	33.38	35.80	37.92
Net NPAs to Total Assets (%)	2.74	2.01	1.19	1.30	0.94	0.86	0.72
Net NPAs to Net Advances (%)	6.74	5.57	2.98	2.59	1.70	1.45	1.22
Op. Profit/ Average Working Funds (%)	1.76	2.70	2.56	1.73	1.58	1.26	1.13
Profit per Employee (Rs. in lakhs)	0.77	1.58	0.93	0.68	1.35	1.56	1.72
Business per Employee (Rs. in Crores)	1.68	1.82	2.07	2.40	3.04	4.01	5.60
Return on Net Worth (%)	12.60	28.73	11.65	9.07	15.97	15.46	14.43
Spread (as a % of Assets)	3.32	3.35	3.46	3.19	2.66	1.79	1.51

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

CORPORATION BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	21,724.57	23,190.93	27,233.16	32,876.53	42,356.89	55,424.42	73,983.91
Total Liabilities	26,271.96	29,153.70	33,923.86	40,506.63	52,720.65	66,597.67	86,905.80
Assets							
Cash & Balances with RBI	1,283.94	1,694.37	1,920.89	1,639.79	2,983.67	7,103.53	5,590.60
Balance with Banks, Money at Call	1,145.10	1,141.83	1,659.75	2,448.90	3,735.22	1,812.32	4,949.09
Advances	12,029.17	13,889.72	18,546.38	23,962.43	29,949.65	39,185.57	48,512.16
Investments	10,669.90	10,685.04	10,261.11	10,652.00	14,417.49	16,512.38	24,937.77
Total Assets	26,271.96	29,153.70	33,923.86	40,506.63	52,720.65	66,597.67	86,905.80

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	2,102.52	2,201.17	2,249.80	2,626.47	3,430.16	4,516.55	6,067.35
Other Income	498.09	474.52	498.31	498.04	524.67	569.70	1,015.81
Total Income	2,600.61	2,675.69	2,748.11	3,124.51	3,954.83	5,086.25	7,083.16
Net Profit for the Year	382.32	461.89	335.91	371.04	420.94	604.91	801.37

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	18.50	20.11	16.23	13.92	12.76	12.09	13.61
Debt Equity Ratio	9.50	8.38	8.91	9.74	11.25	13.11	15.11
Net NPAs to Total Assets (%)	0.76	0.86	0.61	0.38	0.27	0.19	0.16
Net NPAs to Net Advances (%)	1.65	1.80	1.12	0.60	0.47	0.32	0.29
Op. Profit/ Average Working Funds (%)	3.85	3.53	3.68	2.93	2.50	2.20	2.50
Profit per Employee (Rs. in lakhs)	4.06	4.98	3.95	4.13	4.79	6.52	7.64
Business per Employee (Rs. in Crores)	3.29	3.66	4.38	5.27	6.37	8.39	10.49
Return on Net Worth (%)	17.55	17.98	11.54	11.54	11.79	17.38	18.23
Spread (as a % of Assets)	3.02	3.31	3.33	3.03	2.48	2.17	1.95

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

DENA BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	16,491.26	18,349.18	20,096.09	23,623.06	27,689.91	33,943.18	43,050.61
Total Liabilities	20,161.97	22,160.23	24,028.59	26,545.34	31,450.65	38,641.73	48,460.52
Assets							
Cash & Balances with RBI	1,114.83	1,233.47	1,490.04	1,686.45	1,957.33	3,533.01	4,982.41
Balance with Banks, Money at Call	337.06	217.71	291.94	817.13	861.36	504.64	874.71
Advances	8,435.60	9,411.79	11,308.59	14,231.24	18,303.39	23,023.98	28,877.96
Investments	8,500.38	9,736.42	9,696.95	8,570.67	9,235.05	10,282.98	12,473.08
Total Assets	20,161.97	22,160.23	24,028.59	26,545.34	31,450.65	38,641.73	48,460.52

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	1,772.30	1,735.48	1,725.18	1,760.13	2,118.52	2,710.05	3,447.50
Other Income	437.00	617.41	311.18	458.99	422.24	478.13	430.13
Total Income	2,209.30	2,352.89	2,036.36	2,219.12	2,540.76	3,188.18	3,877.63
Net Profit for the Year	114.19	238.49	71.51	92.95	201.56	359.79	422.66

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	9.33	9.48	11.91	10.62	11.52	11.09	12.07
Debt Equity Ratio	16.75	19.67	20.25	22.17	22.33	21.67	22.09
Net NPAs to Total Assets (%)	4.95	3.99	2.46	1.62	1.16	0.56	0.64
Net NPAs to Net Advances (%)	11.82	9.40	5.23	3.00	1.99	0.94	1.09
Op. Profit/ Average Working Funds (%)	2.57	3.41	1.94	2.48	2.24	2.02	1.75
Profit per Employee (Rs. in lakhs)	1.08	2.23	0.60	0.72	1.99	3.61	4.28
Business per Employee (Rs. in Crores)	2.42	2.74	3.13	3.64	4.58	5.59	7.14
Return on Net Worth	11.44	26.55	7.43	9.03	17.48	22.96	21.68
Spread (as a % of Assets)	2.82	2.67	2.86	2.72	2.72	2.31	2.20

<u>Note</u>: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
<u>Source</u>: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

FEDERAL BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	10,947.42	13,476.68	15,192.88	17,878.74	21,584.44	25,913.36	32,198.19
Total Liabilities	12,201.64	15,114.27	16,820.97	20,642.92	25,089.93	32,506.44	38,850.88
Assets							
Cash & Balances with RBI	609.04	725.89	689.27	1,214.59	1,231.54	2,355.69	2,214.40
Balance with Banks, Money at Call	298.82	565.71	866.62	657.91	1,081.60	389.79	1,222.70
Advances	6,217.52	7,700.53	8,822.59	11,736.47	14,899.10	18,904.66	22,391.88
Investments	4,551.68	5,507.38	5,799.17	6,272.38	7,032.66	10,026.59	12,118.97
Total Assets	12,201.64	15,114.27	16,820.97	20,642.92	25,089.93	32,506.44	38,850.88

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	1,111.46	1,192.06	1,191.03	1,436.53	1,817.35	2,515.44	3,315.38
Other Income	242.88	298.93	221.74	233.10	302.59	394.99	515.78
Total Income	1,354.34	1,490.99	1,412.77	1,669.63	2,119.94	2,910.43	3,831.16
Net Profit for the Year	105.01	136.31	90.09	225.21	292.73	368.05	500.49

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	11.23	11.48	11.22	13.75	13.43	22.46	20.22
Debt Equity Ratio	20.84	21.02	21.22	14.38	14.43	6.61	7.45
Net NPAs to Total Assets (%)	2.52	1.48	1.16	0.54	0.26	0.13	0.17
Net NPAs to Net Advances (%)	6.15	2.89	2.21	0.95	0.44	0.23	0.30
Op. Profit/ Average Working Funds (%)	3.28	3.30	2.74	2.57	2.89	2.89	3.72
Profit per Employee (Rs. in lakhs)	1.69	2.14	1.39	3.54	4.73	5.30	6.90
Business per Employee (Rs. in Crores)	2.70	3.27	3.66	4.31	5.44	6.40	7.50
Return on Net Worth (%)	19.83	23.29	13.28	22.99	21.38	9.39	11.58
Spread (as a % of Assets)	2.78	2.79	2.99	2.91	2.86	2.67	3.39

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

HDFC BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	22,376.07	30,408.86	36,354.25	55,796.82	68,297.94	100,768.60	142,811.58
Total Liabilities	30,424.08	42,306.99	51,429.00	73,506.39	91,235.61	133,176.60	183,270.78
Assets							
Cash & Balances with RBI	2,081.96	2,541.98	2,650.13	3,306.61	5,182.48	12,553.18	13,527.21
Balance with Banks, Money at Call	1,087.26	1,115.57	1,823.87	3,612.39	3,971.40	2,225.16	3,979.41
Advances	11,754.86	17,744.51	25,566.30	35,061.26	46,944.78	63,426.90	98,883.05
Investments	13,388.08	19,256.79	19,349.81	28,393.96	30,564.80	49,393.54	58,817.55
Total Assets	30,424.08	42,306.99	51,429.00	73,506.39	91,235.61	133,176.60	183,270.78

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	2,022.97	2,510.93	3,093.49	4,475.34	6,889.02	10,115.00	16,332.26
Other Income	475.23	528.94	637.36	1,213.64	1,510.24	2,205.38	3,470.63
Total Income	2,498.20	3,039.87	3,730.85	5,688.98	8,399.26	12,320.38	19,802.89
Net Profit for the Year	438.04	602.72	853.62	1,115.94	1,382.54	1,590.18	2,244.94

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	11.12	11.66	12.16	11.41	13.10	13.60	15.70
Debt Equity Ratio	10.95	11.30	8.04	10.53	10.62	8.76	9.75
Net NPAs to Total Assets (%)	0.14	0.07	0.12	0.21	0.22	0.22	0.34
Net NPAs to Net Advances (%)	0.37	0.16	0.24	0.44	0.43	0.47	0.63
Op. Profit/ Average Working Funds (%)	2.58	2.56	2.56	2.75	2.98	3.13	2.94
Profit per Employee (Rs. in lakhs)	10.09	9.39	8.80	7.39	6.13	4.97	4.18
Business per Employee (Rs. in Crores)	8.65	8.66	8.06	7.58	6.07	5.06	4.46
Return on Net Worth (%)	19.45	24.38	23.67	22.73	23.57	13.83	15.32
Spread (as a % of Assets)	2.73	3.16	3.46	3.46	3.80	3.93	4.05

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

INDIAN BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	27,015.93	30,444.40	34,808.44	40,805.52	47,090.91	61,045.95	72,581.83
Total Liabilities	35,375.23	35,323.93	40,030.57	47,635.27	56,148.64	70,507.68	84,121.74
Assets							
Cash & Balances with RBI	1903.92	2,843.75	1,962.04	2,302.99	3,729.45	6,432.94	6,211.58
Balance with Banks, Money at Call	944.04	300.85	610.30	2,504.36	1,088.30	339.88	472.24
Advances	12,274.99	14,126.08	18,380.10	22,484.64	29,058.11	39,838.71	51,465.28
Investments	14,839.01	16,696.21	17,920.99	19,017.00	20,877.73	21,915.07	22,800.57
Total Assets	35,375.23	35,323.93	40,030.57	47,635.27	56,148.64	70,507.68	84,121.74

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	2,531.91	2,666.92	2,870.66	3,364.52	4,284.65	5,150.78	6,830.33
Other Income	525.00	747.33	572.44	531.47	823.06	1,067.89	1,035.44
Total Income	3,056.91	3,414.25	3,443.10	3,895.99	5,107.71	6,218.67	7,865.77
Net Profit for the Year	188.83	405.75	408.49	504.48	759.77	1,008.74	1,245.32

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	10.85	12.82	14.14	13.19	14.14	12.86	13.27
Debt Equity Ratio	5.90	20.64	18.53	17.99	14.74	13.37	13.32
Net NPAs to Total Assets (%)	2.13	0.98	0.56	0.37	0.18	0.14	0.11
Net NPAs to Net Advances (%)	6.15	2.71	1.35	0.79	0.35	0.24	0.34
Op. Profit/ Average Working Funds (%)	1.93	2.39	2.45	2.06	2.61	2.70	3.12
Profit per Employee (Rs. in lakhs)	0.85	1.85	1.87	2.36	3.64	4.91	6.28
Business per Employee (Rs. in Crores)	1.74	1.89	2.46	2.95	3.64	4.88	8.61
Return on Net Worth (%)	3.68	27.51	24.36	24.34	25.80	21.18	22.03
Spread (as a % of Assets)	2.32	2.85	2.97	3.17	3.17	2.82	3.10

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

INDIAN OVERSEAS BANK

Consolidated Balance Sheet for the year ended March 31 (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	36,698.59	41,482.58	44,241.24	50,529.32	68,740.41	84,325.58	100,115.89
Total Liabilities	41,154.71	47,322.02	50,815.06	59,357.80	82,256.83	101,859.73	121,073.40
Assets							
Cash & Balances with RBI	2,687.94	4,332.22	4,175.44	3,077.96	4,686.11	9,124.23	5,940.44
Balance with Banks, Money at Call	906.20	912.87	778.52	629.28	4,293.19	1,217.09	4,981.46
Advances	17,447.00	20,294.86	25,205.19	34,756.20	47,060.29	60,423.84	74,885.27
Investments	18,603.01	20,171.64	19,014.72	18,952.28	23,974.47	28,474.71	31,215.44
Total Assets	41,154.71	47,322.02	50,815.06	59,357.80	82,256.83	101,859.73	121,073.40

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	3,485.91	3,754.10	3,951.05	4,406.28	5,832.07	7,968.25	9,641.40
Other Income	543.45	819.96	799.56	728.21	862.76	1,075.46	1,713.07
Total Income	4,029.36	4,574.06	4,750.61	5,134.49	6,694.83	9,043.71	11,354.47
Net Profit for the Year	416.10	512.76	651.36	783.34	1,008.43	1,202.34	1,325.79

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	11.30	12.49	14.21	13.04	13.27	11.96	13.20
Debt Equity Ratio	25.39	21.49	18.18	16.54	17.75	17.78	16.85
Net NPAs to Total Assets (%)	2.22	1.22	0.63	0.38	0.31	0.36	0.82
Net NPAs to Net Advances (%)	5.23	2.85	1.27	0.65	0.55	0.60	1.33
Op. Profit/ Average Working Funds (%)	1.99	2.93	2.63	2.70	2.10	2.46	2.55
Profit per Employee (Rs. in lakhs)	1.70	2.12	2.66	3.22	4.04	4.82	5.20
Business per Employee (Rs. in Crores)	2.04	2.55	2.69	3.55	4.67	5.88	6.90
Return on Net Worth (%)	19.99	30.25	29.85	28.55	29.11	25.35	22.31
Spread (as a % of Assets)	2.97	3.38	3.65	3.48	3.11	2.63	2.37

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

INDUSIND BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	8,597.87	11,200.26	13,114.28	15,006.30	17,644.80	19,037.42	22,110.25
Total Liabilities	9,901.06	15,086.45	15,622.01	17,622.52	20,927.15	23,261.89	27.614.68
Assets							
Cash & Balances with RBI	574.76	1,334.64	636.08	604.09	1,021.17	1,526.26	1.190.79
Balance with Banks, Money at Call	575.96	918.97	518.51	876.42	1,574.23	651.77	732.90
Advances	5,347.85	7,812.23	8,999.75	9,310.46	11,084.20	12,795.31	15.770.64
Investments	2,535.07	3,971.69	4,069.17	5,409.90	5,891.66	6,629.70	8.083.41
Total Assets	9,901.06	15,086.45	15,622.01	17,622.52	20,927.15	23,261.89	27.614.68

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	742.95	986.15	1,134.39	1,188.28	1,500.25	1,920.23	2.309.47
Other Income	257.75	322.70	159.78	139.80	284.25	297.58	456.25
Total Income	1,000.70	1,308.85	1,294.17	1,328.08	1,784.50	2,217.81	2.765.72
Net Profit for the Year	-2.03	239.83	201.15	36.82	68.22	75.05	148.34

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	12.13	12.75	11.62	10.54	12.54	11.91	12.55
Debt Equity Ratio	14.67	15.34	15.81	17.33	16.70	17.16	15.48
Net NPAs to Total Assets (%)	2.30	1.41	1.56	1.11	1.31	1.25	0.27
Net NPAs to Net Advances (%)	4.25	2.72	2.71	2.09	2.47	2.27	1.14
Op. Profit/ Average Working Funds (%)	4.00	3.74	2.87	1.36	0.87	0.88	1.45
Profit per Employee (Rs. in lakhs)	9.50	14.98	10.12	14.98	2.61	2.62	3.49
Business per Employee (Rs. in Crores)	12.84	10.80	9.25	8.80	10.40	10.63	8.36
Return on Net Worth (%)	-0.33	34.20	25.79	4.34	7.10	6.76	10.38
Spread (as a % of Assets)	1.86	2.10	2.66	1.79	1.30	1.46	1.66

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

ICICI BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	48,169.31	68,108.58	99,818.78	165,083.17	230,510.19	244,431.05	218,347.82
Total Liabilities	106,811.95	125,228.87	167,659.40	251,388.95	344,658.11	399,795.07	379,300.96
Assets							
Cash & Balances with RBI	4,886.14	5,408.00	6,344.90	8,934.37	18,706.88	29,377.53	17,536.33
Balance with Banks, Money at Call	1,602.86	3,062.64	6,585.07	8,105.85	18,414.45	8,663.60	12,430.23
Advances	53,279.41	62,095.52	91,405.15	146,163.11	195,865.60	225,616.08	218,310.85
Investments	35,462.30	42,742.86	50,487.35	71,547.39	91,257.84	111,454.34	103,058.31
Total Assets	106,811.95	125,228.87	167,659.40	251,388.95	344,658.11	399,795.07	379,300.96

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	9,368.06	8,894.04	9,409.89	13,784.50	22,994.29	30,788.34	31,092.55
Other Income	3,158.72	3,064.92	3,416.23	5,036.62	6,962.95	8,878.85	8,117.76
Total Income	12,526.78	11,958.96	12,826.12	18,821.12	29,957.24	39,667.19	39,210.31
Net Profit for the Year	1,206.18	1,637.11	2,005.20	2,540.07	3,110.22	4,157.73	3,758.13

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	11.10	10.36	11.78	13.35	11.69	13.97	15.53
Debt Equity Ratio	11.32	8.55	7.98	7.45	9.50	5.27	4.42
Net NPAs to Total Assets (%)	2.60	1.10	0.90	0.42	0.58	0.87	0.12
Net NPAs to Net Advances (%)	5.21	2.21	1.65	0.72	1.02	1.55	2.09
Op. Profit/ Average Working Funds (%)	2.49	2.09	2.18	2.39	2.05	2.14	2.33
Profit per Employee (Rs. in lakhs)	11.00	12.00	11.00	10.00	9.00	10.00	11.00
Business per Employee (Rs. in Crores)	11.20	10.10	8.80	9.05	10.27	10.08	11.50
Return on Net Worth (%)	16.56	20.93	18.86	14.33	13.17	8.94	7.58
Spread (as a % of Assets)	1.33	1.59	1.69	1.87	1.64	1.83	2.21

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

IDBI BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	N/A	N/A	N/A	26,000.92	43,354.04	72,997.98	112,401.01
Total Liabilities	N/A	N/A	N/A	88,564.79	103,839.32	130,694.38	172,402.33
Assets							
Cash & Balances with RBI	N/A	N/A	N/A	2,680.09	5,406.47	6,694.83	8,590.82
Balance with Banks, Money at Call	N/A	N/A	N/A	2,682.69	1,504.62	2,063.94	2,628.50
Advances	N/A	N/A	N/A	52,739.07	62,470.82	82,212.69	103,428.34
Investments	N/A	N/A	N/A	25,350.53	25,675.31	32,802.93	50,047.60
Total Assets	N/A	N/A	N/A	88,564.79	103,839.32	130,694.38	172,402.33

*IDBI turned into a Bank in September, 2004

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	N/A	N/A	N/A	5,380.72	6,345.42	8,020.84	11,631.63
Other Income	N/A	N/A	N/A	1,280.45	1,046.74	1,751.26	1,475.72
Total Income	N/A	N/A	N/A	6,661.17	7,392.16	9,772.10	13,107.35
Net Profit for the Year	N/A	N/A	N/A	560.89	630.31	729.46	858.54

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	N/A	N/A	N/A	14.80	13.73	11.95	11.57
Debt Equity Ratio	N/A	N/A	N/A	11.54	10.33	12.65	15.10
Net NPAs to Total Assets (%)	N/A	N/A	N/A	0.64	0.70	0.83	0.55
Net NPAs to Net Advances (%)	N/A	N/A	N/A	1.01	1.12	1.30	0.92
Op. Profit/ Average Working Funds (%)	N/A	N/A	N/A	0.97	0.97	1.19	0.97
Profit per Employee (Rs. in lakhs)	N/A	N/A	N/A	12.45	8.44	8.86	8.42
Business per Employee (Rs. in Crores)	N/A	N/A	N/A	17.18	13.87	18.09	2.03
Return on Net Worth (%)	N/A	N/A	N/A	9.12	10.00	10.72	11.53
Spread (as a % of Assets)	N/A	N/A	N/A	0.43	0.63	0.50	0.77

*IDBI turned into a Bank in September, 2004

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

KARNATAKA BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	8,291.72	9,406.94	10,837.06	13,243.16	14,037.44	17,016.19	20,333.29
Total Liabilities	9,264.82	10,576.65	12,526.73	14,953.27	16,222.51	19,339.81	22,857.81
Assets							
Cash & Balances with RBI	437.27	388.78	687.68	535.39	826.82	1,482.21	1,364.98
Balance with Banks, Money at Call	198.51	360.53	684.80	679.22	334.69	502.04	95.75
Advances	3,899.70	4,667.92	6,287.44	7,791.57	9,552.68	10,841.97	11,810.05
Investments	4,432.61	4,878.91	4,555.72	5,548.58	5,048.16	5,963.71	8,961.49
Total Assets	9,264.82	10,576.65	12,526.73	14,953.27	16,222.51	19,339.81	22,857.81

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	811.47	848.45	839.93	1,018.04	1,256.25	1,570.81	1,917.40
Other Income	239.23	270.29	221.15	166.80	184.99	237.44	353.15
Total Income	1,050.70	1,118.74	1,061.08	1,184.84	1,441.24	1,808.25	2,270.55
Net Profit for the Year	110.12	133.17	147.15	176.03	177.03	241.74	266.71

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	13.44	13.03	14.16	11.78	11.03	12.17	13.48
Debt Equity Ratio	14.50	13.47	11.08	11.92	11.33	12.33	12.98
Net NPAs to Total Assets (%)	3.09	2.19	1.14	0.62	0.72	0.55	0.51
Net NPAs to Net Advances (%)	7.34	4.98	2.29	1.18	1.21	0.98	0.98
Op. Profit/ Average Working Funds (%)	2.88	3.29	3.16	2.46	2.31	2.21	2.25
Profit per Employee (Rs. in lakhs)	2.55	2.37	3.35	4.05	4.00	5.00	5.00
Business per Employee (Rs. in Crores)	2.75	3.20	3.81	4.78	5.24	5.89	6.49
Return on Net Worth (%)	15.77	20.78	17.56	16.85	15.07	17.52	17.01
Spread (as a % of Assets)	1.67	2.02	2.53	2.45	2.59	2.43	2.07

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

KOTAK MAHINDRA BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	256.81	4,459.34	4,299.54	6,565.92	11,000.09	16,423.65	15,644.93
Total Liabilities	2,152.62	5,816.95	6,512.86	10,175.12	19,915.42	28,312.36	28,711.88
Assets							
Cash & Balances with RBI	53.57	126.85	238.73	418.80	751.22	1,710.29	995.35
Balance with Banks, Money at Call	22.85	551.57	181.66	173.71	544.75	439.18	145.32
Advances	1,240.58	2,097.02	4,017.14	6,348.54	10,924.07	15,552.22	16,625.34
Investments	706.66	2,882.77	1,826.97	2,855.53	6,861.96	9,141.99	9,110.18
Total Assets	2,152.62	5,816.95	6,512.86	10,175.12	19,915.42	28,312.36	28,711.88

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	173.24	288.42	427.76	694.02	1,354.10	2,535.36	2885.93
Other Income	81.44	97.46	124.67	237.33	287.83	310.48	336.77
Total Income	254.68	385.88	552.43	931.35	1,641.93	2,845.84	3,222.70
Net Profit for the Year	44.90	78.73	84.89	118.23	141.37	293.93	276.10

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	25.97	15.25	12.80	11.27	13.46	18.65	20.01
Debt Equity Ratio	2.58	7.35	5.68	7.59	6.62	4.57	4.01
Net NPAs to Total Assets (%)	0.06	0.06	0.23	0.15	1.98	0.98	0.14
Net NPAs to Net Advances (%)	0.11	0.17	0.37	0.24	1.98	1.78	2.39
Op. Profit/ Average Working Funds (%)	5.24	3.86	2.44	2.16	2.16	2.51	2.54
Profit per Employee (Rs. in lakhs)	10.99	10.25	5.37	4.15	3.13	3.81	3.00
Business per Employee (Rs. in Crores)	2.30	3.54	3.87	3.52	3.84	3.84	3.47
Return on Net Worth (%)	8.29	13.72	12.45	14.58	11.16	8.17	7.06
Spread (as a % of Assets)	4.03	2.94	3.46	3.73	3.11	4.33	5.29

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

ORIENTAL BANK OF COMMERCE

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	29,809.09	35,673.50	47,850.33	50,197.46	63,995.97	77,856.70	98,368.85
Total Liabilities	33,987.63	41,006.57	54,069.46	58,937.37	73,936.27	90,705.32	112,582.58
Assets							
Cash & Balances with RBI	1,895.90	2,633.52	6,451.09	4,263.22	5,336.09	7,322.25	6,879.89
Balance with Banks, Money at Call	628.31	966.85	1,092.20	1,262.48	2,173.12	2,892.49	5,345.24
Advances	15,677.24	19,680.76	25,299.20	33,577.24	44,138.47	54,565.83	68,500.37
Investments	14,780.54	16,794.12	18,342.18	16,817.57	19,808.36	23,950.68	28,488.95
Total Assets	33,987.63	41,006.57	54,069.46	58,937.37	73,936.27	90,705.32	112,582.58

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	3,294.69	3,300.54	3,571.90	4,118.92	5,164.90	6,838.18	8,856.47
Other Income	566.81	726.89	263.70	290.06	365.57	139.93	1,071.32
Total Income	3,861.50	4,027.43	3,835.60	4,408.98	5,530.47	6,978.11	9,927.79
Net Profit for the Year	456.95	686.07	726.07	557.16	580.81	353.22	905.42

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	14.04	14.47	9.21	12.46	12.51	12.12	12.98
Debt Equity Ratio	14.50	13.33	14.38	9.71	11.43	13.48	15.25
Net NPAs to Total Assets (%)	0.63	0	0.60	0.28	0.29	0.59	0.39
Net NPAs to Net Advances (%)	1.44	0	1.29	0.50	0.49	0.99	0.65
Op. Profit/ Average Working Funds (%)	1.30	4.10	2.50	2.06	1.90	1.48	1.63
Profit per Employee (Rs. in lakhs)	3.40	5.10	6.67	5.32	5.61	5.84	6.18
Business per Employee (Rs. in Crores)	3.43	4.16	5.12	5.70	7.43	9.24	11.42
Return on Net Worth (%)	21.66	28.67	24.19	13.11	10.78	14.55	14.03
Spread (as a % of Assets)	3.54	3.55	2.82	2.72	2.29	1.85	1.77

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

PUNJAB NATIONAL BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	75,813.50	87,916.40	103,166.89	119,684.92	139,859.67	166,457.23	209,760.50
Total Liabilities	86,221.81	102,331.75	126,241.28	145,267.40	162,422.50	199,020.36	246,918.62
Assets							
Cash & Balances with RBI	6,568.53	6,742.28	9,460.20	23,394.56	12,372.03	15,258.15	17,058.25
Balance with Banks, Money at Call	1,508.66	2,078.23	1,628.83	1,397.14	3,273.49	3,572.57	4,354.89
Advances	40,228.12	47,224.72	60,412.75	74,627.37	96,596.52	119,501.57	154,702.99
Investments	34,030.05	42,125.49	50,672.83	41,055.31	45,189.84	53,991.71	63,385.18
Total Assets	86,221.81	102,331.75	126,241.28	145,267.40	162,422.50	199,020.36	246,918.62

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	7,485.01	7,779.70	8,459.85	9,584.15	11,537.48	14,265.02	19,326.16
Other Income	1,320.40	1,984.68	1,854.54	1,478.23	1,343.64	1,997.56	2,919.69
Total Income	8,805.41	9,764.38	10,314.39	11,062.38	12,881.12	16,262.58	22,245.85
Net Profit for the Year	842.20	1,108.69	1,410.12	1,439.31	1,540.08	2,048.76	3,090.88

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	12.02	13.10	14.78	11.95	12.29	12.96	14.03
Debt Equity Ratio	18.96	18.74	13.14	13.19	13.79	15.44	15.96
Net NPAs to Total Assets (%)	4.41	0.44	0.09	0.14	0.45	0.38	0.11
Net NPAs to Net Advances (%)	3.80	0.98	0.20	0.30	0.76	0.64	0.17
Op. Profit/ Average Working Funds (%)	2.87	3.26	2.25	2.18	2.15	2.25	2.58
Profit per Employee (Rs. in lakhs)	1.43	1.88	2.42	2.48	2.68	3.66	2.95
Business per Employee (Rs. in Crores)	1.96	2.28	2.77	3.31	4.07	5.04	6.64
Return on Net Worth (%)	20.88	26.42	22.49	17.01	16.03	19.00	23.52
Spread (as a % of Assets)	3.62	3.54	3.17	3.21	3.21	2.78	2.85

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

STATE BANK OF BIKANER & JAIPUR

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	13,233.63	15,642.31	19,038.40	21,693.61	28,480.49	34,108.43	39,224.42
Total Liabilities	18,038.15	20,256.42	23,401.53	27,514.02	34,507.49	41,154.00	46,370.21
Assets							
Cash & Balances with RBI	879.22	1,260.62	925.81	1,632.02	3,653.40	3,908.30	3,598.17
Balance with Banks, Money at Call	822.36	607.50	849.87	821.05	712.85	610.43	720.69
Advances	6,773.33	8,596.55	12,009.08	15,895.80	20,526.22	25,075.94	29,850.71
Investments	7,682.00	8,430.03	8,362.49	7,932.47	8,683.67	10,498.36	10,998.79
Total Assets	18,038.15	20,256.42	23,401.53	27,514.02	34,507.49	41,154.00	46,370.21

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	1,438.20	1,573.57	1,740.89	1,965.78	2,504.28	3,052.02	3,810.28
Other Income	339.90	491.50	483.12	359.26	493.20	471.66	577.05
Total Income	1,778.10	2,065.07	2,224.01	2,325.04	2,997.48	3,523.68	4,387.33
Net Profit for the Year	203.28	301.52	205.65	145.03	305.80	315.00	403.45

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	13.08	12.93	12.60	12.08	12.89	12.51	14.52
Debt Equity Ratio	14.99	13.62	14.67	15.43	17.22	19.91	19.19
Net NPAs to Total Assets (%)	1.56	0.53	0.83	0.68	0.65	0.51	0.55
Net NPAs to Net Advances (%)	4.16	1.25	1.61	1.18	1.09	0.83	0.85
Op. Profit/ Average Working Funds (%)	2.78	3.70	3.25	2.39	2.04	1.83	2.04
Profit per Employee (Rs. in lakhs)	1.63	2.44	1.69	1.20	2.57	2.73	3.55
Business per Employee (Rs. in Crores)	1.46	1.70	2.20	2.77	3.56	4.45	5.55
Return on Net Worth (%)	17.70	29.39	16.81	10.73	19.99	18.38	19.71
Spread (as a % of Assets)	3.06	3.56	3.71	3.61	2.72	2.28	2.38

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

STATE BANK OF INDIA

Consolidated Balance Sheet for the year ended March 31 (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	296,123.28	318,618.67	367,047.53	380,046.06	435,521.09	537,403.94	742,073.13
Total Liabilities	375,876.51	407,815.28	459,882.86	493,869.54	566,565.24	721,526.32	964,432.08
Assets							
Cash & Balances with RBI	12,738.47	19,041.28	16,810.33	21,652.70	29,076.43	51,534.62	55,546.17
Balance with Banks, Money at Call	32,442.56	24,525.33	22,511.77	22,907.30	22,892.27	15,931.72	48,857.63
Advances	137,758.46	157,933.54	202,374.45	261,641.53	337,336.49	416,768.20	542,503.20
Investments	172,347.91	185,676.48	197,097.91	162,534.24	149,148.88	189,501.27	275,953.96
Total Assets	375,876.51	407,815.28	459,882.86	493,869.54	566,565.24	721,526.32	964,432.08

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	31,087.02	30,460.49	32,428.00	35,794.93	39,491.03	48,950.31	63,788.43
Other Income	5,745.32	7,612.67	7,119.90	7,388.69	7,446.76	9,398.43	12,691.35
Total Income	36,832.34	38,073.16	39,547.90	43,183.62	46,937.79	58,348.74	76,479.78
Net Profit for the Year	3,105.00	4,378.72	4,304.52	4,406.67	4,541.31	6,729.12	9,121.23

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	13.50	13.53	12.45	11.88	12.34	13.49	14.25
Debt Equity Ratio	17.75	15.75	15.25	13.75	13.91	10.96	12.81
Net NPAs to Total Assets (%)	1.64	1.33	1.16	0.99	0.93	1.03	0.99
Net NPAs to Net Advances (%)	4.49	3.45	2.65	1.90	1.56	1.78	1.76
Op. Profit/ Average Working Funds (%)	2.27	2.50	2.61	2.27	1.86	1.96	2.05
Profit per Employee (Rs. in lakhs)	1.48	1.77	2.07	2.16	2.37	3.73	4.73
Business per Employee (Rs. in Crores)	1.91	2.11	2.43	2.99	3.57	4.56	5.56
Return on Net Worth (%)	18.05	23.39	19.43	17.04	15.47	13.72	15.74
Spread (as a % of Assets)	2.67	2.74	3.03	3.16	2.66	2.36	2.16

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

SYNDICATE BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	30,660.54	42,584.82	46,294.56	53,624.39	78,633.57	95,170.80	115,885.14
Total Liabilities	34,435.45	47,223.19	52,109.41	61,076.76	89,277.36	107,132.28	130,255.67
Assets							
Cash & Balances with RBI	1,649.98	4,507.19	2,690.00	3,145.14	6,574.23	10,374.91	12,543.23
Balance with Banks, Money at Call	869.03	2,070.31	379.57	2,068.38	2,924.68	1,282.24	1,861.18
Advances	16,305.35	20,646.92	26,729.20	36,466.23	51,670.44	64,051.01	81,532.27
Investments	13,823.25	17,916.60	20,370.73	17,269.11	25,234.01	28,075.93	30,537.23
Total Assets	34,435.45	47,223.19	52,109.41	61,076.76	89,277.36	107,132.28	130,255.67

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	2,875.17	3,084.85	3,757.62	4,050.42	6,040.07	7,906.31	9,579.64
Other Income	509.54	782.84	590.42	591.58	651.10	939.67	908.20
Total Income	3,384.71	3,867.69	4,348.04	4,642.00	6,691.17	8,845.98	10,487.84
Net Profit for the Year	344.13	456.09	438.06	536.49	716.06	848.07	912.82

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	11.03	11.49	10.70	11.73	11.74	11.22	12.68
Debt Equity Ratio	19.46	25.00	23.15	20.33	24.69	24.62	25.22
Net NPAs to Total Assets (%)	2.03	1.13	0.82	0.51	0.44	0.58	0.49
Net NPAs to Net Advances (%)	4.16	2.58	1.59	0.86	0.76	0.97	0.77
Op. Profit/ Average Working Funds (%)	1.77	2.51	1.88	1.76	1.75	1.52	1.34
Profit per Employee (Rs. in lakhs)	1.30	1.62	1.53	2.05	2.76	3.18	4.18
Business per Employee (Rs. in Crores)	1.80	2.40	2.80	3.49	4.89	5.86	7.93
Return on Net Worth (%)	21.79	29.62	23.66	23.14	24.60	21.94	19.86
Spread (as a % of Assets)	3.51	3.03	3.25	3.08	2.41	1.93	2.00

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

UCO BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	31,343.39	39,244.26	49,470.24	54,543.73	64,860.01	79,908.94	100,221.57
Total Liabilities	34,914.08	43,797.82	54,589.45	61,839.40	74,863.89	89,794.93	111,664.15
Assets							
Cash & Balances with RBI	2,133.81	2,342.03	2,977.89	2,032.15	3,794.27	5,702.72	6,588.85
Balance with Banks, Money at Call	1,003.62	1,845.63	3,536.46	1,311.08	2,420.26	2,400.80	4,264.59
Advances	15,923.10	20,626.44	27,655.70	37,377.58	46,988.91	55,081.89	68,803.86
Investments	14,137.51	17,611.47	19,064.37	19,636.31	19,524.87	24,249.63	29,384.78
Total Assets	34,914.08	43,797.82	54,589.45	61,839.40	74,863.89	89,794.93	111,664.15

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	2,792.70	3,096.28	3,546.86	4,354.59	5,317.84	6,508.56	8,121.38
Other Income	609.29	625.27	515.56	463.73	550.43	772.13	1,019.89
Total Income	3,401.99	3,721.55	4,062.42	4,818.32	5,868.27	7,280.69	9,141.27
Net Profit for the Year	207.49	435.42	345.65	196.65	316.10	412.16	557.72

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	10.04	11.88	11.26	11.12	11.56	10.09	11.93
Debt Equity Ratio	26.33	26.25	27.98	27.44	29.33	32.16	36.11
Net NPAs to Total Assets (%)	2.00	1.72	1.49	1.27	1.34	1.22	0.73
Net NPAs to Net Advances (%)	4.38	3.65	2.93	2.10	2.41	1.98	1.18
Op. Profit/ Average Working Funds (%)	1.97	2.47	1.73	1.48	1.40	1.20	1.28
Profit per Employee (Rs. in lakhs)	0.85	1.79	1.43	0.82	1.30	1.76	2.33
Business per Employee (Rs. in Crores)	1.97	2.49	3.21	3.87	4.64	5.80	7.09
Return on Net Worth (%)	17.21	36.21	21.18	10.47	15.06	16.58	19.95
Spread (as a % of Assets)	2.53	2.73	2.58	2.53	2.12	1.66	1.47

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

UNION BANK OF INDIA

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	44,748.62	50,558.93	61,830.59	74,094.30	85,180.22	103,858.65	138,702.83
Total Liabilities	51,060.48	58,316.68	72,413.25	89,126.04	102,677.88	124,073.26	160,975.51
Assets							
Cash & Balances with RBI	2,247.24	2,400.04	3,647.18	4,387.27	5,917.57	9,454.74	8,992.05
Balance with Banks, Money at Call	1,652.39	1,447.89	2,924.79	2,003.24	2,508.87	643.10	6,992.88
Advances	25,514.84	29,425.91	40,105.08	53,379.96	62,386.43	74,348.29	96,534.23
Investments	19,370.79	22,442.04	22,792.79	25,917.65	27,981.77	33,822.63	42,996.96
Total Assets	51,060.48	58,316.68	72,413.25	89,126.04	102,677.88	124,073.26	160,975.51

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	4,306.18	4,516.31	4,969.79	5,863.71	7,382.18	9,447.30	11,889.38
Other Income	824.56	831.46	766.10	625.10	841.80	1,232.67	1,482.55
Total Income	5,130.74	5,347.77	5,735.89	6,488.81	8,223.98	10,679.97	13,371.93
Net Profit for the Year	552.69	712.05	719.06	675.18	845.39	1,387.03	1,726.55

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	12.41	12.32	12.09	11.39	12.80	15.51	13.27
Debt Equity Ratio	17.61	19.43	19.69	18.10	18.00	18.47	19.66
Net NPAs to Total Assets (%)	2.45	1.45	1.46	0.94	0.59	0.10	0.20
Net NPAs to Net Advances (%)	4.91	2.87	2.64	1.56	0.96	0.17	0.34
Op. Profit/ Average Working Funds (%)	2.78	2.77	2.52	2.04	2.19	2.34	2.28
Profit per Employee (Rs. in lakhs)	2.15	2.78	2.81	2.66	3.25	5.39	6.28
Business per Employee (Rs. in Crores)	2.49	2.86	3.43	4.36	5.09	6.99	8.61
Return on Net Worth (%)	21.53	30.47	25.05	18.67	19.16	24.66	24.47
Spread (as a % of Assets)	2.93	2.98	2.85	2.66	2.72	2.49	2.82

Note: ***Only those items required for the study are shown in the Balance Sheet and P&L Statement***
Source: ***Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)***

VIJAYA BANK

Consolidated Balance Sheet for the year ended March 31(Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital and Liabilities							
Deposits	17,019.81	21,015.05	25,617.98	27,709.29	37,604.50	47,952.01	54,535.42
Total Liabilities	19,079.37	24,071.01	29,335.49	31,534.09	42,357.49	56,184.31	62,382.61
Assets							
Cash & Balances with RBI	1,086.27	875.57	1,282.11	2,248.64	3,399.71	5,661.55	5,730.41
Balance with Banks, Money at Call	517.21	242.99	332.46	586.50	1,670.41	435.81	1,941.78
Advances	7,891.34	11,045.31	14,335.78	16,664.01	24,223.55	31,689.22	35,468.11
Investments	8,861.61	10,836.99	12,068.74	11,179.70	12,018.41	16,617.32	17,387.70
Total Assets	19,079.37	24,071.01	29,335.49	31,534.09	42,357.49	56,184.31	62,382.61

Consolidated Profit & Loss Account for the year (Rs. in crores)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Earned	1,670.81	1,940.09	2,094.31	2,311.80	2,823.11	3,983.41	5,237.83
Other Income	346.02	525.69	353.67	368.99	336.70	532.03	698.81
Total Income	2,016.83	2,465.78	2,447.98	2,680.79	3,159.81	4,515.44	5,936.64
Net Profit for the Year	196.55	396.11	380.57	126.88	288.94	355.91	207.87

Key Financial Ratios

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Capital Adequacy Ratio (%)	12.66	14.11	12.92	11.94	11.21	11.22	13.15
Debt Equity Ratio	21.37	16.44	16.68	17.10	20.31	22.76	23.74
Net NPAs to Total Assets (%)	1.08	0.42	0.29	0.45	0.34	0.32	0.47
Net NPAs to Net Advances (%)	2.61	0.91	0.59	0.90	0.59	0.57	0.82
Op. Profit/ Average Working Funds (%)	2.50	3.96	3.01	2.38	1.95	1.39	1.28
Profit per Employee (Rs. in lakhs)	1.76	3.73	3.45	1.16	3.04	3.32	2.19
Business per Employee (Rs. in Crores)	1.94	2.49	3.11	3.69	4.55	6.13	7.56
Return on Net Worth (%)	24.23	39.08	27.05	8.04	16.65	17.15	11.31
Spread (as a % of Assets)	3.37	3.48	3.36	3.08	2.53	1.65	1.80

Note: *Only those items required for the study are shown in the Balance Sheet and P&L Statement*
Source: *Annual Reports of Bank & Reports on Trend and Progress of Banking in India (RBI Publication)*

Annexure VII

CAMEL Rating Calculation – An Example

The calculation of CAMEL Rating for commercial banks as adopted in the study is explained with the example of State Bank of India for the Financial Year 2008-2009 –

Calculation of Parameter Ratios under the Components of CAMEL Model

I. Capital Adequacy

The values of the parameters of Capital Adequacy of SBI for the FY 2008-09 are –

CAR	=	14.25%
D/E Ratio	=	12.81
Advances to Assets	=	56.25%

II. Asset Quality

The values of the parameters of Asset Quality of SBI for the FY 2008-09 are –

Net NPAs to Total Assets	=	0.99%
Net NPAs to Net Advances	=	1.76%
Total Investments to Total Assets	=	28.61%

III. Management

The values of the parameters of Management of SBI for the FY 2008-09 are –

Total Advances to Total Deposits	=	73.11%
Profit per Employee	=	Rs. 4.73 lakhs
Business per Employee	=	Rs. 5.56 crores
Return on Net Worth	=	15.74%

IV. Earnings Quality

The values of the parameters of Earnings Quality of SBI for the FY 2008-09 are –

Operating profit by Average Working Funds	=	2.05%
Spread	=	2.16%
Net Profit/ Average Assets	=	1.08%
Interest Income/ Total Income	=	83.41%
Non-interest Income/ Total Income	=	16.59%

V. Liquidity

The values of the parameters of Liquidity of SBI for the FY 2008-09 are –

Liquid Assets/ Total Deposits	=	14.07%
Liquid Assets/ Total Assets	=	10.83%

Determining the Parameter Rating Range

For the FY 2008-09, the parameter ranges were determined so that parameters relating to a sample bank could be assigned a score between 1 and 5. Thus, the number of class intervals required was 5. In order to obtain the required class intervals, first, the **mean value (μ)** and **standard deviation (σ)** of the population (consisting of 39 listed commercial banks in FY 2008-09) were calculated for each parameter under the C.A.M.E.L components. Thereafter, the class interval was determined by taking μ +/- 1σ, μ +/- 2σ, μ +/- 3σ, as below –

Class Interval for Parameters

Score	Class Intervals	
	Where High value of the ratio is considered to be better	**Where Low value of the ratio is considered to be better**
1	$(\mu + 2\sigma)$ to $(\mu + 3\sigma)$	$(\mu - 2\sigma)$ to $(\mu - 3\sigma)$
2	$(\mu + 1\sigma)$ to $(\mu + 2\sigma)$	$(\mu - 1\sigma)$ to $(\mu - 2\sigma)$
3	$(\mu - 1\sigma)$ to $(\mu + 1\sigma)$	$(\mu - 1\sigma)$ to $(\mu + 1\sigma)$
4	$(\mu - 1\sigma)$ to $(\mu - 2\sigma)$	$(\mu + 1\sigma)$ to $(\mu + 2\sigma)$
5	$(\mu - 2\sigma)$ to $(\mu - 3\sigma)$	$(\mu + 2\sigma)$ to $(\mu + 3\sigma)$

In the FY 2008-09, the mean and standard deviation of the parameters of C.A.M.E.L Components and based on the parameter ranges, and the parameter score of SBI were as follows –

Mean & Standard Deviation of the Parameters and SBI's Score

CAMEL Components	Parameters	Mean	SD	SBI's Score
Capital Adequacy	Capital Adequacy Ratio	13.78%	1.93%	3*
	Debt Equity Ratio	16.00	7.11	3
	Advances to Assets	58.89%	4.16%	3
Asset Quality	Net NPAs to Total Assets	0.47%	0.36%	4
	Net NPAs to Net Advances	0.93%	0.69%	4
	Total Investments to Total Assets	28.25%	3.69%	3

* SBI's CAR of 14.25 % lies in the range of 11.85% to 15.71%, hence it gets a score of 3.

Management	Total Advances to Total Deposits	71.86%	9.62%	3
	Profit per Employee	Rs. 4.81 lakhs	Rs. 2.70 lakhs	3
	Business per Employee	Rs. 6.96 crores	Rs.2.06 crores	3
	Return on Net Worth	16.13%	7.04%	3
Earnings Quality	Operating Profit by Average Working Funds	2.09%	0.63%	3
	Spread	2.38%	0.73%	3
	Net Profit/ Average Assets	0.98%	0.49%	3
	Interest Income/ Total Income	86.52%	3.19%	3
	Non-interest Income/ Total Income	13.49%	3.17%	3
Liquidity	Liquid Assets/ Total Deposits	10.91%	2.43%	2
	Liquid Assets/ Total Assets	8.91%	2.38%	3

Thereafter, the averages of the parameter scores were taken and the component scores were obtained. This implies that the C.A.M.E.L components for State Bank of India will now be assigned the following score –

$C_{SBI} = 3.00$ $A_{SBI} = 3.67$ $M_{SBI} = 3.00$

$E_{SBI} = 3.00$ $L_{SBI} = 2.50$

Determining Composite C.A.M.E.L Score

For calculating the composite CAMEL score of a bank, weighted average of the score assigned against all the components were taken into consideration. As the study focus on five components of C.A.M.E.L, the revised weights used for determining Composite score are –

Revised Weights Assigned to CAMEL Components

Components	Weights assigned
Capital Adequacy	27%
Asset Quality	22%
Management	27%
Earnings Quality	12%
Liquidity	12%
TOTAL	100%

Thus, based on the revised weights assigned to the C.A.M.E.L components, the weighted C.A.M.E.L score of State Bank India works out as follows –

$$CS_{SBI} = 3.00 * 27\,\% + 3.67 * 22\,\% + 3.00 * 27\,\% + 3.00 * 12\,\% + 2.50 * 12\,\%$$

$$= \mathbf{3.0874}$$

Determining the Composite C.A.M.E.L Rating

On obtaining the C.A.M.E.L score of the bank, it was rated as per the rating ranges and the rating scales given below –

Table 4.4 : Composite C.A.M.E.L and their Interpretation

Rating Scale	Rating range	Rating Analysis	Rating analysis Interpretation
1	1.0-1.4	Strong	Sound in every respect, no supervisory responses required.
2	1.6-2.4	Satisfactory	Fundamentally sound with modest correctable weakness, supervisory response limited.
3	2.6-3.4	Fair (watch category)	Combination of weaknesses if not redirected will become severe. Watch category. Requires more than normal supervision.
4	3.6-4.4	Marginal (some risk of failure)	Immoderate weakness unless properly addressed could impair future viability of the bank. Needs close supervision.
5	4.6-5.0	Unsatisfactory (high degree of failure evident)	High risk of failure in the near term. Under constant supervision/cease and desist order.

Source: BASEL COMMITTEE ON BANKING SUPERVISION, WORKING PAPERS No. 4 – December 2000

As per the table, State Bank of India can be assigned a rating of 3 on the CAMEL Scale. Thus, SBI falls under the Fair (watch) category, which implies that the Bank requires more than normal supervision.

Annexure VIII

Financial Year 2007 - 08

Component Rating for Capital Adequacy of Banks

1.1. Capital Adequacy

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	12.732 %
	=	12.73 %
Standard Deviation (σ)	=	2.240 %
	=	2.24 %
2σ	=	4.48 %
3σ	=	6.72 %

Based on the above, the class interval is determined.

Rating Scale for Capital Adequacy Ratio

Rating Scale	Rating range	Rating Analysis
1	17.21 % to 19.45%	Strong
2	14.97 % to 17.21 %	Satisfactory
3	10.49 % to 14.97 %	Fair (watch category)
4	8.25 % to 10.49 %	Marginal (some risk of failure)
5	6.01% to 8.25 %	Unsatisfactory (high degree of failure evident)

1.2. Debt Equity Ratio

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	15.939
	=	15.94
Standard Deviation (σ)	=	6.643
	=	6.64
2σ	=	13.28
3σ	=	19.92

Based on the above, the class interval is determined.

Rating Scale for Debt-Equity Ratio

Rating Scale	Rating range	Rating Analysis
1	(-3.98) to 2.66	Strong
2	2.66 to 9.30	Satisfactory
3	9.30 to 22.58	Fair (watch category)
4	22.58 to 29.22	Marginal (some risk of failure)
5	29.22 to 35.86	Unsatisfactory (high degree of failure evident)

1.3. Advances to Assets

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	58.327 %
	=	58.33 %
Standard Deviation (σ)	=	3.923 %
	=	3.92 %
2σ	=	7.84 %
3σ	=	11.76 %

Based on the above, the class interval is determined.

Rating Scale for Advances to Assets

Rating Scale	Rating range	Rating Analysis
1	66.17 % to 70.09 %	Strong
2	62.25 % to 66.17 %	Satisfactory
3	54.41 % to 62.25 %	Fair (watch category)
4	50.49 % to 54.41 %	Marginal (some risk of failure)
5	46.57 % to 50.49 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Capital Adequacy

Banks	Component Rating of Banks for Capital						Average Component Rating
	CAR %	Rating	Total Debt – Equity	Rating	Advances to Assets (%)	Rating	
Allahabad Bank	12.04	3	13.65	3	59.95	3	3.00
Andhra Bank	11.61	3	15.21	3	60.50	3	3.00
Axis Bank	13.73	3	9.99	3	54.45	3	3.00
Bank of Baroda	12.91	3	13.77	3	59.41	3	3.00
Bank of India	12.59	3	17.00	3	63.45	2	2.67
Bank of Maharashtra	10.26	4	23.65	4	60.82	3	3.67
Canara Bank	13.25	3	18.57	3	59.40	3	3.00
Central Bank of India	10.42	4	35.80	5	58.89	3	4.00
Corporation Bank	12.09	3	13.11	3	58.84	3	3.00
Dena Bank	11.09	3	21.67	3	59.58	3	3.00
Federal Bank	22.46*	1	6.61	2	58.16	3	2.00
HDFC Bank	13.60	3	8.76	2	47.63	5	3.33
Indian Bank	12.86	3	13.37	3	56.50	3	3.00
Indian Overseas Bank	11.96	3	17.78	3	59.32	3	3.00
Indusind Bank	11.91	3	17.16	3	55.01	3	3.00
ICICI Bank	13.97	3	5.27	2	56.43	3	2.67
IDBI Bank	11.95	3	12.65	3	62.90	2	2.67
Karnataka Bank	12.17	3	12.33	3	56.06	3	3.00
Kotak Mahindra Bank	18.65	1	4.57	2	54.93	3	2.00
Oriental Bank of Commerce	12.12	3	13.48	3	60.16	3	3.00
Punjab National Bank	12.96	3	15.44	3	60.04	3	3.00
SBBJ	12.51	3	19.91	3	60.93	3	3.00
State Bank of India	13.49	3	10.96	3	57.76	3	3.00
Syndicate Bank	11.22	3	24.62	4	59.79	3	3.33
UCO Bank	10.09	4	32.16	5	61.34	3	4.00
Union Bank of India	15.51	2	18.47	3	59.92	3	2.67
Vijaya Bank	11.22	3	22.76	4	56.40	3	3.33

Source: Annual Report of Banks

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Component Rating for Asset Quality of Banks

2.2. Net NPAs to Total Assets

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	0.466 %
	=	0.47 %
Standard Deviation (σ)	=	0.3 %
2 σ	=	0.6 %
3 σ	=	0.9 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Total Assets

Rating Scale	Rating range	Rating Analysis
1	(-0.43) % to (-0.13) %	Strong
2	(-0.13) % to 0.17 %	Satisfactory
3	0.17 % to 0.77 %	Fair (watch category)
4	0.77 % to 1.07 %	Marginal (some risk of failure)
5	1.07 % to 1.37 %	Unsatisfactory (high degree of failure evident)

2.2. Net NPA to Net Advances

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	0.832 %
	=	0.83 %
Standard Deviation (σ)	=	0.538 %
	=	0.54 %
2 σ	=	1.08 %
3 σ	=	1.62 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Net Advances

Rating Scale	Rating range	Rating Analysis
1	(-0.79) % to (-0.25) %	Strong
2	(-0.25) % to 0.29 %	Satisfactory
3	0.29 % to 1.37 %	Fair (watch category)
4	1.37 % to 1.91 %	Marginal (some risk of failure)
5	1.91 % to 2.45 %	Unsatisfactory (high degree of failure evident)

2.3. Total Investments to Total Assets

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	27.471 %
	=	27.47 %
Standard Deviation (σ)	=	2.673 %
	=	2.67 %
2 σ	=	5.34 %
3 σ	=	8.01 %

Based on the above, the class interval is determined.

Rating Scale for Total Investments to Total Assets

Rating Scale	Rating range	Rating Analysis
1	19.46 % to 22.13 %	Strong
2	22.13 % to 24.80 %	Satisfactory
3	24.80 % to 30.14 %	Fair (watch category)
4	30.14 % to 32.81 %	Marginal (some risk of failure)
5	32.81 % to 35.48 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Asset Quality

Banks	Component Rating of Banks for Asset Quality						Average Component Rating
	Net NPAs to Total Assets (%)	Rating	Net NPA to Net Advances (%)	Rating	Total Investment to Total Assets (%)	Rating	
Allahabad Bank	0.48	3	0.80	3	28.21	3	3.00
Andhra Bank	0.09	2	0.15	2	26.33	3	2.33
Axis Bank	0.23	3	0.42	3	30.76	4	3.33
Bank of Baroda	0.27	3	0.47	3	24.43	2	2.67
Bank of India	0.33	3	0.52	3	23.38	2	2.67
Bank of Maharashtra	0.53	3	0.87	3	25.51	3	3.00
Canara Bank	0.50	3	0.84	3	27.59	3	3.00
Central Bank of India	0.86	4	1.45	4	25.38	3	3.67
Corporation Bank	0.19	3	0.32	3	24.79	2	2.67
Dena Bank	0.56	3	0.94	3	26.61	3	3.00
Federal Bank	0.13	2	0.23	2	30.85	4	2.67
HDFC Bank	0.22	3	0.47	3	37.09*	5	3.67
Indian Bank	0.14	2	0.24	2	31.08	4	2.67
Indian Overseas Bank	0.36	3	0.60	3	27.95	3	3.00
Indusind Bank	1.25	5	2.27	5	28.50	3	4.33
ICICI Bank	0.87	4	1.55	4	27.88	3	3.67
IDBI Bank	0.83	4	1.30	3	25.10	3	3.33
Karnataka Bank	0.55	3	0.98	3	30.84	4	3.33
Kotak Mahindra Bank	0.98	4	1.78	4	32.29	4	4.00
Oriental Bank of Commerce	0.59	3	0.99	3	26.40	3	3.00
Punjab National Bank	0.38	3	0.64	3	27.13	3	3.00
SBBJ	0.51	3	0.83	3	25.51	3	3.00
State Bank of India	1.03	4	1.78	4	26.26	3	3.67
Syndicate Bank	0.58	3	0.97	3	26.21	3	3.00
UCO Bank	1.22	5	1.98	5	27.01	3	4.33
Union Bank of India	0.10	2	0.17	2	27.26	3	2.33
Vijaya Bank	0.32	3	0.57	3	29.58	3	3.00

Source: Annual Report of Banks
* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Component Rating for Management of Banks

3.1. Total Advances to Total Deposits

For the Financial Year 2007 – 08,

N = 39 banks

Mean = 70.920 %
= 70.92 %

Standard Deviation (σ)	=	10.171 %
	=	10.17 %
2 σ	=	20.34 %
3 σ	=	30.51 %

Based on the above, the class interval is determined.

Rating Scale for Total Advances to Total Deposits

Rating Scale	Rating range	Rating Analysis
1	91.26 % to 101.43 %	Strong
2	81.09 % to 91.26 %	Satisfactory
3	60.75 % to 81.09 %	Fair (watch category)
4	50.58 % to 60.75 %	Marginal (some risk of failure)
5	40.41 % to 50.58 %	Unsatisfactory (high degree of failure evident)

3.2. Profit per Employee (in Lacs)

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	Rs. 4.282 Lakhs
	=	Rs. 4.28 Lakhs
Standard Deviation (σ)	=	Rs. 1.915 Lakhs
	=	Rs. 1.92 Lakhs
2 σ	=	Rs. 3.84 Lakhs
3 σ	=	Rs. 5.76 Lakhs

Based on the above, the class interval is determined.

Rating Scale for Profit per Employee

Rating Scale	Rating range	Rating Analysis
1	8.12 to 10.04 lakhs	Strong
2	6.20 to 8.12 lakhs	Satisfactory
3	2.36 to 6.20 lakhs	Fair (watch category)
4	0.44 to 2.36 lakhs	Marginal (some risk of failure)
5	(-1.48) to 0.44 lakhs	Unsatisfactory (high degree of failure evident)

3.3. Business per Employee (in Crores)

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	Rs. 6.393 Crores
	=	Rs. 6.39 Crores
Standard Deviation (σ)	=	Rs. 2.545 Crores
	=	Rs. 2.55 Crores
2 σ	=	Rs. 5.10 Crores
3 σ	=	Rs. 7.65 Crores

Based on the above, the class interval is determined.

Rating Scale for Business per Employee

Rating Scale	Rating range	Rating Analysis
1	11.49 to 14.04 crores	Strong
2	8.94 to 11.49 crores	Satisfactory
3	3.84 to 8.94 crores	Fair (watch category)
4	1.29 to 3.84 crores	Marginal (some risk of failure)
5	(-1.26) to 1.29 crores	Unsatisfactory (high degree of failure evident)

3.4. Return on Net Worth

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	17.59103 %
	=	17.59 %

Standard Deviation (σ) = 8.42911 %
= 8.43 %
2 σ = 16.86 %
3 σ = 25.29 %

Based on the above, the class interval is determined.

Rating Scale for Return on Net Worth

Rating Scale	Rating range	Rating Analysis
1	34.45 % to 42.88 %	Strong
2	26.02 % to 34.45 %	Satisfactory
3	9.16 % to 26.02 %	Fair (watch category)
4	0.73 % to 9.16 %	Marginal (some risk of failure)
5	(-7.70) % to 0.73 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Management

Banks	Component Rating of Banks for Management								Average Component Rating
	Total Advances to Total Deposits (%)	Rating	Profit per employee (Rs. in Lakhs)	Rating	Business per employee (Rs. in Crores)	Rating	Return on Net Worth (%)	Rating	
Allahabad Bank	69.43	3	4.85	3	6.04	3	18.57	3	3.00
Andhra Bank	69.26	3	4.30	3	6.27	3	17.71	3	3.00
Axis Bank	68.09	3	8.39	1	11.17	2	12.21	3	2.25
Bank of Baroda	70.18	3	3.94	3	7.10	3	12.99	3	3.00
Bank of India	75.64	3	4.95	3	6.52	3	22.76	3	3.00
Bank of Maharashtra	70.13	3	2.36	3	5.16	3	18.60	3	3.00
Canara Bank	69.60	3	3.65	3	6.09	3	18.86	3	3.00
Central Bank of India	66.17	3	1.56	4	4.01	3	15.46	3	3.25
Corporation Bank	70.70	3	6.52	2	8.39	3	17.38	3	2.75
Dena Bank	67.83	3	3.61	3	5.59	3	22.96	3	3.00
Federal Bank	72.95	3	5.30	3	6.40	3	9.39	3	3.00
HDFC Bank	62.94	3	4.97	3	5.06	3	13.83	3	3.00
Indian Bank	65.26	3	4.91	3	4.88	3	21.18	3	3.00
Indian Overseas Bank	71.66	3	4.82	3	5.88	3	25.35	3	3.00
Indusind Bank	67.21	3	2.62	3	10.63	2	6.76	4	3.00
ICICI Bank	92.30	1	10.00	1	10.08	2	8.94	4	2.00
IDBI Bank	112.62*	1	8.86	1	18.09*	1	10.72	3	1.50
Karnataka Bank	63.72	3	5.00	3	5.89	3	17.52	3	3.00
Kotak Mahindra Bank	94.69	1	3.81	3	3.84	3	8.17	4	2.75
Oriental Bank of Commerce	70.08	3	5.84	3	9.24	2	14.55	3	2.75
Punjab National Bank	71.79	3	3.66	3	5.04	3	19.00	3	3.00
State Bank of Bikaner & Jaipur	73.52	3	2.73	3	4.45	3	18.38	3	3.00
State Bank of India	77.55	3	3.73	3	4.56	3	13.72	3	3.00
Syndicate Bank	67.30	3	3.18	3	5.86	3	21.94	3	3.00
UCO Bank	68.93	3	1.76	4	5.80	3	16.58	3	3.25
Union Bank of India	71.59	3	5.39	3	6.99	3	24.66	3	3.00
Vijaya Bank	66.05	3	3.32	3	6.13	3	17.15	3	3.00

Source: Annual Report of Banks

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Component Rating for Earnings Quality of Banks

4.1. Operating Profit by Average Working Fund

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	1.927 %
	=	1.93 %
Standard Deviation (σ)	=	0.547 %
	=	0.55 %
2 σ	=	1.10 %
3 σ	=	1.65 %

Based on the above, the class interval is determined.

Rating Scale for Operating Profit by Average Working Funds

Rating Scale	Rating range	Rating Analysis
1	3.03 % to 3.58 %	Strong
2	2.48 % to 3.03 %	Satisfactory
3	1.38 % to 2.48 %	Fair (watch category)
4	0.83 % to 1.38 %	Marginal (some risk of failure)
5	0.28 % to 0.83 %	Unsatisfactory (high degree of failure evident)

4.2. Spread (as % of Assets)

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	2.292%
	=	2.29 %
Standard Deviation (σ)	=	0.608 %
	=	0.61 %
2 σ	=	1.22 %
3 σ	=	1.83 %

Based on the above, the class interval is determined.

Rating Scale for Spread (as % of Assets)

Rating Scale	Rating range	Rating Analysis
1	3.51 % to 4.12 %	Strong
2	2.90 % to 3.51%	Satisfactory
3	1.68 % to 2.90 %	Fair (watch category)
4	1.07 % to 1.68 %	Marginal (some risk of failure)
5	0.46 % to 1.07 %	Unsatisfactory (high degree of failure evident)

4.3. Net Profit / Average Assets

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	1.032 %
	=	1.03 %
Standard Deviation (σ)	=	0.40 %
2 σ	=	0.80 %
3 σ	=	1.20 %

Based on the above, the class interval is determined.

Rating Scale for Net Profit / Average Assets

Rating Scale	Rating range	Rating Analysis
1	1.83 % to 2.23 %	Strong
2	1.43 % to 1.83 %	Satisfactory
3	0.63 % to 1.43 %	Fair (watch category)
4	0.23 % to 0.63 %	Marginal (some risk of failure)
5	(-0.17) % to 0.23 %	Unsatisfactory (high degree of failure evident)

4.4. Interest Income / Total Income

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	86.254 %
	=	86.25 %
Standard Deviation (σ)	=	3.90 %
2 σ	=	7.80 %
3 σ	=	11.70 %

Based on the above, the class interval is determined.

Rating Scale for Interest Income / Total Income

Rating Scale	Rating range	Rating Analysis
1	94.05 % to 97.95 %	Strong
2	90.15 % to 94.05 %	Satisfactory
3	82.35 % to 90.15 %	Fair (watch category)
4	78.45 % to 82.35 %	Marginal (some risk of failure)
5	74.55 % to 78.45 %	Unsatisfactory (high degree of failure evident)

4.5. Non Interest Income / Total Income

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	13.821 %
	=	13.82 %
Standard Deviation (σ)	=	3.948417 %
	=	3.95 %
2 σ	=	7.90 %
3 σ	=	11.85 %

Based on the above, the class interval is determined.

Rating Scale for Non Interest Income / Total Income

Rating Scale	Rating range	Rating Analysis
1	1.97 % to 5.92 %	Strong
2	5.92 % to 9.87 %	Satisfactory
3	9.87 % to 17.77 %	Fair (watch category)
4	17.77 % to 21.72 %	Marginal (some risk of failure)
5	21.72 % to 25.67 %	Unsatisfactory (high degree of failure evident)

Component Rating for Banks for Earnings Quality

Banks	Operating Profit/Avg. Working Funds	Rating	Spread (as a % of Assets)	Rating	Net Profit/ Average Assets (%)	Rating	Interest Income/ Total Income (%)	Rating	Non Interest Income/ Total . Income (%)	Rating	Average Component Rating
Allahabad Bank	2.00	3	2.15	3	1.29	3	86.68	3	13.32	3	3.00
Andhra Bank	1.17	4	2.51	3	1.11	3	86.64	3	13.36	3	3.20
Axis Bank	2.57	2	2.36	3	1.17	3	80.01	4	19.99	4	3.20
Bank of Baroda	1.96	3	2.18	3	0.89	3	85.21	3	14.79	3	3.00
Bank of India	2.31	3	2.36	3	1.25	3	85.37	3	14.63	3	3.00
Bank of Maharashtra	1.54	3	2.55	3	0.75	3	90.30	2	9.70	2	2.60
Canara Bank	1.73	3	1.96	3	0.90	3	86.02	3	13.98	3	3.00
Central Bank of India	1.26	4	1.79	3	0.51	4	89.86	3	10.14	3	3.40
Corporation Bank	2.20	3	2.17	3	1.01	3	88.80	3	11.20	3	3.00
Dena Bank	2.02	3	2.31	3	1.03	3	85.00	3	15.00	3	3.00
Federal Bank	2.89	2	2.67	3	1.28	3	86.43	3	13.57	3	2.80
HDFC Bank	3.13	1	3.93	1	1.42	3	82.10	4	17.90	4	2.60
Indian Bank	2.70	2	2.82	3	1.59	2	82.83	3	17.17	3	2.60
Indian Overseas Bank	2.46	3	2.63	3	1.31	3	88.11	3	11.89	3	3.00
Indusind Bank	0.88	4	1.46	4	0.34	4	86.58	3	13.42	3	3.60
ICICI Bank	2.14	3	1.83	3	1.12	3	77.62	5	22.38	5	3.80
IDBI Bank	1.19	4	0.50	5	0.62	4	82.08	4	17.92	4	4.20
Karnataka Bank	2.21	3	2.43	3	1.36	3	86.87	3	13.13	3	3.00
Kotak Mahindra Bank	2.51	2	4.33*	1	1.22	3	89.09	3	10.91	3	2.40
Oriental Bank of Commerce	1.48	3	1.85	3	0.43	4	97.99*	1	2.01	1	2.40
Punjab National Bank	2.25	3	2.78	3	1.13	3	87.72	3	12.28	3	3.00
SBBJ	1.83	3	2.28	3	0.83	3	86.64	3	13.39	3	3.00
State Bank of India	1.96	3	2.36	3	1.04	3	83.89	3	16.11	3	3.00
Syndicate Bank	1.52	3	1.93	3	0.86	3	89.38	3	10.62	3	3.00
UCO Bank	1.20	4	1.66	4	0.50	4	89.39	3	10.61	3	3.60
Union Bank of India	2.34	3	2.49	3	1.22	3	88.46	3	11.54	3	3.00
Vijaya Bank	1.39	3	1.65	4	0.72	3	88.22	3	11.78	3	3.20

Source: Annual Report of Banks
* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Component Rating for Liquidity of Banks

5.1. Liquid Assets / Total Deposits

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	12.741 %
	=	12.74 %
Standard Deviation (σ)	=	2.549 %
	=	2.55 %
2σ	=	5.10 %
3σ	=	7.65 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets / Total Deposits

Rating Scale	Rating range	Rating Analysis
1	17.84 % to 20.39 %	Strong
2	15.29 % to 17.84 %	Satisfactory
3	10.19 % to 15.29 %	Fair (watch category)
4	7.64 % to 10.19 %	Marginal (some risk of failure)
5	5.09 % to 7.64 %	Unsatisfactory (high degree of failure evident)

5.2. Liquid Assets / Total Assets:

For the Financial Year 2007 – 08,

N	=	39 banks
Mean	=	10.597 %
	=	10.60 %
Standard Deviation (σ)	=	2.50 %
2σ	=	5.00 %
3σ	=	7.50 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets / Total Assets

Rating Scale	Rating range	Rating Analysis
1	15.60 % to 18.10 %	Strong
2	13.10 % to 15.60 %	Satisfactory
3	8.10 % to 13.10 %	Fair (watch category)
4	5.60 % to 8.10 %	Marginal (some risk of failure)
5	3.10 % to 5.60 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Liquidity

Banks	Component Rating for Liquidity				Average Component Rating
	Liquid Assets/ Total Deposits (%)	Rating	Liquid Assets/ Total Assets (%)	Rating	
Allahabad Bank	9.83	4	8.49	3	3.50
Andhra Bank	11.52	3	10.06	3	3.00
Axis Bank	14.27	3	11.41	3	3.00
Bank of Baroda	14.67	3	12.42	3	3.00
Bank of India	11.81	3	9.91	3	3.00
Bank of Maharashtra	10.12	4	8.78	3	3.50
Canara Bank	11.60	3	9.90	3	3.00
Central Bank of India	11.64	3	10.36	3	3.00
Corporation Bank	16.09	2	13.39	2	2.00
Dena Bank	11.90	3	10.45	3	3.00

Federal Bank	10.59	3	8.45	3	3.00
HDFC Bank	14.67	3	11.10	3	3.00
Indian Bank	11.09	3	9.61	3	3.00
Indian Overseas Bank	12.26	3	10.15	3	3.00
Indusind Bank	11.44	3	9.36	3	3.00
ICICI Bank	15.56	2	9.52	3	2.50
IDBI Bank	12.00	3	6.70	4	3.50
Karnataka Bank	11.66	3	10.26	3	3.00
Kotak Mahindra Bank	13.09	3	7.59	4	3.50
Oriental Bank of Commerce	13.12	3	11.26	3	3.00
Punjab National Bank	11.31	3	9.46	3	3.00
State Bank of Bikaner & Jaipur	13.25	3	10.98	3	3.00
State Bank of India	12.55	3	9.35	3	3.00
Syndicate Bank	12.25	3	10.88	3	3.00
UCO Bank	10.14	4	9.02	3	3.50
Union Bank of India	9.72	4	8.14	3	3.50
Vijaya Bank	12.72	3	10.85	3	3.00

Source: Annual Report of Banks

Composite CAMEL Ratings of Banks for FY 2007-08

Banks	Component Ratings of Banks					Weighted Average Composite Rating Points	WACR (rounded up to one decimal point)	Composite Rating Scale
	Capital	Asset Quality	Management	Earnings Quality	Liquidity			
Allahabad Bank	3.00	3.00	3.00	3.00	3.50	3.0600	3.1	3
Andhra Bank	3.00	2.33	3.00	3.20	3.00	2.8766	2.9	3
Axis Bank	3.00	3.33	2.25	3.20	3.00	2.8941	2.9	3
Bank of Baroda	3.00	2.67	3.00	3.00	3.00	2.9274	2.9	3
Bank of India	2.67	2.67	3.00	3.00	3.00	2.8383	2.8	3
Bank of Maharashtra	3.67	3.00	3.00	2.60	3.50	3.1929	3.2	3
Canara Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Central Bank of India	4.00	3.67	3.25	3.40	3.00	3.5329	3.5	3.5*
Corporation Bank	3.00	2.67	2.75	3.00	2.00	2.7399	2.7	3
Dena Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Federal Bank	2.00	2.67	3.00	2.80	3.00	2.6334	2.6	3
HDFC Bank	3.33	3.67	3.00	2.60	3.00	3.1885	3.2	3
Indian Bank	3.00	2.67	3.00	2.60	3.00	2.8794	2.9	3
Indian Overseas Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Indusind Bank	3.00	4.33	3.00	11.60	3.00	3.3646	3.4	3
ICICI Bank	2.67	3.67	2.00	3.80	2.50	2.8243	2.8	3
IDBI Bank	2.67	3.33	1.50	4.20	3.50	2.7585	2.8	3
Karnataka Bank	3.00	3.33	3.00	3.00	3.00	3.0726	3.1	3
Kotak Mahindra Bank	2.00	4.00	2.75	2.40	3.50	2.8705	2.9	3
Oriental Bank of Commerce	3.00	3.00	2.75	2.40	3.00	2.8605	2.9	3
Punjab National Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
State Bank of Bikaner & Jaipur	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
State Bank of India	3.00	3.67	3.00	3.00	3.00	3.1474	3.1	3
Syndicate Bank	3.33	3.00	3.00	3.00	3.00	3.0891	3.1	3
UCO Bank	4.00	4.33	3.25	3.60	3.50	3.7621	3.8	4
Union Bank of India	2.67	2.33	3.00	3.00	3.50	2.8235	2.8	3
Vijaya Bank	3.33	3.00	3.00	3.20	3.00	3.1131	3.1	3

Source: Calculated

* Banks in transition

Financial Year 2006 - 07

Component Rating for Capital Adequacy of Banks

1.1. Capital Adequacy Ratio

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	12.214 %
	=	12.21 %
Standard Deviation (σ)	=	1.058 %
	=	1.06 %
2 σ	=	2.12 %
3 σ	=	3.18 %

Based on the above, the class interval is determined.

Rating Scale for Capital Adequacy Ratio

Rating Scale	Rating range	Rating Analysis
1	14.33 % to 15.39 %	Strong
2	13.27 % to 14.33 %	Satisfactory
3	11.15 % to 13.27 %	Fair (watch category)
4	10.09 % to 11.15 %	Marginal (some risk of failure)
5	9.03 % to 10.09 %	Unsatisfactory (high degree of failure evident)

1.2. Total Debt Equity Ratio

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	16.200
	=	16.20
Standard Deviation (σ)	=	5.571
	=	5.57
2 σ	=	11.14
3 σ	=	16.71

Based on the above, the class interval is determined.

Rating Scale for Debt Equity Ratio

Rating Scale	Rating range	Rating Analysis
1	(-0.51) to 5.06	Strong
2	5.06 to 10.63	Satisfactory
3	10.63 to 21.77	Fair (watch category)
4	21.77 to 27.34	Marginal (some risk of failure)
5	27.34 to 32.91	Unsatisfactory (high degree of failure evident)

1.3. Advances to Assets Ratio

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	57.845 %
	=	57.85 %
Standard Deviation (σ)	=	4.102 %
	=	4.10 %
2 σ	=	8.20 %
3 σ	=	12.30 %

Based on the above, the class interval is determined.

Rating Scale for Advances to Assets Ratio

Rating Scale	Rating range	Rating Analysis
1	66.05 % to 70.15 %	Strong
2	61.95 % to 66.05 %	Satisfactory
3	53.75 % to 61.95 %	Fair (watch category)
4	49.65 % to 53.75 %	Marginal (some risk of failure)
5	45.55 % to 49.65 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Capital

Banks	Component Rating of Banks for Capital						Average Component Rating
	CAR %	Rating	Total Debt – Equity	Rating	Advances to Assets (%)	Rating	
Allahabad Bank	12.52	3	13.30	3	61.02	3	3.00
Andhra Bank	11.33	3	13.13	3	58.66	3	3.00
Axis Bank	11.57	3	17.32	3	50.34	4	3.33
Bank of Baroda	11.8	3	14.44	3	58.42	3	3.00
Bank of India	11.58	3	20.86	3	59.97	3	3.00
Bank of Maharashtra	12.06	3	19.77	3	58.75	3	3.00
Canara Bank	13.50	2	17.55	3	59.35	3	2.67
Central Bank of India	10.40	4	33.38*	5	55.69	3	4.00
Corporation Bank	12.76	3	11.25	3	56.81	3	3.00
Dena Bank	11.52	3	22.33	4	58.20	3	3.33
Federal Bank	13.43	2	14.43	3	59.38	3	2.67
HDFC Bank	13.10	3	10.62	2	51.45	4	3.00
Indian Bank	14.14	2	14.74	3	51.75	4	3.00
Indian Overseas Bank	13.27	2	17.75	3	57.21	3	2.67
Indusind Bank	12.54	3	16.70	3	52.97	4	3.33
ICICI Bank	11.69	3	9.50	2	56.83	3	2.67
IDBI Bank	13.73	2	10.33	2	60.16	3	2.33
Karnataka Bank	11.03	4	11.33	3	58.89	3	3.33
Kotak Mahindra Bank	13.46	2	6.62	2	54.85	3	2.33
OBC	12.51	3	11.43	3	59.70	3	3.00
Punjab National Bank	12.29	3	13.79	3	59.47	3	3.00
SBBJ	12.89	3	17.22	3	59.48	3	3.00
State Bank of India	12.34	3	13.91	3	59.54	3	3.00
Syndicate Bank	11.74	3	24.69	4	57.88	3	3.33
UCO Bank	11.56	3	29.33	5	62.77	2	3.33
Union Bank of India	12.8	3	18.00	3	60.76	3	3.00
Vijaya Bank	11.21	3	20.31	3	57.19	3	3.00

Source: Annual Report of Banks
* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Component Rating for Asset Quality of Banks

2.1. Net NPAs to Total Assets

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	0.598 %
	=	0.60 %
Standard Deviation (σ)	=	0.387 %
	=	0.39 %
2 σ	=	0.78 %
3 σ	=	1.17 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Total Assets

Rating Scale	Rating range	Rating Analysis
1	(-0.57) % to (-0.18) %	Strong
2	(-0.18) % to 0.21 %	Satisfactory
3	0.21 % to 0.99 %	Fair (watch category)
4	0.99 % to 1.38 %	Marginal (some risk of failure)
5	1.38 % to 1.77 %	Unsatisfactory (high degree of failure evident)

2.2. Net NPAs to Net Advances

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	0.998 %
	=	1.0 %
Standard Deviation (σ)	=	0.6 %
2 σ	=	1.20 %
3 σ	=	1.80 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Net Advances

Rating Scale	Rating range	Rating Analysis
1	(-0.80) % to (-0.20) %	Strong
2	(-0.20) % to 0.40 %	Satisfactory
3	0.40 % to 1.60 %	Fair (watch category)
4	1.60 % to 2.20 %	Marginal (some risk of failure)
5	2.20 % to 2.80 %	Unsatisfactory (high degree of failure evident)

2.3. Total Investment to Total Assets

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	28.006 %
	=	28.01 %
Standard Deviation (σ)	=	3.433 %
	=	3.43 %
2 σ	=	6.86 %
3 σ	=	10.29 %

Based on the above, the class interval is determined.

Rating Scale for Total Investment to Total Assets

Rating Scale	Rating range	Rating Analysis
1	17.72 % to 21.15 %	Strong
2	21.15 % to 24.58 %	Satisfactory
3	24.58 % to 31.44 %	Fair (watch category)
4	31.44 % to 34.87 %	Marginal (some risk of failure)
5	34.87 % to 38.30 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Asset Quality

Banks	Component Rating of Banks for Asset Quality						Average Component Rating
	Net NPAs to Total Assets (%)	Rating	Net NPA to Net Advances (%)	Rating	Total Investment to Total Assets (%)	Rating	
Allahabad Bank	0.65	3	1.07	3	27.70	3	3.00
Andhra Bank	0.10	2	0.17	2	30.08	3	2.33
Axis Bank	0.36	3	0.72	3	36.72	5	3.67
Bank of Baroda	0.35	3	0.60	3	24.41	2	2.67
Bank of India	0.45	3	0.74	3	25.06	3	3.00
Bank of Maharashtra	0.71	3	1.21	3	28.96	3	3.00
Canara Bank	0.56	3	0.94	3	27.25	3	3.00
Central Bank of India	0.94	3	1.70	4	29.83	3	3.33
Corporation Bank	0.27	3	0.47	3	27.35	3	3.00
Dena Bank	1.16	4	1.99	4	29.36	3	3.67
Federal Bank	0.26	3	0.44	3	28.03	3	3.00
HDFC Bank	0.22	3	0.43	3	33.50	4	3.33
Indian Bank	0.18	2	0.35	2	37.18	5	3.00
Indian Overseas Bank	0.31	3	0.55	3	29.15	3	3.00
Indusind Bank	1.31	4	2.47	5	28.15	3	4.00
ICICI Bank	0.58	3	1.02	3	26.48	3	3.00
IDBI Bank	0.70	3	1.12	3	24.73	3	3.00
Karnataka Bank	0.72	3	1.21	3	31.12	3	3.00
Kotak Mahindra Bank	1.98*	5	1.98	4	34.46	4	4.33
Oriental Bank of Commerce	0.29	3	0.49	3	26.79	3	3.00
Punjab National Bank	0.45	3	0.76	3	27.82	3	3.00
SBBJ	0.65	3	1.09	3	25.16	3	3.00
State Bank of India	0.93	3	1.56	3	26.33	3	3.00
Syndicate Bank	0.44	3	0.76	3	28.26	3	3.00
UCO Bank	1.34	4	2.41	5	26.08	3	4.00
Union Bank of India	0.59	3	0.96	3	27.25	3	3.00
Vijaya Bank	0.34	3	0.59	3	28.37	3	3.00

Source: Annual Report of Banks

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Component Rating for Management of Banks

3.1. Total Advances to Total Deposits

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	71.803 %
	=	71.80 %
Standard Deviation (σ)	=	13.990%
	=	13.99 %
2σ	=	27.98 %
3σ	=	41.97 %

Based on the above, the class interval is determined.

Rating Scale for Total Advances to Total Deposits Ratio

Rating Scale	Rating range	Rating Analysis
1	99.78 % to 113.77 %	Strong
2	85.79 % to 99.78 %	Satisfactory
3	57.81 % to 85.79 %	Fair (watch category)
4	43.82 % to 57.81 %	Marginal (some risk of failure)
5	29.83 % to 43.82 %	Unsatisfactory (high degree of failure evident)

3.2. Profit per Employee

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	Rs. 3.468 lakhs
	=	Rs. 3.47 lakhs
Standard Deviation (σ)	=	Rs. 1.870 lakhs
	=	Rs. 1.87 lakhs
2 σ	=	Rs. 3.74 lakhs
3 σ	=	Rs. 5.61 lakhs

Based on the above, the class interval is determined.

Rating Scale for Profit per Employee

Rating Scale	Rating range	Rating Analysis
1	7.21 to 9.08 lakhs	Strong
2	5.34 to 7.21 lakhs	Satisfactory
3	1.60 to 5.34 lakhs	Fair (watch category)
4	(-0.27) to 1.60 lakhs	Marginal (some risk of failure)
5	(-2.14) to (-0.27) lakhs	Unsatisfactory (high degree of failure evident)

3.3. Business per Employee

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	Rs. 5.391 crores
	=	Rs. 5.39 crores
Standard Deviation (σ)	=	Rs. 2.202 crores
	=	Rs. 2.20 crores
2 σ	=	Rs. 4.40 crores
3 σ	=	Rs. 6.60 crores

Based on the above, the class interval is determined.

Rating Scale for Total Business per Employee

Rating Scale	Rating range	Rating Analysis
1	9.79 to 11.99 crores	Strong
2	7.59 to 9.79 crores	Satisfactory
3	3.19 to 7.59 crores	Fair (watch category)
4	0.99 to 3.19 crores	Marginal (some risk of failure)
5	(-1.21) to 0.99 crores	Unsatisfactory (high degree of failure evident)

3.4. Return on Net Worth

For the Financial Year 2006-07,

N	=	39 banks
Mean	=	16.63 %
Standard Deviation (σ)	=	5.971 %
	=	5.97 %
2 σ	=	11.948 %
3 σ	=	17.91 %

Based on the above, the class interval is determined.

Rating Scale for Return on Net Worth Ratio

Rating Scale	Rating range	Rating Analysis
1	28.57 % to 34.54 %	Strong
2	22.60 % to 28.57 %	Satisfactory
3	10.66 % to 22.60 %	Fair (watch category)
4	4.69 % to 10.66 %	Marginal (some risk of failure)
5	(-1.28) % to 4.69 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Management

Banks	Component Rating of Banks for Management								Average Component Rating
	Total Advances to Total Deposits (%)	Rating	Profit per Employee (Rs. In Lakhs)	Rating	Business per Employee (Rs. in Crores)	Rating	Return on Net Worth (%)	Rating	
Allahabad Bank	69.34	3	3.68	3	4.95	3	18.49	3	3.00
Andhra Bank	67.28	3	4.14	3	5.36	3	17.78	3	3.00
Axis Bank	62.73	3	7.59	1	10.24	1	20.96	3	2.00
Bank of Baroda	66.94	3	2.73	3	5.55	3	11.86	3	3.00
Bank of India	70.85	3	2.71	3	4.98	3	21.25	3	3.00
Bank of Maharashtra	67.57	3	1.95	3	4.05	3	14.00	3	3.00
Canara Bank	69.18	3	3.24	3	5.49	3	18.78	3	3.00
Central Bank of India	62.57	3	1.35	4	3.04	4	15.97	3	3.50
Corporation Bank	70.71	3	4.79	3	6.37	3	11.79	3	3.00
Dena Bank	66.10	3	1.99	3	4.58	3	17.48	3	3.00
Federal Bank	69.03	3	4.73	3	5.44	3	21.38	3	3.00
HDFC Bank	68.74	3	6.13	2	6.07	3	23.57	2	2.50
Indian Bank	61.71	3	3.64	3	3.64	3	25.80	2	2.75
Indian Overseas Bank	68.46	3	4.04	3	4.67	3	29.11	1	2.50
Indusind Bank	62.82	3	2.61	3	10.40	1	7.10	4	2.75
ICICI Bank	84.97	3	9.00	1	10.27	1	13.17	3	2.00
IDBI Bank	144.09*	1	8.44	1	13.87*	1	10.00	4	1.75
Karnataka Bank	68.05	3	4.00	3	5.24	3	15.07	3	3.00
Kotak Mahindra Bank	99.31	2	3.13	3	3.84	3	11.16	3	2.75
Oriental Bank of Commerce	68.97	3	5.61	2	7.43	3	10.78	3	2.75
Punjab National Bank	69.07	3	2.68	3	4.07	3	16.03	3	3.00
State Bank of Bikaner & Jaipur	72.07	3	2.57	3	3.56	3	19.99	3	3.00
State Bank of India	77.46	3	2.37	3	3.57	3	15.47	3	3.00
Syndicate Bank	65.71	3	2.76	3	4.89	3	24.60	2	2.75
UCO Bank	72.45	3	1.30	4	4.64	3	15.06	3	3.25
Union Bank of India	73.24	3	3.25	3	5.09	3	19.16	3	3.00
Vijaya Bank	64.42	3	3.04	3	4.55	3	16.65	3	3.00

Source: Annual Report of Banks
* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Component Rating for Earnings Quality of Banks

4.1. Operating Profit/Average Working Funds

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	1.988 %
	=	1.99 %
Standard Deviation (σ)	=	0.489 %
	=	0.49 %
2 σ	=	0.98 %
3 σ	=	1.47 %

Based on the above, the class interval is determined.

Rating Scale for Operating Profit/ Average Working Funds

Rating Scale	Rating range	Rating Analysis
1	2.97 % to 3.46 %	Strong
2	2.48 % to 2.97 %	Satisfactory
3	1.50 % to 2.48 %	Fair (watch category)
4	1.01 % to 1.50 %	Marginal (some risk of failure)
5	0.52 % to 1.01 %	Unsatisfactory (high degree of failure evident)

4.2. Spread (as percentage of Assets)

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	2.564 %
	=	2.56 %
Standard Deviation (σ)	=	0.565 %
	=	0.57 %
2 σ	=	1.14 %
3 σ	=	1.71 %

Based on the above, the class interval is determined.

Rating Scale for Spread (as a % of Assets)

Rating Scale	Rating range	Rating Analysis
1	3.70 % to 4.27 %	Strong
2	3.13 % to 3.70 %	Satisfactory
3	1.99 % to 3.13 %	Fair (watch category)
4	1.42 % to 1.99 %	Marginal (some risk of failure)
5	0.85 % to 1.42 %	Unsatisfactory (high degree of failure evident)

4.3. Net Profit/ Average Assets

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	0.932 %
	=	0.93 %
Standard Deviation (σ)	=	0.331 %
	=	0.33 %
2 σ	=	0.66 %
3 σ	=	0.99 %

Based on the above, the class interval is determined.

Rating Scale for Net Profit/ Average Assets

Rating Scale	Rating range	Rating Analysis
1	1.59 % to 1.92 %	Strong
2	1.26 % to 1.59 %	Satisfactory
3	0.60 % to 1.26 %	Fair (watch category)
4	0.27 % to 0.60 %	Marginal (some risk of failure)
5	(-0.06) % to 0.27 %	Unsatisfactory (high degree of failure evident)

4.4. Interest Income/ Total Income

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	86.245 %
	=	86.25 %
Standard Deviation (σ)	=	4.545 %
	=	4.55 %
2 σ	=	9.10 %
3 σ	=	13.65 %

Based on the above, the class interval is determined.

Rating Scale for Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	95.35 % to 99.90 %	Strong
2	90.80 % to 95.35 %	Satisfactory
3	81.70 % to 90.80 %	Fair (watch category)
4	77.15 % to 81.70 %	Marginal (some risk of failure)
5	72.60 % to 77.15 %	Unsatisfactory (high degree of failure evident)

4.5. Non Interest Income/ Total Income

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	13.656%
	=	13.66 %
Standard Deviation (σ)	=	4.558 %
	=	4.56 %
2 σ	=	9.12 %
3 σ	=	13.68 %

Based on the above, the class interval is determined.

Rating Scale for Non Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	(-0.02) % to 4.54 %	Strong
2	4.54 % to 9.10 %	Satisfactory
3	9.10 % to 18.22 %	Fair (watch category)
4	18.22 % to 22.78 %	Marginal (some risk of failure)
5	22.78 % to 27.34 %	Unsatisfactory (high degree of failure evident)

Component Rating for Banks for Earnings Quality

Banks	Component Rating for Banks for Earnings Quality										Average Component Rating
	Operating Profit/ Avg. Working Funds (%)	Rating	Spread (as a % of Assets)	Rating	Net Profit/ Average Assets (%)	Rating	Interest Income/ Total Income (%)	Rating	Non Interest Income/ Total Income (%)	Rating	
Allahabad Bank	1.84	3	2.59	3	1.22	3	91.02	2	8.98	2	2.60
Andhra Bank	2.27	3	2.98	3	1.22	3	86.39	3	13.61	3	3.00
Axis Bank	2.27	3	2.00	3	1.07	3	82.22	3	17.78	3	3.00
Bank of Baroda	1.94	3	2.50	3	0.80	3	86.96	3	13.04	3	3.00
Bank of India	1.89	3	2.43	3	0.88	3	85.45	3	14.55	3	3.00
Bank of Maharashtra	1.72	3	2.80	3	0.65	3	87.79	3	12.21	3	3.00
Canara Bank	2.01	3	2.43	3	0.95	3	88.26	3	11.74	3	3.00
Central Bank of India	1.58	3	2.66	3	0.59	4	91.73	2	8.27	2	2.80
Corporation Bank	2.50	2	2.48	3	0.90	3	86.73	3	13.27	3	2.80
Dena Bank	2.24	3	2.72	3	0.70	3	83.38	3	16.62	3	3.00
Federal Bank	2.89	2	2.86	3	1.28	3	85.73	3	14.27	3	2.80
HDFC Bank	2.98	1	3.80	1	1.68	1	82.02	3	17.98	3	1.80
Indian Bank	2.61	2	3.17	2	1.46	2	83.89	3	16.11	3	2.40
Indian Overseas Bank	2.10	3	3.11	3	1.42	2	87.11	3	12.89	3	2.80
Indusind Bank	0.87	5	1.30	5	0.35	4	84.07	3	15.93	3	4.00
ICICI Bank	2.05	3	1.64	4	1.04	3	76.76	5	23.24	5	4.00
IDBI Bank	0.97	5	0.63*	5	0.66	3	85.84	3	14.16	3	3.80
Karnataka Bank	2.31	3	2.59	3	1.14	3	87.16	3	12.84	3	3.00
Kotak Mahindra Bank	2.16	3	3.11	3	0.94	3	82.47	3	17.53	3	3.00
Oriental Bank of Commerce	1.90	3	2.29	3	0.87	3	93.39	2	6.61	2	2.60
Punjab National Bank	2.15	3	3.21	2	1.00	3	89.57	3	10.43	3	2.80
SBBJ	2.04	3	2.72	3	0.99	3	83.55	3	16.45	3	3.00
State Bank of India	1.86	3	2.66	3	0.86	3	84.13	3	15.87	3	3.00
Syndicate Bank	1.75	3	2.41	3	0.95	3	90.27	3	9.73	3	3.00
UCO Bank	1.40	4	2.12	3	0.46	4	90.62	3	9.38	3	3.40
Union Bank of India	2.19	3	2.72	3	0.88	3	89.76	3	10.24	3	3.00
Vijaya Bank	1.95	3	2.53	3	0.78	3	89.34	3	10.66	3	3.00

Source: Annual Report of Banks

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Component Rating for Liquidity of Banks

5.1. Liquid Assets/ Total Deposits

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	12.476 %
	=	12.48 %
Standard Deviation (σ)	=	3.108 %
	=	3.11 %
2 σ	=	6.22 %
3 σ	=	9.33 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets/ Total Deposits

Rating Scale	Rating range	Rating Analysis
1	18.70 % to 21.81 %	Strong
2	15.59 % to 18.70 %	Satisfactory
3	9.37 % to 15.59 %	Fair (watch category)
4	6.26 % to 9.37 %	Marginal (some risk of failure)
5	3.15 % to 6.26 %	Unsatisfactory (high degree of failure evident)

5.2. Liquid Assets/ Total Assets

For the Financial Year 2006 – 07,

N	=	39 banks
Mean	=	10.25769 %
	=	10.26 %
Standard Deviation (σ)	=	2.8017 %
	=	2.80 % (rounded up)
2 σ	=	5.60 %
3 σ	=	8.40 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets/ Total Assets

Rating Scale	Rating range	Rating Analysis
1	15.86 % to 18.66 %	Strong
2	13.06 % to 15.86 %	Satisfactory
3	7.46 % to 13.06 %	Fair (watch category)
4	4.66 % to 7.46 %	Marginal (some risk of failure)
5	1.86 % to 4.66 %	Unsatisfactory (high degree of failure evident)

Component Rating for Liquidity

Banks	Component Rating for Liquidity				Average Component Rating
	Liquid Assets/ Total Deposits (%)	Rating	Liquid Assets/ Total Assets (%)	Rating	
Allahabad Bank	8.30	4	7.30	4	4.00
Andhra Bank	9.71	3	8.46	3	3.00
Axis Bank	11.77	3	9.44	3	3.00
Bank of Baroda	14.63	3	12.77	3	3.00
Bank of India	14.52	3	12.29	3	3.00
Bank of Maharashtra	9.85	3	8.57	3	3.00
Canara Bank	11.50	3	9.87	3	3.00
Central Bank of India	10.65	3	9.48	3	3.00
Corporation Bank	15.86	2	12.74	3	2.50

Dena Bank	10.18	3	8.96	3	3.00
Federal Bank	10.72	3	9.22	3	3.00
HDFC Bank	13.40	3	10.03	3	3.00
Indian Bank	10.23	3	8.58	3	3.00
Indian Overseas Bank	13.06	3	10.92	3	3.00
Indusind Bank	14.71	3	12.40	3	3.00
ICICI Bank	16.10	2	10.77	3	2.50
IDBI Bank	15.94	2	6.66	4	3.00
Karnataka Bank	8.27	4	7.16	4	4.00
Kotak Mahindra Bank	11.78	3	6.51	4	3.50
Oriental Bank of Commerce	11.73	3	10.16	3	3.00
Punjab National Bank	11.19	3	9.63	3	3.00
State Bank of Bikaner & Jaipur	15.33	3	12.65	3	3.00
State Bank of India	11.93	3	9.17	3	3.00
Syndicate Bank	12.08	3	10.64	3	3.00
UCO Bank	9.58	3	8.30	3	3.00
Union Bank of India	9.89	3	8.21	3	3.00
Vijaya Bank	13.48	3	11.97	3	3.00

Source: Annual Report of Banks

Composite Rating under C.A.M.E.L Model for the FY 2006 – 07

Banks	Component Ratings of Banks					Weighted Average Composite Rating Points	WACR (rounded up to one decimal point)	Composite Rating
	Capital	Asset Quality	Management	Earnings Quality	Liquidity			
Allahabad Bank	3.00	3.00	3.00	2.60	4.00	3.0720	3.1	3
Andhra Bank	3.00	2.33	3.00	3.00	3.00	2.8526	2.9	3
Axis Bank	3.33	3.67	2.00	3.00	3.00	2.9665	3.0	3
Bank of Baroda	3.00	2.67	3.00	3.00	3.00	2.9274	2.9	3
Bank of India	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Bank of Maharashtra	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Canara Bank	2.67	3.00	3.00	3.00	3.00	2.9109	2.9	3
Central Bank of India	4.00	3.33	3.50	2.80	3.00	3.4536	3.5	3.5*
Corporation Bank	3.00	3.00	3.00	2.80	2.50	2.9160	2.9	3
Dena Bank	3.33	3.67	3.00	3.00	3.00	3.2365	3.2	3
Federal Bank	2.67	3.00	3.00	2.80	3.00	2.8869	2.9	3
HDFC Bank	3.00	3.33	2.50	1.80	3.00	2.7936	2.8	3
Indian Bank	3.00	3.00	2.75	2.40	3.00	2.8605	2.9	3
Indian Overseas Bank	2.67	3.00	2.50	2.80	3.00	2.7519	2.8	3
Indusind Bank	3.33	4.00	2.75	4.00	3.00	3.3616	3.4	3
ICICI Bank	2.67	3.00	2.00	4.00	2.50	2.7009	2.7	3
IDBI Bank	2.33	3.00	1.75	3.80	3.00	2.5776	2.6	3
Karnataka Bank	3.33	3.00	3.00	3.00	4.00	3.2091	3.2	3
Kotak Mahindra Bank	2.33	4.33	2.75	3.00	3.50	3.1042	3.1	3
Oriental Bank of Commerce	3.00	3.00	2.75	2.60	3.00	2.8845	2.8	3
Punjab National Bank	3.00	3.00	3.00	2.80	3.00	2.9760	3.0	3
SBBJ	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
State Bank of India	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Syndicate Bank	3.33	3.00	2.75	3.00	3.00	3.0216	3.0	3
UCO Bank	3.33	4.00	3.25	3.40	3.00	3.4246	3.4	3
Union Bank of India	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Vijaya Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3

Source: Calculated

* Banks in transition

Financial Year 2005 – 06

Component Rating for Capital Adequacy

1.1. Capital Adequacy

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	12.0933 %
	=	12.09 % (rounded up)
Standard Deviation (σ)	=	1.46628 %
	=	1.47 % (rounded up)
2 σ	=	2.94 %
3 σ	=	4.41 %

Based on the above, the class interval is determined.

Rating Scale for Capital Adequacy Ratio

Rating Scale	Rating range	Rating Analysis
1	15.03 % to 16.50 %	Strong
2	13.56 % to 15.03 %	Satisfactory
3	10.62 % to 13.56 %	Fair (watch category)
4	9.15 % to 10.62 %	Marginal (some risk of failure)
5	7.68 % to 9.15 %	Unsatisfactory (high degree of failure evident)

1.2. Total Debt Equity Ratio

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	15.32897
	=	15.33 (rounded up)
Standard Deviation (σ)	=	4.7958
	=	4.80 (rounded up)
2 σ	=	9.60
3 σ	=	14.40

Based on the above, the class interval is determined.

Rating Scale for Debt Equity Ratio

Rating Scale	Rating range	Rating Analysis
1	0.93 to 5.73	Strong
2	5.73 to 10.53	Satisfactory
3	10.53 to 20.13	Fair (watch category)
4	20.13 to 24.93	Marginal (some risk of failure)
5	24.93 to 29.73	Unsatisfactory (high degree of failure evident)

1.3. Advances to Assets

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	55.60077 %
	=	55.60 % (rounded up)
Standard Deviation (σ)	=	4.95075 %
	=	4.95 % (rounded up)
2 σ	=	9.90 %
3 σ	=	14.85 %

Based on the above, the class interval is determined.

Rating Scale for Advances to Assets Ratio

Rating Scale	Rating range	Rating Analysis
1	65.50 % to 70.45 %	Strong
2	60.55 % to 65.50 %	Satisfactory
3	50.65 % to 60.55 %	Fair (watch category)
4	45.70 % to 50.65 %	Marginal (some risk of failure)
5	40.75 % to 45.70 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Capital

Banks	Component Rating of Banks for Capital						Average Component Rating
	CAR %	Rating	Total Debt – Equity	Rating	Advances to Assets (%)	Rating	
Allahabad Bank	13.37	3	13.33	3	52.72	3	3.00
Andhra Bank	14.00	2	11.72	3	54.34	3	2.67
Axis Bank	11.08	3	13.97	3	44.87	5	3.67
Bank of Baroda	13.65	2	11.94	3	52.84	3	2.67
Bank of India	10.75	3	19.46	3	58.05	3	3.00
Bank of Maharashtra	11.27	3	17.42	3	52.76	3	3.00
Canara Bank	11.22	3	16.64	3	59.80	3	3.00
Central Bank of India	11.03	3	22.66	4	50.19	4	3.67
Corporation Bank	13.92	2	9.74	2	59.16	3	2.33
Dena Bank	10.62	3	22.17	4	53.61	3	3.33
Federal Bank	13.75	2	14.38	3	56.85	3	2.67
HDFC Bank	11.41	3	10.53	3	47.70	4	3.33
Indian Bank	13.19	3	17.99	3	47.20	4	3.33
Indian Overseas Bank	13.04	3	16.54	3	58.55	3	3.00
Indusind Bank	10.54	4	17.33	3	52.83	3	3.33
ICICI Bank	13.35	3	7.45	2	58.14	3	2.67
IDBI Bank	14.80	2	11.54	3	59.55	3	2.67
Karnataka Bank	11.78	3	11.92	3	52.11	3	3.00
Kotak Mahindra Bank	11.27	3	7.59	2	62.39	2	2.33
Oriental Bank of Commerce	12.46	3	9.71	2	56.97	3	2.67
Punjab National Bank	11.95	3	13.19	3	51.37	3	3.00
SBBJ	12.08	3	15.43	3	57.77	3	3.00
State Bank of India	11.88	3	13.75	3	52.98	3	3.00
Syndicate Bank	11.73	3	20.33	4	59.71	3	3.33
UCO Bank	11.12	3	27.44	5	60.44	3	3.67
Union Bank of India	11.39	3	18.10	3	59.89	3	3.00
Vijaya Bank	11.94	3	17.10	3	52.84	3	3.00

Source: Annual Report of Banks

Asset Quality

2.1. Net NPAs to Total Assets

For the Financial Year 2005-06,

N	=	39 banks
Mean	=	0.721538 %
	=	0.72 % (rounded up)
Standard Deviation (σ)	=	0.46904%
	=	0.47 % (rounded up)
2 σ	=	0.94 %
3 σ	=	1.14 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Total Assets Ratio

Rating Scale	Rating range	Rating Analysis
1	(-0.69) % to (-0.22) %	Strong
2	(-0.22) % to 0.25 %	Satisfactory
3	0.25 % to 1.19 %	Fair (watch category)
4	1.19 % to 1.66 %	Marginal (some risk of failure)
5	1.66 % to 2.13 %	Unsatisfactory (high degree of failure evident)

2.2. Net NPAs to Net Advances

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	1.302821 %
	=	1.30 % (rounded up)
Standard Deviation (σ)	=	0.88317 %
	=	0.88 % (rounded up)
2 σ	=	1.76 %
3 σ	=	2.64 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Net Advances Ratio

Rating Scale	Rating range	Rating Analysis
1	(-1.34) % to (-0.46) %	Strong
2	(-0.46) % to 0.42 %	Satisfactory
3	0.42 % to 2.18 %	Fair (watch category)
4	2.18 % to 3.06 %	Marginal (some risk of failure)
5	3.06 % to 3.94 %	Unsatisfactory (high degree of failure evident)

2.3. Total Investments to Total Assets

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	30.9041 %
	=	30.90 % (rounded up)
Standard Deviation (σ)	=	4.4328 %
	=	4.43 % (rounded up)
2 σ	=	8.86 %
3 σ	=	13.29 %

Based on the above, the class interval is determined.

Rating Scale for Total Investments to Total Assets Ratio

Rating Scale	Rating range	Rating Analysis
1	17.61 % to 22.04 %	Strong
2	22.04 % to 26.47 %	Satisfactory
3	26.47 % to 35.33 %	Fair (watch category)
4	35.33 % to 39.76 %	Marginal (some risk of failure)
5	39.76 % to 44.19 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Asset Quality

Banks	Component Rating of Banks for Asset Quality						Average Component Rating
	Net NPAs to Total Assets (%)	Rating	Net NPAs to Net Advances (%)	Rating	Total Investment to Total Assets (%)	Rating	
Allahabad Bank	0.45	3	0.84	3	32.53	3	3.00
Andhra Bank	0.13	2	0.24	2	28.14	3	2.33
Axis Bank	0.44	3	0.98	3	43.29	5	3.67
Bank of Baroda	0.46	3	0.87	3	30.97	3	3.00
Bank of India	0.86	3	1.49	3	28.31	3	3.00
Bank of Maharashtra	1.07	3	2.03	3	36.37	4	3.33
Canara Bank	0.66	3	1.10	3	27.84	3	3.00
Central Bank of India	1.30	4	2.59	4	38.35	4	4.00
Corporation Bank	0.38	3	0.60	3	26.30	2	2.67
Dena Bank	1.62	4	3.00	4	32.29	3	3.67
Federal Bank	0.54	3	0.95	3	30.39	3	3.00
HDFC Bank	0.21	2	0.44	3	38.63	4	3.00
Indian Bank	0.37	3	0.79	3	39.92	5	3.67
Indian Overseas Bank	0.38	3	0.65	3	31.93	3	3.00
Indusind Bank	1.11	3	2.09	3	30.70	3	3.00
ICICI Bank	0.42	3	0.72	3	28.46	3	3.00
IDBI Bank	0.64	3	1.01	3	28.62	3	3.00
Karnataka Bank	0.62	3	1.18	3	37.11	4	3.33
Kotak Mahindra Bank	0.15	2	0.24	2	28.06	3	2.33
Oriental Bank of Commerce	0.28	3	0.50	3	28.53	3	3.00
Punjab National Bank	0.14	2	0.30	2	28.26	3	2.33
SBBJ	0.68	3	1.18	3	28.83	3	3.00
State Bank of India	0.99	3	1.90	3	32.91	3	3.00
Syndicate Bank	0.51	3	0.86	3	28.27	3	3.00
UCO Bank	1.27	4	2.10	3	31.75	3	3.33
Union Bank of India	0.94	3	1.56	3	29.08	3	3.00
Vijaya Bank	0.45	3	0.90	3	35.45	4	3.33

Source: Annual Report of Banks

Management

3.1. Total Advances to Total Deposits

For the Financial Year 2005 – 06,

n	=	39 banks
Mean	=	69.69744 %
	=	69.70 % (rounded up)
Standard Deviation (σ)	=	23.36257 %
	=	23.36 % (rounded up)
2σ	=	46.72 %
3σ	=	70.08 %

Based on the above, the class interval is determined.

Rating Scale for Total Advances to Total Deposits

Rating Scale	Rating range	Rating Analysis
1	116.42 % to 139.78 %	Strong
2	93.06 % to 116.42 %	Satisfactory
3	46.34 % to 93.06 %	Fair (watch category)
4	22.98 % to 46.34 %	Marginal (some risk of failure)
5	(-0.38) % to 22.98 %	Unsatisfactory (high degree of failure evident)

3.2. Profit per Employee

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	Rs. 3.336923 lakhs
	=	Rs. 3.34 lakhs (rounded up)
Standard Deviation (σ)	=	Rs. 3.71079 lakhs
	=	Rs. 3.71 lakhs (rounded up)
2 σ	=	Rs. 7.42 lakhs
3 σ	=	Rs. 11.13 lakhs

Based on the above, the class interval is determined.

Rating Scale for Profit per Employee

Rating Scale	Rating range	Rating Analysis
1	10.76 to 14.47 lakhs	Strong
2	7.05 to 10.76 lakhs	Satisfactory
3	(-0.37) to 7.05 lakhs	Fair (watch category)
4	(-4.08) to (-0.37) lakhs	Marginal (some risk of failure)
5	(-7.79) to (-4.08) lakhs	Unsatisfactory (high degree of failure evident)

3.3. Business per Employee

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	Rs. 4.78333 crores
	=	Rs. 4.78 crores (rounded up)
Standard Deviation (σ)	=	Rs. 2.72396 crores
	=	Rs. 2.72 crores (rounded up)
2 σ	=	Rs. 5.44 crores
3 σ	=	Rs. 8.16 crores

Based on the above, the class interval is determined.

Rating Scale for Business per Employee

Rating Scale	Rating range	Rating Analysis
1	10.22 to 12.94 crores	Strong
2	7.50 to 10.22 crores	Satisfactory
3	2.06 to 7.50 crores	Fair (watch category)
4	(-0.66) to 2.06 crores	Marginal (some risk of failure)
5	(-3.38) to (-0.66) crores	Unsatisfactory (high degree of failure evident)

3.4. Return on Net Worth

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	12.85564 %
	=	12.86 % (rounded up)
Standard Deviation (σ)	=	11.68760 %
	=	11.69 % (rounded up)
2 σ	=	23.38 %
3 σ	=	35.07 %

Based on the above, the class interval is determined.

Rating Scale for Return on Net Worth

Rating Scale	Rating range	Rating Analysis
1	36.24 % to 47.93 %	Strong
2	24.55 % to 36.24 %	Satisfactory
3	1.17 % to 24.55 %	Fair (watch category)
4	(-10.52) % to 1.17 %	Marginal (some risk of failure)
5	(-22.21) % to (-10.52) %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Management

Banks	Component Rating of Banks for Management								Average Component Rating
	Total Advances to Total Deposits (%)	Rating	Profit per employee (Rs. in Lakhs)	Rating	Business per employee (Rs. in Crores)	Rating	Return on Net Worth (%)	Rating	
Allahabad Bank	60.10	3	3.69	3	3.36	3	23.67	3	3.00
Andhra Bank	65.15	3	3.69	3	4.27	3	23.34	3	3.00
Axis Bank	55.63	3	8.69	2	10.20	2	18.28	3	2.50
Bank of Baroda	63.97	3	2.13	3	3.96	3	10.54	3	3.00
Bank of India	69.38	3	1.66	3	3.81	3	15.37	3	3.00
Bank of Maharashtra	61.21	3	0.36	3	3.06	3	4.08	3	3.00
Canara Bank	68.00	3	3.02	3	4.42	3	20.65	3	3.00
Central Bank of India	56.38	3	0.68	3	2.40	3	9.07	3	3.00
Corporation Bank	72.89	3	4.13	3	5.27	3	11.54	3	3.00
Dena Bank	60.24	3	0.72	3	3.64	3	9.03	3	3.00
Federal Bank	65.64	3	3.54	3	4.31	3	22.99	3	3.00
HDFC Bank	62.83	3	7.39	2	7.58	2	22.73	3	2.50
Indian Bank	55.10	3	2.36	3	2.95	3	24.34	3	3.00
Indian Overseas Bank	68.78	3	3.22	3	3.55	3	28.55	2	2.75
Indusind Bank	62.04	3	14.98*	1	8.80	2	4.34	3	2.25
ICICI Bank	88.54	3	10.00	2	9.05	2	14.33	3	2.50
IDBI Bank	202.84*	1	12.45	1	17.18*	1	9.12	3	1.50
Karnataka Bank	58.83	3	4.05	3	4.78	3	16.85	3	3.00
Kotak Mahindra Bank	96.69	2	4.15	3	3.52	3	14.58	3	2.75
Oriental Bank of Commerce	66.89	3	5.32	3	5.70	3	13.11	3	3.00
Punjab National Bank	62.35	3	2.48	3	3.31	3	17.01	3	3.00
SBBJ	73.27	3	1.20	3	2.77	3	10.73	3	3.00
State Bank of India	68.84	3	2.16	3	2.99	3	17.04	3	3.00
Syndicate Bank	68.00	3	2.05	3	3.49	3	23.14	3	3.00
UCO Bank	68.53	3	0.82	3	3.87	3	10.47	3	3.00
Union Bank of India	72.04	3	2.66	3	4.36	3	18.67	3	3.00
Vijaya Bank	60.14	3	1.16	3	3.69	3	8.04	3	3.00

Source: Annual Report of Banks

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Earnings Quality

4.1. Operating Profit/ Average Working Funds

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	1.967436 %
	=	1.97 % (rounded up)
Standard Deviation (σ)	=	0.74161 %
	=	0.74 % (rounded up)
2 σ	=	1.48 %
3 σ	=	2.22 %

Based on the above, the class interval is determined.

Rating Scale for Operating Profit/ Average Working Funds

Rating Scale	Rating range	Rating Analysis
1	3.45 % to 4.19 %	Strong
2	2.71 % to 3.45 %	Satisfactory
3	1.23 % to 2.71 %	Fair (watch category)
4	0.49 % to 1.23 %	Marginal (some risk of failure)
5	(-0.25) % to 0.49 %	Unsatisfactory (high degree of failure evident)

4.2. Spread (as a % of Assets)

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	2.75641 %
	=	2.76 % (rounded up)
Standard Deviation (σ)	=	0.60 %
2 σ	=	1.20 %
3 σ	=	1.80 %

Based on the above, the class interval is determined.

Rating Scale for Spread (as a % of Assets)

Rating Scale	Rating range	Rating Analysis
1	3.96 % to 4.56 %	Strong
2	3.36 % to 3.96 %	Satisfactory
3	2.16 % to 3.36 %	Fair (watch category)
4	1.56 % to 2.16 %	Marginal (some risk of failure)
5	0.96 % to 1.56 %	Unsatisfactory (high degree of failure evident)

4.3. Net Profit/ Average Assets

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	0.80641 %
	=	0.81 % (rounded up)
Standard Deviation (σ)	=	0.65574 %
	=	0.66 % (rounded up)
2 σ	=	1.32 %
3 σ	=	1.98 %

Based on the above, the class interval is determined.

Rating Scale for Net Profit/ Average Assets

Rating Scale	Rating range	Rating Analysis
1	2.13 % to 2.79 %	Strong
2	1.47 % to 2.13 %	Satisfactory
3	0.15 % to 1.47 %	Fair (watch category)
4	(-0.51) % to 0.15 %	Marginal (some risk of failure)
5	(-1.17) % to (-0.51) %	Unsatisfactory (high degree of failure evident)

4.4. Interest Income/ Total Income

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	85.67641 %
	=	85.68 % (rounded up)
Standard Deviation (σ)	=	5.61604 %
	=	5.62 % (rounded up)
2 σ	=	11.24 %
3 σ	=	16.86 %

Based on the above, the class interval is determined.

Rating Scale for Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	96.92 % to 102.54 %	Strong
2	91.30 % to 96.92 %	Satisfactory
3	80.06 % to 91.30 %	Fair (watch category)
4	74.44 % to 80.06 %	Marginal (some risk of failure)
5	68.82 % to 74.44 %	Unsatisfactory (high degree of failure evident)

4.5. Non Interest Income/ Total Income

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	14.27205 %
	=	14.27 % (rounded up)
Standard Deviation (σ)	=	5.63471 %
	=	5.63 % (rounded up)
2 σ	=	11.26 %
3 σ	=	16.89 %

Based on the above, the class interval is determined.

Rating Scale for Non Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	(-2.62) % to 3.01 %	Strong
2	3.01 % to 8.64 %	Satisfactory
3	8.64 % to 19.90 %	Fair (watch category)
4	19.90 % to 25.53 %	Marginal (some risk of failure)
5	25.53 % to 31.16 %	Unsatisfactory (high degree of failure evident)

Component rating for Earnings Quality

Banks	Component Rating for Banks for Earnings Quality										Average Component Rating
	Operating Profit/ Avg. Working Funds (%)	Rating	Spread (as a % of Assets)	Rating	Net Profit/ Average Assets (%)	Rating	Interest Income/ Total Income (%)	Rating	Non Interest Income/ Total Income (%)	Rating	
Allahabad Bank	2.05	3	2.85	3	1.41	3	86.13	3	13.87	3	3.00
Andhra Bank	2.18	3	2.87	3	1.50	2	85.38	3	14.62	3	2.80
Axis Bank	2.43	3	2.17	3	1.11	3	80.19	3	19.81	3	3.00
Bank of Baroda	1.92	3	2.80	3	1.00	3	85.63	3	14.37	3	3.00
Bank of India	1.64	3	2.34	3	0.68	3	85.58	3	14.42	3	3.00
Bank of Maharashtra	1.13	4	3.11	3	0.19	3	93.43	2	6.57	2	2.80
Canara Bank	2.19	3	2.70	3	1.10	3	86.35	3	13.65	3	3.00
Central Bank of India	1.73	3	3.19	3	0.36	3	90.71	3	9.29	3	3.00
Corporation Bank	2.93	2	3.03	3	1.00	3	84.06	3	15.94	3	2.80
Dena Bank	2.48	3	2.72	3	0.37	3	79.32	4	20.68	4	3.40
Federal Bank	2.57	3	2.91	3	1.20	3	86.04	3	13.96	3	3.00
HDFC Bank	2.75	2	3.46	2	1.77	2	78.67	4	21.33	4	2.80
Indian Bank	2.06	3	3.17	3	1.15	3	86.36	3	13.64	3	3.00
Indian Overseas Bank	2.70	3	3.48	2	1.42	3	85.82	3	14.18	3	2.80
Indusind Bank	1.36	3	1.79	4	0.22	3	89.47	3	10.53	3	3.20
ICICI Bank	2.39	3	1.87	4	1.21	3	73.24	5	26.76	5	4.00
IDBI Bank	0.97	4	0.43*	5	0.63**	3	80.78	3	19.22	3	3.60
Karnataka Bank	2.46	3	2.45	3	1.28	3	85.92	3	14.08	3	3.00
Kotak Mahindra Bank	2.16	3	3.73	2	1.42	3	74.52	4	25.48	4	3.20
Oriental Bank of Commerce	2.06	3	2.72	3	0.99	3	93.42	2	6.58	2	2.60
Punjab National Bank	2.18	3	3.21	3	1.06	3	86.64	3	13.36	3	3.00
SBBJ	2.39	3	3.61	2	0.57	3	84.55	3	15.45	3	2.80
State Bank of India	2.27	3	3.16	3	0.92	3	82.89	3	17.11	3	3.00
Syndicate Bank	1.76	3	3.08	3	0.95	3	87.26	3	12.74	3	3.00
UCO Bank	1.48	3	2.53	3	0.34	3	90.38	3	9.62	3	3.00
Union Bank of India	2.04	3	2.66	3	0.84	3	90.37	3	9.63	3	3.00
Vijaya Bank	2.38	3	3.08	3	0.42	3	86.24	3	13.76	3	3.00

Source: Annual Report of Banks

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

** Since IDBI turned into a bank in September, 2004, this ratio is taken as Net profit/ Assets

Liquidity

5.1. Liquid Assets/ Total Deposits

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	11.20128 %
	=	11.20 % (rounded up)
Standard Deviation (σ)	=	4.70531 %
	=	4.71 % (rounded up)
2 σ	=	9.42 %
3 σ	=	14.13 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets/ Total Deposits

Rating Scale	Rating range	Rating Analysis
1	20.62 % to 25.33 %	Strong
2	15.91 % to 20.62 %	Satisfactory
3	6.49 % to 15.91 %	Fair (watch category)
4	1.78 % to 6.49 %	Marginal (some risk of failure)
5	(-2.93) % to 1.78 %	Unsatisfactory (high degree of failure evident)

5.2. **Liquid Assets/ Total Assets**

For the Financial Year 2005 – 06,

N	=	39 banks
Mean	=	9.114103 %
	=	9.11 % (rounded up)
Standard Deviation (σ)	=	4.06816 %
	=	4.07 % (rounded up)
2 σ	=	8.14 %
3 σ	=	12.21 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets/ Total Assets

Rating Scale	Rating range	Rating Analysis
1	17.25 % to 21.32 %	Strong
2	13.18 % to 17.25 %	Satisfactory
3	5.04 % to 13.18 %	Fair (watch category)
4	0.97 % to 5.04 %	Marginal (some risk of failure)
5	(-3.10) % to 0.97 %	Unsatisfactory (high degree of failure evident)

Component Rating for Liquidity

Banks	Component Rating for Liquidity				Average Component Rating
	Liquid Assets/ Total Deposits (%)	Rating	Liquid Assets/ Total Assets (%)	Rating	
Allahabad Bank	9.05	3	7.94	3	3.00
Andhra Bank	15.15	3	12.64	3	3.00
Axis Bank	9.08	3	7.32	3	3.00
Bank of Baroda	14.35	3	11.87	3	3.00
Bank of India	12.19	3	10.19	3	3.00
Bank of Maharashtra	8.88	3	7.65	3	3.00
Canara Bank	10.98	3	9.65	3	3.00
Central Bank of India	7.21	3	6.42	3	3.00
Corporation Bank	12.44	3	10.09	3	3.00
Dena Bank	10.60	3	9.43	3	3.00

Federal Bank	10.47	3	9.07	3	3.00
HDFC Bank	12.40	3	9.41	3	3.00
Indian Bank	11.78	3	10.09	3	3.00
Indian Overseas Bank	7.34	3	6.25	3	3.00
Indusind Bank	9.87	3	8.40	3	3.00
ICICI Bank	10.32	3	6.78	3	3.00
IDBI Bank	20.63	1	6.06	3	2.00
Karnataka Bank	9.17	3	8.12	3	3.00
Kotak Mahindra Bank	9.02	3	5.82	3	3.00
Oriental Bank of Commerce	11.01	3	9.38	3	3.00
Punjab National Bank	20.71	1	17.07	2	1.50
State Bank of Bikaner & Jaipur	11.31	3	8.92	3	3.00
State Bank of India	11.72	3	9.02	3	3.00
Syndicate Bank	9.72	3	8.54	3	3.00
UCO Bank	6.13	4	5.41	3	3.50
Union Bank of India	8.62	3	7.17	3	3.00
Vijaya Bank	10.23	3	8.99	3	3.00

Source: Annual Report of Banks

Composite Rating under C.A.M.E.L Model for the FY 2005 – 06

Banks	Component Ratings of Banks					Weighted Average Composite Rating Points	WACR (rounded up to one decimal point)	Composite Rating
	Capital	Asset Quality	Management	Earnings Quality	Liquidity			
Allahabad Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Andhra Bank	2.67	2.33	3.00	2.80	3.00	2.7395	2.7	3
Axis Bank	3.67	3.67	2.50	3.00	3.00	3.1933	3.2	3
Bank of Baroda	2.67	3.00	3.00	3.00	3.00	2.9109	2.9	3
Bank of India	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Bank of Maharashtra	3.00	3.33	3.00	2.80	3.00	3.0486	3.0	3
Canara Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Central Bank of India	3.67	4.00	3.00	3.00	3.00	3.4009	3.4	3
Corporation Bank	2.33	2.67	3.00	2.80	3.00	2.7225	2.7	3
Dena Bank	3.33	3.67	3.00	3.40	3.00	3.2845	3.2	3
Federal Bank	2.67	3.00	3.00	3.00	3.00	2.9109	2.9	3
HDFC Bank	3.33	3.00	2.50	2.80	3.00	2.9301	2.9	3
Indian Bank	3.33	3.67	3.00	3.00	3.00	3.2365	3.2	3
Indian Overseas Bank	3.00	3.00	2.75	2.80	3.00	2.9085	2.9	3
Indusind Bank	3.33	3.00	2.25	3.20	3.00	2.9106	2.9	3
ICICI Bank	2.67	3.00	2.50	4.00	3.00	2.8959	2.9	3
IDBI Bank	2.67	3.00	1.50	3.60	2.00	2.4579	2.5	2.5*
Karnataka Bank	3.00	3.33	3.00	3.00	3.00	3.0726	3.1	3
Kotak Mahindra Bank	2.33	2.33	2.75	3.20	3.00	2.6282	2.6	3
Oriental Bank of Commerce	2.67	3.00	3.00	2.60	3.00	2.8629	2.9	3
Punjab National Bank	3.00	2.33	3.00	3.00	1.50	2.6726	2.7	3
State Bank of Bikaner & Jaipur	3.00	3.00	3.00	2.80	3.00	2.9760	3.0	3
State Bank of India	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Syndicate Bank	3.33	3.00	3.00	3.00	3.00	3.0891	3.1	3
UCO Bank	3.67	3.33	3.00	3.00	3.50	3.3135	3.3	3
Union Bank of India	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Vijaya Bank	3.00	3.33	3.00	3.00	3.00	3.0726	3.1	3

Source: Calculated
* Banks in transition

Financial Year 2004 – 05

Component Rating for Capital of Banks

1.1. Capital Adequacy

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	12.51211 %
	=	12.51 % (rounded up)
Standard Deviation (σ)	=	1.9131 %
	=	1.91 % (rounded up)
2 σ	=	3.82 %
3 σ	=	5.73 %

Based on the above, the class interval is determined.

Rating Scale for Capital Adequacy Ratio

Rating Scale	Rating range	Rating Analysis
1	16.33 % to 18.24 %	Strong
2	14.42 % to 16.33 %	Satisfactory
3	10.60 % to 14.42 %	Fair (watch category)
4	8.69 % to 10.60 %	Marginal (some risk of failure)
5	6.78 % to 8.69 %	Unsatisfactory (high degree of failure evident)

1.2. Total Debt – Equity Ratio

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	15.93395
	=	15.93 (rounded up)
Standard Deviation (σ)	=	5.1759
	=	5.18 (rounded up)
2 σ	=	10.36
3 σ	=	15.54

Based on the above, the class interval is determined.

Rating Scale for Debt Equity Ratio

Rating Scale	Rating range	Rating Analysis
1	0.39 to 5.57	Strong
2	5.57 to 10.75	Satisfactory
3	10.75 to 21.11	Fair (watch category)
4	21.11 to 26.29	Marginal (some risk of failure)
5	26.29 to 31.47	Unsatisfactory (high degree of failure evident)

1.3. Advances to Assets

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	50.53079 %
	=	50.53 % (rounded up)
Standard Deviation (σ)	=	6.58559 %
	=	6.59 % (rounded up)
2 σ	=	13.18 %
3 σ	=	19.77 %

Based on the above, the class interval is determined.

Rating Scale for Advances to Assets Ratio

Rating Scale	Rating range	Rating Analysis
1	63.71 % to 70.30 %	Strong
2	57.12 % to 63.71 %	Satisfactory
3	43.94 % to 57.12 %	Fair (watch category)
4	37.35 % to 43.94 %	Marginal (some risk of failure)
5	30.76 % to 37.35 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Capital

Banks	Component Rating of Banks for Capital						Average Component Rating
	CAR %	Rating	Total Debt – Equity	Rating	Advances to Assets (%)	Rating	
Allahabad Bank	12.53	3	17.51	3	46.85	3	3.00
Andhra Bank	12.11	3	15.00	3	53.52	3	3.00
Axis Bank	12.66	3	13.17	3	41.34	4	3.33
Bank of Baroda	12.61	3	14.45	3	45.85	3	3.00
Bank of India	11.52	3	18.33	3	58.97	2	2.67
Bank of Maharashtra	12.68	3	19.06	3	39.72	4	3.33
Canara Bank	12.78	3	16.17	3	54.78	3	3.00
Central Bank of India	12.15	3	22.16	4	39.77	4	3.67
Corporation Bank	16.23	2	8.91	2	54.67	3	2.33
Dena Bank	11.91	3	20.25	3	47.06	3	3.00
Federal Bank	11.22	3	21.22	4	52.45	3	3.33
HDFC Bank	12.16	3	8.04	2	49.71	3	2.67
Indian Bank	14.14	3	18.53	3	45.92	3	3.00
Indian Overseas Bank	14.21	3	18.18	3	49.60	3	3.00
Indusind Bank	11.62	3	15.81	3	57.61	2	2.67
ICICI Bank	11.78	3	7.98	2	54.52	3	2.67
IDBI Bank	-	-	-	-	-	-	-
Karnataka Bank	14.16	3	11.08	3	50.19	3	3.00
Kotak Mahindra Bank	12.80	3	5.68	2	61.68	2	2.33
Oriental Bank of Commerce	9.21	4	14.38	3	46.79	3	3.33
Punjab National Bank	14.78	2	13.14	3	47.85	3	2.67
SBBJ	12.60	3	14.67	3	51.32	3	3.00
State Bank of India	12.45	3	15.25	3	44.01	3	3.00
Syndicate Bank	10.70	3	23.15	4	51.29	3	3.33
UCO Bank	11.26	3	27.98	5	50.66	3	3.67
Union Bank of India	12.09	3	19.69	3	55.38	3	3.00
Vijaya Bank	12.92	3	16.68	3	48.87	3	3.00

Source: Annual Report of Banks
Note: IDBI turned into a bank in September, 2004

Component Rating for Asset Quality of Banks

2.1. Net NPAs to Total Assets

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	1.058421 %
	=	1.06 % (rounded up)
Standard Deviation (σ)	=	0.73484 %
	=	0.73 % (rounded up)
2 σ	=	1.46 %
3 σ	=	2.19 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Total Assets

Rating Scale	Rating range	Rating Analysis
1	(-1.13) % to (-0.40) %	Strong
2	(-0.40) % to 0.33 %	Satisfactory
3	0.33 % to 1.79 %	Fair (watch category)
4	1.79 % to 2.52 %	Marginal (some risk of failure)
5	2.52 % to 3.25 %	Unsatisfactory (high degree of failure evident)

2.2. Net NPAs to Net Advances

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	2.101316 %
	=	2.10 % (rounded up)
Standard Deviation (σ)	=	1.4525 %
	=	1.45 % (rounded up)
2σ	=	2.90 %
3σ	=	4.35 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Net Advances

Rating Scale	Rating range	Rating Analysis
1	(-2.25) % to (-0.80) %	Strong
2	(-0.80) % to 0.65 %	Satisfactory
3	0.65 % to 3.55 %	Fair (watch category)
4	3.55 % to 5.00 %	Marginal (some risk of failure)
5	5.00 % to 6.45 %	Unsatisfactory (high degree of failure evident)

2.3. Total Investment to Total Assets

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	35.26 %
Standard Deviation (σ)	=	5.08035 %
	=	5.08 % (rounded up)
2σ	=	10.16 %
3σ	=	15.24 %

Based on the above, the class interval is determined.

Rating Scale for Total Investment to Total Assets

Rating Scale	Rating range	Rating Analysis
1	20.02 % to 25.10 %	Strong
2	25.10 % to 30.18 %	Satisfactory
3	30.18 % to 40.34 %	Fair (watch category)
4	40.34 % to 45.42 %	Marginal (some risk of failure)
5	45.42 % to 50.50 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Asset Quality

Banks	Component Rating of Banks for Asset Quality						Average Component Rating
	Net NPAs to Total Assets (%)	Rating	Net NPA to Net Advances (%)	Rating	Total Investment to Total Assets (%)	Rating	
Allahabad Bank	0.60	3	1.28	3	42.06	4	3.33
Andhra Bank	0.15	2	0.28	2	32.53	3	2.33
Axis Bank	0.58	3	1.39	3	37.82	3	3.00
Bank of Baroda	0.65	3	1.45	3	39.16	3	3.00
Bank of India	1.64	3	2.80	3	29.69	2	2.67
Bank of Maharashtra	0.85	3	2.15	3	44.03	4	3.33
Canara Bank	1.02	3	1.88	3	34.50	3	3.00
Central Bank of India	1.19	3	2.98	3	44.95	4	3.33
Corporation Bank	0.61	3	1.12	3	30.25	3	3.00
Dena Bank	2.46	4	5.23	5	40.36	4	4.33
Federal Bank	1.16	3	2.21	3	34.48	3	3.00
HDFC Bank	0.12	2	0.24	2	37.62	3	2.33
Indian Bank	0.56	3	1.35	3	44.77	4	3.33
Indian Overseas Bank	0.63	3	1.27	3	37.42	3	3.00
Indusind Bank	1.56	3	2.71	3	26.05	2	2.67
ICICI Bank	0.90	3	1.65	3	30.11	2	2.67
IDBI Bank	-	-	-	-	-	-	-
Karnataka Bank	1.14	3	2.29	3	36.37	3	3.00
Kotak Mahindra Bank	0.23	2	0.37	2	28.05	2	2.00
OBC	0.60	3	1.29	3	33.92	3	3.00
Punjab National Bank	0.09	2	0.20	2	40.14	3	2.33
SBBJ	0.83	3	1.61	3	35.73	3	3.00
State Bank of India	1.16	3	2.65	3	42.86	4	3.33
Syndicate Bank	0.82	3	1.59	3	39.09	3	3.00
UCO Bank	1.49	3	2.93	3	34.92	3	3.00
Union Bank of India	1.46	3	2.64	3	31.48	3	3.00
Vijaya Bank	0.29	2	0.59	2	41.14	4	2.67

Source: Annual Report of Banks
Note: IDBI turned into a bank in September, 2004

Component Rating for Management of Banks

3.1. Total Advances to Total Deposits

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	62.16579 %
	=	62.17 %
Standard Deviation (σ)	=	14.11630 %
	=	14.12 % (rounded up)
2σ	=	28.24 %
3σ	=	42.36 %

Based on the above, the class interval is determined.

Rating Scale for Total Advances to Total Deposits

Rating Scale	Rating range	Rating Analysis
1	90.41 % to 104.53 %	Strong
2	76.29 % to 90.41 %	Satisfactory
3	48.05 % to 76.29 %	Fair (watch category)
4	33.93 % to 48.05 %	Marginal (some risk of failure)
5	19.81 % to 33.93 %	Unsatisfactory (high degree of failure evident)

3.2. Profit per Employee

For the Financial Year 2004 – 05,

N = 38 banks
Mean = Rs. 2.43736 lakhs
= Rs. 2.44 lakhs
Standard Deviation (σ) = Rs. 3.5986 lakhs
= Rs. 3.60 lakhs (rounded up)
2 σ = Rs. 7.20 lakhs
3 σ = Rs. 10.80 lakhs

Based on the above, the class interval is determined.

Rating Scale for Profit per Employee

Rating Scale	Rating range	Rating Analysis
1	9.64 to 13.24 lakhs	Strong
2	6.04 to 9.64 lakhs	Satisfactory
3	(-1.16) to 6.04 lakhs	Fair (watch category)
4	(-4.76) to (-1.16) lakhs	Marginal (some risk of failure)
5	(-8.36) to (-4.76) lakhs	Unsatisfactory (high degree of failure evident)

3.3. Business per Employee

For the Financial Year 2004 – 05,

N = 38 banks
Mean = Rs. 3.94710 crores
= Rs. 3.95 crores
Standard Deviation (σ) = Rs. 1.97989 crores
= Rs. 1.98 crores (rounded up)
2 σ = Rs. 3.96 crores
3 σ = Rs. 5.94 crores

Based on the above, the class interval is determined.

Rating Scale for Business per Employee

Rating Scale	Rating range	Rating Analysis
1	7.91 to 9.89 crores	Strong
2	5.93 to 7.91 crores	Satisfactory
3	1.97 to 5.93 crores	Fair (watch category)
4	(-0.01) to 1.97 crores	Marginal (some risk of failure)
5	(-1.99) to (-0.01) crores	Unsatisfactory (high degree of failure evident)

3.4. Return on Net Worth

For the Financial Year 2004 – 05,

N = 38 banks
Mean = 13.25684 %
= 13.26 %
Standard Deviation (σ) = 16.48575 %
= 16.49 % (rounded up)
2 σ = 32.98 %
3 σ = 49.47 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Total Assets

Rating Scale	Rating range	Rating Analysis
1	46.24 % to 62.73 %	Strong
2	29.75 % to 46.24 %	Satisfactory
3	(-3.23) % to 29.75 %	Fair (watch category)
4	(-19.72) % to (-3.23) %	Marginal (some risk of failure)
5	(-36.21) % to (-19.72) %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Management

Banks	Component Rating of Banks for Management								Average Component Rating
	Total Advances to Total Deposits (%)	Rating	Profit per employee (Rs. in Lakhss)	Rating	Business per employee (Rs. in Crores)	Rating	Return on Net Worth (%)	Rating	
Allahabad Bank	51.89	3	2.86	3	2.82	3	27.93	3	3.00
Andhra Bank	63.58	3	3.97	3	3.46	3	13.66	3	3.00
Axis Bank	49.20	3	8.02	2	10.21*	1	18.19	3	2.25
Bank of Baroda	53.36	3	1.71	3	3.10	3	12.58	3	3.00
Bank of India	71.06	3	0.80	3	3.20	3	8.36	3	3.00
Bank of Maharashtra	45.28	4	1.25	3	2.95	3	8.82	3	3.25
Canara Bank	62.35	3	2.48	3	3.51	3	19.95	3	3.00
Central Bank of India	44.90	4	0.93	3	2.07	3	11.65	3	3.25
Corporation Bank	68.10	3	3.95	3	4.38	3	11.54	3	3.00
Dena Bank	56.27	3	0.60	3	3.13	3	7.43	3	3.00
Federal Bank	58.07	3	1.39	3	3.66	3	13.28	3	3.00
HDFC Bank	70.33	3	8.80	2	8.06	1	23.67	3	2.25
Indian Bank	52.80	3	1.87	3	2.46	3	24.36	3	3.00
Indian Overseas Bank	56.97	3	2.66	3	2.69	3	29.85	2	2.75
Indusind Bank	68.63	3	10.12	1	9.25	1	25.79	3	2.00
ICICI Bank	91.57	1	11.00	1	8.80	1	18.86	3	1.50
IDBI Bank	-	-	-	-	-	-	-	-	-
Karnataka Bank	58.02	3	3.35	3	3.81	3	17.56	3	3.00
Kotak Mahindra Bank	93.43	1	5.37	3	3.87	3	12.45	3	2.50
Oriental Bank of Commerce	52.87	3	6.67	2	5.12	3	24.19	3	2.75
Punjab National Bank	58.56	3	2.42	3	2.77	3	22.49	3	3.00
SBBJ	63.08	3	1.69	3	2.20	3	16.81	3	3.00
State Bank of India	55.14	3	2.07	3	2.43	3	19.43	3	3.00
Syndicate Bank	57.74	3	1.53	3	2.80	3	23.66	3	3.00
UCO Bank	55.90	3	1.43	3	3.21	3	21.18	3	3.00
Union Bank of India	64.86	3	2.81	3	3.43	3	25.05	3	3.00
Vijaya Bank	55.96	3	3.45	3	3.11	3	27.05	3	3.00

Source: Annual Report of Banks

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Note: IDBI turned into a bank in September, 2004

Component Rating for Earnings Quality of Banks

4.1. Operating Profit / Average Working Funds

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	2.188684 %
	=	2.19 %
Standard Deviation (σ)	=	0.91651 %
	=	0.92 % (rounded up)
2 σ	=	1.84 %
3 σ	=	2.76 %

Based on the above, the class interval is determined.

Rating Scale for Operating Profit/ AverageWorking Funds

Rating Scale	Rating range	Rating Analysis
1	4.03 % to 4.95 %	Strong
2	3.11 % to 4.03 %	Satisfactory
3	1.27 % to 3.11 %	Fair (watch category)
4	0.35 % to 1.27 %	Marginal (some risk of failure)
5	(-0.57) % to 0.35 %	Unsatisfactory (high degree of failure evident)

4.2. Spread

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	2.816842 %
	=	2.82 %
Standard Deviation (σ)	=	0.54772 %
	=	0.55 % (rounded up)
2 σ	=	1.10 %
3 σ	=	1.65 %

Based on the above, the class interval is determined.

Rating Scale for Spread (as a % of Assets)

Rating Scale	Rating range	Rating Analysis
1	3.92 % to 4.47 %	Strong
2	3.37 % to 3.92 %	Satisfactory
3	2.27 % to 3.37 %	Fair (watch category)
4	1.72 % to 2.27 %	Marginal (some risk of failure)
5	1.17 % to 1.72 %	Unsatisfactory (high degree of failure evident)

4.3. Net Profit/ Average Assets

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	0.556579 %
	=	0.56 %
Standard Deviation (σ)	=	0.78740 %
	=	0.79 % (rounded up)
2 σ	=	1.58 %
3 σ	=	2.37 %

Based on the above, the class interval is determined.

Rating Scale for Net Profit to Average Assets

Rating Scale	Rating range	Rating Analysis
1	2.14 % to 2.93 %	Strong
2	1.35 % to 2.14 %	Satisfactory
3	(-0.23) % to 1.35 %	Fair (watch category)
4	(-1.02) % to (-0.23) %	Marginal (some risk of failure)
5	(-1.81) % to (-1.02) %	Unsatisfactory (high degree of failure evident)

4.4. Interest Income/ Total Income

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	83.18105 %
	=	83.18 %
Standard Deviation (σ)	=	5.80258 %
	=	5.80 % (rounded up)
2 σ	=	11.60 %
3 σ	=	17.40 %

Based on the above, the class interval is determined.

Rating Scale for Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	94.78 % to 100.58 %	Strong
2	88.98 % to 94.78 %	Satisfactory
3	77.38 % to 88.98 %	Fair (watch category)
4	71.58 % to 77.38 %	Marginal (some risk of failure)
5	65.78 % to 71.58 %	Unsatisfactory (high degree of failure evident)

4.5. Non Interest Income/ Total Income

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	16.76789 %
	=	16.77 %
Standard Deviation (σ)	=	5.813776 %
	=	5.81 % (rounded up)
2 σ	=	11.62 %
3 σ	=	17.43 %

Based on the above, the class interval is determined.

Rating Scale for Non Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	(-0.66) % to 5.15 %	Strong
2	5.15 % to 10.96 %	Satisfactory
3	10.96 % to 22.58 %	Fair (watch category)
4	22.58 % to 28.39 %	Marginal (some risk of failure)
5	28.39 % to 34.20 %	Unsatisfactory (high degree of failure evident)

Component rating for Earnings Quality

Banks	Component Rating for Banks for Earnings Quality										Average Component Rating
	Operating Profit/ Working Funds	Rating	Spread (as a % of Assets)	Rating	Net Profit/ Average Assets	Rating	Interest Income/ Total Income	Rating	Non Interest Income/ Total Income	Rating	
Allahabad Bank	2.64	3	3.02	3	1.36	2	83.27	3	16.73	3	2.80
Andhra Bank	3.25	2	3.27	3	1.96	2	75.11	4	24.89	4	3.00
Axis Bank	2.04	3	1.94	4	1.05	3	82.66	3	17.34	3	3.20
Bank of Baroda	2.45	3	3.15	3	0.75	3	83.13	3	16.87	3	3.00
Bank of India	1.62	3	2.36	3	0.38	3	83.92	3	16.08	3	3.00
Bank of Maharashtra	1.71	3	2.68	3	0.40	3	86.01	3	13.99	3	3.00
Canara Bank	2.48	3	2.86	3	1.06	3	83.06	3	16.95	3	3.00
Central Bank of India	2.56	3	3.46	2	0.46	3	84.72	3	15.28	3	2.80
Corporation Bank	3.68	2	3.33	3	1.07	3	81.87	3	18.13	3	2.80
Dena Bank	1.94	3	2.86	3	0.31	3	84.72	3	15.28	3	3.00
Federal Bank	2.74	3	2.99	3	0.56	3	84.30	3	15.70	3	3.00
HDFC Bank	2.56	3	3.46	2	1.82	3	82.92	3	17.08	3	2.80
Indian Bank	2.45	3	2.97	3	1.08	3	83.37	3	16.63	3	3.00
Indian Overseas Bank	2.63	3	3.65	2	1.33	3	83.17	3	16.83	3	2.80
Indusind Bank	2.87	3	2.66	3	1.37	3	87.65	3	12.35	3	3.00
ICICI Bank	2.18	3	1.69	5	1.37	2	73.37	4	26.63	4	3.60
IDBI Bank	-	-	-	-	-	-	-	-	-	-	-
Karnataka Bank	3.16	2	2.53	3	1.27	3	79.16	3	20.84	3	2.80
Kotak Mahindra Bank	2.44	3	3.46	2	1.38	2	77.43	3	22.57	3	2.60
Oriental Bank of Commerce	2.50	3	2.82	3	1.53	3	93.12	2	6.88	2	2.60
Punjab National Bank	2.25	3	3.17	3	1.23	3	82.02	3	17.98	3	3.00
SBBJ	3.25	2	3.71	2	0.94	3	78.28	3	21.72	3	2.60
State Bank of India	2.61	3	3.03	3	0.99	3	82.00	3	18.00	3	3.00
Syndicate Bank	1.88	3	3.25	3	0.88	3	86.42	3	13.58	3	3.00
UCO Bank	1.73	3	2.58	3	0.70	3	87.31	3	12.69	3	3.00
Union Bank of India	2.52	3	2.85	3	1.10	3	86.64	3	13.36	3	3.00
Vijaya Bank	3.01	3	3.36	3	1.43	2	85.55	3	14.45	3	2.80

Source: Annual Report of Banks
Note: IDBI turned into a Bank in September, 2004

Component Rating for Liquidity of Banks

5.1. Liquid Assets/ Total Deposits

For the Financial Year 2004 – 05,

n	=	38 banks
Mean	=	11.46868 %
	=	11.47 %
Standard Deviation (σ)	=	4.2023 %
	=	4.20 % (rounded up)
2 σ	=	8.40 %
3 σ	=	12.60 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets/ Total Deposits

Rating Scale	Rating range	Rating Analysis
1	19.87 % to 24.07 %	Strong
2	15.67 % to 19.87 %	Satisfactory
3	7.27 % to 15.67 %	Fair (watch category)
4	3.07 % to 7.27 %	Marginal (some risk of failure)
5	(-1.13) % to 3.07 %	Unsatisfactory (high degree of failure evident)

5.2. Liquid Assets to Total Assets

For the Financial Year 2004 – 05,

N	=	38 banks
Mean	=	9.435263 %
	=	9.44 %
Standard Deviation (σ)	=	3.63455 %
	=	3.63 % (rounded up)
2 σ	=	7.26 %
3 σ	=	10.89 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets/ Total Assets

Rating Scale	Rating range	Rating Analysis
1	16.70 % to 20.33 %	Strong
2	13.07 % to 16.70 %	Satisfactory
3	5.81 % to 13.07 %	Fair (watch category)
4	2.18 % to 5.81 %	Marginal (some risk of failure)
5	(-1.45) % to 2.18 %	Unsatisfactory (high degree of failure evident)

Component Rating for Liquidity

Banks	Component Rating for Liquidity				Average Component Rating
	Liquid Assets/ Total Deposits (%)	Rating	Liquid Assets/ Total Assets (%)	Rating	
Allahabad Bank	8.13	3	7.34	3	3.00
Andhra Bank	12.79	3	10.77	3	3.00
Axis Bank	16.64	2	13.98	2	2.00
Bank of Baroda	11.38	3	9.78	3	3.00
Bank of India	9.55	3	7.92	3	3.00
Bank of Maharashtra	13.43	3	11.78	3	3.00
Canara Bank	8.95	3	7.86	3	3.00
Central Bank of India	11.61	3	10.28	3	3.00
Corporation Bank	13.15	3	10.55	3	3.00
Dena Bank	8.87	3	7.42	3	3.00
Federal Bank	10.24	3	9.25	3	3.00

HDFC Bank	12.31	3	8.70	3	3.00
Indian Bank	7.39	3	6.43	3	3.00
Indian Overseas Bank	11.20	3	9.75	3	3.00
Indusind Bank	8.80	3	7.39	3	3.00
ICICI Bank	12.95	3	7.71	3	3.00
IDBI Bank *	-	-	-	-	-
Karnataka Bank	12.66	3	10.96	3	3.00
Kotak Mahindra Bank	9.78	3	6.45	3	3.00
Oriental Bank of Commerce	15.76	2	13.95	2	2.00
Punjab National Bank	10.75	3	8.78	3	3.00
SBBJ	9.33	3	7.59	3	3.00
State Bank of India	10.71	3	8.55	3	3.00
Syndicate Bank	6.63	4	5.89	3	3.50
UCO Bank	13.17	3	11.93	3	3.00
Union Bank of India	10.63	3	9.08	3	3.00
Vijaya Bank	6.30	4	5.50	4	4.00

Note: IDBI turned into a bank in September, 2004

Composite Rating under C.A.M.E.L Model for the FY 2004 – 05

Banks	Component Ratings of Banks					Weighted Average Composite Rating Points	WACR (rounded up to one decimal point)	Composite Rating
	Capital	Asset Quality	Management	Earnings Quality	Liquidity			
Allahabad Bank	3.00	3.33	3.00	2.80	3.00	3.0486	3.0	3
Andhra Bank	3.00	2.33	3.00	3.00	3.00	2.8526	2.9	3
Axis Bank	3.33	3.00	2.25	3.20	2.00	2.7906	2.8	3
Bank of Baroda	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Bank of India	2.67	2.67	3.00	3.00	3.00	2.8383	2.8	3
Bank of Maharashtra	3.33	3.33	3.25	3.00	3.00	3.2292	3.2	3
Canara Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Central Bank of India	3.67	3.33	3.25	2.80	3.00	3.2970	3.3	3
Corporation Bank	2.33	3.00	3.00	2.80	3.00	2.7951	2.8	3
Dena Bank	3.00	4.33	3.00	3.00	3.00	3.2926	3.3	3
Federal Bank	3.33	3.00	3.00	3.00	3.00	3.0891	3.1	3
HDFC Bank	2.67	2.33	2.25	2.80	3.00	2.5370	2.5	2.5*
Indian Bank	3.00	3.33	3.00	3.00	3.00	3.0726	3.1	3
Indian Overseas Bank	3.00	3.00	2.75	2.80	3.00	2.9085	2.9	3
Indusind Bank	2.67	2.67	2.00	3.00	3.00	2.5683	2.6	3
ICICI Bank	2.67	2.67	1.5	3.60	3.00	2.5053	2.5	2.5*
IDBI Bank	-	-	-	-	-	-	-	-
Karnataka Bank	3.00	3.00	3.00	2.80	3.00	2.9760	3.0	3
Kotak Mahindra Bank	2.33	2.00	2.50	2.60	3.00	2.4161	2.4	2
OBC	3.33	3.00	2.75	2.60	2.00	2.8536	2.9	3
Punjab National Bank	2.67	2.33	3.00	3.00	3.00	2.7635	2.8	3
SBBJ	3.00	3.00	3.00	2.60	3.00	2.9520	3.0	3
State Bank of India	3.00	3.33	3.00	3.00	3.00	3.0726	3.1	3
Syndicate Bank	3.33	3.00	3.00	3.00	3.50	3.1491	3.1	3
UCO Bank	3.67	3.00	3.00	3.00	3.00	3.1809	3.2	3
Union Bank of India	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Vijaya Bank	3.00	2.67	3.00	2.80	4.00	3.0234	3.0	3

Source: Calculated

Note: IDBI turned into a Bank in September, 2004

* Banks in transition from one phase to the other.

Financial Year 2003 - 04

Component Rating for Capital of Banks

1.1. Capital Adequacy

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	12.969 %
	=	12.97 %
Standard Deviation (σ)	=	1.964 %
	=	1.96 %
2 σ	=	3.92 %
3 σ	=	5.88 %

Based on the above, the class interval is determined.

Rating Scale for Capital Adequacy Ratio

Rating Scale	Rating range	Rating Analysis
1	16.89 % to 18.85 %	Strong
2	14.93 % to 16.89 %	Satisfactory
3	11.01 % to 14.93 %	Fair (watch category)
4	9.05% to 11.01 %	Marginal (some risk of failure)
5	7.09 % to 9.05 %	Unsatisfactory (high degree of failure evident)

1.2. Total Debt Equity Ratio

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	16.986
	=	16.99
Standard Deviation (σ)	=	4.679
	=	4.68
2 σ	=	9.36
3 σ	=	14.04

Based on the above, the class interval is determined.

Rating Scale for Debt Equity Ratio

Rating Scale	Rating range	Rating Analysis
1	2.95 to 7.63	Strong
2	7.63 to 12.31	Satisfactory
3	12.31 to 21.67	Fair (watch category)
4	21.67 to 26.35	Marginal (some risk of failure)
5	26.35 to 31.03	Unsatisfactory (high degree of failure evident)

1.3. Advances to Assets

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	44.806 %
	=	44.81 %
Standard Deviation (σ)	=	5.691 %
	=	5.69 %
2 σ	=	11.38 %
3 σ	=	17.07 %

Based on the above, the class interval is determined.

Rating Scale for Advances to Assets

Rating Scale	Rating range	Rating Analysis
1	56.19 % to 61.88 %	Strong
2	50.50 % to 56.19 %	Satisfactory
3	39.12 % to 50.50 %	Fair (watch category)
4	33.43 % to 39.12 %	Marginal (some risk of failure)
5	27.74 % to 33.43 %	Unsatisfactory (high degree of failure evident)

Component Rating for Banks for Capital

Banks	Component Rating for Banks for Capital						Average Component Rating
	CAR %	Rating	Total Debt – Equity	Rating	Advances to Assets (%)	Rating	
Allahabad Bank	12.52	3	20.28	3	44.21	3	3.00
Andhra Bank	13.71	3	15.79	3	47.71	3	3.00
Axis Bank	11.21	3	18.44	3	39.14	3	3.00
Bank of Baroda	13.91	3	14.22	3	41.83	3	3.00
Bank of India	13.01	3	18.51	3	54.04	2	2.67
Bank of Maharashtra	11.88	3	18.82	3	36.42	4	3.33
Canara Bank	12.66	3	16.83	3	47.86	3	3.00
Central Bank of India	12.43	3	22.97	4	36.00	4	3.67
Corporation Bank	20.11*	1	8.38	2	47.64	3	2.00
Dena Bank	9.48	4	19.67	3	42.47	3	3.33
Federal Bank	11.48	3	21.02	3	50.95	2	2.67
HDFC Bank	11.66	3	11.30	2	41.94	3	2.67
Indian Bank	12.82	3	20.64	3	39.99	3	3.00
Indian Overseas Bank	12.49	3	21.49	3	42.89	3	3.00
Indusind Bank	12.75	3	15.34	3	51.78	2	2.67
ICICI Bank	10.36	4	8.55	2	49.59	3	3.00
IDBI Bank	-	-	-	-	-	-	-
Karnataka Bank	13.03	3	13.47	3	44.13	3	3.00
Kotak Mahindra Bank	15.25	2	7.35	1	36.05	4	2.33
Oriental Bank of Commerce	14.47	3	13.33	3	47.99	3	3.00
Punjab National Bank	13.10	3	18.74	3	46.15	3	3.00
SBBJ	12.93	3	13.62	3	42.44	3	3.00
State Bank of India	13.53	3	15.75	3	38.73	4	3.33
Syndicate Bank	11.49	3	25.00	4	43.72	3	3.33
UCO Bank	11.88	3	26.25	4	47.09	3	3.33
Union Bank of India	12.32	3	19.43	3	50.46	3	3.00
Vijaya Bank	14.11	3	16.44	3	45.87	3	3.00

Source: Annual Report of Banks
* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.
Note: IDBI turned into a bank in September, 2004

Component Rating for Asset Quality of Banks

2.1. Net NPAs to Total Assets

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	1.459 %
	=	1.46 %
Standard Deviation (σ)	=	1.063 %
	=	1.06 %
2 σ	=	2.12 %
3 σ	=	3.18 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Total Assets

Rating Scale	Rating range	Rating Analysis
1	(-1.72) % to (-0.66) %	Strong
2	(-0.66) % to 0.40 %	Satisfactory
3	0.40 % to 2.52 %	Fair (watch category)
4	2.52 % to 3.58 %	Marginal (some risk of failure)
5	3.58 % to 4.64 %	Unsatisfactory (high degree of failure evident)

2.2. Net NPAs to Net Advances

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	2.985 %
	=	2.99 %
Standard Deviation (σ)	=	1.984 %
	=	1.98 %
2 σ	=	3.96 %
3 σ	=	5.94 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Net Advances

Rating Scale	Rating range	Rating Analysis
1	(-2.95) % to (-0.97) %	Strong
2	(-0.97) % to 1.01 %	Satisfactory
3	1.01 % to 4.97 %	Fair (watch category)
4	4.97 % to 6.95 %	Marginal (some risk of failure)
5	6.95 % to 8.93 %	Unsatisfactory (high degree of failure evident)

2.3. Total Investment to Total Assets

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	40.311 %
	=	40.31 %
Standard Deviation (σ)	=	5.373 %
	=	5.37 %
2 σ	=	10.74 %
3 σ	=	16.11 %

Based on the above, the class interval is determined.

Rating Scale for Total Investment to Total Assets

Rating Scale	Rating range	Rating Analysis
1	24.20 % to 29.57 %	Strong
2	29.57 % to 34.94 %	Satisfactory
3	34.94 % to 45.68 %	Fair (watch category)
4	45.68 % to 51.05 %	Marginal (some risk of failure)
5	51.05 % to 56.42 %	Unsatisfactory (high degree of failure evident)

Component Rating for Banks for Asset Quality

Banks	Component Rating for Banks for Asset Quality						Average Component Rating
	Net NPAs to Total Assets	Rating	Net NPA to Net Advances	Rating	Total Investment to Total Assets	Rating	
Allahabad Bank	1.05	3	2.37	3	44.82	3	3.00
Andhra Bank	0.44	3	0.93	2	38.20	3	2.67
Axis Bank	0.46	3	1.29	3	32.27	2	2.67
Bank of Baroda	2.07	3	2.99	3	44.67	3	3.00
Bank of India	2.43	3	4.50	3	32.01	2	2.67
Bank of Maharashtra	0.89	3	2.46	3	43.28	3	3.00
Canara Bank	1.38	3	2.89	3	35.96	3	3.00
Central Bank of India	2.01	3	5.57	4	49.58	4	3.67
Corporation Bank	0.86	3	1.80	3	36.65	3	3.00
Dena Bank	3.99	5	9.40*	5	43.94	3	4.33
Federal Bank	1.48	3	2.89	3	36.44	3	3.00
HDFC Bank	0.07	2	0.16	2	45.52	3	2.33
Indian Bank	0.98	3	2.71	3	47.27	4	3.33
Indian Overseas Bank	1.22	3	2.85	3	42.63	3	3.00
Indusind Bank	1.41	3	2.72	3	26.32	1	2.33
ICICI Bank	1.10	3	2.21	3	34.13	2	2.67
IDBI Bank	-	-	-	-	-	-	-
Karnataka Bank	2.19	3	4.98	4	46.13	4	3.67
Kotak Mahindra Bank	0.06	2	0.17	2	49.56	4	2.67
Oriental Bank of Commerce	0	2	0	2	40.95	3	2.33
Punjab National Bank	0.44	3	0.98	2	41.17	3	2.67
SBBJ	0.53	3	1.25	3	41.62	3	3.00
State Bank of India	1.33	3	3.45	3	45.53	3	3.00
Syndicate Bank	1.13	3	2.58	3	37.94	3	3.00
UCO Bank	1.72	3	3.65	3	40.21	3	3.00
Union Bank of India	1.45	3	2.87	3	38.48	3	3.00
Vijaya Bank	0.42	3	0.91	2	45.02	3	2.67

Source: Annual Report of Banks
* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.
Note: IDBI turned into a bank in September, 2004

Component Rating for Management of Banks

3.1. Total Advances to Total Deposits

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	54.393 %
	=	54.39 %
Standard Deviation (σ)	=	9.851 %
	=	9.85 %
2 σ	=	19.70 %
3 σ	=	29.55 %

Based on the above, the class interval is determined.

Rating Scale for Total Advances to Total Deposits

Rating Scale	Rating range	Rating Analysis
1	74.09 % to 83.94 %	Strong
2	64.24 % to 74.09 %	Satisfactory
3	44.54 % to 64.24 %	Fair (watch category)
4	34.69 % to 44.54 %	Marginal (some risk of failure)
5	24.84 % to 34.69 %	Unsatisfactory (high degree of failure evident)

3.2. Profit per Employee

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	Rs. 3.744 lakhs
	=	Rs. 3.74 lakhs
Standard Deviation (σ)	=	Rs. 3.196 lakhs
	=	Rs. 3.20 lakhs
2 σ	=	Rs. 6.40 lakhs
3 σ	=	Rs. 9.60 lakhs

Based on the above, the class interval is determined.

Rating Scale for Profit per Employee

Rating Scale	Rating range	Rating Analysis
1	10.14 to 13.34 lakhs	Strong
2	6.94 to 10.14 lakhs	Satisfactory
3	0.54 to 6.94 lakhs	Fair (watch category)
4	(-2.66) to 0.54 lakhs	Marginal (some risk of failure)
5	(-5.86) to (-2.66) lakhs	Unsatisfactory (high degree of failure evident)

3.3. Business per Employee

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	Rs. 3.485 crores
	=	Rs. 3.49 crores
Standard Deviation (σ)	=	Rs. 2.213 crores
	=	Rs. 2.21 crores
2 σ	=	Rs. 4.42 crores
3 σ	=	Rs. 6.63 crores

Based on the above, the class interval is determined.

Rating Scale for Business per Employee

Rating Scale	Rating range	Rating Analysis
1	7.91 to 10.12 crores	Strong
2	5.70 to 7.91 crores	Satisfactory
3	1.28 to 5.70 crores	Fair (watch category)
4	(-0.93) to 1.28 crores	Marginal (some risk of failure)
5	(-3.14) to (-0.93) crores	Unsatisfactory (high degree of failure evident)

3.4. Return on Net Worth

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	24.80 %
Standard Deviation (σ)	=	7.453 %
	=	7.45 %
2 σ	=	14.90 %
3 σ	=	22.35 %

Based on the above, the class interval is determined.

Rating Scale for Return on Net Worth

Rating Scale	Rating range	Rating Analysis
1	39.70 % to 47.15 %	Strong
2	32.25 % to 39.70 %	Satisfactory
3	17.35 % to 32.25 %	Fair (watch category)
4	9.90 % to 17.35 %	Marginal (some risk of failure)
5	2.45 % to 9.90 %	Unsatisfactory (high degree of failure evident)

Component Rating of Banks for Management

Banks	Component Rating of Banks for Management								Average Component Rating
	Total Advances to Total Deposits (%)	Rating	Profit per employee (Rs. in Lakhs)	Rating	Business per employee (Rs. in Crores)	Rating	Return on Net Worth (%)	Rating	
Allahabad Bank	48.74	3	2.46	3	2.15	3	26.33	3	3.00
Andhra Bank	56.17	3	3.54	3	2.77	3	36.41	2	2.75
Axis Bank	44.68	3	8.07	2	8.08	1	26.39	3	2.25
Bank of Baroda	48.79	3	2.43	3	2.53	3	20.32	3	3.00
Bank of India	64.58	2	2.35	3	2.67	3	28.04	3	2.75
Bank of Maharashtra	44.36	4	2.16	3	2.69	3	23.45	3	3.25
Canara Bank	55.17	3	2.97	3	2.98	3	29.23	3	3.00
Central Bank of India	40.79	4	1.58	3	1.82	3	28.73	3	3.25
Corporation Bank	59.89	3	4.98	3	3.66	3	17.98	3	3.00
Dena Bank	51.29	3	2.23	3	2.74	3	26.55	3	3.00
Federal Bank	57.14	3	2.14	3	3.27	3	23.29	3	3.00
HDFC Bank	58.35	3	9.39	2	8.66	1	24.38	3	2.25
Indian Bank	46.40	3	1.85	3	1.89	3	27.51	3	3.00
Indian Overseas Bank	48.92	3	2.12	3	2.55	3	30.25	3	3.00
Indusind Bank	69.75	2	14.98*	1	10.80*	1	34.20	2	1.50
ICICI Bank	91.17*	1	12.00	1	10.10	1	20.93	3	1.50
IDBI Bank	-	-	-	-	-	-	-	-	-
Karnataka Bank	49.62	3	2.37	3	3.20	3	20.78	3	3.00
Kotak Mahindra Bank	47.03	3	10.25	1	3.54	3	13.72	4	2.75
Oriental Bank of Commerce	55.17	3	5.10	3	4.16	3	28.67	3	3.00
Punjab National Bank	53.72	3	1.88	3	2.28	3	26.42	3	3.00
State Bank of Bikaner & Jaipur	54.96	3	2.44	3	1.70	3	29.39	3	3.00
State Bank of India	49.57	3	1.77	3	2.11	3	23.39	3	3.00
Syndicate Bank	48.48	3	1.62	3	2.40	3	29.62	3	3.00
UCO Bank	52.56	3	1.79	3	2.49	3	36.21	2	2.75
Union Bank of India	58.20	3	2.78	3	2.86	3	30.47	3	3.00
Vijaya Bank	52.56	3	3.73	3	2.49	3	39.08	2	2.75

Source: Annual Report of Banks
* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.
Note: IDBI turned into a bank in September, 2004

Component Rating for Earnings Quality of Banks

4.1. Operating Profit/ Average Working Funds

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	3.026 %
	=	3.03 %
Standard Deviation (σ)	=	0.608 %
	=	0.61 %
2σ	=	1.22 %
3σ	=	1.83 %

Based on the above, the class interval is determined.

Rating Scale for Operating Profit/ Average Working Funds

Rating Scale	Rating range	Rating Analysis
1	4.25 % to 4.86 %	Strong
2	3.64 % to 4.25 %	Satisfactory
3	2.42 % to 3.64 %	Fair (watch category)
4	1.81 % to 2.42 %	Marginal (some risk of failure)
5	1.20 % to 1.81 %	Unsatisfactory (high degree of failure evident)

4.2. Spread

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	2.830 %
	=	2.83 %
Standard Deviation (σ)	=	0.565 %
	=	0.57 %
2 σ	=	1.14 %
3 σ	=	1.71 %

Based on the above, the class interval is determined.

Rating Scale for Spread (as a percentage of Assets)

Rating Scale	Rating range	Rating Analysis
1	3.97 % to 4.54 %	Strong
2	3.40 % to 3.97 %	Satisfactory
3	2.26 % to 3.40 %	Fair (watch category)
4	1.69 % to 2.26 %	Marginal (some risk of failure)
5	1.12 % to 1.69 %	Unsatisfactory (high degree of failure evident)

4.3. Net Profit/ Average Assets

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	1.321 %
	=	1.32 %
Standard Deviation (σ)	=	0.469 %
	=	0.47 %
2 σ	=	0.94 %
3 σ	=	1.41 %

Based on the above, the class interval is determined.

Rating Scale for Net Profit/Average Assets

Rating Scale	Rating range	Rating Analysis
1	2.26 % to 2.73 %	Strong
2	1.79 % to 2.26 %	Satisfactory
3	0.85 % to 1.79 %	Fair (watch category)
4	0.38 % to 0.85 %	Marginal (some risk of failure)
5	(-0.09) % to 0.38 %	Unsatisfactory (high degree of failure evident)

4.4. Interest Income/ Total Income

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	78.788 %
	=	78.79 %
Standard Deviation (σ)	=	3.834 %
	=	3.83 %
2 σ	=	7.66 %
3 σ	=	11.49 %

Based on the above, the class interval is determined.

Rating Scale for Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	86.45 % to 90.28 %	Strong
2	82.62 % to 86.45 %	Satisfactory
3	74.96 % to 82.62 %	Fair (watch category)
4	71.13 % to 74.96 %	Marginal (some risk of failure)
5	67.30 % to 71.13 %	Unsatisfactory (high degree of failure evident)

4.5. Non Interest Income/ Total Income

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	21.214 %
	=	21.21 %
Standard Deviation (σ)	=	3.837 %
	=	3.84 %
2 σ	=	7.68 %
3 σ	=	11.52 %

Based on the above, the class interval is determined.

Rating Scale for Non Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	9.69 % to 13.53 %	Strong
2	13.53 % to 17.37 %	Satisfactory
3	17.37 % to 25.05 %	Fair (watch category)
4	25.05 % to 28.89 %	Marginal (some risk of failure)
5	28.89 % to 32.73 %	Unsatisfactory (high degree of failure evident)

Component Rating for Earnings Quality

Banks	Component Rating for Banks for Earnings Quality										Average Component Rating
	Operating Profit/ Avg. Working Funds (%)	Rating	Spread (as a % of Assets)	Rating	Net Profit/ Average Assets (%)	Rating	Interest Income/ Total Income (%)	Rating	Non Interest Income/ Total Income (%)	Rating	
Allahabad Bank	2.73	3	3.13	3	1.14	3	78.07	3	21.93	3	3.00
Andhra Bank	3.69	2	3.37	3	1.81	2	76.54	3	23.46	3	2.60
Axis Bank	3.53	3	2.39	3	1.24	3	74.86	4	25.14	4	3.40
Bank of Baroda	3.00	3	3.02	3	1.20	3	78.15	3	21.85	3	3.00
Bank of India	2.78	3	2.59	3	1.25	3	76.38	3	23.62	3	3.00
Bank of Maharashtra	2.48	3	2.38	3	0.97	3	82.57	3	17.43	3	3.00
Canara Bank	3.23	3	2.76	3	1.47	3	77.17	3	22.83	3	3.00
Central Bank of India	2.70	3	3.35	3	1.03	3	83.65	2	16.35	2	2.60
Corporation Bank	3.53	3	3.31	3	1.67	3	82.27	3	17.73	3	3.00
Dena Bank	3.41	3	2.67	3	1.13	3	73.76	4	26.24	4	3.40
Federal Bank	3.30	3	2.79	3	1.00	3	79.95	3	20.05	3	3.00
HDFC Bank	2.56	3	3.16	3	1.66	3	82.60	3	17.40	3	3.00
Indian Bank	2.39	4	2.85	3	1.15	3	78.11	3	21.89	3	3.20
Indian Overseas Bank	2.93	3	3.38	3	1.16	3	82.07	3	17.93	3	3.00
Indusind Bank	3.74	2	2.10	4	1.92	2	75.34	3	24.66	3	2.80
ICICI Bank	2.09	4	1.59	5	1.41	3	74.37	4	25.63	4	4.00
IDBI Bank	-	-	-	-	-	-	-	-	-	-	-
Karnataka Bank	3.29	3	2.02	4	1.34	3	75.84	3	24.16	3	3.20
Kotak Mahindra Bank	3.86	2	2.94	3	1.98	2	74.74	4	25.26	4	3.00
Oriental Bank of Commerce	4.10	2	3.55	2	1.83	2	81.95	3	18.05	3	2.40
Punjab National Bank	3.26	3	3.54	2	1.18	3	79.67	3	20.33	3	2.80
SBBJ	3.70	2	3.56	2	1.57	3	76.20	3	23.80	3	2.60
State Bank of India	2.50	3	2.74	3	1.12	3	80.01	3	19.99	3	3.00
Syndicate Bank	2.51	3	3.03	3	1.12	3	79.76	3	20.24	3	3.00
UCO Bank	2.47	3	2.73	3	1.11	3	83.20	2	16.80	2	2.60
Union Bank of India	2.77	3	2.98	3	1.30	3	84.45	2	15.55	2	2.60
Vijaya Bank	3.96	2	3.48	2	1.84	2	78.68	3	21.32	3	2.40

Source: Annual Report of Banks
Note: IDBI turned into a bank in September, 2004

Component Rating for Liquidity of Banks

5.1. Liquid Assets/ Total Deposits

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	11.873 %
	=	11.87 %
Standard Deviation (σ)	=	4.247 %
	=	4.25 %
2σ	=	8.50 %
3σ	=	12.75 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets/ Total Deposits

Rating Scale	Rating range	Rating Analysis
1	20.37 % to 24.62 %	Strong
2	16.12 % to 20.37 %	Satisfactory
3	7.62 % to 16.12 %	Fair (watch category)
4	3.37 % to 7.62 %	Marginal (some risk of failure)
5	(-0.88) % to 3.37 %	Unsatisfactory (high degree of failure evident)

5.2. Liquid Assets/ Total Assets

For the Financial Year 2003 – 04,

N	=	37 banks
Mean	=	10.009 %
	=	10.01 %
Standard Deviation (σ)	=	3.562 %
	=	3.56 %
2σ	=	7.12 %
3σ	=	10.68 %

Based on the above, the class interval is determined.

Rating Liquid Assets/ Total Assets

Rating Scale	Rating range	Rating Analysis
1	17.13 % to 20.69 %	Strong
2	13.57 % to 17.13 %	Satisfactory
3	6.45 % to 13.57 %	Fair (watch category)
4	2.89 % to 6.45 %	Marginal (some risk of failure)
5	(-0.67) % to 2.89 %	Unsatisfactory (high degree of failure evident)

Component Rating for Liquidity

Banks	Component Rating for Liquidity				Average Component Rating
	Liquid Assets/ Total Deposits (%)	Rating	Liquid Assets/ Total Assets (%)	Rating	
Allahabad Bank	8.25	3	7.48	3	3.00
Andhra Bank	11.22	3	9.53	3	3.00
Axis Bank	27.03*	1	23.45*	1	1.00
Bank of Baroda	9.96	3	8.54	3	3.00
Bank of India	12.05	3	10.08	3	3.00
Bank of Maharashtra	21.23	1	17.43	1	1.00
Canara Bank	13.93	3	12.08	3	3.00
Central Bank of India	9.09	3	8.02	3	3.00
Corporation Bank	12.23	3	9.73	3	3.00
Dena Bank	7.91	3	6.55	3	3.00
Federal Bank	9.58	3	8.55	3	3.00
HDFC Bank	12.03	3	8.65	3	3.00
Indian Bank	10.33	3	8.90	3	3.00

Indian Overseas Bank	12.64	3	11.08	3	3.00
Indusind Bank	20.12	2	14.94	2	2.00
ICICI Bank	12.44	3	6.76	3	3.00
IDBI Bank	-	-	-	-	-
Karnataka Bank	7.97	3	7.08	3	3.00
Kotak Mahindra Bank	15.22	3	11.66	3	3.00
OBC	10.09	3	8.78	3	3.00
Punjab National Bank	10.03	3	8.62	3	3.00
SBBJ	11.94	3	9.22	3	3.00
State Bank of India	13.67	3	10.68	3	3.00
Syndicate Bank	15.45	3	13.93	2	2.50
UCO Bank	10.67	3	9.56	3	3.00
Union Bank of India	7.61	4	6.60	3	3.50
Vijaya Bank	5.32	4	4.65	4	4.00

Source: Annual Report of Banks
* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.
Note: IDBI turned into a bank in September, 2004

Composite Rating under C.A.M.E.L Model for the FY 2003 – 04

Banks	Component Ratings of Banks					Weighted Average Composite Rating Points	WACR (rounded up to one decimal point)	Composite Rating
	Capital Adequacy	Asset Quality	Management	Earnings Quality	Liquidity			
Allahabad Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3	3
Andhra Bank	3.00	2.67	2.75	2.60	3.00	2.8119	2.8	3
Axis Bank	3.00	2.67	2.25	3.40	1.00	2.5329	2.5	2.5*
Bank of Baroda	3.00	3.00	3.00	3.00	3.00	3.0000	3	3
Bank of India	2.67	2.67	2.75	3.00	3.00	2.7708	2.8	3
Bank of Maharashtra	3.33	3.00	3.25	3.00	1.00	2.9166	2.9	3
Canara Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3	3
Central Bank of India	3.67	3.67	3.25	2.60	3.00	3.3478	3.3	3
Corporation Bank	2.00	3.00	3.00	3.00	3.00	2.7300	2.7	3
Dena Bank	3.33	4.33	3.00	3.40	3.00	3.4297	3.4	3
Federal Bank	2.67	3.00	3.00	3.00	3.00	2.9109	2.9	3
HDFC Bank	2.67	2.33	2.25	3.00	3.00	2.5610	2.6	3
Indian Bank	3.00	3.33	3.00	3.20	3.00	3.0966	3.1	3
Indian Overseas Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3	3
Indusind Bank	2.67	2.33	1.50	2.80	2.00	2.2145	2.2	2
ICICI Bank	3.00	2.67	1.50	4.00	3.00	2.6424	2.6	3
IDBI Bank	-	-	-	-	-	-	-	-
Karnataka Bank	3.00	3.67	3.00	3.20	3.00	3.1714	3.2	3
Kotak Mahindra Bank	2.33	2.67	2.75	3.00	3.00	2.6790	2.7	3
Oriental Bank of Commerce	3.00	2.33	3.00	2.40	3.00	2.7806	2.8	3
Punjab National Bank	3.00	2.67	3.00	2.80	3.00	2.9034	2.9	3
State Bank of Bikaner & Jaipur	3.00	3.00	3.00	2.60	3.00	2.9520	3	3
State Bank of India	3.33	3.00	3.00	3.00	3.00	3.0891	3.1	3
Syndicate Bank	3.33	3.00	3.00	3.00	2.50	3.0291	3	3
UCO Bank	3.33	3.00	2.75	2.60	3.00	2.9736	3	3
Union Bank of India	3.00	3.00	3.00	2.60	3.50	3.0120	3	3
Vijaya Bank	3.00	2.67	2.75	2.40	4.00	2.9079	2.9	3

Source: Calculated
Note: IDBI turned into a bank in September, 2004 * Banks in transition

Financial Year 2002 - 03

Component Rating for Capital of Banks

1.1. Capital Adequacy

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	12.512 %
	=	12.51 %
Standard Deviation (σ)	=	2.961 %
	=	2.96 %
2 σ	=	5.92 %
3 σ	=	8.88 %

Based on the above, the class interval is determined.

Rating Scale for Capital Adequacy Ratio

Rating Scale	Rating range	Rating Analysis
1	18.43 % to 21.39 %	Strong
2	15.47 % to 18.43 %	Satisfactory
3	9.55 % to 15.47 %	Fair (watch category)
4	6.59 % to 9.55 %	Marginal (some risk of failure)
5	3.63 % to 6.59 %	Unsatisfactory (high degree of failure evident)

1.2. Total Debt Equity Ratio

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	16.932
	=	16.93
Standard Deviation (σ)	=	5.128
	=	5.13
2 σ	=	10.26
3 σ	=	15.39

Based on the above, the class interval is determined.

Rating Scale for Debt Equity Ratio

Rating Scale	Rating range	Rating Analysis
1	1.54 to 6.67	Strong
2	6.67 to 11.80	Satisfactory
3	11.80 to 22.06	Fair (watch category)
4	22.06 to 27.19	Marginal (some risk of failure)
5	27.19 to 32.32	Unsatisfactory (high degree of failure evident)

1.3. Advances to Assets (%)

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	46.464 %
	=	46.46 %
Standard Deviation (σ)	=	6.730 %
	=	6.73 %
2 σ	=	13.46 %
3 σ	=	20.19 %

Based on the above, the class interval is determined.

Rating Scale for Advances to Assets

Rating Scale	Rating range	Rating Analysis
1	59.92 % to 66.65 %	Strong
2	53.19 % to 59.92 %	Satisfactory
3	39.73 % to 53.19 %	Fair (watch category)
4	33.00 % to 39.73 %	Marginal (some risk of failure)
5	26.27 % to 33.00 %	Unsatisfactory (high degree of failure evident)

Component Ratings for Banks for Capital

Banks	Component Ratings for Banks for Capital						Average Component Rating
	CAR %	Rating	Total Debt – Equity	Rating	Advances to Assets (%)	Rating	
Allahabad Bank	11.15	3	21.80	3	44.72	3	3.00
Andhra Bank	13.62	3	19.77	3	46.65	3	3.00
Axis Bank	10.90	3	19.24	3	36.61	4	3.33
Bank of Baroda	12.65	3	15.27	3	46.26	3	3.00
Bank of India	12.02	3	19.34	3	55.64	2	2.67
Bank of Maharashtra	11.76	3	22.94	4	38.18	4	3.67
Canara Bank	12.50	3	17.40	3	49.32	3	3.00
Central Bank of India	10.51	3	21.17	3	38.97	4	3.33
Corporation Bank	18.50	1	9.50	2	45.79	3	2.00
Dena Bank	9.33	4	16.75	3	41.84	3	3.33
Federal Bank	11.23	3	20.84	3	50.96	3	3.00
HDFC Bank	11.12	3	10.95	2	38.64	4	3.00
Indian Bank	10.85	3	5.90	1	34.70	4	2.67
Indian Overseas Bank	11.30	3	25.39	4	42.39	3	3.33
Indusind Bank	12.13	3	14.67	3	54.01	2	2.67
ICICI Bank	11.10	3	11.32	2	49.88	3	2.67
IDBI Bank	-	-	-	-	-	-	-
Karnataka Bank	13.44	3	14.50	3	42.09	3	3.00
Kotak Mahindra Bank	25.97*	1	2.58	1	57.63	2	1.33
OBC	14.04	3	14.50	3	46.13	3	3.00
Punjab National Bank	12.02	3	18.96	3	46.66	3	3.00
SBBJ	13.08	3	14.99	3	37.55	4	3.33
State Bank of India	13.50	3	17.75	3	36.65	4	3.33
Syndicate Bank	11.03	3	19.46	3	47.35	3	3.00
UCO Bank	10.04	3	26.33	4	45.61	3	3.33
Union Bank of India	12.41	3	17.61	3	49.97	3	3.00
Vijaya Bank	12.66	3	21.37	3	41.36	3	3.00

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.
Note: IDBI turned into a bank in September, 2004

Component Rating for Asset Quality of Banks

2.1. Net NPAs to Total Assets

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	2.271 %
	=	2.27 %
Standard Deviation (σ)	=	1.232 %
	=	1.23 %
2 σ	=	2.46 %
3 σ	=	3.69 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Total Assets

Rating Scale	Rating range	Rating Analysis
1	(-1.42)% to (-0.19) %	Strong
2	(-0.19) % to 1.04 %	Satisfactory
3	1.04 % to 3.50 %	Fair (watch category)
4	3.50 % to 4.73 %	Marginal (some risk of failure)
5	4.73 % to 5.96 %	Unsatisfactory (high degree of failure evident)

2.2. Net NPAs to Net Advances

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	4.750 %
	=	4.75 %
Standard Deviation (σ)	=	2.387 %
	=	2.39 %
2 σ	=	4.78 %
3 σ	=	7.17 %

Based on the above, the class interval is determined.

Rating Scale for Net NPAs to Net Advances

Rating Scale	Rating range	Rating Analysis
1	(-2.42)% to (-0.03) %	Strong
2	(-0.03) % to 2.36 %	Satisfactory
3	2.36 % to 7.14 %	Fair (watch category)
4	7.14 % to 9.53 %	Marginal (some risk of failure)
5	9.53 % to 11.92 %	Unsatisfactory (high degree of failure evident)

2.3. Total Investment to Total Assets

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	39.729 %
	=	39.73 %
Standard Deviation (σ)	=	5.180 %
	=	5.18 %
2 σ	=	10.36 %
3 σ	=	15.54 %

Based on the above, the class interval is determined.

Rating Scale for Total Investment to Total Assets

Rating Scale	Rating range	Rating Analysis
1	24.19 % to 29.37 %	Strong
2	29.37 % to 34.55 %	Satisfactory
3	34.55 % to 44.91 %	Fair (watch category)
4	44.91 % to 50.09 %	Marginal (some risk of failure)
5	50.09 % to 55.27 %	Unsatisfactory (high degree of failure evident)

Component Ratings for Banks for Asset Quality

Banks	Component Ratings for Banks for Asset Quality						Average Component Rating
	Net NPAs to Total Assets (%)	Rating	Net NPA to Net Advances (%)	Rating	Total Investment to Total Assets (%)	Rating	
Allahabad Bank	3.16	3	7.07	3	44.10	3	3.00
Andhra Bank	0.84	2	1.79	2	42.62	3	2.33
Axis Bank	0.83	2	2.26	2	39.98	3	2.33
Bank of Baroda	2.22	3	4.81	3	39.49	3	3.00
Bank of India	3.11	3	5.36	3	31.89	2	2.67
Bank of Maharashtra	1.84	3	4.83	3	47.39	4	3.33
Canara Bank	1.77	3	3.59	3	37.12	3	3.00
Central Bank of India	2.74	3	6.74	3	45.61	4	3.33
Corporation Bank	0.76	2	1.65	2	40.61	3	2.33
Dena Bank	4.95	5	11.82	5	42.16	3	4.33
Federal Bank	2.52	3	6.15	3	37.30	3	3.00
HDFC Bank	0.14	2	0.37	2	44.00	3	2.33
Indian Bank	2.13	3	6.15	3	41.95	3	3.00
Indian Overseas Bank	2.22	3	5.23	3	45.20	4	3.33
Indusind Bank	2.30	3	4.25	3	25.60	1	2.33
ICICI Bank	2.60	3	5.21	3	33.20	2	2.67
IDBI Bank	-	-	-	-	-	-	-
Karnataka Bank	3.09	3	7.34	4	47.84	4	3.67
Kotak Mahindra Bank	0.06	2	0.11	2	32.83	2	2.00
OBC	0.63	2	1.44	2	43.49	3	2.33
Punjab National Bank	4.41	4	3.80	3	39.47	3	3.33
SBBJ	1.56	3	4.16	3	42.59	3	3.00
State Bank of India	1.64	3	4.49	3	45.85	4	3.33
Syndicate Bank	2.03	3	4.16	3	40.14	3	3.00
UCO Bank	2.00	3	4.38	3	40.49	3	3.00
Union Bank of India	2.45	3	4.91	3	37.94	3	3.00
Vijaya Bank	1.08	3	2.61	3	46.45	4	3.33

Note: IDBI turned into a bank in September, 2004

Component Rating for Management of Banks

3.1. Total Advances to Total Deposits

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	66.623 %
	=	66.62 %
Standard Deviation (σ)	=	70.332 %
	=	70.33 %
2 σ	=	140.66 %
3 σ	=	210.99 %

Based on the above, the class interval is determined.

Rating Scale for Total Advances to Total Deposits

Rating Scale	Rating range	Rating Analysis
1	207.28 % to 277.61 %	Strong
2	136.95 % to 207.28 %	Satisfactory
3	(-3.71) % to 136.95 %	Fair (watch category)
4	(-74.04) % to (-3.71) %	Marginal (some risk of failure)
5	(-144.37) % to (-74.04) %	Unsatisfactory (high degree of failure evident)

3.2. Profit per Employee

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	Rs. 3.067 lakhs
	=	Rs. 3.07 lakhs
Standard Deviation (σ)	=	Rs. 2.908 lakhs
	=	Rs. 2.91 lakhs
2 σ	=	Rs. 5.82 lakhs
3 σ	=	Rs. 8.73 lakhs

Based on the above, the class interval is determined.

Rating Scale for Profit per Employee

Rating Scale	Rating range	Rating Analysis
1	8.89 to 11.80 lakhs	Strong
2	5.98 to 8.89 lakhs	Satisfactory
3	0.16 to 5.98 lakhs	Fair (watch category)
4	(-2.75) to 0.16 lakhs	Marginal (some risk of failure)
5	(-5.66) to (-2.75) lakhs	Unsatisfactory (high degree of failure evident)

3.3. Business per Employee

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	Rs. 3.216 crores
	=	Rs. 3.22 crores
Standard Deviation (σ)	=	Rs. 2.653 crores
	=	Rs. 2.65 crores
2 σ	=	Rs. 5.30 crores
3 σ	=	Rs. 7.95 crores

Based on the above, the class interval is determined.

Rating Scale for Business per Employee

Rating Scale	Rating range	Rating Analysis
1	8.52 to 11.17 crores	Strong
2	5.87 to 8.52 crores	Satisfactory
3	0.57 to 5.87 crores	Fair (watch category)
4	(-2.08) to 0.57 crores	Marginal (some risk of failure)
5	(-4.73) to (-2.08) crores	Unsatisfactory (high degree of failure evident)

3.4. Return on Net Worth

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	17.368 %
	=	17.37 %
Standard Deviation (σ)	=	10.862 %
	=	10.86 %
2 σ	=	21.72 %
3 σ	=	32.58 %

Based on the above, the class interval is determined.

Rating Scale for Return on Net Worth

Rating Scale	Rating range	Rating Analysis
1	39.09 % to 49.95 %	Strong
2	28.23 % to 39.09 %	Satisfactory
3	6.51 % to 28.23 %	Fair (watch category)
4	(-4.35) % to 6.51 %	Marginal (some risk of failure)
5	(-15.21) % to (-4.35) %	Unsatisfactory (high degree of failure evident)

Component Ratings for Banks for Management

Banks	Component Ratings for Banks for Management								Average Component Rating
	Total Advances to Total Deposits (%)	Rating	Profit per employee (Rs. in Lakhs)	Rating	Business per employee (Rs. in Crores)	Rating	Return on Net Worth (%)	Rating	
Allahabad Bank	49.26	3	0.87	3	1.83	3	14.18	3	3.00
Andhra Bank	54.66	3	3.10	3	2.27	3	36.13	2	2.75
Axis Bank	42.32	3	8.22	2	9.26	1	21.05	3	2.25
Bank of Baroda	53.26	3	1.92	3	2.38	3	17.62	3	3.00
Bank of India	66.15	3	1.97	3	2.43	3	24.03	3	3.00
Bank of Maharashtra	42.88	3	1.58	3	2.22	3	22.65	3	3.00
Canara Bank	56.14	3	2.26	3	2.50	3	24.56	3	3.00
Central Bank of India	43.49	3	0.77	3	1.68	3	12.60	3	3.00
Corporation Bank	55.37	3	4.06	3	3.29	3	17.55	3	3.00
Dena Bank	51.15	3	1.08	3	2.42	3	11.44	3	3.00
Federal Bank	56.79	3	1.69	3	2.70	3	19.83	3	3.00
HDFC Bank	52.53	3	10.09	1	8.65	1	19.45	3	2.00
Indian Bank	45.44	3	0.85	3	1.74	3	3.68	4	3.25
Indian Overseas Bank	47.54	3	1.70	3	2.04	3	19.99	3	3.00
Indusind Bank	62.20	3	9.50	1	12.84*	1	-0.33	4	2.25
ICICI Bank	110.61	3	11.00	1	11.20*	1	16.56	3	2.00
IDBI Bank	-	-	-	-	-	-	-	-	-
Karnataka Bank	47.03	3	2.55	3	2.75	3	15.77	3	3.00
Kotak Mahindra Bank	483.07*	1	10.99	1	2.30	3	8.29	3	2.00
OBC	52.59	3	3.40	3	3.43	3	21.66	3	3.00
Punjab National Bank	53.06	3	1.43	3	1.96	3	20.88	3	3.00
SBBJ	51.18	3	1.63	3	1.46	3	17.70	3	3.00
State Bank of India	46.52	3	1.48	3	1.91	3	18.05	3	3.00
Syndicate Bank	53.18	3	1.30	3	1.80	3	21.79	3	3.00
UCO Bank	50.80	3	0.85	3	1.97	3	17.21	3	3.00
Union Bank of India	57.02	3	2.15	3	2.49	3	21.53	3	3.00
Vijaya Bank	46.37	3	1.76	3	1.94	3	24.23	3	3.00

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.
Note: IDBI turned into a bank in September, 2004

Component Rating for Earnings Quality of Banks

4.1. Operating Profit/ Average Working Funds

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	2.743 %
	=	2.74 %
Standard Deviation (σ)	=	0.728 %
	=	0.73 %
2 σ	=	1.46 %
3 σ	=	2.19 %

Based on the above, the class interval is determined.

Rating Scale for Operating Profit/ Average Working Funds

Rating Scale	Rating range	Rating Analysis
1	4.20 % to 4.93 %	Strong
2	3.47 % to 4.20 %	Satisfactory
3	2.01 % to 3.47 %	Fair (watch category)
4	1.28 % to 2.01 %	Marginal (some risk of failure)
5	0.55 % to 1.28 %	Unsatisfactory (high degree of failure evident)

4.2. Spread (as a % of Assets)

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	2.724 %
	=	2.72 %
Standard Deviation (σ)	=	0.608 %
	=	0.61 %
2 σ	=	1.22 %
3 σ	=	1.83 %

Based on the above, the class interval is determined.

Rating Scale for Spread (as a Percentage of Assets)

Rating Scale	Rating range	Rating Analysis
1	3.94 % to 4.55 %	Strong
2	3.33 % to 3.94 %	Satisfactory
3	2.11 % to 3.33 %	Fair (watch category)
4	1.50 % to 2.11 %	Marginal (some risk of failure)
5	0.89 % to 1.50 %	Unsatisfactory (high degree of failure evident)

4.3. Net Profit/ Average Assets

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	1.050 %
	=	1.05 %
Standard Deviation (σ)	=	0.70 %
2 σ	=	1.40 %
3 σ	=	2.10 %

Based on the above, the class interval is determined.

Rating Scale for Net Profit/Average Assets

Rating Scale	Rating range	Rating Analysis
1	2.45 % to 3.15 %	Strong
2	1.75 % to 2.45 %	Satisfactory
3	0.35 % to 1.75 %	Fair (watch category)
4	(-0.35) % to 0.35 %	Marginal (some risk of failure)
5	(-1.05) % to (-0.35) %	Unsatisfactory (high degree of failure evident)

4.4. Interest Income/ Total Income

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	80.57 %
Standard Deviation (σ)	=	4.363 %
	=	4.36 %
2 σ	=	8.72 %
3 σ	=	13.08 %

Based on the above, the class interval is determined.

Rating Scale for Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	89.29 % to 93.65 %	Strong
2	84.93 % to 89.29 %	Satisfactory
3	76.21 % to 84.93 %	Fair (watch category)
4	71.85 % to 76.21 %	Marginal (some risk of failure)
5	67.49 % to 71.85 %	Unsatisfactory (high degree of failure evident)

4.5. Non Interest Income/ Total Income

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	19.472 %
	=	19.47 %
Standard Deviation (σ)	=	4.350 %
	=	4.35 %
2 σ	=	8.70 %
3 σ	=	13.05 %

Based on the above, the class interval is determined.

Rating Scale for Non Interest Income/ Total Income

Rating Scale	Rating range	Rating Analysis
1	6.42 % to 10.77 %	Strong
2	10.77 % to 15.12 %	Satisfactory
3	15.12 % to 23.82 %	Fair (watch category)
4	23.82 % to 28.17 %	Marginal (some risk of failure)
5	28.17 % to 32.52 %	Unsatisfactory (high degree of failure evident)

Component Rating for Banks for Earnings Quality

Banks	Component Rating for Banks for Earnings Quality										Average Component Rating
	Operating Profit/ Avg. Working Funds (%)	Rating	Spread (as a % of Assets)	Rating	Net Profit/ Average Assets (%)	Rating	Interest Income/ Total Income (%)	Rating	Non Interest Income/ Total Income (%)	Rating	
Allahabad Bank	1.87	4	3.24	3	0.63	3	83.06	3	16.94	3	3.20
Andhra Bank	3.06	3	3.05	3	2.16	2	78.43	3	21.57	3	2.80
Axis Bank	2.50	3	1.64	4	1.14	3	78.14	3	21.86	3	3.20
Bank of Baroda	2.25	3	2.75	3	1.05	3	82.86	3	17.14	3	3.00
Bank of India	2.77	3	2.66	3	1.16	3	78.31	3	21.69	3	3.00
Bank of Maharashtra	2.32	3	2.71	3	0.96	3	85.24	2	14.76	2	2.60
Canara Bank	2.63	3	2.72	3	1.32	3	81.49	3	18.51	3	3.00
Central Bank of India	1.76	4	3.32	3	0.56	3	89.63	1	10.37	1	2.40
Corporation Bank	3.85	2	3.02	3	1.13	3	80.85	3	19.15	3	2.80
Dena Bank	2.57	3	2.82	3	0.59	3	80.22	3	19.78	3	3.00
Federal Bank	3.28	3	2.78	3	0.94	3	82.07	3	17.93	3	3.00
HDFC Bank	2.58	3	2.73	3	1.62	3	80.98	3	19.02	3	3.00
Indian Bank	1.93	4	2.32	3	0.53	3	82.83	3	17.17	3	3.20
Indian Overseas Bank	1.99	4	2.97	3	1.09	3	86.51	2	13.47	2	2.80
Indusind Bank	4.00	2	1.86	4	-0.02	4	74.24	4	25.76	4	3.60
ICICI Bank	2.49	3	1.33	5	1.14	3	74.78	4	25.22	4	3.80
IDBI Bank	-	-	-	-	-	-	-	-	-	-	-
Karnataka Bank	2.88	3	1.67	4	1.29	3	77.23	3	22.77	3	3.20
Kotak Mahindra Bank	5.24*	1	4.03	1	2.44	2	68.02	5	31.98	5	2.80
Oriental Bank of Commerce	1.30	4	3.54	2	1.38	3	85.32	2	14.68	2	2.60
Punjab National Bank	2.87	3	3.62	2	1.06	3	85.00	2	15.00	2	2.40
SBBJ	2.78	3	3.06	3	1.21	3	80.88	3	19.12	3	3.00
State Bank of India	2.27	3	2.67	3	0.86	3	84.40	3	15.60	3	3.00
Syndicate Bank	1.77	4	3.51	2	1.04	3	84.95	2	15.05	2	2.60
UCO Bank	1.97	4	2.53	3	0.63	3	82.09	3	17.91	3	3.20
Union Bank of India	2.78	3	2.93	3	1.16	3	83.93	3	16.07	3	3.00
Vijaya Bank	2.50	3	3.37	2	1.12	3	82.84	3	17.16	3	2.80

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.

Note: IDBI turned into a bank in September, 2004

Component Rating for Liquidity of Banks

5.1. Liquid Assets/ Total Deposits

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	11.347 %
	=	11.35 %
Standard Deviation (σ)	=	4.273 %
	=	4.27 %
2σ	=	8.54 %
3σ	=	12.81 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets/ Total Deposits

Rating Scale	Rating range	Rating Analysis
1	19.89 % to 24.16 %	Strong
2	15.62 % to 19.89 %	Satisfactory
3	7.08 % to 15.62 %	Fair (watch category)
4	2.81 % to 7.08 %	Marginal (some risk of failure)
5	(-1.46) % to 2.81 %	Unsatisfactory (high degree of failure evident)

5.2. Liquid Assets/ Total Assets

For the Financial Year 2002 – 03,

N	=	37 banks
Mean	=	9.065 %
	=	9.07 %
Standard Deviation (σ)	=	2.605 %
	=	2.61 %
2σ	=	5.22 %
3σ	=	7.83 %

Based on the above, the class interval is determined.

Rating Scale for Liquid Assets/ Total Assets

Rating Scale	Rating range	Rating Analysis
1	14.29 % to 16.90 %	Strong
2	11.68 % to 14.29 %	Satisfactory
3	6.46 % to 11.68 %	Fair (watch category)
4	3.85 % to 6.46 %	Marginal (some risk of failure)
5	1.24 % to 3.85 %	Unsatisfactory (high degree of failure evident)

Component Rating for Banks for Liquidity

Banks	Component Rating for Banks for Liquidity				Average Component Rating
	Liquid Assets/ Total Deposits (%)	Rating	Liquid Assets/ Total Assets (%)	Rating	
Allahabad Bank	7.89	3	7.16	3	3.00
Andhra Bank	7.94	3	6.78	3	3.00
Axis Bank	21.04	1	18.20*	1	1.00
Bank of Baroda	10.27	3	8.92	3	3.00
Bank of India	10.86	3	9.13	3	3.00
Bank of Maharashtra	11.44	3	10.19	3	3.00
Canara Bank	10.68	3	9.38	3	3.00
Central Bank of India	10.58	3	9.48	3	3.00
Corporation Bank	11.18	3	9.25	3	3.00
Dena Bank	8.80	3	7.20	3	3.00
Federal Bank	8.29	3	7.44	3	3.00
HDFC Bank	14.16	3	10.42	3	3.00

Indian Bank	10.54	3	8.05	3	3.00
Indian Overseas Bank	9.79	3	8.73	3	3.00
Indusind Bank	13.38	3	11.62	3	3.00
ICICI Bank	13.47	3	6.08	4	3.50
IDBI Bank	-	-	-	-	-
Karnataka Bank	7.67	3	6.86	3	3.00
Kotak Mahindra Bank	29.76*	1	3.55	5	3.00
Oriental Bank of Commerce	8.47	3	7.43	3	3.00
Punjab National Bank	10.65	3	9.37	3	3.00
SBBJ	12.86	3	9.43	3	3.00
State Bank of India	15.26	3	12.02	2	2.50
Syndicate Bank	8.22	3	7.32	3	3.00
UCO Bank	10.01	3	8.99	3	3.00
Union Bank of India	8.71	3	7.64	3	3.00
Vijaya Bank	9.42	3	8.40	3	3.00

* These banks are outliers. Accordingly, they are assigned the highest or lowest rating based on the ratio under consideration.
Note: IDBI turned into a bank in September, 2004

Composite Rating under C.A.M.E.L Model for the FY 2002 – 03

Banks	Composite Rating for Banks					Weighted Average Composite Rating Points	WACR (rounded up to one decimal point)	Composite Rating
	Capital Adequacy	Asset Quality	Management	Earnings Quality	Liquidity			
Allahabad Bank	3.00	3.00	3.00	3.20	3.00	3.0240	3.0	3
Andhra Bank	3.00	2.33	2.75	2.80	3.00	2.7611	2.8	3
Axis Bank	3.33	2.33	2.25	3.20	1.00	2.5232	2.5	2.5*
Bank of Baroda	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Bank of India	2.67	2.67	3.00	3.00	3.00	2.8383	2.8	3
Bank of Maharashtra	3.67	3.33	3.00	2.60	3.00	3.2055	3.2	3
Canara Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Central Bank of India	3.33	3.33	3.00	2.40	3.00	3.0897	3.1	3
Corporation Bank	2.00	2.33	3.00	2.80	3.00	2.5586	2.6	3
Dena Bank	3.33	4.33	3.00	3.00	3.00	3.3817	3.4	3
Federal Bank	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
HDFC Bank	3.00	2.33	2.00	3.00	3.00	2.5826	2.6	3
Indian Bank	2.67	3.00	3.25	3.20	3.00	3.0024	3.0	3
Indian Overseas Bank	3.33	3.33	3.00	2.80	3.00	3.1377	3.1	3
Indusind Bank	2.67	2.33	2.25	3.60	3.00	2.6330	2.6	3
ICICI Bank	2.67	2.67	2.00	3.80	3.50	2.7243	2.7	3
IDBI Bank	-	-	-	-	-	-	-	-
Karnataka Bank	3.00	3.67	3.00	3.20	3.00	3.1714	3.2	3
Kotak Mahindra Bank	1.33	2.00	2.00	2.80	3.00	2.0351	2.0	2
Oriental Bank of Commerce	3.00	2.33	3.00	2.60	3.00	2.8046	2.8	3
Punjab National Bank	3.00	3.33	3.00	2.40	3.00	3.0006	3.0	3
SBBJ	3.33	3.00	3.00	3.00	3.00	3.0891	3.1	3
State Bank of India	3.33	3.33	3.00	3.00	2.50	3.1017	3.1	3
Syndicate Bank	3.00	3.00	3.00	2.60	3.00	2.9520	3.0	3
UCO Bank	3.33	3.00	3.00	3.20	3.00	3.1131	3.1	3
Union Bank of India	3.00	3.00	3.00	3.00	3.00	3.0000	3.0	3
Vijaya Bank	3.00	3.33	3.00	2.80	3.00	3.0486	3.0	3

Source: Calculated
Note: IDBI turned into a Bank in September, 2004
* Banks in transition from one stage to the other.

Annexure –IX

Calculation of Chi Square – Test of Significance

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Age * Cash Withdrawal	270	100.0%	0	.0%	270	100.0%

Age * Cash Withdrawal Crosstabulation

Count

		Withdrawal		Total
		ATM	Bank	
Age	Below 21	13	9	22
	21-30	41	11	52
	31-40	50	9	59
	41-50	35	11	46
	51-60	15	31	46
	Above 60	10	35	45
Total		164	106	270

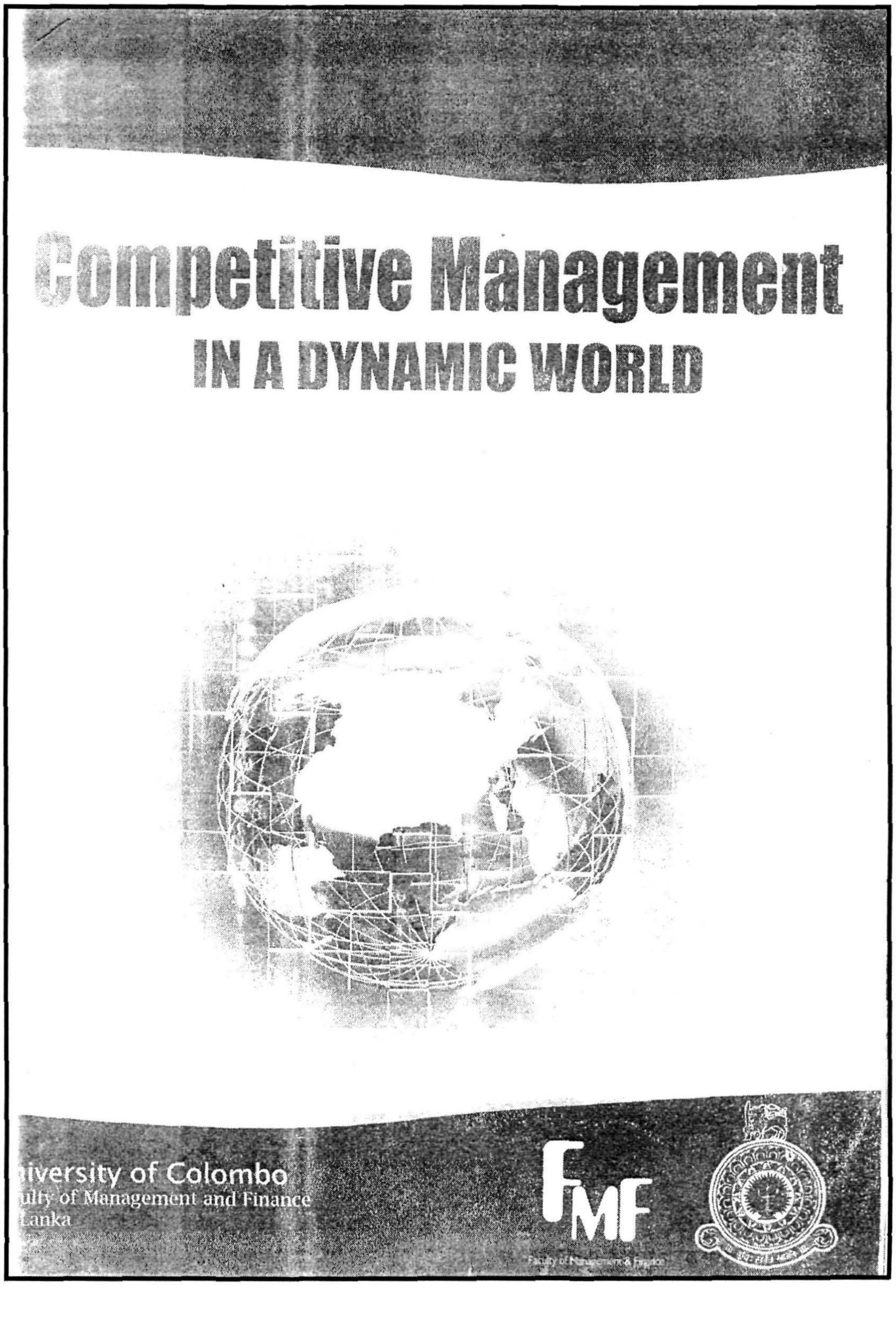
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	69.238[a]	5	.000
Likelihood Ratio	71.549	5	.000
Linear-by-Linear Association	40.083	1	.000
N of Valid Cases	270		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.64.

Annexure X

Paper Presented at 4th International Research Conference on Management and Finance, 2009



TRANSITION OF INDIAN COMMERCIAL BANKS TOWARDS UNIVERSAL BANKING

By
Chandana Goswami and Nilanjana Deb,

ABSTRACT

Commercial banking in India has evolved over the ages since the establishment of the General Bank of India in 1786. Today, a commercial bank is no longer restricted to providing only traditional services i.e., accepting deposits and making advances but encouraged to provide a host of financial services ranging from insurance to merchant banking and from mutual funds to investment banking. This has been made possible after the financial sector reforms and liberalisation of certain statutes. With the addition of various banking and financial services in its boutique, a bank is considered to be making a steady and gradual transition towards the Universal Banking framework. However, not all Indian commercial banks can be given the status of a Universal bank. This study aims to define a scale, based on which a commercial bank can be positioned with respect to ICICI Bank - the only Indian Universal bank in the country at present. The basis of positioning of banks in the scale is on the services offered by banks. Of the 29 banks studied, it is found that all of them are positioned towards the upper end of the scale.

INTRODUCTION

The Indian Banking System is unique and perhaps has no parallels in the banking history of any country in the world (Velayudham, 2002). The demography of the country clearly indicates its diverse culture, overwhelming population - of which a large percentage still remains illiterate and also an equally large reservoir of managerial and technologically advanced talent, and extreme disparities in income (NEDFi Databank Quarterly, 2004). Keeping all these in view and in order to ensure equitable development and growth of all the regions, the policy makers of our country since independence have combined both Socialistic and Capitalistic features in the country's economic policy framework. And accordingly, the banking system had to serve the goals of economic policies enunciated in successive five-year plans, particularly concerning equitable income distribution, balanced regional economic growth and the reduction and elimination of private sector monopolies in trade and industry. All these make the functioning of banks rather challenging.

The role of commercial banking assumes much importance especially in our country, which faces the problems of acute shortage of capital, depressed industrial development, bad means of transport and communication etc. (Gurusamy, 2009).

The initiation of financial sector reforms in early 1990s has provided the much need impetus to the Indian banks in proliferating their business activities. Today, the banks are no longer restricted to their traditional activity of accepting deposits and making advances but are allowed to diversify into areas like insurance, mutual funds, stock trading, housing finance, pension funds, investment banking etc., which till the other day was the domain of other non-banking organisations. Although reforms in the financial sector played an important role in banking sector diversification, explosive growth of financial market in early 1980s had been the other reason for such a change. Financial market developments resulted in disintermediation. This forced banks to enter into new areas of business in order to hang on to their precious customers. Moreover, product boundaries have blurred, which was another striking reason, forcing banks to go for diversification. Thus, as banks diversified their business activities, they gradually began making a transition from being a traditional bank to a Universal bank.

RESEARCH PROBLEM

Today, almost all Indian commercial banks are offering a variety of service under one roof but in spite of that, all of them do not enjoy the status of Universal bank. Therefore, the main objective of the study is to position a commercial bank on a scale of 0-5 and assess where a sample bank lies with respect to a Universal bank. The basis of positioning a bank is on the services presently offered by it (as Universal bank[1] is defined in terms of services it offers).

REVIEW OF LITERATURE

It is worth mentioning that with the dawn of independence, India faced the herculean task of rebuilding the economy, which was in a state of despair (Singh, 2005). In view of this situational requirement and specially to provide the much needed stimulus and direction to the economy, the Government formulated various policies for faster and orderly growth of the economy through optimum utilisation of available resources. As the financial sector provides necessary impetus for a sound economy, the policies of the Government had been directed for the upliftment and strengthening of this sector. And the first step in this direction was nationalisation of Reserve Bank of India in 1948, followed by the enactment of the Banking Regulation Act, 1949 for amendment and consolidation of the laws relating to banking companies. The enactment of Banking Regulation Act with its subsequent enforcement in March 1949 imposed certain discipline on the joint stock companies doing banking business in India and thereby provided the legal framework for the regulation of the banking system by RBI (Velayudham, 2002). As a result, the banking industry came to be organised for the first time on certain uniform parameter.

The Indian Banking system has gained much strength and cohesion after the first round of nationalisation of banks in 1969. The nationalisation process improved the environment in respect of formulation and implementation of the monetary and banking policies (Dhar, 2004). Post nationalisation period has witnessed rapid branch expansion, increase in credit facilities to the priority sectors, and increase in the volume of deposit mobilisation and introduction of various schemes like Lead Bank Scheme, Integrated Rural Development Programme etc.

Moreover, the gales of financial sector reforms, which started in early 1990s, have uprooted many of the outdated regulatory fences within which banks were required to operate. This provided more liberty to banks (Rajadhyaksha, 2004) and they started to diversify their business areas as per permission granted to the banks by the Government. Simultaneously, in the global banking system, there were structural and financial changes, which resulted in large-scale mergers, amalgamations and acquisitions among banks and financial institutions. This led to diversification of business areas of banks, even in India, so as to maximise economies of scale and scope by 'bundling' the production of financial service (Kannan, 2002).

Rao (2004) has noted that deregulation and globalisation of the financial market in India since early 1990s, marked by interest rate competition, relaxation of exchange control and development of IT have largely facilitated international pooling of financial resources across the world markets. Amidst all these developments, banks started placing more emphasis on new sources of non-interest incomes. This has lead to diversification of banking activities even in India, which has eventually led to the emergence of Universal Banks in the Indian Financial System.

Bhalla (2002) asserts that the deregulation of the Indian Financial sector has thrown up a number of business opportunities. According to him, recent developments both in the regulatory front as well as from a demographic perspective, would give rise to growing demand for certain categories of financial services including insurance and pension funds management, outsourcing, asset management and wealth management etc. Patnaik (2003) opines that the fee-based income can be increased substantially if only banks use their creativity in finding possibility of intermediation, although disintermediation of banking has taken place in case of lending to large corporates. Thus, financial sector reforms have provided ample opportunities for banks to diversify and offer a host of financial services under one roof, as it is essential for sustenance and to remain competitive. The author also mentioned that, for this, banks need to go for product innovation, enter into strategic alliance with service providers of various kinds, bring revolution in the distribution channels of their

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[1] As per Reserve Bank of India, the term Universal Banking in general refers to the combination of commercial banking and investment banking i.e., issuing underwriting, investing and trading in securities. In a broad sense, however, the term Universal Banking refers to those banks that offer a wide variety of financial services especially insurance.
(Source: RBI Discussion Paper on Universal Banking.
http://www.rbidocs.rbi.org.in/sec5/7448.pdf.)

products and open subsidiaries with different focus.
Sarkar (1999) mentions that with the progressive dismantling of exchange control under the capital account convertibility of rupee, retaining clientele-base would be a challenge to Indian banks. This is because there would be an increase in the flow of both portfolio and foreign direct investment, thereby putting a downward pressure on lending rates. A bank's ability to respond to supply pressures would depend on its cost of funds and operations and failure to remain competitive would lead to loss of clientele, with Corporates and individuals accessing financial markets abroad. Khan (2004) also mentions that in this age of global competition, one of the biggest challenges any service organisation like a bank would face is to meet rising customer expectations. In this context, Lavender (2004) feels that information about customers is the key to increasing sales and instituting profitable relationships, so banks need to organise these data to easily differentiate their key customers and prospects and to grow relationships by offering relevant services.
Kannan (2002) mentions that the first impulses of a more diversified financial intermediation was witnessed in the late 1980s and early 1990s, when banks were allowed to undertake leasing, investment banking, mutual funds, factoring, hire-purchase activities through separate subsidiaries. By the mid 1990s, all restrictions on project finance were removed and banks were allowed to undertake several activities in-house. According to the author, reforms in the Insurance sector in the late 1990s and eventual opening up of this sector to private and foreign players also resulted in permitting banks to undertake sale of insurance products. Another significant fact pointed out by Karunagaran (2005) is that in India, though there is no legislative distinction between Commercial banking and Investment banking or any explicit legislative restriction for the banks to operate in investment banking activities, the banks have traditionally been maintaining the 'arms length' distance from investment banking. However, with the financial sector reforms beginning in 1990s, banks were given abundant freedom to go much beyond their traditional conservative commercial banking and this has facilitated banks in providing a host of financial products to meet customer needs. Moreover, the loss of comparative advantage by banks as providers of credit to large borrowers, and increased competition from foreign banks has created the impetus for adoption of universal banking (Swary et al, 1992). Thus, all these have resulted in gradual metamorphosis of Indian Commercial banks into Universal banks, offering a variety of financial services.
Finally, the more tangible momentum for the emergence of Universal banking concept in India seems to have set in only after the second Narasimham Committee Report (1998) recommending Development Financial Institutions, over a period of time to convert themselves into banks (implicitly Universal banks) and that there should eventually be only two forms of intermediation – Banking companies and Non Banking Financial Companies. Moreover, this was followed by a Working Group chaired by S. H. Khan on '*Harmonising the Roles and Operations of Development Financial Institutions and Banks*' (1998), which made it more explicit by recommending for a progressive movement towards Universal banking for the Development Financial Institutions. Significantly, by that time Commercial banks were already permitted to enter diversified areas of financial businesses. Therefore, diversification in the Banking sector and the acceptance of Universal Banking concept, as different from narrow banking came to the forefront in the Indian context with the second Narasimham Committee (1998) and later the Khan Committee (1998) reports.
Although the concept of 'Universal banking' is of recent origin in India but at the global level, Universal banks have been operating for quite some time in Germany, Austria and Switzerland (Gurusamy, 2009). In fact, Universal banking has its origin in Germany where it originated in 1850s. It is to be noted that in India, as all banking organisations are marching towards Universal banking, their dependence on technology for providing world class banking products and financial services has also increased significantly. According to Bhaskar (2005), as the main objective of present day banking business is to earn as much profit by way of interest, fee-based income and commission through various diversified activities, Universal banking adapts, adopts and achieves the basic objectives of business through technology. In fact, Tele-Banking, Internet Banking, multiple delivery channels, Real Time Gross Settlement, Virtual Banking, Niche Banking are all very common usages presently. Darshan (2006) opines that due to all these developments, 'Brick and

Mortar' banking has almost given way to 'Click and Mouse' banking. Moreover, computerisation in the banking industry is regarded by many as a key ingredient of the financial sector reform process and it aims to improve customer service, house-keeping, decision-making and productivity and profitability (Suneja, 1994). In fact, I.T has paved the way to speed up the process of banking operations and reduce the drudgery and the time taken in normal banking operations (Vittal, 2001). The introduction of I.T in banking activities has made the transition path easier for banks in the direction of Universal banking.

The trend towards Universal banking will result in cost savings in sharing Technology, Information Systems, Accounting Services and Fixed costs (Bhaskar, 2005). It enables cross selling and increases customer base, reduces transaction costs (in collaboration with Strategic Alliances) and generates more business. Apart from reducing transaction costs and increasing the speed of economic activity, it ensures continuity of earning revenue with less risk. Moreover, as banks offer diversified services under one-roof, it maximise economies of scale and scope (Kannan, 2002; Karunagaran, 2005) because the synergies in joint production of financial and non-financial services increase economic efficiency, reduce cost and increase earnings (Bhole, 2004). However, these benefits of Universal banking have to be weighed out against the problems. The obvious drawback, according to Sensarma (2001), is that Universal banking leads to a loss in economies of specialisation. Again diversifications of banking activities need not always result in economies of scale and scope especially if banks were not of appropriate size (Herring & Litan, 2003; Karunagaran, 2005). On the contrary, it might even lead to be more expensive, if sufficient number of transactions in each of the specialised financial activity is not even up to the 'breakeven' level. Apart from these, Bhole (2004) has pointed out that diversification of banking activities and their eventual transition towards Universal Banking framework would aggravate the problem of concentration of financial and economic power, creation of financial and industrial oligopolies and conglomerates. This might maximise private commercial gains but not social benefits, as large combinations and their unrestricted growth do not lead to socially best allocation of resources. Therefore, a genuine need for devising appropriate regulations for Universal banks is strongly felt.

The Banking industry in India is now a much matured one and banks are being forced to change rapidly as a result of open market forces such as the threat of competition, customer demand and technological innovations like the growth of Internet. If banks are to retain their competitiveness, they must focus on customer retention and relationship management, upgrade and offer integration and value added services, form strong alliance and joint ventures with other Non-Banking entities. In short, banks need to adopt innovative banking (Mithani, 1992) for deposit mobilisation and deployment of credit and that too, through customised products. Above all, the decision of the Government of India to open the banking sector to foreign participants after 2009, has thrown an open challenge to Indian banks to attain operational efficiency (Rajadhyaksha, 2005). With this, competition in the banking sector would go up further with the emergence of Private Sector Banks and Foreign Banks as well as Non Banking Financial Companies and Financial Institutions have caught up with the idea of Universal Banking.

RESEARCH METHODOLOGY

The study aims to position domestic commercial banks in India with respect to the only Indian Universal Bank (i.e., ICICI Bank) on a scale of 0-5 and the basis of positioning is on the services presently offered by the sample banks.

In this study, an attempt has been made to group the services offered presently by banks so as to reflect the evolution of commercial banks from traditional banking to Universal banking framework and at the same time to position the sample banks in a scale of 0-5.

FOCUS GROUP DISCUSSION

In view of the objective of the study, first a *Focus Group Discussion* was held with practicing Bank Managers on the theme of the services presently offered by banks and how these services can be grouped under different transition points of the banking industry. The services were clubbed in such a way that it reflected the progressive trend of a Commercial bank in the direction of Universal banking.

4.2. DELPHI PANEL

A Delphi Panel was formed with 06 (six) Officers of different banks, who are experts in their field and are also willing to share their expertise with the researcher. In the first round, the participants were explained the objectives of the study and all of them were provided with a Questionnaire. They were requested to put forward their views on the grouping of services made under different points of the scale. Two rounds of discussion were held and this led to the creation of the scale. The positioning scale so created is given in Table 01.

4.3. DATA COLLECTION

The primary data was collected by using a questionnaire. Apart from questionnaire, web sites of commercial banks were assessed to obtain more information on the services offered by the individual banks.

4.4. SAMPLE SIZE

The sample comprised of Branch Managers of banks in Guwahati city of Assam (India). 29 (twenty nine) banks in the private and public sector were taken into consideration.

4.5. POSITIONING METHODOLOGY

The positioning scale has 6 points ranging from 0 to 5. Banks which are confined to their traditional service of 'accepting deposits and making advances' are placed under point 0 of the scale, while at point 5 of the scale, we have Universal bank offering all the services that are listed under all the points (i.e., services listed under points 0 to 5).

Table 01: Services under different points of the positioning scale

The services presently offered by commercial banks under different	**0 (Commercial Bank)**	• Accepting deposits • Making advances
	1	• Retail loans • Pension payments • Traveler cheques • Gift cheques • Locker facility • Business overdraft facilities
	2	• Loan against gold • Housing loans • Loan against shares/ debentures • Kisan credit card • Export finance • Tax payment • Forex remittances
	3	• Telephone & Electricity bills payment • School tuition fee payment • Sale of Entrance exam forms • Cash Management services • Letter of Credit & Export bill negotiation • NRE & NRO Account facilities • Facilitates donation for charity • Recharging pre-paid Mobiles • Pre-paid cards for payment disbursements
	4	• Credit card • ATM card • Debit card • Depository services • Consultancy services/ Trade services • Investment banking • Phone banking • Insurance (Life & General) • Mutual funds • Health cards • NRI Investment • Online stock trading • Online bill payment • Online cash remittances • Online Ticket (Air & Railway) booking • Derivative and Forward contract • Electronic fund transfer • RTGS
	5 (Universal Bank)	• Credit card securitisation • Home Search (lease, purchase and sell house property)

All the services under respective points of the scale are assigned equal weights and then weighted average score of a bank is calculated for each point of the scale.

Score under a given Point $Sp = \sum w^* s_i$

where
w = [2]weight assigned to each service
s_i = services under a point of the scale
i = 1, 2, ... n (denotes number of services under a point of the scale)
p = 1, 2, 3, 4, 5 (five different points in the scale)

The composite score (S1+S2+S3+S4+S5) is then calculated. This composite score is the basis of positioning a bank on the scale and highlights where a sample bank lies with respect to ICICI Bank – the lone Indian Universal bank.

FINDINGS OF THE STUDY

Table 02 shows the scores of sample banks on the scale –

Table 02: Composite score of banks on the positioning scale

Sl. No	BANKS	Composite Score
1.	ICICI Bank	5.00
2.	State Bank of India	4.50
3.	Bank of Baroda	4.00
4.	Bank of India	4.00
5.	Axis Bank	4.00
6.	Allahabad Bank	3.94
7.	Andhra Bank	3.94
8.	Canara Bank	3.94
9.	Indian Bank	3.94
10.	Indian Overseas Bank	3.94
11.	Oriental Bank of Commerce	3.94
12.	Union Bank of India	3.94
13.	HDFC Bank	3.94
14.	Indusind Bank	3.94
15.	Kotak Mahindra Bank	3.94
16.	Bank of Maharashtra	3.88
17.	Central Bank of India	3.88
18.	Corporation Bank	3.88
19.	Dena Bank	3.88
20.	Punjab National Bank	3.88
21.	State Bank of Bikaner & Jaipur	3.88
22.	Syndicate Bank	3.88
23.	UCO Bank	3.88
24.	United Bank of India	3.88
25.	Vijaya Bank	3.88
26.	IDBI Bank	3.88
27.	Karnataka Bank	3.88
28.	Federal Bank	3.79
29.	Punjab & Sind Bank	3.54

Source: Calculated.
Note: The score would change as and when a bank introduces a new service.

[2] Weight assigned to each service under a Point = 1 / (No. of services under the Point)

Significantly, in the study, most of the sample commercial banks have a composite score of above 3.5 and this clearly indicates that these banks are positioned in the upper half of the scale. Moreover, the score so obtained for a sample bank would eventually change (increase) as and when a commercial bank offers a new product in the market. Thus, it can be anticipated that, in the near future, our country would have a few more Universal banks to boast of.

CONCLUSION

Commercial banks in India have been offering a variety of services under one umbrella brand. Today, the changing needs of customers have forced banks to look beyond their traditional banking activities and offer a variety of products ranging from deposits, short-term and long-term loans, insurance, mutual funds, stock trading, housing loans, investment banking, consultancy etc. under an umbrella brand. Thus, banks are gradually moving towards becoming Universal banks as they have become multi-purpose and multi-functional supermarket providing both banking and financial services through a single window.

However, in India, apart from ICICI Bank – the largest private sector bank in the country, no other bank has acquired the status of Universal bank. Although the State Bank of India, which is also the country's largest bank have been providing almost all the services that are offered by the ICICI Bank, but it is yet to be technically given the status of Universal Bank. On the other hand, DFIs like Industrial Development Bank of India (IDBI) (presently IDBI Bank), Export Import Bank (EXIM Bank), Industrial Finance Corporation of India (IFCI) and Industrial Investment Bank of India (IIBI) were in the race along with ICICI Bank to become Universal bank but things did not materialise. This is probably due to the norms laid down for universal banks by the Reserve Bank of India.

Therefore, conclusively, it can be said that most of the Indian commercial banks are on the verge of becoming universal banks in near future as most of them have been offering services ranging from insurance to mutual funds, from housing finance to pension funds and from stock broking to investment banking.

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