APPLICATION OF BALANCED SCORECARD IN MEASURING PERFORMANCE OF BANKS-A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA

A THESIS

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By

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CERTIFICATE

I feel great pleasure in certifying that the thesis entitled, **"Application of Balanced Scorecard in Measuring Performance of Banks-A Comparative Study of Public and Private Sector Banks in India"** embodies a record of the results of the research work carried out by **Mrs. Sudarshana Sharma** under my guidance. She has completed the following requirements as per Ph.D. regulations of the University:

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b) Residential requirements of the University (200 days).

c) Submitted annual progress reports regularly.

d) Presented her work in the department committee.

e) Published/accepted minimum of one research paper in a refereed research journal.

I recommend the submission of the thesis.

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Associate Professor

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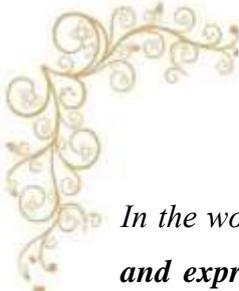**Sudarshana Sharma**

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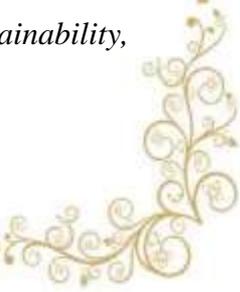(Research Supervisor)

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PREFACE

*In the words of Kelvin, "**When you can measure what you are speaking about and express it in numbers, you know something about it**." Anon said, "**You cannot manage what you cannot measure.**" These adages highlight the importance of adopting appropriate performance measurement in an organization. They reveal the fact that in order to improve the performance, it must be measured first and each and everything should be get measured for which you are talking about or which affects the performance directly or indirectly, financially or non-financially, qualitatively or quantitatively.*

For measuring and evaluating the performance of an organization a performance measurement system or a tool should be adopted. Performance measurement systems are recognized as a fundamental element in improving the performance of an organization. Performance measurement systems help in planning, measuring, reviewing, comparing and controlling the strategic performance against the set standard/targets and help in specifying the areas for further improvements. A good performance measurement system helps in bringing out the effectiveness in achieving the vision and mission of the organization, contributes to organizations success and serve better to its customers, employees, shareholders and all other stakeholders.

Recent trends in banking industry such as technological revolutions, increased competition due to liberalization and globalization, meeting strict regulatory & compliance frameworks, stakeholders expectations, reducing operating costs, recruit and retain the talent, improving business processes, financial scams etc. have made the banking business more complex and risky. This has posed many new challenges for banks to look into their performance measurement criteria to map the true picture of their performance so that precautionary measures and improvement can be done on time and they can survive in the phases of crises and economic slowdown and can also achieve their long term goals of sustainability, profitability and competitiveness.

Different financial accounting measures are being used to measure the performance of banks since long. These measures primarily include the Return on Assets (ROA), Return on Capital Employed (ROCE), Earning Per Share (EPS), Profitability ratios, Productivity ratios, Liquidity ratios, Activity based costing, Economic Value Added (EVA), CAMEL Rating Methodology etc. These measures evaluate the efficiency and effectiveness of banks in utilizing their financial and other physical resources to create value for their shareholders. They provide detailed information on financial performance, profitability, cost efficiency etc. of banks using different financial statements to shareholders, potential investors and other stakeholders. These financial measures cannot portray the position of banks on the basis of sustainability because for achieving the sustainable position for longer period both the financial and non-financial aspects play an important role.

Although financial based measures are proved to be an excellent tool to review the financial performance and will continue to be an important part of performance measurement systems. Yet it has been argued by many authors that non-financial based measures indicate the performance of intangible aspects which are necessary for predicting future performance. These intangible aspects are a source gaining a sustainable competitive advantage. These resources which an organizations owns are not easily replicable. The increased importance of intangible factors in achieving long term success in the sectors like banking has led the management accounting thinkers/practitioners to develop integrated performance measurement systems/tools that comprises of financial and non-financial measures. Non-financial measures are equally important in achieving the desired level of profitability, competitiveness and sustainability in the long run for an organization.

Balanced Scorecard is a significant development in the field of management accounting and emerged as a strong and effective strategic performance measurement and management tool which has overcame the problems of short term and past oriented traditional financial performance measurement systems. This study is an initiative to highlight the importance of Balanced Scorecard as a Strategic Performance and Management tool for evaluating the performance of Indian Banks on all strategic parameters of success.
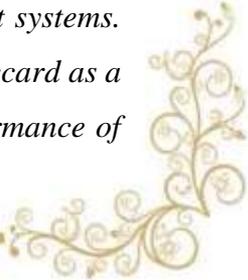
*The present study comprises 7 Chapters in total. The first Chapter **"Introduction"** provides a conceptual background of the study. The chapter includes the overview of current banking scenario, role & importance of performance measurement systems and its challenges in banking sector, conceptual framework of Balanced Scorecard, its evolution, advantages, drawbacks, prerequisites for the implementation, importance of incorporating social and environment issues into Balanced Scorecard, current adoption rate of Balanced Scorecard in corporates.*

*The second Chapter, **"Review of Literature"** enlightens the brief reviews on the literature available on this topic. The available literature has been categorised into four parts viz., (i) Reviews on conceptual structure of Balanced Scorecard at international and national level. (ii) Reviews of theoretical and empirical articles on Balanced Scorecard in banking sector at international and national level. (iii) Reviews of Research Reports/dissertations on Balanced Scorecard in banking sector (iv) Reviews on incorporating sustainability issues into Balanced Scorecard. Findings and gaps existed in the previous studies on Balanced Scorecard have become a base for this study. It has been noted that most of studies on Balanced Scorecard include only four perspectives viz. Financial, Customer, Internal Business Process and Learning & Growth and Innovation Perspective and ignores the Social & Environment Perspective. Therefore, the present study comprises Social and Environment Perspective to make study more fruitful and Logical.*

*The third Chapter **"Research Methodology"** is the blueprint of this research study which states the research problem and best suited methodology to conduct this research. It covers the objectives and significance of the study, sample size, period of the study, sources of data collection and hypotheses framed. It also includes the procedure for achieving the objectives of research objectives, performance score scales, justifications of measures for score assignment.*

*The fourth Chapter **"Measurement and Intra-Bank Comparison of Performance of Public Sector Banks on Balanced Scorecard"** presents the detailed analysis of the performance of Top 10 Public Sector Banks of BSE Sensex on Balanced Scorecard from the financial year 2007-08 to 2016-17. This chapter also exhibits*
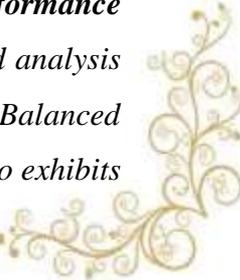
the performance score and intra-bank comparison of these performance score of each public sector bank on each perspective, observations along with necessary suggestions.

The fifth Chapter ***"Measurement and Intra-Bank Comparison of Performance of Private Sector Banks on Balanced Scorecard"*** *is an attempt to highlight the detailed analysis of performance of Top 10 private sector banks of BSE Sensex on BSE Sensex on Balanced Scorecard from the from the financial year 2007-08 to 2016-17. It entails the performance score and intra-bank comparison of these performance score of each private sector bank on each perspective, key observations with essential suggestions.*

The sixth Chapter ***"Inter-Bank and Inter-Sector Comparison of Performance of Public Sector Banks and Private Sector Banks on Balanced Scorecard"*** *has been designed to attain the major objectives of the study and focuses on inter-bank and inter-sector comparison of performance of selected Public and Private sector banks on different perspectives and on Balanced Scorecard.*

The last and final Chapter ***"Summary of Findings and Suggestions"*** *summarizes the major findings of the study, set of suggestions and policy recommendations for the improvement in the performance of Banks in India on Balanced Scorecard. It also highlights the future scope of the study.*

It can be hoped that the outcome of the study will become a base for banking and other sectors in India for evaluating their performance on Balanced Scorecard and contribute in enhancement of the knowledge resource of Balanced Scorecard.

(Sudarshana Sharma)

CANDIDATE'S DECLARATION

I, hereby, declare that the work which is being presented in the thesis entitled **"Application of Balanced Scorecard in Measuring Performance of Banks-A Comparative Study of Public and Private Sector Banks in India"** in partial fulfilment of the requirement for the award of the degree of Doctor of Philosophy, carried under the supervision of **Dr. Ashok Kumar Gupta**, Associate Professor, Department of Accountancy and Business Statistics, Govt. Commerce College, Kota (Raj.) and submitted to the University of Kota, Kota (Raj.) represents my ideas in my own words and where others ideas or words have been included, I have adequately cited and referenced the original sources. The work presented in this thesis has not been submitted elsewhere for the award of any degree or diploma from any institutions. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will cause for disciplinary action by the University and can also evoke penal action from the sources which have thus not been cited or from whom proper permission has not been taken when needed.

Date: **Sudarshana Sharma**

This is to certify that the above statements made by **Sudarshana Sharma** (Reg. No. RS/278/13) are correct to the best of my knowledge.

Date: **Dr. Ashok Kumar Gupta**

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"A grateful heart is beginning of greatness. It is an expression of humility. It is a foundation for the development of such virtues as prayer, faith, courage, containment, happiness, love and well-being."- James E. Faust

Creating a Ph.D. thesis involves efforts of several people. I am very grateful to a number of people who have been instrumental in guiding me in getting this thesis into its present form.

Prima facia, I would like to place on record my sincere and special gratitude to my "GURU", my research guide and my "IDEAL", Dr. Ashok Kumar Gupta, Associate Professor, Department of Accountancy and Business Statistics, Govt. Commerce College, Kota for accepting me as research scholar, offering me his mentorship and pouring drops from the ocean of his knowledge base. His enormous knowledge & expertise on subject, in depth observations, enthusiastic nature, mission for providing high quality work, zeal for perfection, working on ethical and spiritual values have made a deep impression on me which is really worth mentioning. I am thankful to him for his dedicated help, invaluable advices, inspiration, encouragement and continuous support throughout my research work. I am very much thankful to Dr. Meenu Maheshwari, Assistant Professor, Department of Commerce & Management, University of Kota, Kota whose untiring and continuous guidance during the work helped me a lot. She acted as a spark who ignited the flame within me many a times when my own light was gone. I really feel privileged to be associated with mentors like my parents.

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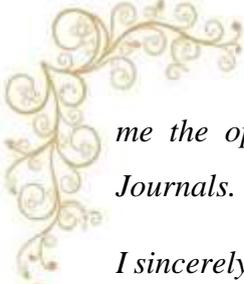
me the opportunity to get the research papers published in their renowned Journals.

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It's my fortune to gratefully acknowledge the selfless love, care, pain and sacrifice of my beloved parents, my father **Shri Ashok Kumar Sharma** and my mother **Mrs. Sushila Sharma** whose continuous motivation, emotional and mental support made me to complete my research work. and shape my career.

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(Sudarshana Sharma)

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Chapter-5 Measurement and Intra-Bank Comparison of Performance of Private Sector Banks on Balanced Scorecard

LIST OF ABBREVIATIONS

AHP	Analytic Hierarchy Process
ANP	Analytical Network Process
ATM	Automated Teller Machine
CASA	Current Account Saving Account
CKFM	Composite Key Financial Measures
CSR	Corporate Social Responsibility
DEA	Data Envelopment Analysis
DEMATEL	Decision Making Trial and Evaluation Laboratory
HDFC	Housing Development Finance Corporation Ltd.
ICICI	Industrial Credit and Investment Corporation of India
IDBI	Industrial Development Bank of India
KPI	Key Performance Indicators
MCDM	Multi Criteria Decision Making
N.A.	Not Available
N.D.	Not Disclosed
NEFT	National Electronic Fund Transfer
NIM	Net Interest Margin
NPA	Non-Performing Assets
PMS	Performance Measurement Systems
POS	Point of Sale
RBI	Reserve Bank of India
RBL	Ratnakar Bank Ltd.
RTGS	Real Time Gross Settlement
SBI	State Bank of India
SEBI	Security Exchange Board of India

Chapter-1

Introduction

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CHAPTER-1

INTRODUCTION

1.1 Prologue

An exemplar transformation has undergone in the last two decades in Indian banking sector. Digital banking has taken a place of physical banking. A changeover from paperwork in bank branches to branchless banking through use of new-age contactless information technology can be seen in banking business in yesteryears. Role of technology has become important in strategic framework of banks which forces them to drive, shape and redefine their business strategic models and revenue streams to compete and survive in the changing scenario. Banking sector is the backbone of an economic system of any country as it facilitates the procurement, creation and maintenance of funds from and for businesses, government and general public. It is the centre of major economic activities of the nation therefore it must be strong and healthy enough for achieving high economic growth. The peak phase of exaggerated and impactful IT revolution & digitalisation, increased level of competition and changed business environment has attributed to many changes and the functioning of the banks and the nature of products and services offered by the banks. This change has benefitted to both the banks and customers but at the same time it has posed many challenges in front of the banks. Customers are experiencing improved new and wide range of innovative products and services through new digitalised channels with easy and convenient facilities at a high speed. Banks are equally benefitted by reduced cost through transactions on internet, ATM's and mobile banking instead of doing high expenditure on transaction through branches. During the same, banks are facing a challenge to focus upon upgrading themselves in terms of technology, innovations in products and services, improvements in business processes, meeting customer preferences, meeting all stakeholders' expectations, differentiate themselves from competitors so that they can survive in this competitive environment.

Now-a-days efficient utilization of monetary capital and gaining high profits are not only the sole determinant of gaining competitive advantage and sustain in this

competitive environment but the non-financial factors such as high intellectual capital, excellent customer relationship, innovative and quality business processes and products & services, skilled employees, better relations with stakeholders etc. play equally important role in achieving long term financial success and sustainability for an organization. As a result strategic focus of the banks has also changed from financial to intangible aspects. Banks which have not changed their focus are required to redefine their strategies and concentrate on intangible aspects with financial aspects so that they can compete and accomplish the long term mission and vision of their organization. Banks may take different initiatives, spends on digitisation, customers services, intellectual capital etc. which are inevitable for their success but the challenge in front of the banks today is to ascertain whether these initiatives are going in the right direction of growth and aligned to overall strategy and helpful in improving the performance both in terms of efficiency and stability.

In the era of prompt changes in banking sector, executing strategies effectively have become crucial requirement. It has become imperative to give focus on performance of banks and parameters used for measuring their performance. With the changes in the parameters of achieving strategic success, the objectives of measuring performance have also changed for the banks. The quality and quantity of information which bank requires to measure and evaluate performance have also become different. Performance measurement and its management has become crucial to survive in the changing and competitive environment prevailing in banking industry. Changed strategic focus demands for use of new holistic performance measurement systems for evaluating performance of banks which focuses on measuring performance from both the financial and non-financial constraints because it has been realized in last decades that financial measures alone are no longer enough to survive , sustain and grow in this competitive environment. Non-financial measures helps in achieving long-term financial success for an organization.

There is a need is to adopt a performance measurement and management system that incorporates financial with intangibles measures which are the drivers of long term economic success and a system which is accurate, comprehensive and reliable

too. A strong strategic performance measurement and management system helps in facing the challenges and sustain in the competitive environment. It supports management in predicting the future performance and highlights the best possible changes in operational activities to maintain congruence with the intended strategy.

Various models, techniques, methods have been introduced for performance evaluation from time to time to cope up with these changes. Balanced Scorecard is a significant development in the field of management accounting and emerged as a strong and effective strategic performance measurement and management tool which has overcame the problems of short term and past oriented traditional financial performance measurement systems. It helps in identifying the major strategic issues of a business and describes and depicts the causal relationship of these issues that contributes in achieving organization's strategies successfully.

To gain a competitive advantage and achieving long term success banks need to pay attention to evaluate and improve their performance on continuous basis on all the parameters of strategic requirement. This study is an initiative to highlight the importance of Balanced Scorecard as a Strategic Performance Measurement and Management tool for evaluating the performance of Indian Banks on all strategic parameters of success.

1.2 Performance Measurement Systems and its Challenges in Banking Sector

In the words of Kelvin, "When you can measure what you are speaking about and express it in numbers, you know something about it." Anon said, "You cannot manage what you cannot measure." These adages highlights the importance of adopting appropriate performance measurement in an organization. It reveals the fact that in order to improve the performance, it must be measured first and each and everything should be get measured for which you are talking about or which affects the performance directly or indirectly, financially or non-financially, qualitatively or quantitatively.

For measuring and evaluating the performance of an organization a performance measurement system or a tool should be adopted. In the words of Neely et al. (1997)

Performance Measurement Systems have been developed to monitor and maintain organization control in order to ensure whether the proposed strategies are suitable to proposed objectives or not. Performance measurement systems are recognized as fundamental element in improving the performance of an organization. They help to identify and track the performance against the predetermined goals. Performance measurement systems helps in planning, measuring, reviewing, comparing and controlling the strategic performance against the set standards/targets and help in specifying the areas for further improvements. They are also helpful in identifying the strengths and weaknesses of organizations. They are the source of implementing and monitoring of strategies of organizations. A good performance measurement system helps in bringing out the effectiveness in achieving the vision and mission of the organization, contributes to organizations success and serves better to its customers, employees, shareholders and all other stakeholders.

Recent trends in banking industry such as technological revolutions, increased competition due to liberalisation and globalization, meeting strict regulatory & compliance frameworks, stakeholders expectations, reducing operating costs, recruit and retain the talent, improving business processes, financial scams etc. has made the banking business more complex and risky. This has posed many new challenges for banks to look into their performance measurement criteria to map the true picture of their performance so that precautionary measures and improvement can be done on time and they can survive in the phases of crises and economic slowdown and can also achieve their long term goals of sustainability, profitability and competitiveness.

Different financial accounting measures are being used to measure the performance of banks since long. These measures primarily include the Return on Assets (ROA), Return on Capital employed (ROE), Earning per share (EPS), profitability ratios, productivity ratios, liquidity ratios, activity based costing, Economic Value Added (EVA), CAMEL rating methodology etc. These measures evaluate the efficiency and effectiveness of banks in utilizing their financial and other physical resources to create value for their shareholders. They provide detailed information on financial performance, profitability, cost efficiency etc. of banks using different financial statements to shareholders, potential investors and other stakeholders.

These financial measures cannot portray the position of banks on the basis of sustainability because for achieving the sustainable position for longer period both the financial and non-financial aspects play an important role.

Traditional financial accounting based measures have lot of drawbacks like they have backward looking approach. They lack in predicting ability for future state of organizations and short term oriented too. Maltz et al. (2003) asserted that these measures give misleading signals for improvement and innovations in organizations and are not aligned with the capabilities and skills required for current organizations in preparing their future. Kennerly & Neely (2003) opined that traditional accounting systems display the outcome of the activities which had been accomplished in the past. They do not show information on how this performance has been achieved and how it can be improved in future.

Besides having too many drawbacks, financial based measures are proved to be an excellent tool to review the financial performance and will continue to be an important part of performance measurement systems. Further, it has been argued by many authors that non-financial based measures indicate the performance of intangible aspects which are necessary for predicting future performance. These intangible aspects are a source gaining a sustainable competitive advantage. These resources which an organizations owns are not easily replicable. The increased importance of intangible factors in achieving long term success in the sectors like banking has led the management accounting thinkers/practitioners to develop integrated performance measurement systems/tools that comprises of financial and non-financial measures. Non-financial measures are equally important in achieving the desired level of profitability, competitiveness and sustainability in the long run for an organization.

Banking sector where intangible factors like customer preferences, service quality, customer satisfaction, technology, innovative products & services and excellent business processes, intellectual capital, knowledge & skills of employees, employee satisfaction etc. plays an important role in success of banks, measuring performance on financial alones will not be sufficient. Performance of these intangibles factors in banks should be measured with financial measures in order to depict the overall

performance of the banks and areas for improvement can be identified and long-term success can be achieved by them.

Changing banking business environment with high pace competition, and technological up gradations requires new performance tools to be adopted by the banks but while adopting and implementing new systems and tools banks may face many challenges. Few of them are being described below:

➢ Digital transformation in products/services and business operations have taken a vast place in the banking sector. A holistic approach in performance measurement systems with keeping in mind the digital breakthroughs is required.

➢ Banks rarely defined the clear targets that are reflected from their strategies. Existing key performance indicators for measuring performance are ineffective and outdated in performance measurement systems of the banks as they do not have a link with the targets and strategies of the banks.

➢ To cope up with the current market challenges and enhance the effectiveness of the banks, a comprehensive approach in performance measurement systems is required which supports to operationalize the strategy and vision of the banks.

➢ Adopting and managing a flexible and forward looking approach in performance measurement system that meet the requirement of a particular bank is a key challenge for banks.

➢ An integrated approach starting from planning, implementing, monitoring, reporting and then reviewing must be in there in performance measurement system of the banks. Establishing such a performance measurement tool is a key challenge for banks.

➢ Reducing the gaps between global and national banks in terms of performance measurement practices is a major challenge in front of the banks as coping up with the immense competition with the global banks is necessary to survive for long run.

➢ Financial measure based performance measurement systems are failed to depict the true picture of overall banking performance so introducing a system which incorporates both financial as well as non-financial indicators is a key challenge for banks.

- ➢ Gathering data on different non-financial measures is a crucial task which in turn an important challenge for banks.
- ➢ Selecting effective and sustainable performance management approaches rely on right governance framework and organizational design which itself a challenge in adopting performance measurement tools.

Designing new products and services, adopting new technologies, innovations, enhancing customer relations, retaining employees and customers etc. are needed by banks to accept the challenges posed by competitive global environment in the industry. Definition of success has changed for the banks and strategic focus of the banks has jumped on intangible aspects rather than on financial aspects because it has been realised that financial figures improves only when banks perform well on intangible aspects. Banks need to create new strategies and redefine their objectives and measure their performance. It has become crucial for banks to effectively execute their strategies. A performance measurement system that incorporate non-financial measures with retaining the financial measures and keeping in consideration the above mentioned challenges is required to depict the current as well as future competitive position of an organization. Such a measurement system should not only measure the profitability of the banks but also the sustainability and stability.

Emphasis on integrating the non-financial measures with financial ones has led the invention of different approaches for performance measurement of organizations. These approaches primarily include the benchmarking, Total Quality Management (TQM), Management by Objectives (MBO), Activity based Costing, Balanced Scorecard, and Performance Prism etc.

To tackle the current market situations and challenges, Performance management plays a critical role. For achieving a success by the bank, it is inevitable to introduce a Comprehensive performance management tool effectively so that bank's goals function can be safeguarded and sustainable value creation can be enhanced.

1.3 Evolution of Balanced Scorecard

Different theories, concepts, surveys, studies etc. have evolved in the past which has become the roots of powerful tree in the form of Balanced Scorecard by Kaplan and Norton. These theories, concepts, studies gave an idea and became base for development of Balanced Scorecard. These are being describe in brief hereunder which are summarized from the studies of Malina and Selto (2001), Lawrie and Cobbold (2002), Ghosh & Mukherjee (2008), Abdullah et al. (2013) etc.:

➢ **1850-** The stems of the power and importance of performance measurement could be seen in the quote given by Lord Kelvin (1824-1907) in the mid of his life. He stated that when one can measure what he or she is speaking about and express it in numbers it is always assumed that one knows something about it. But if you cannot measure it and cannot express it in numbers, one's knowledge is insufficient and unsatisfactory. Kelvin articulated that in order to improve performance, it need to be get measured first.

➢ **1930-** A management tool named "Tableau de bord" was devised by France engineers in 1930 which was termed as "Dashboard" and used by the managers to guide organizations to their destinations. It was also grounded on the philosophy that emphasised on the relation between financial and non-financial measures but it was more an operational tool that aimed to manage and control the production process.

➢ **1950's-**

1. The proposed team at General Electric (GE) devised a BSC type performance measurement system to measure the company's decentralised divisional performance and recommended 8 measures including one financial and seven non-financial measures. The measures were profitability, market share, productivity, product leadership, public responsibility, personal development and employee attitudes with focus on balance between short –range and long-range objectives. The origins of Balanced Scorecard can be seen in these eight measures.

2. Herb Simon et al. (1954) recognized the different questions for accounting information in organizations. The first question was on Scorecard which

focused if the organization was doing well or badly. The second was attention-directing question which focused on identifying the problems an organization should look into. And the last one focused on problem solving question which emphasised on finding the best way out of the several ways of solving problems. The term "Scorecard" was first introduced in this study on performance measurement.

3. In 1954, Peter Drucker introduced the concept of "Management by Objectives" in his book "The Practice of Management". As per his views each employee should have its own performance objective which should be aligned towards the strategic objective of the organization. It was traced from Peter Drucker's work that alignment between the objectives of individual and ultimate business objectives are somewhat common in executing Balanced Scorecard.

➢ **1960's-**

Robert Anthony suggested a framework on planning and control systems which comprises of three types of systems i.e. Strategic Planning, Management control and operational control. According to Anthony, Strategic planning depends on estimating the cause-effect relationship between course of action and desired outcome but it is a difficult task as strategic planning is both an art and a science. Information for strategic planning requires financial emphasis. Secondly, management control system also requires financial information as plans and results are expressed in monetary terms but he said that other quantitative measurements such as market share, yield, productivity etc. are equally important. Thirdly, operational control conforms if the specific tasks are carried effectively and efficiently and for this non-monetary information is required.

➢ **1975-1990**

1. During 1970s and 1980s Japanese companies brought the concept of Just in time (JIT), Total Quality Management (TQM), short cycle time etc. The main focus of introducing these concepts was on improving the profitability through quality enhancement, making available zero defects products, improving production, satisfying customers and gaining a competitive advantage.

2. During the same period when Japanese brought these concepts, Western corporate world focused on performance management which was short term and

financial performance oriented but the senior management and front line employees felt the requirement of a framework which could have provided the information on both financial and non-financial performance aspects of organizations.

3. During the year 1986, Schneiderman, a Vice president of Quality and Productivity Improvement at Analog Devices Incorporation (ADI), a medium size semiconductor company prepared a short report as a part of five year strategic plan of ADI which he named scored. This scorecard basically included 3 categories of measures along with financial metrics which were Customer quality metrics, Manufacturing Process metrics, and Employee Metrics. This inclusion of metrics focused on expansion of measurement systems beyond financial indicators

4. In 1987, a survey had been conducted by the National Association of Accountants and Computer Aided Manufacturing-International which concluded on dissatisfaction with performances measurement systems by most of the financial officers and operating executives in US.

5. Johnson and Kaplan (1987) have gone through the history of management accounting and concluded that trapping with short term financial measures by US organizations had failed in improving the operational efficiency. To improve this, incorporation of total quality and short cycle time management in management accounting and control system practices is required.

➢ **Shareholder Value Maximization and Principal-Agent Framework: The Agency Theory-** As per the views of this theory owners are the principal in a business and Managers are their agents. Managers have steward duty towards their owners and are expected to isolate their economic interests with those of the owners. Managers are subject to get strong incentives by maximizing shareholder value. The satisfaction of social interest (Strong incentives to managers) contributes in maximizing the shareholder value. Most of the companies pay attention to social interest who has stake in a firm in any way.

➢ **Stakeholder Theory and Balanced Scorecard-** The stakeholder theory offered a multi-dimensional approach to measure the organization's performance as against the expectations of all stakeholders who have interests in the effects o

the organization performance. According to this theory, the creation of performance measurement system starts with identification of stakeholders' objectives which they expect from an organization and how each stakeholders' group contribute to the success of the company. After defining the stakeholders' expectations and implied and explicit contracts between the stakeholders and company. The company then defines the strategy to meet these expectations and fulfilling the contracts. Stakeholder theory helped in articulating a broad company mission further than a narrow, short-term shareholder value-maximizing model yet the major drawback of stakeholder theory was that organizations cannot meet the expectations of all possible stakeholders at the same time.

Both the agency theory and stakeholder theory reveal that to achieve long term financial results, preferences and expectations of all the stakeholders like customers, suppliers, owners, employees, communities etc. should be taken care of. The concept of Balanced Scorecard has also been developed on the basis stakeholder theory as it is assumed that all stakeholders' affects the performance of an organization and all stakeholders are taken into consideration for measuring and improving the overall performance through Balanced Scorecard.

1.4 Need for Development of Balanced Scorecard-

1. **Gaps in the Existing Literature on Performance Measurement:-** The need for the inclusion of intangible measures in performance measurement had been recognized at different times through previous studies and concepts like "Tableau de bord" devised by France engineers, a BSC type performance measurement system by Herb Simon at General Electric, Peter F Drucker's "Management by Objectives", Robert Anthony's framework on planning and control systems, Japanese concept of Just in time, Total Quality Management (TQM), short cycle time etc., Schneiderman's one page report on financial metrics with Customer quality metrics, Manufacturing Process metrics, and Employee Metrics etc. From all these studies it has been realized that:-

> Improvement in employees and process performance are the critical factors for current as well as future success. Further improvement in these will lead to improvement in financial results.

> Preferences and expectations of shareholders, customers, suppliers, employees and communities should be taken into considerations to maximize the long term shareholders' value.

> A robust measurement and management system is required which included both operational and financial metrics as leading indicators and outcome measures to measure the company's progress in driving future performance.

2. **Ambiguities in Traditional Performance Measurement Systems:**

> Traditional performance measurement systems concentrate on financial measures only which is not compatible in current competitive environment. (Jitender & Neha, 2015). Financial measures are exclusively based on past performance and results provide little predictive value to the management of the company.

> It is a post-mortem technique of examining the performance of organizations as investors now a days assess the non-financial aspects with financial aspects before taking investment decision. (Jitender & Neha, 2015)

> Traditional performance measurement systems relied on internal evaluation of operational conditions and neglect the external factors as it is necessary to focus on external environment also. (Zhang & Li, 2009)

> They are unable to link a company's long term strategy with short term actions. (Kaplan & Norton, 1996)

> Traditional performance measurement system over emphasizes the physical assets rather than intellectual capital which truly activates physical assets by making their proper utilization.

> Traditional performance measurement system primarily focuses on creating shareholder value. Too much focus on shareholder value to measure the management performance can jeopardize company's long term growth and success.

> Traditional performance measurement systems do not communicate or explain the factors that drives future performance.

Loopholes in conventional financial performance measurement systems and pooled fruits of theories and concepts and gaps existed in literature has resulted in crisis in development of design and implementation of new performance measurement systems in which Balanced Scorecard emerged as an important tool as a single integrated measure of corporate performance which covers all the aspects of an organization.

1.5 Conceptual Framework of Balanced Scorecard

1.5.1 Introduction:

Ambiguities existed in traditional performance measurement systems and gaps exists in available performance measurement system resulted in the origin of Balanced Scorecard. Professors at Harvard University, Robert Kaplan and David Norton conducted a research study during the 1990's on a number of companies to see the insights on new methods of performance measurement. The study heightened the belief on ineffectiveness of financial measures alone and their inability to create long term value for modern organizations. They identified the possible alternatives and finally devised a performance measurement tool including measures on customer issues, internal business processes, employees and shareholders' concerns. Kaplan and Norton labelled this tool as a "BALANCED SCORECARD" and introduced this concept in their first article in 1992, "The Balanced Scorecard-Measures that Drives Performance".

1.5.2 Meaning & Definitions:

The definitions of Balanced Scorecard changed from time to time since its introduction in 1992 with the further developments in this tool. Some of the conceptual definitions are being given below that gives an idea on what a Balanced Scorecard actually is:

According to Kaplan and Norton (1992), "Balanced Scorecard is a business management concept that transforms both financial and non-financial data into a detailed roadmap that helps the organization to measure its performance and meet long and short term objectives. It translates mission and vision statements into a

comprehensive set of objectives and performance measures that can be quantified and appraised"

Kaplan & Norton (1996) stated Balanced Scorecard as a Strategic Management System that focus on accomplishing the critical management processes through clarifying and translating the vision, mission and strategy, communicating and linking strategic objectives & measures, planning, setting targets and aligning strategic initiatives, enhancing strategic feedback and learning. The name "Balanced Scorecard itself reflects the balance between short and long-term objectives, between financial and non-financial measures between lagging and leading indicators and between external and internal performance perspectives.

Kaplan & Norton (2000) in their article on "Having trouble with your strategy? Then map it" said that "Balanced Scorecard tells you the knowledge, skills and systems that your employees will need (Learning & Growth) to innovate and build the right strategic capabilities and efficiencies (Internal Processes) that deliver specific value to the market (Customer) which will eventually lead to higher shareholder value (Financial)."

2GC Management Consultants, Cary, North Carolina in their working paper defined Balanced Scorecard as a concise summary of an organisation's performance against its strategic (and sometimes operational) goals, and is used by the organisation's managers to monitor the progress being made towards these goals.

"The Balanced Scorecard is a strategic planning and management system which takes into account non-financial aspect of corporate performance, such as customer satisfaction and business processes, to create complete picture of how the company is likely to perform in the future."

"BSC is defined as a methodology that can provide managers with a measurement and management system to support organization in translating their strategy into action."

Balanced Scorecard Institute (A Strategy Management Group Company at Cary, North Carolina) (2011) defined Balanced Scorecard as a strategic planning and management system which are used extensively in business, industry,

government and non-profit organization worldwide to align business activities to the vision and strategy of the organization, improve internal and external communication and monitor organization performance against strategic goals.

Kasasbeh (2018) defined Balanced Scorecard in his article as a Strategic Planning tool which helps organization to assess their activities, performance and strategies and it takes into consideration the balance between financial results and growth, the balance between tactics and strategy. Balanced Scorecard is not only a measurement system but an administrative system which links objectives, metrics and target levels which describes strategy and helps management in providing feedback on performance so that it can be improved.

It can be concluded from the above definitions that Balanced Scorecard is a Comprehensive Strategic Performance Measurement and Management System which begins with the identification of strategic objectives from vision and mission statements of an organization and measures under the four major strategic areas viz. Financial, Customers, Internal Business Process and Learning & Growth and ends with the measurement of performance on these measures, reviewing the performance against set targets , control and improve on diverted measures, and lastly with provided feedback & learning.

It is a Birds' Eye View of Company's Performance as against Strategic Goals.

1.5.3 Four Basic Pillars of Balanced Scorecard

1.5.3.a Financial Perspective: Company's Performance in Front of Shareholders –The Destination Perspective

The ultimate aim of any profit making organization is to improve the financial performance. Financial perspective acts as a central point of Balanced Scorecard because the destination of objectives of other three perspectives ends on maximizing the financials and it defines the financial performance which is expected from a strategy to achieve. It lays down a base for selecting the measures in other perspective. While selecting measures on customer, internal business processes or learning & growth it must be ensured that their achievement leads to

improvement in financial performance and linked to any of the objectives/measures on financial perspective. It helps organization to get familiar with the financial position and shareholders perception. Under this perspective, measures should be created which are aimed at achieving high rate of return on investments, maximizing the profitability, minimizing cost of capital and most importantly on delighting the shareholders. Financial measures will vary with the changes in stages of the company like growth, sustainable or harvesting stage.

Financial Perspective of Banks:

Banks being profit making institutions, financial perspective of Balanced Scorecard focuses on outcome based measures which shows the value created by the bank and performance deliver to shareholders or the economic consequences of bank activities done in past. Selection of measures under this perspective will depend on Bank's strategy on financial outcomes which they expects in future and on Bank's life cycle. It is important to look at the financial indicators for banks as the ultimate aim is to improve the financial performance but it do not indicate what is happening inside and bank being knowledge intensive industry, better financial outcomes are realized through focusing on intangible factors only. Financial Perspective of the bank is mainly created around the strategic objectives like increasing profitability, increasing shareholders value, maintaining liquidity or asset quality, improving earning quality, reducing cost etc.

Table 1.1 Possible Strategic Objectives and Measures under Financial Perspective of Banks

STRATEGIC OBJECTIVES	MEASURES
Aggressive Growth in Profits or Increasing Shareholder Value	Growth Rate of Profits
	Return on Assets
	Return on Equity
	Earnings Per Share (EPS)
Maintaining Liquidity	Cash-Deposit Ratio
	Credit-Deposit Ratio
Improving Asset Quality	Net NPA to Net Advances Ratio
Maintaining Capital Adequacy	Capital Adequacy Ratio
Improving Earning Quality	Interest Income to Total Assets Ratio
	Net Interest Margin to Total Assets Ratio
	Investment Deposit Ratio
Cost efficiency	Cost/Income Ratio

Source: Compiled from own observations

1.5.3.b Customer Perspective: View of Company's Performance from Customer Angle

It is one of the important perspective of the Balanced Scorecard as the importance of focus on customers and their satisfaction have increased in current businesses. This perspective measures the performance of organization in terms of customers' experiences with the value created by the organization. In this perspective companies identify the target customers and market segments in which they have chosen to compete and try to deepen the relationship with them through identifying and delivering them value prepositions required by them. Measures under this perspective mainly focuses on outcome based measures on market share, customer retention, new customer acquisition, customer satisfaction and customer profitability with lead indicators on customer value prepositions, customer relationship dimensions and image & reputation dimensions. Customer value preposition include product & services attributes such as time, quality & price. Customer relationship dimensions focuses on purchasing experiences and relationship with the company and image & reputation dimensions reflects the intangible factors which attracts customers to the company.

Customer Perspective of Banks:

Banks being a service industry, customers play an important role in the operations of the banks. Banks that meet the needs of the customers and provide high customer satisfaction through excellent services can only compete and make high profits. These days banks interact customers mainly through electronic means such as debit cards, credit cards, internet banking, mobile banking, multifunctional ATM's, e-kiosks etc. To keep the customers active for the long run it is necessary for banks that they should provide innovative products & services as per their preferences, on time and with quality services & technological excellence at a reasonable cost. It is one of the leading perspective of Bank's performance. Satisfied customers leads to more business for the bank thus leads to high profits. The strategic focus of banks on this perspective moves around achieving high customer satisfaction, customer retention, growth in customer's accounts, improving market share, providing best after sales services etc.

Table 1.2: Possible Strategic Objectives and Measures under Customer Perspective of Banks

STRATEGIC OBJECTIVES	MEASURES
Achieving best customer experience	Customer Satisfaction Survey Index
Boosting Customer Loyalty Index	Customer Loyalty Index
Customer growth in Saving accounts, current accounts, CASA deposits, Credit accounts	Growth in Different deposits and credit accounts
	Market share in deposits
	Market share in advances
Providing excellent after sales services	Customer complaints and grievances Redressel Ratio
Improve Brand Image	Brand Awareness Index
Retaining Customers	Customer Retention Ratio
Increasing Return on Customer	Profit/Revenue per customer

Source: Compiled from own observations

1.5.3.c Internal Business Process Perspective: Drivers/Priorities to Outshine in Front of Customers and Shareholders

Internal Business Process perspective focuses on identifying the critical business processes and competencies at which company must excel at to meet the objectives on financial and customer perspectives. Kaplan and Norton recommended to define a complete value chain that starts with the identification of innovative processes in which company will identify the emerging needs of the customers and then it will create those products and provide those services which will comply with the needs of customers. This will enable the company to place appropriate weight on research, design and development processes of new products, services and markets. Secondly companies should identify the operational processes in which the company will identify the cost, quality, time and performance characteristics which will enable company to deliver the best products to target markets. Achieving the operational excellence and cost reduction in manufacturing of products and delivery of services are the main objectives under this. The last step in creation of value chain process is the providing best post-sale services processes which add values to customers.

Internal Business Process Perspective in Banks:

Internal Business Process Perspective of banks aims at identifying the operational activities of the bank that affects the customer satisfaction and ultimately to financial performance. Customers always demands for innovative products and services that meets their expectations. They want accurate, prompt, timely services

of high quality with an easy reach to bank branches, ATM's, Digital Kiosk etc. With the increasing demands of customers in digitalised banking, banks are required to improve their operational efficiency in delivering services to its customers. They need to introduce innovative products and services, technological up gradations in processes and innovative apps etc. on time. Excellency in business operations through effective utilization of intellectual capital with other resources, decreased operating cost, gaining high productivity of employees, expanding distribution channels in the form of increase in branches, ATM's , POS terminals, E-kiosk etc are highly recommended for banks and are main strategic focus areas on this perspective. At the same time they should try to reduce their marketing cost, operating cost, employees cost etc. Improvement in internal business operations will lead to highly satisfied customers with their retention with the bank for long term and this in turn will lead to sustain the financial performance and higher profitability. A bank must excel at services provided by them to survive in the competitive market.

Table 1.3: Possible Strategic Objectives and Measures under Internal Business Process Perspective of Banks

STRATEGIC OBJECTIVES	MEASURES
Improving Operational Efficiency /Excellent Service Delivery	Transaction Speed
	Response time i.e. Time Lag involved in Transaction
	Service Quality & Diversity
	Accuracy in Handling Business Transactions
Improving Operational Capabilities	Business Per Employee
	Profit Per Employee
Achieving Operational Excellence through Reducing Cost of Business Operations	Wage Bills to Total Cost Ratio
	Marketing Cost to Total Business Ratio
Building CRM Capacity and Cross Sell efficiency	Percentage of Customers/Products being cross sell
Improvement in Distribution Channel Capacity or Increasing Geographical reach for Customers	Growth in ATM's, Branches, Cities/Towns

Source: Compiled from own observations

1.5.3.d Learning & Growth and Innovation Perspective: Key Drivers for Pushing Excellence in Business Operations

The fourth and final perspective on which the foundation of Balanced Scorecard is built is the learning & growth perspective which deals with constructing a

mechanism to fill the gaps in knowledge, processes, information systems, organization culture and to be continually innovative. Kaplan and Norton (1996) describes learning & growth perspective as the roots of a powerful tree which lead through trunk of internal processes to the branches of customer results and finally to the leaves of financial returns. The measures in learning & growth perspective are the enablers for achieving excellent outcomes in other three perspectives. To achieve the objectives of customer, internal business processes and financial perspectives, a company must have strong organizational infrastructure of employees' skills, information systems and innovations. Kairu et al. (2013) stated that the learning & growth perspective evaluate the ability of employees i.e. skills, talents, knowledge, training etc., the quality of Information Systems i.e. system databases and network etc. and the effects of organizational alignment (culture, leadership, alignment and teamwork) in supporting the accomplishment of organizational objectives. Motivated employees with right skills set and knowledge with innovative products and services and processes lead to process improvements, help in meeting customers' expectations and achieving financial returns.

Learning & Growth Perspective of Banks:

Banks are highly intellectual intensive organizations. Employees are the main assets of banks. Knowledgeable, highly skilled, trained, empowered and committed employees increases the efficiency of business operations and thus lead to high customer satisfaction and growth in revenues. Performance of banks depends on efficiency of its employees. For this banks need to impart training to their employees on continuous basis for upgrading their technical, behavioural and analytical skills so that they can satisfactorily response to their customers with the required information. Continuous Innovation and technical up gradations in products, services & business processes are required by banks to retain the existing and attract new customers. The learning & growth and innovation perspective of the banks aims at providing & developing the employees' capabilities & productivity, employee's satisfaction, information technology capabilities, and creating a strong work culture so that objectives of customer and internal business processes can be achieved.

**Table 1.4: Possible Strategic Objectives and Measures under Learning &
Growth and Innovation Perspective of Banks**

STRATEGIC OBJECTIVES	MEASURES
Recruit & Retain Employees	Growth in No. of Skilled Employees
	Employee Retention Rate
	Employee Turnover
Improving Employees Capabilities	Percentage of Employees Trained
	Average Hours of Training to Per Employee
	No. of Training Programs Conducted
	Training Expenditure Per Employee
	Average Increase in Remuneration Per Employee
Driving Employee Satisfaction	Employee Satisfaction Survey Index
Improving Digital Customer Experiences	Growth in No. of Debit Cards, Credit Cards, POS terminals, E-Kiosks etc.
	Increase in Number of Transaction through Mobile, Internet, NEFT, RTGS
Providing Reliable IT Infrastructure	IT Usage
	Percentage of IT Investment over Total Bank Capital Expenditure

Source: Compiled from own observations

1.5.4 Cause-effect Relationship among Measures/Perspectives of Balanced Scorecard:

A Balanced Scorecard states the story of organization's strategy through the objectives and measures which are chosen. There must be a cause effect relationship among these measures in various perspectives of Balanced Scorecard so that they can be monitored, managed and validated. (Kaplan & Norton, 1996). These measures should be linked together in a chain of cause and effect relationship from the performance drivers in learning and growth perspective to outcome measures in financial perspective. Selecting series of measures that are tied together in a cause effect relationship not only helps in measuring the implementation of strategy but also help in describing "how" these helped in value creation for an organization. Kaplan and Norton asserted that, "Strategy denotes the movement of an organization from its present position to desired uncertain future state. As to reach this desired future position the path is through a series of linked hypothesis." Kaplan and Norton (2004) introduced the concept of strategy map and described through it that performance in each perspective follows a hierarchical model in which improvements in learning & growth lead to better internal processes which in turn lead to increase in value prepositions delivered to customers and thus lead to

increased revenues and improved financial performance. A strategy map specifies this cause and effect relationship and these cause effect linkages guides the specific path to be followed to achieve the strategy. Atkinson (1997) also said that this logic of cause and effect relationship distinguished Balanced Scorecard from other approaches. A good Balanced Scorecard should have a combination of Outcome Measures (Lag Indicators) and Performance drivers (Lead Indicators). While establishing cause and effect relationship among measures, lagging indicators of performance should be selected in each of the four perspective. These lagging indicators are result oriented in nature and can easily be amendable to combine in logical sequence starting from financial and channelled downward through customer, internal process and then to learning and growth. Then the lead indicators are selected under each perspective. It not necessary that lead indicators will have linkages with measures in other perspectives. Lead indicators are the differentiators of performance for an organization in achieving its core outcome measures. This course of action of identifying lead and lag indicators and establishing cause effect relationships ensures that strategy is converted into a set of hypothesis of cause and effect. (Kaplan & Norton, 1996).

1.6 Generations of Balanced Scorecard:

The definitions of Balanced Scorecard have changed with the development and improvement in the concept of Balanced Scorecard as a Strategic measurement and management system. The three distinct generations have been recognized during the evolution of Balanced Scorecard which are being described as follows:

1st Generation of Balanced Scorecard-

1st generation of Balanced Scorecard described Balanced Scorecard as a "4 box" approach to performance measurement. (Kaplan and Norton, 1992). In this generation it was encouraged to see the performance of an organization beyond financial measures including learning & growth, internal business processes and customer perspectives with financial perspective which represents the major stakeholders of a business. The definition of Balanced Scorecard was scanty and it focused only on high level structure of this tool. The focus was only on the selection and reporting of a limited number of measures in each of the four perspective.

(Kaplan and Norton, 1992). The attitudinal approach for selection of measure was proposed by Kaplan and Norton in first generation model. For e.g. in order to succeed financially how should we appear to our stakeholders.

Drawbacks with 1st Generation Balanced Scorecard Design- The main problem associated with 1st generation Balanced Scorecard Model was identification of method to select measures which are critical for the success of this tool. Filtering i.e. selection of measures from a number of measures which are needed to create Balanced Scorecard and Clustering i.e. which measure should appear in which perspective were the important issues in 1st generation model. Design challenges presented in this generation and the adverse effect of poor measure selection on the usefulness and adoption rates of Balanced Scorecard have been experienced by different practitioners and authors which demanded for modification in design of Balanced Scorecard.

2nd Generation of Balanced Scorecard

Choosing the specific measures i.e. filtering and grouping these specific measures into perspectives i.e. clustering were the problems associated with 1st generation model. It has been realized by Kaplan and Norton in the mid of 1990's that the attitudinal approach proposed by them initially for the selection of measures is not good enough so they replaced it with the concept of "Strategic Objectives". They suggested that there should be a direct mapping between different strategic objectives selected in each perspective and with one or more performance measures. This further step in selection process of measures renovated the design process of Balanced Scorecard. This has helped to overcome the filtering issues as the strategic objectives themselves are the justification for selection of one measure over another out of many possible measures for including in each perspective.

The second key concern which was focused in this generation was causality. Work between 1992 and 1996 was focused on finding the ways to show causality between the measures. In the mid of the 1990s the Balanced Scorecard design showed the graphical linkages between the strategic objectives. This design was named as "Strategy Linkages Model" later known as Strategy Maps. As a result of these changes by Kaplan and Norton (1996), Balanced Scorecard evolved as "Improved

Measurement System" to a "Core Management System." Balanced Scorecard maintained the focus on supporting the management in strategy implementation and the development of the changes in the Balanced Scorecard in this generation were described as the central element of Strategic Management System. The following two key enhancements in the definition of Balanced Scorecard were noted in 2nd Generation of BSC:

1. Choosing the measures which are specifically related to strategic objectives of an organization. The design of BSC aimed to identify strategic objectives associated with one or more measures and assigned to any of the four perspective.
2. An attempt has been made to present a visual document which shows the major casual relationships between the strategic objectives which was resulted in "Strategic Linkages Model" or "Strategy Map".

Drawbacks with 2nd Generation Balanced Scorecard Design-

Although the 2nd Generation Balanced Scorecard set out a standard layout for a strategic linkage model which sets causality flowed across the four perspectives started from Learning and Growth Perspective and passed through Internal Business Process Perspective and Customer Perspective and ended up at Financial Perspective yet it has been argued by many authors that this causal flow may be inappropriate for many organizations because it either leaves out one or more important perspective or the causality links cannot be justified. (Norrekelit, 2000). It was desired that Balanced Scorecard should accurately reflects the strategic objectives of the organization and the linkages must be meaningful.

3rd Generation of Balanced Scorecard-

To provide a better functionality and more strategic relevance to the Balanced Scorecard the 3rd generation emerged as a refinement of 2nd generation model with new features. This generation brought the concept of "Destination Statement". A destination statement is nothing but a clear, expressed and quantifiable short description of organization which describes what the future will look like at a defined point of time. These destination statements should be created at the

beginning of the design process then the strategic objectives should be selected on the basis of these statements so that at the completion of a strategy map and Balanced Scorecard it can be assured at the end that strategic success has been achieved and the BSC is well constructed. These statements act as a useful reference point for the target setting process and validation of strategic objectives. These statements can also be sub-divided into different categories like perspectives.

In this generation second most important change was replacement of four perspectives into two perspectives i.e. outcome perspective and activity perspective. Outcome perspective includes financial and customer perspective and activity perspective includes internal business process and learning & growth perspective.

Balanced Scorecard that incorporates the features of "Destination Statement" and "Strategic Linkage Model with Activity and Outcome Perspective" in its definition are known as 3rd generation Balanced Scorecard.

In these three generations, Balanced Scorecard has evolved as a "Strategic Measurement Management Tool". It involves number of managers in this Strategic Management Process. It provides boundaries of control which are not as rigid or stiffed. It bridges the gap between strategy formulation and its implementation. Kaplan and Norton (1996) defined Balanced Scorecard as a Strategic Management system that focus on accomplishing the critical management processes through clarifying and translating the vision, mission and strategy, communicating and linking strategic objectives & measures, planning, setting targets and aligning strategic initiatives , enhancing strategic feedback and learning.

1.7 Advantages of the Balanced Scorecard to the Corporate Sector

Organizations which have successfully implemented the Balanced Scorecard as their performance measurement tool reap many benefits as this tool has been proved as an accurate tool of measurement of performance of an organization and presents a balanced view of company's performance. Some of the benefits realised from implementing balanced scorecard summarized from the studies of Frigo et al.

(2000), Pandey (2005), Wu (2012), Salem et al. (2012), Asa, Prasad and Htay (2013), Abagissa (2019) etc. are being discussed hereunder:

1. BSC provides fruitful insights on critical drivers of organizations' success to the management.

2. BSC helps in improving and growing the bottom line by focusing on areas/perspectives that needs attention through reducing the process cost, improving employees productivity and effectiveness etc.

3. With the help of BSC, organizations can gain transparency throughout the organization as it describes each department's operational strategy which directs employees on how their role can affect change and create value for an organization.

4. BSC ensures the management of the company that every employee is focused on their aligned goals or objectives as all specific goals are communicated through the organization through which employees get aware of current status of the organization and expected performance contribution from them to reach organizational goals.

5. BSC helps in understanding their target customers, their preferences, performance gaps and can determine the value prepositions which delights customers.

6. BSC enables an organization to identify the factors that are putting down to their business and outline the strategic areas which need to be focused for fetching out the better results. This ultimately helps in aligning the operational activities with the mission of the organization.

7. BSC provides a visual presentation of a Company's strategy, highlights strategic objectives, cause-effect relationship among the perspectives and its performance on a single dashboard which helps in taking better and quick decisions and thus, reduces the risk.

8. BSC provides a standard set of measurement through which it can be determined whether the goals of organization have been met or not.

9. BSC depicts the balanced picture of company's performance on all the areas through which managers can identify the areas for improvement and allocate resources in future.

10. BSC provides a strong logic for focusing on intangible and intellectual assets.

11. BSC enables an organization to articulate growth strategies for business through more focus on non-financial initiatives.

12. With the help of BSC, employees can understand the business strategies and can link strategic objectives to daily routine operations.

13. BSC brings all the data together on a single dashboard and presents a Birds' eye view of Company's overall performance.

1.8 Hindrances in Successful Implementation of Balanced Scorecard

Although there are number of benefits of using Balanced Scorecard as Performance measurement tool yet its implementation is a crucial task. Many problems are being experienced by practitioners in corporate sector. Some major obstacles in implementation of BSC summarized from the studies of Schneiderman (1999), Olve (2003), Niven (2006), Ghosh and Mukherjee (2006), Debusk and Crabtree (2006), Othman (2009), Salem et al. (2012), Rabab'ah (2014), Madsen and Stenheim (2014), Kasasbeh (2018), Abagissa (2019) etc. are being given below:-

1. **Requirement of high skills & expertise, time and expenditure-**Balanced Scorecard to be more useful and practical enough, it is necessary to assign appropriate weights and balance between both financial measures and non-financial measures, performance drivers' measure and outcome based measures. It is a complicated task and requires a lot of skills & expertise of the management. It is simple in terms of principles but an expensive and time-consuming system which involves complexities in its maintenance, operation and implementation.

2. **Conceptual issues-** Conceptual issues like limited understanding of the concept (Othman, 2009), too much focus on technical aspects of the concept like strategy maps, data gathering and automation, lack of training and knowledge on how to use Balanced Scorecard (Niven, 2006) and misunderstandings about relationship between organization's strategy and BSC etc. can obstruct the success of Balanced Scorecard tool as performance measurement system.

3. **A common model does not fit to all companies-** General model of Balanced Scorecard does not fit to all types of companies and industries. It requires a lot of efforts to understand the strategy of the particular company for which the BSC is to be created and then identifying the strategic objectives, filtering of key performance indicators, their clustering into suitable perspectives and then creating the Balanced Scorecard Model for that company.

4. **Lack of support from top management-** Lack of support or resistance of top management in implementation process of BSC can cause a complete failure of this tool as delegating it to lower/middle level will not be as effective as that it is being implemented by top management. (Schneiderman, 1999). Top management may resist because it requires a separate team, lot of efforts, time, expenditure etc. will increase the cost to company.

5. **Improper planning and lack of communication to employees–** Balanced Scorecard can only be successful if proper planning for its implementation has been done and communicated effectively to all the employees of an organization about its initiative.

6. **Technical issues-** Inadequate IT support (Olve,2003), problems in collection of data gathering and automation, lack of technical infrastructure, lack of software packages or non-retrieval of information entered into the system by the people who are supposed to reap benefits from it etc. can be the barriers to the successful implementation of BSC.

7. **Ineffective executing team for BSC-** Successful implementation of BSC depends on team work and effective & focused team members. Ineffectiveness of the executing team can distract the success rate of BSC. (Niven,2006)

8. **Complicated task-** Balanced Scorecard needs continuous modification on the basis of feedback. Determining goals and measures under each perspective are also not easy. Assigning weights to difficult measures on the basis of their relevance and balancing between financial and non-financial measures also becomes complicated. These complications can hamper the success of the tool.

9. **Inadequate and uncorrelated key performance indicators-** It is necessary to identify the suitable key performance indicators under each perspective which must include the performance drivers as well as outcome based measures and

there must be a cause effective relationship between measures. Inadequate and insufficient key performance indicators will not depict the actual performance and can obstruct the success of this tool.

10. **Missing perspectives -** A Company being a corporate citizen has to contribute for the welfare of the society and has to respond to society's expectations. It increases the reputation of the company thus effects the profits too. To pursue the goal of "Sustainable Growth and Development" companies need to accept CSR. This perspective of CSR is missing in BSC while creating the four perspective. (Ghosh & Mukherjee, 2006). There may be another aspects which should be added into Balanced Scorecard like Environment, Corporate Governance, ethics etc. as they all affects the performance of companies.

1.9 Suggestions for Pooling Fruitful Insights of Balanced Scorecard Tool

IM Pandey (2005), Niven (2006), Schneiderman (1999), Olve (2003), Othman (2009a) etc. authors have suggested some prerequisites for successful implementation of BSC which should be kept in mind before and during implementation of Balanced Scorecard. Some of them are being specified below:

1. Balanced Scorecard requires continue, active commitment and support of top level management to introduce and implement it with proper understanding of the concepts of Balanced Scorecard.

2. Proper training and in-depth knowledge on using the Balanced Scorecard must be given to the employees so that organizations can reap maximum benefits of this tool.

3. Consistency in Strategy articulation must be there for successful implementation of Balanced Scorecard. Inconsistency might hamper the formulation process.

4. A top down bottom up centralized management approach is required for successful implementation of BSC as autocratic vision of strategy by management cannot be compatible and successful in implementing the strategy.

5. Identification of critical success factor is crucial task as they changes as per the requirement of stakeholders so before implementation, care should be taken while selecting the critical success factors.

6. After identifying the critical success factors they must be translated into measurable metrics as strategic measures or key performance indicators. These metrics should be verifiable, accessible, precise and consistent to achieve the objectives.

7. Balanced Scorecard should contain a sufficient mix of performance drivers (Measures on Learning & Growth perspective and Internal Business Process Perspective) outcome based measures (Measures on Financial and Customer Perspective). Unnecessary performance indicators must be eliminated or replaced with required ones

8. Measures should be easy to grasp, actionable and amendable to review and further improvements.

9. A scorecard should be developed at corporate, divisional and at individual levels to delight all the stakeholders.

10. Skilled and efficient team of Managerial level personnels is required for developing, planning, implementing and communicating the concept of Balanced Scorecard for an organization

11. An effective planning and communication system should be developed so that all employees can understand the language of the BSC.

12. For better allocation of resources there should be a link between strategic planning, Balanced Scorecard and budgeting process.

13. The effectiveness of BSC can only be achieved through efficient review process system which should be integrated with it.

14. Integration of other perspectives and measures which might affect the organization's performance directly or indirectly should be added in Balanced Scorecard.

1.10 Integrating the Social and Environment Sustainability Issues into Balanced Scorecard

1.10.1 Introduction: Restructuring the relationship between corporate world and stakeholders has become important in the past few years. Greater accountability and

transparency has been questioned from corporate management by the stakeholders. It has been realized now that without taking into consideration to the immediate society, no corporate can succeed. AB Caroll (1983) stated that business should be conducted in such a manner that it is economically profitable, law – abiding, ethical and socially and environment supportive.

Achieving Sustainability has become necessary requirement for businesses these days as it is the key factor for achieving success in future. It enhances the competitiveness of the company. "The Stakeholder's theory and agency theory asserted that if companies fulfils their responsibilities towards all the stakeholders then it will enhance their financial performance" (Freeman, 1984). "To be successful in the long run, there must be an enduring relationship between company and stakeholders and this relationship must be managed properly to create value" (Hammann, Habiseh and Pechlaner, 2009). "Being socially responsible, the firms cost is decreased, high value is created for stakeholders and internal capabilities are crafted. These all together increases the competitive advantage of the firm" (Preston & O' bannon, 1997).

"Companies adopting CSR practices enjoy high level of Stakeholder's confidence which results in high returns, good wages, timely payment, enhanced goodwill and reputation" (Mishra and Suar 2010). Corporates can't be successful in long term without taking social and environment concerns into consideration. If you do something for the welfare of all stakeholders, communities, environment it will always pay for you.

"Satisfied Stakeholders bring effectiveness and cost efficiency through different means which ultimately enhances the firm's performance" (Maqbool & Zameer, 2018). Satisfied Workers lead to productivity gains, less employing and training costs, satisfied customers enhances business growth through repeat purchases, satisfied investors lend capital at less, expenses rate and diminishes cost of capital, and finally satisfied communities decreases the advertisement cost and Ecological Stewardship prompts favourable circumstances for the less and better suppliers reduce quality and certification cost.

As the importance of social and environment concerns has increased these days, companies should try to renovate there business philosophy, vision, mission and strategies by focusing on socially responsible approaches instead of focusing solely on profit oriented approach. "To sustain in the long run, companies must have to be aware with 3 P's i.e. Profit, People and Planet. To earn more profits (Profit) companies are required to pay more attention on the welfare of the surrounded Communities (People) and has to preserve the natural environment (Planet)." (Elkington, 1997).

Now a days Companies focus on triple bottom line concept of 3 P's which considers the social and environment aspects instead of relying solely on single bottom line concept of economic aspects. Organizations are moving towards the creation and implementing the sustainability as a part of their strategies as it has already been realised that investment in more capital is not only the sole determinant of firm's success. Other factors like customer satisfaction, innovation compatibilities, most importantly brings responsible award social and environment concerns are the necessary elements for long – term success of an Organization.

Sustainability refers to handling of non – financial factors on environment and social with the economic issues. Corporate sustainability refers to the economic sustainability social and environment sustainability. Organizations incorporate sustainability as a part of their strategies and if a company is incorporating sustainability as a part of the strategy, it need to assess, measure and manage the strategic objectives of sustainability strategy.

1.10.2 Sustainability and Balanced Scorecard: -

If a company is incorporating sustainability as a part of their strategy, it is essential to measure and manage the performance of objectives of such strategy. Now the question arises that whether BSC is a suitable tool to combine environment and social concerns with it or not. The answer to the question is obviously yes as Kaplan & Norton (1996) asserted that "The inclusion of four perspective and measure is not restricted to as prescribed by them. Additional perspective can be added if it affects any of the stakeholder's interest because all stakeholder's interests are important for success of company's strategy". Measures on such stakeholder's

interest should be merged into Balanced Scorecard but there should be causal relationship between them. Companies being responsible for society and environment, it always stimulates favourable circumstances for the companies and affects the financial performance positively therefore measures on social and environment perspective can be added to Balanced Scorecard.

For measuring the strategy objectives of an organization, BSC is a widely accepted tool which measures the performance on four dimensions i.e. Financial, Customer, Internal Business processes and Learning & growth. Sustainability Balanced Scorecard is the innovated form of traditional Balanced Scorecard which aims to incorporate social and environment concerns into the scorecard in a structured form. Combining sustainability Management with Balanced Scorecard helps in resolving the problem of corporate contributions to sustainability in an integrated form. "It is assumed that if companies are incorporating sustainability development as a part of their strategies, it is needed to improve the corporate performance in all the three dimensions of sustainability i.e. economic, environment and social". (Figge et al. 2001a)

BSC covers all the relevant aspects for achieving a competitive advantage in the four quadrants. It includes all the company's activities which are critical for long – term success and helps in establishing the cause-effect relationship among all the activities. While formulating BSC, objectives and measures are first identified from the long-term strategies of the business in all the four perspective named financial, customer, internal business process and learning & growth then the performance is thus measured and improved for achieving those goals. The hierarchical structure of BSC ensures the successful implementation of the business strategies.

The above features of BSC can be implemented in improving the management and measurement of environment and social aspects through integrating them into ordinary business activities. This approach of sustainability management aims to achieve the ecological, social and economic goals. (Figge et al., 2001a, 2001b; Schaltegger and Burrit. 2000).

There are three possibilities to integrate environment and social aspects in the BSC as suggested by different authors. **First** option is to integrate the environment and

social aspects in the existing four perspective of BSC. **Secondly,** an additional perspective can be added i.e. Social and Environment Perspective. **And the last** alternative suggests to create a different environment and social scorecard. (Epstein 1996, Sturm 2000, Deegan 2001, Figge et al., 2001a, 2001b).

Figge et al. (2002) proposed a process for formulating the Sustainability Balanced Scorecard. Firstly the Strategic Business unit is selected for which balanced scorecard needs to be designed as the strategic objectives for different units are different so the specific Balanced Scorecard is in need to be designed. Secondly, the environment and social aspects are defined and in the end relevance of these aspects for the business unit's strategy is determined. A cause-effect relationship must be established with the core strategic objectives of that business unit to ensure whether these aspects really contribute as performance drivers in achieving the key financial objectives of the business unit and helps in gaining a competitive advantage.

1.10.3 Integration of Social and Environment Sustainability Perspective into Balanced Scorecard Model of Banks:-

Achieving a sustainable competitive edge has become the strategic focus of all the organizations. It is now required to think beyond the concept of profitability as it is short term indicator of organization performance. Companies should try to engage themselves in those actions which may be required by law or beneficial for all stakeholders including society so that they can survive for long term. Companies are also responsible for the environment sustainability and protection because they consumes the natural resources where they are located. They need to comply with the environment norms applicable in that particular areas by keeping in mind that they do not harm environment in any way. Focusing on social and environment concerns improve the image and reputation of the company in the eyes of all the stakeholders thus increase the profitability through improved business growth and can sustain in competitive environment. Now companies are required to Business responsibility reports/sustainability reports to share their sustainability activities with the stakeholders. To measure and improve the performance of an organization, all the three dimensions of economic, social and environment must be taken into

consideration. Performance indicators under social and environment can be chosen from strategies and goals of a particular company. These measures must have cause effect relationship with the measures under other perspectives of Balanced Scorecard.

The main strategic objectives now a days for the banks in India are achieving Sustainability, Competitiveness, Liquidity and Profitability. To achieve these objectives it has become inevitable to measure, analyse and improve the performance of banks on all the parameters of people, processes, products, infrastructure, sustainability, competitiveness, profitability, liquidity etc. to identify the areas which are profitable and which are not. Incorporating the social and environment issues in Balanced Scorecard appears to be a promising tool as it claims to identify the strategic issues of business and now a days paying attention social and environment concerns are a part of strategies of banks. Secondly, BSC establishes the causal contribution among the issues that contributes to successful achievement of a company's strategies so linkages between social and environment strategies of banks and financial performance can be established with the help of BSC tool. Women empowerment and welfare, gender equality, financial inclusion initiatives, health and safety measures, community development, financial literacy, priority sectors development, environment protection through energy efficiency, carbon emissions, wastage recycled etc. are some of the social and environment concerns of the banks which should be focused upon and performance of these activities should be get measured as the environment friendly and socially responsible image of the banks indirectly affects the reputation of banks in the eyes of all concerned stakeholders and will lead to satisfied employees, satisfied customers, thus increase the market share and financial performance of the bank.

Table 1.5: Possible Strategic Objectives and Measures under Social & Environment Perspective of Banks

STRATEGIC OBJECTIVES	MEASURES
Increasing Monetary Contribution Towards Social activities	Percentage of CSR Expenditure to Net Profits
Maximizing Number of Activities for Social Welfare and Expenditure	Number of Activities for Health, Education, Skill development, Natural Calamities, Rural Development, Women and Children Welfare, Financial Literacy etc.
	Expenditure Done Per Activity
Promoting Gender Equality and Empowering Women at Workplace	Percentage of Female Employees to Total Employees
Promoting Financial Inclusion Plans	Growth of Branches in Rural & Semi-Urban Areas
	Ratio of Priority Sector Advances to Total Advances
	Increase in Number of Beneficiaries in Accounts opened for financially weaker sections
Promoting Environment Protection	Amount Invested in Environment Sustainability
Steps taken for Environment Protection	Emission Per Employee
	Energy Consumption Per Employee
	E-Waste Recycled
	Paper Conservation

Source: Compiled from own observations

1.11 Status of Application of Balanced Scorecard in Different Sectors and in Different Countries

Various surveys and studies have been conducted to identify the adoption rate of Balanced Scorecard in different countries and different sectors. A survey in 1999 showed that 43.9 % managers in US use the Balanced Scorecard. (Rigby, 2001). A survey on management tools & techniques in 2002 by Bain & Company highlighted that 62% managers agreed on using BSC. (Rigby, 2003). The study by Singh & Kumar (2007) revealed that in India Godrej-GE Appliances Limited, Goodlass Nerolac paints Limited, Philips Electronics, Infosys technologies, Tata Consultancy Services, Castrol India, Taj Group or India Hotels have adopted Balanced Scorecard in their organizations. Rahhal, A. & Darabee, I. (2014) revealed through a survey that adoption and implementation of Balanced Scorecard in Palestinian Corporations is 30%.

BSC Adoption in Banking Industry-A survey was conducted in 1998 in UK which revealed that 9 out of 20 biggest banks were using BSC. (Broady-Preston & Preston, 1999). A survey in the end of 1999 with 140 managers of banks, Insurance companies and other financial institutions in the US revealed that 20%

organizations use BSC. (Ittner, Larcker and Randall, 2003). Zuriekat, M. and Al-Sharari (2008) revealed the fact that 40% Jordanian Commercial Banks and Insurance Companies use BSC to evaluate their performance. Anand, Sahay & Saha (2005) through a survey method found that the adoption rate of BSC in India is 45.28% and ICICI and Axis Bank have implemented the Process of Implementation of Balanced Scorecard. Balanced Scorecard Institute report on adoption of Balanced Scorecard shows that Allfirst Bank, Chemical Bank, Fannie Mae Bank, National City Bank and Well Fargo Banks of USA, Bank of Tokyo-Mitsubishi of Japan and Lloyds TSB Bank of UK have implemented Balanced Scorecard.

Oghuvwu and Omoye (2016) stated that adoption of Balanced Scorecard in developing economies is lower than developed countries that may be due to many reasons like mangers perceives that BSC has already been embedded in alternative management approaches being adopted or they assume that this tool do not confer any significant effects on organizations' goals and objectives.

1.12 Conclusion:

It can be concluded that Balanced Scorecard has evolved as a worthwhile instrument for measuring and evaluating the performance of organizations from a wider angle than a financial view. It proves to be an imperative tool in the modern era where managing performance in the information age and changed business scenario is a key challenge in front of banks. Integration of other perspectives which affects the performance of organizations can also be done in the basic structure of the BSC as it allows to keep in consideration the interest of all key stakeholders. Social and environment sustainability are the two important aspects which now a days companies should focus upon to gain a sustainable competitive edge. Integrating these two aspects with the traditional Balanced Scorecard and then measuring overall performance of public and private sector banks in India is an attempt undertaken in this study to highlight the importance and benefits of Balanced Scorecard in banking sector.

The ideas put forth here in this chapter on conceptual framework, Financial, Customer and Internal Business Perspectives are based on articles published by us in different journals (Reference no. 32, 33, 34 & 35).

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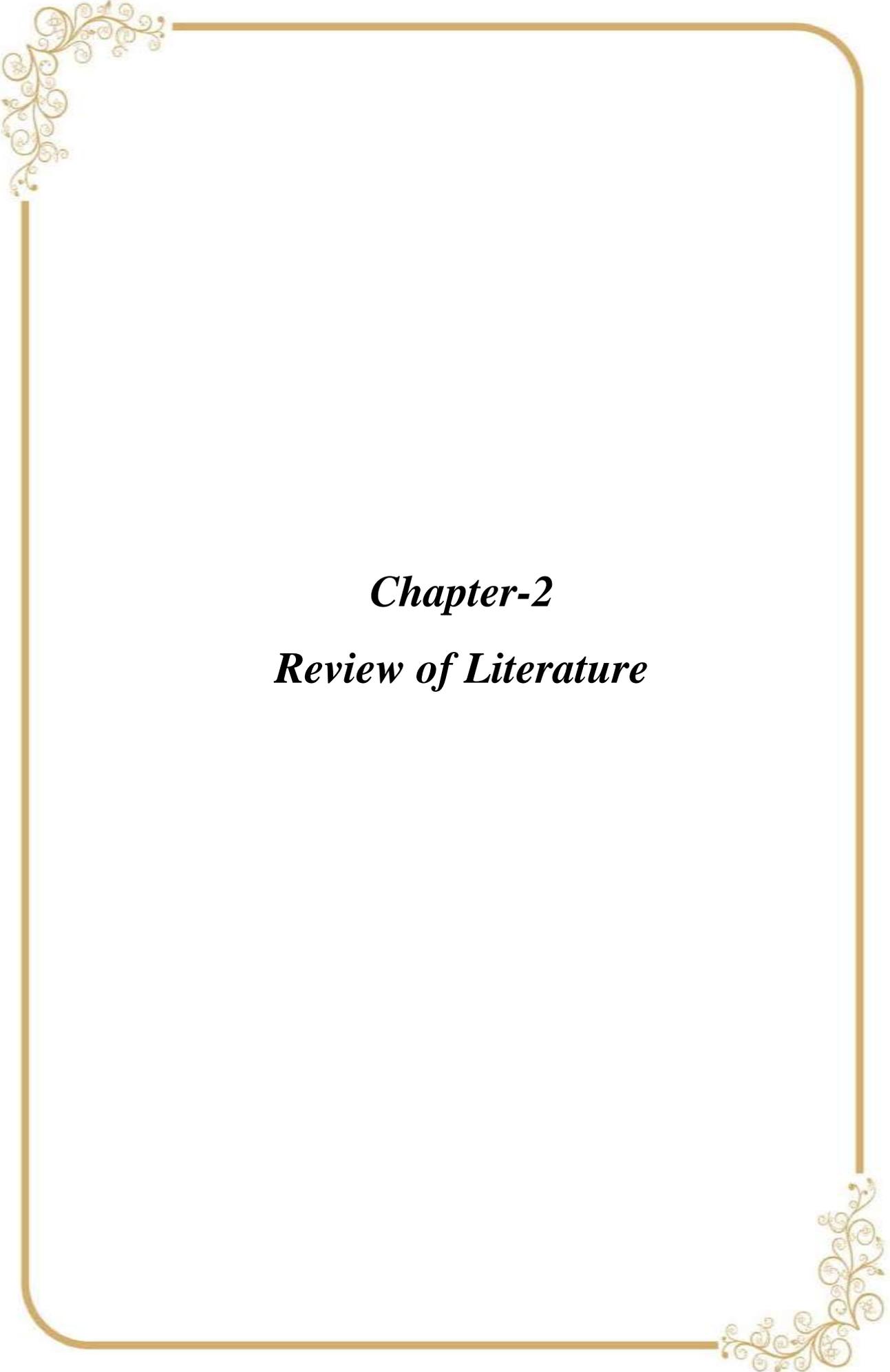
Chapter-2
Review of Literature

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CHAPTER-2
REVIEW OF LITERATURE

2.1 Introduction:

The previous chapter highlighted the overview on transformed scenario of banking industry in India, role and importance of performance measurement systems in improving and managing performance of organizations, performance measurement systems in banking industry, evolution and the conceptual framework of Balanced Scorecard, advantages and drawbacks of Balanced Scorecard, prerequisites for implementing the Balanced Scorecard, importance of incorporating social and environment issues through sustainability Balanced Scorecard, current status of adoption rate of BSC in Corporates etc. Since the inception of Balanced Scorecard, various organizations adopted Balanced Scorecard as a comprehensive performance measurement tool. Different conceptual and empirical studies have been carried out by different authors to identify the usefulness, development in conceptual framework of Balanced Scorecard, its adoption, implementation in different companies and different sectors. The present chapter is an attempt to enlighten the brief review on the literature of the studies conducted on conceptual overviews of BSC, its uses, implementation and implications at national and international level in banking industry.

2.2 Objectives of Review of Literature:

The key concern of this chapter is to review the available literature and to gain in-depth insights on Balanced Scorecard with ascertaining the research gap on this tool of strategic performance and measurement in banking sector. To attain this objective following supplementary objectives have been framed and accomplished in the next sections of the study:

1. Understanding the fundamentals of Balanced Scorecard.
2. Getting acquainted with the level of uses and implementation of Balanced Scorecard in banking industry at national and international level.

3. Getting familiar with the BSC model, statistical tools & techniques and different key performance indicators used in measuring performance through Balanced Scorecard in banks.

4. Identifying the research gap in the field of Balanced Scorecard in banking sector in India.

2.3 Scope of Review of Literature:

The scope of review of literature comprises of the Indian as well as global views available in various books, journals, research papers, project reports, thesis, websites etc. The concerned available literature has been studied and presented into the following categories:

   (i)   Literature Review on Conceptual Structure of Balanced Scorecard.

   a. Studies at International Level

   b. Studies at National Level

   (ii) Literature Review of Different Theoretical and Empirical Articles on Balanced Scorecard in Banking Sector

   a. Studies at International Level

   b. Studies at National Level

   (iii) Literature Review of Research Reports/Dissertations on Balanced Scorecard in Banking Sector.

   a. Review of Master's thesis

   b. Review of Doctoral thesis

   (iv) Literature Review on Incorporating Sustainability Issues into Balanced Scorecard

2.4 Literature Review on Conceptual Structure of Balanced Scorecard

2.4.1 Studies at International Level:

Kaplan and Norton (1992), in their article have exhibited the concept of Balanced Scorecard. This article was summarized on a multi-company Research project to study performance measurement in companies whose intangible assets played a central role in value creation. They asserted that in order to improve the

management of the intangible assets, integration of measurement of intangible assets into existing management systems by the companies it is needed.

Kaplan and Norton (1993) concluded with an opinion to learn how to create a balanced scorecard that reflects company's mission and strategy before building the strategy map. It has been opined to define corporate objectives and metrics within each of the four scorecard perspectives viz. Financial, Customer, Internal Business Process and Learning & Growth. They emphasised that these metrics will clarify how you will look different to your customers and shareholders when you reach to your goals. It will also indicate how your internal processes as well as your ability to innovate and grow should change.

Kaplan and Norton (1996) concluded that after defining strategic objectives and measures and measuring intangible assets strategic readiness, employee's everyday actions should be link to company's long term goals, and your vision should be translated into metrics that everyone can understand. It has been suggested to communicate high level goals and link them to individual performance and compensation and use scorecard data to test and revise your theories. They have argued in their paper that in order to compete and for survival in the information age where it plays pivotal role within the trade and industry, it is not enough to rely solely on financial measures because they could depict an incorrect picture of the effectiveness and profitability of a business.

Kaplan and Norton (2000) in their article concluded that to execute the strategy, it must be communicated throughout the organization so employees can see how their everyday actions support or hamper the strategy and for this ,use a strategy map which is a new tool built on the balanced scorecard. A strategy map is a visual framework for the corporate objectives within the four perspectives of balanced scorecard. Strategy map put into focus the often unclear line of sight between corporate strategy and activities of employees every day which significantly enhances collaboration and coordination.

Malina and Selto (2001) conducted an empirical study to analyse the effectiveness of the Balanced Scorecard (BSC) as a management control and strategy communication device. They first reviewed the management control and communication literatures that identify attributes of effective control and

communication of strategy, and then offered a model of control and communication applicable to the BSC. The study then analysed the empirical interviews and archival data to assess the control and communication effectiveness of the BSC. The study has included data from multiple divisions of a large, international manufacturing company. The study accumulated evidence on the challenges of designing and implementing the BSC faced by large and well- funded company. The results indicated that there is a disagreement and tension exist between top and middle level management regarding the appropriateness of specific aspect of BSC as a communication, control and evaluation mechanism.

Salem, Hasnan and Osman (2012) in their exploratory paper discussed the benefits, strengths and weaknesses of Balanced Scorecard over other performance measurement systems like TQM, ISO 4001, Performance Pyramid, Performance Prism, EFQM Excellence Model, MBO, Blue Ocean Strategy, environmental shareholder value. It also discussed and evaluated the ability of BSC to integrate the social and environment issues. Unidirectional approach of BSC, negligence of time aspect, lack of the rationale, lack of the integration between top-level and operational level measures, internal and ineffective focus to attain corporate sustainability were found as critical points in BSC. Besides having many criticism BSC has the ability to present the different extent of performance over other performance measurement systems that can measure the different aspects in the company including financial and non-financial measures. It has been strongly suggested that BSC has the ability to incorporate social and environment issues and future studies should focus on these issues.

Asa, Prasad and Htay (2013) in their theoretical paper tried to investigate whether the implementation of BSC as a paradigm measurement tool contributes in improving and synergy of the business strategy and firm performance. The study concluded that an organization must add value on all the perspectives of Balanced Scorecard both in long term and short term and should be able to keep balance between the financial and non-financial aspects of the business. The study found BSC a valid tool that helps in improving firm's performance, achieving organizational goals and contributes to the synergy of strategy. For the successful

implementation of BSC, it has been suggested that it must be supported by different metrics, mechanism and factors to achieve long-term profitability.

Abdullah, Umair, Rashid and Naeem (2013) reviewed the development of BSC through analysis of secondary data and concluded that BSC must not focus only on past, it must be future oriented to affect future organizational performance. They claimed that approach of BSC is somewhat objective hence, there is a need of subjective approach also that must be taken into consideration by manager for performance evaluation. Further they added, common BSC measures should be adopted by all SBU's and organizations to ensure uniformity in performance evaluation and responsiveness of BSC to external situation of business environment can be ensured.

Zizlavsky (2014), in his theoretical paper concluded that Balanced Scorecard is a strategic control system that has the merit of balance between financial and non-financial metrics and between internal and external factors affecting business innovation strategy. It links strategic objectives (long-term orientation) with annual budgets (short-term orientation), clarifies and gains consensus about strategic goals, tracks individual and collective performances, and defines and communicates company goals to its internal and external stakeholders. It has been suggested that more studies on implementation of innovative performance measurement systems should be conducted on different business sectors.

Oghuvwu and Omoye (2016), in their study tried to examine the various determinants which affects the adoption of Balanced Scorecard as a performance measurement tool by different organization. For this purpose researchers adopted library based methodology and reviewed the extensive literature. It has been found through survey of empirical literature that the adoption rate of Balanced Scorecard in developing companies is at growing stage. It has also been found that adopting of Balanced Scorecard as Strategic Performance Measurement & Management tool depends on the different factors. These factors can be the firm size, attitudinal factors, top management support, organizational culture, environmental factors etc. The study recommended to incorporate environment and culture as a fifth perspective of BSC model as there is a positive relationship found between environment uncertainty and BSC usage.

2.4.2 Studies at National Level:

Anand, Sahay and Saha (2005) in their article identified the extent of the usage of the Balanced Scorecard by Corporate India and explored the usage of all the four perspectives of BSC by Indian firms in their performance scorecard. The study also tried to identify the key performance indicators in different perspective of scorecard. For the study, a questionnaire based survey of 500 private sector companies and 75 most valuable PSUs has been conducted. The survey asked the CFO's to respond on a likert scale of 0 to 5. 53 companies has responded and constituted the sample size. The Student's t-test has been used to investigate whether management's motivation and decision choices differ across firm's cost management systems, performance measurement and control systems and sector. It was found that the adoption rate of Balanced Scorecard in India is 45.28% as compared to 43.90% in the US. The financial perspective has been found to be the most important perspective followed by Customer, Shareholder, internal business and learning and growth perspective and then the environmental, social, and employees' perspective. It has been concluded that the difficulty in assigning weightage to the different perspectives and establishment of cause and effective relationship among these perspectives are the most critical issues in the implementation of the Balanced Scorecard in Corporate India. The implementation of BSC helps in identifying cost reduction opportunities which results in improvement in bottom line.

IM Pandey (2005) in his article concluded that Balanced Scorecard emerged as a performance improvement tool in strategic planning process. It helps in tracking the performance and providing quick feedback for control and evaluation. It is a simple, systematic and easy to understand approach for performance measurement. He asserted that BSC need not to be restricted to four perspectives. It is needed to consider requirements of all stakeholders. They suggested social and environment concerns as possible perspectives which need to be added in BSC. They also asserted that success of BSC depends on identification of financial and non-financial variables clearly with their accurate and objective measurement and on linking the performance with rewards and penalties. They further recommended to prove the assumption that BSC aligns with strategy and leads to better

communication and motivation which cause better performance through documenting the experiences of the Balanced Scorecard companies and establishing cause-effect relationship.

Ghosh and Mukerjee (2006) presented a theoretical overview on measuring Corporate Performance through Balanced Scorecard. They concluded that although Balanced Scorecard tool has theoretical superiority and comprehensiveness yet it has some practical difficulties in its development and implementation. The study suggested that to make BSC approach more useful the concept should be more refined and for its successful deployment a better understanding of the critical success factors should be developed. Proficiency in Balanced Scorecard approach can lead organization access their Vision and Strategies by measuring their performance against established goals. It can assist management in steering the organization in right direction and face competitive challenges. They specifically asserted that perspective of CSR is missing in Balanced Scorecard which should be added to achieve enterprise profitability and achieve sustainable growth and development.

Singh and Sohani (2014) conceptualized in their paper on how to enhance organizational performance through Balanced Scorecard with strategic management activities. The authors discussed the different phases of BSC implementation as a methodology for facilitating strategic planning for organizations and to examine the process of identifying performance measures, linking department's BSC to the overall BSC for the organization. They also examined the cause and effect relationship between performance measures and linkages between the overall objectives for the department and the goals of the organization. They concluded that BSC is a very significant strategic management tool which helps an organization not only to boost performance but also helps in determining the strategies needed to be customized for achieving long term objectives. The application of BSC ensures the consistency of vision and action which is the first step towards the development of a successful organization. Appropriate implementation can ensure the development of capabilities within an organization which will help it in developing a competitive advantage.

Muniraju & Nadhiya (2017), in their conceptual paper tried to explain the importance of Balanced Scorecard and find out the ways how BSC can help Indian companies to achieve competitive advantage over their competitors. They also tried to establish a relationship between sustainable competitive edge and performance measurement through a descriptive and theoretical study. Secondary data through different books, literature, business reports, web sources etc. have been used for the study. It has been found that there are too many opportunities for companies in India to explore and maximum utilization of the resources during 2012 -2030. To take advantage of the opportunities companies should work to achieve sustainable competitive advantage through focusing on developing and executing sound strategies. Balanced Scorecard has been found as a strong management tool which could help companies in developing the strategies, converting them into measurable terms, and communicating it to the lower level fir its execution with the help of strategy mapping and subsequently gaining a competitive advantage. The authors suggested that more acceptance of BSC as best tool for performance measurement can only be achieved through providing training and expertise to top level management so that suitable business strategies can be formulated that suits to the need of the company and companies can gain competitive advantages.

2.5 Literature Review of Different Theoretical and Empirical Articles on Balanced Scorecard with Reference to Banking Sector

2.5.1 Studies at International Level:

Ashton (1998) in his article on "Balanced Scorecard Benefits: Nat West Bank", examined National Westminster Bank and its use of BSC to improve quality, service, and speed and to help change the corporate culture from its traditional command and control structure to a culture based upon "Empowerment and coaching". Nat west deemed the effort successful in aligning performance measurement to the bank's long term strategic goals and to enhance the bank's ability to better manage the business and its resources, and in establishing a performance measurement system that was consistent and understood by employees at all levels. BSC helps to overcome the traditional bias in banking toward financial reporting with the aid of introducing a system which takes a long-term view and takes account of factors such as learning and innovation.

Davis and Albright (2004) investigated the effect on financial performance of sample bank branches after implementing Balanced Scorecard. For this purpose, a quasi-experimental design was used. Out of 14 branches of a bank, 4 branches were selected in the experimental group (BSC) and five branches in the control (Non-BSC) group. CKFM (Composite Key Financial Measures) were used as a dependent measure that all branches seek to maximize. The study period taken was from June 1999 to June 2001. Non-Parametric Wilcoxon Signed rank test was applied on both groups of branches separately to determine if there is a significant change in the performance within either group. The second comparison test was applied to determine the change in performance improvement level of experimental division branches is greater than control division branches. The results indicated that performance of experimental branches improved subsequently after implementation of BSC while the performance of control branches did not improve. It has been concluded that the treatment of the BSC had produced a significant and positive effect on dependent measure i.e. CKFM. It was suggested if non-financial measures would have been incorporated logically and systematically, it would eventually result in improved financial performance backed by BSC method.

Wu, Tzeng and Chen (2009) evaluated the performance of banks based on Balanced Scorecard using A Fuzzy MCDM Approach. Firstly, 55 evaluation indexes were scrutinized from the previous studies on banking performance. 23 indexes that fits for the performance evaluation of banks were selected through expert questionnaires. Four BSC perspectives were ranked in the order of their relative importance i.e. Customer, Finance, learning & Growth and internal process using FAHP process. Customer satisfaction, return on assets, earning per share, customer retention rate and profit per customer were found as top five evaluation indexes. U bank, C Bank and S bank respectively were ranked on the basis of performance using MCDM analytical methods. The authors suggested that it is not necessary that one performance evaluation index fits to all so it should be tailored as per the organizations' goals as well as individual goals and future research should include other analytical methods to investigate the causal relationship among performance evaluation indexes of the BSC.

Vola, Broccardo and Truent (2009) in their paper studied the implementation of a management control system based on Balanced Scorecard in a Co-operative Credit Bank in Piedmont. An empirical analysis through exploratory case study method has been used. The study concluded that a control system is needed based on comprehensive framework that translates company's strategy into a coherent set of performance measures for the bank. They suggested that a logical model in strategic process is necessary in which a strategic map is designed and then the Balanced Scorecard is formalized in addition to the need of alignment of the organizational units.

Al-Mawali, Zainuddin and Ali (2010) empirically investigated the extent of Balanced Scorecard usage and it effect on the financial performance of the Branches in Jordan Banking Industry. For accomplishing the said objective, 120 branches were randomly selected as a sample out of 480 branches. A questionnaire was framed to know the usage frequency of performance measures used by branches. 5 measures under each perspective namely: Financial, Customer, employees and Product/Service oriented indicators were included. Five-Point likert scale 1 "not used at all" to 5 "to a greater extent" was used. BSC was considered as an independent variable and financial performance as a dependent variable. To indicate the reliability of the scale and to test the hypotheses Cronbach Alpha Value and multiple regression were used respectively. A positive relationship was found between the branches' financial performance and the overall BSC measures uses. Branches which uses more customer oriented indicators and product/service oriented indicators experienced enhancement in financial performance. The study also revealed that many of the branches in Jordan still relied heavily on use of financial measures and financial indicators are insufficient to present a true picture of branch performance. It was further suggested that future research should focus on examining large samples and further than banking by modifying architecture of BSC as per the mission and vision of the organization.

Fago (2010) compared the overall performance of two commercial banks of Nepal using Balanced Scorecard from four different interlinked perspectives. For this study primary data have been collected through survey method using questionnaires and secondary data have been collected through banks websites and annual reports.

The data have been analysed through percentage, growth rates, ratios and weighted average mean and presented using simple graphs and tables. The study concluded that Bank B has been found stronger than Bank A in the overall performance measurement of banks on the basis of four perspectives of BSC. The author suggested that future research can be extended by increasing number of sample firms and observations and more refined statistical techniques can be used for data processing and analysis.

Umar and Olatunde (2011), evaluated the performance of four consolidated Nigerian Banks by using non-financial measures. They identified the 7 non-financial measures of bank performance out of 43 measures through factor analysis and assessed the overall performance of banks. Simple Random Sampling was used to select samples (customers of 4 Banks). Structured disguised Questionnaires were used to collect the data from 303 customers. Barlitt test of Sphericity for testing hypothesis and Kaiser-Meyer-Olkin method was used to measure sampling adequacy and multiple regression was used to find out variation caused by Non-financial measure in banks performance. They identified seven non-financial measures named: Cost of transaction, Information technology, service delivery, quality of service, bank offering, loan application and customer satisfaction and suggested that these measures should be adopted to improve financial performance of consolidated banks fundamentally.

Tekar, Teker and Kent (2011), conducted an empirical research in Turkey to evaluate the financial performance of 13 commercial banks and ranked them for each year using a performance indexing approach from the year 2003 to 2010. The web pages of Turkish Banks Association have been used for data collection. This study concluded that non- financial performance measures have become more important in recent years for measuring overall performance of any firm and the inclusion of measures like higher customer satisfaction, effective management and leadership and using advanced technology in banking operations makes valuable contribution to the measurement of overall performance of banks rather than limiting the measures by financials only.

Shaverdi, Akbari and Tafti (2011) evaluated the performance of 3 non-governmental banks of Iran using the Multiple Criteria Decision Making Model

(MCDM) and Balanced Scorecard. For achieving the said objectives, the authors have gone through the concerned literature and selected 21 indexes out of 51 indexes with the help of questionnaire distributed to 12 academicians and 12 experienced banking experts. After that weights have been assigned to all perspectives of BSC and indexes using Fuzzy Analytical Hierarchical Process method. The finding of the study highlighted that customer perspective is the most important perspective then is the financial one. Internal business process perspectives stood on third position whereas learning and development perspective was the last one. Customer satisfaction, return on assets, customer retention rate, earning per share and profit per customer were found as 5 important indexes with the highest weights. The sampled bank were then ranked as E bank, P bank and then the S bank using MCDM. The study concluded that customers and market share rate are the crucial indexes that should be recognized by the banks. Banks should first develop new service items, technology, and improved promotions, focus on customer satisfaction and then focus on financial returns. It has been suggested that other analytical tools and performance evaluation techniques can be used to assess and evaluate the relationship among indexes and this approach can be extended in other industries too.

Amiri, Amiri and Amiri (2012) evaluated the performance of banks on Balanced Scorecard using an Analytical Network Process Approach. The authors identified the evaluation indexes from the previous studies on banking performance and then 23 indexes were scrutinized by expert questionnaire. ANP model was used to identify the relative importance of BSC performance for the performance evaluation of banks with respect to success that consisted of main factors i.e. strategic factors, technical factors and operational factors. Then the corresponding weights of BSC indexes were identified to evaluate the performance of banks. One bank out of sample of four banks was found to the poor performer as it had the lowest performance on financial dimension due to lowest "return on assets" index and lowest performance on customer perspective. The study suggested that Return on assets must be considered as a crucial factor in bank's growth strategy. Banks should try to increase their sales and improve promotion of their product and services to attract new customers as these indexes are the key success factors.

Najjar and Kalaf (2012) designed a Balanced Scorecard to measure the performance of Large Local Bank (LLB) in Iraq from the year 2006 to 2009. For this purpose, the authors along with the bank's administrators developed a cause-effect relationship to link bank's objectives with the strategic goals and then selected five measures under each perspective of BSC. Data for the measures have been collected through bank's financial statements, monthly, quarterly and annual reports. After compiling the data on each perspective, a performance scale has been identified for each measure and 50 score points have been divided on the elements of each scale. Performance of LLB has been measured using this scale for the study period. The performance of the bank was found weak during the first three years of the study with 47%, 43% and 47% respectively and fair in the last year with 58%. The study recommended that banks should implement BSC as a strategic and valuable performance measurement tool and integrate other perspectives with financial perspective to view performance. It has been suggested to conduct more studies to identify the relevant measures of the BSC for the banking sector in Iraq and focus is required to study the contingent factors which will facilitate the implementation of the BSC such as organization culture & structure, environment and technology.

Wu (2012) constructed a strategy map for banks by linking KPI's of the Balanced Scorecard into a structured evaluation methodology. For this purpose the author selected the suitable performance measurement indicators from the relevant literature and then these indicators were screened by committee of experts who had experienced in banking. The Decision Making Trial and Evaluation Laboratory method (DEMATEL) was employed to determine the causal relationship between the selected KPI's. Critical, central and influential factors were identified and a visualized strategy map with logical links was framed using this method to improve the banking performance. The study revealed that Customer Perspective is the key effect factor among all the BSC perspectives. Customer satisfaction in customer perspective was found as an important critical lag indicator to measure the bank performance. Employee stability in Learning and growth perspective was found to be the most crucial factor which strongly influences customer satisfaction and moderately influences professional training, employee satisfaction, customer

retention and earning per share. In financial perspective, earning per share was identified as central indicator and main effect factor which was influenced by many factors especially market share arte, sales performance, management performance. It was concluded that organizations should concentrate on success of non-financial measures before achieving success on financial measures. As each organization is unique so it should choose its own different performance indicators that reflects its performance.

Karasneh and Al-Dahir (2012) studied the impact of IT Balanced Scorecard on financial performance. Sample of the study included 122 questionnaires filled through individual survey from 19 banks employees from Jordanian Banking Sector and was analysed through SPSS. Questionnaire was pre tested by 9 Academicians of Yarmouk University. Cronbach's coefficient alpha was used to test the internal consistency and reliability of the measures. Data were analysed through SPSS software using descriptive Statistic including mean, standard deviation and percentages. A significant relationship between IT application and the internal business process, financial and strategic competitiveness perspective and no significant relationship with customers and employees has been found. The study recommended that for enhancing continuous improvement and job satisfaction among their employees, banks should pay attention to their all employees and frame policies and practices to make accurate decision. As banks are concerned with developing and applying information technology services to attract new customers, satisfy customers, retain customer loyalty, banks should take insights from consumers through follow up services and customer feedback surveys.

Ombuna, Omido, Garashi, Odera and Okaka (2013), studied the impact of Balanced Scorecard Usage on the Performance of Commercial Banks. The study was conducted in Nakuru district of Kenya where convenient sampling was utilized to select 72 respondents from 18 commercial banks in Nakuru. A likert scale of 1 to 5 was employed to measure the degree of response in terms of strength or weakness. The data were analysed through descriptive statistics and Pearson's correlation was utilized to test the relationship between 2 or more variables. They concluded that BSC and its implementation is positively correlated with organizations' mission & strategy and involvement of employees. BSC provides

feedback on the internal processes and external outcomes in order to continuously improve strategic performance. The effectiveness of BSC usage depends on organization dynamics and adoption of the manner of execution and monitoring and evaluation procedures. They recommended that banks should develop those products and services that have a competitive advantage and are able to satisfy the needs of customers.

Asante (2013) identified the different performance measures used by local Ghanaian banks and divisional branch managers. A sample of six Ghanaian banks was taken for the study. For the collection of primary data, a survey method using structured and un-structured interviews and questionnaires was used. Secondary data have been gathered through various publication of annual reports during 2009-2012. It has been concluded that the local Ghanaian banks use both financial and non-financial measures in assessing the performance of their branches. Financial measures were considered more important than non-financial measures and majority of banks used different-different measures for assessing the performance of branches and branch managers.

Eskandari, Roudabr and Kamifiroozi (2013) presented a structured performance evaluation methodology to link the key performance indicators into a strategy map of the Balanced Scorecard for banking institutions. For this purpose, a sample bank was considered as an example. Firstly key performance indicators under each perspective of balanced scorecard for measuring banking performance have been selected from the relevant literature. These were consulted and screened by committee of 12 experts from banking industry and academia. Then a causal relationship analysis on the selected KPI's was conducted using DEMATEL technique and a strategy map of the BSC was constructed. Perspectives and indicators were then ranked using Analytical Network Process. The results indicated that DEMATEL method demonstrate a clear road map which assist management in prioritizing the performance indicators and focus on the strategies related to crucial indicators Customer perspective was ranked on top and learning & growth on last. Customer satisfaction, operating revenues, customer retention rate, employee satisfaction and sales performance were found to be the crucial indicators as they ranked on top five. It was suggested that a constructed strategy

map helps management in identifying the areas that requires improvement on priority basis so that they can invest their resources and efforts in those areas.

Tominac (2014) in his study aimed to explore the understanding on development of Balanced Scorecard and its application in banks for the measurement of their performance. The study was descriptive in nature. The study concluded that reporting on financial indicators is not enough because it is based on historical data and directly not connected with the bank's long term goals. He asserted that Balanced Scorecard encompasses all the hidden resources to ensure bank's leading position in market and helps all employees in understanding the strategy of the bank in a smooth manner. This model helps to understand the strengths and weaknesses of the organization and helps to identify the loss and profitable areas. Although implementation of BSC is expensive, time consuming and require much efforts but still its advantages dominate its limitations.

Tariq, Ahmed, Rafi and Ahmed (2014) investigated the practicability and effectiveness of implementing the Balanced Scorecard (BSC) in improving the performance of Banking Sector in Pakistan. Data were collected using Non-Probability Sampling method. A sample of 400 bankers from different banks have been selected for survey interview through close ended questionnaire. The regression equation and ANOVA were used to test the reliability and validity of the data series. It was found that 4 hypotheses out of 5 were accepted. Financial, internal control, learning and growth and customer perspective have significant positive effect on Bank's Overall performance especially financial perspective. The vision and strategy perspective have insignificant role in Bank's performance. Customer satisfaction and training and growth of employees have been opined as core elements for the success of banks. Setting standards for customer preferences, getting continuous feedback of customers and communication with them, made customers being loyal with the banks. Authors stated that implementation of BSC in Banks gives favourable outcomes in financial, customer, internal business processes and learning & growth perspectives.

Ozturk & Coskun (2014) in their article revealed the theoretical background on implementation of the Balanced Scorecard in Banking Industry. The study concluded that BSC is comprehensive method to offer quality and efficient financial

services. Implementation of BSC helps in getting desired results in strategic performance measurement and it also affects decision making process. The study revealed that different steps have been described in earlier studies for successful implementation of BSC. It was found that innovations should be adopted in banking sector to gain competitive advantage at international level and it is more beneficial to prepare the Balanced Scorecard for the bank than to evaluate performance on financial measures.

Michael and Tobi (2014) identified the Performance Measurement Systems in the United Kingdom (UK) retail banking industry. A survey questionnaire was used to collect data. A sample size of 15 retail banks of UK was selected from multiple stage sampling method. Charts, percentage analysis, Wilcoxon signed rank test, Pearson Chi-square, Kruskal Wallis test and Mann-Whitney u test were applied for analysis of data. It was found that the Balanced Scorecard, performance dashboards and use of financial measures are the three most common PMS utilized in UK retail banking industry. There are strong indicators that represent a relationship between the PMS and the Bank's strategy. No significant association between specific bank characteristic like age, base/ownership structure, market position and the PMS adopted in the banking industry was found. The study recommended that in order to develop an efficient PMS, organisational strategies should be linked with the performance measures. This linkage will increase the direct relationship with the strategies and simultaneously will improve the appropriateness within the industry. It was also that UK Banks should consider more externalities and all stakeholders while creating their PMS.

Shahroodi and Bahraloloom (2014) evaluated the efficiency of Sadrat Bank Branches in Guilan by Data Envelopment Analysis (DEA) using Balanced Scorecard approach. The sample of the study included 29 branches of main Iranian Bank. The data have been collected through bank data base. Questionnaire has been used to collect data on Customer Satisfaction. Firstly effective factors that indicates branch performance were identified using Balanced Scorecard. Then input and output data have been collected to apply DEA and then the performance of branches were evaluated and final ranking were given to branches. It was found that 8

branches (40%) gained efficient scores 1 in the year 2010. Rest all branches were considered inefficient as there score was between 0-1.

Ibrahim and Murtala (2015) examined the perceptions of Nigerian banks on the relevance of BSC as a technique for assessing performance. A judgemental sampling technique was used to select the 11 banks out of 21 banks operating in the Gombe State of Nigeria. Data was collected using questionnaire filled by bank executives from top management. 43 questionnaire out of 55 were duly filled, returned and used for analysis. Descriptive statistics was used for the data analysis. Kruskal Wallis ANOVA test was applied to find whether statistical differences exist among the responses on the issues raised by banks on balanced scorecard. To carry out all this analysis SPSS 19.0 was used. It was concluded that management of Nigerian banks recognized the importance of using Balanced Scorecard for Performance Evaluation. The full structure of BSC comprising all its perspectives was not seen in the banks and this had threatened their performance measurement systems. It has been augmented that the use of BSC helps in increasing employee's satisfaction and their performance which eventually will increase the profitability of banks.

Akter (2015), in her research paper explored the scope of Adopting Multidimensional Performance Measurement Models in Banking Sector of Bangladesh. The study was based on primary data which was collected through survey using questionnaire to be filled by bank professionals. 57 branches of 19 private commercial banks from Bangladesh were selected as sample. 150 filled questionnaires out of 171 distributed questionnaires have been used for analysis.30 performance measures were selected from different performance areas after consulting with bank professionals. The data were analysed using SPSS 16.00. Pearson's Correlation Coefficient and factor analysis were used to test the relationship between variables and to identify contributing factors that helps in choosing different performance measures respectively. It was found that banks in Bangladesh consider nine performance factors to judge their overall performance. The factors are market Indicator, HRM, Effectiveness of Internal process, Marketing Strategy Implementation, Adaptability to changes, Customer Perception, Efficiency of management, Earning Capacity and Social Image. A scope of

adoption of multidimensional performance measurement models like BSC exists in Bangladeshi Banks.

Rostami, Goudarzi and Zaj (2015) defined the Balanced Scorecard Model for bank as an evaluation system and examined the aspects, importance and related indicators of BSC. For this purpose, 56 indicators were selected on the basis of prior studies and literature on BSC and a questionnaire was developed based on five-point likert scale and administered to identify the influential indicators. Data were analysed using SPSS Software and Freidman ranking Test was employed. Nine affecting indicators were identified under each perspective. The second step was taken to investigate the weight of each indicator. For this pair comparison questionnaire based on FAHP Approach was used. It was found that the "market rate" and the "growth rate of customer complaints" and "Customer attract rate" are the most important indicators of customer aspect. "Revenues", "P/E Ratio" and "leverage" are the most important indicators in the financial aspect. The "Electronic transaction share", "performance management" and "research and development costs are the most important indicator in internal processes aspect and "Employee Stability", "loan Per Capita" and "Present Reduction in disciplinary matters" are the most important indicators in learning and growth aspect. It was concluded that the customer aspect is the first cluster, financial is the second, internal process for third and the last one is the learning and growth aspect as found in relative importance in Balanced Scorecard.

Ibrahim (2015) investigated the use of the four perspective of Balanced Scorecard (BSC) as technique for assessing performance by Nigerian Banks. A judgemental/purposive sampling technique was adopted to arrive at the sample of eleven banks in Nigeria. For collection of data, a survey technique using questionnaires was used. Descriptive statistics, percentages, means, medians, modes, standard deviations, minimum points, maximum points were used for analysis of data. The study concluded that Nigerian Banks relied heavily on financial performance measures followed by customer performance measures as a technique for assessing their performance. A comprehensive view of their performance can't be guaranteed without incorporating all the four perspective of BSC. He recommended Nigerian Banks should enhance their performance

measurement systems by balancing their performance measures within the four perspective of BSC.

Rillyan, Satria, Raihan and Wibisono (2016), studied the linkages among Balanced Scorecard Perspectives by taking the case of Indonesian Local Banks and analysed the relationship between financial and non-financial perspective that comes from corporate strategy established by the local banks. Stepwise regression analysis method was used to investigate and compare the relationship among the variables from the corporate strategy which was composed by four perspective of BSC and represents every existed division in the company. The study found 17 strategic variables that significantly influence local bank performances and profitability. These identified variables should be used and optimized by the banks to improve their performance. It was also found that there is a strong relationship among the BSC perspectives proposed in the corporate strategy of the local bank.

Balkovskaya and Filneva (2016) constructed a strategy map of the BSC for banking institutions by taking the Russian regional bank as sample bank. For this, on the basis of unique mission and strategic vision of a sample bank, KPI's have been selected. A questionnaire was used to evaluate the mutual influence among KPI's to be filled by bank managers' own judgement. DEMATEL method was employed in order to identify causal relationship between the KPI's. It was found that transaction efficiency, sales channel development and rationalised processes are three critical factors that need to be enhanced as they have high impact on bank's performance. Automated processes as well as enhanced transaction efficiency help to optimize operations boosting the quality of customer service and therefore increase the number of customers. Developing remote banking channels leads to increase in profitability both directly (Cost Saving) and indirectly (Customer base expansion). It was recommended that BSC should be complemented with some other analytical tools like Analytical Hierarchy Process, Fuzzy Integral etc. to verify causal relationship among the performance indicators.

Dincer, Hacioglu and Yuksel (2016) evaluated the performance of 33 deposit banks of Turkish through BSC using Analytic Network Process Approach and determined which perspective of Balanced scorecard are more significant with respect to the state banks, private banks and foreign banks. It was found that the

financial perspective of BSC has the first rank with 65.7%, customer perspective stood at the second rank with 22.1%, learning& growth perspective stood at the third rank with 6.3% and internal factors has the weakest importance with 5.9%. It was also found that state banks have the highest rank with 53.9% into bank ownership, private owned banks have the second with 36.1% and foreign banks at the last order with 10% in performance based on balanced scorecard.

Baber and Akter (2016) analysed the perspectives of the Balanced Scorecard to assess which perspective has significant impact on the performance measurement and management of banks and developed a BSC model for the banking sector in Bangladesh through extracting the key performance indicators under different perspectives. For the study, 26 banks were selected as the samples using stratified random sampling technique. Data have been collected through self-administered questionnaires that were filled by top managers and senior officers. A five point likert scale ranging from 1(never) to 5(always) has been used to assess the extent to which a bank uses the performance measurement variables. 40 variables or KPI's were extracted from 51 variables explaining a total of 73.84% of the total variance through the factor analysis and a BSC model using these variables has been constructed. The study found that non-financial factors are crucial factors to manage the performance of banks and achieving their strategic goals in the modern banking sector. Regression analysis showed that the perspective of BSC are significantly correlated with each other and the performance of banks is significantly and positively associated with the learning and growth measures of BSC. They suggested that banks should develop their own intellectual competencies to survive in market place. The individual bank may modify the suggested BSC model as per its own needs, goals and capabilities.

Mobarez and Elfar (2016) in their study aimed to determine the role of information technology in raising banking sector performance using Balanced Scorecard (BSC). A sample of 6 commercial banks in Egypt has been taken for the study which was selected on the basis of total assets. All employees of administrative level were selected as sample unit from all selected private and public sector Egyptian commercial banks. The study concluded that the information technology positively affects the performance of banks. Availability of more IT

applications will increase the performance of banks. They suggested that strategic technological programs should be conducted by top management of banks for raising better performance that facilitates work in banks.

Chowdhury and Saha (2016) examined the performance of Bangladeshi Banks through application of Balanced Scorecard. For accomplishing the purpose of the study United Commercial Bank Ltd. was selected as sampled bank selected on the basis of highest operating profits in the year 2014. Data have been collected through bank's annual reports of five years i.e. from 2010 to 2014 and financial stability reports of Bangladeshi banks. Data have been analysed through ratios calculated manually from the financial data compiled from annual reports of each year and then compared with the industry average of private commercial banks listed on Dhaka Stock Exchange. The findings of the study exposed that UCB's performance on financial perspective was good as compared to other perspectives. Improvement in Non-performing loans and ratio of wage bills to total income has been required by the bank. It has also been revealed that information and records on non-financial aspects were not accessible and available. They suggested that banks should convert its strategies into set of objectives and KPI's. They should publish data on information needed for customer, internal business processes and learning & growth perspective in their annual reports. They asserted that as operational and technological developments are taking place in the banking industry of Bangladesh so it is required to re-examine the strategies by the banks and implement BSC for the benefit of all stakeholders, financial sector analysts and bank managers.

Agyeman (2017) in his article assessed the perceptions of selected Ghanaian banks about the effect of BSC for measuring performance in banks. The 3 Ghanaian banks were selected as sample using purposeful sampling technique out of population size of 28 registered commercial or universal banks in Ghana. For collection of data, questionnaire was administered to bank executives. Out of 45 questionnaires 30 were filled and returned. Data have been analysed through descriptive statistics. It was found that the most of the respondents agreed upon all the four perspectives of BSc affect the performance of banks up to a great extent but Ghanaian banks relied on financial measures to a great extent. It has been recommended that banks should pay more attention on incorporating the learning & Growth perspective, Internal

Business Process Perspective and Customer Perspective into the performance measurement system which will simultaneously improve their profitability and performance on financial on financial perspective.

Ataree, Lovy and Oraka have gone through an exploratory Study on how does Balanced Scorecard plays a vital role in improving performance of microfinance banks in special context of Nigeria. Development of the banking sector have substantial impact on the nation' economy. They concluded that BSC presents a complete and consistent approach to enhance the performance of Microfinance banks in the Nigerian Economy. They suggested that there should be performance measures and targets (expected results) in forms of goals that should be set yearly (Decomposed into monthly and weekly goals) in area of finance, customer satisfaction in measurable terms, employee development and product development.

Kasasbeh (2018) in his article identified the barriers and problems in implementation in Jordanian Commercial Banks. For this purpose, 13 questionnaire were distributed in Jordanian Commercial Bank's main branches to be got filled by financial managers. A semi-structured interview with hand delivery of questionnaire has been conducted. Data have been analysed quantitatively to know the implementation rate of BSC in Jordanian Banks and qualitatively to outline the barriers and problems identified through bank's managers on implementation of BSC. It has been found that 4 out of 13 i.e. 30.7% banks have fully implemented the BSC. Rest all were the partial implementers. The main problems associated with implementation of BSC were lack of support of top management, lack of acceptance of BSC due to different organization culture, technical issues like collection of Data, automation, political issues like resistance from employees, lack of software packages, employee's turnover, conceptual issues like misunderstandings on relationship between the organizational strategy and BSC. It has been finally concluded that BSC implementation rate is too low in Jordanian Banking Industry due to many problems. The study recommended to enhance the coverage of more banks for research. Separate case study of particular bank should be conducted to identify the actual problems faced by the banks during BSC implementation.

Al-Dweikat and Nour (2018) in his study identified the critical success factors of Balanced Scorecard at Jordanian Commercial banks and evaluated their effect on

financial performance of banks. For fulfilling the objectives of the study, a five point Likert scale questionnaire has been constructed to collect the data from 120 higher and middle level administrators from Jordanian Commercial Banks which were selected randomly. Data analysis has been done through mean, standard deviation, AMOS programming using confirmatory factors analysis and structural equation modelling. The results concluded that top management, strategic intent, HR aspects and systems & techniques are the critical success factors of Balanced Scorecard which positively effect and helpful in obtaining better financial performance at Jordanian Commercial banks. These factors were considered reliable and valid to achieve excellency in financial performance in the long run.

Sakil, Islam and Islam in their study identified the key performance indicators pertaining to MFI's performance and revealed the influence and significance of those performance indicators from four perspectives of BSC. For the study, two MFI's have been selected and a survey was conducted on employees and microfinance users. Chi square test has been used to analyse the data. The study revealed that ROI and operating self-sufficiency are applicable by MFIs to measure their financial performance. Proper service capability influences the customer satisfaction. Loan sanction time, accurate recording and the way of dealing customer complaints are the most critical internal processes for achieving the customer and shareholder objectives. Employee training, job satisfaction, product and service flexibility are necessary to create a climate that support the MFIs learning and Growth objectives.

Abagissa (2019) assessed the implementation issues of Balanced Scorecard and its challenges from employee and management perspective of different branches of commercial bank of Ethiopia. For accomplishing the objectives of the study, 3 branches out of 109 branches in East Addis Ababa District of CBE were selected through non- probability sampling. 80 Employees and 9 Managers constituted the population of the study. Data have been collected through primary as well as secondary sources. Primary data were collected using questionnaire and semi-structured Interview. Data have been analysed through tables, charts and graphs. It has been found that the implementation of BSC has benefitted bank in many ways such as alignment of day to day activities to the strategy, improvement in service

delivery system and organization performance, improved understanding of Employees towards bank vision, mission & values and enhanced value. It was also found that BSC implementation has several challenges too. It primarily includes lack of leadership commitment and support with reference to create awareness for employees, focus of top management on strategy formulation rather than on strategy implementation, lack of readiness of employees in terms of mentality, skills and competence on BSC implementation, poor monitoring and evaluation system, lack of linkage with reward systems etc. The author further suggested that in order to alleviate these problems, bank should work on changing the attitude and perception of employees towards BSC through promoting the benefits of BSC.

Nnamseh and Umoh (2019) examined the effect of Balanced Scorecard on the performance of Nigerian Banks. For this, ex-post facto research design has been adopted as it involved the historical data of banks from the year 2007-2017. BSC perspectives viz. customer, internal business process, learning and growth and financial perspective were taken as independent variables and Bank's performance as dependent variable. 5 Banks out of 22 licensed bank in Nigeria were taken as sampled banks. A multiple regression model was used to ascertain the nature of relationship between dependent and independent variables and significance of degree of effect of BSC on the bank performance. It has been found that customer perspective and internal business process perspective had a significant impact on bank's performance whereas financial and learning & growth perspective do not have a significant impact on bank's performance in Nigeria. The study proved that relying solely on financial indicators alone for measuring bank performance is not enough. An approach that measure performance from different perspectives is needed. It has been recommended that Nigerian banks should adopt BSC model to measure, manage and report their performance. Banks should also focus more on creating more strategies on customer related issues to acquire more business and sustain their performance. Banks should also invest more on deployment of relevant technology and infrastructure, management efficiency and sound credit management. In regard to learning and growth perspective banks are required to address issues related to employees such as workforce diversity, growth in no. of employees and staff productivity.

Turshan and Karim (2020) investigated the effect of BSC on the financial performance and relationship between both BSC and financial performance. The study was conducted on 14 banks operating in Palestine. For the said purpose, both primary and secondary data sources have been used. A questionnaire was framed and distributed to 130 respondents. Respondents were the employees of bank which included the branch managers, head of departments, directors of departments and financial controllers. Financial performance was used as a dependent variable and financial, customer, internal business process perspective and innovation, growth and learning perspective as independent variables. A multiple regression model was used to analyse the data. It has been found that BSC model can be used to improve the performance of banks in Palestine. Out of 4 perspective of BSC, customer's perspective did not have the effect on financial performance of banks as other perspective has. It has been recommended that banks should implement BSC as an integrated system for strategic performance management and as a means for decision making. Its implementation enhances the competitive position and financial performance of banks. Banks in Palestine need to pay more attention on strategy and measurements that are included in customer perspective of BSC.

2.5.2 Studies at National Level:

Kochhar (2004), in a seminar on "Balanced Scorecard in Indian banks", highlighted the various challenges faced by banking industry and role of the scorecard. She said BSC will help the organization in operationalized strategy, aligning employee's goals to that of organization, ensuring a focus across multiple perspectives and enabling flexibility. She also highlighted how BSC has benefited the ICICI Bank in the various areas like rapid growth, strategic consistency despite scale and diversity and systematic and objective performance evaluation. It has also been recommended that performance measures should be output based rather than input based and scorecards should be balanced for business unit as whole. BSC can be a base for gaining sustained future growth & value creation.

Anand (2004), in the seminar on "Balanced Scorecard in Indian Banks" highlighted the various issues facing the banking industry like improving service quality by focusing on the client to improve profitability. He pointed out that profitable customers need to be identified and offered differentiated product and services,

customer retention and utilization rates of products and services. He also enlisted various barriers to strategy implementation and various key drivers for scorecard implementation. Existence of strategic planning process, clarity between scorecard and EVA / TQM / Six Sigma, Alignment of individual and enterprise performance, communicating scorecard and BSC as a first step in strategic implementation process are some of the key drivers for the successful implementation of BSC in a bank.

Purohit and Mazumdar (2006) indicated that the CAMEL approach of performance measurement of banks covers only the financial measures and ignores non-financial measures. The new model for performance measurement named Balanced Scorecard overlapped the drawbacks and inadequacies of CAMEL approach and covers both financial and non-financial operational perspectives of an organization. The authors suggested that the performance evaluation of banks through CAMEL approach should be replaced with the Balanced Scorecard Model as other perspectives like customer, internal business processes and learning & growth affects the financial ratios. It will help banks to assess their long term performance.

Satish and Rao (2010) concluded that the performance measurement of a bank under traditional measures including CAMEL rating techniques covers only the financial ratios but under BSC technique it covers both quantitative and qualitative focus. Performance evaluation of a bank can be widened through incorporating the long-term perspective of overall performance valuation of Balanced Scorecard.

Dave and Dave (2012) conducted an empirical study on the State Bank of India by applying Balanced Scorecard. For the study, a balanced scorecard was constructed and performance of bank over twelve years from 1997 to 2008 was evaluated using 29 indicators of the banks using descriptive statistics. It was concluded that banks are important part of the service sector. They need long-term strategic planning to concentrate on a comprehensive performance evaluation system. BSC emerged as efficient tool that encompasses various aspects of Banks performance. It helps in understanding the complementarities among various performance indicators for a bank and makes a strategy designing ad implementation process more efficient. Implementing BSC technique becomes complicated due to the difficulties in

measurement of the intangible assets, existence of interrelations among these indicators, differences in the significance assigned to various indicators within the organization and trouble in setting the linkages between the employee's performance and the reward mechanism.

Panicker and Seshadri (2013) devised a Balanced Scorecard to determine the performance of Standard Chartered Bank. A case study approach has been used for the study. A BSC model including 20 measures was constructed to measure the standard chartered Banks Performance through creating a performance scale for each measure separately. The performance was found better in first two years but declined in last two years. The study highlighted the importance of viewing performance from other perspective in addition to the financial perspective. It has been found that score on financial perspective improved from 2009-2011 then declined in 2012. No significant improvement has been seen in internal business process perspective scores. The customer perspective scored the worst while score on learning & growth perspective was better than other perspective. With the increased demands from stakeholders, financial sector analysts, educators and practitioners, the BSC shall be widely used in the banking sector in India. More studies are needed to identify the relevant measures of the BSC for the Banking Sector.

Visalakshi and Kasilingam (2015) presented a conceptual framework on Balanced Scorecard Approach to measure performance of banks. The study concluded that in order to stand differentiated against competitors organizations are required to assess & rebalance themselves on diverse parameters. The balanced scorecard is an excellent tool for attaining this objective. It could be a time-consuming exercise and organizations may find it difficult to identify the key performance areas in designing scorecard. Once designed it could be a useful tool for tracking performance of organization and facilitates feedback for control and evaluation. They asserted that among the Indian banks ICICI Bank and Axis bank have pioneered the process of implementation of balanced scorecard. Balanced Scorecard to be successful, proper identification of both the financial and non-financial variables should be done.

Kumar (2016), examined the different issues and challenges faced by Indian Banks in implementing the Balanced Scorecard. For this purpose, primary data have been gathered through structured questionnaires filled by top, middle and branch level management as all three are responsible for formulating, communicating and implementing bank's strategy respectively. A sample of 200 bankers from six banks, 100 each from 3 private and 3 public sector banks were taken for the collection of data. Analysis was done through simple frequencies, percentages and averages. A gap was found between the awareness level and implementation part of BSC as performance measurement tool. It has been suggested to take remedial measures on problems like difficulty in assigning weightage to different perspective, assigning weightage to different measures under each perspective, difficulty in establishing cause and effect relationship among these perspectives, lack of employees and management support and reluctance of management to rely on non-financial measures so that the benefits of this tool can be availed to the maximum.

Kumar (2016), in his study attempted to identify the awareness level regarding contemporary performance measures for measuring Performance of Indian Banking Sector. For this purpose, primary data have been gathered through structured questionnaires. A sample of 200 bankers, 100 each from Public & Private sector banks was drawn. Analysis of data had been done by using simple frequencies, percentages, averages, weighted average scores, Mann-whitney test etc. It was found that bankers from public sector were more aware about various performance measurement systems under financial measures as compared to private sector banks and under non-financial measures bankers from both sectors were equally aware about various performance measurement systems. The study concluded that both financial and non-financial measures were considered important by public and private sector banks for measuring their performance but a balance between the two measures is needed.

Annapurna and Manchala (2017) evaluated the performance of New Generation Private Sector Banks named ICICI, HDFC and Axis bank using different variables of four perspectives of Balanced Scorecard during the year 2006-2015. The study was based on secondary data collected from the annual reports of selected banks

and from statistic and tables of RBI and from different books and journals. Data have been analysed through mean, standard deviation, Anova-Test etc. The study revealed HDFC bank performed good on financial perspective and ICICI and AXIS bank's performance was moderate on customer perspective. ICICI and Axis bank performed good on two variables out of three variables in internal business perspective. ICICI bank was a good performer in Learning & Growth Perspective of BSC. It has been concluded that there is significant difference in the performance of ICICI, HDFC and AXIS bank under the four perspectives of balanced scorecard except capital adequacy ratio in financial perspective and number of ATM's in learning & growth perspective of BSC. They suggested that banks should try to improve their performance on all the perspectives of BSC to improve the overall performance.

2.6 Literature Review of Research Reports/Dissertations on Balanced Scorecard with Particular Reference to Banking Sector

2.6.1 Review of Master's Thesis

Yahaya (2009) assessed performance of Banks in Ghana using Balanced Scorecard. For achieving the objectives of the study, primary and secondary both sources both have been used for data collection. Primary sources included questionnaires and interviews that concentrated on the internal processes and learning and growth perspective. Secondary sources included banks published financial statements. The study concluded that the Customer perspective, learning and growth perspective and internal business perspective affect the assessment of the performance of banks to a very large extent in Ghana. The well performing banks financially may not necessarily be the best banks in the industry when other perspective or dimensions are taken into consideration. It provides additional information to managers, shareholders and other stakeholders regarding performance of banks which enables banks focus on the core strategies in order to create and deliver superior value and returns to their shareholders. He recommended that banks should implement the BSC as performance measurement and strategic implementation tool to improve their operational performance and profitability. Banks must follow a well-planned methodology to reap the full benefit of their investment.

Abay (2010) evaluated the performance of selected Ethiopian Commercial banks using Balance Scorecard. For accomplishing the objectives of the study, the researcher used both quantitative and qualitative research methods to gather data from primary sources (structured questionnaires) and secondary sources (annual reports). The researcher use quota and convenience sampling methods to select customers, employees and managers as respondents. Structured questionnaires and unstructured interviews were used as survey instruments. Data analysis tools such as descriptive statistics, correlation and regression analysis with the help of SPSS for windows version 7.0 were used in the studies. The study revealed that the Customer perspective, learning and growth perspective, and internal business processes perspective affect the assessment of the performance of commercial banks to a very large extent in Ethiopia. He suggested that multi-dimensional measures including customer, internal business process, learning and growth perspectives help stakeholders to know and evaluate about the performance and competitiveness of these commercial banks in a better way. This will help to assess the long term performance and survival of the banks than just looking at their financial alone. This will allow commercial banks to pay attention upon the core strategies to create and deliver superior value and returns to their stakeholders.

Sihra Kirandeep (2015) in her research project identified the extent of the adoption of the BSC at National Bank of Kenya and the challenges involved in the adoption of the Balanced Scorecard. A sample of 10 informants from senior management of NBK was taken for the study and data was collected through in depth interview and analysed through content analysis. The study found that NBK uses the BSC as a strategic management tool to help align key objectives to various departmental objectives. It is used in each and every stage of the organization when adopting strategy from formulation, implementation and then evaluation and control. Challenges faced in adoption of BSC included inadequate skills and knowledge on the BSC, cultural changes which lead to lot of confusion within the bank and having KPI's that are too difficult when staff performance is appraised departmentally. She suggested that all these above challenges should be taken into consideration by any organization when adopting the BSC as a strategic management tool.

2.6.2 Review of Doctoral Thesis

Sagar R. Dave (2008) attempted to evaluate the actual performance of Indian Banks using the BSC and tested the superiority of Balanced Scorecard tool as compared to traditional methods of performance evaluation. A group of 5 Indian banks has been selected as a sample size on the basis of their financial performance, credibility among customers and overall banking operations. The banks included were SBI, BOI, HDFC, ICICI and ABN AMRO. Data have been collected through secondary sources primarily through statistical tables relating to banks of India (RBI). Time series of 10 years from 1996-97 to 2005-06 has been taken for the study. A common BSC model for inter-bank comparison has been developed by the researcher. Performance has been measured through this model and data have been analysed through graphs, trend analysis, ratios, mean, averages and hypotheses have been tested through z-test which has also been used for testing the mean difference between two samples.

Major Findings of the Study-

- Using Balanced Scorecard as performance evaluation tool revealed better results of the banks as majority of indicators were found statistically significant in all the three perspectives of BSC other than Financial.

- Bank who has given more importance to intangible measures has shown better performance and has grown up at high speed and a stable pace.

- It has also been found from the study that banks do not focus on rapid technological developments and emphasised less on customer satisfaction. Banks also neglected intangible indicators as the sufficient data was not collected by the banks on these indicators or they did not provide to RBI due to confidentiality reasons.

Suggestions: The researcher suggested that:

➢ Service sector organizations like banks should adopt BSC technique as the role of intangible aspects has increased enormously in strategic planning of organizations.

➢ RBI can provide broad guidelines on construction of BSC and can take initiatives to develop its own larger set of performance indicators to evaluate performance.

➢ Banks should employ a team of experts to identify KPI's and develop BSC model for them. Representatives of employees should be included in evaluation process of performance.

➢ Banks can link the rewards of the employees with their performance on intangible aspects rather than on achieving financial targets.

Conclusion:

It has been finally concluded that BSC is an advanced and efficient tool for performance evaluation and strategic management for all types of private, public or foreign banks. BSC ensures more comprehensive approach by including both tangible and intangible aspects of performance of banks. Good financial results alone do not reflect soundness of banking operations.

Sanjeev Kumar (2011) targeted to examine the awareness level and opinion of the bank management on existing and new performance measurement systems in Indian Banking Sector. The study also tried to know extent of usage of Balanced Scorecard in performance measurement systems in the Indian Banking Sector and examined the impact of economic liberalization on their performance. The sample size of the study was comprised of 3 public and 3 private sector banks on the basis of their assets size viz. SBI, PNB, Canara Bank, ICICI, HDFC and Axis Bank. To collect the primary data a sample size of 200 bankers 100 each from private and public sector banks, holding senior positions in banks were taken and selected through stratified sampling. Both primary and secondary data collection methods have been used. Primary data have been collected through interview with selected bankers using pre tested questionnaires. Secondary data were collected through annual reports of banks, perspectives plans, and statistical tables relating to banks in India, RBI different reports, CMIE (Prowess), websites of banks and others. Data have been analysed through simple frequencies, percentages, averages, weighted average scores (WAS), Mann-Whitney test (U-test).

Findings of the Study:

Findings on awareness level and opinion on survey of bankers on Performance Measurement Systems were as follows:

➢ Financial and non-financial measures for measuring performance both were considered important by bankers from private and public sector banks but they said that there is a need to strike a balance is between the both.

➢ Bankers opined that while introducing performance measurement systems in banks, financial and customer perspectives should be given more importance followed by internal business perspective, learning & innovation perspective, employee perspective and lastly shareholder perspective.

➢ Financial Perspective- 91% bankers from both public and private sector banks considered ROI i.e. return on investment and productivity measures as important measures under financial perspective followed by CAMEL framework. Public Sector banks were more in favour of financial measures than private sector banks with reference to CAMEL framework.

➢ Customer Perspective- Customer perspective was considered as important perspective under non-financial perspectives by bankers from both sectors. Bankers considered customer satisfaction level, customer retention, market share, know your customer and customer complaints as important measures under customer perspective.

➢ Internal Business Process Perspective- Maximum number of bankers considered various measures like service time, confidentiality of customer data and e-banking viz. ATM's, RTGS, ECS, EFT etc., response time, core banking solutions, aggressive marketing, new & differentiated products introduction etc. as important indicators tracked by mobile banking and corporate social responsibility.

➢ Learning & Innovation Perspective- Under this perspective there was a mixed response from the bankers of both the sectors on the importance of measures. IT usage, training and development programmes, new products and services, number and percentage of internet products, number of branches offering, single window services were considered as significant measures.

➢ It has been revealed through opinion of bankers that technology, competition, liberalisation, economic growth, globalisation and privatization are the important factors that affect the performance measurement systems in banks.

➢ It has also been found that bankers from both the sectors were aware about the Balanced Scorecard tool as Performance Measurement Systems but the bankers from public sector banks were not aware about the problems which are associated in implementing BSC as a Performance Measurement System.

Suggestions:

➢ Bankers must be trained enough to develop their capabilities in managing the strategies to reap the full benefits and to understand and implement Balanced Scorecard as contemporary performance measurement tool.

➢ Banks should try to strike a balance between financial and non-financial measures for measuring and managing as both public and private sector banks emphasis on considering both financial and non-financial measures.

Conclusion:

It has been concluded that awareness level of bankers on different perspectives and measures under each perspective have increased in the competitive era. Bankers opined that there are various problems associated with implementation of Balanced Scorecard. Benefits of BSC as contemporary performance measurement system can only be availed by taking initiatives on assigning proper weights to different perspectives & measures, establishing cause and effect relation among perspective and measures and getting support from management to accept non-financial measures as critical success factors.

Rameesha Kalra (2015) intended to evaluate the performance of public and private sector banks on tangible as well as intangible aspects so that a comprehensive picture of business operation from quantitative and qualitative terms can be known. Period of 5 years from the year 2010 to 2014 has been taken for the study. 2 private sector banks viz., ICICI & HDFC and 2 public sector banks viz., SBI & PNB constituted the sample of the study selected on the basis of number of branches and net profit earned. 500 customers of branches located at Delhi/NCR of these banks were selected as sample for collecting the data on customer satisfaction level. To evaluate the performance of banks on financial, internal business process and learning & growth perspective data have been collected through secondary sources which included annual reports, statistical tables relating to banks in India, RBI Annual reports, RBI bulletin, reports on trends and progress of banking in India by

RBI, CMIE database, websites etc. Primary data for analysing the performance on customer satisfaction has been collected through structured questionnaire. Data have been analysed through mean, standard deviation, t-test, bi-variant regression, correlation analysis etc. The major findings of the study on different perspective were as follows:

Financial Perspective- Private Sector banks performed better in terms of capital adequacy ratio, asset quality, management efficiency and earning quality than public sector banks whereas the liquidity of public sector banks was higher than private sector banks under the CAMEL framework.

Internal Business Process Perspective- Public sector banks ranked the highest than private sector banks in terms of internal business process perspective. Business per employee, deposits per employee and advances per employee were the highest for public sector banks while profit per employee and wage bills to expenses ratio were the highest of private sector banks.

Learning & Growth Perspective- The performance score of private sector banks was higher than public sector banks on this perspective. Number of credit cards was higher than private sector banks whereas the growth in number of employees was higher in case of private sector banks. There was no significant difference between the two sectors in terms of number of ATM's and Number of Debit cards.

E-Banking- Significant difference between public and private sector banks was found on e-banking services. Volume of business of e-transactions of public sector banks was the highest than private sector banks.

Customer Satisfaction- The level of customer satisfaction and service quality of private sector banks were found to be higher than public sector banks although the customer base of public banks was the maximum than private sector banks.

Conclusion of the study- It has been concluded that Customer satisfaction was the major contributor of bank performance followed by internal business perspective and then learning & growth perspective. All perspectives together contribute in achieving high level of performance of banks. Private sector banks got the highest scores on Capital Adequacy, asset quality, earning quality, learning & Growth perspective and customer perspective whereas public sector banks got the highest

scores on management efficiency, liquidity and internal business process perspective.

Suggestions: It has been recommended by the researcher that Public sector banks should focus on reducing NPA's, enhancing profit per employee, return on assets. They should also invest to impart training to employees on technological up gradations, processes and products knowledge. Private sector banks were suggested to focus on enhancing their liquidity, business per employees and encourage customers to use e-banking facilities. Public sector banks were suggested to improve their service quality and conduct surveys to identify service quality and customer satisfaction at regular intervals.

S. Visalakshmi (2016), in her doctoral thesis on "Performance Measurement of Commercial banks in India using Balanced Scorecard" attempted a descriptive research to measure the performance of commercial banks in India using four perspectives of the Balanced Scorecard and to identify the factors that influences customer's trust and loyalty and lead to learning & growth of employees and better internal processes in banks. 10 Indian banks which included 6 public sector banks, 1 old private sector banks and 3 new private sector banks were selected as sampled banks randomly. 5 branches from each bank were selected randomly to collect primary data. Primary data have been collected through questionnaires for gathering data on customer, internal business process and learning & growth perspective. To collect data on financial perspective secondary data sources including annual reports of sampled banks were used. For data analysis frequency analysis, mean, correlation, ANOVA, chi-square test, cluster analysis, discriminant analysis, structural equation modelling etc. tools were used. The major finding of the study were as follows:

Financial Perspective: The performance of banks on financial perspective was found satisfactory only. Indian Overseas Bank performed poor and ranked on last position whereas HDFC bank was on the first position.

Customer Perspective: State Bank of India had been ranked the first and Bank of Baroda on second on customer perspective as the customers of these banks were found very much satisfactory with the services of the banks whereas HDFC bank

was ranked on the last position and South Indian Bank on second last as the customers were only satisfied only.

Internal Business Process: ICICI bank ranked the highest on this perspective followed by HDFC bank whereas South Indian Bank was on the last position.

Learning & Growth Perspective: ICICI Bank ranked on the first position followed by AXIS Bank and then SBI which indicated that employees of these banks were too much satisfied on Learning & Growth perspective in their banks. The employees of Bank of Baroda, Indian Overseas Bank and South Indian Bank expressed average satisfaction

Conclusion: It has been observed and concluded that Customer Perspective alone can affect the financial results but this is not sufficient for future sustainability. It requires long term focus on learning & growth perspective and improvement in Internal processes which will lead to long-term benefits for the organization.

Suggestions: It has been suggested to banks to identify the key performance indicators of each perspective of BSC to devise appropriate strategies. Employees must be aware of vision and mission of the banks so that they can contribute in success of the bank. Banks were also suggested to improve their operations and to focus on improving their customer services. Employees must be trained enough to improve the responsiveness and competitiveness to handle customer complaints & grievances efficiently. To improve operational efficiency banks were suggested to diversify into non-banking activities.

2.7 Literature Review on Incorporating Sustainability Issues into Balanced Scorecard

Figge, Hahn, Schaltegger and Wagner (2002), in their article discussed the various possible forms of Sustainability Balanced Scorecard and described the process and steps for formulating a Sustainability Balanced Scorecard for a business unit. For this, they have summed up the suitability of BSC tool for Sustainability Management. They asserted that BSC is a suitable tool for incorporating social and environment aspects for gaining a competitive advantage. While formulating BSC, all the objectives and measures are deducted from long-term strategies of a business unit so objectives and measures from sustainability strategy can also be deducted and incorporated into a BSC through establishing cause-effect relationship. For

formulating the SBSC, the authors have outlined some steps. The first step has been identified as choosing a strategic business unit for which the SBSC is to be created as environment and social exposure are different for different type of organization. After selecting a business unit the environment and social aspects that affect business unit must be identified and strategically relevant in the second step. The third step determined and linked the most relevant social and environment aspects into cause and effect relationship which are directed towards the long term success of a business unit which are measured through financial perspectives. It has been further described that the process as described will enhance the effectiveness and efficient environment and social management and sustain an economic success. They concluded that SBSC as a strong tool for sustainability management which helps to overcome the drawbacks of previously implemented approaches of environment, social and economic management systems.

Gminder and Beiker (2002) in a conference paper presented a possibility of managing corporate social responsibility and corporate sustainability with the management tool Balanced Scorecard. For this they used the case study based approach with a survey of interviewing with approx. 50 employees and 10 workshops held in the selected companies. The study covered different companies from banking, automotive, utility and engineering sector, different Strategic business units within these companies i.e. R& D, environment, corporate and divisional level etc. and different stages for development of the CSR. The study concluded that BSC is an appropriate tool to understand the notion of CSR and integrating social aspects of CSR and Corporate Sustainability into business management. For setting-up and implementing a SBSC for the management of CSR, a well-structured methodology is required. Clarification of sustainability strategies, and deduction of social and environment objectives, their KPI's and targets is needed with the identification of casual linkages. The study suggested that a discussion between the business and social & environment managers on sustainability aspects should be done. The business managers must accept that sustainability or CSR is more than maintaining public relations whereas social/environment managers should acknowledge that there objectives are only one or few our of strategic objectives of the whole company. But integrating social

& environment objectives with other objectives can lead company in a win-win-situation.

Brignall (2002), in conference proceeding argued three main criticisms of Multidimensional Performance Measurement systems specifically BSC. Firstly they argued on institutional theory that most of the performance measurement system will not be balanced and integrated as some managers may intentionally disintegrate their performance measurement systems in order to maintain the balance among stakeholders of unequal power. Secondly they argued that the possible interrelationship among performance measures are not restrained to universally valid one-way linear chain of cause effect relationship and a series of interdependencies. They argued that it might be possible that there are other class of possible relationship or no relationship among measures at all. Thirdly they said that social and environment aspects are omitted from MPDM Models specifically BSC which should be included as an additional perspective. They further added that the effect of inclusion of social and environment aspects may be difficult to determine for three main reason. Firstly it is difficult to determine the power and legality of this aspect. Secondly, the approaches to social and environment aspects will be different for different companies and time to time. Lastly, to realize the social and environment objectives, managers need to understand the interrelationship among BSC existing as well as with measures of social and environment aspects which will require a sophisticated approach.

They suggested that future research should aimed to estimate the relationship among different variables empirically. Research should be done to know the effects on the MPDM Models expanded with a new perspective of social and environment. They further recommended that more thorough research is required on incorporation of social and environment aspects into MPDM models like BSC.

Hubbard (2009), developed a Sustainability Balanced Scorecard with adding two more quadrants of Social and Environment performance in the conventional Balanced Scorecard. They defined performance indicators for each quadrants and determined a rating scale of 1-5 for each indicator. Then the average rating of all the indicators in each quadrants were calculated separately and then the average of overall ratings of all the quadrants was converted into an Overall Performance

Sustainability Index (OPSI). The author acknowledge that leaving social and environment issues from the ambit of organization attention will not be useful as organizations are under significant pressure to measure and report their social, environment and economic performance. They will require to report their sustainability performance in the not-too-distant-future and adopt a stakeholder view and develop their strategies accordingly rather than relying on shareholder's performance. They concluded that SBSC is a pragmatic choice for measuring and reporting social and environment performance because BSC is the most familiar approach for management of organization's performance. SBSC developed by the author offers a glimpses into the future. SBSC reporting may vary from company to company and industry to industry.

Zavodna (2013), in her paper provided a format for a possible bridge between the strategic Balanced Scorecard system and future trend of sustainability. She also introduced the possible methods for implementing sustainability into the Balanced Scorecard. The study concluded that the Balanced Scorecard could be used to implement the sustainability strategy in order to link the corporate sustainability objectives with actions and performance outcomes. The improved sustainability performance helps in improving employee satisfaction, lowering operational and administrative cost, improving productivity, improving image and reputation, increasing market opportunities, gaining better stakeholders relationship etc. She asserted that indicators for measuring sustainability will differ company to company. Several indicators have been suggested by the author. It has been recommended that future researches should focuses on summarizing real problems faced during implementation of sustainability issues in Balanced Scorecard. Research on customer satisfaction with green strategy of organizations has also been suggested to improve the overall situation in the market and to push more companies to implement sustainability indicators.

Purnamasari and Hastuti (2014), analysed the effect of environment perspective on four BSC perspectives and examined the relationship between the non-financial perspectives with financial perspective. A sample of 125 companies has been taken for the study which was selected through purposive judgement sampling. Data have been collected through observations of the annual reports of the sampled

companies. To test the hypothesis, path analysis method with AMOS (Analysis of Moment Structure) has been used. The study concluded that the environment perspective was influenced by financial perspective not by learning & growth perspectives, internal business processes and customer perspective. Internal business perspective and learning & growth perspective positively affect the consumer perspective which in turns affects the financial performance. Companies with good financial performance care and are more attentive on environment perspective. It has been further recommended that the government regulations should encourage companies to think and focus on incorporating CSR obligations.

Kalender and Vayvay (2016) in their study aimed to highlight the sustainability issue as a fifth pillar of the Balanced Scorecard. As per the views of researchers every company should realize the importance of the sustainability aspects and accept sustainability as their core strategies. Environment and social aspects should be integrated as an important part of core management. Sustainable Balanced Scorecard can provide a potential to integrate these issues. Although this process is long and challenging too that requires a lot of patience and persistence. The study asserted that the addition of social and environment concerns in management systems gives several financial benefits. The study further suggested that relationship between current strategies of companies and sustainability aspects should be investigated and comprehended in detail so that better future plan for implementation of a right measurement system can be provided.

Chaker et al. (2017) in their research paper critically evaluated the Sustainability Balanced Scorecard as a decision aid framework and proposed directions for research in constructing a promising SBSC. It has been found that the analysis of construction methodologies and designing of the sustainability balanced scorecard is the critical framework in sustainability management. Architecture structure, connecting to the value system, design orientation and design confinement were described in the existing literature. The study suggested that future research must focus on investigating the systematic methods for constructing a SBSC which must be more holistic, adaptive enough and strategic too. It must include ethics and governance as two additional and distinctive perspective of the scorecard. The varied structure should be designed as per industry and type of organization. The

general strategy map should be created first and the specific metric should be formed incorporating sustainability issues.

Maqbool and Zameer (2018) tried to analyse the relationship between corporate social responsibility and financial performance in Indian Banks. For accomplishing the stated objective 28 Indian commercial banks listed on BSE were selected out of 45 banks. Out of 28 banks 15 were public sector banks and 13 private sector banks. The time period of the study was from the year 2007 to 2016. Data have been collected through secondary sources which mainly included the annual reports, Prowess, centre for monitoring Indian economy (CMIE) electronic database. For analysing the data descriptive statistics, panel regression model factor analysis have been used. It has been found that CSR showed a positive impact on profitability and stock market returns. It has been evinced through study that being socially responsible always pays and create a competitive advantages for organization.

Yilmaz and Inel (2018), assessed the sustainability performance of Banks by Topsis method and balanced scorecard approach. For this purpose the authors have gone through the GRI G4 sustainability report guidelines and published sustainability reports of different businesses. They stated that banking sector was more inclined towards maintaining sustainability reports so 7 Turkish banks in 2015 and 6 Turkish Banks in 2016 were selected for evaluating the Sustainability performance of these banks. A Sustainability Performance Scorecard Model has been established with 20 indicators on economic, environmental, social and corporate sustainability area. The performance was thus measured through TOPSIS multi-criterion decision making methods. The banks were ranked on the basis of their performance. It has been found that Bank A performed the best in 2015 and 2016. Bank G was on the second position in 2015 and Bank C & F maintained the 3rd and 4th position. It has been concluded that the economic, environmental and social all the three activities are necessary for confirming the sustainability of the organizations for long term. It has also been recommended that each sector has its own sustainability indicators so separate model for each sector can be created. Other methods like expert opinion, group interviews, extensive research etc. can be used to develop sustainability models.

2.8 Research Gap:

After going through the different national and international literature studies on Balanced Scorecard in banking industry it has been recognized that the relevance of non-financial measures with financial ones have increased in evaluating the performance of banks as non-financial measures have been considered as critical success factors of business performance these days. Balanced Scorecard appeared as a useful tool in the last decades for measuring the performance and competitiveness of banks in today's fast changing and challenging business environment. The adoption of BSC in developing countries like India has found to be in growing phase. The above mentioned literature basically focused on application of BSC in banks in other countries and mostly concentrated on identification and ranking of important Key Performance Indicators or critical success factors under different perspectives in Bank's Balanced Scorecard using different statistical tools & techniques. The importance and possibility of incorporating social and environment perspectives into Balanced Scorecard has been identified by many researchers. As far in Indian context, there are not much empirical studies have been conducted applying Balanced Scorecard and no particular study has been conducted integrating social and environment perspectives into Balanced Scorecard in Indian Banking Sector. The following research questions arose in the mind of researcher:

1. What are the different causes for decline in financial performance of Banks in India?

2. Which are the non-financial factors other than financial that affects the performance of Indian banks in long run?

3. Is the Balanced Scorecard an appropriate tool for measuring performance of Indian banks which will depicts the overall performance of banks and helpful in predicting and improving long term performance?

4. Is there any difference in the performance of Public Sector Banks and Private Sector banks using Balanced Scorecard?

5. Are there any other perspectives other than four basic perspectives of Balanced Scorecard that affect the performance of banks in India?

6. Is there any difference in the performance of Public and Private Sector Banks using new perspectives?

7. How the performance of banks can be improved and managed in long term?

The present study seeks to answer the above questions through applying Balanced Scorecard in Public and private sector banks in India which will give a true and balanced picture of banking performance and help to determine whether banks are able to achieve their strategic objectives or not and if not then what are the reasons behind it. The importance of Sustainability concerns and incorporating them with BSC model have been talked a lot in the literature but no particular study has been conducted on performance evaluation incorporating these concerns with Balanced Scorecard. This study aims to fulfil this important gap also. For this the study has used a Balanced Scorecard model created integrating the important indicators of banking performance into the model. For measuring the performance scores of banks, subjective approach in creating scorecard scales have been used provided with the proper justification of the scales used.

This chapter comprehend reviews based on articles published by us in different journals. (See reference no. 31 to 38)

2.9 Studies on Balanced Scorecard in Banking Industry- A Snapshot

Year	Authors	Title	Tools & Techniques	Findings & Conclusion	Suggestions
1998	Ashton	"Balanced Scorecard Benefits: Nat West Bank"	Secondary Data Base Analysis	Nat west believed that successful alignment exists between performance measurement to the bank's long term strategic goals and to enhance the bank's ability to better manage the business and its resources, and in establishing a performance measurement system that was consistent and understood by employees at all levels.	BSC helps to overcome the traditional bias in banking toward financial reporting with the aid of introducing a system which takes a long-term view and takes account of factors such as learning and innovation.
2004	Davis & Albright	An Investigation of the Effect of Balanced Scorecard Implementation on Financial Performance	Quasi Experimental Design, Wicox on Signed Rank Test	Performance of Experimental branches improved significantly after implementation of BSC and it had produced significant and positive impact in dependent measure i.e. Composite Key Financial Measure.	Non-financial measures should be incorporated logically and systematically into BSC in order to improve financial performance.
2009	Wu et al.	A Fuzzy MCDM Approach for Evaluating Banking Performance Based on Balanced Scorecard	Fuzzy MCDM Approach, FAHP Process	Top five evaluation index of banks were found as customer satisfaction, return on assets, earning per share, customer retention rate, profit per customer. Ranking to the banks were given in sequence of U Bank, C Bank and then S bank.	Performance Evaluation Index should be tailor made as per organizations goals and individual goals and future research may use other analytical methods for investigation of casual relationship among indexes.
2009	Zhang and Li	Study on Balanced Scorecard of Commercial Bank in Performance Management System	Conceptual Study	The BSC raises the value of Performance Management Appraisal System based on the introduction of customer factors, internal business processes, employee learning and growth and financial factors.	To achieve innovation model in banking industry, it is necessary to improve the "Smile" services, personal mechanism and incentive mechanism.

2009	Yahaya	Using Balanced Scorecard to assess Performance of Banks in Ghana.	Descriptive Statistics	The Customer perspective, learning and growth perspective and internal business perspective affect the performance of banks to a very large extent in Ghana. These perspectives provide additional information to managers, shareholders and other stakeholders regarding performance of banks which enables banks focus on the core strategies in order to create and deliver superior value and returns to their shareholders.	Banks should implement the BSC as performance measurement and strategic implementation tool to improve their operational performance and profitability. Banks must follow a well-planned methodology to reap the full benefit of their investment.
2010	Al-Mawali et al.	Balanced Scorecard Usage and Financial Performance of Branches in Jordanian Banking Industry	Questionnaire, Cronbach Alpha, Multiple Regression	A positive relationship was found between the financial performance and overall BSC measures. Branches using more Customer oriented and product/service oriented indicators experienced enhanced financial performance.	Future research should focus on using large sample, other sectors than banking through modifying architecture of BSC as per the mission and vision of organization.
2010	Fago	Performance Measurement using Balanced Scorecard-A Case of Nepal	Questionnaire, Descriptive Statistics	Bank B was found stronger than Bank A on overall performance measured through BSC.	Future research should focus on extending the sample size and more refined statistical techniques should be used for data analysis.
2010	Abay	Performance Evaluation of Ethiopian Commercial Banks using Balanced Scorecard	Descriptive statistics, Correlation and Regression analysis	The study revealed that the Customer perspective, learning and growth perspective, and internal business processes perspective affect the assessment of the performance of commercial banks to a very large extent in Ethiopia.	He suggested that multi-dimensional measures including customer, internal business process, learning and growth perspectives helps stakeholders to know and evaluate about the performance and competitiveness of these commercial banks

					in a better way. This will help to assess the long term performance and survival of the banks than just looking at their financial alone. This will allow commercial banks to pay attention upon the core strategies to create and deliver superior value and returns to their stakeholders.
2011	Umar and Olatunde	Performance Evaluation of Consolidated Banks in Nigeria by using Non-Financial Measures	Factor analysis, Questionnaire, Bartlett test of Sphericity, Kaiser-Meyer-Olkin Method	The study identified, Cost of transactions. Information technology, services delivery, quality of service, bank offering, loan application, and customer satisfaction as important non-financial measures for measuring performance of banks.	The study suggested to adopt identified non-financial measures to improve the financial performance of banks.
2011	Tekar et al.	Measuring Commercial Bank's Performance in Turkey: A Proposed Model	Performance Index	Inclusion of measures like customer satisfaction, effective management and leadership, advances technology contributed in measurement of overall performance of banks.	Suggested to focus on non-financial measures rather than limiting on financials to measure the performance of banks.
2011	Shaverdi et al.	Combining Fuzzy MCDM with BSC Approach in Performance Evaluation of Iranian Private Banking Sector	MCDM, Fuzzy AHP method	Customer Perspective was found as an important perspective. Customer satisfaction, return on assets, customer retention rate, market share rate, earning per share and profit per customer were identified as important indexes. Banks were ranked as E Bank, P Bank, and then S bank.	Banks should focus on developing new service items, technology, improving promotions, customer satisfaction and lastly on financial returns. More evaluation techniques can be used and extended to other industries than banking.

2012	Amiri et al.	An Analytical Network Process Approach for Evaluating Banking Performance based on Balanced Scorecard	Expert Questionnaire, ANP method	One bank out of four sampled banks performed poor due to low performance on financial dimension specifically low return on assets index and low performance on customer perspective.	Banks should concentrate on key success factors like return on assets, increase in sales and promotion of products and services and acquisition of new customers.
2012	Najjar and Kalaf	Designing a Balanced Scorecard to Measure a Bank's Performance: A Case Study	Subjective Method	Performance of sampled bank was found weak in first 3 years with 47%, 43% and 47% respectively and fair in last year with 58% on BSC.	More studies are needed to identify the relevant measures of BSC in banking sector in Iraq and focus on contingent factors like organization culture & structure, environment and technology is required.
2012	Wu	Constructing a Strategy Map for Banking Institution with Key Performance Indicators of the Balanced Scorecard.	DEMATEL method	Customer perspective is the key Perspective. Customer satisfaction in customer perspective, Employee stability in learning and Growth, earning per share in financial perspective were found as critical success factors for banks.	Organizations were suggested to concentrate on success of non-financial measures before financial measures. Performance measures should be chosen separately for each organization that reflects their performance.
2012	Karasneh and Al-Dahir	Impact of IT-Balanced Scorecard on Financial Performance: An Empirical Study on Jordanian Banks	Questionnaire, Cronbach's Coefficient Alpha and Descriptive Statistic	Significant Relationship between IT Application and the internal business process, financial and strategic competitiveness perspective and no significant relationship between customer and employee perspective has been found.	Banks should pay attention to all employees and frame policies and practices to take accurate decisions. They should also collect consumer insights through follow up and feedback surveys.

2013	Ombuna et al.	Impact of Balanced Scorecard Usage on the Performance of Commercial Banks	Descriptive Statistics and Pearson's Correlation	BSC and its implementation is positively correlated with organization mission & strategy and with involvement of employees. It provides feedback on the internal processes and external outcomes. Effectiveness of BSC depends on organization dynamics and its manner of execution, monitoring and evaluation procedure.	Banks are suggested to develop the competitive products and services which satisfy the needs of customers.
2013	Asante	Divisional Performance Evaluation Tools Employed by Indigenous Ghanaian Banks	Survey Method	Both financial and non-financial measures have been used by local Ghanaian banks for the assessment of the performance of their branches.	-
2013	Eskandri et al.	Bank's Performance Evaluation Model based on the Balanced Scorecard Approach, Fuzzy DEMATEL and Analytic Network Process	Fuzzy DEMATEL method, ANP for ranking	Among the BSC perspective, customer perspective was ranked on the top and learning & growth on the last. The top five crucial indicators were found as customer satisfaction, operating revenues, customer retention rate, employee's satisfaction and sales performance.	Strategy maps helps management to identify those areas which needs improvement on priority basis so that they can invest their resources in these areas.
2013	Panicker and Seshadri	Devising a Balanced Scorecard to Determine Standard Chartered Bank's Performance: A Case Study	Subjective Method	The Performance of SCB has declined in last two years of the study period. The performance on learning and growth perspective has been found better than the other perspectives of BSC.	BSC should be widely adopted by Indian banks and more studies are needed to figure out the relevant measures for banking sector.
2014	Tominac	Possibilities of Balanced Scorecard Application in Commercial Banks	Descriptive Study	Financial indicators are not enough for reporting as they are historical in nature and not connected directly with long term goals. Balanced Scorecard encompasses all the aspects to ensure leading position of bank in the market and helps employees in	Author suggested a Balanced Scorecard model for banks and the procedure for construction of this model.

				understanding the strategy of the bank.	
2014	Tariq et al.	Investigating the Impact of Balanced Scorecard on Performance of Business: A Study based on the Banking Sector of Pakistan	Questionnaire , Regression Analysis and ANOVA	Financial, Internal control, learning & Growth and Customer perspective had significant impact on bank's overall performance whereas vision and strategy perspective had an insignificant role. Customer satisfaction and training & growth of employees were opined as core essential elements	Implementing BSC in banks can give favourable outcomes in all perspectives through setting standards and continuous monitoring.
2014	Ozturk & Coskun	A Strategic Approach to Performance Management in Banks: The Balanced Scorecard	Descriptive Study	Implementation of BSC as comprehensive method helps in getting desired result in strategic performance and offers quality and efficient financial services.	To gain global competitive advantage innovations should be adopted by banks and Balanced Scorecard should be used to evaluate their performance rather than measuring on financial measures.
2014	Michael and Tobi	Performance Measurement in the United Kingdom (UK) Retail Banking Industry	Questionnaire , Wilcoxon signed rank test, Pearson Chi-square, Kruskal Wallis test and Mann-Whitney U test	Three most commonly used Performance Measurement Systems in UK retail banks were Balanced Scorecard, Performance Dashboards and Financial Measures. Age, Ownership structure and market position of banks has no relation in adopting Performance Measurement systems in UK Banks.	Strategies should be linked with performance measures to develop efficient PMS. UK Retail banks were suggested to consider all the stakeholders and externalities while adopting PMS.
2014	Shahroodi and Bahraloloom	Evaluating the Efficiency of Banking Industry By DEA: Balanced Scorecard	Data Envelopment Analysis	Branches of Sederent Bank in Guilan were evaluated and ranked through BSC and DEA. 40% branches were found as efficient branches with a performance score 1 in the year 2010.	-

2015	Akter	Exploring the Scope of Adopting Multidimensional Performance Measurement Models in Banking Sector of Bangladesh	Questionnaire, Pearson Correlation Coefficient and Factor Analysis	The measures used by Banks in Bangladesh are correlated. They considered nine performance factors to evaluate their overall performance. Factors are market indicator, HRM, effectiveness of Internal process, market strategy implementation, adaptability to changes, customer perception, efficiency of management, earning capacity and social image.	Bangladeshi Banks may adopt multidimensional performance measurement models like Balanced Scorecard.
2015	Rostami	Defining Balanced Scorecard Aspects in Banking Industry using FAHP Approach	Freidman Ranking Teat, FAHP Approach	Market rate, Growth rate of customer complaints, customer attract rate in customer perspective, Revenues, PE ratio and Leverage in Financial, Electronic transaction share, performance management and Research & Development costs in internal processes and employee stability, loan per capita and reduction in disciplinary matters in Learning & Growth were found as important indicators.	-
2015	Ibrahim	Investigating the use of the Four Perspective of Balanced Scorecard as technique for assessing performance by Nigerian Banks	Descriptive Statistics	For assessing the performance, Nigerian banks relied heavily on financial performance measures followed by customer performance measures.	For a comprehensive view of banks performance, balance should be given to performance measures in all perspectives of BSC.
2015	Ibrahim & Murtala	The Relevance of Balanced Scorecard as a Technique for assessing Performance in the Nigerian Banking Industry.	Questionnaire, Descriptive Statistics and Kruskal Wallis ANOVA test	Management of Nigerian banks recognized the importance of using BSC but they do not adopt the full structure of Balanced Scorecard comprising all perspectives which had threatened their performance measurement systems.	BSC as technique for evaluating performance of banks helps in increasing employee's satisfaction and their performance which simultaneously increases the profitability of banks.

2015	Mittal et al.	Awareness and Usage of Contemporary Performance Measures for Measuring Performance of Indian Banking Sector	Descriptive Statistics	Both Public and Private sector banks considered financial and non-financial measures as important measures for measuring and managing performance and aware about integrated performance measurement system.	To strike a balance between financial and non-financial measures is needed.
2015	Visalakhshi and Kasilingam	Balanced Scorecard Approach to Measure Performance of Banks	Theoretical Study	In order to stand differentiated against competitors, banks are required to evaluate and rebalance themselves on different parameters. To achieve this objective Balanced scorecard is an excellent tool which may be time consuming and banks might find it difficult to identify the key performance areas but once designed it could be very useful.	Proper identification of both the financial and non-financial variables should be done for successful implementation of BSC.
2015	Sihra Kirandeep	The Application of Balanced Scorecard as a Strategic Management Tool at National Bank of Kenya.	Content analysis	It has been found that BSC is used by the sampled bank as a strategic management tool. Bank faced challenges while adoption of BSC like inadequate skills and knowledge on the BSC, cultural changes which lead to lot of confusion within the bank and having KPI's that are too difficult when staff performance is appraised departmentally.	It was suggested to take into consideration the different challenges while adopting BSC as a Strategic Management Tool.
2016	Rillyan et al.	A Study on Linkages among Balanced Scorecard Perspectives: The Case of Indonesian Local Banks	Regression Analysis	A strong relationship has been found among the perspectives of BSC proposed in the corporate strategy of the local banks of Indonesia. 17 strategic variables have been found that significantly influences local bank's performance and profitability.	Identified variables from the strategy of the banks should be used to measure and improve the performance of the banks.

2016	Balkovskaya and Filneva	The Use of Balanced Scorecard in Bank Strategic Management	Questionnaire, DEMATEL method	The three critical factors that have high impact on bank's performance were identified as transaction efficiency, sales channel development and rationalised processes. Automated processes and enhanced transaction efficiency helps to maximize operations which leads to boosted service quality and increase in no. of customers. Development of remote banking channels leads to profitability.	BSC should be complemented with other analytical tools to assess or verify the casual relationship among performance indicators.
2016	Dincer et al.	Balanced Scorecard-Based Performance Assessment of Turkish Banking Sector with Analytic Network Process	Analytic Network Process	Findings demonstrated financial perspective as the most important perspective then is the customer perspective followed by learning & growth and internal factors respectively. State banks performed the best on Balanced Scorecard followed by private owned banks and foreign banks respectively.	-
2016	Baber and Akter	Developing a Comprehensive Balanced Scorecard for the Banking Sector in Bangladesh: An Empirical Study	Factor analysis, Questionnaire and Regression Analysis	40 variables were extracted out of 51 variables through factor analysis and BSC model for Bangladesh banking sector had been created. Measures on learning and growth perspective of BSC are positively correlated with the performance of banks.	BSC Model suggested by authors for banking sector in Bangladesh should be customized as per the needs, goals and capabilities of individual bank.
2016	Chowdhury and Saha	Balanced Scorecard Application for Performance Measurement in Bangladeshi Bank-A Case Study on a Private Commercial Bank	Ratio Analysis	The performance of sampled bank was found good on financial perspective of Balanced Scorecard rather than on other perspectives. Improvement in NPA's and ratio of wage bills to total income was needed.	Re-examination of the strategies and implementation of BSC by the Bangladeshi banks is required. They are also required to publish data non-financial perspectives in their annual reports.

2016	Kumar	Issues and Challenges of Implementing the Balanced Scorecard in Indian Banks	Descriptive Statistics	There has been a gap found between the awareness level and implementation part of Balanced Scorecard as a performance measurement tool.	To avail the benefits of BSC it was recommended to take remedial measures on problems like difficulties in assigning weightage to different perspective and different measures, difficulty in establishing cause and effect relationship, lack of management support etc.
2017	Agyeman	Balanced Scorecard as a Tool for Managing Performance in Selected Ghanaian Banks	Questionnaire, Descriptive Statistics	Most of the respondents agreed that the four perspectives of Balanced Scorecard greatly affects the performance of banks but most of the banks in Ghana relies on financial measures.	-
2017	Annapurna and Manchala	Performance of New Generation Private Sector Banks in India: A Balanced Scorecard Evaluation	Descriptive Statistics	A significant difference was found in the performance of ICICI, HDFC and Axis Bank on four perspectives of balanced scorecard except Capital Adequacy Ratio in financial perspective and Number of ATM's in Learning & Growth perspective.	Banks were suggested to improve their performance on all the perspectives of BSC so that the overall performance can be improved significantly.
2018	Kasasbeh	Problems of Management Accounting Implementation: The Case of Balanced Scorecard Implementation within Jordanian Commercial Banks	Descriptive Quantitative and Qualitative analysis	30.7% were found as full implementers of BSC and rest all were partial implementers. Problems in implementation of BSC were identified as lack of support of top management, different organization culture, technical issues, political issues, conceptual issues, lack of software packages etc.	It has been recommended to enhance the coverage of research on more banks. To identify the actual problem associated with implementation of BSC, a separate case study for a particular bank should be conducted.

2018	Al-Dweikat and Nour	Balanced Scorecard Critical Success Factors of Jordanian Commercial Banks and its effect on Financial Performance	Descriptive Statistics, AMOS Programming Tool	Top Management, Strategic Intent, HR Aspects, and systems & techniques were found as critical success factors of BSC which had positive effect and helpful in obtaining better financial performance in Jordanian Commercial Banks.	To achieve excellency on financial performance in the long run, identified critical success factors are valid and reliable enough.
2019	Abagissa	The Assessment of Balanced Scorecard Implementation in the Commercial Bank of Ethiopia: The Case of Three Branches of East Addis Ababa District.	Questionnaire and semi-structured Interview, Tables, Charts, Graphs	The implementation of BSC has benefitted bank in many ways such as alignment of day to day activities to the strategy, improvement in service delivery system and organization performance, improved understanding of Employees towards bank vision, mission & values and enhanced value. BSC implementation has several challenges too.	Bank should work on changing the attitude and perception of employees towards BSC through promoting the benefits of BSC.
2019	Nnamseh & Umoh	Efficacy of Balanced Scorecard on Performance of banks in Nigeria	Multiple Regression Model	Customer perspective and internal business process perspective had a significant impact on bank's performance whereas financial and learning & growth perspective do not have a significant impact on bank's performance in Nigeria. Relying solely on financial indicators alone for measuring bank performance is not enough.	Nigerian banks should adopt BSC model to measure, manage and report their performance. Banks should also focus more on creating more strategies on customer related issues to acquire more business and sustain their performance. Banks should also invest more on deployment of relevant technology and infrastructure, management efficiency and sound credit management.

| 2020 | Turshan and Karim | The Effect of Adopting Balanced Scorecard as Strategic Planning Tool on Financial Performance of Banks Operating in Palestine. | Questionnaire and Multiple Regression Model | BSC model can be used to improve the performance of banks in Palestine. Out of 4 perspective of BSC, customer's perspective did not have the effect on financial performance of banks as other perspective has. | Banks should implement BSC as an integrated system for strategic performance management and as a means for decision making. Its implementation enhances the competitive position and financial performance of banks. Banks in Palestine need to pay more attention on strategy and measurements that are included in customer perspective of BSC. |

2.10 Studies on Incorporating Social and Environment Issues into Balanced Scorecard- A Snapshot

| 2002 | Figge et al. | The Sustainability Balanced Scorecard- Linking Sustainability Management to Business Strategy. | Theoretical Study | A process for developing Sustainability Balanced Scorecard has been outlined by the authors and concluded that objectives and measures from long-term sustainability strategy of a business unit can be deducted and incorporated into a BSC through establishing cause-effect relationship. | Suggested process for developing SBSC will enhance the effectiveness and efficiency of environment and social management and sustain an economic success. |
| 2002 | Gminder and Beiker | Managing Corporate Social Responsibility by using the "Sustainability Balanced Scorecard" | Case Study method, interview | BSC was found as an appropriate tool to understand the concept of CSR and integrating social and corporate sustainability aspects into business management. Clarification of sustainability strategies, identification of social and environment objectives, their KPI's is required. | A discussion between business managers and social & Environment managers on sustainability aspects should be done has been suggested by the authors. Integrating Social and environment objectives with others can lead |

					company in win-win situation.
2002	Brignall	The Unbalanced Scorecard: A Social and Environment Critique	Conference proceedings	Criticised and argued on the multidimensional performance models specifically BSC primarily due to omission of social and environment aspects. Inclusion of these aspects will be difficult for many reasons like difficulty in determining the legality of these aspects, different approaches for different companies on these aspects, need to understand the interrelationship among BSC existing and new measures on these aspects.	Future research should focus on estimating the relationship among different variables empirically and on determining the effects on MDPM models expanded with new perspective of social and environment.
2009	Hubbard	Measuring Organizational Performance: Beyond the Triple Bottom Line	Theoretical Study, Rating Scale	Authors developed a Sustainability Balanced Scorecard with adding two social and environment quadrants of performance into conventional BSC. It has been acknowledged that organizations will require to report their sustainability performance and adopt a stakeholder's view to develop their strategies in near future.	Developed SBSC model will provide a base in the future. SBSC reporting may vary from company to company and industry to industry.
2014	Purnamasari et al.	Environment Perspective: A New Perspective in Balanced Scorecard.	Path Analysis Method with AMOS (Analysis of Moment Structure)	The study analysed the effect of environment perspective on four basic perspective of BSC and found that environment perspective is affected only with financial perspective and companies with good financial performance cares and more attentive on environment perspective.	The government regulations should encourage companies to think and focus on incorporating CSR Obligations.

2016	Kalender and Vayvay	The Fifth Pillar of the Balanced Scorecard: Sustainability.	Theoretical Study	The importance of social and environment aspects should be realized by every company and integrate them as important part of core management. By doing so companies can achieve several financial benefits.	It has been suggested to investigate the relationship between current strategies of companies and sustainability aspects should be done so that a better future plan for implementing a right measurement system can be provided.
2017	Chaker et al.	A Critical Evaluation of the Sustainability Balanced Scorecard as a Decision Aid Framework.	Theoretical Study	The analysis of construction methodologies and designing of the Sustainability Balanced Scorecard is the critical issues in sustainability management.	Future research should focus upon investigating the systematic methods for constructing SBSC which must be holistic, adaptive and strategic. It must include ethics and governance as two additional perspective.
2018	Yilmaz and Inel	Assessment of Sustainability Performance of Banks by TOPSIS Method and Balanced Scorecard Approach	TOPSIS Method	A Sustainability Performance Scorecard Model has been created with 20 indicators on economic, environmental, social and Corporate Sustainability Area and concluded that all these activities are necessary for confirming the sustainability of the organizations for long-term.	It has been suggested that each sector has its own sustainability indicators so separate model for each sector should be created. Methods like expert opinion, group interviews, and extensive research can be used to develop sustainability models.

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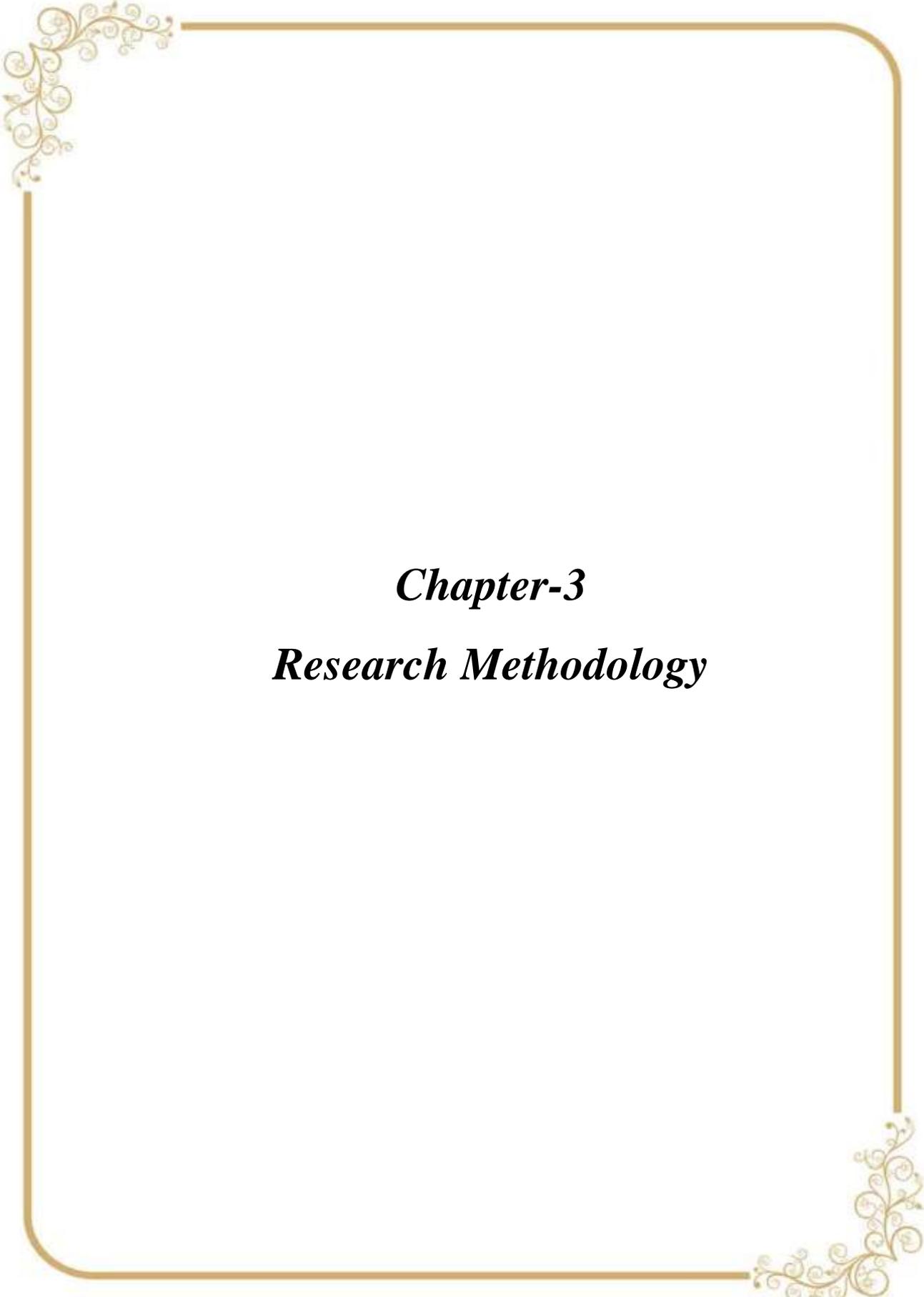
Chapter-3
Research Methodology

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CHAPTER-3

RESEARCH METHODOLOGY

3.1 Introduction:

This chapter is the blueprint of the research study. It states the research problem with the key objectives of the research and describes the best suited methodology to conduct the research. The main focus of the research is to evaluate, analyse, present and compare the performance of Public Sector Banks and Private Sector Banks in India on the basis of four basic perspectives of the Balanced Scorecard alongwith the new identified perspectives.

The research methodology adopted in this chapter is based on the articles published by us in various journals. (See reference no. 7, 8, 9, 10, 11 and 12).

3.2 Problem Identification:

The problem of the research is stated as "APPLICATION OF BALANCED SCORECARD IN MEASURING PERFORMANCE OF BANKS-A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA".

The study will present a view on Banks' overall performance and will provide a basis for implementation of Balanced Scorecard and recommend banks to apply it as a Strategic Performance Measurement and Management tool for improving the performance in long run so that they can survive in the global competitive markets.

3.3 Objectives of the Study:

Banking sector is a highly knowledge intensive service industry. Financial knowledge, intellectual resources and intangible assets of banks are important resources which should be evaluated and improved from time to time to ensure better financial performance, stability and growth. Balanced Scorecard is a tool that integrates non-financial measures with the financial measures on a single dashboard under the four perspectives named financial, customer, internal business processes and Learning & growth.

This study intends to evaluate, compare and analysed the overall performance of Public and Private sector banks in India using Balanced Scorecard Model and to suggest for improving the performance in the long run. The specific objectives of the study include the following:

1. To assess and compare the performance of Public and Private Sector Banks on **Financial Perspective** of BSC to determine the Growth in Profitability, shareholders satisfaction, liquidity position, asset quality , capital adequacy and earning capacity.

2. To examine and compare the performance of Public and Private Sector Banks on **Customer Perspective** of BSC to determine the customer growth through business growth, the customer preferences and growth trends in different accounts, the level of after sales services, and market share with regards to customers.

3. To evaluate and compare the performance of Public and Private Sector Banks on **Internal Business Perspective** of BSC to examine the operational excellence through growth in business, operational efficiency and capabilities through measuring productivity growth, cost of business operations and geographical expansion of business.

4. To appraise and compare the performance of Public and Private Sector Banks on **Learning & Growth and Innovation Perspective** of BSC to determine the improvement in employees' capabilities through growth in skilled employees, expenditure on employees and training provided and to study the growth in innovations and level of digitalization in products and services.

5. To explore new perspectives and measures and then evaluate and compare the performance of Public and Private Sector Banks on such perspectives.

6. To determine the overall performance of Public and Private Sector Banks in India using Proposed Balanced Scorecard Model.

7. To observe whether BSC can provide more worthwhile information on performance of the selected banks and then suggest ways for improvement in the overall performance of selected Public and Private Sector banks in India using Balanced Scorecard Model.

3.4 Sample Design:

10 Public Sector banks and 10 Private Sector banks have been selected as a sample banks for the study. Rationale behind selecting these banks is that these banks have the highest market capitalization as on 1st Feb'2018 in the banking sector on BSE

Sensex (Retrieved from moneycontrol.com). Selected banks represent the whole banking sector in India. These Banks are as follows:

Table: 3.1

List of Sampled Public Sector Banks and Private Sector Banks

Public Sector Banks	Private Sector Banks
1. State Bank of India	1. HDFC Bank Ltd.
2. Punjab National Bank	2. ICICI Bank
3. Bank of Baroda	3. Kotak Mahindra Bank
4. Canara Bank	4. Axis Bank
5. Bank of India	5. IndusInd Bank
6. Indian Bank	6. Yes Bank
7. IDBI Bank	7. Ratnakar Bank Ltd.
8. Central Bank of India	8. Federal Bank.
9. Union Bank	9. City Union Bank
10. Syndicate Bank	10. Karur Vysya Bank

Source: www.moneycontrol.com

3.5 Sources and Collection of Data:

Collection of data is mainly based on the secondary sources. The data have been collected through the following sources:

1. Annual Reports of the Sampled Banks for the study period
2. Business Responsibility Reports and Sustainability Reports of the sampled banks.
3. Websites of sampled banks.
4. Reserve Bank of India's various publications, statistical tables related to banks in India for study years, website of RBI etc.
5. Different websites, various journals, books, reports, relevant thesis, etc.

3.6 Period of the Study:

The period of the study is made up of 10 consecutive financial year from 2007-08 to 2016-17. The logic behind taking such a long period is that it will reveal the trends in performance of banks over a decade and will disclose the fact that improvements in non-financial performance really affects the financial results of the banks in the long run.

3.7 Research Process for the achievement of Research Objectives:

1. Identification of Common Strategic objectives of the Indian Banks after thorough review of literature on Balanced Scorecard in banking sector and review of annual reports of sampled banks.

2. Selection of variables under each strategic objective.

3. Preparation of Balanced Scorecard Model for Indian Banks.

4. Compilation of data for each perspective of Balanced Scorecard.

5. Preparation of scorecard scales for each variable with the assignment of their respective scores.

6. Measurement of total scores of each bank on all perspectives and deriving overall scores.

7. Analysis and interpretation of the data through personal observations of performance tables and score tables of each bank on each perspective.

8. Testing the hypothesis of the study through non-parametric tests using IBM SPSS.

9. Identifying the major findings, drawing conclusions and providing suggestions.

3.8 Hypotheses of the Study:

Financial Perspective

A). Intra-bank Hypotheses

1. H_0- There is no significant difference in the performance of Public Sector Banks on Financial Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Public Sector Banks on Financial Perspective during the last 10 years.

2. H_0- There is no significant difference in the performance of Private Sector Banks on Financial Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Private Sector Banks on Financial Perspective during the last 10 years.

B). Inter-bank Hypotheses

1. H_0- There is no significant difference in the performance on Financial Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Financial Perspective among Public Sector Banks.

2. H_0- There is no significant difference in the performance on Financial Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Financial Perspective among Private Sector Banks.

C). Inter-Sector bank Hypotheses

1. H_0- There is no significant difference in the performance on Financial Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Financial Perspective between Public and Private Sector Banks.

Customer Perspective

A). Intra-bank Hypotheses

1. H_0- There is no significant difference in the performance of Public Sector Banks on Customer Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Public Sector Banks on Customer Perspective during the last 10 years.

2. H_0- There is no significant difference in the performance of Private Sector Banks on Customer Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Private Sector Banks on Customer Perspective during the last 10 years.

B). Inter-bank Hypotheses

1. H_0- There is no significant difference in the performance on Customer Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Customer Perspective among Public Sector Banks.

2. H_0- There is no significant difference in the performance on Customer Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Customer Perspective among Private Sector Banks.

C). Inter-Sector bank Hypotheses

1. H_0- There is no significant difference in the performance on Customer Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Customer Perspective between Public and Private Sector Banks.

<p align="center">**<u>Internal Business Process Perspective</u>**</p>

A). Intra-bank Hypotheses

1. H_0- There is no significant difference in the performance of Public Sector Banks on Internal Business Processes Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Public Sector Banks on Internal Business Processes Perspective during the last 10 years.

2. H_0- There is no significant difference in the performance of Private Sector Banks on Internal Business Processes Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Private Sector Banks on Internal Business Processes Perspective during the last 10 years.

B). Inter-bank Hypotheses

1. H_0- There is no significant difference in the performance on Internal Business Processes Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Internal Business Processes Perspective among Public Sector Banks.

2. H_0- There is no significant difference in the performance on Internal Business Processes Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Internal Business Processes Perspective among Private Sector Banks.

C). Inter-Sector bank Hypotheses

1. H_0- There is no significant difference in the performance on Internal Business Processes Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Internal Business Processes Perspective between Public and Private Sector Banks.

Learning & Growth and Innovation Perspectives

A). Intra-bank Hypotheses

1. H_0- There is no significant difference in the performance of Public Sector Banks on Learning and Growth Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Public Sector Banks on Learning & Growth and Innovation Perspective during the last 10 years.

2. H_0- There is no significant difference in the performance of Private Sector Banks on Learning & Growth and Innovation Perspective during last 10 years.

H_1- There is a significant difference in the performance of Private Sector Banks on Learning & Growth and Innovation Perspective during the last 10 years.

B). Inter-bank Hypotheses

1. H_0- There is no significant difference in the performance on Learning & Growth and Innovation Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Learning & Growth and Innovation Perspective among Public Sector Banks.

2. H_0- There is no significant difference in the performance on Learning & Growth and Innovation Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Learning & Growth and Innovation Perspective among Private Sector Banks.

C). Inter-Sector bank Hypotheses

1. H_0- There is no significant difference in the performance on Learning & Growth and Innovation Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Learning & Growth and Innovation Perspective between Public and Private Sector Banks.

Social and Environment Perspective

A). Intra-bank Hypotheses

1. H_0- There is no significant difference in the performance of Public Sector Banks on Social and Environment Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Public Sector Banks on Social and Environment Perspective during the last 10 years.

2. H_0- There is no significant difference in the performance of Private Sector Banks on Social and Environment Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Private Sector Banks on Social and Environment perspective during the last 10 years.

B). Inter-bank Hypotheses

1. H_0- There is no significant difference in the performance on Social and Environment Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Social and Environment Perspective among Public Sector Banks.

2. H_0- There is no significant difference in the performance on Social and Environment Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Social and Environment Perspective among Private Sector Banks.

C). Inter-Sector bank Hypotheses

1. H_0- There is no significant difference in the performance on Social and Environment Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Social and Environment Perspective between Public and Private Sector Banks.

Overall Performance Hypotheses

A). Intra-bank Hypotheses

1. H_0- There is no significant difference in the Overall Performance of Public Sector Banks during the last 10 years.

H_1- There is a significant difference in the Overall Performance of Public Sector Banks during the last 10 years.

2. H_0- There is no significant difference in the Overall Performance of Private Sector Banks during the last 10 years.

H_1- There is a significant difference in the Overall Performance of Private Sector Banks during the last 10 years.

B). Inter-bank Hypotheses

1. H_0- There is no significant difference in the Overall Performance among Public Sector Banks.

H_1- There is a significant difference in the Overall Performance among Public Sector Banks.

2. H_0- There is no significant difference in the Overall Performance among Private Sector Banks.

H_1- There is a significant difference in the Overall Performance among Private Sector Banks.

C). Inter-Sector bank Hypotheses

1. H_0- There is no significant difference in the Overall Performance between Public and Private Sector Banks.

H_1- There is a significant difference in the Overall Performance between Public and Private Sector Banks.

3.9 Balanced Scorecard Model for Indian Banks

The basic Balanced Scorecard Model given by Kaplan and Norton includes the four distinctive perspectives named Financial, Customer, Internal Business Process and Learning & Growth. Although these perspectives cover almost each aspects of organization's strategies yet some aspects are still uncovered like strategies on

social and environment concerns which are equally important for sustainable development of any organization. Companies have started implicating social and environment pillars in their strategies and management. They have recognized that they need to manage their social and environment impacts as they are responsible for it as a corporate citizen and this will benefit them in many forms through lowering their operational costs, productivity improvement through employees' satisfaction, enhanced image & reputation in the eyes of all stakeholders , increased market opportunities, strong relationship with stakeholders etc.

Now the question is whether additional perspectives can be added in Balanced Scorecard or not. The answer is obviously yes as Kaplan and Norton (1996) in their book "Translating strategy into Action" said that the four perspectives of Balanced Scorecard should be considered as a prototype not as a strait jacket. They also said that there is no mathematical theorem exists that these all perspectives are necessary and sufficient. Selection of perspectives will vary on industry to industry, company to company and most importantly it will depend on strategies of a company. As Kaplan and Norton in their book also said that all stakeholders' interest are important for the success of company's strategy. Measures on such stakeholders' interest should be merged into Balanced Scorecard but there should be causal relationship between the perspectives. Various studies have highlighted the importance of integrating social and environment sustainability issues into Balanced Scorecard.

After thorough review of literature on Balanced Scorecard in banking industry, going through the vision, mission statements and strategic objectives of the sampled banks and studies highlighting importance of Sustainability issues of social and environment aspects, a Balanced Scorecard Model for Sampled Banks has been designed by incorporating one more perspective named Social and Environment Perspective with the four basic perspectives of BSC. The justification behind combining this new perspective is that achieving economic, social and environment Sustainability has become the core strategic objectives of the banks in the recent years. Sharma and Mani in their article said that the RBI (2011) has also suggested banks to pay attention towards integration of social and environment concerns in to

their business operations to achieve sustainable development. Balanced Scorecard is a suitable tool for measuring strategic performance of banks.

3.9.1 Selection of Measures under Each Perspective:

For selecting measures under each perspective the study concentrates the strategic objectives of the sampled bank and literature on Balanced Scorecard in banking industry. Different national and international studies on Balanced Scorecard have been referred (Refer Section 3.17) to select measures for each perspective. As every bank has different mission, vision and different objectives, some common strategic objectives and their measures to keep uniformity for comparison have been considered.

It is to be noted here that while selecting measures, the availability of data on these measures was kept in mind so that the research work do not get hampered. From the selected measures, individual bank while designing its Balanced Scorecard can subtract or add measures as per its strategic objectives.

Table: 3.2 Balanced Scorecard Model for Indian Banks

Perspective	Strategic Objective	Measure
Financial Perspective	*Healthy Growth in Profitability*	*Growth Rate of Profits*
		Return on Average Assets
	Increasing Shareholder Value	*Return on Equity*
	Maintaining Liquidity	*Cash-Deposit Ratio*
		Credit-Deposit Ratio
	Improving Asset Quality	*Net NPA's to Net Advances Ratio*
	Capital Adequacy	*Capital Adequacy Ratio*
	Improving Earning Quality	*NIM to Total Average Assets Ratio*
Customer Perspective	*Achieving high Business and Customer Growth Rate*	*Deposits Growth*
		Credit Growth
	Increasing Customer Growth Rate in Low Cost Funds	*Saving A/c*
		Current A/c
		Casa Ratio
	Providing Excellent after sales services	*Complaints Redressel Ratio*
	Increasing Market Share in	*Deposits*
		Advances
Internal Business Process Perspective	*Improving Operational Excellence*	*Growth in Total Business*
	Improving Operational Capabilities	*Business Per Employee*
		Profit Per Employee
	Reducing Cost of Business Operations	*Ratio of Wage Bills to Total Cost*
		Ratio of Intermediation cost to Total Assets
		Advertisement Cost to Total Business Volume Ratio
	Increasing Geographical reach for customers	*Growth in ATM's*
		Growth in Branches
Learning & Growth and Innovation Perspective	*Recruit skilled employees and Retrain & Retain Employees*	*Number of Skilled Employees*
		Expenditure Per Employee
		Percentage of employees trained
	Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	*Number of Debit Cards*
		Number of Credit Cards
		Number of POS Terminals
		Number of Mobile Transactions
		Number of NEFT Transactions
Social and Environment Perspective	*Increasing Monetary Contribution towards Society*	*Percentage of CSR Expenditure to Net Profits*
	Promoting Gender Equality and Empowering Women	*Percentage of Female employees to Total employees*
	Promoting Financial Inclusion Plans	*Growth in Branches in Rural & Semi urban Areas*
		Ratio of Priority Sector Advances to Total Advances
		Total No. of beneficiaries of PMJDY accounts
		Total Deposits in PMJDY accounts
	Promoting Environment Sustainability	*Amount invested on Environment Sustainability*
		Steps Taken for Environment Protection

3.9.2 Compilation of Data for Each Perspective of Balanced Scorecard

Based on the above Balanced Scorecard Model, Data have been compiled for each perspective for the sampled banks from the financial year 2007-08 to 2016-17 using the various secondary data sources mentioned earlier.

3.9.3 Preparation of Scorecard Scales for Each Variable with the Assignment of Their Respective Scores

After compilation of data for each bank for the studied period, score scale for each selected measure/variable has been framed separately by keeping in view the lowest and highest values. Equal weights have been assigned to each measure to keep uniformity. Banks can assign more weights to some measures as per the importance of those particular measures in their scorecards. Scales for the scores are subjective and have been designed keeping in mind various researches and requirements to create scorecards. Maximum marks assigned for each perspective were 400 i.e. 50 Scores x 8 measures so total maximum scores for Comprehensive Performance on BSC are 2000 i.e. 400 Scores x 5 perspective. Below tables show the scorecard scales with their respective scores.

Table: 3.3 Scorecard Scales for Financial Perspective

Measures	Unit of Measure	Max./Min.	Scores with their Respective Scales				
			10	20	30	40	50
Growth Rate of Profits(%)	%	Max.	0-12.5	12.5-25	25-37.5	37.5-50	More than 50
Return on Average Assets (ROAA)	%	Max.	0-0.40	0.40-0.80	0.80-1.20	1.20-1.60	1.60-2.00
Return on Equity (ROE)	%	Max.	0-5	5-10	10-15	15-20	20-25
Cash-Deposit Ratio	%	Max.	0-3	3-6	6-9	9-12	12-15
			24-27	21-24	18-21	15-18	
Credit-Deposit Ratio	%	Max.	30-40	40-50	50-60	60-70	70-80
			110-120	100-110	90-100	80-90	
Net NPA's to Net Advances Ratio	%	Min.	More than 4	3-4	2-3	1-2	0-1
Capital Adequacy Ratio	%	Max.	0-4	4-8	8-12	12-16	16-20
			More than 32	28-32	24-28	20-24	
Net Interest Margin (NIM) to Total Average Assets Ratio	%	Max.	0-1.20	1.20-2.40	2.40-3.60	3.60-4.80	4.80-6.00

Table 3.4 Scorecard Scale for Customer Perspective

Measures	Unit of Measure	Max./Min	Score with their Respective Scales				
			10	**20**	**30**	**40**	**50**
Deposits Growth	%	Max.	0-10	10-20	20-30	30-40	More than 40
Credit Growth	%	Max.	0-10	10-20	20-30	30-40	More than 40
Saving A/c	%	Max.	0-10	10-20	20-30	30-40	More than 40
Current A/c	%	Max.	0-10	10-20	20-30	30-40	More than 40
Casa Ratio	%	Max.	0-12	12-24	24-36	36-48	48-60
Complaints Redressel Ratio	%	Max.	75-80	80-85	85-90	90-95	95-100
Deposits	%	Max.	0-1.5	1.5-3	3-4.5	4.5-6	More than 6
Advances	%	Max.	0-1.5	1.5-3	3-4.5	4.5-6	More than 6

Table 3.5 Scorecard Scale for Internal Business Process Perspective

Measures	Unit of Measure	Max./Min	Scores with their Respective Scales				
			10	**20**	**30**	**40**	**50**
Growth in Total Business	%	Max.	0-12.5	12.5-25	25-37.5	37.5-50	More than 50
Business Per Employee	Lakhs	Max.	0-36000	36000-72000	72000-108000	108000-144000	More than 144000
Profit Per Employee	Lakhs	Max.	0-400	400-800	800-1200	1200-1600	1600-2000
Ratio of Wage Bills to Total Cost	%	Min.	More than 16	12-16	8-12	4-8	0-4
Ratio of Intermediation cost to Total Assets	%	Min.	4-5	3-4	2-3	1-2	0-1
Advertisemnet Cost to Total Business Volume Ratio	%	Min.	0.060-0.075	0.045-0.060	0.030-0.045	0.015-0.030	0-0.015
Growth in ATM's	Nos.	Max.	0-3750	3750-7500	7500-11250	11250-15000	More than 15000
Growth in Branches	Nos.	Max.	0-1250	1250-2500	2500-3750	3750-5000	More than 5000

Table: 3.6 Scorecard Scale for Learning & Growth and Innovation Perspective

Measures	Unit of Measure	Max./Min	Scores with their Respective Scales				
			10	**20**	**30**	**40**	**50**
Number of Skilled Employees	Nos.	Max.	0-20000	20000-40000	40000-60000	60000-80000	Above 80000
Expenditure Per Employee	Lakh	Max.	0-2.50	2.50-5.00	5.00-7.50	7.50-10.00	Above 10.00
Percentage of employees trained	%	Max.	0-20	20-40	40-60	60-80	More than 80
Number of Debit Cards	Lakh	Max.	0-20	20-40	40-60	60-80	More than 80
Number of Credit Cards	Lakh	Max.	0-10	10-20	20-30	30-40	More than 40
Number of POS Terminals	Lakh	Max.	0-.80	0.80-1.60	1.60-2.40	2.40-3.60	More than 3.60
Number of Mobile Transactions	Lakh	Max.	0-20	20-40	40-60	60-80	More than 80
Number of NEFT Transactions	Lakh	Max.	0-80	80-160	160-240	240-360	More than 360

Table: 3.7 Scorecard Scale for Social & Environment Perspective

Measures	Unit of Measure	Max./Min	Scores with their Respective Scales				
			10	20	30	40	50
Percentage of CSR Expenditure to Net Profits	%	Max.	0-0.50	0.50-1	1-1.5	1.5-2	More than 2%
Percentage of Female Employees to Total employees	%	Max.	5-10	10-15	15-20	20-25	More than 25
Growth in Branches in Rural & Semi urban Areas	%	Max.	0-15	15-30	30-45	45-60	60-75
Ratio of Priority Sector Advances to Total Advances	%	Max.	0-10	10-20	20-30	30-40	40-50
Total No. of Beneficiaries of PMJDY accounts	Lakhs	Max.	0-50	50-100	100-150	150-200	More than 200
Total Deposits in PMJDY Accounts	%	Max.	Less than 25	25-50	50-75	75-100	More than 100
Amount Invested on Environment Sustainability	Crore	Max.	0-1.25	1.25-2.50	2.50-3.75	3.75-5	More than 5
Steps Taken for Environment Protection	Yes/No	Max.	1	2	3	4	5

Table: 3.8 Maximum Scores for Comprehensive Performance on Balanced Scorecard

Perspective	Measures (1)	Score Per Measure (2)	Total Score Per Perspective (1*2)
Financial	8	50	400
Customer	8	50	400
Internal Business Process	8	50	400
Learning & Growth and Innovation	8	50	400
Social and Environment	8	50	400
Total Score			2000

3.10 Explanation of Measures with Justifications of the Scores Assignment to Measures:

Financial Perspective

1. **Growth rate of Profits: -** This measure is the indicator of bank's ability to sustain the profitability and overall performance of the bank. Higher ratio than the previous years and from competitive banks is considered better therefore highest scores have been assigned to the highest growth rates.

2. **Return on Assets: -** This measure depicts the overall profitability and management efficiency of the banks in deploying the assets in generation of profits. Higher ratio indicates the proper utilization of assets and better managerial efficiency so the highest scores have been assigned to the highest rates.

3. **Return on Equity: -** This measure shows the bank's capability to generate profits on the money invested by the shareholders. Higher ratio will reveal more efficiency in making use of shareholders' funds and will attract more investors to invest their funds so the highest scores to higher rates of return on equity have been assigned.

4. **Cash Deposit Ratio: -** This measure shows the liquidity maintained by bank to fulfil the statutory requirements with RBI as CRR and Cash maintained by banks to meet its liabilities out of the deposits mobilized by bank. Higher Cash deposit is a good sign for bank but a very high ratio is the indicator of keeping idle cash which is very expensive to hold. So two scales have been created. For higher ratio the highest scores have been provided whereas low scores have been provided to very high values.

5. **Credit Deposit Ratio: -** This ratio indicates the lending ratio out of the deposits mobilized by banks. Higher ratio is better as it shows that bank have utilized its deposits efficiently but a very high ratio also indicates that bank might not have sufficient liquidity to fulfil any contingency fund requirement and depicts bank may have provided advances from other sources of funds like capital which should not be done. Two scales have been created. The highest scores to the highest ratio and low scores to very high values have been created.

6. **Net NPA's to Net Advances Ratio: -** This measure is the indicator of overall quality of loan portfolio of a bank. Ratio value near to zero is considered as better position as it shows efficient recovery of advances. The highest scores have been assigned to the lowest ratio.

7. **Capital Adequacy Ratio: -** This measure is calculated to see if the bank has sufficient capital as against risk weighted assets. Higher ratio is better as it ensures the soundness of the bank and shows that bank maintains more capital than risk weighted assets but a very high ratio indicates bank has blocked more capital than the required. The highest scores have been assigned to the highest ratio whereas lowest scores have been assigned to too high ratio.

8. **NIM to Total Assets Ratio: -** This measure is the indicator of earning quality and financial health of the bank. Higher ratio is considered better as it shows the

higher yield and better mix of funds. The highest scores have been assigned to the highest values.

Customer Perspective

1. **Deposits Growth: -** Growth in deposits indicates the customer growth with a bank as receiving deposits is the main business activity of the bank. High growth rate in deposits from the previous years and from the competitors depicts the increased customer confidence level with the bank and indicates the bank's ability to attract new customers by providing high interest rates on deposits and by providing convenient and quality services to its customers. So the highest scores have been assigned to higher growth rates.

2. **Credit Growth: -** Creating credit out of the deposits received is also the main business activity of banks. Growth in credit is also an indicator of customer growth with the bank. High growth in credit depicts the banks' ability to attract new customers with the reasonable interest rates and other charges on advances and faster & easier processing of credit applications. So the highest scores have been assigned to higher growth rates.

3. **Growth in Saving Accounts:** Growth in saving accounts is the indicator of satisfaction level and faith of individuals, service class or salaried persons, students, housewives. As the interest rate and maintenance cost is very low on such accounts so banks tries to maximize the customers in saving accounts by providing quality services and smooth operations. The highest scores have been assigned to the highest growth rates in such accounts.

4. **Growth in Current Accounts:** Increase in current accounts depicts the increase in customer base of business class customers by offering best facilities on such accounts. As the interest rate is near to zero on such accounts but if a bank is providing prompt, accurate and quality services for such accounts, there will be a high growth in customers of current accounts. So the highest scores have been given to the highest growth rates.

5. **CASA Ratio:** High CASA ratio reveals that bank is concentrating on acquiring deposits in saving and current accounts as they are very low cost of funds which eventually increases interest margin thus leads to high profits. So the highest scores have been assigned to the highest ratio.

6. **Complaints redressed ratio:** This ratio is the indicator of satisfaction level of customers with regard to after post sale services provided by bank. If the complaints redressed ratio of a bank is higher than previous years and higher than from competitive banks than it is considered bank is providing high quality services to its customers. So higher rates have been given the highest scores.

7. **Market Share of Deposits:** This ratio shows the percentage of total deposits of a bank with the total deposits of scheduled commercial banks. Higher ratio indicates the better competitive position of a bank in terms of customer deposits accounts. So the highest market share rate has been assigned the highest scores.

8. **Market Share of Advances:** This ratio reflects the percentage of total advances of a bank with the total advances of scheduled commercial banks. The highest market share in advances have been considered as better position than competitors so highest rates have been given the highest scores.

<u>**Internal Business Perspective**</u>

1. **Growth in Total Business:** The highest growth in total business of a bank depicts the better operational efficiency than the competitors. It shows that bank is providing high quality services to its customers through highly skilled, knowledgeable and trained employees using updated technology in business processes and operations. So the highest scores have been assigned to highest growth rates.

2. **Business Per Employee:** This measure is used to judge the operational capabilities of the employees of the bank in generating business for the bank. Higher business per employee than competitors and from previous years shows the better management efficiency in utilizing its human resources and operational capabilities of a bank in generating business. So the highest values have been assigned the highest scores.

3. **Profit Per Employee:** This measure is also used to evaluate the performance of bank employee in generation of profits for the bank. Higher values entails the better bank's management efficiency and the highest operational capabilities in utilizing the manpower in creating profits so the highest values have been given the highest scores.

4. **Ratio of Wage Bills to Total Cost:** This measure shows the percentage of the total cost incurred on the employee with the total cost (Operating + Non-Operating). It indicates the bank's operational efficiency in maximizing the business and profits by the minimizing the cost on employees. Reliance on technological advancements has resulted in reduction of this ratio because it cuts the cost on employees. Lower ratio is considered better as it shows that bank is able to control the cost incurred on employees so lower ratio have been given the highest scores.

5. **Ratio of Intermediation Cost to Total Assets:** Operating costs affects the profitability of the bank. Due to the technological advancement taking place in banking sector, the operating cost of the banks is increasing. This ratio is used to measure the total cost incurred on operational activities out of the total assets. Lower ratio will reveal the better profitability condition of the bank so the highest scores have been assigned the lowest values.

6. **Advertisement Cost to Total Business Volume Ratio:** This ratio helps to know that the resources spent on advertisement and publicity has facilitated in acquiring the new business to the bank or not. Low ratio indicates the low cost on advertisement generated high business to the bank so the highest scores have been assigned to low ratio.

7. **Growth in ATM's:** ATM serve as mini branches of banks as they provide many services in addition to cash withdrawals like cash deposits, balance enquiry, mini statements, passbook printing etc. Growth in ATM's replaces the hassle in transactions in bank, personal attention of employees to customers, limited branch banking hours, validations on papers etc. Higher the number of ATM's of bank in different locations, the more will be the convenient geographical reach for customers for banking. So the highest scores have been assigned to high number of ATM's.

8. **Growth in Branches:** Expanding branches to reach to the customers is continuously to be the part of strategies of the bank. Opening of new branches in new geographical locations will expand the customer base of the bank which will bring more business to the bank. So the highest scores have been assigned to the highest number of branches.

Learning & Growth and Innovation Perspective:

1. **Growth in Number of Skilled Employees:** As the high technological innovations are taking place in banking products & services and processes, all it requires highly skilled, technically updated and trained employees to conduct banking activities smoothly. Although growth in employees will significantly increase the cost to bank yet it will improve the bank' performance as well. So the highest scores have been assigned to high number of employees.

2. **Growth in Expenditure per Employee:** This measure shows the amount spent by bank on each employee. As the individual data on training and development is not provided by the most of the banks so total expenditure is considered. Higher expenditure motivates employee to work more dedicatedly and improves employee productivity. So the highest scores have been assigned to highest expenditure.

3. **Percentage of Employees Trained:** This measure indicates the percentage of employees trained out of the total employees. Maximum trained employees will ensure the more efficiency in banking operations so the highest scores have been given to maximum percentage of employees trained.

4. **Growth in Debit Cards:** As there is a huge push in digital banking in the last few years, debit cards have become the most preferable form of utility payments through POS terminals on stores, internet banking, mobile wallets, online shopping, mail order catalogues, e-commerce websites etc. This form of banking saves the time of both customers and bankers. Growth in debit cards with a high speed depicts that bank and customers prefers digital form of banking rather than branch banking. So the highest scores have been given to the highest number of debit cards.

5. **Growth in Credit Cards:** Like debit cards, the number of credit cards have also increased but slower than debit card as banks charges high rate of interest in case of default in payment and there are disadvantages like theft, data hacking etc. Increased trend of online shopping, attractive offers like cashbacks, rewards points, discounts, buying expensive items in instalments, and digitalized boom have increased the use of credit cards. Increase in number of credit cards depicts the move towards high digitalization in banking products and services which

bring more revenues to the bank. So the highest scores have been assigned the highest scores.

6. **Growth in POS Terminals:** Point of Sale (POS) terminals are installed by banks at different shopping outlets/stores where purchase are made by customers using debit cards or credit cards. The number of POS terminals is expanding with the increase in debit and credit cards which will increase the purchases made by customers and eventually increase the revenues of the bank. Higher number of terminals have given the highest scores.

7. **Increase in Mobile Banking Transactions:** Mobile banking is the easiest, convenient, and popular form of banking for smartphone users available for 24/7 hours and 365 days. Customer can perform different financial transactions like bill payments, balance inquiries, fund transfer, scheduled payments etc. using mobile banking app on a mobile device or on tablet provided by the bank. Increase in mobile banking transactions has led the bank lowers its cost to serve customers. It has extended the customer engagement with banks and increases the revenue for the banks. So the highest number of transactions have been assigned the highest scores.

8. **Increase in Number of NEFT Transactions:** Internet banking has also become a commonly accepted mode of doing banking transactions in the last decade. It is usually used for services like transfer of funds through NEFT, RTGS or IMPS, opening and closing of fixed or recurring deposits a/c's, etc. NEFT (i.e. National Electronic Fund Transfer) is used to transfer funds from one account to another without any hassle, easily and safely. Banks tries to provide convenient logging facilities on their websites for internet banking. As these services are fast, easy, convenient, economical and paperless for customers so it is seen that there is high increase in number of NEFT transactions. High growth in NEFT transactions depicts that number of internet banking customers is increasing and bank is able to cope up with digital initiatives in the industry by continuously upgrading their infrastructural facilities. So the highest scores are assigned to the highest number of transactions.

Social and Environment Perspective:

1. **Percentage of CSR Expenditure to Average Net Profits:** As per the section 135 of the Companies Act 2013, all listed companies are required to spend at least 2% of the Average Net Profits of immediately preceding last 3 financial years. This measure is used to see if bank is complying with the minimum requirement of the CSR expenditure. Higher ratio than the minimum required rate is considered better as it shows that bank is concentrating more on CSR activities and have more responsible behaviour towards community development than competitors which increases the reputation of the bank in the eyes of all stakeholders thus increase the revenues for the bank. So the highest scores have been given to the highest percentage.

2. **Percentage of Female Employees to Total Employees:** To empower women and to extend gender equality in the workforce, banks have started recruiting and retaining more female employees. It has been felt and proved also that women possess the excellent leadership skills, managerial abilities and the best administrative skills. They have showed the remarkable growth over the years in the banking industry being main decision makers and by introducing innovative ideas. So the highest percentage of female employees in banks has been assigned the highest scores.

3. **Growth in Branches in Rural & Semi urban areas:** One of the major aim of financial inclusions plans is to cover the unbanked or under banked rural and semi-urban areas to provide access to financial services to rural & poor people provided by banks. Increase in branches in rural & semi-urban areas shows that banks have taken initiatives in this regard and improved banking penetration. Hence this will improve the customer base of banks in these areas. The highest percentage of rural & semi urban branches has been given the highest scores.

4. **Ratio of Priority Sector Lending:** Providing loans to priority sectors like agriculture, micro, small and medium enterprises, and to other weaker sections of society etc. have also been considered as important objectives of financial inclusion. As per RBI guidelines scheduled commercial banks are required to provide minimum 40% of adjusted net bank credit or credit equivalent amount whichever is higher to these sectors. Ratio equivalent to 40% or above has been

assigned the highest score as it shows bank is concerned for all round development of the economy.

5. **Growth in PMJDY Accounts:** PMJDY is a national initiatives for financial inclusion to provide access of financial services to each individual through opening of saving/deposits accounts, remittances, credit, insurance or pension in an affordable manner. Growth in PMJDY accounts depicts the increased customer base of bank with the affordable banking services to all sections of the society. So the highest growth in the number of these accounts has been the assigned highest score as it indicates banks efforts in pushing financial inclusion plans for the benefit of the society.

6. **Growth in Deposits in PMJDY Accounts:** Growth in deposits in PMJDY accounts indicate that after stepping in into the bank branches through opening these accounts by such account holders have increased the demand for banking services and have inculcated the saving habit among such account holders. So the highest growth in deposits in PMJDY accounts have been assigned the highest score.

7. & 8. Amount Invested on Environment Sustainability & Steps Taken for Environment Protection: Incorporating the environment sustainability in the corporate strategies has become the need of the hour as it has been recognized that focus on environment issues improves the brand image of the company. Running business with least damage to environment, saving the depletion of the natural resources, using energy efficiency equipment, more use of renewable resources, recycling of e-waste, carbon emissions etc. are the steps which should be considered by banks to protect and sustain the environment. More investment in environment sustainability and more steps taken for environment protection have been given the highest score. Following points have been considered for assigning score on steps taken for environment protection:

i. Are there some policies for Environment Sustainability?

ii. Do these policies confirm to any National/International Standards?

iii. Does the bank has Board/Committee to see the implementation of the Policy?

iv. Has the bank taken initiatives for clean technology, energy efficiency, Renewable energy recycling of e-waste?

v. Has the bank started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc.?

3.11 Statistical Tools and Techniques

All public and private sector banks have been assigned score on the basis of their performance on each measure under each perspective using the above mentioned performance scales. To test the hypothesis of any study, it is firstly required to identify which type of data are being used under the study so that the methods of hypothesis testing can be determined whether to apply parametric tests or non-parametric tests.

Under this study, non-metric ordinal data (Ranked, Scaled or rated data) have been used so non-parametric tests have been applied using IBM SPSS 22 to draw statistical conclusions as these methods require no assumptions about the population probability distributions.

For intra-bank and inter-bank comparisons Kruskal-Wallis H-Test has been used whereas for inter-sector comparisons Mann-Whitney-Wilcoxon U test has been applied to draw conclusions about the sampled population. Brief description of both the tests is being given below:

Kruskal-Wallis H-test-

➢ It is an extension of Mann-Whitney-Wilcoxon U test and used for the cases of three or more independent population groups i.e. $k = 3$ or $k > 3$.

➢ Measurement must be at least ordinal.

➢ It does not require the assumption of normally distributed populations.

➢ As the samples are independent, they can be of different sizes.

➢ The rejection rule for this test is reject null hypothesis if p-value is less than or equals to alpha i.e. significance level and accept it is greater than alpha.

Mann-Whitney- Wilcoxon U test

➢ This non-parametric test is used to determine whether there is difference between two independent populations i. e. $k = 2$.

➢ The only requirement for this test is that the measurement must be scale or must be at least ordinal.

➢ This does not require the assumption that both the populations are normally distributed.

➢ For this, the combined data are ranked from the lowest to the highest values, with the tied values being assigned the average of the tied rankings. Then compute T i.e. the sum of the ranks for the first sample. And in the last compare the observed value of T to the sampling distribution of T for identical populations. The value of the standardised test statistic z will provide the basis for deciding whether to reject null hypothesis.

➢ The rejection rule for this test is reject null hypothesis if p-value is < or = to alpha.

3.12 Formulas Used for Calculating the Different Measures under Different Perspectives

Measures	Unit of Measure	Formulas
Growth Rate of Profits	%	(Current Year Net Profit after taxes-Previous Year Net Profit after Taxes)/Previous Year Net Profit after Taxes*100
Return on Average Assets	%	Net Profit after Taxes/Average Total Assets*100
Return on Equity	%	Net Profit after Taxes/Average Equity*100
Cash-Deposit Ratio	%	Cash-in-hand + Cash Balances with RBI/Total Deposits
Credit-Deposit Ratio	%	Total Credits/Total Deposits*100
Net NPA's to Net Advances Ratio	%	Net Non-Performing Assets/Net Advances*100
Capital Adequacy Ratio	%	Total Capital/Risk-Weighted Assets *100
NIM to Total Average Assets Ratio	%	Net Interest Margin/Total Average Assets*100
Deposits Growth	%	Current Year Deposits-Previous Year Deposits/Previous Year Deposits*100
Credit Growth	%	Current Year Credit-Previous Year Credit/Previous Year Credit*100
Saving A/c	%	Current Year Saving A/c Deposits-Previous Year Saving A/c Deposits / Previous Year Saving A/c Deposits*100
Current A/c	%	Current Year Current A/c Deposits-Previous Year Current A/c Deposits/Previous Year Current Account Deposits*100
Casa Ratio	%	Current Account Deposits + Savings A/c Deposits/Total Deposits*100
Complaints Redressed Ratio	%	Complaints Redressed during the year/Total Complaints*100
Market Share of Deposits	%	Total Deposits/Total Deposits of Scheduled Commercial Banks*100
Market Share of Advances	%	Total Advances/Total Advances of Scheduled Commercial Banks*100
Growth in Total Business	%	Current Year Total Business-Previous Year Total Business/Previous Year Total Business*100
Business Per Employee	Lakhs	Total Business/Total Number of employees
Profit Per Employee	Lakhs	Net Profit after Taxes/Total Number of employees

Ratio of Wage Bills to Total Cost	%	Wage Bills/Total Cost*100
Ratio of Intermediation cost to Total Assets	%	Intermediation Cost/Total Cost*100
Advertisement Cost to Total Business Volume Ratio	%	Advertisement Cost /Total Business Volume*100
Growth in ATM's	Nos.	Number of ATM's each year
Growth in Branches	Nos.	Number of Branches each year
Number of Skilled Employees	Nos.	Number of employees each year
Expenditure Per Employee	000	Total Expenditure on employees/No. of Employees
Percentage of employees trained	%	Percentage of employee trained each year
Number of Debit Cards	Nos.	Number of Debit cards each year
Number of Credit Cards	Nos.	Number of Credit cards each year
Number of POS Terminals	Nos.	Number of POS terminals each year
Number of Mobile Transactions	Nos.	Number of Mobile transactions each year
Number of NEFT Transactions	Nos.	Number of NEFT transactions each year
Percentage of CSR Expenditure to Net Profits	%	Total CSR Expenditure / Average Net Profits of Previous 3 Years*100
Percentage of Female employees to Total employees	%	Total Female employees / Total Number of Employees*100
Growth in Branches in Rural & Semi urban Areas	%	Rural and Semi Urban Branches / Total Branches*100
Ratio of Priority Sector Advances to Total Advances	%	Priority Sector Advances / Total Advances * 100
Total No. of beneficiaries of PMJDY accounts	No.	Number of Beneficiaries in PMJDY A/c's each year
Growth in Deposits in PMJDY accounts	%	Deposits in PMJDY A/c's each year
Amount invested on Environment Sustainability	In Crore	Amount spent on environment sustainability each year
Steps Taken for Environment Sustainability	Checklist	Check list prepared for steps taken for environment protection

∗   Equity comprises Equity Share Capital + Preference Share Capital + Net Free Reserves
∗   Net NPA's= Gross NPA's-Provision for NPA's
∗   Total Capital= Tier I + Tier II Capital
∗   Net Interest Margin= Interest Income-Interest Income
∗   Total Complaints comprises of Opening Complaints plus Complaints Received during the year
∗   Total Business Comprises of Total deposits plus total advances
∗   Total Cost includes Interest Expended plus operating expenses
∗   Percentage of Employees trained each year is taken from annual reports or Business responsibility reports

3.13 Grading of Total Performance Scores of a Bank on Balanced Scorecard

A performance scale has been framed for each measure separately by keeping in view the highest and the lowest values. Maximum marks assigned for each perspective are 400 i.e. 50 Scores x 8 measures so total maximum scores for overall

Performance on BSC are 2000 i.e. 400 Scores x 5 perspective. Total scores gained by each bank on Balanced Scored will be converted into the percentage and will be graded on the basis of below Table:

Table: 3.9 Overall Grading of Performance

Scores (In Percentage)	Grade
More than 80%	Excellent
More than 70%	Very Good
More than 60%	Good
More than 50%	Satisfactory
Less than 50%	Poor

3.14 Expected Contribution from the Research Study:

There has been a huge technological advancement where digitalization has taken a gigantic place in banking products and services in the recent years. This has created a cut throat competition among banks due to which total Business and financial performance of few banks is continuously declining. This may be due to the negligence of non-financial aspects related to customers, employees, operational activities, or lack of innovations and technical up gradation in products and services or avoidance of social and environment factors which directly or indirectly affect the performance of the banks. This research study is being carried out to evaluate the performance of banks on both the financial and non-financial aspects using Balance Scorecard tool of performance measurement. The study will contribute to different parties in following ways:

1. The research study will contribute to the BSC literature on banking Industry.
2. The study will give a true picture of banking sector performance to all stakeholders of banks like shareholders, customers, employees, investors etc. This will figure out the reasons for diminution in the performance of banks in the last decade and they will be able to identify that which bank is performing the best in protecting the interest of all associated stakeholders. All stakeholders will be able to determine the progress of bank in the long run.
3. It will assist the banks whether they are achieving their strategic objectives or not on all strategic financial and non-financial parameters both. It will also help to know the extent of responsible behaviour of banks towards society and

environment and to identify if this behaviour have an impact on financial performance.

4. It will be helpful for the managers who can use the result of their study in applying BSC framework to obtain the best financial and non-financial information for effective decision making of the banks.

5. It will be helpful for shareholders, potential investors, and business partners in getting assistance in understanding the performance measurement and in determining the progress of banks.

6. It would be helpful for academic studies on performance evaluation through Balanced Scorecard approach on banking sector in India.

7. The top level management of banks will be benefited by providing a base for the implementation of Balanced Scorecard tool for measuring their performance on both the financial and non-financial aspects.

8. The study will highlight the relevance of integrating the non-financial aspects into performance measurement which can help RBI or other authoritative bodies to make policies on compulsory disclosure of non-financial information which reveals the true picture of performance of banks.

9. The presented model of Balanced Scorecard can become a base for applying this tool as Performance Measurement and Management System by banks and help them to improve their performance.

3.15 Limitations of the Study:
This research study is no exception to the few limitations attached to each study which might have affected the results and inferences drawn from the study. Some of them are as follows:

1. Research study is completely based on secondary data. Primary data for analysing customer, Internal Business Processes & Learning & Growth and Innovationperspective might have given more appropriate results.

2. The study is confined to Indian Commercial Banks only while inclusion of foreign banks, small finance banks, and regional rural banks may influence the results of the study.

3. Although utmost care has been taken while selecting the measures under each perspective of Balanced Scorecard still the inclusion of other measures may affect the results.

4. Equal weightage to measures and perspectives and score assignment is completely based on subjective decision which has its own limitations.

5. Scores are affected due to non-availability of data on some measures for some years which might have affected the results of the study.

6. Inferences and conclusion have been drawn on the basis of the information available and presented in the different reports of the sampled banks. Any hidden information may affect the results.

3.16 Referencing

The study uses 6th edition of the Publication manual of the American Psychological Association (APA) for referencing and citation of the different articles, journals, books, conference proceedings, research reports, thesis etc.

3.17 References Taken from the Studies to Select Measures:

Year	Authors	Financial	Customer	Internal Business Process	Learning & Growth
2009	Wu et al.	Sales, Debt Ratio, Return on Assets, Earning Per Share, Net Profit Margin, Return on Investment	Customer Satisfaction, Profit Per Customer, Market Share Rate, Customer Retention Rate, Customer Increasing rate, Profit Per Customer	No. of New Service Items, Transaction Efficiency, Customer Complaints, Rationalised forms & processes, Sales Performance, Management Performance	Response of Customer Service, Professional Training, Employee Stability, Employee Satisfaction, Organization Competence
2009	Zhang and Li	Economic Value Added Bank Profits, The Per Capital Profit, Non-Interest Income, Net Interest Income, Marketing cost income ratio, Office expenses, Labour Cost, Loan	Market Share, Target number of obtaining customers, Customers Attention, The growth rate of Customer Complaints, Innovative Services	Product & Service Innovation, New Products and Services revenue, the new non-performing loan rate and the rate of increase, the number of internal regulations, responsibility for the accident rate	Employee Satisfaction, Staff Violation rate, pass rate of status examination, the operational capacity of standard rate, professional development program, staff training satisfaction
2009	Yahaya	Earnings Per Share, Return on Equity, Return on Assets	Customer Satisfaction Index, Customer Retention Index	SLA for account opening, cash withdrawal, loan disbursement	Employee Satisfaction Index, Employee Innovativeness, Employee Stability Index

2010	Fago	Return on Assets, Return on Equity, Earning Per Share, Net Profit Margin, Credit-Deposit Ratio	Duration of Customer Relationship, Total Deposits, New Customer from Program, Satisfied Customer, Identified Profitable Customer	Request Fulfilment Time, Internal Customer Satisfaction, Treatment of Complaints, Improve Service Quality, Improve Operating Efficiency, Investment in Social Welfare	Employees with training Plan, Successful Groups, Satisfied Customers' with communication, Employee involvement with decision, Employee recognized for doing a good job, Key employee turnover, Critical Jobs filled with qualified employees, employees who achieve personal goals, leadership development plans
2010	Abay	Net Profit Growth, Return on Equity, Return on Assets	Customer Satisfaction, Customer Retention, Customer Intention	Transaction Speed, Service Responsiveness, Service quality and diversity	Payment Satisfaction, Social Relationship, Working Environment, Participation
2011	Shaverdi et al.	Sales, Debt Ratio, Return on Assets, Earning Per Share, Net Profit Margin, Return on Investment	Customer Satisfaction, Profit Per Customer, Market Share Rate, Customer Retention Rate, Customer Acquisition rate	No. of New Service Items, Transaction Efficiency, Customer Complaints, Rationalised processes, Sales Performance	Customer Service Replication, Professional Training, Employee Stability, Employee Satisfaction, Organization Competence
2012	Najjar and Kalaf	Liquidity Ratio, Return on Investment, Return on Equity, Profit Margin, Leverage Ratio	Customer Satisfaction, Customers' Growth, Growth of Current Accounts, Growth of Saving Accounts and Growth of Safety Deposits	Productivity Growth, Growth of Banking Services, Credit Growth, Growth in Software Applications, and Front office Employees	Employee Productivity, Employee Turnover Rate, Growth of Bank Branches, Employee Participation in Development Programs, Number of Employees using IT in their work

2012	Dave & Dave	Cash Deposit Ratio, Credit Deposit Ratio, Interest Income to Total Assets Ratio, Net Interest Margin to Total Assets Ratio, NPA to Net Advances Ratio, Investment Deposit Ratio, Return on Equity, Capital Adequacy Ratio, Return on Assets, Growth Rate of Profits	Growth of Credit granted to Customers, Term Loan to Total Advances Ratio, Growth of Priority Sector Landings, Growth of Transactions outside India, Growth of Deposits with bank, Term Deposits to total Deposits ratio, Total Deposits to total liabilities, Growth of Marketing Expenses, Growth of Volume of Business, Marketing Expenses to Volume of Business	Business Per Employee, Profit Per Employee, Wage Bill to Income Ratio, Wage Bill to Total Expenses Ratio, Wage Bills to Intermediation Cost	Number of ATM's, Number of Debit Cards, Number of Credit Cards, Expenditure on training of Employees, Growth in Skilled Employees
2013	Panicker and Seshadri	Liquidity Ratio, Return on Equity, Net Profit, Leverage Ratio, Return on Investment	Customer Complaints Redressed, Growth in Customer Saving Accounts, Growth in Term Deposit, Growth in Demand Deposit, Consumer Banking Net Promoter Score	Business Per Employee Growth, Growth of Banking Services, Credit Growth, Process & Reliability Operational Errors, Number of Suppliers	Number of Employees, Profit per Employees, Percentage of Employees Appraised, Percentage of Employees Receiving Training, Employee Engagement
2013	Eskandari et al.	Revenue, Debt Ratio, Return on Assets, Earning Per Share, Profit Margin, Return on Investment	Customer Satisfaction, Profit Per Customer, Market Share, Customer retention rate, Customer Increasing rate, Profit per Customer,	No. of Service Items, Transaction Efficiency, Customer Complaints, Sales Performance, Management Performance	Responses of Customer Service, Professional Training, Employee Stability, Employee Satisfaction
2014	Tominac	Return on Assets, Return on Equity, Net Interest margin, Revenue Mix, Revenue Growth, Return on Equity Growth	Market Share by segment, Customer retention, customer satisfaction survey, customer acquisition	Error rates, Investment in Technology, Number of Complaints, Cross-sell ratio	Revenue from new products, Product Development Cycle, Employee Survey, Revenue per Employee, Employee Turnover, Training Hours Per Employee

2016	Balkovskay a and Filneva	Return on Assets, Return on equity, Return on Investment, Profit Margin, Leverage Ratio, Operating Income to assets Ratio	Profit Per Customer, Profit Per Online Customer, Market Share, Customer Retention Rate, Customer Growth Rate, Number of Active Products/services	Number of New products/services, Transaction Efficiency, Customer Complaint, Rationalised Processes, Time for New Products/Services development and launch, sales channels development	Professional Training, Training Costs, staff turnover, Motivation, Proactiveness
2016	Baber and Akter	Profit per customer, profit per employee, EPS growth, Product Profitability, Return on Investment, Return on Equity, Leverage ratio, Economic Value Added, Capital Adequacy Ratio, Net Operating Income, Profitability of each branch, Net Interest Margin	Customer Feedback/Suggestion s, Market share, average length of account	Property Risk Identification, Efficiency in Credit Proposal Processing, Non-Performing Loan, Advertising Expense, Cost of Service Quality Maintenance, Number of branches within a geographic area	Efficiency & Productivity of employee, relation with customer & branch employee, education level & training skill up gradation, contribution of employee in the development, employee satisfaction, employee suggestions, loyalty & discipline, update with new software & technology, research & development expense, cost to develop new product, process innovation, and no. of new product, growth of bank branches
2016	Chowdhury and Saha	Capital Adequacy Ratio, Cash Deposit ratio, Credit-Deposit Ratio, Net Profit, Investment Deposit Ratio, Ratio of Interest Income to Total Assets, Ratio of Net	Growth Rate of Total Credit, Growth Rate of Total Deposits, Ratio of Deposits to Total Liabilities	Deposit Per Employee, Ratio of Wage Bill to Total Income, Ratio of Wage bill to Total Expense, Non-Performing Loans, % of Non-Performing Loan to Total Loan	Number of ATM's, Number of Branches, Business Per Employee, Profit Per Employee

		Interest Margin to Total Assets, Return on Assets, Return on Equity			
2017	Annapurana and Manchala	Credit Deposit ratio, Net Interest Margin, Capital Adequacy Ratio, Net Non-Performing Assets Ratio	Market Share in Deposits, Ratio of Marketing Expenses to Volume of Business, Ratio of Priority Sector Advances to Total Advances	Cost-to-Income Ratio, Business Per Employee, Profit per Employee	Number of ATM's, Number of Skilled Employees, Ratio of Wage Bills to Total Income
2018	Yilmaz and Inel	Net Profit, Total Active, Credits, Deposits, Equity, Capital Adequacy Ratio, Rate of Low Credits	No. of Branches, No. of ATM's, No. of Customers using Internet /Mobile Banking Customer, No. of Disabled Friendly ATM	Internal Electricity Consumption, Loan Amount for renewable energy, Water Consumption, Carbon footprint, Recycled paper amount	Average Training Time Per Employee, Average age of employee, Total Number of Employees
	Cedar Consultancy	Book Size, ROE, Growth from Key Areas, TATs, NPAs, Audit rating, Cost/Income ratio	Customer feedback, Market share, No. Electronic Banking Transaction	Revenue from new products, Revenue/sales FTE, Channel Mix target, cross sell, TAT Index	Profit per Employee, New Performance Management System Development, Employee Satisfaction Survey, Employee Feedback, Key Milestone Compliances
2012	Amiri et al.	Sales, Debt Ratio, Return on Assets, Earning Per Share, Net Profit Margin, Return on Investment	Customer Satisfaction, Profit Per Customer, Market Share Rate, Customer Retention Rate, Customer Increasing rate, Profit Per Customer	No. of new service items, Customer Complaints, Transactions efficiency, Rationalised forms and processes, Management performance, Sales performance	Responses of Customer Service, Professional Training, Employee Stability, Employee Satisfaction, Organization Competence

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Chapter-4

Measurement and Intra-Bank Comparison of Performance of Public Sector Banks on Balanced Scorecard

CHAPTER-4

MEASUREMENT AND INTRA-BANK COMPARISON OF PERFORMANCE OF PUBLIC SECTOR BANKS ON BALANCED SCORECARD

4.1 Introduction:

This chapter presents the detailed analysis of the performance of top 10 Public Sector Banks of BSE Sensex using the strategic measurement and management tool named Balanced Scorecard from the financial year 2007-08 to 2016-17. For this purpose, the performance of individual bank on each perspective of Balanced Scorecard has been measured and calculated using the data available from various reports of that particular bank. After the measurement of performance, the scores have been assigned on the basis of performance scale. An intra-bank comparison has been drawn to compare the performance of individual bank on different perspective separately during the studied period. The performance of the banks has been measured and compared using the following perspectives:

1. Measurement of Performance on Financial Perspective
2. Measurement of Performance on Customer Perspective
3. Measurement of Performance on Internal Business Process Perspective
4. Measurement of Performance on Learning & Growth and Innovation Perspective
5. Measurement of Performance on Social and Environment Perspective

The performance measurement and analysis presented in this chapter is based on articles published by us in different journals (See reference no. 1, 2 and 3).

4.2 Measurement of Performance of Public Sector Banks on Financial Perspective

To measure and evaluate the performance of banks on Financial Perspective 6 common financial strategic objectives with 8 measures have been selected. The performance is then measured and scored using the performance scale created separately for each measure. Kruskal Wallis test has been applied separately on performance scores of individual bank using IBM SPSS22 to test whether bank shows any difference in the performance on Financial Perspective when intra-company comparison is drawn for year 2007-08 to 2016-17. Performance and intra-bank comparison of all the selected Public Sector Banks is being given below:

4.2.1 Measurement of Performance of State Bank of India on Financial Perspective

Table 4.1: Performance of State Bank of India on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	48.18	35.55	0.49	-9.84	41.66	20.48	-22.78	20.30	-24.05	5.36
	Return on Average Assets	%	1.04	1.08	0.91	0.73	0.91	0.97	0.65	0.68	0.46	0.42
Increasing Shareholder Value	Return on Equity	%	16.75	17.05	14.80	12.62	15.72	15.43	10.03	10.62	7.30	6.31
Maintaining Liquidity	Cash-Deposit Ratio	%	9.59	7.49	7.62	10.11	5.18	5.47	6.09	7.35	7.49	6.26
	Credit-Deposit Ratio	%	77.55	73.11	78.58	81.03	83.13	86.94	86.76	82.45	84.57	76.83
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	1.78	1.78	1.72	1.63	1.82	2.10	2.57	2.12	3.81	3.71
Capital Adequacy	Capital Adequacy Ratio	%	13.47	14.25	13.39	11.98	13.86	12.92	12.44	12.00	13.12	13.11
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.64	2.48	2.35	2.86	3.38	3.06	2.93	2.86	2.64	2.49

Table 4.2: Performance Score of State Bank of India on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	40	30	10	0	40	20	0	20	0	10
	Return on Average Assets	30	30	30	20	30	30	20	20	20	20
Increasing Shareholder Value	Return on Equity	40	40	30	30	40	40	30	30	20	20
Maintaining Liquidity	Cash-Deposit Ratio	40	30	30	40	20	20	30	30	30	30
	Credit-Deposit Ratio	50	50	50	40	40	40	40	40	40	50
Improving Asset Quality	Net NPA's to Net Advances Ratio	40	40	40	40	40	30	30	30	20	20
Capital Adequacy	Capital Adequacy Ratio	40	40	40	30	40	40	40	30	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	20	30	30	30	30	30	30	30
Total	**400**	**310**	**290**	**250**	**230**	**280**	**250**	**220**	**230**	**200**	**220**

Observations: Table 4.2 reveals that:

1. the performance score of SBI on Financial Perspective has a declining trend continuously in the first four years of the study. Score declined to 230 in 2010-11 from 310 in 2007-08 then increased to 280 in 2011-12. It declined again in subsequent years due to reduction in growth rate of profits, increased NPA's and low interest margins.

2. Score on growth rate of profits has an inconsistent trend. The score decreased to 0 in 2013-14 mostly due to high provisioning for NPA's, provision for pay for pay revision, payment for pension and gratuity etc. The score increased to 20 in 2014-15 and again decreased to 0 in 2015-16 as there has been a correction in base rate which affects the interest income and high provisioning for NPA' on

account of Asset Quality Review by RBI. Table 4.1 shows that return on average assets has a decreasing trend during the study period.

3. Score on return on equity has also been declined to 20 in 2016-17 from 40 in 2007-08 due to decline in profits.

4. Cash -deposit ratio has gained average scores and credit-deposit ratio has scored either 40 or 50 in all the years which shows that bank has maintained sufficient liquidity and has made full use of its funds by creating more assets.

5. Score on net NPA's to net advances ratio declined to 20 in 2015-16 from 40 in 2007-2008 due to thorough review of quality of assets by the bank on its own and fresh slippages.

6. Bank has maintained sufficient capital against risk weighted assets as the Capital adequacy ratio of the bank has a steady trend as shown in Table 4.1.

7. Score on net interest margin to total average assets ratio has a stable trend as it scored 30 in almost each year except 2009-10 where the score was 20. Earning quality of the bank declined after 2011-12 as shown in Table 4.1.

Suggestions:

1. Bank should focus on creating efficient portfolio of assets and deposits, reducing NPA's, maximizing yield on assets and minimizing cost of deposits which will improve the net interest margin and net profits of the bank.

2. Bank should conduct review and monitoring of assets on regular basis and create strong credit management policies on providing loans to reduce NPA's.

4.2.2. Measurement of Performance of Bank of Baroda on Financial Perspective

Table 4.3: Performance of Bank of Baroda on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	39.85	55.15	37.32	38.69	18.04	-10.51	1.35	-25.16	-258.77	-125.63
	Return on Average Assets	%	0.89	1.09	1.21	1.33	1.24	0.90	0.75	0.49	-0.78	0.20
Increasing Shareholder Value	Return on Equity	%	14.58	18.62	21.86	23.47	20.64	15.07	13.36	8.96	-13.48	3.44
Maintaining Liquidity	Cash-Deposit Ratio	%	6.16	5.51	5.62	6.50	5.63	2.84	3.27	3.64	3.78	3.79
	Credit-Deposit Ratio	%	70.18	74.46	72.55	74.87	74.67	69.25	69.79	69.32	66.85	63.70
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.46	0.31	0.34	0.35	0.54	1.28	1.52	1.89	5.06	4.72
Capital Adequacy	Capital Adequacy Ratio	%	12.94	14.05	14.36	14.52	14.67	13.30	12.28	12.60	13.17	12.24
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.42	2.52	2.35	2.76	2.56	2.28	1.98	1.92	1.84	1.98

Table 4.4: Performance Score of Bank of Baroda on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	40	50	30	40	20	0	10	0	0	0
	Return on Average Assets	30	30	40	40	40	30	20	20	0	10
Increasing Shareholder Value	Return on Equity	30	40	50	50	50	40	30	20	0	10
Maintaining Liquidity	Cash-Deposit Ratio	30	20	20	30	20	10	20	20	20	20
	Credit-Deposit Ratio	50	50	50	50	50	40	40	40	40	40
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	50	50	40	40	40	10	10
Capital Adequacy	Capital Adequacy Ratio	40	40	40	40	40	40	40	40	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	20	30	30	20	20	20	20	20
Total		**400**	**300**	**310**	**300**	**330**	**300**	**220**	**220**	**200**	**130**	**150**

Observations: Table 4.4 manifests that:

1. the performance score of Bank of Baroda on Financial Perspective has been declined to 150 in 2016-17 from 300 in 2007-08 primarily due to decrease in profitability and increased NPA's in last years of the study period.

2. Growth rate of profits and return on average assets both have a declining trend (as shown in Table 4.3) which may be due to decline in yield on advances or high cost funds or increased operational cost or increased NPA's which forces bank to create more provisions.

3. Score on return on equity reached to 0 in 2015-16 from 50 in 2009-10, 2010-11, and 2011-12 as return on equity ratio has a declining trend due to decline in profits of the bank which can be seen from Table 4.3.

4. Table 4.3 shows that the liquidity in the form of cash has not been maintained by the bank sufficiently in the last five years of the study period so cash-deposit ratio scored 10 or 20. Credit-deposit ratio scored 50 in first five years and 40 in last five years of the study period.

5. Net NPA's to net advances ratio has increased continuously as shown in Table 4.3 so score on this ratio decreased to 10 in 2015-16 from either 40 or 50 in last five years.

6. Capital adequacy ratio scored 40 in all the years. Bank has maintained sufficient capital against risk weighted assets.

7. Net interest margin to total average assets ratio has a declining trend during the study period as shown in Table 4.3. The score was 20 after 2012-13 in all the years due to decrease in growth rate of fresh credits because of increased NPA's.

Decrease in net interest margin has affected the profitability of the bank adversely.

Suggestions:

1. Bank should try to improve its net interest margin through acquiring more low cost deposits and high yielding advances so that the profitability can be increased.

2. Bank should emphasis on maintaining asset quality in order to reduce NPA's. It should adopt proper credit monitoring and management system.

3. To maintain the trust of shareholders bank should try to maintain sustainability in return provided to shareholders.

4. Bank should increase its liquidity in the form of cash to pay for unforeseen liabilities.

4.2.3 Measurement of Performance of Punjab National Bank on Financial Perspective

Table 4.5: Performance of Punjab National Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	33.03	50.87	26.35	13.52	10.17	-2.80	-29.60	-8.41	-229.82	-133.33
	Return on Average Assets	%	1.13	1.39	1.44	1.31	1.17	1.01	0.65	0.53	-0.63	0.19
Increasing Shareholder Value	Return on Equity	%	18.01	22.92	24.12	22.60	19.80	15.70	9.75	8.17	-10.27	3.31
Maintaining Liquidity	Cash-Deposit Ratio	%	9.17	8.13	7.35	7.60	4.87	4.57	4.93	4.83	4.79	4.05
	Credit-Deposit Ratio	%	71.79	73.75	74.84	77.38	77.39	78.86	77.38	75.90	74.55	67.47
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.63	0.17	0.53	0.84	1.52	2.34	2.84	4.05	8.59	7.80
Capital Adequacy	Capital Adequacy Ratio	%	13.46	14.03	14.16	12.42	12.63	12.72	11.52	12.21	11.28	11.66
Improving Earning Quality	NIM to Total Average Assets Ratio	%	3.06	3.06	3.12	3.50	3.21	3.17	3.14	2.87	2.41	2.16

Table 4.6: Performance Score of Punjab National Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	30	50	30	20	10	0	0	0	0	0
	Return on Average Assets	30	40	40	40	30	30	20	20	0	10
Increasing Shareholder Value	Return on Equity	40	50	50	50	40	40	20	20	0	10
Maintaining Liquidity	Cash-Deposit Ratio	40	30	30	30	20	20	20	20	20	20
	Credit-Deposit Ratio	50	50	50	50	50	50	50	50	50	40
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	50	40	30	30	10	10	10
Capital Adequacy	Capital Adequacy Ratio	40	40	40	40	40	40	30	40	30	30
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	30	30	30	30	30	30	30	20
Total	**400**	310	340	320	310	260	240	200	190	140	140

Observations: Table 4.6 highlights that:

1. the performance score on Financial Perspective of Punjab National Bank has been dropped to 140 in 2016-17 from 310 in 2007-08 mainly due to decline in profits, increased NPA's and low interest margins.

2. Score on growth rate of profits declined to 0 in 2012-13 from 50 in 2008-09 and remained 0 till 2016-17 primarily on account of increased NPA's which forced bank to create high provision which affected the profitability of the bank. Score on return on average assets remained constant from 2008-09 to 2010-11 but showed a declining trend after that and score reached to 0 in 2015-16.

3. Due to decrease in profitability of the bank the return provided to shareholders have also declined as shown in Table 4.5 so score dropped to 0 in 2015-16 from 50 in 2008-09.

4. Cash-deposit ratio scored 20 from 2011-12 to 2016-17. Bank has efficiently created credits out of the deposits and scored 50 in almost all the years except 2016-17 where the score slightly dropped down to 40.

5. Bank's assets quality was affected by the overall economic slowdown in 2012-13 and 2013-14 which affected the recovery of assets and gave rise to NPA's therefore score on net NPA's to net advances ratio jumped down to 10 in 2014-15 from 50 or 40 in last years. NPA's slightly decreased in 2016-17 due to initiatives taken by the bank for NPA's recovery.

6. Table 4.5 shows that earning quality of the bank has also decreased primarily due to decrease in credit growth rate which has lowered the interest earned. So the score on NIM to average assets ratio declined to 20 in 2016-17 from 30 in all the last years.

Suggestions:

1. Bank should take initiatives for efficient recovery of NPA accounts and should create strong credit management and monitoring policies for credits to maintain the quality of its assets.

2. Bank should increase its net interest margin through creating profitable portfolio of assets and funds.

3. Sufficient liquidity in the form of cash should be maintained by the bank to pay for unforeseen liabilities.

4.2.4. Measurement of Performance of IDBI Bank on Financial Perspective

Table 4.7: Performance of IDBI Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	15.73	17.70	20.10	60.05	23.10	-7.36	-40.42	-22.12	-519.61	40.75
	Return on Average Assets	%	0.62	0.57	0.51	0.68	0.75	0.61	0.34	0.25	-1.00	-1.40
Increasing Shareholder Value	Return on Equity	%	8.52	9.41	10.53	13.35	11.95	9.26	5.00	3.64	-14.08	-20.52
Maintaining Liquidity	Cash-Deposit Ratio	%	9.17	7.64	8.29	10.84	7.17	4.64	5.39	5.06	5.20	4.97
	Credit-Deposit Ratio	%	112.62	92.02	82.43	87.04	85.79	86.43	83.85	80.20	81.25	71.06
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	1.15	1.36	1.21	1.07	1.61	1.63	2.48	2.88	6.78	13.21
Capital Adequacy	Capital Adequacy Ratio	%	11.95	11.57	11.31	13.64	14.58	13.13	11.68	11.76	11.67	10.7
Improving Earning Quality	NIM to Total Average Assets Ratio	%	0.58	0.82	1.12	1.75	1.67	1.75	1.85	1.68	1.67	1.56

Table 4.8: Performance Score of IDBI Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	20	20	20	50	20	0	0	0	0	40
	Return on Average Assets	20	20	20	20	20	20	10	10	0	0
Increasing Shareholder Value	Return on Equity	20	20	30	30	30	20	10	10	0	0
Maintaining Liquidity	Cash-Deposit Ratio	40	30	30	40	30	20	20	20	20	20
	Credit-Deposit Ratio	10	30	40	40	40	40	40	40	40	50
Improving Asset Quality	Net NPA's to Net Advances Ratio	40	40	40	40	40	40	30	30	10	10
Capital Adequacy	Capital Adequacy Ratio	30	30	30	40	40	40	30	30	30	30
Improving Earning Quality	NIM to Total Average Assets Ratio	10	10	10	20	20	20	20	20	20	20
Total	400	190	200	220	280	240	200	160	160	120	170

Observations: Table 4.8 presents that

1. the performance score of IDBI bank on Financial Perspective has an erratic trend. It increased to 280 in 2010-11 from 190 in 2007-08 then again declined to 120 in 2015-16 because of high decrease in profitability ratio and increased NPA's.

2. Score on growth rate of profits was the highest 50 in 2010-11. Growth rate of profits declined and scored 0 from 2011-12 to 2015-16 due to high provisioning cost for NPA's and stressed assets. Score on return on average assets scored 0 in 2015-16 and 2016-17 due to increased NPA's, decreased net interest margin, negative or low growth in profits.

3. Return on equity was the highest 13.35 % in 2010-11 due to high growth rate of profits as shown in Table 4.7 and scored 30. Score reached to 0 in 2015-16 and 2016-17 as there has been a declining trend in profits in these years.

4. Bank has created maximum credits out of deposits in almost all the years as shown in Table 4.7. It has affected the liquidity condition of the bank. Score on cash deposit ratio has been declined to 20 in 2012-13 from 40 in 2007-08. Credit-deposit ratio was the highest 112.62 % in 2007-08 as shown in Table 4.7 which depicts that bank created more advances from other sources of funds than deposits.

5. Table 4.7 depicts that Net NPA's to net advances ratio was low in first 6 years of the study period. After 2012-13 the ratio increased rapidly due to deterioration of asset quality and thus scored 10 in 2015-16 and 2016-17.

6. Although bank has maintained adequate capital than the prescribed rate as per BASEL norms yet it was low and scored 40 from 2010-11 to 2012-13 and 30 in rest all the years.

7. Net interest margin of the bank was too low in first three years of the study as shown in Table 4.7. Score on this ratio was 10 in first 3 years then increased and remained 20 in last 7 years of the study period.

Suggestions:-

1. Bank should concentrate on acquiring low cost deposits and high interest yielding assets, reducing NPA's through strong credit management and regular monitoring of assets which will improve the return on assets and net profits of the bank.

2. Bank should increase the liquidity in the form of cash from deposits so that it can pay for unforeseen liabilities.

4.2.5. Measurement of Performance of Canara Bank on Financial Perspective

Table 4.9: Performance of Canara Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	10.15	32.42	45.79	33.24	-18.46	-12.51	-15.11	10.85	-204.08	-60.11
	Return on Average Assets	%	0.90	1.04	1.25	1.34	0.92	0.73	0.54	0.52	-0.51	0.20
Increasing Shareholder Value	Return on Equity	%	15.01	18.25	22.48	23.20	15.36	12.08	8.95	8.79	-8.86	3.44
Maintaining Liquidity	Cash-Deposit Ratio	%	8.67	5.37	6.70	7.50	5.44	4.33	5.27	4.64	4.31	4.02
	Credit-Deposit Ratio	%	69.60	73.96	72.16	72.00	71.09	68.05	71.56	69.65	67.68	69.05
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	1.41	1.30	1.38	1.10	1.46	2.18	1.98	2.65	6.42	6.33
Capital Adequacy	Capital Adequacy Ratio	%	13.25	14.10	13.43	15.38	13.76	12.40	10.63	10.56	11	12.86
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.04	2.36	2.35	2.56	2.17	2.00	1.98	1.86	1.77	1.74

Table 4.10: Performance Score of Canara Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	10	30	40	30	0	0	0	10	0	0
	Return on Average Assets	30	30	40	40	30	20	20	20	0	10
Increasing Shareholder Value	Return on Equity	40	40	50	50	40	30	20	20	0	10
Maintaining Liquidity	Cash-Deposit Ratio	30	20	30	30	20	20	20	20	20	20
	Credit-Deposit Ratio	40	50	50	50	50	40	50	40	40	40
Improving Asset Quality	Net NPA's to Net Advances Ratio	40	40	40	40	40	30	40	30	10	10
Capital Adequacy	Capital Adequacy Ratio	40	40	40	40	40	40	30	30	30	40
Improving Earning Quality	NIM to Total Average Assets Ratio	20	20	20	30	20	20	20	20	20	20
Total	400	250	270	310	310	240	200	200	190	120	150

Observations: Table 4.10 demonstrates that

1. the score of Canara Bank on Financial Perspective has been deteriorated during the study period. Score was the highest 310 in 2009-10 and 2010-11 primarily due to high profitability ratios. Score was the lowest 120 in 2015-16 as bank incurred losses and has high NPA's in this year.

2. Growth rate of profits was better in first four years of the study period as shown in Table 4.9. After 2010-11, the score was 0 in all the years except 2014-15 where the score was 10. This was primarily due to low business growth in these years, high NPA's and high provisioning for them. Score on return on average assets decreased to 0 in 2015-16 from 40 in 2009-10.

3. Return provided to shareholders was affected with the changes in growth rate of profits so return on equity has a declining trend in last years as shown in Table 4.9.

4. Credit-deposit ratio scored either 40 or 50 in all the years as bank created maximum credit out of the deposits in each year thus it affected the Cash-deposit ratio of the bank so it scored 20 in maximum years.

5. Score on net NPA's to net advances ratio decreased to 10 in 2015-16 from 40 in last year's due to increase in poor quality assets of the bank.

6. Capital adequacy ratio scored 40 from 2007-08 to 2012-13 then declined to 30 in 2013-14. This implies that the bank maintained sufficient capital against risk-weighted assets in starting years but declined in last years of the study period.

7. Score on NIM to total average assets ratio was 20 in all the years except 2010-11. This ratio has also a decreasing trend as shown in Table 4.9 due to fall in earnings on assets and decrease in fresh credits.

Suggestions:

1. Bank should concentrate on improving return on assets through best assets portfolio composition, increasing the efficiency of processing of advances, increasing yield on advances, reducing NPA's, attracting deposits in low cost funds which will simultaneously improve the profitability of the bank.

2. To decrease the NPA's and increasing efficiency of advances, bank should have proper monitoring and recovery mechanism with strong credit management policies.

4.2.6. Measurement of Performance of Bank of India on Financial Perspective

Table 4.11: Performance of Bank of India on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	78.90	49.66	-42.11	42.94	7.59	2.68	-0.73	-37.39	-456.32	-74.41
	Return on Average Assets	%	1.25	1.49	0.70	0.79	0.73	0.66	0.53	0.29	-0.99	-0.25
Increasing Shareholder Value	Return on Equity	%	24.38	24.97	12.56	15.79	14.00	12.25	10.14	5.57	-19.50	-5.04
Maintaining Liquidity	Cash-Deposit Ratio	%	7.83	4.70	6.79	7.29	4.71	5.75	4.00	5.11	6.62	5.06
	Credit-Deposit Ratio	%	75.64	75.33	73.33	71.30	78.20	75.78	77.73	75.58	70.02	67.86
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.52	0.44	1.31	0.91	1.47	2.06	2.00	3.36	7.79	6.90
Capital Adequacy	Capital Adequacy Ratio	%	12.04	13.01	12.94	12.17	11.95	11.02	9.97	10.73	12.01	12.14
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.64	2.72	2.30	2.49	2.26	2.16	2.11	1.91	1.91	1.91

Table 4.12: Performance Score of Bank of India on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	50	40	0	40	10	10	0	0	0	0
	Return on Average Assets	40	40	20	20	20	20	20	10	0	0
Increasing Shareholder Value	Return on Equity	50	50	30	40	30	30	30	20	0	0
Maintaining Liquidity	Cash-Deposit Ratio	30	20	30	30	20	20	20	20	30	20
	Credit-Deposit Ratio	50	50	50	50	50	50	50	50	50	40
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	40	50	40	30	40	20	10	10
Capital Adequacy	Capital Adequacy Ratio	40	40	40	40	30	30	30	30	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	20	30	20	20	20	20	20	20
Total	**400**	**340**	**320**	**230**	**300**	**220**	**210**	**210**	**170**	**150**	**130**

Observations: Table 4.12 portrays that

1. the performance score of Bank of India on Financial Perspective has been declined to 130 in 2016-17 from 340 on 2007-08 as there has been a decline in profitability ratios, interest margins and growth in Net NPA's of the bank.

2. Growth rate of the profits was the highest 78.90% in 2007-08 as shown in Table 4.11 so it scored 50. Score declined to 0 in 2009-10 as there has been a decline in net interest margin because of high cost deposits and decline in yield on advances. It has slightly improved but again declined in 2015-16 due to high provisioning for NPA's and pension liabilities. Score on return on average assets declined to 0 in 2015-16 and 2016-17 from 40 in 2007-08.

3. Due to declining trend in profits return provided to shareholders has also decreased and score reached to 0 in 2015-16 from 50 in 2007-08.

4. Score on cash deposit ratio was either 30 or 20 in all the years. Credit-deposit ratio scored 50 in all the years except 2016-17 where the score declined to 40.

5. Score on Net NPA's to net advances ratio has declined to 10 in 2015-16 from 50 in 2007-08 due to increase in weak accounts identified by asset quality review by RBI and drop down in advances in this year.

6. Score on capital adequacy ratio was 40 from the year 2007-08 to 2010-11 then it declined to 20 in 2013-14. The ratio improved in last two years of the study as shown in Table 4.11.

7. Net interest margin ratio has a decreasing trend as shown in Table 4.11 thus score declined to 20 in last years of the study period from 30 in 2007-08 because of the decline in growth in advances and low yields on them.

Suggestions:

1. Bank should focus on increasing net interest margin through acquiring low cost deposit with high yielding assets which will improve the profitability of the bank.

2. Proper monitoring and recovery of the advances on time is a prerequisite for decrease in NPA's which bank should follow.

4.2.7 Measurement of Performance of Indian Bank on Financial Perspective

Table 4.13: Performance of Indian Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	32.77	23.45	24.87	10.23	1.92	-9.49	-26.70	-13.27	-29.23	97.60
	Return on Average Assets	%	1.59	1.61	1.68	1.54	1.33	1.04	0.66	0.53	0.36	0.67
Increasing Shareholder Value	Return on Equity	%	22.41	20.26	20.18	19.27	17.19	13.89	8.97	7.00	4.58	8.41
Maintaining Liquidity	Cash-Deposit Ratio	%	10.54	8.56	8.00	6.50	5.23	4.98	4.78	4.91	5.15	3.06
	Credit-Deposit Ratio	%	65.26	70.81	70.44	71.12	74.77	74.41	75.31	74.38	72.38	69.97
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.24	0.18	0.23	0.53	1.33	2.26	2.26	2.50	4.20	4.39
Capital Adequacy	Capital Adequacy Ratio	%	12.74	13.98	12.71	13.56	13.47	13.08	12.64	12.86	13.2	13.64
Improving Earning Quality	NIM to Total Average Assets Ratio	%	3.24	3.38	3.41	3.62	3.36	2.97	2.49	2.35	2.24	2.44

Table 4.14: Performance Score of Indian Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	30	20	20	10	10	0	0	0	0	50
	Return on Average Assets	40	50	50	40	40	30	20	20	10	20
Increasing Shareholder Value	Return on Equity	50	50	50	40	40	30	20	20	10	20
Maintaining Liquidity	Cash-Deposit Ratio	40	30	30	30	20	20	20	20	20	20
	Credit-Deposit Ratio	40	50	50	50	50	50	50	50	50	40
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	50	40	30	30	30	10	10
Capital Adequacy	Capital Adequacy Ratio	40	40	40	40	40	40	40	40	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	30	40	30	30	30	20	20	30
Total	**400**	**320**	**320**	**320**	**300**	**270**	**230**	**210**	**200**	**160**	**230**

Observations: Table 4.14 exhibits that

1. the performance score of Indian Bank on Financial Perspective has been decline to 160 in 2015-16 from 320 in first 3 years of the study period. This was primarily due to decline in profits, increased Net NPA's and low earning quality of the bank.

2. Growth rate of profits has a declining trend from 2007-08 to 2015-16 as shown in Table 4.13 due to decline in overall business growth rate, reduced net interest margins and increase in poor quality assets. Increase in interest margin in 2016-17 has increased the growth rate of profits thus it scored 50. Score on return on average assets decreased to 10 in 2015-16 from 50 in 2008-09 and 2009-10. It improved in 2016-17 thus scored 20.

3. Return provided shareholders was the highest in beginning 3 years as shown in Table 4.13 so it scored 50. It declined to 10 in 2015-16 due to decline in profits.

4. It is depicted from Table 4.13 that bank has created sufficient credits out of deposits received but liquidity retained by the bank in cash form was too low after 2011-12. Cash-deposit ratio scored 20 since 2011-12 in each year.

5. Score on net NPA's to net advances ratio has been declined to 10 in 2015-16 from 50 in first four years which was primarily due to asset quality review impact by RBI.

6. Table 4.13 shows that bank has maintained adequate capital against risk weighted assets above required BASEL norms. Capital adequacy ratio scored 40 in all years during the study period.

7. Net interest margin has a declining trend after 2010-11 and score reached to 30 in 2016-17 from 40 in 2010-11 due to decline in credit growth rate which decrease the yield on advances.

Suggestions:

1. Through mobilizing low cost deposits and acquiring high yielding assets, and improving the quality of assets, bank can improve its net interest margin and profitability.

2. Proper monitoring and management of credits is required by the bank to control the increase of bad loans.

4.2.8 Measurement of Performance of Central Bank of India on Financial Perspective

Table 4.15: Performance of Central Bank of India on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	10.47	3.83	85.25	18.35	-57.44	90.41	-224.42	-148.02	-333.85	-71.28
	Return on Average Assets	%	0.51	0.42	0.64	0.64	0.24	0.41	-0.45	0.20	-0.46	-0.76
Increasing Shareholder Value	Return on Equity	%	11.31	9.25	15.01	13.49	4.57	7.31	-8.12	3.65	-8.07	-13.90
Maintaining Liquidity	Cash-Deposit Ratio	%	10.46	8.41	10.49	7.85	6.68	6.00	4.97	5.52	5.29	25.31
	Credit-Deposit Ratio	%	66.17	65.12	65.01	72.33	75.20	76.06	73.86	73.75	67.63	46.99
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	1.45	1.24	0.69	0.65	3.12	2.90	3.75	3.61	7.36	10.20
Capital Adequacy	Capital Adequacy Ratio	%	9.39	13.12	12.23	11.64	12.4	11.49	9.87	10.9	10.41	10.95
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.05	1.64	1.54	2.71	2.35	2.30	2.33	2.41	2.29	2.06

Table 4.16: Performance Score of Central Bank of India on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	10	10	50	20	0	50	0	0	0	0
	Return on Average Assets	20	20	20	20	10	20	0	10	0	0
Increasing Shareholder Value	Return on Equity	30	20	40	30	10	20	0	10	0	0
Maintaining Liquidity	Cash-Deposit Ratio	40	30	40	30	30	20	20	20	20	10
	Credit-Deposit Ratio	40	40	40	50	50	50	50	50	40	20
Improving Asset Quality	Net NPA's to Net Advances Ratio	40	40	50	50	20	30	20	20	10	10
Capital Adequacy	Capital Adequacy Ratio	30	40	40	30	40	30	30	30	30	30
Improving Earning Quality	NIM to Total Average Assets Ratio	20	20	20	30	20	20	20	30	20	20
Total	400	230	220	300	260	180	240	140	170	120	90

Observations: Table 4.16 displays that

1. the performance score of Central Bank of India on Financial Perspective has been decreased to 90 in 2016-17 from 300 in 2009-10 primarily on account of decrease in profits, low interest margins and high NPA's.

2. Growth rate of profits scored 0 after 2012-13 due to reduction in business growth rate, high provisioning for NPA's and restructuring of accounts. It was the highest 50 in 2009-10 and 2012-13 due to high productivity and business growth rate. Bank remodelled its business strategies in these years and gave an extra focus on people, process, customers, technology & productivity. Return on average assets decreased with the decline in profits due to low interest margins as shown in Table 4.16.

3. Score on return on equity declined to 0 in last four years from 40 in 2009-10. This was due to low or negative profits as shown in Table 4.15.

4. Score on cash deposit ratio was the highest 40 in 2007-08. It declined to 10 in 2016-17 because of very high liquidity in the form of cash. Credit-deposit ratio was too low in 2016-17 thus scored 20.

5. Net NPA's to net advances ratio has risen speedily in 2011-12 as depicted in Table 4.15 primarily on account of high slippages due to adoption of system driven NPA's and adverse economic conditions. The score decreased to 10 in 2015-16 from 30 in 2012-13 due to stress in different sectors like infrastructure, textiles, Iron & steel, gems & jewellery etc.

6. Capital adequacy ratio scored 40 in 2008-09, 2009-10 and 2011-12. The ratio declined after 2011-12 as shown in Table 4.16 which shows that bank has maintained low capital against risk-weighted assets.

7. Score have slight fluctuations in NIM to total average assets ratio. It was the highest 30 in 2010-11 and declined to 20 in last years which may be due to fall in yield on investments or low rate of interest on advances etc.

Suggestions:

1. Bank should focus on acquiring high yielding assets and low cost deposits to improve its profits and net interest margin.

2. Cash deposit ratio was too high in last year as retaining more cash is very expensive so bank should take care in this regard and create more credit out of deposits.

3. Monitoring and recovery of advances is required on continuous basis to stop them being converted into NPA's.

4.2.9 Measurement of Performance of Union Bank on Financial Perspective

Table 4.17: Performance of Union Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	64.07	24.48	20.18	0.34	-14.16	20.75	-21.40	5.04	-24.14	-58.92
	Return on Average Assets	%	1.22	1.21	1.17	0.97	0.72	0.75	0.51	0.48	0.34	0.13
Increasing Shareholder Value	Return on Equity	%	22.13	21.46	21.65	17.96	13.05	13.52	9.48	9.32	6.34	2.40
Maintaining Liquidity	Cash-Deposit Ratio	%	9.10	6.48	7.33	8.70	5.22	4.08	6.19	4.75	4.55	4.37
	Credit-Deposit Ratio	%	71.59	69.60	70.17	74.58	79.81	78.90	76.96	80.68	69.26	75.71
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.17	0.34	0.81	1.19	1.70	1.61	2.33	2.71	5.91	6.57
Capital Adequacy	Capital Adequacy Ratio	%	12.51	13.27	12.51	12.95	11.85	11.45	10.8	10.22	10.56	11.79
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.72	2.68	2.35	2.88	2.77	2.63	2.37	2.30	2.11	2.08

Table 4.18: Performance Score of Union Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	50	20	20	10	0	20	0	10	0	0
	Return on Average Assets	40	40	30	30	20	20	20	20	10	10
Increasing Shareholder Value	Return on Equity	50	50	50	40	30	30	20	20	20	10
Maintaining Liquidity	Cash-Deposit Ratio	40	30	30	30	20	20	30	20	20	20
	Credit-Deposit Ratio	50	40	50	50	50	50	50	40	40	50
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	40	40	40	30	30	10	10
Capital Adequacy	Capital Adequacy Ratio	40	40	40	40	30	30	30	30	30	30
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	20	30	30	30	20	20	20	20
Total	**400**	350	300	290	270	220	240	200	190	150	150

Observations: Table 4.18 conveys that

1. the performance score of Union Bank on Financial Perspective has decreased to 150 in last two years of the study from 350 in 2007-08. Decline in performance was primarily due to low profitability and business growth ratios, increased NPA's, decrease in interest earned etc.

2. Growth rate of profits has been declined sharply in 2015-16 and 2016-17 as shown in Table 4.17. Score on this ratio decreased to 0 in these years from 50 in 2007-08 primarily due to blocking of profits in provisions for NPA's. Score on return on average assets has also decreased to 10 in last two years as there has been a sharp decline in growth rate of profits.

3. Due to negative growth rate of profits as shown in Table 4.17, score on return on equity has also decreased to 10 in 2016-17 from 50 in 2007-08, 2008-09 and 2009-10

4. Cash-deposit ratio declined after 2010-11 as shown in Table 4.17 thus scored 20 after this in most of the years. Credit-deposit ratio scored either 50 or 40 during the study period.

5. Delay in repayments of debt by corporate borrowers due to poor economic conditions prevailing in the country and deduction of cash flows of projects of these corporates has affected the asset quality of the banks so NPA's to net advances ratio has a decreasing trend as shown in Table 4.17.

6. Required capital adequacy ratio by RBI's BASEL norms has been maintained by the bank as shown in Table 4.17 thus scored 30 in each year.

7. Net interest margin to total average assets has decreased after 2012-13 as depicted in table 4.17 and scored 20 due to decline in corporate demand of loans in last years.

Suggestions:-

1. Bank should focus on improving its profitability ratios through acquiring low cost deposits and high yielding assets, reducing cost of business operations.

2. More cash should be retained by the bank to pay for contingent liabilities.

3. Strong credit management system should be introduced by the bank for proper monitoring and recovery of non-performing assets.

4.2.10 Measurement of Performance of Syndicate Bank on Financial Perspective

Table 4.19: Performance of Syndicate Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	18.44	7.64	-10.90	28.85	25.33	52.61	-14.62	-11.02	-207.92	-121.84
	Return on Average Assets	%	0.86	0.77	0.60	0.71	0.77	1.01	0.73	0.55	-0.54	0.12
Increasing Shareholder Value	Return on Equity	%	21.42	19.63	15.29	16.53	16.32	20.47	15.29	12.23	-12.94	2.71
Maintaining Liquidity	Cash-Deposit Ratio	%	10.90	10.82	6.14	7.70	5.58	4.37	5.99	4.69	5.10	5.03
	Credit-Deposit Ratio	%	67.30	70.36	77.25	78.75	78.27	79.61	81.90	79.38	76.94	76.63
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.97	0.77	1.07	0.97	0.96	0.76	1.56	1.90	4.48	5.21
Capital Adequacy	Capital Adequacy Ratio	%	11.82	12.68	12.7	13.04	12.24	12.59	11.41	10.54	11.16	12.03
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.11	2.15	2.03	2.97	3.00	2.74	2.37	1.99	1.96	2.07

Table 4.20: Performance Score of Syndicate Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	20	10	0	30	30	50	0	0	0	0
	Return on Average Assets	30	20	20	20	20	30	20	20	0	10
Increasing Shareholder Value	Return on Equity	50	40	40	40	40	50	40	30	0	10
Maintaining Liquidity	Cash-Deposit Ratio	40	40	30	30	20	20	20	20	20	20
	Credit-Deposit Ratio	40	50	50	50	50	50	40	50	50	50
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	40	50	50	50	40	40	10	10
Capital Adequacy	Capital Adequacy Ratio	30	40	40	40	40	40	30	30	30	40
Improving Earning Quality	NIM to Total Average Assets Ratio	20	20	20	30	30	30	20	20	20	20
Total		400	280	270	240	290	280	320	210	210	130	160

Observations: Table 4.20 shows that

1. there has been an inconsistent trend in the performance score of Syndicate Bank on Financial Perspective. The score was the highest 320 in 2012-13 as the growth rate of profits was high and the NPA's were low in this year. The score was the lowest 130 in 2015-16 as the profitability declined sharply in this year and Net NPA's has also increased.

2. Score on growth rate of profits was the highest 50 in 2012-13 due to high credit growth which has increased the interest earned on assets. Bank incurred loss in 2015-16 as shown in Table 4.19 and scored 0 on growth rate of profits. Return on average assets has also decreased after 2012-13 as show in Table 4.19 on account of increased cost, decrease in interest and non-interest income both, decrease in advances growth and increased NPA's.

3. Return provided to shareholders was high from 2007-08 to 2013-14 as shown in Table 4.19 so it scored 40 or 50. The score declined to 0 in 2015-16 as bank incurred losses in this year.

4. Table 4.19 shows that liquidity in cash form was too low after 2010-11. The cash deposit ration scored 20 after 2010-11 in all the years. Credit-deposit ratio scored 40 or 50 in all the years as maximum credits have been created out of deposits.

5. Score on net NPA's to net advances ratio declined to 10 in 2015-16 and 2016-17 as bank has high amount fresh slippages in these years.

6. Score on capital adequacy ratio remained 40 from 2008-09 to 2012-13. Ratio declined after 2012-13 as shown in Table 4.20 thus scored 20 till 2015-16. Low

ratio indicates that bank do not maintain sufficient capital against risk-weighted assets.

7. Score on net interest margin to total average assets ratio was 20 in last four years as this ratio has a declining trend after 2011-12 as depicted in Table 4.19 which may be due to low growth in credits and growth in high cost deposits of the bank.

Suggestions:

1. Bank should try improve its profitability through efficient composition of portfolio of assets and liabilities with high yielding assets and low cost deposits.

2. Bank should enhance its liquidity in the form of cash to pay for unforeseen liabilities.

3. Bank should follow Proper credit monitoring system and recovery of non-performing assets should be done on time.

4.2.11 Intra-Bank Comparison of Performance of Public Sector Banks on Financial Perspective

Intra bank Hypotheses

H_0- There is no significant difference in the performance of Public Sector Banks on Financial Perspective during the last 10 years.

H_1- There is a significant difference in the performance of Public Sector Banks on Financial Perspective during the last 10 years.

Table: 4.21: Mean Ranks of Years for Public Sector Banks on Financial Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
State Bank of India	8	8.06	8	7.38	8	5.81	8	4.75	8	6.44	8	5.56	8	4.38	8	4.31	8	3.69	8	4.63	80	-
Bank of Baroda	8	7.38	8	5.19	8	7.06	8	6.44	8	4.63	8	5.75	8	4.31	8	4.31	8	4.06	8	5.88	80	-
Punjab National Bank	8	7.25	8	7.94	8	7.75	8	7.56	8	5.81	8	5.25	8	4	8	4.31	8	3.06	8	2.06	80	-
IDBI Bank	8	5.5	8	5.31	8	6.19	8	8.19	8	7.44	8	6.06	8	4.13	8	4.13	8	3.38	8	4.69	80	-
Canara Bank	8	6.5	8	6.75	8	8.19	8	8.63	8	6.06	8	4.31	8	4.63	8	3.94	8	2.56	8	3.44	80	-
Bank of India	8	8.63	8	7.81	8	5.81	8	7.81	8	5	8	4.81	8	4.38	8	3.56	8	4.19	8	2.94	80	-
Indian Bank	8	7.06	8	7.56	8	7.56	8	7.19	8	5.81	8	4.75	8	4.25	8	3.69	8	2.88	8	4.25	80	-
Central Bank of India	8	6.5	8	6.56	8	7.94	8	7.81	8	5.56	8	6.25	8	3.88	8	5.13	8	3	8	2.38	80	-
Union Bank	8	8.88	8	7.69	8	7.44	8	7.13	8	5	8	5.69	8	4.31	8	3.5	8	2.5	8	2.88	80	-
Syndicate Bank	8	6.44	8	6.63	8	5.5	8	7.31	8	5.81	8	7.94	8	3.75	8	4	8	2.88	8	3.75	80	-

Table 4.22: Results of Kruskal Wallis Test for Public Sector Banks on Financial Perspective

Name of the Bank	Chi-Square	Degree of Freedom	P-Value	Null Hypothesis Accepted /Rejected
State Bank of India	22.490	9	0.007	Rejected
Bank of Baroda	17.333	9	0.044	Rejected
Punjab National Bank	49.583	9	0.000	Rejected
IDBI Bank	23.560	9	0.005	Rejected
Canara Bank	44.562	9	0.000	Rejected
Bank of India	40.141	9	0.000	Rejected
Indian Bank	34.421	9	0.000	Rejected
Central Bank of India	35.326	9	0.000	Rejected
Union Bank	46.328	9	0.000	Rejected
Syndicate Bank	33.000	9	0.000	Rejected

Inferences:

From the above tables following inferences are drawn on Financial Perspective of public sector banks:

1. **State Bank of India –** Mean rank 8.06 is the highest for the year 2007-08. Table 4.22 shows that since p-value is 0.008, which is less than 0.05, this implies null hypothesis is rejected. Hence, there is a significant difference in the performance of SBI Bank over the mentioned financial years at 5 % level of significance.

2. **Bank of Baroda-** Mean rank 7.38 is the highest for the year 2007-08. Table 4.22 shows that since p-value is 0.044, which is significantly less than 0.05, this implies null hypothesis is rejected. Hence, there is a significant difference in the performance of Bank of Baroda over the mentioned financial years at 5 % level of significance.

3. **Punjab National Bank-** Mean rank 7.94 is the highest for the year 2008-09. Table 4.22 shows that since p-value is 0.000, which is significantly less than 0.05, this implies null hypothesis is rejected. Hence, there is a significant difference in the performance of Punjab National Bank over the mentioned financial years at 5 % level of significance.

4. **IDBI Bank -** Mean rank 8.19 is the highest for the year 2010-11. Table 4.22 shows that since p-value is 0.005, which is significantly less than 0.05, this implies null hypothesis is rejected. Hence, there is a significant difference in the performance of IDBI Bank over the mentioned financial years at 5 % level of significance.

5. **Canara bank-** Mean rank 8.63 is the highest for the year 2010-11. Table 4.22 shows that since p-value is 0.000, which is significantly less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Canara Bank over the mentioned financial years on the basis of Financial Perspective.

6. **Bank of India-** Mean rank 8.63 is the highest for the year 2007-08. Table 4.22 shows that since p-value is 0.000, which is significantly less than 0.05, this implies null hypothesis is rejected. Hence, there is a significant difference in the performance of Bank of India over the mentioned financial years at 5 % level of significance.

7. **Indian Bank-** Mean rank 7.56 is the highest for the years 2008-09 and 2009-10. Table 4.22 shows that since p-value is 0.000, which is significantly less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there

is a significant difference in the performance of Indian Bank over the mentioned financial years on the basis of Financial Perspective.

8. **Central Bank of India -**Mean rank 7.94 is the highest for the year 2009-10. Table 4.22 shows that since p-value is 0.000, which is significantly less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Central Bank over the mentioned financial years on the basis of Financial Perspective.

9. **Union Bank of India-** Mean rank 8.88 is the highest for year 2007-08. Table 4.22 shows that since p-value is 0.000 which is significantly less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Union Bank over the mentioned financial years on the basis of Financial Perspective.

10. **Syndicate Bank-** Mean rank 7.94 is the highest for the year 2012-13. Table 4.22 shows that since p-value is 0.000 which is significantly less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Syndicate Bank over the mentioned financial years on the basis of Financial Perspective.

Major Findings and Conclusion:

The highest mean rank of the banks denotes that the bank has performed the best in that particular year. It has been found that there is a significant difference in the performance of all the public sector banks on Financial Perspective when an intra-bank comparison is drawn for the study period but this difference in performance shows a declining trend in performance of public sector banks on Financial Perspective as almost all these banks have the highest means ranks in the early years of the study period which means that the performance of the banks have declined in the last years of the study period.

4.3 Measurement of Performance of Public Sector Banks on Customer Perspective

To measure and evaluate the performance of banks on Customer Perspective 4 common customers centric strategic objectives with 8 measures have been selected. The performance is then measured and scored using the performance scale created separately for each measure. Kruskal Wallis test has been applied separately on

performance scores of individual bank using IBM SPSS22 to test whether bank shows any difference in the performance on Customer Perspective when intra-company comparison is drawn for year 2007-08 to 2016-17. Performance and intra-bank comparison on Customer Perspective of all the selected Public Sector Banks is being given below:

4.3.1 Measurement of Performance of State Bank of India on Customer Perspective

Table 4.23: Performance of State Bank of India on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	23.39	38.08	8.36	16.14	11.75	15.24	15.94	13.08	9.76	18.14
	Credit Growth	%	23.55	30.17	16.48	19.75	14.65	20.52	15.70	7.46	12.59	7.34
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	19.43	28.53	29.88	28.30	11.76	15.50	13.79	8.69	13.35	26.97
	Current A/c	%	19.68	12.86	10.68	7.03	-24.96	14.45	0.49	10.01	12.23	9.02
	Casa Ratio	%	46.96	41.64	47.26	49.42	44.81	44.82	42.91	41.34	42.62	44.57
Providing Excellent after sales services	Complaints Redressel Ratio	%	93.91	96.37	96.00	97.66	97.10	98.28	98.61	98.13	98.78	96.88
Increasing Market Share in	Deposits	%	16.19	18.26	16.94	16.63	16.17	16.19	16.34	16.71	17.15	18.40
	Advances	%	16.83	18.08	18.07	17.65	17.10	17.78	17.96	17.60	18.54	19.36

Table 4.24: Performance Score of State Bank of India on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	30	40	10	20	20	20	20	20	10	20
	Credit Growth	30	40	20	20	20	30	20	10	20	10
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	30	30	30	20	20	20	10	20	30
	Current A/c	20	20	20	10	0	20	10	20	20	10
	Casa Ratio	40	40	40	50	40	40	40	40	40	40
Providing Excellent after sales services	Complaints Redressel Ratio	40	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	50	50	50	50	50	50	50	50	50	50
	Advances	50	50	50	50	50	50	50	50	50	50
Total		400	280	320	270	280	250	280	260	250	260	260

Observations: Table 4.24 shows that :

1. the performance score of SBI on Customer perspective has an unstable trend and has no significant difference during the study period. The scores declined to 250 in 2014-2015 from 320 in 2008-09. The score was the highest 320 in 2008-09 due to high business growth in this year.

2. Score on deposits and credit growth rate both was the highest 40 in 2008-09. Both the ratios scored either 10 or 20 or 30 after 2008-2009 in most of the years still bank has retained largest customer base both in deposits and advances.

3. Growth rate in saving and current accounts deposits has a fluctuating trend during the studied period as shown in Table 4.23. CASA ratio scored 40 in almost each year which shows that SBI bank is able to attract deposits in low cost funds by providing efficient, prompt and smooth services to saving and current account holders.

4. Complaints redressel ratio scored maximum 50 in all the years except 2007-08 where the score was 40. It proves that bank is providing satisfactory after sales services to their customers and have a effcicient complaints redressel mechanism.

5. Score on market share of SBI in both the deposits and advances was the highest i.e 50 in all the years which indicates the best competitive position of the bank with the largest base of customers in deposits and advances.

Suggestions:

Bank should try to maintain sustainability in growth rate of customers and increase the business and customer growth by improving the internal business operations and quality customer services.

4.3.2 Measurement of Performance of Bank of Baroda on Customer Perspective

Table 4.25: Performance of Bank of Baroda on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	21.71	26.55	25.40	26.60	26.01	23.13	20.05	8.55	-7.05	4.81
	Credit Growth	%	27.60	34.94	21.56	30.65	25.67	14.20	20.97	7.82	-10.35	-0.13
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	13.30	18.76	23.67	22.67	15.71	13.04	14.39	14.24	5.93	29.37
	Current A/c	%	18.44	23.56	30.95	22.25	25.11	23.27	40.28	5.49	-34.41	22.78
	Casa Ratio	%	31.22	29.59	29.65	28.68	26.90	25.32	25.75	26.39	26.36	32.16
Providing Excellent after sales services	Complaints Redressel Ratio	%	97.12	98.08	97.56	97.47	94.48	98.04	98.83	98.08	99.21	99.28
Increasing Market Share in	Deposits	%	4.58	4.74	5.08	5.44	5.96	6.38	6.67	6.54	5.69	5.41
	Advances	%	4.31	4.80	5.01	5.33	5.66	5.58	5.89	5.79	4.86	4.72

Table 4.26: Performance Score of Bank of Baroda on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	30	30	30	30	30	30	30	10	0	10
	Credit Growth	30	40	30	40	30	20	30	10	0	0
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	20	30	30	20	20	20	20	10	30
	Current A/c	20	30	40	30	30	30	50	10	0	30
	Casa Ratio	30	30	30	30	30	30	30	30	30	30
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	40	40	40	40	40	50	50	50	40	40
	Advances	30	40	40	40	40	40	40	40	40	40
Total		400	250	280	290	290	270	270	300	220	170	230

Observations: Table 4.26 reveals that

1. the performance score of Bank of Baroda on Customer Perspective has deteriorated in the last three years of the study period mainly due to low or negative growth rate in customer accounts. The score was the lowest 170 in 2015-16 and the highest 300 in 2013-14.

2. Score on deposits and credit growth rate has a declining trend and score reached to 0 in 2015-16 due to shedding of high cost deposit by the bank to improve yield on assets and reducing cost of liabilities. Score on deposits growth rate has slightly improved in 2016-17 and scored 10 due to increase in CASA deposits on account of demonetisation.

3. Growth in saving accounts and current accounts deposit was low in 2015-16 as shown in Table 4.25 thus scored 10 and 0 respectively. It was due to low growth in overall deposits. Score on CASA ratio remained 30 in all the years. Although there was a growth in CASA deposits in 2016-17 as shown in Table 4.25 because of deposits of old currency notes during demonetisation.

4. High complaints redressed ratio of the bank (as shown in Table 4.25) depicts that bank provides excellent post sales services to customers with good complaints and queries solving mechanism. Score on this ratio was 50 in all the years of the study.

5. Market share of the bank in both deposits and credits have declined after 2013-14 as shown in Table 4.25 and scored 40 in last two years. This was due to decline in business and customers growth rate in last years.

Suggestions:

1. Bank should focus on increasing growth rate in business and customers by providing improved products and services aligned with customers' needs and by providing smooth, prompt and quality services.

4.3.3. Measurement of Performance of Punjab National Bank on Customer Perspective

Table 4.27: Performance of Punjab National Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	19.02	26.01	18.86	25.50	21.31	3.15	15.28	11.07	10.31	12.41
	Credit Growth	%	23.71	29.46	20.62	29.75	21.34	5.11	13.11	8.95	8.35	1.74
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	11.81	16.51	24.72	19.65	13.02	16.86	14.50	6.24	12.80	26.40
	Current A/c	%	8.05	5.75	26.06	13.16	6.09	4.92	5.44	6.61	7.67	26.82
	Casa Ratio	%	42.99	38.83	40.85	38.45	35.34	39.16	38.30	36.66	37.17	41.82
Providing Excellent after sales services	Complaints Redressel Ratio	%	99.22	98.82	99.55	99.35	99.43	99.57	99.51	96.50	97.79	97.56
Increasing Market Share in	Deposits	%	5.0	5.2	5.3	5.6	5.9	5.3	5.3	5.3	5.5	5.6
	Advances	%	4.8	5.2	5.3	5.6	5.8	5.3	5.2	5.2	5.2	5.2

Table 4.28: Performance Score of Punjab National Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	20	30	20	30	30	10	20	20	20	20
	Credit Growth	30	30	30	30	30	10	20	10	10	10
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	20	30	20	20	20	20	10	20	30
	Current A/c	10	10	30	20	10	10	10	10	10	30
	Casa Ratio	40	40	40	40	30	40	40	40	40	40
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	40	40	40	40	40	40	40	40	40	40
	Advances	40	40	40	40	40	40	40	40	40	40
Total	400	250	260	280	270	250	220	240	220	230	260

Observations: Table 4.28 manifests that:

1. the performance score of Punjab National Bank on Customer Perspective has an inconsistent trend. The score was the highest 280 in 2009-10. It was the lowest 220 in 2012-13 and 2014-15 due to low growth in deposits and credits of the bank in these years.

2. Table 4.27 shows that the deposits growth rate was too low as 3.15 % in 2012-13 due to high inflation prevailed in the country which has resulted in negative real return to depositors in banking sector. Credit growth rate was the lowest 1.74% in 2016-17 due to decrease in demand thus scored 10.

3. Growth in saving and current account deposits was the highest 26.40 % and 26.82 % respectively in 2016-17 as shown in Table 4.27 and scored 30. This was primarily due to deposits accumulated during demonetisation. CASA ratio scored 40 in all the years.

4. Complaints redressel ratio scored 50 in all the years which depicts bank has provided satisfactory post sales services.

5. Although bank has a declining trend in growth in deposits and advances as depicted in Table 4.27 yet the bank has maintained sustainable market share and scored 40 in all the years.

Suggestions:

1. Bank should introduce innovative products and services as per customer preferences and provide smooth, prompt, convenient and quality services so that existing customers can be retained and the new customers get acquired in. It will help in maximizing business growth and market share of the bank can be maximized.

2. To improve the CASA deposits bank should increase the efficiency of such accounts by providing smooth and quality services and providing attractive interest rates or other facilities on such accounts.

4.3.4 Measurement of Performance of IDBI Bank on Customer Perspective

Table 4.29: Performance of IDBI Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	68.38	53.98	49.17	7.65	16.63	7.90	3.81	10.21	2.26	1.06
	Credit Growth	%	31.60	25.81	33.62	13.67	14.94	8.71	0.70	5.41	3.61	-11.61
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	19.51	14.03	59.82	58.59	36.36	25.04	19.25	22.47	14.84	26.43
	Current A/c	%	4.00	52.99	40.95	51.48	33.61	4.94	-24.85	21.58	-4.15	16.92
	Casa Ratio	%	16.56	14.78	14.59	20.88	24.10	25.12	22.63	25.06	25.97	31.46
Providing Excellent after sales services	Complaints Redressel Ratio	%	97.63	97.71	98.33	97.24	98.35	98.55	98.33	99.32	97.87	98.93
Increasing Market Share in	Deposits	%	2.2	2.8	3.5	3.2	3.3	3.1	2.8	2.8	2.6	2.4
	Advances	%	3.3	3.4	4.0	3.7	3.6	3.3	2.9	2.8	2.7	2.4

Table 4.30: Performance Score of IDBI Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	50	50	50	10	20	10	10	20	10	10
	Credit Growth	40	30	40	20	20	10	10	10	10	0
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	20	50	50	40	30	20	30	20	30
	Current A/c	10	50	50	50	40	10	0	30	0	20
	Casa Ratio	20	20	20	20	30	30	20	30	30	30
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	20	20	30	30	30	30	20	20	20	20
	Advances	30	30	30	30	30	30	20	20	20	20
Total	400	240	270	320	260	260	200	150	210	160	180

Observations: Table 4.30 demonstrates that

1. the score of IDBI bank on Customer Perspective has a declining trend after 2009-10. The score was the highest 320 in 2009-10 due to high growth in deposits and advances. The score was the lowest 150 in 2013-14 as there has been a decline in deposits and credit growth rate.

2. Score on deposit and credits growth was high in initial 3 years. Score declined after 2009-10 due to decrease in bulk term deposits of the bank and increase in stress on corporate advances portfolio of the bank.

3. Bank concentrate on mobilisation of low cost deposits so the score on CASA ratio increased to 30 in 2011-12 from 20 in previous years and remained 30 till 2016-17.

4. Score on complaints redressel ratio scored 50 in all the years of the study period which indicates that bank has good complaints redressel mechanism.

5. Market share of the bank in terms of deposits and advances has a decreasing trend as shown in Table 4.29 so it scored 20 in last four years of the study period.

Suggestions:

1. Bank should try to acquire new customers and maintain the existing ones through providing new, differentiated and innovative products and services as per customer preferences. It should also ensure the smooth, quality and prompt services at bank branches.

2. Bank should try to attract more deposits from salaried individuals, businessman in saving and current accounts through providing additional facilities with such accounts.

4.3.5 Measurement of Performance of Canara Bank on Customer Perspective

Table 4.31: Performance of Canara Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	8.21	21.30	25.55	25.05	11.46	8.81	18.23	12.63	1.26	3.23
	Credit Growth	%	8.86	28.89	22.51	24.76	10.04	4.17	24.32	9.62	-1.61	5.33
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	8.73	18.55	19.29	17.53	10.53	9.84	20.19	9.53	10.70	22.61
	Current A/c	%	6.68	8.32	28.06	33.25	-39.52	0.50	19.14	11.85	-0.09	13.89
	Casa Ratio	%	31.49	30.05	29.09	28.33	24.34	24.18	24.55	23.96	25.75	30.24
Providing Excellent after sales services	Complaints Redressel Ratio	%	95.36	94.28	93.35	95.10	95.00	97.97	98.62	98.61	95.86	95.38
Increasing Market Share in	Deposits	%	4.6	4.6	4.9	5.2	5.1	4.8	4.9	5.0	4.8	4.5
	Advances	%	4.3	4.6	4.8	5.0	4.6	4.1	4.5	4.5	4.1	4.2

Table 4.32: Performance Score of Canara Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	10	30	30	30	20	10	20	20	10	10
	Credit Growth	10	30	30	30	20	10	30	10	0	10
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	10	20	20	20	20	10	30	10	20	30
	Current A/c	10	10	30	40	0	10	20	20	0	20
	Casa Ratio	30	30	30	30	30	30	30	20	30	30
Providing Excellent after sales services	Complaints Redressel Ratio	50	40	40	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	40	40	40	40	40	40	40	40	40	30
	Advances	30	40	40	40	40	30	30	30	30	30
Total	**400**	**190**	**240**	**260**	**280**	**220**	**190**	**250**	**200**	**180**	**210**

Observations: Table 4.32 presents that

1. the performance score of Canara bank has an inconsistency on Customer Perspective. The score was the highest 280 in 2010-11 due to high growth in deposits and credits and the lowest 180 in 2015-16.

2. Score on deposits and credit growth increased to 30 in 2008-09 from 10 in 2007-08 due to bank's strategic focus on business expansion. The deposits and credit growth was too low in last two years of the study period as shown in Table 4.31 because of increased NPA's that might have affected the acquisition of new credits.

3. Growth in savings and current accounts has an unstable trend as shown in Table 4.31. CASA ratio scored 30 in all the years except 2014-15 where the score was 20. This shows that bank has more high cost deposits in their portfolio might have affected the profitability of the Bank.

4. Complaints redressel ratio scored 50 in all the years except 2008-09 and 2009-10 which depicts the high satisfactory level of services of the bank.

5. The score on market share of deposits decreased to 30 in 2016-17 from 40 in previous all years whereas market share of advances scored 30 in last 5 years of the study period.

Suggestions:

1. Bank need to increase the growth in deposits and advances to increase the profits. For this, bank need to attract new customers through customized innovative products and services with maintaining the quality at the same time controlling the cost and time.

2. Supplementary facilities and smooth services, attractive offers and interest rates should be provided on saving and current accounts to acquire new customers and more deposits in such accounts.

4.3.6 Measurement of Performance of Bank of India on Customer Perspective

Table 4.33: Performance of Bank of India on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	25.13	26.46	21.11	30.08	6.47	19.99	24.91	11.52	-3.55	5.27
	Credit Growth	%	33.32	25.94	17.90	26.47	16.77	16.29	28.12	8.44	-10.66	2.03
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	14.30	14.22	25.87	22.92	13.11	16.12	13.18	10.57	12.43	31.76
	Current A/c	%	33.50	0.92	25.90	6.19	6.46	12.94	6.43	-0.53	9.51	20.47
	Casa Ratio	%	30.61	26.76	27.84	25.42	26.65	25.64	22.94	22.30	25.87	31.89
Providing Excellent after sales services	Complaints Redressel Ratio	%	N.D.	N.D.	97.53	99.18	99.47	99.47	98.78	97.22	98.50	98.97
Increasing Market Share in	Deposits	%	4.5	4.7	4.8	5.3	4.9	5.1	5.6	5.6	5.1	4.9
	Advances	%	4.6	4.8	4.8	5.0	4.9	4.9	5.5	5.4	4.6	4.6

Table 4.34: Performance Score of Bank of India on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	30	30	30	40	10	20	30	20	0	10
	Credit Growth	40	30	20	30	20	20	30	10	0	10
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	20	30	30	20	20	20	20	20	40
	Current A/c	40	10	30	10	10	20	10	0	10	30
	Casa Ratio	30	30	30	30	30	30	20	20	30	30
Providing Excellent after sales services	Complaints Redressel Ratio	N.D.	N.D.	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	30	40	40	40	40	40	40	40	40	40
	Advances	40	40	40	40	40	40	40	40	40	40
Total	**400**	**230**	**200**	**270**	**270**	**220**	**240**	**240**	**200**	**190**	**250**

Observations: Table 4.34 highlights that

1. the performance score of Bank of India on Customer Perspective has been varying during the study period. The score was the highest 270 in 2009-10 and 2010-11 with the high growth rate of deposits and advances whereas the score was the lowest 190 in 2015-16 which may be due to negative or low growth rate in deposits and advances and low market share of deposits and advances.

2. Score on deposits and credit growth rate has been declined to 0 in 2015-16 primarily due to attain stability in the liabilities by reducing high cost deposits and due to lack of corporate credit proposals. Scores slightly improved in 2016-17 and scored 10 as bank focuses on acquiring retail and SME advances with high yield.

3. Score on savings and current account deposits has increased to 40 and 30 respectively in 2016-17 which ranges between 10 and 30 in previous years. CASA ratio scored 30 in all the years except 2013-14 and 2014-15 where the score was 20.

4. Bank scored 50 on complaints redressel ratio in all the years of the study period which indicates the satisfactory complaints and queries management system for customers.

5. Market share of deposits and advances was higher than other competitive banks as the score was 40 in almost all the years. High market share depicts the best competitive position of the bank.

Suggestions:

1. Bank should launch more highly innovative, technically upgraded and customized products. Simultaneously, efficiency at front office and back-end operations is required by the bank to improve the business growth.

2. Mobilization of more deposits and customers in CASA is required as they are low cost funds and can increase the profitability of the banks.

4.3.7 Measurement of Performance of Indian Bank on Customer Perspective

Table 4.35: Performance of Indian Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	29.63	18.90	21.56	19.92	14.18	17.53	14.29	4.28	5.35	2.37
	Credit Growth	%	37.10	29.18	20.75	21.09	20.03	16.96	15.68	2.99	2.53	-1.05
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	15.07	17.70	23.34	20.56	13.98	8.01	14.10	9.01	15.55	23.35
	Current A/c	%	30.33	11.78	25.17	-2.80	8.17	-1.71	4.58	18.26	9.57	11.50
	Casa Ratio	%	32.35	31.63	32.21	30.92	30.55	27.60	27.15	28.77	31.28	37.08
Providing Excellent after sales services	Complaints Redressel Ratio	%	N.D.	95.83	99.33	99.23	99.50	99.70	99.60	98.91	98.25	96.90
Increasing Market Share in	Deposits	%	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.6
	Advances	%	1.6	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.6

Table 4.36: Performance Score of Indian Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	30	20	30	20	20	20	20	10	10	10
	Credit Growth	40	30	30	30	30	20	20	10	10	0
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	20	30	30	20	10	20	10	20	30
	Current A/c	40	20	30	0	10	0	10	20	10	20
	Casa Ratio	30	30	30	30	30	30	30	30	30	40
Providing Excellent after sales services	Complaints Redressel Ratio	N.D.	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	20	20	20	20	20	20	20	20	20	20
	Advances	20	20	20	20	20	20	20	20	20	20
Total		**400**	**200**	**210**	**240**	**200**	**200**	**170**	**190**	**170**	**170**	**190**

Observations: Table 4.36 portrays that

1. There has been an inconsistent trend in the performance score of Indian bank on Customer Perspective. The score was the highest 240 in 2009-10 having high growth in deposits primarily in saving and current accounts.

2. Deposit growth rate was the highest 29.63 % in 2007-08 as shown in table 4.35 thus it scored 30. Table 4.35 shows that after 2010-11 deposit and credit growth rate has a downward moving trend thus the score declined to 10 and 0 in 2016-17 respectively.

3. Score on saving and current accounts wavered during the study period. CASA ratio scored 30 from 2007-08 to 2015-16. It increased to 40 in 2016-17 with an increase in deposits of the bank from demonetisation.

4. Complaints redressel ratio scored 50 in all the years. It reflects that bank is able to resolve the maximum complaints of customers in the same year.

5. Market share of deposits and advances was lower than other banks which shows the poor competitive position of the bank thus scored 20 in all the years.

Suggestions:

1. Bank should focus on increasing deposits and advances through innovative bundle of products and services, providing higher level of customer services and providing attractive offers. Increase in deposits and advances will improve the market share too.

2. Strategies on acquiring more current and saving accountholders should be refined by the bank to increase low cost deposits in bank.

4.3.8 Measurement of Performance of Central Bank of India on Customer Perspective

Table 4.37: Performance of Central Bank of India on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	33..27	18.99	23.49	10.64	9.38	15.22	6.21	6.46	4.15	11.45
	Credit Growth	%	40.93	17.10	23.28	23.10	13.71	16.56	3.13	6.30	-4.49	-22.56
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	13.51	12.77	21.03	16.88	10.39	12.35	12.49	11.04	11.75	25.00
	Current A/c	%	17.30	-66.14	49.04	2.39	-17.83	14.28	-6.58	-2.47	-9.33	10.33
	Casa Ratio	%	36.14	33.36	34.44	35.17	33.27	32.55	33.33	34.05	35.48	39.20
Providing Excellent after sales services	Complaints Redressel Ratio	%	92.47	92.98	84.17	96.15	96.29	97.54	97.10	96.51	97.78	93.97
Increasing Market Share in	Deposits	%	3.3	3.2	3.4	3.2	3.0	3.0	2.8	2.7	2.6	2.7
	Advances	%	2.9	2.8	3.0	3.0	2.9	2.9	2.6	2.6	2.3	1.7

Table 4.38: Performance Score of Central Bank of India on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	40	20	30	20	10	20	10	10	10	20
	Credit Growth	50	20	30	30	20	20	10	10	0	0
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	20	30	20	20	20	20	20	20	30
	Current A/c	20	0	50	10	0	20	0	0	0	20
	Casa Ratio	40	30	30	30	30	30	30	30	30	40
Providing Excellent after sales services	Complaints Redressel Ratio	40	40	20	50	50	50	50	50	50	40
Increasing Market Share in	Deposits	30	30	30	30	20	20	20	20	20	20
	Advances	20	20	20	20	20	20	20	20	20	20
Total		400	260	180	240	210	170	200	160	160	150	190

Observations: Table 4.38 exhibits that

1. the overall score of Central Bank of India on customer Perspective has deteriorated to 200 in 2016-17 from 260 in 2007-08 due to low growth in deposits and advances and low market share of bank than competitive banks.

2. Score on deposits and credit growth rate was 40 & 50 in 2007-08 which declined to 10 and 0 in 2015-16 respectively. The score on deposits growth improved slightly in 2016-17 due to improvement in CASA deposits on account of demonetisation whereas credit growth scored 0 due to stress in corporate accounts and sale of loan assets by the bank.

3. Score on saving account deposits was 20 in maximum years. Current account deposits was the highest 49.04% in 2009-10 as shown in Table 4.37 and scored 50. Bank maintained a sustainable growth rate in CASA deposits and scored 30 in all the years from 2008-09 to 2016-17.

4. Scores on complaints redressel ratio was 50 from the year 2010-11 to 2016-17 which shows that bank has efficient post sale services and complaints redressel mechanism.

5. Market share of deposits and advances both have a declining trend as shown in Table 4.37. Score was 20 in maximum years. This show the poor competitive position of the bank.

Suggestions:

1. The decline in growth rate of deposits and advances might have affected the profitability of the bank. Bank should concentrate on increasing the growth in business through aggressive marketing strategies and introducing new and differentiated digitalized products and services. It should also try to improve the internal operational efficiency at front and back office to make feel customers delighted. This will eventually increase the market share of the bank.

2. Bank should focus on acquiring more customers and deposits in saving accounts and current accounts by providing additional facilities and smooth functioning of these accounts other than interest rates.

4.3.9 Measurement of Performance of Union Bank on Customer Perspective

Table 4.39: Performance of Union Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	21.93	33.55	22.59	19.07	10.08	18.35	12.86	6.45	8.16	10.41
	Credit Growth	%	19.17	29.84	23.60	26.54	17.81	16.99	10.09	11.59	-7.16	20.69
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	17.36	17.14	32.17	18.45	12.84	14.02	13.22	9.92	13.38	28.27
	Current A/c	%	37.26	11.24	23.26	20.88	-1.74	25.22	-5.95	-7.09	41.01	-11.79
	Casa Ratio	%	34.86	30.07	31.73	31.76	31.28	30.95	29.50	29.24	32.35	34.44
Providing Excellent after sales services	Complaints Redressel Ratio	%	N.D.	N.D.	86.59	93.14	96.17	97.88	99.39	99.75	99.77	99.86
Increasing Market Share in	Deposits	%	3.1	3.4	3.6	3.6	3.5	3.6	3.5	3.4	3.4	3.4
	Advances	%	3.0	3.2	3.4	3.5	3.5	3.5	3.4	3.5	3.0	3.5

Table 4.40: Performance Score of Union Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	30	40	30	20	20	20	20	10	10	20
	Credit Growth	20	30	30	30	20	20	20	20	0	30
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	20	40	20	20	20	20	10	20	30
	Current A/c	40	20	30	30	0	30	0	0	50	0
	Casa Ratio	30	30	30	30	30	30	30	30	30	30
Providing Excellent after sales services	Complaints Redressel Ratio	N.D.	N.D.	30	40	50	50	50	50	50	50
Increasing Market Share in	Deposits	30	30	30	30	30	30	30	30	30	30
	Advances	20	30	30	30	30	30	30	30	20	30
Total		**400**	**190**	**200**	**250**	**230**	**200**	**230**	**200**	**180**	**210**	**220**

Observations: Table 4.40 displays that

1. the performance score of Union bank on Customer Perspective has an inconsistent trend during the study period. The score was the highest 250 in 2009-10 due to high deposits growth specially in saving accounts. The score was the lowest 180 in 2014-15 due to low deposits growth rate.

2. Score on deposit growth has been decreased to 10 in 2014-15 from 40 in 2008-09 whereas the score on credit growth rate declined to 0 in 2015-16 from 20 or 30 in previous years due to decrease in demand of credits from corporates.

3. Score on saving and current account deposits fluctuated during the study period. CASA ratio scored 30 in all the years. This implies that bank has less low cost deposits in their deposits portfolio which might have affected the profitability of the bank.

4. Score on complaints redressel ratio increased from 30 in 2009-10 to 50 in 2011-12 and remained 50 in rest of the years.

5. Market share of deposits and advances scored 30 in most of the years.

Suggestions:

1. Decrease in growth in business depicts the less number of customers with the bank. To attract and retain customers, bank should focus on introducing new products and services as per customer preferences and provide smooth services to them. Increase in customer base will simultaneously increase the business and profit growth rate. It will also improve the competitive position of the bank.

4.3.10 Measurement of Performance of Syndicate Bank on Customer Perspective

Table 4.41: Performance of Syndicate Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	21.08	21.77	0.98	15.87	16.48	17.36	14.56	20.27	2.49	-0.45
	Credit Growth	%	23.96	27.29	10.88	18.11	15.77	19.37	17.85	16.56	-0.67	-0.84
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	13.92	14.34	22.88	18.36	9.90	10.85	10.55	10.56	12.01	23.46
	Current A/c	%	40.41	-1.50	-3.24	5.43	13.81	14.03	0.23	22.61	-6.98	-27.13
	Casa Ratio	%	30.95	27.60	31.23	30.93	29.45	28.03	26.37	24.90	25.97	29.12
Providing Excellent after sales services	Complaints Redressel Ratio	%	N.D.	N.D.	94.62	92.13	95.67	95.58	94.93	97.18	93.04	96.47
Increasing Market Share in	Deposits	%	2.9	2.9	2.5	2.4	2.4	2.5	2.5	2.7	2.6	2.3
	Advances	%	2.6	2.7	2.6	2.5	2.4	2.5	2.6	2.7	2.6	2.5

Table 4.42: Performance Score of Syndicate Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	30	30	10	20	20	20	20	30	10	0
	Credit Growth	30	30	20	20	20	20	20	20	0	0
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	20	30	20	10	20	20	20	20	30
	Current A/c	50	0	0	10	20	20	10	30	0	0
	Casa Ratio	30	30	30	30	30	30	30	30	30	30
Providing Excellent after sales services	Complaints Redressel Ratio	N.D.	N.D.	40	40	50	50	40	50	40	50
Increasing Market Share in	Deposits	20	20	20	20	20	20	20	20	20	20
	Advances	20	20	20	20	20	20	20	20	20	20
Total		400	200	150	170	180	190	200	180	220	140	150

Observations: Table 4.42 conveys that

1. the performance score of Syndicate bank on Customer Perspective has decreased to 150 in 2016-17 from 220 in 2014-15 due to negative growth in deposits and credit growth rate.

2. Score on deposit growth rate declined to 0 in 2016-17 from 30 in 2007-08 and 2008-09 while score on credit growth rate declined to 0 in last two years from 30 in 2007-08 and 2008-09. This depicts that customer and business growth rate is too low of the bank which may be due to poor operational efficiency or poor marketing strategies of the bank.

3. Growth in saving accounts and credit accounts deposits fluctuated during the study period as shown in Table 4.41. CASA ratio scored 30 in all the years. Low CASA ratio shows that bank focuses on acquiring high cost deposits which might have affected the profitability of the bank.

4. Score on complaints redressel ratio was either 40 or 50 during the study period. This depicts that bank provide excellent after sale services and complaints redressel system.

5. Market share of deposits and advances fluctuated each year slightly as shown in Table 4.41. Score was 20 in all the years for this ratio. Low market share reflects the poor competitive position of the bank.

Suggestions:

1. Negative growth rate in deposits and advances depicts the inefficiency of the bank on acquiring customers and inefficient internal operational activities. Bank should focus on attracting new customers through introduction of new innovative products and services. It should provide smooth, fast and reliable services.

2. Bank should focus on acquiring new customers through aggressive marketing strategies and try to attract new deposits in saving and current accounts as their maintenance cost is low.

4.3.11 Intra-Bank Comparison of Performance of Public Sector Banks on Customer Perspective

Intra bank Hypotheses

H_0- There is no significant difference in the performance of Public Sector banks on Customer perspective during last 10 years.

H_1- There is a significant difference in the performance of Public Sector banks on Customer Perspective during last 10 years.

Table 4.43: Mean Ranks of Years for Public Sector Banks on Customer Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
State Bank of India	8	5.75	8	7.25	8	5.56	8	6.13	8	4.69	8	5.94	8	4.94	8	4.69	8	5	8	5.06	80	-
Bank of Baroda	8	5.88	8	6	8	6.56	8	6.56	8	5.63	8	5.31	8	6.13	8	4.13	8	3.19	8	5.63	80	-
Punjab National Bank	8	5.5	8	6.06	8	6.75	8	6.56	8	5.44	8	4.38	8	5.13	8	4.31	8	4.81	8	6.06	80	-
IDBI Bank	8	5.5	8	6	8	7.69	8	6.56	8	7.19	8	5.69	8	3.13	8	5.19	8	3.75	8	4.31	80	-
Canara Bank	8	4.25	8	6.19	8	6.81	8	7.56	8	5.81	8	4.25	8	6.63	8	4.44	8	4.13	8	4.94	80	-
Bank of India	8	6.36	8	5.93	8	6.79	8	6.93	8	4.79	8	5.5	8	5.21	8	3.57	8	4	8	5.93	80	-
Indian Bank	7	7.21	8	5.93	8	7.29	8	5.71	8	5.5	8	4.21	8	5.07	8	4.14	8	4.21	8	5.71	79	-
Central Bank of India	8	7.38	8	5.19	8	7.06	8	6.44	8	4.63	8	5.75	8	4.31	8	4.31	8	4.06	8	5.88	80	-
Union Bank	7	5.57	7	6.57	8	7.36	8	6.14	8	4.86	8	5.5	8	4.86	8	3.79	8	4.29	8	6.07	78	-
Syndicate Bank	7	7.14	7	6.07	8	5.21	8	5.43	8	5.14	8	5.71	8	5.43	8	6.43	8	4	8	4.43	78	-

Table 4.44: Results of Kruskal Wallis Test for Public Sector Banks on Customer Perspective

Name of the Bank	Chi-Square	Degree of Freedom	P-Value	Null Hypothesis Accepted /Rejected
State Bank of India	10.705	9	0.296	Accepted
Bank of Baroda	18.924	9	0.026	Rejected
Punjab National Bank	14.603	9	0.102	Accepted
IDBI Bank	22.942	9	0.006	Rejected
Canara Bank	18.728	9	0.028	Rejected
Bank of India	14.602	9	0.102	Accepted
Indian Bank	16.325	9	0.060	Accepted
Central Bank of India	17.333	9	0.044	Rejected
Union Bank	15.102	9	0.088	Accepted
Syndicate Bank	12.356	9	0.194	Accepted

Inferences:

From the above tables following observations have been drawn on Customer Perspective of the all public sector banks:

1. **State Bank of India-** Mean rank 7.25 is the highest for the year 2008-09. Table 4.44 shows that since p-value is 0.296, which is greater than 0.05, this implies

null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of SBI Bank on Customer Perspective during last 10 years.

2. **Bank of Baroda-** Mean rank 6.56 is the highest for the two years 2009-10 and 2010-11. Table 4.44 shows that since p-value is 0.026, which is less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Bank of Baroda on Customer Perspective during last 10 years.

3. **Punjab National Bank-** Mean rank 6.75 is the highest for the year 2009-10. Table 4.44 shows that since p-value is 0.102, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Punjab National Bank on Customer Perspective during last 10 years.

4. **IDBI Bank-** Mean rank 7.69 is the highest for the year 2009-10. Table 4.44 shows that since p-value is 0.006, which is less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of IDBI Bank on Customer Perspective during last 10 years.

5. **Canara Bank-** Mean rank 7.56 is the highest for the year 2010-11. Table 4.44 shows that since p-value is 0.028, which is less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Canara Bank on Customer Perspective during last 10 years.

6. **Bank of India-** It is clear that the mean rank 6.93 is the highest for the year 2010-11. Table 4.44 shows that since p-value is 0.102, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Bank of India on Customer Perspective during last 10 years.

7. **Indian Bank-** Mean rank 7.29 is the highest for the year 2009-10. Table 4.44 shows that since p-value is 0.060, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Indian Bank on Customer Perspective during last 10 years.

8. **Central Bank of India-** Mean rank 7.38 is the highest for the year 2007-08. Table 4.44 shows that since p-value is 0.044, which is less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Central Bank of India on Customer Perspective during last 10 years.

9. **Union Bank of India-** It is clear that mean rank 7.36 is the highest for the year 2009-10. Table 4.44 shows that since p-value is 0.088, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence there is no significant difference in the performance of Union Bank on Customer Perspective during last 10 years.

10. **Syndicate Bank-** Mean rank 7.14 is the highest for the year 2007-08. Table 4.44 shows that since p-value is 0.194, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence there is no significant difference in the performance of Syndicate Bank on Customer Perspective during last 10 years.

Major Findings and Conclusion:

It has been observed here that the mean rank of performance score on Customer Perspective of almost all public sector banks was high in the early years of the study period. This was primarily due to high customer and business growth rate in early years of the study period. No significant difference has been found in the performance of SBI, Punjab National Bank, Bank of India, Indian Bank, Union Bank and Syndicate Bank. The performance of Bank of Baroda, IDBI, Canara Bank and Central Bank of India has a significant difference on customer Perspective but the performance has declined in last years. Overall the performance of all public sector banks on Customer Perspective has deteriorated in the last years of the study period.

4.4 Measurement of Performance of Public Sector Banks on Internal Business Process Perspective

To measure and evaluate the performance of banks on Internal Business Process Perspective 4 common business operations related strategic objectives with 8 measures have been selected. The performance is then measured and scored using the performance scale created separately for each measure. Kruskal Wallis test has been applied separately on performance scores of individual bank using IBM SPSS22

to test whether bank shows any difference in the performance on Internal Business Process Perspective when intra-company comparison is drawn for year 2007-08 to 2016-17. Performance and intra-bank comparison on Internal Business Process Perspective of all the selected Public Sector Banks is given below:

4.4.1 Measurement of Performance of State Bank of India on Internal Business Process Perspective

Table 4.45: Performance of State Bank of India on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	23.46	34.63	11.79	17.73	13.05	17.64	15.83	10.47	11.04	13.19
Improving Operational Capabilities	Business Per Employee	Lakhs	53244.73	62389.57	71694.34	75836.79	88695.81	98484.25	116882.05	134908.68	153770.97	172538.13
	Profit Per Employee	Lakhs	375.50	443.00	457.62	370.72	543.31	617.84	488.81	614.40	479.00	500.27
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	17.48	16.64	18.86	21.16	19.01	17.57	18.33	17.40	16.90	16.54
	Ratio of Intermediation cost to Total Assets	%	1.96	1.86	2.01	2.02	2.04	2.02	2.13	2.00	1.90	1.84
	Advertisemnet Cost to Total Business Volume Ratio	%	0.018	0.020	0.016	0.015	0.011	0.017	0.011	0.010	0.010	0.008
Increasing Geographical reach for customers	Growth in ATM's	Nos.	5848	8506	16294	20084	22141	27175	43515	42222	42740	42454
	Growth in Branches	Nos.	10186	11448	12496	13542	14097	14816	15869	16333	16784	17170

Table 4.46: Performance Score of State Bank of India on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	20	30	10	20	20	20	20	10	10	20
Improving Operational Capabilities	Business Per Employee	20	20	20	30	30	30	40	40	50	50
	Profit Per Employee	10	20	20	10	20	20	20	20	20	20
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	10	10	10	10	10	10	10	10	10	10
	Ratio of Intermediation cost to Total Assets	40	40	30	30	30	30	30	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	40	40	40	50	50	40	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	20	30	50	50	50	50	50	50	50	50
	Growth in Branches	50	50	50	50	50	50	50	50	50	50
Total	**400**	**210**	**240**	**230**	**250**	**260**	**250**	**270**	**270**	**280**	**290**

Observations: Table 4.46 shows that

1. the performance score of SBI on Internal Business Process Perspective has been significantly improved year wise. Score increased to 290 on 2016-17 from 210 in 2007-08 which was primarily on account of reduced operational cost and increased geographical reach by the bank for their customers through increase in number of ATMs and branches.

2. Score on growth on total business scored either 10 or 20 in maximum yeas of the study except in 2008-09 where the score was 30. Decrease in business growth depicts the operational inefficiency of the bank.

3. Score on business per employee has increased to 50 in 2015-16 from 20 in 2007-08. Profit per employee has an inconsistent trend during the study period as shown in Table 4.45. Employees are efficient enough to generate sufficient business for the bank but profit per employee has decreased may be due to increase in operational costs on infrastructural and technological up gradation.

4. Ratio of wage bills to total cost has scored 10 in all the years and ratio of intermediation cost to total assets have scored 40 in almost every year. This implies that bank is spending more on employees which has increases employee productivity but decrease the profitability too. Advertisement cost to total business volume ratio scored 40 or 50. Minimum cost on advertisement is good from reducing cost of business operations.

5. Growth in ATM's and branches scored 50 in all the years of study which indicates the increased reach to customers in remote locations from the beginning of the study period.

Suggestions:

1. Bank should try to control the cost incurred on employees and infrastructural cost on expansion of branches and ATMs as it might have affected the profitability of the bank.

2. Growth in overall business is low for the bank so bank should try to improve the operational efficiency for acquiring more business.

4.4.2 Measurement of Performance of Bank of Baroda on Internal Business Process Perspective

Table 4.47: Performance of Bank of Baroda on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	24.07	-44.63	190.61	28.30	25.86	19.31	20.43	8.25	-8.40	2.83
Improving Operational Capabilities	Business Per Employee	Lakhs	69440.54	91114.71	106852.47	133375.58	159395.00	186060.38	209973.74	211759.22	186936.79	187892.86
	Profit Per Employee	Lakhs	385.27	604.59	784.99	1059.20	1187.19	1039.42	987.17	688.25	-1053.05	263.86
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	17.41	17.34	16.14	16.47	12.18	11.57	12.14	11.38	12.37	12.21
	Ratio of Intermediation cost to Total Assets	%	1.88	1.76	1.51	1.45	1.28	1.20	1.18	1.22	1.29	1.36
	Advertisemnet Cost to Total Business Volume Ratio	%	0.013	0.028	0.011	0.011	0.009	0.008	0.007	0.007	0.008	0.010
Increasing Geographical reach for customers	Growth in ATM's	Nos.	1106	1179	1315	1561	2012	2630	6254	8030	10110	10520
	Growth in Branches	Nos.	2899	2974	3148	3418	3959	4336	4934	5250	5330	5422

Table 4.48: Performance Score of Bank of Baroda on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	20	0	50	30	30	20	20	10	0	10
Improving Operational Capabilities	Business Per Employee	20	30	30	40	50	50	50	50	50	50
	Profit Per Employee	10	20	20	30	30	30	30	20	0	10
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	10	10	10	10	20	30	20	30	20	20
	Ratio of Intermediation cost to Total Assets	40	40	40	40	40	40	40	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	50	40	50	50	50	50	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	20	30	30	30
	Growth in Branches	30	30	30	30	40	40	40	50	50	50
Total	**400**	**190**	**180**	**240**	**240**	**270**	**270**	**270**	**280**	**240**	**260**

Observations: Table 4.48 reveals that

1. the performance score of Bank of Baroda on Internal Business Process Perspective has an erratic trend. The score was the lowest 180 in 2008-09 due to negative business growth rate, low productivity ratios and high wage bills. Score was the highest 280 in 2014-15 which may be due to improved geographical reach to customers, high productivity ratios and low cost of business operations.

2. Score on growth in total business declined to 0 in 2015-16 from 50 in 2009-10. This may be due to decline in operational efficiency and employee productivity of the bank.

3. Business per employee has increased till 2014-15 then declined in last two years as shown in Table 4.47. There has been a continuous decrease in profit per employee thus the score reached to 0 and 10 in 2015-16 and 2016-17 respectively.

4. Ratio of wage bills to total cost was too high in first four years of the study as shown in Table 4.47 thus scored 10. It has fluctuated after 2010-11 and scored either 20 or 30. Score on intermediation cost to total assets was 40 in all the years. The intermediation cost increased to 1.36 % in 2016-17 as shown in Table 4.47 due to additional expenses incurred on demonetisation exercise. Advertisement cost to business volume ratio scored 50 in almost all the years except 2008-09 where it was 40.

5. Score on growth in number of ATM's and branches has been increased to 30 and 50 in 2016-17 from 10 & 30 in 2007-08 respectively. This depicts that bank's reach to customers has increased through expansion of more branches and ATMs.

Suggestions:

1. Bank should increases its operational efficiency through providing prompt convenient, and quality services to its customers with effective utilisation of trained manpower.

2. More advertisements and promotional activities of bank's product and services should be done to attract new customers.

3. Bank should expand its ATM network in more areas to avoid rush for cash transactions at bank branches.

4.4.3 Measurement of Performance of Punjab National Bank on Internal Business Process Perspective

Table 4.49: Performance of Punjab National Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	20.94	27.45	19.61	27.31	21.33	4.01	14.32	10.15	9.46	7.85
Improving Operational Capabilities	Business Per Employee	Lakhs	48198.82	62617.21	76341.17	104493.24	108384.96	118909.97	131416.12	129142.34	146289.18	151264.24
	Profit Per Employee	Lakhs	345.32	531.03	683.91	834.71	786.16	806.08	548.63	448.32	-602.26	192.47
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	20.08	17.72	17.63	20.71	15.71	16.12	17.88	18.23	15.27	13.02
	Ratio of Intermediation cost to Total Assets	%	1.95	1.89	1.75	1.89	1.67	1.74	1.81	1.82	1.57	1.35
	Advertisemnet Cost to Total Business Volume	%	0.008	0.009	0.009	0.007	0.006	0.004	0.004	0.004	0.006	0.005
Increasing Geographical reach for customers	Growth in ATM's	Nos.	1516	2150	3544	5050	6009	6313	4940	8348	9463	10681
	Growth in Branches	Nos.	4589	4668	4951	5194	5675	5874	6201	6560	6759	6938

Table 4.50: Performance Score of Punjab National Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	20	30	20	30	20	10	20	10	10	10
Improving Operational Capabilities	Business Per Employee	20	20	30	30	40	40	40	40	50	50
	Profit Per Employee	10	20	20	30	20	30	20	20	0	10
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	10	10	10	10	20	10	10	10	20	20
	Ratio of Intermediation cost to Total Assets	40	40	40	40	40	40	40	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	20	20	20	20	30	30	30
	Growth in Branches	40	40	40	50	50	50	50	50	50	50
Total	400	200	220	220	260	260	250	250	250	250	260

Observations: Table 4.50 manifests that

1. the performance score of Punjab National Bank on Internal Business Process Perspective has not much improved after 2010-11. The score was either 260 or 250.

2. The overall operational efficiency has declined of the bank after 2011-12 as the growth rate in total business was lower than previous years as shown in Table 4.49. Growth in total business ratio scored 10 in all the years after 2011-12 except 2013-14 where the score was 10.

3. Score on business per employee has increased to 50 in 2015-16 and 2016-17 from 20 in 2007-08. Score on profit per employee reached to 0 in 2015-16 due to decline in overall business growth rate and declined profits.

4. Ratio of wage bills to total cost was too high in all the years as depicted in Table 4.49 so it scored either 10 or 20 in all the years. It has decreased in 2015-16. Table 4.49 shows that ratio of intermediation cost to total assets has declined in last two years primarily due to decrease in employees cost in these years. Advertisement cost to total business volume ratio was too low in all the years so it scored 50.

5. Score on growth in number of ATM's has increased to 30 in 2014-15 from 10 in 2007-08 whereas the score on growth in branches increased from 40 in 2007-08 to 50 in 2010-11. Bank has a wide network of branches which has increased its reach to customers.

Suggestions:

1. Efforts on improving the business processes, efficiency of front office and back office, processing time of transactions, reducing cost, improving quality of services etc. should be taken by the bank to gain excellence in business operations.

2. Bank should try to control the cost on employees as well as other operating cost too to improve the cost efficiency.

3. Although cutting the operational cost is necessary but the amount spent on advertisements is too low which should be increase to promote product & services of the bank so that more customers and more business can be acquired.

4.4.4 Measurement of Performance of IDBI Bank on Internal Business Process Perspective

Table 4.51: Performance of IDBI Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	46.67	39.07	41.71	10.37	15.84	8.27	2.37	8.02	2.86	-4.62
Improving Operational Capabilities	Business Per Employee	Lakhs	188065.76	211592.48	250445.37	248259.93	253362.40	273794.32	263693.66	282822.62	274111.14	252578.23
	Profit Per Employee	Lakhs	883.87	841.62	844.29	1213.65	1316.24	1217.00	682.20	527.57	-2085.83	-2836.17
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	4.59	4.89	5.10	6.21	5.41	6.74	6.24	7.29	6.44	8.11
	Ratio of Intermediation cost to Total Assets	%	0.82	0.88	0.90	0.93	0.96	1.02	1.02	1.18	1.13	1.39
	Advertisemnet Cost to Total Business Volume Ratio	%	0.016	0.022	0.015	0.014	0.007	0.003	0.009	0.009	0.005	0.009
Increasing Geographical reach for customers	Growth in ATM's	Nos.	755	900	1201	1370	1542	1702	2301	3000	3310	3537
	Growth in Branches	Nos.	500	509	708	815	973	1077	1388	1717	1846	1896

Table 4.52: Performance Score of IDBI Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	40	40	40	10	20	10	10	10	10	0
Improving Operational Capabilities	Business Per Employee	50	50	50	50	50	50	50	50	50	50
	Profit Per Employee	30	30	30	40	40	40	20	20	0	0
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	40	40	40	40	40	40	40	40	40	30
	Ratio of Intermediation cost to Total Assets	50	50	50	50	50	40	40	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	40	40	50	50	50	50	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	10
	Growth in Branches	10	10	10	10	10	10	20	20	20	20
Total	**400**	**270**	**270**	**280**	**260**	**270**	**250**	**240**	**240**	**220**	**200**

Observations: Table 4.52 demonstrates that

1. there has been a declining trend in the performance score of IDBI bank on Internal Business Process Perspective. The score declined to 200 in 2016-17 from 280 in 2009-10 that may be primarily due to decline in operational efficiency of the bank and low reach to customers which might have affected the business growth of the bank adversely.

2. Score on total business growth rate has reached to 0 in 2016-17 from 40 in 2007-08, 2008-09 and 2009-10. It indicates the operational inefficiency of the bank which has affected the business growth.

3. There has been a decline in business per employee in last two years as shown in Table 4.51. Score on profit per employee has also declined to 0 in last years from 40 in 2012-13. Decrease in productivity ratios is the indicator of bank's management inefficiency in utilizing its resources.

4. Score on ratio of wage bills to total cost was 40 in all the years except 2016-17 where the score was 30. Score on ratio of intermediation cost to total assets was 50 in first five years then decreased to 40 in last five years. Intermediation cost increased primarily on account of increase in wage bills and other infrastructural and IT cost. Advertisement cost to total business volume ratio scored 50 in almost all the years except 2007-08 and 2008-09.

5. Growth in ATM's and Branches were lower than competitive banks so scored either 10 or 20.

Suggestions:

1. Bank should improve the efficiency of operational activities of the bank and bank's management should utilize the human resources of the bank efficiently to improve the productivity of the employees.

2. Bank should enhance its reach to customers through expansion of more ATM's and branches.

4.4.5 Measurement of Performance of Canara Bank on Internal Business Process Perspective

Table: 4.53: Performance of Canara Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	8.48	24.42	24.26	24.93	10.87	6.88	20.69	11.37	0.08	4.07
Improving Operational Capabilities	Business Per Employee	Lakhs	57735.41	73738.24	93127.26	116299.50	132367.42	140077.44	147926.04	149435.93	148960.60	150274.42
	Profit Per Employee	Lakhs	345.78	470.04	696.50	927.69	776.57	672.73	499.69	502.40	-520.82	-201.36
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	12.35	12.14	13.26	15.03	10.68	10.38	10.01	10.34	10.65	12.28
	Ratio of Intermediation cost to Total Assets	%	1.61	1.53	1.44	1.47	1.32	1.31	1.34	1.40	1.36	1.50
	Advertisemnet Cost to Total Business Volume Ratio	%	0.017	0.007	0.005	0.005	0.005	0.006	0.009	0.005	0.004	0.005
Increasing Geographical reach for customers	Growth in ATM's	Nos.	2006	2019	2017	2216	2858	3526	6312	8533	9251	10519
	Growth in Branches	Nos.	2690	2729	3043	3257	3600	3728	4755	5682	5849	6083

Table: 4.54: Performance Score of Canara Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	10	20	20	20	10	10	20	10	10	10
Improving Operational Capabilities	Business Per Employee	20	30	30	40	40	40	50	50	50	50
	Profit Per Employee	10	20	20	30	20	20	20	20	0	0
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	20	20	20	20	30	30	30	30	30	20
	Ratio of Intermediation cost to Total Assets	40	40	40	40	40	40	40	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	40	50	50	50	50	50	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	20	30	30	30
	Growth in Branches	30	30	30	30	30	30	40	50	50	50
Total	**400**	**180**	**220**	**220**	**240**	**230**	**230**	**270**	**280**	**260**	**250**

Observations: Table 4.54 presents that

1. the performance score on Internal Business Process Perspective of Canara bank has been inconsistent during the study period. The score is the highest 280 in 2014-15 because of high employee productivity, low cost of business operations and increased reach to customers through expansion of Branches & ATMs in this year. The score was the lowest 180 in 2007-08.

2. Score on growth in total business was either 10 or 20 in all the years. Low growth in business depicts the operational inefficiency.

3. Business per employee has increased with each passing year as shown in Table 4.53. Score increased to 50 in last 4 years from 20 in 2007-08 on this ratio. Profit per employee has decreased after 2010-11 as shown in Table 4.53 so score reached to 0 in last 2 years. Although business per employee has increased yet there has been a decline in overall business growth and profits of the bank which depicts the decrease in productivity of employees.

4. Ratio of wage bill to total cost was higher in first four years as shown in Table 4.53 so it scored 20. The score increased and remained 30 from 2011-12 to 2015-16. Ratio of intermediation cost to total assets ratio scored 40 in all the years. Advertisement cost to business volume ratio was minimum in all the years and scored 50 in all the years except 2007-08 where the score was 40.

5. Bank has continuously expanded its network through increase in number of ATM's and bank branches. The score on growth in ATM's and branches has been increased to 30 and 50 in 2016-17 from 10 and 30 in 2007-08 respectively.

Suggestions:

1. Bank should improve its efficiency of operational activities at bank branches. It should effectively utilize its manpower to enhance the productivity thus achieving excellence on operational and productivity measures.

2. More investment on advertisements and promotional activities should be done to improve the brand image of products and services of the bank in order to enhance customer base and business growth.

4.4.6 Measurement of Performance of Bank of India on Internal Business Process Perspective

Table 4.55: Performance of Bank of India on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	28.53	26.24	19.73	28.56	10.76	18.37	26.30	10.17	-6.61	3.93
Improving Operational Capabilities	Business Per Employee	Lakhs	64967.41	82833.47	100376.21	128677.49	136516.69	159257.60	196455.99	206161.49	176350.33	189845.80
	Profit Per Employee	Lakhs	495.45	748.93	438.82	625.49	644.61	652.34	632.51	377.24	-1231.19	-326.35
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	15.38	13.90	14.54	18.28	12.16	11.09	11.82	12.41	13.59	14.85
	Ratio of Intermediation cost to Total Assets	%	1.53	1.53	1.47	1.62	1.34	1.27	1.31	1.36	1.52	1.43
	Advertisemnet Cost to Total Business Volume Ratio	%	0.012	0.007	0.012	0.011	0.011	0.009	0.010	0.012	0.005	0.005
Increasing Geographical reach for customers	Growth in ATM's	Nos.	440	500	820	1425	1680	2133	4225	6771	7807	7717
	Growth in Branches	Nos.	2883	3021	3207	3490	4000	4292	4646	4892	5016	5131

Table 4.56: Performance Score of Bank of India on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	30	30	20	30	10	20	30	10	0	10
Improving Operational Capabilities	Business Per Employee	20	30	30	40	40	50	50	50	50	50
	Profit Per Employee	20	20	20	20	20	20	20	10	0	0
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	20	20	20	10	20	30	30	20	20	20
	Ratio of Intermediation cost to Total Assets	40	40	40	40	40	40	40	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	20	20	30	30
	Growth in Branches	30	30	30	30	40	40	40	40	50	50
Total	**400**	**220**	**230**	**220**	**230**	**230**	**260**	**280**	**240**	**240**	**250**

Observations: Table 4.56 presents that

1. the performance score of Bank of India on Internal Business Process Perspective has an erratic trend. The score was maximum 280 in 2013-14 because of high

growth in business, high productivity ratios and high expansion of branches and ATM's.

2. Growth in total business was lower in last years as compared to starting years of the study period as shown in Table 4.55. In 2015-16 the score on growth in total business reached to 0. This shows the decreasing efficiency of the bank in business operations.

3. Score on business per employee has increased to 50 in 2012-13 from 20 in 2007-08 whereas score on profit per employee has decreased to 0 in last two years from 20 in previous years.

4. Ratio of wage bills to total cost was high in all the years as shown in Table 4.55 and scored decreased to 20 in 2014-15 from 30 in 2012-13. Ratio of intermediation cost to total assets scored 40 in all the years whereas the advertisement cost to total business volume ratio scored 50 in all the years.

5. Score on growth in number of ATM's and branches increased from 10 and 30 in 2007-08 from 30 and 50 in 2016-17. Bank has expanded its network to reach to more customers through expansion of Branches & ATMs.

Suggestions:

1. Bank should initiate more efforts on providing smooth, prompt and quality services through trained staff so that the operational efficiency and productivity can be increased.

2. Bank should control the cost incurred on employees as it one of the major part of operating cost which might have affected the profitability of the bank.

3. Bank should invest more on promotion and advertisement of banking products and services.

4.4.7 Measurement of Performance of Indian Bank on Internal Business Process Perspective

Table 4.57: Performance of Indian Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	32.48	22.89	21.29	20.40	16.61	17.29	14.89	3.73	4.15	0.94
Improving Operational Capabilities	Business Per Employee	Lakhs	49097.07	62291.41	76561.17	94142.10	112842.01	131763.26	147012.46	145924.65	153100.99	148702.63
	Profit Per Employee	Lakhs	490.92	625.35	791.70	891.26	933.71	841.34	598.91	497.07	354.38	673.83
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	21.22	19.84	19.30	18.38	14.84	16.29	14.04	12.27	13.38	13.97
	Ratio of Intermediation cost to Total Assets	%	2.21	2.06	1.87	1.73	1.66	1.81	1.62	1.48	1.61	1.59
	Advertisemnet Cost to Total Business Volume	%	0.012	0.007	0.007	0.006	0.005	0.003	0.003	0.003	0.003	0.002
Increasing Geographical reach for customers	Growth in ATM's	Nos.	600	755	1005	1128	1280	1322	2123	2344	2531	2816
	Growth in Branches	Nos.	1541	1642	1758	1860	1955	2089	2250	2409	2562	2679

Table 4.58: Performance Score of Indian Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	30	20	20	20	20	20	20	10	10	10
Improving Operational Capabilities	Business Per Employee	20	20	30	30	40	40	50	50	50	50
	Profit Per Employee	20	20	20	30	30	30	20	20	10	20
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	10	10	10	10	20	10	20	20	20	20
	Ratio of Intermediation cost to Total Assets	30	30	40	40	40	40	40	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	10
	Growth in Branches	20	20	20	20	20	20	20	20	30	30
Total	**400**	**190**	**180**	**200**	**210**	**230**	**220**	**230**	**220**	**220**	**230**

Observations: Table 4.58 highlights that

1. the performance score of Indian Bank on Internal Business Process Perspective has slightly fluctuated during each year of the studied period. The score was 190 in 2007-08 which moved up to 230 in 2016-17 as there has been an improvement in operational capabilities of the bank and due to low cost of business operations in this year.

2. Growth in total business depicts the operational efficiency of the bank which has decreased with each passing year as shown in Table 4.57. The score on growth in total business declined to 10 in 2016-17 from 30 in 2007-08.

3. Scores on business per employee increased to 50 in 2016-17 from 20 in 2007-08. Profit per employee was the highest 933.71 Lakhs in 2011-12 as shown in Table 4.57. So profit per employee scored 30 in 2011-12. Score on this ratio declined to 10 in 2015-16 due to decline in operational efficiency of the bank which has reduced the business growth and simultaneously the profitability.

4. Ratio of wage bills to total cost was too high in all the years of the study as shown in Table 4.57 so it scored either 10 or 20. Ratio of intermediation cost to total assets scored 40 in all the years except 2007-08 and 2008-09 where the score was 30. Advertisement cost to total business volume ratio was too low in all the years as shown in Table 4.57 so it scored 50 in all the years.

5. Score on growth in ATM's of the bank was 10 in all the years as the growth was lower than competitive banks whereas the score on growth in number of branches increased to 30 in 2016-17 from 20 in starting years.

Suggestions:

1. Bank should control its operational cost particularly the cost incurred on employees to improve the profitability.

2. Bank should try to improve its operational efficiency and productivity through effective utilization of human resources and other resources of the bank.

3. Bank should expand its network through expansion of more branches and ATM's to reach to more customers.

4.4.8 Measurement of Performance of Central Bank of India on Internal Business Process Perspective

Table 4.59: Performance of Central Bank of India on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	36.22	18.24	23.41	15.55	11.20	15.80	4.88	6.39	0.48	-2.27
Improving Operational Capabilities	Business Per Employee	Lakhs	48900.21	66075.80	76807.83	90866.21	95731.64	107233.09	102649.75	113745.21	118400.90	117716.76
	Profit Per Employee	Lakhs	146.76	174.14	303.86	368.19	148.47	273.48	-310.58	155.34	-376.33	-655.73
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	16.15	12.61	13.15	21.33	14.14	14.21	15.30	15.46	17.73	17.24
	Ratio of Intermediation cost to Total Assets	%	1.61	1.37	1.35	2.04	1.71	1.70	1.86	1.86	2.16	1.99
	Advertisemnet Cost to Total Business Volume	%	0.004	0.007	0.006	0.031	0.010	0.007	0.006	0.006	0.007	0.008
Increasing Geographical reach for customers	Growth in ATM's	Nos.	367	400	895	1006	1682	2529	3628	4835	5254	5285
	Growth in Branches	Nos.	3308	3518	3577	3728	4011	4294	4573	4689	4728	4714

Table 4.60: Performance Score of Central Bank of India on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	30	20	20	20	10	20	10	10	10	0
Improving Operational Capabilities	Business Per Employee	20	20	30	30	30	30	30	40	40	40
	Profit Per Employee	10	10	10	10	10	10	0	10	0	0
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	10	20	20	10	20	20	20	20	10	10
	Ratio of Intermediation cost to Total Assets	40	40	40	30	40	40	40	40	30	40
	Advertisemnet Cost to Total Business Volume Ratio	50	50	50	30	50	50	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	20	20	20	20
	Growth in Branches	30	30	30	30	40	40	40	40	40	40
Total	**400**	**200**	**200**	**210**	**170**	**210**	**220**	**210**	**230**	**200**	**200**

Observations: Table 4.60 highlights that

1. the performance score of Central Bank of India on Internal Business Process Perspective has slightly been fluctuated during the study period. Score was the highest 230 in 2014-15 and the lowest 170 in 2010-11. The fluctuations occurred due to changes in the operational efficiency and cost of business operations.

2. Growth in total business has decreased with each passing year as shown in Table 4.59 and score declined to 0 in 2016-17 from 30 in 2007-08 on this ratio. This depicts the inefficiency in business operations.

3. Score on business per employee has increased in last three years and scored 40. Score on profit per employee decreased to 0 in last two years as bank incurred loss in these two years. This may be due to high operational cost which has affected the profits of the bank thus the profit per employee has also declined.

4. Ratio of wage bills to total cost was high in all the years as shown in Table 4.59 so it scored either 10 or 20. Score on ratio of intermediation cost to total assets was either 40 or 30. Advertisement cost to total business volume ratio scored 50 in all the years except 30 in 2010-11. Employee's cost was too higher of the Bank.

5. Score on growth in number of ATM's increased to 20 in last 4 years from 10. Increase in number of branches by the bank was higher than competitive banks so it scored 40 from the year 2011-12 to 2016-17.

Suggestions:

1. Bank should put its efforts on improving the internal operational efficiency and productivity of the employees through effective utilization of its resources.

2. Bank should try to control its operational expenditures especially cost incurred on wage bills.

3. Bank should increase the number of ATM's to avoid rush at bank branches for cash transactions and increase the number of branches in remote areas to expand its reach to customers.

4.4.9 Measurement of Performance of Union Bank on Internal Business Process Perspective

Table 4.61: Performance of Union Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	20.76	32.00	23.01	22.15	13.38	17.74	11.64	8.68	1.32	14.62
Improving Operational Capabilities	Business Per Employee	Lakhs	64779.09	81077.09	98356.52	127386.78	129953.64	148394.16	155824.43	161210.93	163525.50	180290.74
	Profit Per Employee	Lakhs	504.19	595.08	705.30	750.38	579.52	678.64	501.75	501.67	381.02	150.56
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	10.63	11.19	11.66	18.33	13.61	12.47	12.27	12.71	12.25	11.37
	Ratio of Intermediation cost to Total Assets	%	1.41	1.55	1.41	1.83	1.60	1.57	1.65	1.67	1.60	1.50
	Advertisemnet Cost to Total Business Volume Ratio	%	0.019	0.056	0.013	0.027	0.017	0.015	0.010	0.011	0.012	0.010
Increasing Geographical reach for customers	Growth in ATM's	Nos.	1146	1790	2327	2634	3801	4603	6429	7020	6883	7518
	Growth in Branches	Nos.	2361	2558	2805	3016	3201	3511	3871	4078	4196	4278

Table 4.62: Performance Score of Union Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	20	30	20	20	20	20	10	10	10	20
Improving Operational Capabilities	Business Per Employee	20	30	30	40	40	50	50	50	50	50
	Profit Per Employee	20	20	20	20	20	20	20	20	10	10
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	30	30	30	10	20	20	20	20	20	30
	Ratio of Intermediation cost to Total Assets	40	40	40	40	40	40	40	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	40	20	50	40	40	50	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	20	20	20	20	20	30
	Growth in Branches	20	30	30	30	30	30	40	40	40	40
Total	**400**	**200**	**210**	**230**	**210**	**230**	**250**	**250**	**250**	**240**	**270**

Observations: Table 4.63 depicts that

1. the performance score of Union bank on Internal Business Process Perspective has improved during the study period. The score increased to 270 in 2016-17 from 200 in 2007-08 primarily due to improvement in productivity ratio and increased geographical reach of the bank.

2. Score on growth in total business of the bank has been decreased to 10 in 2013-14 from 30 in 2008-09. It slightly improved in 2016-17 and scored 20 which may be due to improvement in operational efficiency which has increased the overall business growth rate.

3. Score on business per employee increased to 50 in 2012-13 from 20 in 2007-08 and remained 50 till 2016-17 while the score on profit per employees decreased to 10 in 2015-16 and 2016-17 from 20 in previous years.

4. Score on ratio of wage bills to total cost decreased to 10 in 2010-11 from 30 in 2007-08. It has again increased to 30 in 2016-17. Ratio of intermediation cost to total assets scored 40 in all the years. Advertisement cost to total business volume ratio scored 50 in maximum years. Total intermediation cost was lower but the bank incurred high cost on wage bills which might have affected the profits of the bank.

5. Bank has continuously increased the number of ATM's and Branches as shown in Table 4.61 thus the score on ATM's and Branches increased to 30 and 40 in 2016-17 from 10 and 20 in 2007-08 respectively. It has increased bank's reach to more customers.

Suggestions:

1. Bank should improve its internal business efficiency and productivity to enhance the business growth. Productivity of the employees should be improved through providing training to them and through their effective utilization.

2. Bank should control the cost of its business operations primarily the cost incurred on employees and infrastructural activities.

3. Bank should spent more on advertisement to promote product & services of the bank in order to attract more customers.

4.4.10 Measurement of Performance of Syndicate Bank on Internal Business Process Perspective

Table 4.63: Performance of Syndicate Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	22.19	23.99	5.07	16.85	16.17	18.24	16.02	18.60	1.09	-0.62
Improving Operational Capabilities	Business Per Employee	Lakhs	64577.31	78752.76	81126.42	92201.00	105826.22	135904.36	154126.22	166912.45	144282.59	141530.91
	Profit Per Employee	Lakhs	343.95	364.14	318.09	398.64	493.65	818.23	682.92	554.88	-512.04	110.38
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	12.68	12.77	14.32	18.44	14.55	14.68	13.60	11.31	12.43	17.07
	Ratio of Intermediation cost to Total Assets	%	1.52	1.51	1.51	1.72	1.66	1.60	1.41	1.31	1.72	1.81
	Advertisemnet Cost to Total Business Volume Ratio	%	0.008	0.011	0.008	0.008	0.005	0.006	0.007	0.006	0.007	0.006
Increasing Geographical reach for customers	Growth in ATM's	Nos.	1000	1100	1187	1220	1240	1306	1946	3427	3730	3974
	Growth in Branches	Nos.	2169	2250	2307	2493	2709	2933	3250	3551	3765	3932

Table 4.64: Performance Score of Syndicate Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	20	20	10	20	20	20	20	20	10	0
Improving Operational Capabilities	Business Per Employee	20	30	30	30	30	40	50	50	50	40
	Profit Per Employee	10	10	10	10	20	30	20	20	0	10
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	20	20	20	10	20	20	20	30	20	10
	Ratio of Intermediation cost to Total Assets	40	40	40	40	40	40	40	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	20
	Growth in Branches	20	20	20	20	30	30	30	30	40	40
Total	400	190	200	190	190	220	240	240	250	220	210

Observations: Table 4.64 exhibits that

1. the performance score of Syndicate Bank on Internal Business Process Perspective has increased to 250 in 2014-15 from 190 in 2007-08 then again declined to 210 in 2016-17 due to low operational efficiency, high cost of business operations primarily wage bills & infrastructural cost on expansion of branches.

2. Score on growth in total business declined to 0 in 2016-17 from 10 or 20 in previous years. This depicts the inefficiency of the bank staff and lack of efficiency in internal business operations at front and back end both.

3. Although score on business per employee has increased to 50 or 40 in last years from 20 in 2007-08 but the score on profit per employee decreased to 0 in 2015-16 which may be due to high intermediation cost which might have affected the profitability of the bank.

4. Ratio of wage bills to total cost was the highest 17.07 % in 2016-17 as shown in Table 4.63 thus it scored 10. Ratio of intermediation cost to total assets scored 40 and advertisement cost to total business volume ratio scored 50 in all the years of the study. High wage bills might have affected the profitability of the bank.

5. Number of ATM's was low than other banks so it scored 10 in all the years except 2016-17 where score increased to 20. Score on growth in number of branches increased to 40 in 2015-16 from 20 in 2007-08.

Suggestions:

1. Bank should take initiatives for improving the internal efficiency of business operations at branch level to improve customer experiences and increase the business.

2. The cost incurred on employees was too high which should be controlled by the bank as it might have affected the profitability.

3. Bank should increase the number of ATM's and branches so that customers can avail the services of the bank with easy and convenient reach.

4.4.11 Intra-Bank Comparison of Performance of Public Sector Banks on Internal Business Process Perspective

Intra-Bank Hypotheses

H_0- There is no significant difference in the performance of Public Sector bank on Internal Business Process Perspective during last 10 years.

H_1- There is a significant difference in the performance of Public Sector bank on Internal Business Process Perspective during last 10 years.

Table 4.65: Mean Ranks of Years for Public Sector Banks on Internal Business Process Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
State Bank of India	8	4.06	8	5.25	8	4.19	8	5.13	8	5.75	8	5.13	8	6.06	8	6.13	8	6.38	8	6.94	80	-
Bank of Baroda	8	6.39	8	3	8	4.69	8	5.13	8	6.5	8	6.56	8	6.63	8	6.88	8	5.75	8	6.19	80	-
Punjab National Bank	8	3.69	8	4.5	8	4.38	8	6.25	8	6.44	8	5.75	8	5.81	8	5.75	8	6.13	8	6.31	80	-
IDBI Bank	8	5.63	8	5.63	8	6.25	8	6	8	6.38	8	5.38	8	5.31	8	5.31	8	5.06	8	4.06	80	-
Canara Bank	8	3	8	4.88	8	4.88	8	5.63	8	5.19	8	5.19	8	7.13	8	7	8	6.38	8	5.75	80	-
Bank of India	8	4.81	8	5	8	4.63	8	4.75	8	5.06	8	6.38	8	7.25	8	5.5	8	5.69	8	5.94	80	-
Indian Bank	8	4.5	8	4.06	8	4.94	8	5.5	8	6.38	8	5.75	8	6.19	8	5.63	8	5.81	8	6.25	80	-
Central Bank of India	8	4.94	8	5.25	8	5.69	8	3.81	8	5.81	8	6.31	8	5.81	8	6.94	8	5.06	8	5.38	80	-
Union Bank	8	4.31	8	5.06	8	5.44	8	4.19	8	5.13	8	6.13	8	6.13	8	6.13	8	5.5	8	7	80	-
Syndicate Bank	8	4.56	8	4.88	8	4.31	8	4.31	8	5.88	8	6.5	8	6.56	8	7.06	8	5.5	8	5.44	80	-

Table 4.66: Results of Kruskal Wallis Test for Public Sector Banks on Internal Business Process Perspective

Name of the Bank	Chi-Square	Degree of Freedom	P-Value	Null Hypothesis Accepted /Rejected
State Bank of India	12.969	9	0.164	Accepted
Bank of Baroda	20.703	9	0.014	Rejected
Punjab National Bank	11.962	9	0.215	Accepted
IDBI Bank	6.838	9	0.654	Accepted
Canara Bank	18.186	9	0.033	Rejected
Bank of India	9.288	9	0.411	Accepted
Indian Bank	8.961	9	0.441	Accepted
Central Bank of India	8.414	9	0.493	Accepted
Union Bank	9.02	9	0.435	Accepted
Syndicate Bank	14.573	9	0.103	Accepted

Inferences:

From the above Table 4.65 and 4.66, following inferences have been drawn for public sector banks on Internal Business Process Perspective:

1. **State Bank of India-** Mean rank 6.94 is the highest for the year 2016-17. Table 4.66 shows that since p-value is 0.164, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of SBI Bank on Internal Business Process Perspective during last 10 years.

2. **Bank of Baroda-** Mean rank 6.88 is the highest for the year 2014-15. Table 4.66 shows that since p-value is 0.014, which is less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Bank of Baroda on Internal Business Process Perspective during last 10 years.

3. **Punjab National Bank-** Mean rank 6.44 is the highest for the year 2011-12. Table 4.66 shows that since p-value is 0.215, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Punjab National Bank on Internal Business Process Perspective during last 10 years.

4. **IDBI Bank-** Mean rank 6.38 is the highest for the year 2011-12. Table 4.66 shows that since p-value is 0.654, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of IDBI Bank on Internal Business Process Perspective during last 10 years.

5. **Canara Bank-** Mean rank 7.13 is the highest for the year 2013-14. Table 4.66 shows that since p-value is 0.033, which is greater than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is no significant difference in the performance of Canara Bank on Internal Business Process Perspective during last 10 years.

6. **Bank of India-** Mean rank 7.25 is the highest for the year 2013-14. Table 4.66 shows that since p-value is 0.411, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Bank of India on Internal Business Process Perspective during last 10 years.

7. **Indian Bank-** Mean rank 6.38 is the highest for the year 2011-12. Table 4.66 shows that since p-value is 0.441, which is greater than 0.05, this implies null

hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Indian Bank on Internal Business Process Perspective during last 10 years.

8. **Central Bank of India-** Mean rank 6.94 is the highest for the year 2014-15. Table 4.66 shows that since p-value is 0.493, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Central Bank of India on Internal Business Process Perspective during last 10 years.

9. **Union Bank-** Mean rank 7 is the highest for the year 2016-17. Table 4.66 shows that since p-value is 0.493, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Union Bank on Internal Business Process Perspective during last 10 years.

10. **Syndicate Bank-** Mean rank 7.06 is the highest for the year 2014-15. Table 4.66 shows that since p-value is 0.103, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Syndicate Bank on Internal Business Process Perspective during last 10 years.

Major Findings and Conclusion:

Highest mean ranks of the banks depicts the best performance in that year. It is found that except Bank of Baroda and Canara Bank all other sampled public sector banks have no significant difference in their performance on Internal Business Process Perspective. It is concluded that the performance of most of the Public sector banks has not improved during the study period which might have affected the performance on Financial and Customer Perspective adversely.

4.5 Measurement of Performance of Public Sector Banks on Learning & Growth and Innovation Perspective

To measure and evaluate the performance of banks on Learning & Growth and Innovation Perspective 2 common employees and innovation related strategic objectives with 8 measures have been selected. The performance is then measured and scored using the performance scale created separately for each measure. Kruskal Wallis test has been applied separately on performance score of individual bank using

IBM SPSS22 to test whether bank shows any difference in the performance on Learning & Growth and Innovation Perspective when intra-bank comparison is drawn for year 2007-08 to 2016-17. Performance and intra-bank comparison on Learning & Growth and Innovation Perspective of all the selected Public Sector Banks is being given below:

4.5.1 Measurement of Performance of State Bank of India on Learning & Growth and Innovation Perspective

Table 4.67: Performance of State Bank of India on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	179205	205896	200299	222933	215481	228296	222809	213238	207739	209567
	Expenditure Per Employee	000	434	473	637	682	788	805	1010	1104	1209	1264
	Percentage of employees trained	%	N.D.	N.D.	N.D.	N.D.	96.7	77.09	105	99.74	100	66.37
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	24760000	39150000	55400000	73134000	90978000	110444000	122223125	160667620	189341852	218879742
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	2088515	2225141	2572777	2858116	3158032	3620042	4569048
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	N.D.	10673	65514	135853	200878	302119	509113
	Number of Mobile Transactions	Nos.	N.D.	N.D.	740853	4989336	20637795	36695557	53058851	77126212	144112690	240995902
	Number of NEFT Transactions	Nos.	N.D.	6418716	11835703	37902540	70188149	128630055	245809454	358451003	488988808	537831219

Table 4.68: Performance Score of State Bank of India on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	50	50	50	50	50	50	50	50	50	50
	Expenditure Per Employee	20	20	30	30	40	40	50	50	50	50
	Percentage of employees trained	-	-	-	-	50	40	50	50	50	40
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	50	50	50	50	50	50	50	50	50	50
	Number of Credit Cards	-	-	-	30	30	30	30	40	40	50
	Number of POS Terminals	-	-	-	-	10	10	20	30	40	50
	Number of Mobile Transactions	-	-	10	30	50	50	50	50	50	50
	Number of NEFT Transactions	-	10	20	50	50	50	50	50	50	50
Total	**400**	120	130	160	240	330	320	350	370	380	390

Observations: Table 4.68 conveys that

1. the performance score of SBI on Learning & Growth and Innovation Perspective has increased to 390 in 2016-17 from 120 in 2007-08 as there has been a continuous increase in the number of skilled employees, expenditure on

employees, number of debit cards and credit cards and number of digital transactions through mobile and internet.

2. Bank gained the highest score 50 in all years of study on growth in number of skilled employees. Bank has simultaneously increased the expenditure on employees and provided training to maximum number of employees in all the years as shown in table 4.67.

3. SBI scored maximum 50 on number of debit cards in all the years as the bank is the leader in issuing highest number of debit cards. The score on credit card was 30 in 2010-11 than increased to 50 in 2016-17. Score on POS terminals has also increased to 50 in 2016-17. Number of mobile transactions and NEFT transactions scored the highest in last 6 years of the study. This implies that bank has provided reliable IT infrastructure for digitalized product and services and cope up with the digitalization taking place in industry.

Suggestions:

Bank should maintain the performance on learning & growth and innovation Perspective by providing continuous training to employees on technical and behavioural skills and continuous innovations in technology in products and services

4.5.2 Measurement of Performance of Bank of Baroda on Learning & Growth and Innovation Perspective

Table 4.69: Performance of Bank of Baroda on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	37260	36838	38960	40046	42175	43108	46001	49378	51237	52420
	Expenditure Per Employee	000	511	637	603	728	708	800	900	863	972	885
	Percentage of employees trained	%	N.D.	39.14	68.86	89.5	114	56.12	51	52	64.31	48.55
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	3260000	4595000	6313713	7968242	10248562	14544809	25345978	32160671	43228705
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	70221	69529	80208	75548	82535	113554	131571
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	4537	4544	5485	10998	13651	35236	85728
	Number of Mobile Transactions	Nos.	N.D.	N.D.	N.D.	N.D.	111832	368843	713948	1149718	5433319	16125669
	Number of NEFT Transactions	Nos.	N.D.	731210	1713387	4923051	8429840	18403528	37914863	54795442	77111460	100368967

Table 4.70: Performance Score of Bank of Baroda on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	20	20	20	30	30	30	30	30	30	30
	Expenditure Per Employee	30	30	30	30	30	40	40	40	40	40
	Percentage of employees trained	-	20	40	50	50	30	30	30	40	30
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	20	30	40	40	50	50	50	50	50
	Number of Credit Cards	-	-	-	10	10	10	10	10	10	10
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	20
	Number of Mobile Transactions	-	-	-	-	10	10	10	10	30	50
	Number of NEFT Transactions	-	10	10	10	20	30	50	50	50	50
Total		400	50	100	130	180	200	210	230	230	260	280

Observations: Table 4.70 displays that

1. the performance score of Bank of Baroda on Learning & Growth and Innovation Perspective has been increased to 280 in 2016-17 from 50 in 2007-08 which is primarily on account of increased digital transactions through innovated products & services.

2. The growth in number of skilled employees was lower than competitive banks as shown in Table 4.69. Score was 20 in first 3 years then increased to 30 and remained the same from the year 2010-11 to 2016-17. To retain and motivate employees, bank has continuously increase the amount of expenditure spent on them as shown in Table 4.69. The score on expenditure on employees was 30 in first five years then increased to 40 in last years. Bank has scored the highest 50 in 2010-11 and 2011-12 on percentage of employees trained. The score declined to 30 or 40 in remaining years.

3. Score on number of debit cards has increased to 50 in 2012-13 from 20 in 2008-09 and remained 50 in all the years after that. Number of credit cards issued by the bank was too low as shown in Table 4.69 so it 10 in all the years. Score on number of POS terminals installed has increased to 20 in 2016-17 from 10 in previous years.

4. Bank has a significant growth in transactions through mobile and internet banking as depicted in Table 4.69. The score on number of mobile and NEFT transactions has increased to 50 in 2016-17 from 10 in initial years of the study period.

Suggestions:

1. Bank should recruit more skilled employees and upgrade knowledge & skills of all existing and newly recruited staff on technical innovations in products and services and changes in operational activities.

2. Number of POS terminals installed and credit card issued by the bank is too low so bank should increase their numbers to propagate the cash less transactions.

4.5.3 Measurement of Performance of Punjab National Bank on Learning & Growth and Innovation Perspective

Table 4.71: Performance of Punjab National Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	59329	58205	57103	53114	62127	58898	60926	68290	65991	68833
	Expenditure Per Employee	000	415	502	547	840	760	963	1069	1074	974	788
	Percentage of employees trained	%	N.D.	71.09	77.96	84.18	75.09	95	65.29	73.91	74.5	65.5
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	13567190	16908880	20658696	24993312	34946160	44011977	55258924
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	80999	102997	115781	126568	143633	194370	253951
	Number of POS Terminals	Nos.	N.D.	N.D.	10	176	376	8866	10970	12067	13699	38841
	Number of Mobile Transactions	Nos.	N.D.	N.D.	28	458	2590	15859	145859	397939	1011737	5567015
	Number of NEFT Transactions	Nos.	N.D.	782228	1892716	6723640	13132210	26392117	52118100	77392182	111325864	119394210

Table 4.72: Performance Score of Punjab National Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	30	30	30	30	40	30	40	40	40	40
	Expenditure Per Employee	20	30	30	40	40	40	50	50	40	40
	Percentage of employees trained	-	40	40	50	40	50	40	40	40	40
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	50	50	50	50	50	50	50
	Number of Credit Cards	-	-	-	10	10	10	10	10	10	10
	Number of POS Terminals	-	-	10	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	10	10	10	10	10	10	10	30
	Number of NEFT Transactions	-	10	10	10	20	40	50	50	50	50
Total	400	50	110	130	210	220	240	260	260	250	270

Observations: Table 4.72 shows that

1. the performance score of Punjab National Bank has increased to 270 in 2016-17 from 50 in 2007-08 on Learning & Growth and Innovation Perspective primarily

on account of high increase in NEFT and mobile transactions, growth in number of skilled employees and high expenditure on them and issuance of highest no. of debit cards.

2. Table 4.71 shows that bank has continuously recruited and retained the number of skilled employees during the study period and with the increase in number of employees bank has increase the expenditure too to motivate them. Percentage of employees trained ratio scored 40 in maximum years except 2010-11 and 2012-13 where the score was 50.

3. Score on number of debit cards was 50 in all the years whereas it was 10 on number of credit cards and on POS terminals during all the years. Score on number of mobile transactions has significantly improved in 2016-17 and scored 50. Score on number of NEFT transactions has been increased to 50 in 2013-14 from 10 in 2008-09.

Suggestions:

1. To improve the productivity of the employees, bank should provide training to 100% of its employees and motivate them through providing more incentives and other monetary benefits.

2. To promote cashless transactions bank should concentrate on increasing the number of debit cards, credit cards, POS terminals and other innovative bundle of digital products and services.

4.5.4 Measurement of Performance of IDBI Bank on Learning & Growth and Innovation Perspective

Table 4.73: Performance of IDBI Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	8253	10201	12213	13598	15435	15465	16438	16555	17570	18187
	Expenditure Per Employee	000	463	558	620	755	752	995	907	1164	953	1212
	Percentage of employees trained	%	76	72.08	90.74	80.81	72.9	91.91	87.8	95.41	66	66
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	4355550	4908022	5503611	6325935	8457957	9229400	10604581
	Number of Credit Cards	Nos.	0	0	0	0	0	0	0	958	6905	21510
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	18403	23394	14448	14726	14492	16563	34469
	Number of Mobile Transactions	Nos.	0	0	2862	8233	10663	54136	32260	43630	391890	530555
	Number of NEFT Transactions	Nos.	0	679301	1898425	5339188	11545776	21622309	31873454	43156245	57133371	81496260

Table 4.74: Performance Score of IDBI Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	10	10	10	10	10	10	10	10	10	10
	Expenditure Per Employee	20	30	30	40	40	40	40	50	40	50
	Percentage of employees trained	40	40	50	50	40	50	50	50	40	40
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	30	30	30	40	50	50	50
	Number of Credit Cards	-	-	-	-	-	-	-	10	10	10
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	10	10	10	10	10	10	10	10
	Number of NEFT Transactions	-	10	10	10	20	30	40	50	50	50
Total	**400**	**70**	**90**	**110**	**160**	**160**	**180**	**200**	**240**	**220**	**230**

Observations: Table 4.74 highlights that

1. the performance score of IDBI bank on Learning & Growth and Innovation Perspective has improved year to year and score reached to 230 in 2016-17 from 70 in 2007-08 as there has been an increase in the number of transactions through digitalised channels.

2. Table 4.73 shows that bank has increase the number of skilled employees every year but the number was lower than other banks so scored 10 in all the years. Expenditure on employees increase/decrease with the change in number of employees as depicted in Table 4.73. Percentage of employees trained scored either 40 or 50 in almost all the years.

3. Score on number of debit cards increased from 30 in 2010-11 to 50 in 2016-17. Bank started issuing credit cards from 2014-15 and scored 10 in all the last 3 years of the study period. The score on number of POS terminals installed and mobile transactions was 10 in all the years. NEFT transactions has increased year to year as shown in Table 4.73 and score reached to 50 in 2014-15 from 10 in 2008-09.

Suggestions:

1. Bank should recruit more skilled staff and provide training to all existing and newly recruited staff on technical and behavioural skills to enhance the operational efficiency and productivity.

2. Bank should introduce more digitalised and innovative products & services which should be more user friendly, secure and reliable to increase the transactions through alternative channels than branches.

4.5.5 Measurement of Performance of Canara Bank on Learning & Growth and Innovation Perspective

Table 4.75: Performance of Canara Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	45260	44090	43380	43397	42272	42693	48794	53794	54008	55717
	Expenditure Per Employee	000	367	426	506	681	703	762	753	795	823	882
	Percentage of employees trained	%	N.D.	108.16	72.81	61.93	68.88	70	112	122	143	130
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	5750000	5000000	5997718	7192400	9552747	15129787	25471880	31949504	33136916
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	64949	57586	61039	68158	125917	200416	215454
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	1220	1027	1064	1073	3319	4725	9680
	Number of Mobile Transactions	Nos.	N.D.	N.D.	0	0	17803	68542	258992	1686878	6681631	23597326
	Number of NEFT Transactions	Nos.	N.D.	1164395	2184757	5888577	9794594	17722250	35918992	51175249	55607530	70809471

Table 4.76: Performance Score of Canara Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	30	30	30	30	30	30	30	30	30	30
	Expenditure Per Employee	20	20	30	30	30	40	40	40	40	40
	Percentage of employees trained	-	50	40	40	40	40	50	50	50	50
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	30	30	30	40	50	50	50	50	50
	Number of Credit Cards	-	-	-	10	10	10	10	10	10	10
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	-	-	10	10	10	10	40	50
	Number of NEFT Transactions	-	10	10	10	20	30	40	50	50	50
Total	**400**	**50**	**140**	**140**	**160**	**190**	**220**	**240**	**250**	**280**	**290**

Observations: Table 4.76 manifests that

1. the performance score of Canara Bank on Learning & Growth and Innovation Perspective has increased to 290 in 2016-17 from 50 in 2007-08 primarily due to increase in transactions through digital channels, increase in no. of trained employees and highest no. of issued debit cards in last few years of the study period.

2. Score on number of skilled employees was 30 in all the years. As there has not been any significant increase in number of employees of the bank as shown in Table 4.75. Score on expenditure on employees has also increased to 40 in 2012-13 from 20 in 2007-08. Bank provided training to maximum number of employees as shown in Table 4.75 thus score on percentage of employees trained was either 40 or 50.

3. Score on number of debit cards outstanding has increased to 50 in 2016-17 from 30 in 2008-09. Score on no. of credit cards issued and POS terminals installed was 10 from 2010-11 to 2016-17. The score on number of mobile and NEFT transactions increased to 50 in 2016-17 from 10 in starting years. Increased number of debit cards and more transactions through internet and mobile shows that banks is focused towards providing innovative digitalised products and services which might have improved customer experiences with the bank.

Suggestions:

1. Bank should recruit more skilled employees and impart training to existing and new employees on continuous basis to upgrade them on technical and behavioural skills.

2. Bank should install more POS terminals and increase the number of credit cards and debit cards to increase cashless transactions at purchase outlets and reduce rush at bank branches.

4.5.6 Measurement of Performance of Bank of India on Learning & Growth and Innovation Perspective

Table 4.77: Performance of Bank of India on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	40557	40155	39676	39788	41537	42146	43150	45301	49458	47750
	Expenditure Per Employee	000	409	482	579	873	739	743	925	1101	1083	1130
	Percentage of employees trained	%	60.8	68.7	68.6	56.9	45.1	55.7	55.9	52.9	45.3	50.3
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	2300000	3200000	4600000	6874195	10343550	13602785	16923918	27379416	35272873	47149101
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	118225	120120	121062	130426	131522	145084	145860
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	2581	2431	2425	3317	4568	5653	17328
	Number of Mobile Transactions	Nos.	N.D.	N.D.	496	3834	11895	7642	880	59664	192419	214150
	Number of NEFT Transactions	Nos.	N.D.	677505	1572926	4878610	10131107	18599799	38725125	61312349	87853859	88961896

Table 4.78: Performance Score of Bank of India on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	30	30	20	20	30	30	30	30	30	30
	Expenditure Per Employee	20	20	30	40	30	30	40	50	50	50
	Percentage of employees trained	40	40	40	30	30	30	30	30	30	30
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	20	20	30	40	50	50	50	50	50	50
	Number of Credit Cards	-	-	-	10	10	10	10	10	10	10
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	10	10	10	10	10	10	10	10
	Number of NEFT Transactions	-	10	10	10	20	30	50	50	50	50
Total		**400**	**110**	**120**	**140**	**170**	**190**	**200**	**230**	**240**	**240**	**240**

Observations: Table 4.78 portrays that

1. the performance score of Bank of India on Learning & Growth and Innovation Perspective has improved slightly and reached to 240 in 2014-15 from 110 in 2007-08. Improvement in score was primarily on account of high NEFT transactions, highest no. of debit cards issued by the bank and high expenditure on employees.

2. Score on number of employees scored 30 in almost all the years except 2009-10 and 2010-11 where the score was 20. To motivate and empower employees bank has increased the expenditure per employees also as shown in Table 4.77. Percentage of employees trained was low in all the years as shown in Table 4.77 thus scored 30 from the year 2010-11 to 2016-17 as bank might have conducted less number of training programs for employees.

3. Growth in number of debit cards outstanding was high as shown in Table 4.77 thus score increased to 50 in 2011-12 from 20 in 2007-08 and remained 50 in all the remaining years. Number of credit cards, POS terminals and number of mobile transactions scored 10 in all the years while the score on number of NEFT transactions increased to 50 in last four years from 10 in 2008-09.

Suggestions:

1. Bank should recruit more skilled employees and provide training to all newly recruited and existing employees to enhance their competencies and equip them with right skills and knowledge so that the changing need of the customers can be met and operational efficiency can be improved.

2. Bank should install more POS terminals to increase cashless transactions at retail outlets.

3. To increase the number of transactions through digital channels more attractive offers and facilities should be given which are consumer friendly, secured and easy to adapt.

4.5.7 Measurement of Performance of Indian Bank on Learning & Growth and Innovation Perspective

Table 4.79: Performance of Indian Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	20548	19914	19641	19232	18710	18793	19351	20222	20074	20861
	Expenditure Per Employee	000	471	579	617	693	793	1050	996	862	999	955
	Percentage of employees trained	%	N.D.	N.D.	111.4	123.92	110.55	106.67	73	46	65	53.87
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	3172000	4351000	5811836	7399952	8952273	11391049	15973505	14759225	17585918
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	38541	43449	52104	63149	68562	73106	80229
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	264	8428
	Number of Mobile Transactions	Nos.	N.D.	N.D.	270	2634	8011	25241	46586	27143	1239440	8920070
	Number of NEFT Transactions	Nos.	N.D.	955460	1711396	4279293	7349276	12775121	24140571	28411782	32819264	43892726

Table 4.80: Performance Score of Indian Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	20	10	10	10	10	10	10	20	20	20
	Expenditure Per Employee	20	30	30	30	40	50	40	40	40	40
	Percentage of employees trained	-	-	50	50	50	50	40	30	40	30
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	20	30	30	40	50	50	50	50	50
	Number of Credit Cards	-	-	-	10	10	10	10	10	10	10
	Number of POS Terminals	-	-	-	-	-	-	-	-	10	10
	Number of Mobile Transactions	-	-	10	10	10	10	10	10	10	50
	Number of NEFT Transactions	-	10	10	10	10	20	40	40	40	50
Total	**400**	40	70	140	150	170	200	200	200	220	260

Observations: Table 4.80 exhibits that

1. there has been an improvement in the performance score of Indian Bank on Learning & Growth and Innovation Perspective. The score increased to 260 in 2016-17 from 40 in 2007-08 because innovations in digital products and services

has increase in the number of digital transactions through mobile and internet banking in last years.

2. Score on number of skilled employees was lower than other banks in all the years so it scored either 10 or 20. Increase in expenditure was higher than increase in number of employees although it declined after 2012-13 as shown in 4.79. Percentage of number of employees trained was the highest from 2008-09 to 2012-13 as depicted in Table 4.79 so this ratio scored 50 in these years. The score on employees trained decreased in last year's so it scored 40 or 30.

3. Score on number of debit cards outstanding increased to 50 in 2012-13 from 20 in 2008-09. Score on credit cards outstanding was 10 from 2010-11 to 2016-17. Bank started installing POS terminals from 2015-16 only so it scored 10 in 2015-16 and 2016-17. Scores on number of mobile transactions increased to 50 in 2016-17 from 10 in 2008-09. This all implies that bank is improving its customer experiences by providing innovative products and services so there has been a high increase in number of transactions through digitalised channels.

Suggestions:

1. Bank should impart training to 100 % of its employees on technical and behavioural skills as trained, updated and skilled employees is the basic requirement for increasing the operational efficiency of the bank.

2. Increase in alternative digital channels and technology is required by the bank to cope up with the increased competition prevailing in the banking sector.

4.5.8 Measurement of Performance of Central Bank of India on Learning & Growth and Innovation Perspective

Table 4.81: Performance of Central Bank of India on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	37488	32804	34826	34015	35901	37113	40661	39039	37685	37044
	Expenditure Per Employee	000	324	388	443	871	698	779	870	980	1185	1138
	Percentage of employees trained	%	N.D.	45.73	67.22	61.99	41.12	86.3	81.59	90.47	89.64	100
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	2622639	4663025	4193703	7212820	15345495	19553837	24334411
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	48067	55703	54611	52272	108711	114446	106515
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	729	843	1129	1428	1699	1694	1851
	Number of Mobile Transactions	Nos.	N.D.	N.D.	14	63	42	4027	9591	39792	408163	3097451
	Number of NEFT Transactions	Nos.	N.D.	136393	448238	1796257	4583402	11260667	30187406	52046338	75842005	77933208

Table 4.82: Performance Score of Central Bank of India on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	20	20	20	20	20	20	30	20	20	20
	Expenditure Per Employee	20	20	20	40	30	40	40	40	50	50
	Percentage of employees trained	-	30	40	40	30	50	50	50	50	50
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	20	30	30	40	50	50	50
	Number of Credit Cards	-	-	-	10	10	10	10	10	10	10
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	10	10	10	10	10	10	10	20
	Number of NEFT Transactions	-	10	10	10	10	20	40	50	50	50
Total	**400**	40	80	100	160	150	190	230	240	250	260

Observations: Table 4.82 displays that

1. the performance score of Central Bank of India on Learning & Growth and Innovation Perspective has increased to 260 in 2016-17 from 40 in 2007-08 as there has been an increase in number of debit cards, digital transactions through internet and mobile banking, highest percentage of employees trained and increase in per employee expenditure in last years of the study period.

2. Number of skilled employees was lower than other banks so it score 20 in all the years. To motivate and retain employees, bank has increased the expenditure on them continuously as shown in Table 4.81. Bank scored either 40 or 50 from the

year 2012-13 to 2016-17. Score on percentage of employees trained has increased to 50 in last years from 30 in 2008-09.

3. Score on number of debit cards issued by the bank increased to 50 in last 3 years from 20 in 2010-11. Score on number of credit cards and debit cards was 10 in all the years. Score on number of mobile transactions increased to 20 in 2016-17 from 10 in previous years. Score on number of NEFT transactions increased to 50 in last 3 years from 10 in 2007-08.

Suggestions:

1. Bank should recruit more skilled employees and provide training to maximum number of its employees so that their skills can be enhanced to improve the productivity and efficiency of bank business. It should also ensure the effectiveness of the training programs conducted.

2. Bank should promote convenient, secure and easy digitalised and innovative products and services so that transactions through alternative channels like ATM's, mobiles, internet etc. can be increased.

4.5.9 Measurement of Performance of Union Bank on Learning & Growth and Innovation Perspective

Table 4.83: Performance of Union Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	27510	29014	29419	27746	30838	31798	33806	35514	35473	36877
	Expenditure Per Employee	000	307	397	460	937	804	866	978	1066	1043	931
	Percentage of employees trained	%	N.D.	N.D.	N.D.	N.D.	N.D.	53.98	81.8	88.25	72.9	74.63
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	2857000	4834000	6530298	7556321	9520632	12266026	19448862	16707313	19546123
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	37971	42190	46579	60186	84151	142221	182914
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	2709	2681	2976	6480	16931	27649	51891
	Number of Mobile Transactions	Nos.	N.D.	N.D.	8772	104193	239663	481850	682212	1443587	6664786	10151778
	Number of NEFT Transactions	Nos.	N.D.	500929	1369174	4625132	10305121	19022037	34306106	47850581	57853798	66301115

Table 4.84: Performance Score of Union Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	20	20	20	20	20	20	20	20	20	20
	Expenditure Per Employee	20	20	20	40	40	40	40	50	50	40
	Percentage of employees trained	-	-	-	-	-	30	50	50	40	40
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	20	30	40	40	50	50	50	50	50
	Number of Credit Cards	-	-	-	10	10	10	10	10	10	10
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	10	10	10	10	10	10	40	50
	Number of NEFT Transactions	-	10	10	10	20	30	40	50	50	50
Total		**400**	**40**	**70**	**90**	**140**	**150**	**200**	**230**	**250**	**270**	**270**

Observations: Table 4.84 conveys that

1. the performance score of Union Bank on Learning & Growth and Innovation Perspective has increased to 270 in 2016-17 from 40 in 2007-08. This was due to improvement in the quantity, quality and innovations in products & services offered by the bank which has impacted the number of transactions through digital channels.

2. Score on number of employees was 20 in all the years of the study. Bank has increased the expenditure per employee continuously as shown in Table 4.83. Thus score increased to 50 in 2014-15 from 20 in 2007-08 on this ratio. This implies that there has not been any significant increase in the number of skilled employees of the bank but the expenditure per employee has increased which might have motivated employees and impacted their productivity. Percentage of employees trained was higher i.e. 81.8 % and 88.25 % in 2013-14 and 2014-15 respectively thus scored 50 in both years.

3. Score on debit cards issued by the bank increased to 50 in 2012-13 from 20 in 2008-09. Score on number of credit cards and POS terminals installed was 10 in all the years. Score on number of mobile transactions increase to 50 in 2016-17 from 10 during 2009-10 to 2014-15. Number of NEFT transactions scored 50 in last 3 years of the study period.

Suggestions:

1. Bank should recruit more skilled employees and trained them to meet with customer's expectations.

2. To increase the cash less transactions bank should issue more debit and credit cards and install more POS terminals for transactions at retail outlets.

4.5.10 Measurement of Performance of Syndicate Bank on Learning & Growth and Innovation Perspective

Table 4.85: Performance of Syndicate Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	24656	25068	25569	26288	26606	24497	25061	27446	32097	32518
	Expenditure Per Employee	000	381	447	523	675	711	890	889	812	870	1167
	Percentage of employees trained	%	N.D.	N.D.	N.D.	52.56	42.00	37.25	33.63	55.93	55.93	45.35
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	2210000	3016000	4863000	5324961	6279109	5501640	6286639	10676851	11887998	13617138
	Number of Credit Cards	Nos.	58874	63949	68414	63431	65436	67195	68948	72625	71735	73858
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	376	513	718	1471	2025	2319	4496
	Number of Mobile Transactions	Nos.	0	0	0	0	3996	7136	26298	302423	1643031	5078386
	Number of NEFT Transactions	Nos.	N.D.	426468	972310	3149532	5888777	10672350	17746949	22372008	29053975	38589850

Table 4.86: Performance Score of Syndicate Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	20	20	20	20	20	20	20	20	20	20
	Expenditure Per Employee	20	20	30	30	30	40	40	40	40	50
	Percentage of employees trained	-	-	-	30	30	20	20	30	30	30
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	20	20	30	30	40	30	40	50	50	50
	Number of Credit Cards	10	10	10	10	10	10	10	10	10	10
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	-	-	10	10	10	10	10	30
	Number of NEFT Transactions	-	10	10	10	10	20	30	30	40	50
Total	**400**	**70**	**80**	**100**	**140**	**160**	**160**	**180**	**200**	**210**	**250**

Observations: Table 4.86 shows that

1. the performance score of Syndicate bank on Learning & Growth and Innovation Perspective has improved in last years of the study period thus score reached to 250 in 2016-17 from 70 in 2007-08. This was primarily on account of increase in number of debit cards issued and increase in number of digital transactions through mobile and internet banking.

2. Number of skilled staff was less than other banks as shown in Table 4.85 so it scored 20 in all the years. Score on expenditure per employee increased to 50 in 2016-17 from 20 in 2007-08. The percentage of employees trained was low in all the years as shown in Table 4.85 so it scored either 20 or 30. Neither bank recruited more highly skilled employees nor imparted training to all its existing employees. This might have affected the productivity of the employees.

3. Score on number of debit cards issued by the bank has increased to 50 in 2014-15 from 20 in 2007-08 whereas the score on credit cards was 10 in all the years. Score on POS terminals installed was 10 from 2010-11 to 2016-17. Score on number of mobile transactions increased to 30 in 2016-17 from 10 in previous years while number of NEFT transactions increased to 50 in 2016-17 from 10 in 2008-09.

Suggestions:

1. Bank should recruit more skilled employees as modern banking requires highly skilled manpower. To enhance their productivity and improving customer expectations, training at regular intervals should be imparted by the bank on technical and behavioural skills to all the employees.

2. Bank should introduce attractive mobile applications which are easy to use and secured enough to increase transactions through mobiles.

3. Bank should install more POS terminals to reduce cash transactions at purchase outlets.

4.5.11 Intra-Bank Comparison of Performance of Public Sector Banks on Learning & Growth and Innovation Perspective

Intra-Bank Hypotheses

H_0- There is no significant difference in the performance of Public Sector bank on Learning & Growth and Innovation Perspective during last 10 years.

H_1- There is a significant difference in the performance of Public Sector bank on Learning & Growth and Innovation Perspective during last 10 years.

Table 4.87: Mean Ranks of Years for Public Sector Banks on Learning & Growth and Innovation Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
State Bank of India	3	4.17	4	4.17	5	4.83	6	4.83	8	5.5	8	5.5	8	6.5	8	6.5	8	6.5	8	6.5	66	-
Bank of Baroda	2	2.5	5	2.5	5	2.5	7	5	8	5	8	7.5	8	7.5	8	7.5	8	7.5	8	7.5	67	-
Punjab National Bank	2	2	4	2.75	6	2.75	8	4.5	8	7	8	4.5	8	8.75	8	8.75	8	7	8	7	68	-
IDBI Bank	3	3.17	4	3.67	5	5.33	7	6.5	7	4.83	7	6.5	7	6.5	8	7.67	8	4.83	8	6	64	-
Canara Bank	2	3.5	5	3.5	5	4.75	7	4.75	8	4.75	8	6.75	8	6.75	8	6.75	8	6.75	8	6.75	67	-
Bank of India	4	4.63	5	4.63	6	4.38	8	4	8	5.5	8	5.5	8	6.13	8	6.75	8	6.75	8	6.75	71	-
Indian Bank	2	4.75	4	3.25	6	3.25	7	3.25	7	5.25	7	6.75	7	5.25	7	7.75	8	7.75	8	7.75	63	-
Central Bank of India	2	3.5	4	3.5	5	3.5	8	5.75	8	4.5	8	5.75	8	8.25	8	5.75	8	7.25	8	7.25	67	-
Union Bank	2	3.75	4	3.75	5	3.75	7	5.75	7	5.75	8	5.75	8	5.75	8	7.5	8	7.5	8	5.75	65	-
Syndicate Bank	4	3.5	5	3.5	5	4.75	8	4.75	8	5.38	8	5.63	8	6.25	8	6.88	8	6.88	8	7.5	70	-

Table 4.88: Results of Kruskal Wallis Test for Public Sector Banks on Learning & Growth and Innovation Perspective

Name of the Bank	Chi-Square	Degree of Freedom	P-Value	Null Hypothesis Accepted /Rejected
State Bank of India	9	9	0.437	Accepted
Bank of Baroda	14.87	9	0.095	Accepted
Punjab National Bank	15.381	9	0.081	Accepted
IDBI Bank	10.679	9	0.298	Accepted
Canara Bank	9	9	0.437	Accepted
Bank of India	6.217	9	0.718	Accepted
Indian Bank	9	9	0.437	Accepted
Central Bank of India	9.923	9	0.357	Accepted
Union Bank	9	9	0.437	Accepted
Syndicate Bank	16.525	9	0.057	Accepted

Inferences:

Following inferences have been drawn from the above tables:

1. **State Bank of India-** It is clear that from 2013-14 to 2016-17 the mean rank 6.50 is same and maximum. Table. 4.88 shows that since p-value is 0.437, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of

significance. Hence, there is no significant difference in the performance of SBI Bank on Learning & Growth and Innovation Perspective during last 10 years.

2. **Bank of Baroda-** It is clear that from 2012-13 to 2016-17 the mean rank 7.50 is same and maximum. Table 4.88 shows that since p-value is 0.095, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Bank of Baroda on Learning & Growth and Innovation Perspective during last 10 years.

3. **Punjab National Bank-** It is clear that for 2013-14 and 2014-15 the mean rank 8.75 is same and maximum. Table 4.88 shows that since p-value is 0.081, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Punjab National Bank on Learning & Growth and Innovation Perspective during last 10 years.

4. **IDBI Bank-** It is clear that for 2014-15 the mean rank 7.67 is maximum. Table 4.88 shows that since p-value is 0.298, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of IDBI Bank on Learning & Growth and Innovation Perspective during last 10 years.

5. **Canara Bank-** It is clear that from 2012-13 to 2016-17 the mean rank 6.75 is same and maximum. Table 4.88 shows that since p-value is 0.437, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Canara Bank on Learning & Growth and Innovation Perspective during last 10 years.

6. **Bank of India-** It is clear that from 2014-15 to 2016-17 the mean rank 6.75 is same and maximum. Table 4.88 shows that since p-value is 0.718, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Bank of India on Learning & Growth and Innovation Perspective during last 10 years.

7. **Indian Bank-** It is clear that from 2014-15 to 2016-17 the mean rank 7.75 is same and maximum. Table 4.88 shows that since p-value is 0.437, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance.

Hence, there is no significant difference in the performance of Indian Bank on Learning & Growth and Innovation Perspective during last 10 years.

8. **Central Bank of India-** It is clear that the mean rank 8.25 is maximum in the year 2013-14. Table 4.88 shows that since p-value is 0.357, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Central Bank of India on Learning & Growth and Innovation Perspective during last 10 years.

9. **Union Bank-** It is clear that for 2014-15 and 2015-16 the mean rank 7.5 is same and maximum. Table 4.88 shows that since p-value is 0.437, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Union Bank on Learning & Growth and Innovation Perspective during last 10 years.

10. **Syndicate Bank-** It is clear that for 2016-17 the mean rank 7.5 is maximum. Table 4.88 shows that since p-value is 0.057, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Syndicate Bank on Learning & Growth and Innovation Perspective during last 10 years.

Major Findings & Conclusion:

It has been observed that Public Sector Banks have highest mean ranks during the last years of the study period as the score is the highest of in last years on Learning & Growth and Innovation Perspective primarily on account of highest number of debit cards, credit cards, POS terminals, NEFT and mobile transactions which depicts that public banks are inclining towards improving customer experiences through providing digitalised and innovative products and services. Although it is found that there is no significant difference in the performance of all Public Sector Banks on this Perspective of BSC. It is concluded that performance has improved but not to the large extent which is needed to improve performance on other perspectives of Balanced Scorecard i.e. Financial, Customer, and Internal Business Process Perspective.

4.6 Measurement of Performance of Public Sector Banks on Social and Environment Perspective

To measure and evaluate the performance of banks on Social and Environment Perspective 4 common sustainability related strategic objectives with 8 measures have been selected. The performance is then measured and scored using the performance scale created separately for each measure. Kruskal Wallis test has been applied separately on performance scores of individual bank using IBM SPSS22 to test whether bank shows any difference in the performance on Social and Environment Perspective when intra-company comparison is drawn for year 2007-08 to 2016-17. Performance and intra-bank comparison on Social and Environment Perspective of all the selected Public Sector Banks is given below:

4.6.1 Measurement of Performance of State Bank of India on Social and Environment Perspective

Table 4.89: Performance of State Bank of India on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	0.29	0.29	0.80	1.27	1.31	0.95	1.13	0.97
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	20.51	20.26	20.96	21.46	22.27
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	66.85	67.06	65.56	66.81	69.88	66.37	65.88	65.84	65.17	64.00
	Ratio of Priority Sector Advances to Total Advances	%	28.61	26.48	26.99	30.61	28.84	25.28	23.21	22.23	22.45	21.72
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	33314711	53172369	85706903
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	234.14	140.76

Table 4.90: Performance of State Bank of India on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	0.67	N.D.	N.D.	3.09	4.78	3.57
	Do you have policies for Environnment Sustainibilty?	Yes/No	N.D.	N.D.	N.D.	N.D.	No	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	No	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes

Table 4.91: Performance Score of State Bank of India on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	10	10	20	30	30	20	30	20
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	40	40	40	40	40
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	50	50	50	50	50	50	50	50	50	50
	Ratio of Priority Sector Advances to Total Advances	30	30	30	40	30	30	30	30	30	30
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	50	50	50
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	50
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	10	0	0	30	40	30
	Steps Taken for Environment Protection	-	-	-	-	-	50	50	50	50	50
Total	400	80	80	90	100	110	200	200	270	340	320

Observations: Table 4.91 shows that

1. the performance score of State Bank of India on Social and Environment Perspective has increased to 320 in 2016-17 from 80 in 2007-08 primarily due to highest score gained on the number of branches in rural & semi-urban areas, high deposits and beneficiaries in PMJDY accounts, all steps taken for environment protection etc.

2. SBI has done monetary contribution on CSR activities every year but percentage was less than 2 % of last three years of average profits as required by Companies Act 2013 so it scored 10-30 in all the years.

3. Percentage of female employees have also increased with the increase in number of total employees as shown in Table 4.89. This measure scored 40 in last five years of the study. This indicates that bank promote gender equality and women empowerment at workplace.

4. Bank has the largest number of branches in rural and semi urban areas as shown in Table 4.89. This measure scored 50 in all the years. Ratio of priority sector advances to total advances scored 30 in almost all years. Number of PMJDY accounts and deposits in such accounts scored 50 in all years. SBI has opened highest number of accounts and mobilized highest savings in such accounts as shown in Table 4.89. From all these ratios it depicts that bank helps in promoting financial inclusion plans in the country.

5. Amount invested in environment protection scored 30 or 40 in last three years of study. Bank has taken all necessary steps for environment protection as shown in Table 4.90 thus scored 50 in last 5 years of the study.

Suggestions:

1. Bank should increase its contribution towards CSR activities and environment protection to improve its reputation in the eyes of its stakeholders.

2. Bank should lend more advances to priority and weaker sectors in order to contribute in the overall economic development of the country.

4.6.2 Measurement of Performance of Bank of Baroda on Social and Environment Perspective

Table 4.92: Performance of Bank of Baroda on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	0.17	0.33	0.38	0.47	1.65
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	19.10	20.96	21.03	22.22	22.56
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	59.33	58.81	58.67	58.60	58.47	59.92	61.71	62.82	63.58	61.51
	Ratio of Priority Sector Advances to Total Advances	%	27.62	26.70	26.35	24.01	22.59	24.21	21.20	22.31	24.02	27.16
	Total No. of beneficiaries of PMJDY accounts	No.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	7966911	12520193	19616596
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	122.67	91.09

Table 4.93: Performance of Bank of Baroda on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.0515	N.D.	N.D.
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No

Table 4.94: Performance Score of Bank of Baroda on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	10	10	10	10	40
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	30	40	40	40	40
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	40	40	40	40	40	40	50	50	50	50
	Ratio of Priority Sector Advances to Total Advances	30	30	30	30	30	30	30	30	30	30
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	20	30	40
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	40
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	10	0	0
	Steps Taken for Environment Protection	-	-	-	-	-	40	40	40	40	40
Total	400	70	70	70	70	70	150	170	200	250	280

Observations: Table 4.94 reveals that

1. the performance score of Bank of Baroda has been increased to 280 in 2016-17 from 70 in first five years of the study period due to increased concern of the bank on social and environment activities in last five years.

2. Monetary contribution by the bank for CSR activities from 2012-13 to 2015-16 was below than the mandatory requirement of 2 % by Companies Act, 2013 as shown in Table 4.92 so it scored 10. The score increased to 40 in 2016-17.

3. To promote gender equality and to empower women bank has continuously increased the number of female employees in its workforce as shown in Table 4.92. The score was 30 in 2012-13 and remained 40 from 2013-14 to 2016-17 with an increase in number of female employees.

4. To promote the financial inclusion and to cover under-banked and unbanked areas, bank has opened more than 50 % of its branches in rural and semi-urban areas as shown in Table 4.92 thus the score was either 40 or 50 in all the years. Table 4.92 shows that the ratio of priority sector advances to total advances was below the prescribed rate of 40 % of adjusted net credits by RBI in all the years so this ratio scored 30 in all the years. Score on number of beneficiaries in PMJDY accounts increased to 40 in 2016-17 from 20 in 2014-15. Deposits in such accounts was the highest 122.67 % in 2015-16 as depicted in Table 4.92

5. Amount spent on environment sustainability scored 10 in 2014-15. Bank has taken all the necessary steps for promoting environment sustainability except

quantitative measurement and its disclosure on carbon emissions. Energy consumption or e-waste recycled etc. as shown in Table 4.93.

Suggestions:

1. Bank should invest more out of its profit on environment protection and other CSR activities to increase the reputation of the bank in the eyes of stakeholders. For spending in the year of losses and low profits bank can create reserve.

2. To promote overall development of the economy, bank should increase the percentage of credit provided to weaker sectors and agricultural activities.

3. Quantitative measurement of carbon emissions, energy consumption or e-waste recycled etc. should be done and disclosed in annual reports of the bank.

4.6.3 Measurement of Performance of Punjab National Bank on Social and Environment Perspective

Table 4.95: Performance of Punjab National Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	0.07	0.06	0.09	0.18	0.34
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	16.00	18.62	19.68	20.86	20.13	22.21	21.23
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	61.80	60.39	61.30	61.63	61.99	62.00	62.99	63.00	63.00	66.66
	Ratio of Priority Sector Advances to Total Advances	%	38.67	31.81	35.70	32.48	31.33	30.04	33.74	36.33	33.81	31.74
	Total No. of beneficiaries of PMJDY accounts	No.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	8976868	13080163	16279952
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	108.58	83.49

Table 4.96: Performance of Punjab National Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No

Table 4.97: Performance Score of Punjab National Bank on Social & Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	10	10	10	10	10
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	30	30	30	40	40	40	40
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	50	50	50	50	50	50	50	50	50	50
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	40	40	40	40	40	40
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	20	30	40
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	40
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	-	-	-
	Steps Taken for Environment Protection	-	-	-	-	-	40	40	40	40	40
Total	400	90	90	90	120	120	170	180	200	260	260

Observations: Table 4.97 manifests that

1. the performance score of Punjab National Bank on Social and Environment Perspective has increased from 90 in 2007-08 to 260 in 2016-17 particularly due to highest score gained on ratios on promoting financial inclusion plans.

2. Percentage of monetary contribution on CSR activities was lower than the prescribed rate of 2 % as shown in Table 4.95 thus scored 10 in all the last five years of the study.

3. To promote gender equality, percentage of female employees to total employees has increased each year by the bank as shown in 4.95 and scored increased to 40 in 2013-14 from 30 in previous years.

4. To promote financial inclusion drive, bank has taken number of initiatives. Score on growth in branches in rural and semi-urban areas to total branches was 50 in all the years as bank has more than 60% of its branches in such areas as shown in Table 4.95. Ratio of priority sector advances to total advances scored 40 in all the years. Score on total number of beneficiaries in PMJDY accounts increased to 40 in 2016-17 from 20 in 2014-15 whereas the growth in deposits in such accounts scored 50 and 40 in 2015-16 and 2016-17 respectively.

5. Table 4.96 shows that bank has not spent any amount on environment protection and taken only few steps on protecting environment. Score on steps taken for environment protection was 40 in all the years.

Suggestions:

1. CSR contribution was too low by the bank which should be increased in order to improve the reputation of the bank in the eyes of all stakeholders.

2. Bank should provide at least 40% of adjusted net credit to priority sectors for promoting the overall development of the economy.

3. Bank should spent on environment protection and initiate the quantitative measurement of carbon emissions, energy efficiency, e-waste recycled etc. for promoting environment sustainability and disclose in the annual reports of the bank.

4.6.4 Measurement of Performance of IDBI Bank on Social and Environment Perspective

Table 4.98: Performance of IDBI Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	0.67	0.66	1.57	0.73	-0.78
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	30.00	30.40	29.82	28.34
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	29.20	30.45	30.65	33.13	34.02	52.37	46.25	52.24	54.55	52.43
	Ratio of Priority Sector Advances to Total Advances	%	18.53	21.98	22.43	26.87	26.82	17.53	20.84	24.50	25.56	31.74
	Total No. of beneficiaries of PMJDY accounts	No.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	929327	1062461	1179012
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	117.81	149.94

Table 4.99: Performance of IDBI Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.99	1.87	0.5527
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No

Table 4.100: Performance Score of IDBI Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	20	20	40	20	0
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	-	50	50	50	50
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	20	30	30	30	30	40	40	40	40	40
	Ratio of Priority Sector Advances to Total Advances	20	30	30	30	30	20	30	30	30	40
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	50
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	10	20	10
	Steps Taken for Environment Protection	-	-	-	-	-	-	-	40	40	40
Total	400	40	60	60	60	60	80	140	220	260	240

Observations: Table 4.100 demonstrates that

1. the performance score of IDBI bank on Social and Environment Perspective has been increased to 240 in 2016-17 from 40 in 2007-08.

2. Score on percentage of CSR expenditure to net profits has increased to 40 in 2014-15 from 20 in 2012-13 and 2013-14. But bank has incurred losses in last year's so bank spent low in 2015-16 and nil amount in 2016-17 as shown in Table 4.98.

3. Score on number of female employees to total employees was 50 in all the last five years which indicates that banks extend gender quality at workplace and helps in empowering women.

4. To cover the unbanked and financially weaker areas, bank has continuously increased the number of branches in rural and semi-urban areas as shown in Table 4.98 thus it scored 40 after 2012-13 in each years. Table 4.98 shows that ratio of priority sector advances to total advances was below the prescribed rate of 40 % of adjusted net credit by RBI. It scored either 30 or 20 in most of the years. Score on number of beneficiaries in PMJDY accounts was 10 in all the last 3 years whereas growth in deposits in such accounts scored 50.

5. Bank spent too low on environment sustainability as shown in Table 4.99 so it scored 10 or 20 in last 3 years. Table 4.99 shows that bank has taken all the necessary steps for environment sustainability except quantitative disclosure of carbon emissions, energy consumptions, e-waste recycled etc.

Suggestions:

1. Bank should spent at least 2 % of its average last 3 years profits on CSR activities. For spending minimum amount in the year of losses or low profits bank can create reserve.

2. Bank should provide more advances to priority sectors for promoting development of all sectors of the Indian economy.

3. To promote financial inclusion plans, bank should try to attract customers in basic saving accounts like PMJDY account through providing attractive offers and facilities on such accounts.

4. Bank should initiate the quantitative measurement of carbon emissions, energy consumption, e-waste recycled etc. and disclose them in their annual reports.

4.6.5 Measurement of Performance of Canara Bank on Social and Environment Perspective

Table 4.101: Performance of Canara Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	0.33	1.24	1.06	1.23	4.21
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	0.00	21.28	22.24	23.69	24.26	25.41	27.43	28.45	29.12	29.77
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	52.76	52.25	51.66	53.21	56.28	56.79	61.58	62.65	62.92	60.97
	Ratio of Priority Sector Advances to Total Advances	%	39.15	33.27	33.48	32.19	29.80	33.88	32.10	32.40	38.48	39.98
	Total No. of beneficiaries of PMJDY accounts	No.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	6157272	7415874	2056690
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	80.09	38.61

Table 4.102: Performance of Canara Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	0.0668	0.7587	0.111	0.3711	0.1496
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No

Table 4.103: Performance Score of Canara Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	10	30	30	30	50
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	40	40	40	40	50	50	50	50	50
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	40	40	40	40	40	40	50	50	50	50
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	30	40	40	40	40	40
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	20	20	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	40	20
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	10	10	10	10	10
	Steps Taken for Environment Protection	-	-	-	-	-	40	40	40	40	40
Total	400	80	120	120	120	110	190	220	240	280	270

Observations: Table 4.103 portrays that

1. the performance score of Canara Bank on Social and Environment Perspective has been increased to 270 in 2016-17 from 80 in 2007-08.

2. Score on percentage of monetary contribution towards CSR has increased to 50 in 2016-17 from 10 in 2012-13.

3. Percentage of female employees in total employees ratio scored 40 from 2008-09 to 2011-12 and 50 in remaining years. This depicts that bank promotes gender equality and empowers women at workplace.

4. Branches in rural & semi-urban areas were more than 50 % of total branches as shown in Table 4.101 thus scored 40 or 50. Ratio of priority sector advances to total advances scored 40 in all the years except 2011-12 where the score was 30. Score on number of beneficiaries in PMJDY accounts declined to 10 in 2016-17 from 20 in last two years. Score on number of beneficiaries in PMJDY accounts declined to 10 in 2016-17 from 20 in last two years. Score on deposits in such accounts decreased to 20 in 2016-17.

5. Score on amount invested on environment protection was 10 in all the years. Bank has taken all the necessary steps except quantitative measurement of carbon emissions, e-waste recycle etc. as shown in Table 4.102 and scored 40 in last years.

Suggestions:

1. Bank should provide more advances to priority and weaker sectors to promote the overall development of the Indian economy.

2. To promote financial inclusion bank should try to increase the beneficiaries of PMJDY accounts and other such accounts through providing different facilities.

3. Bank should start the quantitative measurement of carbon emissions, energy efficiency or e-waste recycled etc.

4.6.6 Measurement of Performance of Bank of India on Social and Environment Perspective

Table 4.104: Performance of Bank of India on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	0.05	0.30	0.44	0.00	-1.17
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	19.97	21.31	22.58	28.62	34.74
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	59.97	60.71	61.49	62.61	64.23	64.38	65.09	73.75	65.95	66.15
	Ratio of Priority Sector Advances to Total Advances	%	28.41	26.27	25.48	25.76	22.56	22.45	20.88	21.16	25.57	26.05
	Total No. of beneficiaries of PMJDY accounts	No.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	6883955	11335068	16746839
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	220.17	140.62

Table 4.105: Performance of Bank of India on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.701	N.D.	N.D.
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No

Table 4.106: Performance Score of Bank of India on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	10	10	10	0	0
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	30	40	40	50	50
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	40	50	50	50	50	50	50	50	50	50
	Ratio of Priority Sector Advances to Total Advances	30	30	30	30	30	30	30	30	30	30
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	20	30	40
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	50
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	10	0	0
	Steps Taken for Environment Protection	-	-	-	-	-	40	40	40	40	40
Total	400	70	80	80	80	80	160	170	200	250	260

Observations: Table 4.106 presents that

1. the performance score on Social and Environment Perspective of Bank of India increased from 70 in 2007-08 to 260 in 2016-17.

2. Table 4.104 shows that monetary contribution towards CSR activities was too low than the prescribed rate of 2 %. This ratio scored 10 from 2012-13 to 2014-15 and 0 in 2015-16 and 2016-17 as bank incurred losses or low profits in these years.

3. To promote gender quality and empower women, bank has increased the number of female employees each year as shown in Table 4.104. The score thus on this ratio increased to 50 in 2015-16 from 30 in 2012-13.

4. Table 4.104 shows that bank has opened more than 50 % of its branches in rural and semi-urban areas therefore this ratio scored 50 in all the years except 2007-08. Score on ratio of priority sector to total advances was 30 in all the years. Score on number of beneficiaries in PMJDY accounts increased to 40 in 2016-17 from 20 in 2014-15. Deposits in PMJDY accounts scored 50 in last two years.

5. Table 4.105 depicts that bank has not invested any amount on environment protection except 2014-15 and bank has taken all the necessary steps for environment sustainability except quantitative disclosures on carbon emissions, energy consumption and e-waste recycled. Steps taken for environment protection ratio scored 40 in all the last 5 years of the study period.

Suggestions:

1. CSR contribution of the bank is too low or nil in some years due to low profits or losses so bank can create reserve for contributing each year on CSR activities in the year of losses and low profits.

2. Bank should provide more credits to priority & weaker sections of the society so as to contribute in overall development of the economy.

3. Bank should start measuring the quantitative information on carbon emissions, e-waste recycled, and energy consumption and disclose this information in their reports.

4.6.7 Measurement of Performance of Indian Bank on Social and Environment Perspective

Table 4.107: Performance of Indian Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.14	0.08	0.24	0.28
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	0.00	17.68	19.80	20.32	21.26	22.97	26.20	28.87	30.49	31.75
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	54.51	53.84	54.21	54.35	54.68	55.24	55.64	55.54	55.50	53.64
	Ratio of Priority Sector Advances to Total Advances	%	37.64	35.52	34.84	34.29	32.98	34.17	33.41	36.63	36.03	42.10
	Total No. of beneficiaries of PMJDY accounts	No.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	2587154	2993125	3248913
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	83.81	47.22

Table 4.108: Performance of Indian Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.1337
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No

Table 4.109: Performance Score of Indian Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	-	10	10	10	10
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	30	30	40	40	40	50	50	50	50
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	40	40	40	40	40	40	40	40	40	40
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	40	40	40	40	40	50
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	40	20
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	-	-	10
	Steps Taken for Environment Protection	-	-	-	-	-	-	40	40	40	40
Total	400	80	110	110	120	120	120	180	190	230	230

Observations: Table 4.109 depicts that

1. the performance score of Indian Bank on Social and Environment Perspective has increased to 230 in 2016-17 from 80 in 2007-08.

2. Percentage of CSR contribution was too low in all the last four years of the study period as shown in Table 4.107 thus it scored 10 in all years.

3. Score on percentage of female employees to total employees increased to 50 in 2013-14 from 30 in 2008-09. Bank increased the number of female employees year to year in order to extend gender quality at workplace and empowers women.

4. To cover the unbanked and unbanked areas and to promote financial inclusion plans, bank has continuously increased the number of branches in rural and semi-urban areas as shown in Table 4.107 thus scored 40 in all the years. Score on ratio of Priority sector advances to total advances increased to 50 in 2016-17 from 40 in last years as Table 4.107 shows that this ratio was the higher than required rate of 40%. Number of beneficiaries in PMJDY accounts was too low so scored 10 in all the last 3 years whereas the growth in deposits in such accounts scored 40 or 20 in 2015-16 and 2016-17 respectively.

5. Bank has spent only in 2016-17 on environment protection as shown in Table 4.108 thus scored 10. Table 4.108 also shows that bank has taken different steps for environment except quantitative disclosure of information on carbon emissions, e-waste recycled or energy saved etc. Thus the ratio scored 40 in last years of the study.

Suggestions:

1. Monetary contribution on CSR and environment protection by the bank is too low which should be increased by the banks. Bank should create reserves for CSR contribution in the year of losses or low profits.

2. Bank should promote and increase the number of beneficiaries of PMJDY accounts through different facilities on such accounts.

3. Quantitative measurement of carbon emissions, e waste recycled or energy consumptions should be done and disclosed in annual reports or sustainability reports.

4.6.8 Measurement of Performance of Central Bank of India on Social and Environment Perspective

Table 4.110: Performance of Central Bank of India on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	0.00	0.00	0.22	0.17	0.05	0.00	0.00
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	22.22
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	65.08	63.90	63.91	63.09	63.18	63.53	65.19	64.98	64.55	62.75
	Ratio of Priority Sector Advances to Total Advances	%	32.88	31.39	32.14	31.23	26.11	29.10	34.64	37.00	42.00	49.46
	Total No. of beneficiaries of PMJDY accounts	No.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	5717895	7415248	8974975
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	169.82	90.64

Table 4.111: Performance of Central Bank of India on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	No

Table 4.112: Performance Score of Central Bank of India on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	0	10	10	10	0	0
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	-	-	-	-	40
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	50	50	50	50	50	50	50	50	50	50
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	30	30	40	40	50	50
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	20	20	20
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	40
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	-	-	-
	Steps Taken for Environment Protection	-	-	-	-	-	10	10	10	10	40
Total	400	90	90	90	90	80	100	110	130	180	240

Observations: Table 4.112 portrays that

1. The performance score of Central Bank of India on Social and Environment Perspective has increased to 240 in 2016-17 from 90 in first four years of the study period.

2. Monetary contribution on CSR activities was too low or nil by the bank as shown in Table 4.110. Score on this ratio was 10 from 2012-13 to 2014-15 and 0 in 2015-16 & 2016-17.

3. Percentage of female employees to total employees with the bank scored 40 in 2016-17. Bank has not disclosed information in previous year's reports.

4. Number of branches in rural and semi-urban areas was more than 50 % as shown in Table 4.10 so it scored 50 in all the years. Score on ratio of priority sector advances to total advances has been increased to 50 in last two years from 40 or 30 in previous years. Score on number of beneficiaries in PMJDY accounts was 20 in all the years whereas the score on deposits on such accounts was 50 and 40 in 2015-16 and 2016-17 respectively. This depicts that Bank focuses on promoting financial inclusion plans.

5. Bank has not spent any amount on environment sustainability as shown in Table 4.112. Score on steps taken for environment sustainability increase to 40 in 2016-17 from 10 in previous years. Bank has not yet started quantitative measurement of carbon emissions, energy consumption, e-waste recycled etc.

Suggestions:

1. Bank should increase the monetary contribution toward CSR activities and environment protection. Bank can create reserves for spending in the year of losses or low profits.

2. Bank should take all necessary efforts for promoting and protecting the environment the environment sustainability.

3. Bank should also disclosed data on no. of female employees in their annual reports.

4.6.9 Measurement of Performance of Union Bank on Social and Environment Perspective

Table 4.113: Performance of Union Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	0.10	0.28	0.38	0.19	0.70	0.37	0.45
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	0.00	0.00	16.52	18.35	18.04	19.30	20.77	22.22	22.75	23.22
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	54.76	53.91	55.12	55.50	57.17	58.59	58.69	58.90	61.11	58.98
	Ratio of Priority Sector Advances to Total Advances	%	39.87	38.06	33.13	35.04	32.04	23.87	30.40	33.58	35.55	36.38
	Total No. of beneficiaries of PMJDY accounts	No.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	4597684	5822613	10519641
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	139.25	57.48

Table 4.114: Performance of Union Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes

Table 4.115: Performance Score of Union Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	10	10	10	10	20	10	10
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	30	30	30	30	40	40	40	40
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	40	40	40	40	40	40	40	40	50	40
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	40	30	40	40	40	40
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	20	30
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	30
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	-	-	-
	Steps Taken for Environment Protection	-	-	-	-	-	50	50	50	50	50
Total	400	80	80	110	120	120	160	180	200	260	240

Observations: Table 4.115 exhibits that

1. the performance score of Union Bank on Social and Environment Perspective has increased from 80 in first two years to 260 in 2015-16.

2. Monetary contribution towards CSR activities was too low by the bank as shown in Table 4.113 so it scored 10 in maximum years except 2014-15 where the score was 20.

3. Bank has continuously increase the number of female employees each year to promote gender equality as shown in Table 4.113. Score on this ratio increase to 40 in last 4 years from 30 in previous years.

4. Growth in number of branches in rural and semi-urban areas scored 40 in all the years except 2015-16 where the score was 50. Score on priority sector advances was 40 in all the years except 2012-13 where the score is 30. Score on number of beneficiaries in PMJDY accounts increased to 30 in 2016-17 from 10 in 2014-15. Score on deposits in PMJDY accounts was 50 and 30 in 2015-16 and 2016-17 respectively.

5. Bank has not disclosed any information on amount spent on environment protection thus it scored 0 in all the years while bank has taken all the necessary steps for environment protection as depicted in Table 4.114.

Suggestions:

1. Bank should increase the monetary contribution toward CSR activities and environment protection.

2. Bank should provide at least 40 % of net adjusted credit to priority and weaker sectors to contribute in the overall development of the economy.

3. Bank should focus on acquiring more beneficiaries in accounts which are opened for poor people.

4.6.10 Measurement of Performance of Syndicate Bank on Social and Environment Perspective

Table 4.116: Performance of Syndicate Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.13	0.74	0.27
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	25.49	28.02	27.44
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	53.34	52.85	52.80	55.84	57.03	57.65	58.09	58.74	60.05	58.01
	Ratio of Priority Sector Advances to Total Advances	%	32.13	32.37	34.38	30.13	29.46	26.63	29.16	27.67	31.06	33.69
	Total No. of beneficiaries of PMJDY accounts	No.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	3496559	4007474	4346730
	Growth in Deposits in PMJDY accounts	%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	64.61	42.23

Table 4.117: Performance of Syndicate Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No

Table 4.118: Performance Score of Syndicate Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	-	-	10	20	10
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	-	-	50	50	50
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	40	40	40	40	40	40	40	40	50	40
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	30	30	30	30	40	40
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	30	20
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	0	0	0
	Steps Taken for Environment Protection	-	-	-	-	-	-	-	40	40	40
Total	**400**	**80**	**80**	**80**	**80**	**70**	**70**	**70**	**180**	**240**	**210**

Observations: Table 4.118 displays that

1. the performance score of Syndicate Bank on Social and Environment Perspective has increased to 240 in 2015-16 from 70 or 80 in previous years.

2. Bank contributed too low on CSR activities as shown in Table 4.116 so it scored 10 or 20 in last three years.

3. Score on number of female employees increased to 50 in 2015-16 and 2016-17 from 40 in 2014-15 which shows that bank is concerned towards promoting gender equality and empowering women at workplace.

4. Bank has more than 50 % of its branches in rural and semi-urban areas as shown in Table 4.116 so it scored 40 in all the year except 2015-16 where the score is 50. Percentage of advances to priority sector advances decline during the mid of the study period from the year 2010-11 to 2014-15 as shown in Table 4.116. .Number of beneficiaries in PMJDY accounts was too low as depicted in Table 4.116 and scored 10 in last three years of the study. Deposits in PMJDY accounts scored 30 and 20 in 2015-16 and 2016-17 respectively.

5. Bank has not spent any amount on environment sustainability. Bank took few steps to promote environment sustainability in last 3 years as shown in Table 4.117.

Suggestions:

1. The contribution towards CSR activities is too low by the bank. Bank should increase it to improve the image and reputation in the eyes of the stakeholders.

2. Bank should try to increase the beneficiaries in PMJDY accounts by providing more facilities on such accounts.

3. Bank should start disclosing the information on quantitative measurement of carbon emissions, e-waste recycled or energy consumption etc. and try to reduce them in order to protect environment.

4.6.11 Intra-Bank Comparison of Performance of Public Sector Banks on Social and Environment Perspective

Intra Bank Hypotheses

H_0- There is no significant difference in the performance of Public Sector bank on Social and Environment Perspective during last 10 years.

H_1- There is a significant difference in the performance of Public Sector bank on Social and Environment Perspective during last 10 years.

Table 4.119: Mean Ranks of Years for Public Sector Banks on Social and Environment Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
State Bank of India	2	5.25	2	5.25	3	5.25	3	7.75	3	5.25	5	5.25	5	5.25	7	5.25	8	5.25	8	5.25	46	-
Bank of Baroda	2	4.5	2	4.5	2	4.5	2	4.5	5	4.5	5	4.5	7	7	7	7	8	7	8	7	43	-
Punjab National Bank	2	5.5	2	5.5	2	5.5	3	5.5	3	5.5	5	5.5	5	5.5	6	5.5	7	5.5	7	5.5	42	-
IDBI Bank	2	4.75	2	7	2	7	2	7	2	9	3	1.25	4	4.75	7	4.75	8	4.75	8	4.75	40	-
Canara Bank	2	4.75	3	4.75	3	4.75	3	4.75	3	2.25	6	4.75	7	7.25	8	7.25	8	7.25	8	7.25	43	-
Bank of India	2	3.25	2	5.75	2	5.75	2	5.75	2	5.75	5	5.75	5	5.75	7	5.75	8	5.75	8	5.75	43	-
Indian Bank	2	5.25	3	5.25	3	5.25	3	5.25	3	5.25	3	5.25	4	5.25	5	5.25	7	5.25	8	7.5	41	-
Central Bank of India	2	5.5	2	5.5	2	5.5	2	5.5	2	3.5	2	3.5	2	5.5	7	5.5	8	7.5	8	7.5	37	-
Union Bank	2	5.5	2	5.5	3	5.5	4	5.5	4	5.5	5	3	5	5.5	6	5.5	7	8	7	5.5	45	-
Syndicate Bank	2	6.25	2	6.25	2	6.25	2	6.25	2	3.75	2	3.75	2	3.75	7	3.75	8	8.75	8	6.25	37	-

Table 4.120: Results of Kruskal Wallis Test for Public Sector Banks on Social and Environment Perspective

Name of the Bank	Chi-Square	Degree of Freedom	P-Value	Null Hypothesis Accepted /Rejected
State Bank of India	9	9	0.437	Accepted
Bank of Baroda	9	9	0.437	Accepted
Punjab National Bank	0	9	1.000	Accepted
IDBI Bank	11.815	9	0.224	Accepted
Canara Bank	11.182	9	0.263	Accepted
Bank of India	9	9	0.433	Accepted
Indian Bank	9	9	0.437	Accepted
Central Bank of India	9	9	0.437	Accepted
Union Bank	10	9	0.350	Accepted
Syndicate Bank	11.182	9	0.263	Accepted

Inferences: From the above two tables following conclusions have been drawn on Social and Environment Perspective of public sector banks:

1. **State Bank of India-** It is clear that the mean rank 7.75 is maximum in the year 2010-11. Table 4.120 shows that since p-value is 0.437, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of SBI Bank on Social and Environment Perspective during last 10 years.

2. **Bank of Baroda-** It is clear that the mean rank 7 is same and maximum from year 2013-14 to 2016-17. Table 4.120 shows that since p-value is 0.437, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Bank of Baroda on Social and Environment Perspective during last 10 years.

3. **Punjab National Bank-** It is clear that the mean rank 5.5 for all the years is same. Table 4.120 shows that since p-value is 1, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Punjab National Bank on Social and Environment Perspective during last 10 years.

4. **IDBI Bank-** It is clear that the mean rank 9 is maximum for the year 2011-12. Table 4.120 shows that since p-value is 0.224, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there

is no significant difference in the performance of IDBI Bank on Social and Environment Perspective during last 10 years.

5. **Canara Bank-**It is clear that the mean rank 7.25 is same and maximum from year 2013-14 to 2016-17. Table 4.120 shows that since p-value is 0.263, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Canara Bank on Social and Environment Perspective during last 10 years.

6. **Bank of India-**It is clear that the mean rank 5.75 is same for all the years except 2007-08 where the mean rank is 3.25. Table 4.120 shows that since p-value is 0.437, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Bank of India on Social and Environment Perspective during last 10 years.

7. **Indian Bank-**It is clear that the mean rank 7.5 is maximum for the year 2016-17. Table 4.120 shows that since p-value is 0.437, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Indian Bank on Social and Environment Perspective during last 10 years.

8. **Central Bank of India-**It is clear that the mean rank 7.5 is maximum from year 2015-16 to 2016-17. Table 4.120 shows that since p-value is 0.437, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Central Bank of India on Social and Environment Perspective during last 10 years.

9. **Union Bank-**It is clear that the mean rank 8 is maximum for the year 2015-16. Table 4.120 shows that since p-value is 0.350, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Union Bank on Social and Environment Perspective during last 10 years.

10. **Syndicate Bank-**It is clear that the mean rank 8.75 is maximum for year 2015-16. Table 4.120 shows that since p-value is 0.263, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence,

there is no significant difference in the performance of Syndicate Bank on Social and Environment Perspective during last 10 years.

Major Findings and Conclusion:

It has been found that there is no significant difference in the performance of all Public Sector Banks on Social and Environment Perspective during the study years. The mean rank for performance score of maximum banks is the highest in last years of the study period on this Perspective which depicts that all public banks performed the best during the last years of the study period.

4.7 Measurement of Performance of Public Sector Banks on Balanced Scorecard

To identify the significant difference in the overall performance of banks on Balanced Scorecard in each studied year, Kruskal Wallis test has been applied separately on performance scores of individual bank on all perspectives using IBM SPSS22 to test whether bank shows any difference in the performance on Balanced Scorecard when intra-bank comparison is drawn for year 2007-08 to 2016-17. Overall performance score on all perspectives and intra-bank comparison on Balanced Scorecard of all the selected Public Sector Banks is being given below:

4.7.1 Overall Performance Score of Public Sector Banks on Balanced Scorecard

Following tables show the total performance score of each public sector bank on different perspectives viz. Financial Perspective, Customer Perspective, Internal Business Process Perspective, Learning & Growth and Innovation Perspective and Social & Environment Perspective and total score on Balanced Scorecard for each year.

Table 4.121: Overall Performance Score of State Bank of India on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	310	290	250	230	280	250	220	230	200	220
Customer Perspective	280	320	270	280	250	280	260	250	260	260
Internal Business Process Perspective	210	240	230	250	260	250	270	270	280	290
Learning & Growth and Innovation Perspective	120	130	160	240	330	320	350	370	380	390
Social & Environment Perspective	80	80	90	100	110	200	200	270	340	320
Total Score	**1000**	**1060**	**1000**	**1100**	**1230**	**1300**	**1300**	**1390**	**1460**	**1480**

Table 4.122: Overall Performance Score of Bank of Baroda on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	300	310	300	330	300	220	220	200	130	150
Customer Perspective	250	280	290	290	270	270	300	220	170	230
Internal Business Process Perspective	190	180	240	240	270	270	270	280	240	260
Learning & Growth and Innovation Perspective	50	100	130	180	200	210	230	230	260	280
Social & Environment Perspective	70	70	70	70	70	150	170	200	250	280
Total Score	**860**	**940**	**1030**	**1110**	**1110**	**1120**	**1190**	**1130**	**1050**	**1200**

Table 4.123: Overall Performance Score of Punjab National Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	310	340	320	310	260	240	200	190	140	140
Customer Perspective	250	260	280	270	250	220	240	220	230	260
Internal Business Process Perspective	200	220	220	260	260	250	250	250	250	260
Learning & Growth and Innovation Perspective	50	110	130	210	220	240	260	260	250	270
Social & Environment Perspective	90	90	90	120	120	170	180	200	260	260
Total Score	**900**	**1020**	**1040**	**1170**	**1110**	**1120**	**1130**	**1120**	**1130**	**1190**

Table 4.124: Overall Performance Score of IDBI Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	190	200	220	280	240	200	160	160	120	170
Customer Perspective	240	270	320	260	260	200	150	210	160	180
Internal Business Process Perspective	270	270	280	260	270	250	240	240	220	200
Learning & Growth and Innovation Perspective	70	90	110	160	160	180	200	240	220	230
Social & Environment Perspective	40	60	60	60	60	80	140	220	260	240
Total Score	**810**	**890**	**990**	**1020**	**990**	**910**	**890**	**1070**	**980**	**1020**

Table 4.125: Overall Performance Score of Canara Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	250	270	310	310	240	200	200	190	120	150
Customer Perspective	190	240	260	280	220	190	250	200	180	210
Internal Business Process Perspective	180	220	220	240	230	230	270	280	260	250
Learning & Growth and Innovation Perspective	50	140	140	160	190	220	240	250	280	290
Social & Environment Perspective	80	120	120	120	110	190	220	240	280	270
Total Score	**750**	**990**	**1050**	**1110**	**990**	**1030**	**1180**	**1160**	**1120**	**1170**

Table 4.126: Overall Performance Score of Bank of India on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	340	320	230	300	220	210	210	170	150	130
Customer Perspective	230	200	270	270	220	240	240	200	190	250
Internal Business Process Perspective	220	230	220	230	230	260	280	240	240	250
Learning & Growth and Innovation Perspective	110	120	140	170	190	200	230	240	240	240
Social & Environment Perspective	70	80	80	80	80	160	170	200	250	260
Total Score	**970**	**950**	**940**	**1050**	**940**	**1070**	**1130**	**1050**	**1070**	**1130**

Table 4.127: Overall Performance Score of Indian Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	320	320	320	300	270	230	210	200	160	230
Customer Perspective	200	210	240	200	200	170	190	170	170	190
Internal Business Process Perspective	190	180	200	210	230	220	230	220	220	230
Learning & Growth and Innovation Perspective	40	70	140	150	170	200	200	200	220	260
Social & Environment Perspective	80	110	110	120	120	120	180	190	230	230
Total Score	**830**	**890**	**1010**	**980**	**990**	**940**	**1010**	**980**	**1000**	**1140**

Table 4.128: Overall Performance Score of Central Bank of India on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	230	220	300	260	180	240	140	170	120	90
Customer Perspective	260	180	240	210	170	200	160	160	150	190
Internal Business Process Perspective	200	200	210	170	210	220	210	230	200	200
Learning & Growth and Innovation Perspective	40	80	100	160	150	190	230	240	250	260
Social & Environment Perspective	90	90	90	90	80	100	110	130	180	240
Total Score	**820**	**770**	**940**	**890**	**790**	**950**	**850**	**930**	**900**	**980**

Table 4.129: Overall Performance Score of Union Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	350	300	290	270	220	240	200	190	150	150
Customer Perspective	190	200	250	230	200	230	200	180	210	220
Internal Business Process Perspective	200	210	230	210	230	250	250	250	240	270
Learning & Growth and Innovation Perspective	40	70	90	140	150	200	230	250	270	270
Social & Environment Perspective	80	80	110	120	120	160	180	200	260	240
Total Score	**860**	**860**	**970**	**970**	**920**	**1080**	**1060**	**1070**	**1130**	**1150**

Table 4.130: Overall Performance Score of Syndicate Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	280	270	240	290	280	320	210	210	130	160
Customer Perspective	200	150	170	180	190	200	180	220	140	150
Internal Business Process Perspective	190	200	190	190	220	240	240	250	220	210
Learning & Growth and Innovation Perspective	70	80	100	140	160	160	180	200	210	250
Social & Environment Perspective	80	80	80	80	70	70	70	180	240	210
Total Score	**820**	**780**	**780**	**880**	**920**	**990**	**880**	**1060**	**940**	**980**

4.7.2 Intra-Bank Comparison of Overall Performance of Public Sector Banks on Balanced Scorecard

Intra Bank Hypotheses

H_0- There is no significant difference in the performance of Public Sector bank on Balanced Scorecard during last 10 years.

H_1- There is a significant difference in the performance of Public Sector bank on Balanced Scorecard during last 10 years.

Table 4.131: Mean Ranks of Years for Public Sector Banks on Balanced Scorecard and Result of Kruskal Wallis Test

Year /Name of the Bank	SBI	BOB	PNB	IDBI	Canara Bank	BOI	Indian Bank	CBI	Union Bank	Syndicate Bank
2007-08	4.30	3.40	3.40	4.20	2.50	3.70	4.00	5.00	3.10	4.90
2008-09	5.10	4.40	4.80	5.80	4.80	4.20	4.70	4.00	3.80	4.00
2009-10	4.00	5.10	5.30	6.90	5.50	4.90	5.50	6.50	5.70	3.90
2010-11	5.10	5.90	6.80	6.30	6.70	5.80	5.40	5.30	5.30	5.20
2011-12	5.20	5.70	6.00	6.50	4.70	4.50	6.40	4.20	4.60	5.70
2012-13	6.10	6.00	4.80	5.50	4.70	6.40	5.10	7.20	6.90	6.90
2013-14	5.40	7.40	5.80	4.20	7.10	7.00	5.90	5.30	6.00	5.30
2014-15	5.90	6.10	5.30	5.80	6.60	5.80	5.10	6.50	5.60	7.90
2015-16	6.90	4.80	5.30	4.60	5.80	5.50	5.50	4.90	6.60	5.50
2016-17	7.00	6.20	7.50	5.20	6.60	7.20	7.40	6.10	7.40	5.70
N	5	5	5	5	5	5	5	5	5	5
Chi-Square	4.911	6.376	6.508	4.5	9.541	6.978	4.404	5.558	9.211	7.378
Degree of Freedom	9	9	9	9	9	9	9	9	9	9
p-value	0.842	0.702	0.688	0.876	0.389	0.639	0.883	0.783	0.418	0.598
Null Hypothesis Accepted Rejected	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted

Observations and Inferences: From the above tables following inferences have been drawn on overall performance of Public Sector Banks on Balanced Scorecard:

1. **State Bank of India-** Table 4.121 depicts that the overall performance score of State Bank of India on Balanced Scorecard has increased to 1480 in 2016-17 from 1000 in 2007-08 primarily due to improvement in score gained on Learning & Growth and Innovation Perspective. Table 4.131 shows that mean rank 7 is the highest for the year 2016-17. Since p-value is higher than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of SBI Bank on Balanced Scorecard during last 10 years.

2. **Bank of Baroda-**Table 4.122 presents that the overall performance score of Bank of Baroda on Balanced Scorecard increased to 1200 in 2016-17 from 860 in 2007-08. This was mainly because of improvement in score on Learning & Growth and Innovation Perspective and Social & Environment Perspective. Table 4.131 shows that mean rank 7.40 in 2013-14. Since p-value is 0.702, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Bank of Baroda on Balanced Scorecard during last 10 years.

3. **Punjab National Bank-** Table 4.123 portrays that the performance score of Punjab National Bank on Balanced Scorecard has an erratic trend. The score was the highest 1190 in 2016-17 as the bank performed the best on all perspectives in this year. Table 4.131 shows that mean rank 7.50 is the highest in 2016-17. Since p-value 0.688 is above 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Punjab National Bank on Balanced Scorecard during last 10 years.

4. **IDBI Bank-** Table 4.124 exhibits that the overall performance score of IDBI Bank on Balanced Scorecard was the highest in 2014-15. The score declined in 2014-15 and reached to 980 because of decline in performance on all perspectives. Table 4.131 shows that mean value 6.90 is maximum in 2009-10. Since p-value is 0.876 is higher than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of IDBI Bank on Balanced Scorecard during last 10 years.

5. **Canara Bank-** Table 4.125 conveys that Canara Bank performed the best in the year 2013-14 and scored 1180. After 2013-14 the score declined in last years primarily due to decline in score on Financial, Customer and Internal Business Process Perspective. Table 4.131 shows that mean rank 7.10 is the highest in 2013-14. Since p-value is 0.389 is greater than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Canara Bank on Balanced Scorecard during last 10 years.

6. **Bank of India-** Table 4.126 manifests that the overall performance score of Bank of India has a fluctuating trend. Score was the highest 1130 in 2013-14 and 2016-17 and the lowest 940 in 2009-10 and 2011-12. Table 4.131 shows that mean rank 7.20 is the highest in 2016-17. Since p-value 0.639 is more than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Bank of India on Balanced Scorecard during last 10 years.

7. **Indian Bank-** Table 4.127 highlights that the overall performance score of Indian Bank has a fluctuating trend on Balanced Scorecard during the study period. Score increased to 1140 in 2016-17 from 980 in 2014-15 due to improvement in scores on all perspectives. Table 4.131 shows that mean rank 7.40 is maximum for the year 2016-17. Since p-value 0.883 is greater than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Indian Bank on Balanced Scorecard during last 10 years.

8. **Central Bank of India-** Table 4.128 conveys that the overall performance score of Central Bank of India fluctuated during the study period. The score was the highest 980 in 2016-17 and the lowest 770 in 2008-09. Table 4.131 shows that mean rank 7.20 is the highest in 2012-13. Since p-value is 0.783 is greater than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Central Bank of India on Balanced Scorecard during last 10 years.

9. **Union Bank of India-** Table 4.128 demonstrates that the overall performance score of Union Bank has increased to 1150 in 2016-17 from 1060 in 2013-14.

Table 4.131 shows that mean rank 7.40 is maximum for the year 2016-17. Since p-value 0.418 is greater than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Union Bank on Balanced Scorecard during last 10 years.

10. **Syndicate Bank-** Table 4.130 shows that Syndicate Bank scored the highest 1060 in 2014-15 on Balanced Scorecard which declined to 940 in 2015-16 because of decline in performance score on Financial Perspective. Table 4.131 shows that mean rank 7.90 is the highest for the year 2014-15. Since p-value 0.598 is greater than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Syndicate Bank on Balanced Scorecard during last 10 years.

Major Findings and Conclusion:

It has been found that there is no significant difference in the overall performance of all Public Sector Banks on Balanced Scorecard. The performance of all Public Sector Banks on Financial perspective was better in the starting years of the study period but the performance has declined in last years as there has been a decline in performance on Internal Business Process Perspective and Customer Perspective. Although the overall performance has improved in last years because the performance has improved on Learning & Growth and Innovation Perspective and Social and Environment perspective of all banks in the last years. But at the same time, it must have increased the cost of business operations by spending more on innovations in IT infrastructural development and on CSR activities. Inefficiency of training imparted or less trained employees might have affected the operational efficiency and employees' productivity. Improvement in performance on Social and environment perspective have a long term impact, benefits of which can be seen in long term. To improve the overall performance on Balanced Scorecard, banks should try to improve their performance on all the perspectives to achieve long term success.

4.8 Conclusion

Overall it is concluded here that Public Sector Banks have a declining trend on Financial Perspective, Customer Perspective and Internal Business Process Perspective whereas the performance on Learning & Growth and Innovation perspective and Social and Environment Perspective has improved slightly. Overall

performance on Balanced Scorecard of all Public Sector Banks has improved slightly but there is no significant difference in their performance during the study period. Public Sector banks should focus on improving their performance on all the perspectives of Balanced Scorecard to improve their overall performance and achieve long term financial success and growth.

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Chapter-5

Measurement and Intra-Bank Comparison of Performance of Private Sector Banks on Balanced Scorecard

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CHAPTER-5

MEASUREMENT AND INTRA-BANK COMPARISON OF PERFORMANCE OF PRIVATE SECTOR BANKS ON BALANCED SCORECARD

5.1 Introduction

Previous chapter revealed the performance of public sector banks on different perspectives of Balanced Scorecard. This chapter enlightens the performance of Top 10 Private sector banks of BSE Sensex on Balanced Scorecard from financial year 2007-08 to 2016-17. For achieving the objectives of this chapter, performance of each private sector bank has been measured for each measure of each perspective and for each year separately using the secondary data collected from different reports of each bank. After measuring the performance, the score have been assigned to each measure using the performance scale. To compare the performance of individual bank on different perspectives separately, an intra-bank comparison has been drawn. Measurement and comparison of the banks have been done on different perspectives of Balanced Scorecard viz. Financial Perspective, Customer Perspective, Internal Business Process Perspective, Learning & Growth and Innovation Perspective, Social and Environment Perspective.

Process, variables and statistical tools for measurement of performance and intra-bank comparison used in this chapter is based on articles published by us in different journals (See reference no. 1, 2 and 3).

5.2 Measurement of Performance of Private Sector Banks on Financial Perspective

To measure and evaluate the performance of banks on Financial Perspective, 8 measures under 6 common financial strategic objectives have been selected. The performance is then measured and scored using the performance scale created separately for each measure. To test whether bank shows any difference in the performance on Financial Perspective when intra-bank comparison is drawn for year 2007-08 to 2016-17, Kruskal Wallis test has been applied separately on performance scores of individual bank using IBM SPSS22. Performance and intra-bank comparison of all the selected Private Sector Banks is being given below:

5.2.1 Measurement of Performance of HDFC Bank on Financial Perspective

Table 5.1: Performance of HDFC Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	39.49	41.45	30.93	33.16	31.60	30.18	26.05	20.49	20.36	18.33
	Return on Average Assets	%	1.42	1.42	1.45	1.57	1.68	1.82	1.90	1.89	1.85	1.81
Increasing Shareholder Value	Return on Equity	%	17.76	17.23	16.31	16.75	18.69	20.34	21.28	19.37	18.26	17.95
Maintaining Liquidity	Cash-Deposit Ratio	%	12.46	9.47	9.25	12.03	6.08	4.94	6.9	6.1	5.5	5.89
	Credit-Deposit Ratio	%	62.94	69.24	75.17	76.70	79.21	79.92	82.49	81.08	85.02	86.16
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.47	0.63	0.31	0.19	0.18	0.2	0.27	0.25	0.28	0.33
Capital Adequacy	Capital Adequacy Ratio	%	13.6	15.69	17.45	16.22	16.52	16.8	16.08	16.79	15.53	14.55
Improving Earning Quality	NIM to Total Average Assets Ratio	%	4.66	4.68	4.13	4.22	4.19	4.28	4.14	4.14	4.15	4.13

Table 5.2: Performance Score of HDFC Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	40	40	30	30	30	30	30	20	20	20
	Return on Average Assets	40	40	40	40	50	50	50	50	50	50
Increasing Shareholder Value	Return on Equity	40	40	40	40	40	50	50	40	40	40
Maintaining Liquidity	Cash-Deposit Ratio	50	40	40	50	30	20	30	30	20	20
	Credit-Deposit Ratio	40	40	50	50	50	50	40	40	40	40
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	50	50	50	50	50	50	50
Capital Adequacy	Capital Adequacy Ratio	40	40	50	50	50	50	50	50	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	40	40	40	40	40	40	40	40	40	40
Total	400	340	330	340	350	340	340	340	320	300	300

Observations: Table 5.2 reveals that

1. the performance score of HDFC Bank score on Financial Perspective has been declined during the study period as the total score gained was 300 in 2016-17 as compared to 340 in 2007-2008. This was primarily on account of decrease in profit growth rate and low cash-deposit ratio. Bank performed the best on all financial parameters in the year 2010-11 as the score gained 350 was the highest in this year.

2. Growth rate of profits has a declining trend during the study period. This may be primarily due to the increase in the IT infrastructural and staff cost on account of expansion of branches, wage revisions etc. Score on return on average assets 50 was maximum in the last six years. This implies that bank's management is

efficiently deploying their assets in generating profits and bank has high interest yielding assets in their portfolio.

3. The score on return on equity 40 was consistent in almost each year of the study except 2012-13 and 2013-14 where the score was 50. It indicates that bank is able to maintain its shareholder value.

4. The score on cash-deposit ratio and credit-deposit ratio has a declining trend in the last four years of the study as bank created maximum credit out of its deposits so liquidity in cash might have declined. Besides this the bank is able to keep sufficient liquidity in the form of cash to pay for unforeseen events.

5. NPA's to net advances ratio scored the highest 50 in all the years which is the indicator of bank's ability to recover its advances efficiently and have strong credit management policies with high quality of assets.

6. Bank has maintained sufficient capital against risk weighted assets even more than prescribed by RBI as shown in Table 5.1 as the score on capital adequacy ratio 50 was maximum from 2009-10 to 2014-15.

7. Score on NIM to total assets was constant in all the years and scored 40 which shows that there has been a stable trend in earning quality of the bank.

Suggestions:

1. Bank should try to maintain sustainable growth rate of profits by maintaining stable growth rates in deposits and advances.

2. Bank should try to increase its net interest margin by focusing on growth in low cost deposits and high interest yielding advances.

5.2.2 Measurement of Performance of ICICI Bank on Financial Perspective

Table 5.3: Performance ICICI Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth in Profitability	Growth Rate of Profits	%	33.68	-9.61	7.10	27.99	25.51	28.77	17.84	13.91	-12.97	0.77
	Return on Average Assets	%	1.12	0.96	1.08	1.34	1.44	1.62	1.73	1.80	1.42	1.31
Increasing Shareholder Value	Return on Equity	%	11.63	7.77	7.90	9.59	11.13	13.03	13.95	14.48	11.39	10.30
Maintaining Liquidity	Cash-Deposit Ratio	%	12.02	8.03	13.62	9.27	8.01	6.51	6.57	7.10	6.43	6.47
	Credit-Deposit Ratio	%	92.30	99.98	89.70	95.91	99.31	99.19	102.05	107.18	103.28	94.73
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	1.55	2.09	2.12	1.11	0.73	0.77	0.97	1.61	2.98	5.43
Capital Adequacy	Capital Adequacy Ratio	%	13.96	15.53	19.41	19.54	18.52	18.74	17.70	17.02	16.64	17.39
Improving Earning Quality	NIM to Total Average Assets Ratio	%	1.96	2.15	2.19	2.34	2.40	2.70	2.91	3.07	3.11	2.91

Table 5.4: Performance Score of ICICI Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	30	0	10	30	30	30	20	20	0	10
	Return on Average Assets	30	30	30	40	40	50	50	50	40	40
Increasing Shareholder Value	Return on Equity	30	20	20	20	30	30	30	30	30	30
Maintaining Liquidity	Cash-Deposit Ratio	50	30	50	40	30	30	30	30	30	30
	Credit-Deposit Ratio	30	30	40	30	30	30	20	20	20	30
Improving Asset Quality	Net NPA's to Net Advances Ratio	40	30	30	40	50	50	50	40	30	10
Capital Adequacy	Capital Adequacy Ratio	40	40	50	50	50	50	50	50	50	50
Improving Earning Quality	NIM to Total Average Assets Ratio	20	20	20	20	20	30	30	30	30	30
Total	400	270	200	250	270	280	300	280	270	230	230

Observations: Table 5.4 manifests that

1. the performance score of ICICI Bank on Financial Perspective has a volatile trend during the study period. The highest score was 300 in year 2012-13. This was on account of increase in net interest margin of the bank, high capital adequacy ratio and low NPAs in this year. The score in 2016-17 has been declined to 230 from 270 in 2007-08 as there was a decline in performance of bank on various financial parameters such as growth rate of profits, increased NPA's , low liquidity ratios etc.

2. The growth rate of profits has declined year after year as shown in Table 5.3 and score reached to 10 in 2016-17 from 40 in year 2007-08. Return on average assets ratio has an increasing trend till 2014-15 depicted in Table 5.3. The ratio declined and scored 40 in last two years.

3. Return on equity was the highest 14.48 % in 2014-15 as shown in Table 5.3 which shows that bank provided satisfactory return to their shareholders. Bank scored 30 in almost all the years of the study except from 2008-09 to 2010-11 where the score was 20 as bank earned low profits in these years.

4. Score on cash-deposit ratio has declined to 30 in 2016-17 from 50 in 2007-08 which was on account of high credits created out of deposits. Credit-deposit ratio was higher than the required in all the years as shown in Table 5.3 which indicates that bank might have utilized capital or other funds to create credits.

5. Table 5.3 shows that the net NPA's of the bank shows an erratic trend during the study period. It decreased during upto the mid of the study period then again

started increasing in last years. The score on this ratio reached to 10 in 2016-17 primarily due to the slippages from the restructured loans.

6. Capital adequacy ratio except in 2007-08 and 2008-09 scored 50 in almost all years which indicates that bank has maintained sufficient capital against risk-weighted assets.

7. There has been a significant improvement in net interest margin during the last 5 years of the study period as shown in Table 5.3 so bank scored 30 in these 5 years due to increase in net interest income through growth in loan portfolio and increase in low cost deposits.

Suggestions:

1. Bank should try to cut the operational costs or other infrastructural cost on technological up gradation and increase its interest margin to increase the net profits.

2. Bank should make strong credit management policies to reduce the NPA's.

3. Bank should ensure that credits are created out of deposits only not from capital or other sources of funds.

5.2.3 Measurement of Performance of Axis Bank on Financial Perspective

Table 5.5: Performance of Axis Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	62.52	69.50	38.51	34.76	25.19	22.09	20.05	18.34	11.77	-55.26
	Return on Average Assets	%	1.17	1.41	1.53	1.60	1.61	1.65	1.72	1.74	1.64	0.65
Increasing Shareholder Value	Return on Equity	%	17.61	19.13	19.15	19.34	20.29	18.53	17.43	17.75	16.81	6.76
Maintaining Liquidity	Cash-Deposit Ratio	%	8.34	8.02	6.70	7.34	4.86	5.86	6.07	6.15	6.25	7.45
	Credit-Deposit Ratio	%	68.09	69.48	73.84	75.25	77.13	77.97	81.89	87.17	94.64	90.03
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.42	0.40	0.40	0.29	0.28	0.36	0.45	0.47	0.74	2.31
Capital Adequacy	Capital Adequacy Ratio	%	13.73	13.69	15.80	12.65	13.66	17.00	16.07	15.09	15.29	14.95
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.83	2.87	3.05	3.10	3.04	3.09	3.30	3.37	3.36	3.17

Table 5.6: Performance Score of Axis Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	50	50	40	30	30	20	20	20	10	0
	Return on Average Assets	30	40	40	40	50	50	50	50	50	20
Increasing Shareholder Value	Return on Equity	40	40	40	40	50	40	40	40	40	20
Maintaining Liquidity	Cash-Deposit Ratio	30	30	30	30	20	20	30	30	30	30
	Credit-Deposit Ratio	40	40	50	50	50	50	40	40	30	30
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	50	50	50	50	50	50	30
Capital Adequacy	Capital Adequacy Ratio	40	40	40	40	40	50	50	40	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	30	30	30	30	30	30	30	30
Total	400	310	320	320	310	320	310	310	300	280	200

Observations: Table 5.6 demonstrates that

1. the performance score of Axis bank on Financial Perspective has a sharp decline in 2016-17. Score decreased to 200 in 2016-17 from 280 in 2015-16. This was due to decline in performance of bank on various financial parameters.

2. Growth rate of profits was the highest 62.52% and 69.50 % in 2007-08 and 2008-09 respectively then it started declining as shown in Table 5.5. Scores declined to 0 in 2016-17 due to negative growth rate in this year. This was primarily due to increase in operating expenses arose on account of investment in branch infrastructure, technology and human capital and higher provisions made for non-performing assets. Score on return on average assets has been decreased to 20 in 2016-17 from 50 in 2011-12 due to decline in net profits.

3. Table 5.5 shows that bank has maintained a consistency in providing return to their shareholders till 2015-16. Score on return on equity remained 40 in almost every year till 2015-16 except 2011-12 where the score was 50 and then decreased to 20 in 2016-17 due to decline in growth rate of profits.

4. Cash-deposit ratio scored 30 in all years except 2011-12 and 2012-13 where the score was 20. Score on credit deposit ratio was either 40 or 50 till 2014-15 then declined to 30 in 2015-16 due to excess credits created out of deposits by the bank which might have affected the liquidity position.

5. Net NPA's to net advances ratio scored 50 in all the years of the study till 2015-16. There was a sudden increase in this ratio in the year 2016-17 due to corporate slippages thus the score declined to 30.

6. Bank has maintained enough capital against risk weighted assets as shown in Table 5.5 thus the capital adequacy ratio scored either 40 or 50 in all the years.

7. Score on NIM to total average assets ratio has a constant trend in almost all years as shown in Table 5.5 and scored 30. Although this ratio declined in 2016-17 due to higher fall in yield on interest earning assets as shown in Table 5.5.

Suggestions:

1. Operational and cost on infrastructure and technology should be controlled to increase the profit margin which will simultaneously improve return on assets and return to shareholders.

2. To improve the net interest margin, bank should control high interest reversals on NPA's and should improve base rate and marginal cost of funds base lending rate (MCLR).

5.2.4 Measurement of Performance of IndusInd Bank on Financial Perspective

Table 5.7: Performance of IndusInd Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	10.02	97.64	136.15	64.81	39.02	32.22	32.68	27.39	27.47	25.43
	Return on Average Assets	%	0.34	0.58	1.11	1.43	1.55	1.62	1.76	1.83	1.81	1.78
Increasing Shareholder Value	Return on Equity	%	6.24	9.85	17.26	17.94	18.30	17.18	16.91	18.25	16.15	14.97
Maintaining Liquidity	Cash-Deposit Ratio	%	8.02	5.39	7.86	7.15	6.85	6.01	7.30	5.44	4.86	6.12
	Credit-Deposit Ratio	%	67.21	71.33	76.94	76.14	82.77	81.90	91.07	92.79	95.07	89.34
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	2.27	1.14	0.50	0.28	0.27	0.31	0.33	0.31	0.36	0.39
Capital Adequacy	Capital Adequacy Ratio	%	11.91	12.55	15.33	15.89	13.85	15.36	13.83	12.09	15.50	15.31
Improving Earning Quality	NIM to Total Average Assets Ratio	%	1.36	1.80	2.81	3.40	3.30	3.41	3.61	3.49	3.58	3.77

Table 5.8: Performance Score of IndusInd Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	10	50	50	50	40	30	30	30	30	30
	Return on Average Assets	10	20	30	40	40	50	50	50	50	50
Increasing Shareholder Value	Return on Equity	20	20	40	40	40	40	40	40	40	30
Maintaining Liquidity	Cash-Deposit Ratio	30	20	30	30	30	30	30	20	20	30
	Credit-Deposit Ratio	40	50	50	50	40	40	30	30	30	40
Improving Asset Quality	Net NPA's to Net Advances Ratio	30	40	50	50	50	50	50	50	50	50
Capital Adequacy	Capital Adequacy Ratio	30	40	40	40	40	40	40	40	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	20	20	30	30	30	30	40	30	30	40
Total	400	190	260	320	330	310	310	310	290	290	310

Observations: Table 5.8 presents that

1. the performance score of IndusInd Bank on Financial Perspective has ample improvement during the study period due to bank's core focus on productivity, profitability and efficiency. The score increased to 330 in 2010-11 from 190 in 2007-08 and then declined to 290 in 2014-15 and 2015-16.

2. Growth rate of profits has a sharp rise in 2008-09 and 2009-2010 as shown in Table 5.7 due to healthy increase on core interest streams. Although there has been a decline in growth rate of profits in subsequent years yet bank has maintained positive sustainable growth in profits. Score on return on assets increased to 50 in 2012-13 from 10 in 2007-08 and remained 50 in all subsequent years.

3. Return provided to equity shareholders has a sharp increase in 2009-10 due to healthy rise in profits as shown in Table 5.7. The score on return on equity remained 40 after 2009-10 in all the years except 30 in 2016-17.

4. Cash-deposit ratio has a changeable trend during the study period as shown in Table 5.7 and scored either 30 or 20. Table 5.7 also shows that credit-deposit ratio was too high in the year 2013-14 to 2015-16 which indicates that bank created more credit out of the deposits and have not retained sufficient liquidity in these years.

5. The net NPA's to net advances ratio scored 50 in all the years after 2009-10 which shows that the bank has made efficient recovery of credits on time through strong credit management policies.

6. Bank has maintained the higher capital as against risk weighted assets than the prescribed rate as per BASEL norms of RBI as shown in Table 5.7.

7. Net interest margin to total average assets ratio has a sharp increase in 2009-10 and 2016-17 due to high yield on advances, decreased cost of deposits and improved asset portfolio composition.

Suggestions:

1. Bank should maintain and improve its sustainable growth rate in profits by focusing on acquiring more profitable business.

2. Bank should increase its liquidity in the form of cash and ensure that credits should be created out of deposits only not from other source of funds.

5.2.5 Measurement of Performance of YES Bank on Financial Perspective

Table 5.9: Performance of Yes Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	111.97	51.90	57.23	52.20	34.36	33.13	24.38	23.96	24.63	31.13
	Return on Average Assets	%	1.42	1.52	1.61	1.52	1.47	1.51	1.55	1.64	1.68	1.75
Increasing Shareholder Value	Return on Equity	%	19.00	20.65	20.27	21.13	23.07	24.81	25.02	21.33	19.94	18.58
Maintaining Liquidity	Cash-Deposit Ratio	%	7.23	7.90	7.45	6.70	4.75	4.99	6.12	5.75	5.17	4.87
	Credit-Deposit Ratio	%	71.05	76.71	82.81	74.80	77.29	70.20	74.99	82.86	87.91	92.57
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.09	0.33	0.06	0.03	0.05	0.01	0.05	0.12	0.29	0.81
Capital Adequacy	Capital Adequacy Ratio	%	13.60	16.60	20.61	16.50	17.90	18.30	14.40	15.60	16.50	17.00
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.45	2.55	2.66	2.61	2.44	2.57	2.61	2.85	3.03	3.05

Table 5.10: Performance Score of Yes Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	50	50	50	50	30	30	20	20	20	30
	Return on Average Assets	40	40	50	40	40	40	40	50	50	50
Increasing Shareholder Value	Return on Equity	40	50	50	50	50	50	50	50	40	40
Maintaining Liquidity	Cash-Deposit Ratio	30	30	30	30	20	20	30	20	20	20
	Credit-Deposit Ratio	50	50	40	50	50	50	50	40	40	30
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	50	50	50	50	50	50	50
Capital Adequacy	Capital Adequacy Ratio	40	50	40	50	50	50	40	40	50	50
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	30	30	30	30	30	30	30	30
Total	**400**	**330**	**350**	**340**	**350**	**320**	**320**	**310**	**300**	**300**	**300**

Observations: Table 5.10 highlights that

1. the performance score of Yes bank on Financial Perspective 350 was the highest in 2008-09 and 2010-11 as the bank performed best on all the financial parameters during these years. There has been a decrease in score after 2010-11 and reached to 300 in 2014-15 due to decrease in growth rate of profits and low liquidity ratios.

2. Table 5.9 shows that growth rate of profits was the highest 111.97 % in 2007-08 as the bank achieved the highest growth in business in this year which has increased the interest margin of the bank. After 2007-08 the growth rate of profits has decreased as shown in Table 5.9 thus score reached to 20 in 2013-14. Then again it has increased to 30 in 2016-17 due to increase in both interest and non-interest income. Scores on return on average assets remained 40 up to

2013-14 except 2009-10. It increased to 50 in 2014-15 and maintained up to 2016-17.

3. Table 5.9 shows that return on equity has an upward moving trend till 2013-14 and after that it started declining therefore score on this ratio reached to 40 in 2016-17 from 50 in the years 2008-09 to 2014-15

4. Score on cash deposit ratio declined to 20 in 2011-12 from 30 in 2007-08. It has slightly improved and scored 30 in 2013-14 and again declined after it. Score on credit-deposit ratio of the bank scored either 40 or 50 till 2015-16 than declined to 30 in 2016-17 because a very high credit deposit ratio indicates lack of liquidity with the bank.

5. Score on net NPA's to net advances ratio remained constant and scored 50 in all the years which implies that bank has maintained quality assets and have strong credit management policies.

6. Bank has maintained sufficient capital against risk weighted assets as per BASEL norms of RBI as shown in Table 5.9 and scored either 40 or 50 during the study period.

7. Net Interest margin to total average assets ratio has no significant improvement during the study period and scored 30 in all the years.

Suggestions:

1. Bank should try to improve its liquidity by keeping more cash to repay its unforeseen liabilities.

2. Bank should try to increase its net interest margin by acquiring more low cost funds and high interest earning advances which will subsequently increase the profit margin.

5.2.6 Measurement of Performance of Kotak Mahindra Bank on Financial Perspective

Table 5.11: Performance of Kotak Mahindra Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	107.86	-6.06	92.36	54.05	32.62	25.41	10.42	24.19	11.99	63.25
	Return on Average Assets	%	1.22	0.97	1.61	1.85	1.86	1.82	1.75	1.93	1.40	1.68
Increasing Shareholder Value	Return on Equity	%	11.18	7.45	12.80	14.50	14.72	15.65	13.83	14.13	10.97	13.23
Maintaining Liquidity	Cash-Deposit Ratio	%	10.41	6.36	8.73	7.20	5.23	4.33	4.99	5.25	4.98	4.76
	Credit-Deposit Ratio	%	94.69	106.27	86.97	100.23	101.41	94.98	89.77	88.38	85.59	86.44
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	1.78	2.39	1.73	0.72	0.61	0.64	1.08	0.92	1.06	1.26
Capital Adequacy	Capital Adequacy Ratio	%	18.65	20.01	18.35	19.92	17.52	16.05	18.83	17.17	16.34	16.77
Improving Earning Quality	NIM to Total Average Assets Ratio	%	5.08	5.33	5.62	4.75	4.31	4.29	4.34	4.36	4.63	3.99

Table 5.12: Performance Score of Kotak Mahindra Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	50	0	50	50	30	30	10	20	10	50
	Return on Average Assets	40	30	50	50	50	50	50	50	40	50
Increasing Shareholder Value	Return on Equity	30	20	30	30	30	40	30	30	30	30
Maintaining Liquidity	Cash-Deposit Ratio	40	30	30	30	20	20	20	20	20	20
	Credit-Deposit Ratio	30	20	40	20	20	30	40	40	40	40
Improving Asset Quality	Net NPA's to Net Advances Ratio	40	30	40	50	50	50	40	50	40	40
Capital Adequacy	Capital Adequacy Ratio	50	50	50	50	50	50	50	50	50	50
Improving Earning Quality	NIM to Total Average Assets Ratio	50	50	50	40	40	40	40	40	40	40
Total	**400**	330	230	340	320	290	310	280	300	270	320

Observations: Table 5.12 depicts that

1. the performance score of Kotak Mahindra Bank on Financial Perspective remains inconsistent during the study period. Bank scored 330 in 2007-08 and score decreased to 230 in 2008-09 due to low scores on different financial measures. The performance score was the highest 340 in 2009-10.

2. Growth rate of profits has an erratic trend during the study period as shown in Table 5.11. It was the highest in 2007-08 and scored 50. Score declined to 0 in 2008-09 as there has been a decline in business growth rate. Bank has achieved adequate return on average assets and scored 50 in almost every year after 2009-10 except 2015-16 where the score was 40.

3. Return on equity ratio scored 30 in almost each year except 2008-09 and 2012-13 where bank scored 20 and 40 respectively. Low and high score on this ration are affected by growth rate of profits.

4. Score on cash deposit ratio was 20 from 2011-12 to 2016-17. Bank has created more credits out of the deposits received in the last four years as shown in Table 5.11 and scored 40 but at the same time the cash deposit ratio was low so it implies that bank has not maintained sufficient liquidity for unforeseen liabilities.

5. Table 5.11 shows that Net NPA's to net advances ratio has a fluctuating trend. The ratio was the highest 2.39 % in 2008-09 thus score was 30. Besides this, the score was either 40 or 50 which shows that bank has effective credit management policies that has led the bank reduced its NPA's effectively.

6. Bank has maintained sufficient capital against risk weighted assets as it can be seen in Table 5.11 and scored 50 in all the years.

7. Although the NIM to total average assets ratio was higher than competitive banks yet it has declined slightly as shown in Table 5.11. It scored 50 in first 3 years and 40 in all remaining years.

Suggestions:

1. Bank should try to maintain sustainable rate of profits by reducing cost of business operations, reducing cost of deposits, increasing high yielding advances etc.

2. More cash should be retained by the bank out of deposits to maintain liquidity and repay the sudden liabilities.

5.2.7 Measurement of Performance of Federal Bank on Financial Perspective

Table 5.13: Performance of Federal Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	25.73	35.98	-7.18	26.38	32.32	7.90	0.09	19.89	-52.71	74.66
	Return on Average Assets	%	1.28	1.40	1.13	1.23	1.39	1.27	1.15	1.28	0.54	0.79
Increasing Shareholder Value	Return on Equity	%	13.56	12.13	10.30	11.98	14.37	13.89	12.60	13.69	6.01	9.75
Maintaining Liquidity	Cash-Deposit Ratio	%	9.09	6.88	6.43	6.82	4.95	4.76	5.20	4.77	4.77	4.69
	Credit-Deposit Ratio	%	72.95	69.54	74.74	74.28	77.15	76.54	72.72	72.41	73.37	75.09
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.23	0.30	0.48	0.60	0.53	0.98	0.74	0.73	1.64	1.28
Capital Adequacy	Capital Adequacy Ratio	%	22.46	20.22	18.36	16.79	16.64	14.73	15.14	15.46	13.93	12.39
Improving Earning Quality	NIM to Total Average Assets Ratio	%	3.01	3.69	3.42	3.67	3.49	3.00	3.06	3.02	2.83	2.91

Table 5.14: Performance Score of Federal Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	30	30	0	30	30	10	10	20	0	50
	Return on Average Assets	40	40	30	40	40	40	30	40	20	20
Increasing Shareholder Value	Return on Equity	30	30	30	30	30	30	30	30	20	20
Maintaining Liquidity	Cash-Deposit Ratio	40	30	30	30	20	20	20	20	20	20
	Credit-Deposit Ratio	50	40	50	50	50	50	50	50	50	50
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	50	50	50	50	50	40	40
Capital Adequacy	Capital Adequacy Ratio	40	40	50	50	50	40	40	40	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	30	40	30	40	30	30	30	30	30	30
Total	**400**	**310**	**300**	**270**	**320**	**300**	**270**	**260**	**280**	**220**	**270**

Observations: Table 5.14 portrays that

1. the performance score of Federal Bank on Financial Perspective has a volatile trend during the study period. The score was 310 in 2007-08 which decreased to 270 in 2009-10. Bank scored the lowest 220 in 2015-16 due to decline in profits and low growth rate of business.

2. Table 5.13 shows that growth rate of profits was negative in 2009-10 due to high provisions for Income tax liabilities and in 2015-16 due to higher slippages & provisioning. Growth rate of profits was the highest 74.66 % in 2016-17 and scored 50 in this year due to healthy increase in core income streams and improved asset quality. Return on average assets has a declining trend as depicted in Table 5.13 and score reached to 20 in 2016-17 from 40 in 2007-08.

3. Score on return of equity was low 30 in first 8 years of the study which declined to 20 in 2015-16 and 2016-17 due to decline in growth rate of profits.

4. The score on cash deposit ratio decreased to 20 in 2011-12 from 40 in 2007-08 which shows that liquidity in the form of cash was too low with the bank. Bank has efficiently utilized its deposits in creating credit thus credit deposit ratio scored 50 in all the years except 2008-09 where the score was 40.

5. Net NPA to net advances ratio was the highest 1.64 % in 2015-16 as shown in Table 5.13 and scored 40 as bank has some major corporate slippages due to delinquencies in corporate accounts.

6. Table 5.13 shows that bank has maintained adequate even higher capital against risk weighted assets as prescribed rate as per BASEL norms of RBI.

7. Net interest margin to total average assets ratio has scored 30 in almost each year except 2008-09 and 2010-11 where the score was 40.

Suggestions:

1. Bank should try to maintain consistency in profitability and try to increase the net interest margin by focusing more on interest earning assets and low cost deposits and controlling operating expenses.

2. Bank should increase its liquidity in the form of cash to pay for unforeseen liabilities.

5.2.8 Measurement of Performance of City Union Bank on Financial Perspective

Table 5.15: Performance of City Union Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	41.47	20.06	25.08	40.77	30.32	14.90	7.78	13.81	12.57	13.06
	Return on Average Assets	%	1.60	1.47	1.47	1.64	1.70	1.56	1.45	1.49	1.49	1.50
Increasing Shareholder Value	Return on Equity	%	21.66	19.90	20.55	23.47	24.91	22.33	18.94	16.74	15.47	15.18
Maintaining Liquidity	Cash-Deposit Ratio	%	10.83	7.25	8.44	8.15	4.99	5.01	4.72	5.12	5.20	4.93
	Credit-Deposit Ratio	%	70.62	68.79	66.44	71.67	74.28	75.09	73.11	74.62	77.53	79.14
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.98	1.08	0.58	0.52	0.45	0.63	1.23	1.30	1.53	1.71
Capital Adequacy	Capital Adequacy Ratio	%	12.48	12.69	13.46	12.75	12.57	13.98	15.01	16.52	15.58	15.83
Improving Earning Quality	NIM to Total Average Assets Ratio	%	3.14	2.92	2.67	3.21	3.03	3.02	3.17	3.05	3.29	3.57

Table 5.16: Performance Score of City Union Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	40	20	30	40	30	20	10	20	20	20
	Return on Average Assets	40	40	40	50	50	40	40	40	40	40
Increasing Shareholder Value	Return on Equity	50	40	50	50	50	50	40	40	40	40
Maintaining Liquidity	Cash-Deposit Ratio	40	30	30	30	20	20	20	20	20	20
	Credit-Deposit Ratio	50	40	40	50	50	50	50	50	50	50
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	40	50	50	50	50	40	40	40	40
Capital Adequacy	Capital Adequacy Ratio	40	40	40	40	40	40	40	50	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	30	30	30	30	30	30	30	30
Total	400	340	280	310	340	320	300	270	290	280	280

Observations: Table 5.16 exhibits that

1. The performance score of City Union bank has been decreased to 280 in 2016-17 from 340 in 2007-08. The scores remained volatile between these years mainly due to fluctuations in growth rate of profits which might be due to variations in business growth or operational cost.

2. Score on growth rate of profits has declined to 10 in 2013-14 from 40 in 2010-11 due to higher provisioning for NPA's and taxation. It has increased to 20 in 2014-15 and remained the same till 2016-17. Score on return on average assets ratio maintained consistency and scored 40 in maximum years except 2010-11 and 2011-12 where the score was 50 due to high growth rate of profits in these years.

3. Bank has provided sufficient return to their shareholders in each year and scored either 50 or 40.

4. Liquidity in the form of cash was higher in starting years because bank created low credits out of deposits so credit deposit ratio was low as shown in Table 5.15. Credit-deposit ratio scored 50 in all the years except 2008-09 and 2009-10.

5. Net NPA has increased rapidly in 2013-14 as shown in Table 5.15 and score declined to 40 in 2013-14 from 50 in previous years due to slow GDP growth rate which affects the profits and margins of various units in different sectors and leads to slippages.

6. Bank has maintained more than required capital against risk weighted assets in all the years as depicted in Table 5.15.

7. Net Interest Margin to total average assets ratio scored 30 during all the years of the study. Table 5.15 shows that net interest margin has significantly improved in last two years.

Suggestions:

1. Bank should try to increase the growth rate of profits by increasing its business by providing best products and services.

2. Bank should maintain more liquidity in the form of cash to pay for unforeseen liabilities.

3. Bank should concentrate on improving interest margin through growth in high yielding advances without compromising the quality of assets.

5.2.9 Measurement of Performance of RBL Bank on Financial Perspective

Table 5.17: Performance of RBL Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	468.90	79.48	-37.41	-35.50	433.24	40.68	0.22	123.56	41.18	52.50
	Return on Average Assets	%	1.30	1.92	1.01	0.46	1.26	0.92	0.59	0.91	0.88	1.02
Increasing Shareholder Value	Return on Equity	%	6.51	9.19	5.51	1.71	5.90	6.73	5.31	10.07	11.21	12.18
Maintaining Liquidity	Cash-Deposit Ratio	%	11.76	7.14	11.38	8.04	5.56	3.49	8.46	8.51	5.50	8.52
	Credit-Deposit Ratio	%	53.20	61.29	73.84	93.29	87.19	76.45	84.80	84.51	87.19	85.14
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.99	0.68	0.97	0.36	0.20	0.11	0.31	0.27	0.59	0.64
Capital Adequacy	Capital Adequacy Ratio	%	49.15	42.30	34.07	56.41	23.20	17.11	14.64	13.13	12.94	13.72
Improving Earning Quality	NIM to Total Average Assets Ratio	%	4.17	3.98	3.11	3.58	3.58	2.55	2.19	2.46	2.47	2.78

Table 5.18: Performance Score of RBL Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	50	50	0	0	50	40	10	50	40	50
	Return on Average Assets	40	50	30	20	40	30	20	30	30	30
Increasing Shareholder Value	Return on Equity	20	20	20	10	20	20	20	30	30	30
Maintaining Liquidity	Cash-Deposit Ratio	40	30	40	30	20	20	30	30	20	30
	Credit-Deposit Ratio	30	40	50	30	40	50	40	40	40	40
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	50	50	50	50	50	50	50
Capital Adequacy	Capital Adequacy Ratio	10	10	10	10	40	50	40	40	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	40	40	30	30	30	30	20	30	30	30
Total	400	280	290	230	180	290	290	230	300	280	300

Observations: Table 5.18 displays that

1. the performance score of RBL bank on Financial Perspective has an erratic trend due to fluctuations on different financial and non-financial parameters. Score declined to 180 in 2010-11 from 280 in 2007-08 and then increased to 290 in 2012-13 and again declined to 230 in 2013-14.

2. Score on growth rate of profits has been declined to 0 in 2009-10 and 2010-11 due to low business growth and increased staff cost and infrastructural cost. Score increased to 50 in 2011-12 due to boost up in advances growth rate, new customers, CASA deposits, credit recoveries, new products and services. Scores on return on average assets fluctuated during the study period.

3. Return provided to shareholders has also an instable trend due to changing growth rate of profits. The score on return on equity increased to 30 in 2014-15 from 20 in 2007-08 and then remained 30 in last years.

4. Cash-deposit ratio and credit-deposit ratio both were erratic as shown in Table 5.17. Score on cash deposit ratio ranges between 20 and 40 and score on credit deposit ratio ranges between 30 and 50.

5. Net NPA's to net advances ratio scored 50 in all the years which depicts that bank maintains good quality of assets. It was due to prudent management of credits by the bank and aggressive and focused efforts of bank on management of NPA's and its recovery.

6. Capital adequacy ratio was too high in the first four years of the study period as shown in Table 5.17 thus scored 10. This indicates that bank has blocked its capital idle. The score was either 40 or 50 from 2011-12 to 2016-17.

7. Net interest margin was the highest 4.17 % and 3.98 % in 2007-08 and 2008-09 respectively as shown in Table 5.17 hence scored 40. Bank scored 30 in almost each year after 2008-09. Decrease in interest margin may be due to decline in growth rate of advances or increase in cost of deposits.

Suggestions:

1. Bank should try to increase its net interest margin by acquiring more low cost funds and high yielding advances and try to decrease operating cost which will simultaneously increase the profit margin.

2. Liquidity maintained by the bank should have a consistent trend.

5.2.10 Measurement of Performance of Karur Vysya Bank on Financial Perspective

Table 5.19: Performance of Karur Vysya Bank on Financial Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	%	30.20	13.21	42.48	23.68	20.73	9.69	-21.94	8.07	22.26	6.76
	Return on Average Assets	%	1.62	1.49	1.72	1.66	1.52	1.30	0.87	0.89	1.01	1.00
Increasing Shareholder Value	Return on Equity	%	18.49	18.57	22.63	22.26	20.81	19.00	13.40	12.26	12.87	12.61
Maintaining Liquidity	Cash-Deposit Ratio	%	8.76	6.38	6.22	6.79	5.98	4.21	5.82	6.03	5.05	5.20
	Credit-Deposit Ratio	%	75.07	68.93	69.78	72.06	74.58	76.27	77.68	80.80	78.05	76.18
Improving Asset Quality	Net NPA's to Net Advances Ratio	%	0.18	0.25	0.23	0.08	0.33	0.37	0.41	0.78	0.55	2.53
Capital Adequacy	Capital Adequacy Ratio	%	12.58	14.92	14.49	14.41	14.33	14.41	12.59	14.62	12.17	12.54
Improving Earning Quality	NIM to Total Average Assets Ratio	%	2.66	2.59	2.90	3.06	2.79	2.75	2.61	2.80	3.18	3.43

Table 5.20: Performance Score of Karur Vysya Bank on Financial Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Healthy Growth In Profitability	Growth Rate of Profits	30	20	40	20	20	10	0	10	20	10
	Return on Average Assets	50	40	50	50	40	40	30	30	30	30
Increasing Shareholder Value	Return on Equity	40	40	50	50	50	40	30	30	30	30
Maintaining Liquidity	Cash-Deposit Ratio	30	30	30	30	20	20	20	30	20	20
	Credit-Deposit Ratio	50	40	40	50	50	50	50	40	50	50
Improving Asset Quality	Net NPA's to Net Advances Ratio	50	50	50	50	50	50	50	50	50	30
Capital Adequacy	Capital Adequacy Ratio	40	40	40	40	40	40	40	40	40	40
Improving Earning Quality	NIM to Total Average Assets Ratio	30	30	30	30	30	30	30	30	30	30
Total	**400**	**320**	**290**	**330**	**320**	**300**	**280**	**250**	**260**	**270**	**240**

Observations: Table 5.20 conveys that

1. the performance score of Karur Vysya Bank on Financial Perspective has been decreased to 240 in 2016-17 from 320 in 2007-08 primarily due to increased NPA's and low growth rate of profits in last years of the study. Bank scored the highest 330 in 2009-10 as the growth rate of profits was the highest in this year.

2. Growth rate of profits was the highest in 2009-10 as shown in Table 5.19 and scored 40 due to high growth in business. The score declined to 0 in 2013-14 as the economic slowdown increased the difficult operating environment which increased cost and decreased the profits margins of the bank. Score on return on

average assets decreased to 30 in 2013-14 from 50 in 2007-08 due to decrease in yield on advances simultaneously it decreases the profitability of the bank.

3. Score on return on equity was either 40 or 50 from 2007-08 to 2012-13. Score declined to 30 in 2013-14 as there has been a decline in growth rate of profits.

4. Table 5.19 shows that Cash-Deposit ratio was higher in early four years and scored 30. This ratio declined after 2010-11 due to decline in deposits. Score on credit-deposit ratio was either 40 or 50 which shows bank utilized its resources very efficiently in creating credit.

5. Net NPA's to net advances ratio scored 50 from the year 2007-08 to 2015-16. The ratio is as high as 2.53 % in 2016-17 as shown in Table 5.19 and scored 30 due to delinquencies in the corporate segment has led the increase in bad quality assets.

6. Table 5.19 shows that bank has maintained sufficient capital against risk weighted assets and scored 40 in all the years of the study period.

7. NIM to total average assets ratio fluctuated slightly during the study period as shown in Table 5.19 and scored 30 in all the years.

Suggestions:

1. Bank should try to increase the percentage of high yielding advances in its portfolio, maintaining good quality of assets so that the return on assets and profit margin can be improved.

2. Bank should keep more liquid assets to pay for contingent liabilities.

5.2.11 Intra-Bank Comparison of Performance of Private Sector Banks on Financial Perspective

Intra-Bank Hypotheses

H_0- There is no significant difference in the performance of Private Sector Banks on Financial perspective during last 10 years.

H_1- There is a significant difference in the performance of Private Sector Banks on Financial perspective during last 10 years.

Table 5.21: Mean ranks of years for Private Sector Banks on Financial Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
HDFC Bank	8	5.38	8	5.13	8	5.94	8	6.19	8	6.25	8	6.5	8	6.25	8	5.13	8	4.13	8	4.13	80	-
ICICI Bank	8	5.5	8	2.94	8	4.94	8	5.75	8	6.25	8	7.31	8	6.38	8	6	8	4.69	8	5.25	80	-
Axis Bank	8	5.5	8	5.75	8	6.06	8	5.88	8	6.31	8	6.06	8	6.19	8	5.56	8	4.94	8	2.75	80	-
Indusind Bank	8	2.44	8	4.13	8	6.63	8	6.81	8	6.13	8	6.19	8	6.25	8	5.13	8	5.13	8	6.19	80	-
Yes Bank	8	5.38	8	6.63	8	6.06	8	6.63	8	5.56	8	5.56	8	5.19.	8	4.63	8	4.63	8	4.75	80	-
Kotak Mahindra Bank	8	6.19	8	3.56	8	6.94	8	6.13	8	5.19	8	6.06	8	5	8	5.75	8	4.44	8	5.75	80	-
Federal Bank	8	6.56	8	6.31	8	5.69	8	7.56	8	6.38	8	5.25	8	4.75	8	5.44	8	3	8	4.06	80	-
City Union Bank	8	7.13	8	4.31	8	6	8	7.5	8	6.69	8	5.63	8	4	8	5	8	4.38	8	4.38	80	-
RBL Bank	8	6.19	8	6.44	8	5.38	8	3.06	8	5.75	8	5.75	8	4.25	8	6.38	8	5.44	8	6.38	80	-
Karur Vysya Bank	8	6.71	8	7	8	5.79	8	3.14	8	5.57	8	5.14	8	3.86	8	6.29	8	5.21	8	6.29	80	-

Table 5.22: Results of Kruskal Wallis Test for Private Sector Banks on Financial Perspective

Name of the Bank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	10.763	9	0.292	Accepted
ICICI Bank	14.494	9	0.106	Accepted
Axis Bank	15.547	9	0.077	Accepted
Indusind Bank	21.063	9	0.012	Rejected
Yes Bank	7.849	9	0.549	Accepted
Kotak Mahindra Bank	11.685	9	0.232	Accepted
Federal Bank	22.822	9	0.007	Rejected
City Union Bank	23.482	9	0.005	Rejected
RBL Bank	13.144	9	0.156	Accepted
Karur Vysya Bank	15.122	9	0.088	Accepted

Inferences:

From the above Table 5.21 and 5.22 following inferences have been drawn on Financial Perspective of Private sector banks:

1. **HDFC Bank-** Mean rank 6.50 is the highest for the year 2012-13. Table 5.22 shows that since p-value is 0.292, which is greater than 0.05. This implies null

hypothesis is accepted. Hence, there is no significant difference in the performance of HDFC Bank over the mentioned financial years at 5 % level of significance.

2. **ICICI Bank-** Mean rank 7.31 is the highest for the year 2012-13. Table 5.22 shows that since p-value is 0.106, which is greater than 0.05, this implies null hypothesis is accepted. Hence, there is no significant difference in the performance of ICICI Bank over the mentioned financial years at 5 % level of significance.

3. **Axis Bank-** Mean rank 6.31 is the highest for the year 2011-12. Table 5.22 shows that since p-value is 0.077, which is greater than 0.05. This implies null hypothesis is accepted. Hence, there is no significant difference in the performance of Axis Bank over the mentioned financial years at 5 % level of significance.

4. **IndusInd Bank-** Mean rank 6.81 is the highest for the year 2010-11. Table 5.22 shows that since p-value is 0.012, which is less than 0.05. This implies null hypothesis is rejected. Hence, there is a significant difference in the performance of IndusInd Bank over the mentioned financial years at 5 % level of significance.

5. **Yes Bank-** Mean rank 6.63 is the highest for years 2008-09 and 2010-11. Table 5.22 shows that since p-value is 0.549, which is greater than 0.05. This implies null hypothesis is accepted. Hence, there is no significant difference in the performance of Yes Bank over the mentioned financial years at 5 % level of significance.

6. **Kotak Mahindra Bank-** Mean rank 6.94 is the highest for the year 2009-10. Table 5.22 shows that since p-value is 0.232, which is greater than 0.05. This implies null hypothesis is accepted. Hence, there is no significant difference in the performance of Kotak Mahindra Bank over the mentioned financial years at 5 % level of significance.

7. **Federal Bank-** Mean rank 7.56 is the highest for the year 2010-11. Table 5.22 shows that since p-value is 0.007, which is less than 0.05. This implies null hypothesis is rejected. Hence, there is a significant difference in the

performance of Federal Bank over the mentioned financial years at 5 % level of significance.

8. **City Union Bank-** Mean rank 7.5 is the highest for the year 2010-11. Table 5.22 shows that since p-value is 0.005, which is less than 0.05. This implies null hypothesis is rejected. Hence, there is significant difference in the performance of City Union Bank over the mentioned financial years at 5 % level of significance.

9. **RBL Bank-** Mean rank 6.44 is the highest for the year 2008-09. Table 5.22 shows that since p-value is 0.156 which is greater than 0.05. This implies null hypothesis is accepted. Hence, there is no significant difference in the performance of RBL Bank over the mentioned financial years at 5 % level of significance.

10. **Karur Vysya Bank-** Mean rank 7 is the highest for the year 2008-09. Table 5.22 shows that since p-value is 0.088, which is above 0.05. This implies null hypothesis is accepted. Hence, there is no significant difference in the performance of Karur Vysya Bank over the mentioned financial years at 5 % level of significance.

Major Findings & Conclusion:

Almost all private sector banks have the highest mean ranks in the early or mid-years of the studied period which depicts their better performance in these years on financial perspective. Although the performance of these banks have a declining trend in last years as the mean rank is low in these years. So it is here concluded that there is no significant difference in the performance of all private sector banks except IndusInd Bank, Federal Bank and City Union Bank on Financial perspective of Balanced Scorecard when an intra-bank comparison is drawn for the studied period.

5.3 Measurement of Performance of Private Sector Banks on Customer Perspective

To measure and evaluate the performance of banks on Customer perspective 4 common customers related strategic objectives with 8 measures have been selected. The performance is then measured and scored using the performance scale created separately for each measure. Kruskal Wallis test has been applied separately on

performance scores of individual bank using IBM SPSS22 to test whether bank shows any difference in the performance on Customer Perspective when intra-bank comparison is drawn for year 2007-08 to 2016-17. Performance and intra-bank comparison on Customer Perspective of all the selected Private Sector Banks are being given below:

5.3.1 Measurement of Performance of HDFC Bank on Customer Perspective

Table 5.23: Performance of HDFC Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	47.54	41.72	17.22	24.60	18.28	20.08	24.00	22.72	21.21	17.79
	Credit Growth	%	35.11	55.90	27.25	27.14	22.15	22.67	26.40	20.63	27.11	19.37
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	33.54	33.50	42.85	27.21	16.63	19.21	16.92	21.13	18.38	30.90
	Current A/c	%	45.16	-1.09	30.57	25.10	-2.27	15.20	17.54	19.64	20.20	30.70
	Casa Ratio	%	54.49	44.37	51.98	52.69	48.40	47.43	44.81	44.03	43.25	48.03
Providing Excellent after sales services	Complaints Redressel Ratio	%	99.70	99.17	99.34	99.32	98.97	98.31	99.17	98.87	98.88	98.08
Increasing Market Share in	Deposits	%	3.0	3.5	3.5	3.7	3.8	4.0	4.3	4.8	5.4	5.8
	Advances	%	2.6	3.3	3.6	3.7	3.9	4.1	4.5	4.9	5.9	6.8

Table 5.24: Performance Score of HDFC Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	50	50	20	30	20	30	30	30	30	20
	Credit Growth	40	50	30	30	30	30	30	30	30	20
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	40	40	50	30	20	20	20	30	20	40
	Current A/c	50	0	40	30	0	20	20	20	30	40
	Casa Ratio	50	40	50	50	50	40	40	40	40	50
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	20	30	30	30	30	30	30	40	40	40
	Advances	20	30	30	30	30	30	30	40	40	50
Total		400	320	290	300	280	230	250	250	280	280	310

Observations: Table 5.24 reveals that

1. the performance score on Customer Perspective of HDFC bank does not reveal any major difference during the study period. The performance score decreased to 230 in 2011-12 due to low deposit and credit growth, low growth in current & saving accounts. Score increased to 310 in 2016-17 as there has been a high growth in saving & current acounts.

2. the score on growth rate in deposits and advances has been decreased to 20 in 2016-17 from 50 in early years of study period. Still bank has sustained positive growth rate in deposits and advances.

3. Score on growth rate in saving and currents accounts has been decreased during the mid years of study then again increased in the subsequent years as shown in Table 5.23. Bank has maintained high CASA ratio as shown in Table 5.23 which are low cost funds thus increases profit margin of the bank.

4. HDFC bank has provided excellent after sales services and has scored the highest 50 on Complaints redressel ratio in all the years of the study.

5. Market share of HDFC bank has also increased continuously in terms of deposits and advances as shown in Table 5.23 that represents the better competitive position of the bank in market.

Suggestions:

1. Bank should try to improve its operational efficiency more to maintain high growth in deposits and advances.

2. Bank should try to maintain its competitive position by continuous focus on maintaining quality of products and services and continuously upgrading them as per the requirements of customer.

5.3.2 Measurement of Performance of ICICI Bank on Customer Perspective

Table 5.25: Performance of ICICI Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	6.04	-10.67	-7.48	11.68	13.25	14.53	13.43	8.93	16.56	16.28
	Credit Growth	%	15.19	-3.24	-17.00	19.40	17.27	14.39	16.69	14.41	12.32	6.66
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	35.54	4.98	29.69	25.65	13.72	12.63	15.74	15.86	16.86	28.02
	Current A/c	%	15.51	-12.39	43.30	12.19	0.56	5.58	17.12	14.51	18.88	27.37
	Casa Ratio	%	26.09	28.70	41.69	45.06	43.45	41.89	42.90	45.46	45.82	50.37
Providing Excellent after sales services	Complaints Redressel Ratio	%	99.00	99.15	98.14	98.12	97.57	97.50	98.51	98.59	98.25	98.07
Increasing Market Share in	Deposits	%	7.4	5.4	4.3	4.0	4.0	3.9	3.9	3.8	4.2	4.4
	Advances	%	2.56	3.30	3.60	3.73	3.85	4.08	4.50	4.95	5.88	6.83

Table 5.26: Performance Score of ICICI Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	10	0	0	20	20	20	20	10	20	20
	Credit Growth	20	0	0	20	20	20	20	20	20	10
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	40	10	30	30	20	20	20	20	20	30
	Current A/c	20	0	50	20	10	10	20	20	20	30
	Casa Ratio	30	30	40	40	40	40	40	40	40	50
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	50	40	30	30	30	30	30	30	30	30
	Advances	50	50	40	40	40	40	40	40	40	40
Total		400	270	180	240	250	230	230	240	230	240	260

Observations: Table 5.26 presents that

1. Performance score of ICICI Bank on Customer Perspective has an inconsistent trend during the study period as there has been a fluctuation in deposits in different accounts. Bank scored the highest 270 in 2007-08 as the score was the maximum on CASA ratio, market share of deposits and advances ratio and complaints redressel ratio.

2. Deposit growth rate was negative in the year 2008-09 and 2009-10 and has a volatile trend after 2009-10 as shown in Table 5.26. The scores on credit growth rate has been decreased to 10 in 2016-17 from 20 in previous years. Decline in deposits and credits shows the decrease no. of customers with the bank which may be because of operational inefficiency.

3. Current account and saving account deposits have varying growth rate during the studied period as shown in Table 5.25. Scores on CASA ratio has been increased to 50 in 2016-17 from 30 in 2007-08 which indicates bank concentrated on acquiring more low cost of funds to increase profit margin.

4. Bank scored 50 on complaints redressel ratio during all the years of the study which indicates that bank has provided excellent after sales services to its customers and customers are satisfied with the bank's services.

5. Table 5.25 shows that market share of the bank in deposits has been the highest in early year of the study and decreased in last years may be due to low interest rates and less facilities on deposits accounts. The market share of advances has

an constant trend in scores from 2009-10 which may be due to convenient processing and approval of loans, low processing fees etc.

Suggestions:

Bank should try to attract more customers to maintain and increase the deposits and advances growth rate by providing convenient, fast, prompt and economical services that will simultaneously increase the market share of bank in deposits and advances.

5.3.3 Measurement of Performance of Axis Bank on Customer Perspective

Table 5.27: Performance of Axis Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	49.06	33.95	20.38	33.93	16.31	14.77	11.22	14.77	11.02	15.76
	Credit Growth	%	61.79	36.70	27.94	36.48	19.21	16.03	16.81	22.17	20.52	10.12
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	64.79	29.22	31.13	20.64	26.48	23.44	21.95	13.52	19.82	19.15
	Current A/c	%	77.32	23.83	29.60	14.76	7.68	21.55	0.75	15.24	13.44	36.68
	Casa Ratio	%	45.68	43.15	46.73	41.10	41.54	44.38	45.01	44.78	47.34	51.41
Providing Excellent after sales services	Complaints Redressel Ratio	%	97.00	97.89	98.28	99.88	99.22	99.12	97.12	96.02	96.00	87.85
Increasing Market Share in	Deposits	%	2.6	2.9	3.0	3.4	3.4	3.4	3.3	3.4	3.5	3.7
	Advances	%	2.4	2.7	3.0	3.3	3.3	3.3	3.4	3.8	4.3	4.6

Table 5.28: Performance Score of Axis Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	50	40	30	40	20	20	20	20	20	20
	Credit Growth	50	40	30	40	20	20	20	30	30	20
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	50	30	40	30	30	30	30	20	20	20
	Current A/c	50	30	30	20	10	30	10	20	20	40
	Casa Ratio	40	40	40	40	40	40	40	40	40	50
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	50	50	50	50	50	50	50	30
Increasing Market Share in	Deposits	20	20	20	30	30	30	30	30	30	30
	Advances	20	20	20	30	30	30	30	30	30	40
Total		**400**	**330**	**270**	**260**	**280**	**230**	**250**	**230**	**240**	**240**	**250**

Observations: Table 5.28 reveals that

1. the performance score of Axis Bank on Customer Perspective has been declined to 250 in 2016-17 from 330 in 2007-08. This was due to decline in scores on business and customer growth rate in both deposits and advances.

2. Growth rate of deposits and advances was higher in early 4 years of the study period as shown in Table 5.27. After 2010-11 it started declining and scored either 20 or 30. Table 5.27 shows that deposits increased during 2016-17 due to high inflow in savings bank accounts because of demonetisation.

3. Table 5.27 shows that growth in saving accounts and current accounts remained the highest in 2007-008 and scored 50. Bank scored either 40 or 50 on CASA ratio during the study period. Sales channel effectiveness and focus of bank on acquisition of high value segment based current accounts was the major factor for growth in CASA.

4. Complaints redressel ratio scored 50 in all the years except 2016-17 where the score declined to 30. High scores implies bank's ability to provide best and satisfactory services to all its customers which has helped bank to protect and grow its brand equity.

5. Market share of bank in deposits and advances with an increasing trend reached to 3.7% and 4.6% in 2016-17 from 2.6 % and 2.4 % in 2007-08 respectively as shown in Table 5.27 which depicts that the competitive position of the bank has increased.

Suggestions:

1. Bank should focus on maintaining consistency in growth rate in customers and business through effective marketing strategies.

2. Bank should focus on acquiring more customers in deposits and credit accounts through improving operational efficiency, providing satisfactory services, offering customized products and services through use of multiple marketing channels.

5.3.4 Measurement of Performance of IndusInd Bank on Customer Perspective

Table 5.29: Performance of IndusInd Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	7.89	16.14	20.80	28.66	23.27	27.75	11.80	22.53	25.45	36.10
	Credit Growth	%	15.44	23.25	30.31	27.32	34.01	26.40	24.33	24.84	28.54	27.89
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	28.76	9.57	47.31	59.73	53.46	49.82	40.99	30.57	33.21	56.77
	Current A/c	%	5.29	63.99	49.13	42.33	9.52	28.62	10.65	26.40	25.27	26.69
	Casa Ratio	%	15.70	19.24	23.67	27.15	27.30	29.32	32.55	34.13	35.19	36.85
Providing Excellent after sales services	Complaints Redressel Ratio	%	80.09	98.01	96.06	97.62	98.30	97.84	98.44	98.49	98.24	94.43
Increasing Market Share in	Deposits	%	0.57	0.54	0.56	0.61	0.66	0.73	0.71	0.79	0.92	1.14
	Advances	%	0.52	0.53	0.59	0.61	0.69	0.75	0.82	0.93	1.12	1.39

Table 5.30: Performance Score of IndusInd Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	10	20	30	30	30	30	20	30	30	40
	Credit Growth	20	30	40	30	40	30	30	30	30	30
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	30	10	50	50	50	50	50	40	40	50
	Current A/c	10	50	50	50	10	30	20	30	30	30
	Casa Ratio	20	20	20	30	30	30	30	30	30	40
Providing Excellent after sales services	Complaints Redressel Ratio	20	50	50	50	50	50	50	50	50	40
Increasing Market Share in	Deposits	10	10	10	10	10	10	10	10	10	10
	Advances	10	10	10	10	10	10	10	10	10	10
Total	400	130	200	260	260	230	240	220	230	230	250

Observations: Table 5.30 demonstrates that

1. the performance score of IndusInd bank on Customer Perspective has been increased to 250 in 2016-17 from 130 in 2007-08. Enhancement in total score was due to proliferation in business growth and customer growth rate in saving accounts and current accounts.

2. Expansion of branches, marketing set up of the bank and increased alternative channels like mobile banking, internet banking, ATM's etc. have led the bank increased its customers growth rate in deposits and advances therefor score on deposits growth rate and credit growth rate increased to 40 and 30 in 2016-17 from 10 and 20 in 2007-08 respectively.

3. The customer base of the bank in saving and current accounts has increased continuously due to introduction of new products & services for individuals and corporate customers and improvement in facilities on them so score on CASA ratio increased to 40 in 2016-17 from 20 in 2007-08.

4. Bank has an excellent complaints and request management system which helps in providing efficient after sales services to customers and leads to highly satisfied customers. Complaints redressel ratio scored 50 in maximum years.

5. Although the bank has a good track record of growth in business yet the market share of deposits and advances was low than competitive banks and scored 10 in almost all years.

Suggestions:

More updated products and services with improved customer experiences and with improved processes should be provided by the bank to gain competitive opportunities over competitors and increase market share.

5.3.5 Measurement of Performance of Yes Bank on Customer Perspective

Table 5.31: Performance of Yes Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	61.47	21.82	65.74	71.42	6.99	36.22	10.81	22.89	22.53	27.89
	Credit Growth	%	49.93	31.52	78.93	54.84	10.55	23.72	18.37	35.80	29.99	34.67
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	152.73	31.08	103.57	108.97	206.45	140.54	54.87	34.86	62.31	60.56
	Current A/c	%	136.15	24.19	98.99	62.08	24.26	36.34	5.29	21.12	28.54	74.72
	Casa Ratio	%	8.50	8.73	10.52	10.34	15.04	18.95	22.03	23.12	28.05	36.30
Providing Excellent after sales services	Complaints Redressel Ratio	%	97.18	99.85	99.86	99.05	99.18	99.86	98.02	95.94	96.84	95.86
Increasing Market Share in	Deposits	%	0.40	0.40	0.56	0.82	0.76	0.90	0.87	0.97	1.11	1.29
	Advances	%	0.38	0.41	0.63	0.80	0.75	0.80	0.83	1.02	1.24	1.63

Table 5.32: Performance Score of Yes Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	50	30	50	50	10	40	20	30	30	30
	Credit Growth	50	40	50	50	20	30	20	40	30	40
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	50	40	50	50	50	50	50	40	50	50
	Current A/c	50	30	50	50	30	40	10	30	30	50
	Casa Ratio	10	10	10	10	20	20	20	20	30	40
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	10	10	10	10	10	10	10	10	10	10
	Advances	10	10	10	10	10	10	10	10	10	20
Total	400	280	220	280	280	200	250	190	230	240	290

Observations: Table 5.32 indicates that

1. the performance score of YES bank on Customer Perspective has an erratic trend. The scores declined to 200 in 2011-12 from 280 in 2007-08 as there has been a sharp decline in deposit and credit growth rate. The score was the highest 290 in 2016-17 as there was a high growth in deposits & credits and saving & current account deposits.

2. Deposit and credit growth rate have fluctuated during the study period as shown in Table 5.31. Score on Deposit growth and credit growth was 50 in 2007-08 and then declined to 10 and 20 in 2011-12 respectively due to the economic slowdown.

3. Score on growth in saving accounts was either 40 or 50 in all the years. Bank has increased the interest rate on saving accounts after Oct 2010 which has increased the saving account customers. It was due to deregulation of interest rate on saving accounts in Oct'2010 by RBI. Score on growth in current accounts has an inconsistent trend. Bank's score on CASA ratio has increased to 40 in 2016-17 from 10 in 2007-08 due to focus of bank on increasing low cost funds.

4. Complaints redressel ratio scored 50 in all the years of the study which shows bank has an excellent complaints and queries management mechanism and customers are satisfied with the banks services.

5. Table 5.31 shows that there has been slight increase in the market share of deposits and advances with the each passing year yet this growth was lower than

competitive banks and scored 10 in all the years except in 2016-17 for advances where the score was 20.

Suggestions:

1. More focus on low cost funds might have decreased the profit margin so bank should concentrate on high interest earning funds.

2. To increase the market share of deposits and advances bank should improve its operational efficiency and provide more facilities on different products and services of the bank.

5.3.6 Measurement of Performance of Kotak Mahindra Bank on Customer Perspective

Table 5.33: Performance of Kotak Mahindra Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	49.30	-4.75	52.69	22.50	31.70	32.42	15.76	26.73	85.20	13.55
	Credit Growth	%	42.37	6.90	24.96	41.18	33.24	24.03	9.41	24.77	79.36	14.68
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	70.95	12.08	45.28	34.78	51.64	43.92	38.78	39.15	110.13	40.72
	Current A/c	%	49.99	8.40	46.09	9.38	34.65	4.05	14.26	50.80	76.63	19.24
	Casa Ratio	%	28.40	32.72	31.24	30.04	32.18	29.24	31.87	36.36	38.07	44.00
Providing Excellent after sales services	Complaints Redressel Ratio	%	96.28	98.18	99.04	98.80	97.11	96.98	97.62	98.14	95.65	96.86
Increasing Market Share in	Deposits	%	0.49	0.39	0.50	0.52	0.60	0.69	0.69	0.79	1.37	1.42
	Advances	%	0.63	0.55	0.59	0.68	0.77	0.82	0.79	0.90	1.52	1.68

Table 5.34: Performance Score of Kotak Mahindra Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	50	0	50	30	40	40	20	30	50	20
	Credit Growth	50	10	30	50	40	30	10	30	50	20
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	50	20	50	40	50	50	40	40	50	50
	Current A/c	50	10	50	10	40	10	20	50	50	20
	Casa Ratio	30	30	30	30	30	30	30	40	40	40
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	10	10	10	10	10	10	10	10	10	10
	Advances	10	10	10	10	10	10	10	10	20	20
Total		**400**	**300**	**140**	**280**	**230**	**270**	**230**	**190**	**260**	**320**	**230**

Observations: Table 5.34 portrays that

1. the performance score of Kotak Mahindra Bank on Customer Perspective has a changing trend due to major fluctuations in business and customers growth rate in different accounts. The score declined to 140 in 2008-09 from 300 in 2007-08 due to sharp decline in deposits and credit growth rate. The score was the highest 320 in 2015-16.

2. Growth rate of deposits and advances showed inconsistency during the study period as shown in Table 5.33. Score was maximum 50 in 2007-08 and 2015-16. There was a sharp decline in growth rate of deposits and advances in 2008-09 and 2013-14 due to the economic slowdown.

3. Score on growth in saving accounts scored either 40 or 50 in maximum years which shows that bank focused on more low cost funds. Growth in current account has changing trend as shown in Table 5.33. Score on CASA ratio increased to 40 in 2014-15 from 30 in the previous years.

4. Complaints redressel ratio scored 50 in all the years which shows that the bank provide quality services to its customers through dedicated service team who looks into root causes of customer complaints and solved them on time.

5. Table 5.33 depicts that market share of deposits and advances both have amplified slightly with each passing year but it was less than the competitive banks so scored 10 in all the years.

Suggestions:

1. Bank should form such effecting marketing strategies and provide quality products and services to their customers to increase the growth rate of deposits and advances.

2. More focus on low cost funds might have increased the cost of deposits which can decrease the profit margin so at the same time bank should try to increase its high yielding assets.

5.3.7 Measurement of Performance of Federal Bank on Customer Perspective

Table 5.35: Performance of Federal Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	20.06	24.25	11.99	19.29	13.77	17.73	3.67	18.57	11.78	23.36
	Credit Growth	%	26.88	18.45	20.36	18.56	18.16	16.79	-1.50	18.07	13.27	26.25
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	19.08	27.98	18.08	20.20	19.48	16.59	19.94	15.98	19.85	23.23
	Current A/c	%	20.37	-1.49	26.94	31.37	5.82	14.26	16.18	20.03	14.14	22.13
	Casa Ratio	%	25.10	24.50	26.19	26.86	27.54	27.17	31.25	30.76	32.91	32.82
Providing Excellent after sales services	Complaints Redressel Ratio	%	95.27	97.34	94.11	97.98	97.22	98.12	97.53	98.55	98.84	98.16
Increasing Market Share in	Deposits	%	0.78	0.79	0.76	0.77	0.76	0.78	0.70	0.75	0.78	0.88
	Advances	%	0.76	0.75	0.77	0.75	0.74	0.75	0.64	0.69	0.74	0.90

Table 5.36: Performance Score of Federal Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	30	30	20	20	20	20	10	20	20	30
	Credit Growth	30	20	30	20	20	20	0	20	20	30
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	20	30	20	30	20	20	20	20	20	30
	Current A/c	30	0	30	40	10	20	20	30	20	30
	Casa Ratio	30	30	30	30	30	30	30	30	30	30
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	40	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	10	10	10	10	10	10	10	10	10	10
	Advances	10	10	10	10	10	10	10	10	10	10
Total	400	210	180	190	210	170	180	150	190	180	220

Observations: Table 5.36 depicts that

1. the performance score of Federal Bank on Customer Perspective was the highest 220 in 2016-17 and the lowest 150 in 2013-14 due to low growth rate of deposits and advances.

2. Score on deposit growth rate and credit growth rate was 30 in 2007-08 which declined to 10 and 0 in 2013-14 respectively due to low economic growth in this year which has affected the savings of the households and credit requirement of corporates.

3. Customer growth rate in saving accounts slightly fluctuated in year as shown in Table 5.35 and score on deposits in saving accounts scored either 20 or 30. Growth in current account deposits was the highest in 2010-11 depicted in Table

5.36 as the bank started providing payment gateway solution for current account customers. CASA ratio scored 30 in each year.

4. Score on complaints redressel ratio was 50 in all the years except 2009-10 where the score was 40. Bank has a systematic root cause analysis procedure for complaints resolving which leads to higher satisfaction among customers by resolving them on time.

5. The market share of the deposits and advances has increased somewhat as shown in Table 5.35 and scored 10 in all the years but it was lower than competitors.

Suggestions:

1. Although bank has maintained steady growth in deposits and advances yet bank should try to increase its market share and customers in deposits and advances by providing them more suitable, tech-savvy, updated quality products and services through effective marketing strategies and advertisements.

2. Bank should enhance its CASA deposits as they are low cost funds which increase the profit margin of the bank.

5.3.8 Measurement of Performance of City Union Bank on Customer Perspective

Table 5.37: Performance of City Union Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	36.72	27.73	25.32	25.57	26.53	24.26	8.43	9.35	12.81	10.89
	Credit Growth	%	36.28	24.43	21.05	35.44	31.14	25.61	5.58	11.61	17.21	13.18
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	27.25	18.34	34.48	25.15	22.75	17.01	19.62	19.68	21.97	28.13
	Current A/c	%	8.20	11.97	57.82	-0.86	10.62	10.99	7.99	15.68	15.06	25.53
	Casa Ratio	%	20.92	18.90	21.86	19.58	18.19	16.77	17.79	19.23	20.37	23.37
Providing Excellent after sales services	Complaints Redressel Ratio	%	98.27	100.00	100.00	98.48	100.00	98.71	98.62	99.47	99.87	99.08
Increasing Market Share in	Deposits	%	0.19	0.20	0.22	0.23	0.25	0.27	0.26	0.26	0.27	0.27
	Advances	%	0.18	0.19	0.20	0.22	0.24	0.26	0.24	0.24	0.27	0.29

Table 5.38: Performance Score of City Union Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	40	30	30	30	30	30	10	10	20	20
	Credit Growth	40	30	30	40	40	30	10	20	20	20
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	30	20	40	30	30	20	20	20	30	30
	Current A/c	10	20	50	0	20	20	10	20	20	30
	Casa Ratio	20	20	20	20	20	20	20	20	20	20
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	50	50	50	50	50	50	50	50
Increasing Market Share in	Deposits	10	10	10	10	10	10	10	10	10	10
	Advances	10	10	10	10	10	10	10	10	10	10
Total		400	210	190	240	190	210	190	140	160	180	190

Observations: Table 5.38 manifests that

1. the performance score of City Union Bank was the highest 240 in 2009-10 primarily due to high growth in current and saving accounts. The score was the lowest 140 in 2013-14 due to decline in growth rate of deposits and advances.

2. The score on both deposits and advances growth rate was 40 in 2007-08 which declined to 10 in 2013-14 due to slowdown in Indian Economy which might have affected the saving & investment pattern of customers.

3. Table 5.37 shows that growth in CASA deposits was the highest 23.37 % in 2016-17 due to impact of demonetisation which leads to high deposits in saving and currents accounts in this year.

4. Complaints redressel ratio scored 50 in all the years which shows that bank provide excellent post sale services to its customers.

5. Market share of deposits and advances of the bank has improved slowly year wise but scored 10 in all the years as the growth was slow than other competitive banks.

Suggestions:

1. Bank should improve its operational efficiency and provide updated products and services to increase the growth rate of deposits and advances.

2. Bank should try to improve its competitive position by increasing market share of deposits and advances.

3. Bank should provide new and different facilities from competitive banks for current and saving accountholders to attract and mobilize savings in these accounts as they are low cost funds which increase the profit margin of the bank.

5.3.9 Measurement of Performance of RBL Bank on Customer Perspective

Table 5.39: Performance of RBL Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	25.59	18.71	21.27	28.84	132.07	75.99	39.06	47.43	42.40	42.05
	Credit Growth	%	10.42	36.75	46.10	62.77	116.90	54.30	54.25	46.92	46.92	38.72
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	20.59	0.62	35.80	18.79	23.35	23.63	26.90	41.18	83.61	118.90
	Current A/c	%	35.17	6.80	25.99	27.92	65.38	89.09	52.40	30.05	26.36	35.06
	Casa Ratio	%	38.30	33.50	36.10	34.50	21.51	19.72	20.43	18.46	18.64	21.98
Providing Excellent after sales services	Complaints Redressel Ratio	%	N.D.	N.D.	N.D.	100.00	100.00	97.39	99.08	97.45	91.68	96.64
Increasing Market Share in	Deposits	%	0.03	0.03	0.03	0.04	0.07	0.11	0.14	0.18	0.24	0.31
	Advances	%	0.02	0.03	0.03	0.04	0.08	0.11	0.15	0.20	0.27	0.36

Table 5.40: Performance Score of RBL Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	30	20	30	30	50	50	40	50	50	50
	Credit Growth	20	40	50	50	50	50	50	50	50	40
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	30	10	40	20	30	30	30	50	50	50
	Current A/c	40	10	30	30	50	50	50	40	30	40
	Casa Ratio	40	30	40	30	20	20	20	20	20	20
Providing Excellent after sales services	Complaints Redressel Ratio	N.A.	N.A.	N.A.	50	50	50	50	50	40	50
Increasing Market Share in	Deposits	10	10	10	10	10	10	10	10	10	10
	Advances	10	10	10	10	10	10	10	10	10	10
Total		400	180	130	210	230	270	270	260	280	260	270

Observations: Table 5.40 conveys that

1. the performance score of RBL bank has been increased to 270 in 2016-17 from 180 in 2007-08 on Customer Perspective primarily due to improvement in business growth rate in both the deposits and advances.

2. Growth rate in deposits and advances was the highest 132.07 % and 116.90 % in 2011-12 respectively as shown in Table 5.39 and scored 50. It was due to

introduction of new products and services and increase in more facilities on deposits account, advances and CASA deposits.

3. Table 5.39 shows that growth in saving accounts was the highest in last year's due to deregulation of interest rates on saving deposits by RBI so bank began to offer attractive interest rate on such accounts. Score on CASA ratio has been declined to 20 in 2016-17 from 40 in 2007-08 that may be because of decline in current and saving account deposits.

4. Bank scored maximum 50 in almost all years on complaints redressel ratio which shows that bank has satisfied customer base and best post sales services are provided by the bank.

5. Market share of deposits and advances was too low than the competitors thus scored 10 in all the years.

Suggestions:

1. Bank should try to increase current and saving accounts customers by providing them attractive facilities on such accounts as they are low cost funds which will increase the profit margin of the bank.

2. Market share of the bank was too low so bank should try to increase its customer base and business growth by expanding its business in more locations and by providing more new digital products and services which are need of the customers these days.

5.3.10 Measurement of Performance of Karur Vysya Bank on Customer Perspective

Table 5.41: Performance of Karur Vysya Bank on Customer Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	%	34.36	20.33	27.62	28.28	29.89	20.37	13.21	2.13	12.06	7.23
	Credit Growth	%	33.82	10.49	29.18	32.48	34.44	23.09	15.31	6.23	8.24	4.67
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	%	23.01	8.13	37.36	30.93	12.92	19.40	23.32	16.74	21.12	30.35
	Current A/c	%	25.33	-2.76	37.00	22.03	-0.96	23.21	17.26	-1.45	14.13	22.18
	Casa Ratio	%	25.59	21.89	23.53	23.28	19.16	19.25	20.54	22.02	23.31	27.73
Providing Excellent after sales services	Complaints Redressel Ratio	%	100.00	98.44	88.24	91.81	96.11	100.00	91.58	99.81	99.71	99.72
Increasing Market Share in	Deposits	%	0.38	0.37	0.41	0.44	0.50	0.52	0.51	0.47	0.50	0.48
	Advances	%	0.38	0.35	0.38	0.42	0.47	0.50	0.50	0.49	0.49	0.50

Table 5.42: Performance Score of Karur Vysya Bank on Customer Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Achieving high Business and Customer Growth Rate	Deposits Growth	40	30	30	30	30	30	20	10	20	10
	Credit Growth	40	20	30	40	40	30	20	10	10	10
Increasing Customer Growth Rate in Low Cost Funds	Saving A/c	30	10	40	40	20	20	30	20	30	40
	Current A/c	30	0	40	30	0	30	20	0	20	30
	Casa Ratio	30	20	20	20	20	20	20	20	20	30
Providing Excellent after sales services	Complaints Redressel Ratio	50	50	30	40	50	50	40	50	50	50
Increasing Market Share in	Deposits	10	10	10	10	10	10	10	10	10	10
	Advances	10	10	10	10	10	10	10	10	10	10
Total		400	240	150	210	220	180	200	170	130	170	190

Observations: Table 5.42 portrays that

1. the performance score of Karur Vysya bank on Customer Perspective has been declined to 190 in 2016-17 from 240 in 2007-08 primarily due to decrease in deposits and credit advances growth rate.

2. Score on deposits and credit growth rate has decreased to 10 in 2014-15 from 40 in 2007-08 due to slowdown and high inflation in Indian economy which resulted in shrinkage of financial savings of households.

3. Score on deposits in saving and current accounts was inconsistent during the study period. Score on CASA deposits increased to 30 in 2016-17 from 20 in last 8 years due to availability of more convenient and quality services on low cost accounts which attracted new customers for the bank.

4. Complaints redressel ratio scored 50 in maximum years which shows that bank resolves customer problems within stipulated time and in a responsible manner.

5. Market share of deposits and advances was too low than competitive banks in the industry thus scored 10 in all the years of the study.

Suggestions:

1. Bank should try to increase the deposits and advances growth rate through improving operational efficiency and providing more convenient facilities and quality services to customers.

2. More facilities on CASA deposits accounts should be provided to attract customers in these accounts as they are low cost funds and can improve the profit margin.

5.3.11 Intra-Bank Comparison of Performance of Private Sector Banks on Customer Perspective

Intra bank Hypotheses

H_0- There is no significant difference in the performance of Private Sector bank on Customer Perspective during last 10 years.

H_1- There is a significant difference in the performance of Private Sector bank on Customer Perspective during last 10 years.

Table 5.43: Mean Ranks of Years for Private Sector Banks on Customer Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
HDFC Bank	8	6.5	8	5.81	8	6	8	5.69	8	4.19	8	4.38	8	4.38	8	5.81	8	5.75	8	6.5	80	-
ICICI Bank	8	5.81	8	4.25	8	5.63	8	5.88	8	4.94	8	4.94	8	5.38	8	5.38	8	5.88	8	6.94	80	-
Axis Bank	8	6.88	8	5.63	8	5.5	8	6.44	8	4.75	8	5.44	8	4.75	8	5	8	5	8	5.63	80	-
Indusind Bank	8	2.44	8	4.63	8	6.5	8	6.5	8	6.13	8	6.06	8	5.25	8	5.56	8	5.56	8	6.38	80	-
Yes Bank	8	6.44	8	4.25	8	6.44	8	6.44	8	4.38	8	5.69	8	4.19	8	4.75	8	5.38	8	7.06	80	-
Kotak Mahindra Bank	8	6.69	8	3.13	8	6.19	8	7.75	8	5.81	8	5.06	8	3.88	8	5.69	8	7.94	8	5.88	80	-
Federal Bank	8	6.5	8	5.75	8	5.31	8	6.31	8	4.69	8	4.94	8	4.06	8	5.38	8	4.94	8	7.13	80	-
City Union Bank	8	6.31	8	5.44	8	6.88	8	5.75	8	6.38	8	5.44	8	3.69	8	4.38	8	5.19	8	5.26	80	-
RBL Bank	8	5	8	3.43	8	5.79	8	4.79	8	6.14	8	6.14	8	5.71	8	6.36	8	5.93	8	5.71	80	-
Karur Vysya Bank	8	7.5	8	4.63	8	6.13	8	6.31	8	5.44	8	5.81	8	4.56	8	3.88	8	4.81	8	5.94	80	-

Table 5.44: Results of Kruskal Wallis Test for Private Sector Banks on Customer Perspective

Name of the Bank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	8.356	9	0.499	Accepted
ICICI Bank	6.429	9	0.696	Accepted
Axis Bank	5.689	9	0.771	Accepted
Indusind Bank	21.809	9	0.010	Rejected
Yes Bank	16.365	9	0.060	Accepted
Kotak Mahindra Bank	25.467	9	0.002	Rejected
Federal Bank	16.193	9	0.063	Accepted
City Union Bank	16.106	9	0.065	Accepted
RBL Bank	9.026	9	0.435	Accepted
Karur Vysya Bank	14.749	9	0.098	Accepted

Inferences:

From Table 5.43 and 5.44 following inferences have been drawn:

1. **HDFC Bank -**Mean rank 6.5 is the highest for the two years 2007-08 and 2016-17. Table 5.44 shows that since p-value is 0.499, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of HDFC Bank on Customer Perspective during last 10 years.

2. **ICICI Bank-** Mean rank 6.94 is the highest for the year 2016-17. Table 5.44 shows that since p-value is 0.696, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of ICICI Bank on Customer Perspective during last 10 years.

3. **Axis Bank-** Mean rank 6.88 is the highest for the year 2007-08. Table 5.44 shows that since p-value is 0.771, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Axis Bank on Customer Perspective during last 10 years.

4. **IndusInd Bank-** Mean rank 6.5 is the highest for the years 2009-10 and 2010-11. Table 5.44 shows that since p-value is 0.010, which is less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is

a significant difference in the performance of IndusInd Bank on Customer Perspective during last 10 years.

5. **Yes Bank-** Mean rank 7.06 is the highest for the year 2016-17. Table 5.44 shows that since p-value is 0.060, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Yes Bank on Customer Perspective during last 10 years.

6. **Kotak Mahindra Bank-** Mean rank 7.94 is the highest for the year 2015-16. Table 5.44 shows that since p-value is 0.002, which is less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Kotak Mahindra Bank on Customer Perspective during last 10 years.

7. **Federal Bank-** Mean rank 7.13 is the highest for the year 2016-17. Table 5.44 shows that since p-value is 0.063, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Federal Bank on Customer Perspective during last 10 years.

8. **City Union Bank-** Mean rank 6.88 is the highest for the year 2009-10. Table 5.44 shows that since p-value is 0.065, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of City Union Bank on Customer Perspective during last 10 years.

9. **RBL Bank-** Mean rank 6.36 is the highest for the year 2014-15. Table 5.44 shows that since p-value is 0.435, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of RBL Bank on Customer Perspective during last 10 years.

10. **Karur Vysya Bank-** Mean rank 7.5 is the highest for the year 2007-08. Table 5.44 shows that since p-value is 0.098, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Karur Vysya Bank on Customer Perspective during last 10 years.

Major Findings and Conclusion:

It has been concluded here that mean ranks of few private sector banks such as HDFC, ICICI, IndusInd Bank, Yes Bank, Federal bank, RBL Bank were higher in last years of the study period whereas other banks such as Axis Bank, Kotak Mahindra Bank, City Union Bank and Karur Vysya Bank has high mean ranks in early years. No significant difference has been found in the performance of all Private Sector Banks when an intra-bank comparison has been drawn for Customer Perspective of Balanced Scorecard except IndusInd Bank and Kotak Mahindra Bank. This implies that most of the private sector banks needs to improve their performance on Customer Perspective in order to improve financial performance as highly satisfied customers will increase the growth in business thus will improve the profits of the bank.

5.4 Measurement of Performance of Private Sector Banks on Internal Business Process Perspective

To measure and evaluate the performance of banks on Internal Business Process perspective 4 common business operations related strategic objectives with 8 measures have been selected. The performance is then measured and scored using the performance scale created separately for each measure. Kruskal Wallis test has been applied separately on performance scores of individual bank using IBM SPSS22 to test whether bank shows any difference in the performance on Internal Business Process perspective when intra-bank comparison is drawn for year 2007-08 to 2016-17. Performance and intra-bank comparison on Internal Business Process Perspective of all the selected Private Sector Banks is being given below:

5.4.1 Measurement of Performance of HDFC Bank on Internal Business Process Perspective

Table 5.45: Performance of HDFC Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	42.48	47.20	21.32	25.69	19.96	21.22	25.07	21.77	23.86	18.51
Improving Operational Capabilities	Business Per Employee	Lakhs	43918.98	45873.67	56513.07	66108.67	66911.81	77227.65	98340.46	107003.99	115472.35	144094.02
	Profit Per Employee	Lakhs	425.89	427.45	568.28	704.26	781.99	969.19	1243.80	1339.16	1404.41	1725.42
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	15.07	15.50	16.68	17.15	14.01	13.01	12.04	11.86	11.49	11.60
	Ratio of Intermediation cost to Total Assets	%	3.34	3.50	2.93	2.86	3.02	3.04	2.70	2.59	2.55	2.46
	Advertisemnet Cost to Total Business Volume Ratio	%	0.070	0.045	0.028	0.043	0.034	0.034	0.021	0.023	0.025	0.017
Increasing Geographical reach for customers	Growth in ATM's	Nos.	1977	3295	4232	5471	8913	10743	11256	11766	12000	12260
	Growth in Branches	Nos.	761	1412	1725	1986	2544	3062	3403	4014	4520	4715

Table 5.46: Performance Score of HDFC Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	40	40	20	30	20	20	30	20	20	20
Improving Operational Capabilities	Business Per Employee	20	20	20	20	20	30	30	30	40	50
	Profit Per Employee	20	20	20	20	20	30	40	40	40	50
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	20	20	10	10	20	20	20	30	30	30
	Ratio of Intermediation cost to Total Assets	20	20	30	30	20	20	30	30	30	30
	Advertisemnet Cost to Total Business Volume Ratio	10	20	40	30	30	30	40	40	40	40
Increasing Geographical reach for customers	Growth in ATM's	10	10	20	20	30	30	40	40	40	40
	Growth in Branches	10	20	20	20	30	30	30	40	40	40
Total	**400**	**150**	**170**	**180**	**180**	**190**	**210**	**260**	**270**	**280**	**300**

Observations: Table 5.46 highlights that

1. the Performance Score of HDFC on Internal Business Process Perspective has been improved year after year. The score gained in year 2007-08 was150 which increased to 300 in 2016-17. This was primarily due to improvement in operational capabilities, cost efficiency and increased reach to customers through expansion of branches and ATMs.

2. Score on growth in total business of HDFC bank has been declined to 20 in 2016-2017 from 40 in 2007-08. Although there is a decline in growth rate of

total business but the operational efficiency was good as growth rate was positive during the study period.

3. Score on Business per employee and profit per employee have been increased from 20 in 2007-08 to 50 in 2016-17. Higher productivity of employees and controlled cost on employees depicts better managerial and operational efficiency in effective utilization of manpower.

4. Score on ratio of wage bills to total cost and ratio of intermediation cost to total average assets both have been increased to 30 in 2016-17 from 20 in 2007-08. Although bank has tried to control the cost of business operations and staffing expenses but it was reduced to an extent. Score on advertisement cost to total business ratio has also increased which represents that bank is able to acquire more business with less advertisement efforts.

5. HDFC bank has increased its geographical reach for their customers by continuous expansion in number of branches and ATM's in remote areas as shown in Table 5.46. The score has increased to 40 in 2016-17 from 10 in 2007-08 on both the ratios of growth in branches and ATM's.

Suggestions:

1. Growth in number of branches and ATM's and increase in number of employees has increased the infrastructural cost, staffing expenses and other operational cost which should be controlled by the bank to improve the profit margin.

2. Bank should improves its operational efficiency for smooth delivery of products & services through trained staff.

5.4.2 Measurement of Performance of ICICI Bank on Internal Business Process Perspective

Table 5.47: Performance of ICICI Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	10.24	-7.10	-12.24	15.33	15.22	14.46	15.06	12.70	14.36	12.59
Improving Operational Capabilities	Business Per Employee	Lakhs	115530.44	126216.52	93314.06	77580.44	87382.05	93911.72	92849.71	110391.68	115618.88	115193.10
	Profit Per Employee	Lakhs	1021.91	1086.29	980.08	904.24	1109.42	1341.41	1358.30	1646.90	1312.66	1183.12
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	6.57	6.62	8.21	11.95	11.47	11.05	11.10	11.43	11.32	12.15
	Ratio of Intermediation cost to Total Assets	%	2.19	1.81	1.58	1.72	1.75	1.76	1.82	1.85	1.86	1.98
	Advertisemnet Cost to Total Business Volume Ratio	%	0.044	0.032	0.029	0.034	0.026	0.032	0.027	0.022	0.025	0.030
Increasing Geographical reach for customers	Growth in ATM's	Nos.	3881	4713	5219	6055	9006	10481	11315	12451	13766	13882
	Growth in Branches	Nos.	1262	1419	1707	2529	2752	3100	3753	4050	4450	4850

Table 5.48: Performance Score of ICICI Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	10	0	0	20	20	20	20	20	20	20
Improving Operational Capabilities	Business Per Employee	40	40	30	30	30	30	30	40	40	40
	Profit Per Employee	30	30	30	30	30	40	40	50	40	30
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	40	40	30	30	30	30	30	30	30	20
	Ratio of Intermediation cost to Total Assets	30	40	40	40	40	40	40	40	40	40
	Advertisemnet Cost to Total Business Volume Ratio	30	30	40	30	40	30	40	40	40	40
Increasing Geographical reach for customers	Growth in ATM's	20	20	20	20	30	30	40	40	40	40
	Growth in Branches	20	20	20	30	30	30	40	40	40	40
Total	**400**	**220**	**220**	**210**	**230**	**250**	**250**	**280**	**300**	**290**	**270**

Observations: Table 5.48 displays that

1. the performance score of ICICI bank on Internal Business Process Perspective has been increased to 300 in 2014-15 from 220 in 2007-08 and then declined to 270 in 2016-17 primarily due to increased cost of Business operations and low business growth.

2. Growth rate of total business was negative in the year 2008-09 and 2009-10 as shown in Table 5.47. After 2009-10 growth rate has improved as depicted in Table 5.47. Improvement in operational efficiency might have affected growth rate of total business.

3. Business per employee was the highest 126216.52 Lakhs in 2008-09 as shown in Table 5.47. Score was either 30 or 40 in all the years. Profit per employee scored maximum 50 in 2014-15 and declined to 30 in 2016-17. This implies the low productivity of employees and bank's management inefficiency to utilize its resources.

4. Wage bills to total cost ratio has an increasing trend as shown in Table 5.47 and score declined to 20 in 2016-17 from 40 in 2007-08 due to increased employees cost. Ratio of intermediation cost to total assets scored 40 in all years except 2007-08. Advertisement cost to total business volume ratio scored above average in all the years which depicts that low cost incurred on advertisement has led the bank acquired more business.

5. ICICI bank has continuously increased its geographical reach for customers by expanding branches and ATM's in remote locations as shown in Table 5.47.

Suggestions:

1. Employees should be trained on technical and other skills to increase the operational efficiency and employee productivity so that the growth rate of the business and profit per employee can be increased.

2. Expansion of branches and ATM's might have increased the infrastructural and other operating cost of the bank which should be decreased to increase the profit margin.

5.4.3 Measurement of Performance of Axis Bank on Internal Business Process Perspective

Table 5.49: Performance of Axis Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	53.97	35.06	23.48	35.01	17.55	15.32	13.66	18.10	15.45	13.02
Improving Operational Capabilities	Business Per Employee	Lakhs	99930.37	96456.01	113513.56	125904.72	122838.19	118619.44	120464.72	142913.80	138973.03	139083.34
	Profit Per Employee	Lakhs	726.66	880.22	1161.98	1286.39	1336.63	1366.57	1465.74	1742.32	1640.30	649.85
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	10.19	9.97	12.14	12.07	10.41	9.73	9.78	10.23	9.86	10.07
	Ratio of Intermediation cost to Total Assets	%	2.36	2.22	2.26	2.26	2.27	2.21	2.18	2.18	2.02	2.14
	Advertisemnet Cost to Total Business Volume Ratio	%	0.051	0.023	0.019	0.024	0.023	0.027	0.019	0.015	0.013	0.017
Increasing Geographical reach for customers	Growth in ATM's	Nos.	2764	3595	4293	6270	9924	11245	12922	12355	12743	14163
	Growth in Branches	Nos.	644	792	983	1390	1622	1947	2402	2589	2904	3304

Table 5.50: Performance Score of Axis Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	50	30	20	30	20	20	20	20	20	20
Improving Operational Capabilities	Business Per Employee	30	30	40	40	40	40	40	40	40	40
	Profit Per Employee	20	30	30	40	40	40	40	50	50	20
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	30	30	20	20	30	30	30	30	30	30
	Ratio of Intermediation cost to Total Assets	30	30	30	30	30	30	30	30	30	30
	Advertisemnet Cost to Total Business Volume Ratio	20	40	40	40	40	40	40	50	50	40
Increasing Geographical reach for customers	Growth in ATM's	10	10	20	20	30	30	40	40	40	40
	Growth in Branches	10	10	10	20	20	20	20	30	30	30
Total	**400**	**200**	**210**	**210**	**240**	**250**	**250**	**260**	**290**	**290**	**250**

Observations: Table 5.50 reveals that

1. the performance score of Axis Bank on Internal Business Process Perspective has been increased to 290 in 2014-15 from 200 in 2007-08. The score decreased to 250 in 2016-17 primarily due to decrease in score on productivity and cost of business operations' ratios.

2. Growth rate of business was higher in earlier years of the study but it reduced in last years as shown in Table 5.49. This may be due to lack of efficiency in internal business operations of the bank.

3. Business per employee scored 30 in 2007-08 and 2008-09. The score was 40 in remaining years. Table 5.49 shows that profit per employee dropped down in 2016-17 and scored 20. This was primarily due to decrease in profit margin of the bank because of low business growth rate.

4. Table 5.49 shows that ratio of wage bills to total cost fluctuated every year with the increase /decrease in number of employees thus scored 20 or 30. Ratio of intermediation cost to total assets scored 30 in all years. Advertisement cost to total business volume ratio was the highest 0.051 % in 2007-08 which has led the bank acquired high business in this year.

5. No. of ATM's and branches have continuously increased to provide convenient reach to customers in remote locations as shown in Table 5.49. Scores increased to 40 and 30 in 2016-17 from 10 in 2007-08 respectively.

Suggestions:

1. Bank should try to reduce cost on employees and other operational and infrastructural cost to increase the profit margin.

2. Bank should try to increase its operational efficiency by providing smooth, prompt, convenient and high quality services to their customers so that the high growth rate in acquiring business can be achieved

5.4.4 Measurement of Performance of IndusInd Bank on Internal Business Process Perspective

Table 5.51: Performance of IndusInd Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	10.80	19.00	24.76	28.08	27.91	27.14	17.44	23.63	26.94	32.10
Improving Operational Capabilities	Business Per Employee	Lakhs	110954.10	89110.54	87796.32	86374.17	82631.27	85582.79	74152.74	74746.39	78672.89	94672.01
	Profit Per Employee	Lakhs	261.60	348.95	650.77	823.81	856.58	922.61	903.16	938.09	991.52	1132.93
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	6.15	7.81	11.37	11.88	9.71	10.17	10.72	10.73	11.21	11.59
	Ratio of Intermediation cost to Total Assets	%	1.82	2.15	2.34	2.49	2.60	2.68	2.73	2.89	2.88	2.98
	Advertisemnet Cost to Total Business Volume Ratio	%	0.007	0.041	0.013	0.027	0.021	0.013	0.026	0.030	0.012	0.021
Increasing Geographical reach for customers	Growth in ATM's	Nos.	173	184	497	594	692	882	1110	1487	1800	2036
	Growth in Branches	Nos.	180	180	210	300	400	500	602	801	1000	1200

Table 5.52: Performance Score of IndusInd Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	10	20	20	30	30	30	20	20	30	30
Improving Operational Capabilities	Business Per Employee	40	30	30	30	30	30	30	30	30	30
	Profit Per Employee	10	10	20	30	30	30	30	30	30	30
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	40	40	30	30	30	30	30	30	30	30
	Ratio of Intermediation cost to Total Assets	40	30	30	30	30	30	30	30	30	30
	Advertisemnet Cost to Total Business Volume Ratio	50	30	50	40	40	50	40	40	50	40
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	10
	Growth in Branches	10	10	10	10	10	10	10	10	10	10
Total	**400**	210	180	200	210	210	220	200	200	220	210

Observations: Table 5.52 manifests that

1. the performance score of IndusInd bank on Internal Business Processes Perspective has no significant changes during the study period. Score slightly fluctuated between 2007-08 and 2016-17.

2. Scores on growth in total business has increased to 30 in 2016-17 from 10 in 2007-08 which shows the marginal improvement in operational efficiency of the bank.

3. Business per employee scored the highest 40 in 2007-08 and remained 30 in all remaining years. There has not been any significant improvements in productivity with the increase in number of employees as shown in Table 5.51. Score on profit per employee remained 30 after 2010-11 in all studied years.

4. Score on ratio of wage bills to total cost and ratio of intermediation cost to total assets was 40 in 2007-08. Both the ratio has an increasing trend due to increase in employees cost and increased expenses on infrastructure and technology as shown in Table 5.51 therefore scored 30 after 2007-08 in all the remaining years. Scores on advertisement cost to total business volume was either 40 or 50 in maximum years which shows that bank acquired more business by spending low on advertisement.

5. Although bank has increased expenses on infrastructural development and technology yet the growth in ATM's and branches was lower than competitive banks as shown in Table 5.51 so scored 10 in all the years of the study.

Suggestions:

1. Bank should try to control the employees cost as there has not been any significant changes in the employee's productivity and it decreases the profit margin too.

2. To provide convenience and easy reach to bank, bank should expand its branch and ATM network in unbanked locations.

3. Bank should improve the operational efficiency through ensuring smooth, prompt & convenient facilities at bank branches on front and back end to attract new customers.

5.4.5 Measurement of Performance of Yes Bank on Internal Business Process Perspective

Table: 5.53: Performance of Yes Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	56.47	25.85	71.46	63.91	8.52	30.77	13.93	28.42	25.91	31.06
Improving Operational Capabilities	Business Per Employee	Lakhs	72074.38	106973.10	168588.06	204384.25	154449.39	162236.83	147561.92	154232.81	139952.97	136713.81
	Profit Per Employee	Lakhs	635.00	1137.56	1643.98	1850.69	1731.65	1851.77	1838.80	1855.10	1692.96	1654.71
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	15.39	11.41	12.34	10.43	8.45	8.85	8.70	9.45	10.86	12.24
	Ratio of Intermediation cost to Total Assets	%	2.43	2.10	1.69	1.43	1.41	1.55	1.68	1.86	1.97	2.16
	Advertisemnet Cost to Total Business Volume Ratio	%	0.007	0.005	0.022	0.026	0.012	0.028	0.046	0.042	0.040	0.037
Increasing Geographical reach for customers	Growth in ATM's	Nos.	115	200	200	242	606	951	1139	1194	1609	1785
	Growth in Branches	Nos.	61	117	150	200	356	430	560	631	860	1000

Table: 5.54: Performance Score of Yes Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	50	30	50	50	10	30	20	30	30	30
Improving Operational Capabilities	Business Per Employee	30	30	50	50	50	50	50	50	40	40
	Profit Per Employee	20	30	50	50	50	50	50	50	50	50
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	20	30	20	30	30	30	30	30	30	20
	Ratio of Intermediation cost to Total Assets	30	30	40	40	40	40	40	40	40	30
	Advertisemnet Cost to Total Business Volume Ratio	50	50	40	40	50	40	20	30	30	30
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	10
	Growth in Branches	10	10	10	10	10	10	10	10	10	10
Total	400	220	220	270	280	250	260	230	250	240	220

Observations: Table 5.54 demonstrates that

1. the performance score of Yes bank on Internal Business Process Perspective has an unstable trend. Score was the highest 280 in 2010-11 which decreased to 250 in 2011-12 mainly due to sharp decline in business growth rate.

2. Table 5.53 shows that growth in total business was the highest in 2007-08, 2009-10 and 2010-11 which shows the excellent operational efficiency in these years. After 2010-11 there has been an erratic trend in business growth rate.

3. Score on business per employee was maximum 50 from the year 2009-10 to 2014-15 and then declined to 40 in 2015-16. Score on profit per employee has

a growing trend and increased to 50 in 2009-10 from 20 in 2007-08 and remained 50 in remaining years. Both the measures indicates that bank has increased its operational capabilities by utilizing its human capital efficiently.

4. Ratio of wage bills to total cost was the highest 15.39% in 2007-08 as shown in Table 5.53 and scored 20. The score increased to 30 in 2008-09 as there has been a decline in number of employees which decreased the cost of employees also. The score decreased to 20 in 2016-17 as the number of employees has increased so wage bills have also increased. Ratio of intermediation cost to total cost scored 30 in 2007-08 and 2008-09. Ratio increased after these years and score remained 40 from the year 2009-10 to 2015-16. Advertisement cost to business volume ratio has increased in last four years and scored 20 or 30.

5. No. of ATM's and branches was lower than competitive banks as shown in Table 5.53 so both ratios scored 10 in all the years.

Suggestions:

1. Bank should try to cut its cost on employees, advertisement, and other operating expenses to improve profit margin.

2. Bank should try to expand its branches and ATM's in remote areas to cover the large customer base and easy reach to banking facilities provided by bank which will simultaneously increase the business growth.

5.4.6 Measurement of Performance of Kotak Mahindra Bank on Internal Business Process Perspective

Table 5.55: Performance of Kotak Mahindra Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	45.85	0.92	38.40	31.19	32.47	28.19	12.67	25.80	82.46	14.07
Improving Operational Capabilities	Business Per Employee	Lakhs	35301.25	39223.69	50792.13	56336.80	61934.05	77142.00	69687.90	76913.56	81919.24	88906.79
	Profit Per Employee	Lakhs	324.41	335.60	604.01	786.71	865.83	1055.03	934.05	1017.71	665.32	1033.38
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	22.29	21.28	22.56	21.50	16.40	15.26	15.44	16.76	18.84	18.22
	Ratio of Intermediation cost to Total Assets	%	4.23	4.20	3.60	3.52	3.15	2.96	2.97	3.36	3.67	2.76
	Advertisemnet Cost to Total Business Volume Ratio	%	0.069	0.062	0.043	0.075	0.073	0.071	0.068	0.060	0.039	0.033
Increasing Geographical reach for customers	Growth in ATM's	Nos.	313	387	492	710	848	961	1103	1273	2032	2163
	Growth in Branches	Nos.	180	217	250	322	356	438	605	684	1333	1369

Table 5.56: Performance Score of Kotak Mahindra Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	40	10	40	30	30	30	20	30	50	20
Improving Operational Capabilities	Business Per Employee	10	20	20	20	20	30	20	30	30	30
	Profit Per Employee	10	10	20	20	30	30	30	30	20	30
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	10	10	10	10	10	20	20	10	10	10
	Ratio of Intermediation cost to Total Assets	10	10	20	20	20	30	30	20	20	30
	Advertisemnet Cost to Total Business Volume Ratio	10	10	30	10	10	10	10	10	30	30
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	10
	Growth in Branches	10	10	10	10	10	10	10	10	20	20
Total	**400**	**110**	**90**	**160**	**130**	**140**	**170**	**150**	**150**	**190**	**180**

Observations: Table 5.56 presents that

1. the performance score of Kotak Mahindra Bank on Internal Business Process Perspective has an unstable trend. The score was the highest 190 in 2015-16 and the lowest 90 in 2008-09. The fluctuations occurred primarily due to the changes in the business growth and cost of business operations.

2. Score on business per employee increased to 30 in 2012-13 from 10 in 2007-08. The score declined to 20 in 2013-14 due to low business growth on account of economic slowdown. Profit per employee was the highest 1055.03 Lakhs in 2012-13 as shown in Table 5.55 therefore scored 30 in this year. Scores declined to 20 in 2015-16 due to decline in profits and increased cost of business operations

3. Ratio of wage bills to total cost scored 10 in all the years except 2012-13 and 2013-14 where the score was 20. Ratio of intermediation cost to total assets decreased till 2012-13 then again increased as shown in Table 5.55 and score declined to 20 in 2015-16. Increase in these ratios was due to proliferation in expenses on employees primarily due to the increased staff after the merger with the ING Vysya Bank and increase in infrastructure cost because of the expansion in branches and ATM's. Advertisement cost to total business volume was too high in the beginning years therefore scored 10 in almost all years except 2009-10 where the score was 30. It declined in the years 2015-16 and 2016-17 as shown in Table 5.55 and scored 30.

4. Growth in ATM's and branches scored 10 from 2007-08 to 2016-17 and growth in branches scored 10 till 2014-15. Growth in branches & ATM's was the highest in 2015-16 due to the merger with ING Vysya Bank as shown in Table 5.55.

Suggestions:

1. Bank should try to increase its employees' productivity and operational efficiency. For this, bank should upgrade the skills and knowledge of employees on technical and behavioural aspects.

2. Employees cost and other operating cost should be controlled by the bank to increase profit margin through better cost management policies.

3. Bank should try to enhance its network to increase customer base and increase the business growth rate by keeping in consideration of various costs involved in expansion.

5.4.7 Measurement of Performance of Federal Bank on Internal Business Process Perspective

Table 5.57: Performance of Federal Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	22.84	21.80	15.42	18.98	15.64	17.32	1.43	18.36	12.51	24.58
Improving Operational Capabilities	Business Per Employee	Lakhs	64532.79	72113.69	79797.44	90650.56	99134.49	101114.99	98564.43	111201.15	116967.92	147503.52
	Profit Per Employee	Lakhs	529.96	661.15	588.33	709.90	888.28	833.25	801.46	915.90	405.32	716.63
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	12.82	12.35	12.45	15.29	11.86	11.74	12.53	13.37	14.76	14.85
	Ratio of Intermediation cost to Total Assets	%	1.63	1.60	1.64	1.76	1.75	1.80	1.98	2.07	2.13	2.11
	Advertisemnet Cost to Total Business Volume Ratio	%	0.017	0.015	0.017	0.024	0.019	0.012	0.020	0.032	0.003	0.006
Increasing Geographical reach for customers	Growth in ATM's	Nos.	532	617	732	803	1005	1179	1359	1485	1516	1667
	Growth in Branches	Nos.	603	612	672	743	950	1103	1174	1247	1252	1252

Table 5.58: Performance Score of Federal Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	20	20	20	20	20	20	10	20	20	20
Improving Operational Capabilities	Business Per Employee	20	30	30	30	30	30	30	40	40	50
	Profit Per Employee	20	20	20	20	30	30	30	30	20	20
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	20	20	20	20	30	30	20	20	20	20
	Ratio of Intermediation cost to Total Assets	40	40	40	40	40	40	40	30	30	30
	Advertisemnet Cost to Total Business Volume Ratio	40	50	40	40	40	50	40	30	50	50
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	10
	Growth in Branches	10	10	10	10	10	10	10	10	20	20
Total	**400**	**180**	**200**	**190**	**190**	**210**	**220**	**190**	**190**	**210**	**220**

Observations: Table 5.58 presents that

1. the performance score of Federal Bank on Internal Business Process Perspective has minor ups and down during the study period therefore it does not revealed any significant changes.

2. Score on growth rate in total business remained 20 in each year except 2013-14 where the score was 10 which may be because of lack of efficiency in internal business operations of the bank.

3. Score on business per employee has been increased to 50 in 2016-17 from 20 in 2007-08. This implies the bank's efficiency in utilizing its human resources. Table 5.57 shows that growth in profit per employee fluctuated with the increase/decrease in business growth and profits.

4. Ratio of wage bills to total cost was the highest 15.29 % and 14.85 % in 2010-11 and 2016-17 respectively as shown in Table 5.57 because of increase in the salary and allowances expenses of the bank. Table 5.57 also shows that ratio of intermediation cost to total assets has an upward moving trend. The score reached to 30 in 2014-15 from 40 in last years. The reason behind it was growth in the cost incurred on employees and growth in expenses related to infrastructural development. Advertisement cost to business volume ratio was the highest 0.032 % in 2014-15 as shown in Table 5.57 and scored 30.

5. Number of bank's ATM's and branches have grownup year to year as revealed in Table 5.57 but scored either 10 or 20. It was less than other competitive banks.

Suggestions:

1. To improve the operational efficiency and productivity of the bank and for achieving high business growth, bank requires highly skilled, efficient and trained employees and more effective marketing and advertisement strategies. Bank should ensures smooth, prompt and convenient services for customers at front and backend.

2. More expansion of branches and ATM's are required by the bank so that the customers of the bank can get ease access to bank's services.

5.4.8 Measurement of Performance of City Union Bank on Internal Business Process Perspective

Table 5.59: Performance of City Union Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	36.54	26.36	23.58	29.51	28.46	24.84	7.21	10.30	14.69	11.89
Improving Operational Capabilities	Business Per Employee	Lakhs	50516.19	57144.70	65137.17	78062.48	85085.80	93925.53	90424.03	96334.68	106741.31	115077.73
	Profit Per Employee	Lakhs	468.81	503.86	581.30	757.23	837.32	850.77	823.43	905.18	984.49	1072.46
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	9.69	9.26	9.49	10.01	8.28	7.78	8.27	8.72	8.46	11.19
	Ratio of Intermediation cost to Total Assets	%	1.73	1.68	1.59	1.66	1.70	1.81	1.91	1.92	1.87	2.05
	Advertisemnet Cost to Total Business Volume Ratio	%	0.029	0.024	0.036	0.052	0.069	0.052	0.052	0.052	0.037	0.031
Increasing Geographical reach for customers	Growth in ATM's	Nos.	82	121	152	231	500	788	950	1071	1325	1486
	Growth in Branches	Nos.	180	208	222	246	300	375	425	475	525	550

Table 5.60: Performance Score of City Union Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	30	30	20	30	30	20	10	10	20	10
Improving Operational Capabilities	Business Per Employee	20	20	20	30	30	30	30	30	30	40
	Profit Per Employee	20	20	20	20	30	30	30	30	30	30
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	30	30	30	30	30	40	30	30	30	30
	Ratio of Intermediation cost to Total Assets	40	40	40	40	40	40	40	40	40	30
	Advertisemnet Cost to Total Business Volume Ratio	40	40	30	20	10	20	20	20	30	30
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	10
	Growth in Branches	10	10	10	10	10	10	10	10	10	10
Total	400	200	200	180	190	190	200	180	180	200	190

Observations: Table 5.60 conveys that

1. the performance score of City Union Bank on Internal Business Process Perspective has no significant changes. The score fluctuated between 180 and 200.

2. Score on growth in total business deteriorated to 10 in 2013-14 from 30 in 2007-08. This depicts that operational efficiency of bank has declined that resulted in low business growth rate.

3. Table 5.59 shows that business per employee has an upward moving trend up to 2012-13. It declined in 2013-14 due to low business growth then again increased after 2013-14 and scored 40 in 2016-17. Profit per employee has also changed every year due to ups and down in profits in last 6 years.

4. Ratio of wage bills to total cost scored 30 in all the years except 2012-13 where the core increased to 40. Table 5.59 shows that this ratio increased highly in 2016-17 due to high increase in wage bills due to wage revision. Score on intermediation cost to total assets scored 40 in all the years till 2015-16. The score decreased to 30 due to high operating expenses on account of establishment expenses, high infrastructure and staffing expenses. Advertisement cost was high from 2010-11 to 2014-15 but the growth rate of business was lower in these years.

5. To expand the easy reach to customers in different areas, bank has continuously expanded its network through installation of ATM's and branches in nationwide locations as shown in Table 5.59 but the number of ATM's and branches was lower than competitive banks thus it scored 10 in all the years.

Suggestions:

1. Bank should ensure the effectiveness of advertisement and promotional activities to ensure the high business growth rate.

2. Bank should control the staffing and other operating expenses to reduce cost of business operations so that the profitability can be improved.

3. Bank should expand its network in more locations to cover the unbanked areas which will increase the customer base of the bank simultaneously it will increased the business of the bank.

5.4.9 Measurement of Performance of RBL Bank on Internal Business Process Perspective

Table 5.61: Performance of RBL Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	19.87	24.97	30.71	43.25	124.75	65.89	45.64	47.19	44.47	40.50
Improving Operational Capabilities	Business Per Employee	Lakhs	31008.64	37312.57	39140.34	43520.66	66804.21	79164.77	76603.46	91050.73	117711.09	130634.70
	Profit Per Employee	Lakhs	312.68	540.35	271.45	135.90	494.95	497.41	331.20	597.91	755.38	909.93
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	20.84	19.03	18.47	38.34	20.16	14.73	12.90	15.07	13.74	12.57
	Ratio of Intermediation cost to Total Assets	%	2.27	2.09	2.04	3.55	2.67	2.25	2.72	2.65	2.32	2.41
	Advertisemnet Cost to Total Business Volume Ratio	%	0.014	0.017	0.012	0.009	0.004	0.002	0.002	0.009	0.015	0.028
Increasing Geographical reach for customers	Growth in ATM's	Nos.	9	19	26	33	59	184	350	348	362	375
	Growth in Branches	Nos.	79	84	88	100	101	124	173	183	197	239

Table 5.62: Performance Score of RBL Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	20	20	30	40	50	50	40	40	40	40
Improving Operational Capabilities	Business Per Employee	10	20	20	20	20	30	30	30	40	40
	Profit Per Employee	10	20	10	10	20	20	10	20	20	30
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	10	10	10	10	10	20	20	20	20	20
	Ratio of Intermediation cost to Total Assets	30	30	30	20	30	30	30	30	30	30
	Advertisemnet Cost to Total Business Volume Ratio	50	40	50	50	50	50	50	50	50	40
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	10
	Growth in Branches	10	10	10	10	10	10	10	10	10	10
Total	**400**	**150**	**160**	**170**	**170**	**200**	**220**	**200**	**210**	**220**	**220**

Observations: Table 5.62 exhibits that

1. the performance score of RBL bank on Internal Business Process Perspective has been increased to 220 in 2016-17 from 150 in 2007-08 due to minor improvements in operational efficiency and productivity of the bank.

2. Table 5.61 reflects that growth in total business of the bank has the highest growth rate in the year 2011-12 and 2012-13. Positive growth rate of profits depicts the bank's efficiency in business processes which resulted in increased business.

3. Score on business per employee and profit per employee has increased to 40 and 30 in 2016-17 from 10 in 2007-08 respectively which depicts the bank's efficiency in utilizing its human capital which has increased the business and profits of the bank.

4. Ratio of wage bills to total cost was the highest 38.34 % in 2010-11 as shown in Table 5.61 due to the highest increase in number of employees in this year. Score on this ratio increased to 20 in 2012-13 from 10 in the previous years and remained 20 in subsequent years. Ratio of intermediation cost to total assets was the highest 3.55 % in 2010-11 as shown in Table 5.61 and scored 20 due to high expenses incurred on employees, branches expansion, depreciation, branding and technology and communication. Table 5.61 shows that advertisement cost to business volume ratio was low in all the years therefore scored either 50 or 40. It depicts spending low on advertisement has led the bank acquired more business.

5. Although there has been a regular expansion of branches and ATM's by the bank as shown in Table 5.61 yet this number was low than the other banks in the industry so scored 10 in all the years.

Suggestions:

1. Bank should try to control its operating cost as in some years it has spent much on employees, infrastructure, technology etc. which has decreased the profit margin of the bank.

2. Bank should expand its branches and ATM's in new locations so that customers can get easy access to bank services thus increase the business of the bank.

5.4.10 Measurement of Performance of Karur Vysya Bank on Internal Business Process Perspective

Table 5.63: Performance of Karur Vysya Bank on Internal Business Process Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	%	34.13	16.11	28.25	30.01	31.80	21.53	14.11	3.92	10.35	6.11
Improving Operational Capabilities	Business Per Employee	Lakhs	61372.96	64732.99	78368.51	92995.88	98820.34	101237.90	105940.62	112267.90	123648.99	127848.02
	Profit Per Employee	Lakhs	581.93	598.43	804.87	908.59	884.41	817.72	585.37	645.11	787.18	818.90
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	%	10.37	9.50	10.59	12.20	9.13	8.93	10.90	10.87	11.29	12.58
	Ratio of Intermediation cost to Total Assets	%	1.69	1.63	1.79	1.72	1.64	1.81	2.06	2.09	2.11	2.13
	Advertisemnet Cost to Total Business Volume Ratio	%	0.033	0.041	0.041	0.045	0.041	0.042	0.034	0.025	0.037	0.029
Increasing Geographical reach for customers	Growth in ATM's	Nos.	291	324	376	488	825	1277	1617	1645	1655	1747
	Growth in Branches	Nos.	291	312	335	369	451	551	572	629	667	711

Table 5.64: Performance Score of Karur Vysya Bank on Internal Business Process Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Improving Operational Excellence	Growth in Total Business	30	20	30	30	30	20	20	10	10	10
Improving Operational Capabilities	Business Per Employee	20	20	30	30	30	30	30	40	40	40
	Profit Per Employee	20	20	30	30	30	30	20	20	20	30
Reducing Cost of Business Operations	Ratio of Wage Bills to Total Cost	30	30	30	20	30	30	30	30	30	20
	Ratio of Intermediation cost to Total Assets	40	40	40	40	40	40	30	30	30	30
	Advertisemnet Cost to Total Business Volume Ratio	30	30	30	30	30	30	30	40	30	40
Increasing Geographical reach for customers	Growth in ATM's	10	10	10	10	10	10	10	10	10	10
	Growth in Branches	10	10	10	10	10	10	10	10	10	10
Total	400	190	180	210	200	210	200	180	190	180	190

Observations: Table 5.64 portrays that

1. there has not been any significant improvement in the performance of score of Karur Vysya Bank on Internal Business Process Perspective. The score was the highest 210 in 2009-10 and 2011-12.

2. Scores on growth rate in total business has declined to 10 in 2014-15 from 30 in 2007-08 which depicts the inefficient internal business operations of the bank. It may be due to lack of trained and skilled staff.

3. Business per employee increased year wise as shown in Table 5.63 thus score reached to 40 in last three years from 20 in 2007-08 & 2008-09. Profit per employee either scored 20 or 30 during the study period.

4. Ratio of wage bills to total cost scored 20 in 2010-11 and 2016-17 as the employee's cost was the highest in these years. Score on ratio of intermediation cost to total assets decreased to 30 in 2013-14 from 40 in previous years and remain the same in remaining years. It may be because of increase in establishment expenses. Advertisement cost to total business volume ratio scored either 30 or 40.

5. Growth in ATM's and Branches was lower than other banks so scored 10 in all the years. It depicts that geographical reach of the bank is low, it might have affected the business growth rate.

Suggestions:

1. Bank should expand its operations through establishing more ATM's and branches in different locations so that more customers can reach and avail services of the bank.

2. Bank should try to control its operating expenses on employees, establishment expenses, advertisement expenses etc. to improve the profitability.

5.4.11 Intra-Bank Comparison of Performance of Private Sector Banks on Internal Business Process Perspective

Intra-Bank Hypothesis

H_0- There is no significant difference in the performance of Private Sector bank on Internal Business Process Perspective during last 10 years.

H_1- There is a significant difference in the performance of Private Sector bank on Internal Business Process Perspective during last 10 years.

Table 5.65: Mean Ranks of Years for Private Sector Banks on Internal Business Process Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
HDFC Bank	8	3.31	8	3.69	8	4.13	8	4.13	8	4.06	8	4.94	8	7.19	8	7.56	8	7.81	8	8.19	80	-
ICICI Bank	8	4	8	4.44	8	3.88	8	4.31	8	5.31	8	5.25	8	6.69	8	7.56	8	7.31	8	6.25	80	-
Axis Bank	8	3.69	8	4.25	8	3.94	8	5.31	8	5.63	8	5.63	8	6	8	7.38	8	7.38	8	5.81	80	-
Indusind Bank	8	6.44	8	4.56	8	5.06	8	5.56	8	5.56	8	6.13	8	5	8	5	8	6.13	8	5.56	80	-
Yes Bank	8	4.44	8	4.69	8	6.13	8	6.75	8	6.13	8	6.25	8	5.25	8	5.88	8	5.38	8	4.13	80	-
Kotak Mahindra Bank	8	3.67	8	3.06	8	5.78	8	4.44	8	5	8	6.94	8	5.83	8	5.67	8	7.33	8	7.28	80	-
Federal Bank	8	4.5	8	5.5	8	4.94	8	4.94	8	6.19	8	6.75	8	4.94	8	5.06	8	6	8	6.19	80	-
City Union Bank	8	5.56	8	5.56	8	4.81	8	5.38	8	5.69	8	6.19	8	5.19	8	5.19	8	6	8	5.44	80	-
RBL Bank	8	3.94	8	4.19	8	4.44	8	4.19	8	5.81	8	6.88	8	5.88	8	6.44	8	6.75	8	6.5	80	-
Karur Vysya Bank	8	5.31	8	4.88	8	6.38	8	5.75	8	6.38	8	5.94	8	4.69	8	5.44	8	4.81	8	5.44	80	-

Table 5.66: Results of Kruskal Wallis Test for Private Sector Banks on Internal Business Process Perspective

Name of the Bank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	35	9	0.000	Rejected
ICICI Bank	21.267	9	0.012	Rejected
Axis Bank	20.525	9	0.015	Rejected
Indusind Bank	6.816	9	0.656	Accepted
Yes Bank	10.994	9	0.276	Accepted
Kotak Mahindra Bank	28.553	9	0.001	Rejected
Federal Bank	8.131	9	0.521	Accepted
City Union Bank	2.645	9	0.977	Accepted
RBL Bank	21.385	9	0.011	Rejected
Karur Vysya Bank	5.579	9	0.781	Accepted

Inferences:

From the above Tables 4.65 and 4.66, following inferences have been drawn for private sector banks on Internal Business Process Perspective:

1. **HDFC Bank-** Mean rank 8.19 is the highest for the year 2016-17. Table 5.66 shows that since p-value is 0.00, which is significantly less than 0.05, this

implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of HDFC Bank on Internal Business Process Perspective during last 10 years.

2. **ICICI Bank-** Mean rank 7.56 is the highest for the year 2014-15. Table 5.66 shows that since p-value is 0.012, which is less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of ICICI Bank on Internal Business Process Perspective during last 10 years.

3. **Axis Bank-** Mean rank 7.38 is the highest for the years 2014-15 and 2015-16. Table 5.66 shows that since p-value is 0.015, which is less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Axis Bank on Internal Business Process Perspective during last 10 years.

4. **IndusInd Bank-** Mean rank 6.44 is the highest for the year 2007-08. Table 5.66 shows that since p-value is 0.656, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of IndusInd Bank on Internal Business Process Perspective during last 10 years.

5. **Yes Bank-** Mean rank 6.75 is the highest for the year 2010-11. Table 5.66 shows that since p-value is 0.276, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Yes Bank on Internal Business Process Perspective during last 10 years.

6. **Kotak Mahindra Bank-** Mean rank 7.33 is the highest for the year 2015-16. Table 5.66 shows that since p-value is 0.001, which is less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Kotak Mahindra Bank on Internal Business Process Perspective during last 10 years.

7. **Federal Bank-** Mean rank 6.75 is the highest for the year 2012-13. Table 5.66 shows that since p-value is 0.521, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant

difference in the performance of Federal Bank on Internal Business Process Perspective during last 10 years.

8. **City Union Bank-** Mean rank 6.19 is the highest for the year 2012-13. Table 5.66 shows that since p-value is 0.977, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of City Union Bank on Internal Business Process Perspective during last 10 years.

9. **RBL Bank-** Mean rank 6.88 is the highest for the year 2012-13. Table 5.66 shows that since p-value is 0.011, which is less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of RBL Bank on Internal Business Process Perspective during last 10 years.

10. **Karur Vysya Bank-** Mean rank 6.38 is the highest for the years 2009-10 and 2011-12. Table 5.66 shows that since p-value is 0.781, which is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Karur Vysya Bank on Internal Business Process Perspective during last 10 years.

Major Findings and Conclusion:

It is here concluded that no significant difference has been found in the performance of IndusInd Bank, Yes Bank, Federal Bank, City Union Bank and Karur Vysya Bank on Internal Business Process Perspective of BSC when an intra-bank comparison has been drawn. A significant difference has been found in the performance of HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank and RBL Bank. It has been observed that the mean rank of most of these banks was the highest in mid/starting years of the study period on Internal Business Process Perspective. The performance of few private sector banks has decreased in last years of the study which reveals that the operational efficiency of the banks is decreasing that might have affected the performance of banks on Customer and Financial Perspective.

5.5 Measurement of Performance of Private Sector Banks on Learning & Growth and Innovation Perspective

To measure and evaluate the performance of banks on Learning & Growth and Innovation perspective 2 common employees and innovation related strategic objectives with 8 measures have been selected. The performance is then measured and scored using the performance scale created separately for each measure. Kruskal Wallis test has been applied separately on performance scores of individual bank using IBM SPSS22 to test whether bank shows any difference in the performance on Learning & Growth and Innovation Perspective when intra-bank comparison is drawn for year 2007-08 to 2016-17. Performance and intra-bank comparison on Learning & Growth and Innovation Perspective of all the selected Private Sector Banks is being given below:

5.5.1 Measurement of Performance of HDFC Bank on Learning & Growth and Innovation Perspective

Table 5.67: Performance of HDFC Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	37386	52687	51888	55752	66076	69401	68165	76286	87555	84325
	Expenditure Per Employee	000	348	425	441	509	515	571	613	623	651	769
	Percentage of employees trained	%	N.D.	N.D.	N.D.	N.D.	N.D.	75.00	100.00	100.00	100.00	100.00
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	5754000	9080000	9830000	13207311	14293166	15758792	17421882	21630195	23034150	23567617
	Number of Credit Cards	Nos.	3800000	4390000	4450000	5089800	5602439	6557564	5137406	5973188	7281693	8544721
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	125179	183769	242823	215524	244991	283274	429749
	Number of Mobile Transactions	Nos.	N.D.	N.D.	157058	261438	221633	841816	2548709	11091012	41545403	259447381
	Number of NEFT Transactions	Nos.	N.D.	8585900	15277225	36923270	59149782	97630484	141949150	184926452	232234722	344931295

Table 5.68: Performance Score of HDFC Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	20	30	30	30	40	40	40	40	50	50
	Expenditure Per Employee	20	20	20	30	30	30	30	30	30	40
	Percentage of employees trained	-	-	-	-	-	40	50	50	50	50
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	30	50	50	50	50	50	50	50	50	50
	Number of Credit Cards	40	50	50	50	50	50	50	50	50	50
	Number of POS Terminals	-	-	-	20	30	40	30	40	40	50
	Number of Mobile Transactions	-	-	10	10	10	10	20	50	50	50
	Number of NEFT Transactions	-	20	20	50	50	50	50	50	50	50
Total	**400**	**110**	**170**	**180**	**240**	**260**	**310**	**320**	**360**	**370**	**390**

Observations: Table 5.68 conveys that

1. the performance score of HDFC bank on Learning & Growth and Innovation Perspective has increased to 390 in 2016-17 from 110 in 2007-08. The performance of the bank has improved during the study period because of improvement in score on number of skilled employees, percentage of employee's trained, increased in number of debit cards, credit cards, POS Terminals, mobile transactions and NEFT transactions.

2. Score on number of employees and expenditure on employees have increased from 20 in 2007-08 to 40 and 50 in 2016-17 respectively. Bank has recruited skilled employees in each year and has increased expenditure also with the increase in number of employees to retain them. Training to maximum employees has been imparted in all the years as shown in 5.67 to improve their capabilities.

3. Score on number of debit cards, credit cards, POS terminals, number of mobile transactions and NEFT transactions have increased to maximum 50 in 2016-17. This indicates that bank is able to provide reliable IT infrastructure for providing digital products/services to its customer and has taken necessary initiatives to cope up with high pace of competition in digitalised environment.

Suggestions:

High increase in transactions through debit cards, credit cards, POS terminals, mobile banking, internet banking might have increased the cost of business operations which should be controlled to improve the profits of the bank.

5.5.2 Measurement of Performance of ICICI Bank on Learning & Growth and Innovation Perspective

Table 5.69: Performance of ICICI Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	40686	34596	41068	56969	58276	62065	72226	67857	74096	82841
	Expenditure Per Employee	000	511	570	569	594	603	627	584	700	675	692
	Percentage of employees trained	%	N.D.	N.D.	N.D.	N.D.	100	100	100	100	100	100
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	12252368	14889242	15121861	16041986	16364517	18583196	22324142	27637868	32645404	36891165
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	3361684	2844705	2866278	3180205	3329101	3653052	4253992
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	182821	155879	197852	293166	221663	200759	306593
	Number of Mobile Transactions	Nos.	N.D.	N.D.	305947	842868	2135831	6554067	14786206	31707045	71348052	143407274
	Number of NEFT Transactions	Nos.	N.D.	10322036	14342692	30782666	47523770	74832000	109144889	144449942	171815675	237308083

Table 5.70: Performance Score of ICICI Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	30	20	30	30	30	40	40	40	40	50
	Expenditure Per Employee	30	30	30	30	30	30	30	30	30	30
	Percentage of employees trained	-	-	-	-	50	50	50	50	50	50
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	50	50	50	50	50	50	50	50	50	50
	Number of Credit Cards	-	-	-	40	30	30	40	40	40	50
	Number of POS Terminals	-	-	-	30	20	30	40	30	30	40
	Number of Mobile Transactions	-	-	10	10	20	40	50	50	50	50
	Number of NEFT Transactions	-	20	20	40	50	50	50	50	50	50
Total	**400**	110	120	140	230	280	320	350	340	340	370

Observations: Table 5.70 displays that

1. the performance of ICICI bank on Learning & Growth and Innovation Perspective has improved during the studied years and the score increased to 370 in 2016-17 from 110 in 2007-08 mainly due to increase in number of skilled employees and expenditure on them, percentage of employees trained, increase in number of transactions through digital channels.

2. Table 5.69 shows that growth in number of employees was the highest in 2010-11 due to the merger of ICICI bank with the Bank of Rajasthan Ltd. The expenditure on employees does not reveal any significant difference and scored

30 in all the years. Bank provided training to 100% of its employees during the last 6 years as shown in Table 5.69 therefore scored 50 from 2011-12 to 2016-17.

3. Bank has continuously increased the number of debit cards, credit cards and POS terminals as shown in Table 5.69 to increase the cashless transactions at purchase outlets and to avoid rush at bank branches. Scores on number of mobile transactions and NEFT transactions reached to 50 in 2016-17 from 10 or 20 in beginning years of the study. Higher increase in transactions through digitalised channels depicts the bank's efficiency in providing highly reliable digital platform to their customers.

Suggestions:

1. To motivate and retain employees for long term and improving their productivity, expenditure per employee on training and other facilities should be increased by the bank.

2. High increase in transactions through mobile banking, internet banking and POS terminals might have increased the cost on IT Infrastructure which ultimately decreases the profit margin so bank should try to cut this cost.

5.5.3 Measurement of Performance of Axis Bank on Learning & Growth and Innovation Perspective

Table 5.71: Performance of Axis Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	14739	20624	21640	26341	31738	37901	42420	42230	50135	56617
	Expenditure Per Employee	000	455	484	580	613	655	627	613	738	673	687
	Percentage of employees trained	%	100	100	100	100	72.05	63.41	82.04	97.46	99.92	102
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	8700000	11800000	8600000	10165381	12499090	14291676	13319675	14303201	15520317	20175013
	Number of Credit Cards	Nos.	450000	533000	550000	634499	778885	1100895	1384836	1736892	2413568	3346735
	Number of POS Terminals	Nos.	0	0	0	186708	202316	215646	248482	248786	263951	433034
	Number of Mobile Transactions	Nos.	N.D.	N.D.	4733	43052	333691	4410330	12230672	21672001	113093332	114417733
	Number of NEFT Transactions	Nos.	N.D.	759384	5629579	16109102	23468010	53356970	82119797	109260915	138714235	219844222

Table 5.72: Performance Score of Axis Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	10	20	20	20	20	20	30	30	30	30
	Expenditure Per Employee	20	20	30	30	30	30	30	30	30	30
	Percentage of employees trained	50	50	50	50	40	40	50	50	50	50
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	50	50	50	50	50	50	50	50	50	50
	Number of Credit Cards	10	10	10	10	10	20	20	20	30	40
	Number of POS Terminals	-	-	-	30	30	30	40	40	40	50
	Number of Mobile Transactions	-	-	10	10	10	30	50	50	50	50
	Number of NEFT Transactions	-	10	10	30	30	50	50	50	50	50
Total		**400**	**140**	**160**	**180**	**230**	**220**	**270**	**320**	**320**	**330**	**350**

Observations: Table 5.72 exhibits that

1. the performance score of Axis Bank on Learning & Growth and Innovation Perspective has a significant growth. The score on this perspective has increased to 350 in 2016-17 from 110 in 2007-08. This was due to increase in score on all the measures of this perspective.

2. Bank has continuously increased expenditure on employees as shown in Table 5.71 with the increase in number of employees. Table 5.71 also shows that bank has also provided training to maximum number of the employees in each year to increase employee's efficiency and productivity.

3. Score on number of debit cards was 50 in all the years. Score on credit cards was 10 in 2007-08 and increased to 40 in 2016-17. Table 5.71 shows that the number of POS terminals have also been increased by the bank every year to increase cashless transactions at purchase outlets. Number of NEFT and Mobile banking transactions has increased fastly as the bank focused on digital transactions by offering simple products, secured payments and improved processes which are basic needs for digitalised payments.

Suggestions:

High investment in technology to increase digital transactions might have increased the operational cost which should be minimized by the bank to improve profit margin.

5.5.4 Measurement of Performance of IndusInd Bank on Learning & Growth and Innovation Perspective

Table 5.73: Performance of IndusInd Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	2869	4251	5283	7008	9370	11502	15590	19121	23060	25314
	Expenditure Per Employee	000	425	440	550	546	518	575	519	513	536	601
	Percentage of employees trained	%	100	100	100	100	100	100	100	100	100	100
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	639181	910307	1115139	1626248	2057140	2555730	3353139
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	N.D.	201056	228121	277338	340312	440527	582848
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	N.D.	111	157	228	469	1039	28034
	Number of Mobile Transactions	Nos.	N.D.	N.D.	N.D.	N.D.	5268	37276	60325	192351	1626449	15923843
	Number of NEFT Transactions	Nos.	N.D.	620117	1119398	2530974	3783216	6347493	9250061	12832043	21283737	28756672

Table 5.74: Performance Score of IndusInd Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	10	10	10	10	10	10	10	10	20	20
	Expenditure Per Employee	20	20	30	30	30	30	30	30	30	30
	Percentage of employees trained	50	50	50	50	50	50	50	50	50	50
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	10	10	10	10	20	20	20
	Number of Credit Cards	-	-	-	-	10	10	10	10	10	10
	Number of POS Terminals	-	-	-	-	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	-	-	10	10	10	10	10	50
	Number of NEFT Transactions	-	10	10	10	10	10	20	20	30	40
Total		**400**	**80**	**90**	**100**	**110**	**140**	**140**	**150**	**160**	**180**	**230**

Observations: Table 5.74 portrays that

1. the performance score of IndusInd Bank on Learning & Growth and Innovation Perspective has increased to 230 in 2016-17 from 80 in 2007-08. This was primarily due to introduction of innovations in digital products and services which increase in transactions through digitalised channels.

2. Score on number of skilled employees with bank increased to 20 in 2015-16 from 10 in 2007-08. To retain and motivate employees bank has slightly increase the expenditure also as shown in Table 5.73 so score has also increased to 30 in 2009-10 from 20 in 2007-08. Bank has provided training to 100% of

its employees in each year as shown in Table 5.73 and scored 50 in all the years but it has not much improved the productivity of the employees.

3. Score on growth in number of debit cards increased to 20 in 2014-15 from 10 in previous years and remained 20 after 2014-15. No. of credit cards and no. of POS terminals scored 10 in all the years. Table 5.73 shows that transactions through mobile banking and internet banking has rapidly increased as customers inclination towards digital channels has increased. Score on number of mobile transactions has increased to 50 in 2016-17 from 10 in 2011-12 and score on number of NEFT transactions increased to 40 in 2016-17 from 10 in 2008-09.

Suggestions:

1. Although bank has provided training to 100% of its employees in each year but bank should ensure the effectiveness of the training imparted as it has not much improved the operational efficiency of the bank.

2. Bank should launch more innovative digitalised products & services which are easy to use, user friendly and more secured as per customer's requirement to increase the transactions through digitalised channels.

5.5.5 Measurement of Performance of Yes Bank on Learning & Growth and Innovation Perspective

Table 5.75: Performance of Yes Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	3150	2671	2906	3929	5642	7024	8798	10810	15000	20125
	Expenditure Per Employee	000	643	816	884	922	842	933	892	906	865	897
	Percentage of employees trained	%	N.D.	N.D.	N.D.	N.D.	80.60	83.23	94.58	85.80	81.46	80.12
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	174097	252915	417063	611759	842633	1118873	1607968
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	93569
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	1505	3229	5105	6437	8502	18928	43985
	Number of Mobile Transactions	Nos.	N.D.	N.D.	226	111489	589148	2232	970590	5805402	7483124	10493959
	Number of NEFT Transactions	Nos.	N.D.	675490	1716786	3289522	5044401	10659501	17722856	26180650	42061400	79663730

Table 5.76: Performance Score of Yes Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	10	10	10	10	10	10	10	10	10	20
	Expenditure Per Employee	30	40	40	40	40	40	40	40	40	40
	Percentage of employees trained	-	-	-	-	50	50	50	50	50	50
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	10	10	10	10	10	10	10
	Number of Credit Cards	-	-	-	-	-	-	-	-	-	10
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	10	10	10	10	10	30	40	50
	Number of NEFT Transactions	-	10	10	10	10	20	30	40	50	50
Total	**400**	**40**	**60**	**70**	**90**	**140**	**150**	**160**	**190**	**210**	**240**

Observations: Table 5.76 depicts that

1. the performance score of Yes Bank on Learning & Growth and Innovation Perspective has improved with the each passing year. The score reached to 240 in 2016-17 from 40 in 2007-08 as the score on measures such as number of mobile and NEFT transactions, growth in number of employees and expenditure on employees have improved during the last years of the study.

2. Table 5.75 shows that bank has increased the number of skilled employees in each year. The score increased to 20 in 2016-17 from 10 in previous years. The expenditure on employees scored 40 in all the years from 2008-09. Bank has imparted training to maximum of its employees each year as shown in Table 5.75 and scored 50 in each year.

3. Number of debit cards issued by the bank has increased constantly as seen in Table 5.75 but the numbers was less than the competitive banks so it scored 10 in all the years. Bank has started issuing credit cards in 2016-17 only and scored 10. No. of POS terminals installed scored 10 in all the years. Growth in transactions through mobile and internet banking has a wild growth as shown in Table 5.76 so score on mobile and NEFT transactions has increased to 50 in 2016-17 from 10 in starting years.

Suggestions:

1. Bank should increase the number of skilled employees and impart training to all of its employees on technical and behavioural skills to improve the operational efficiency and productivity.

2. To reduce and avoid rush for cash transactions at bank's branches and retail outlets bank should try to increase the number of debit cards, credit cards and POS terminals by offering best offers on them.

5.5.6 Measurement of Performance of Kotak Mahindra Bank on Learning & Growth and Innovation Perspective

Table 5.77: Performance of Kotak Mahindra Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	9058	8227	8793	10400	12532	12898	16086	18335	31410	33013
	Expenditure Per Employee	000	573	709	664	754	720	834	729	800	897	839
	Percentage of employees trained	%	N.D.	N.D.	N.D.	N.D.	N.D.	100.0	N.D.	N.D.	84.00	82.00
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	1185510	1491814	1587148	1135841	1586122	3567142	4968601
	Number of Credit Cards	Nos.	N.D.	88000	94000	169108	203102	328354	435120	530011	727207	1044402
	Number of POS Terminals	Nos.	0	0	0	0	0	0	0	0	0	0
	Number of Mobile Transactions	Nos.	N.D.	N.D.	1869	5366	4311	5319	1344783	5087235	16828610	39027839
	Number of NEFT Transactions	Nos.	N.D.	702143	1634657	3729460	6677935	11933266	19923132	25144884	37371092	69394165

Table 5.78: Performance Score of Kotak Mahindra Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	10	10	10	10	10	10	10	10	20	20
	Expenditure Per Employee	30	30	30	40	30	40	30	40	40	40
	Percentage of employees trained	-	-	-	-	-	50	-	-	50	50
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	10	10	10	10	10	20	30
	Number of Credit Cards	-	10	10	10	10	10	10	10	10	20
	Number of POS Terminals	-	-	-	-	-	-	-	-	-	-
	Number of Mobile Transactions	-	-	10	10	10	10	10	30	50	50
	Number of NEFT Transactions	-	10	10	10	10	20	30	40	50	50
Total	**400**	**40**	**60**	**70**	**90**	**80**	**150**	**100**	**140**	**240**	**260**

Observations: Table 5.78 highlights that

1. the performance of Kotak Mahindra bank was very poor on different measures of Learning & Growth and Innovation Perspective. With the each passing year it has improved steadily and score reached to 260 in 2016-17 from 40 in 2007-08.

2. Bank has recruited skilled employees each year and scored 10 in till 2014-15. Table 5.77 shows that increase in no. of employees and expenditure per employee was the highest in 2015-16 as the merger between the bank and ING Vysya took place. Bank has disclosed the information on training of employees for the year 2012-13, 2015-16 and 2016-17 where the score was 50.

3. Number of debit cards and credit cards have been amplified by the bank each year as shown in Table 5.77 and score increased to 30 and 20 in 2016-17 respectively from 10 in 2011-12 respectively. Bank has not yet installed POS terminals. There has been a speedy growth in transactions through mobile banking and internet banking as shown in Table 5.77. Score increased to 50 in 2015-16 from 10 in beginning years.

Suggestions:

1. Bank should increase the number of trained and skilled staff so that operational efficiency and productivity can be enriched. Bank should disclose the information on training of employees in their annual reports.

2. Bank should try to increase the number of debit cards to avoid rush at cash counters of bank and should start installing POS terminals and issuing more credit cards for increasing cashless transactions at purchase outlets.

5.5.7 Measurement of Performance of Federal Bank on Learning & Growth and Innovation Perspective

Table 5.79: Performance of Federal Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	6945	7570	7896	8270	8745	10059	10467	10981	11735	11593
	Expenditure Per Employee	000	391	419	464	581	622	628	737	812	897	1004
	Percentage of employees trained	%	N.D.	N.D.	N.D.	67.0	34.5	N.D.	32.1	N.D.	53.1	54.3
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	3251543	2537807	3107591	3797673	4554704	4797573	5569590
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	0	0	0	0	0	0	0
	Number of POS Terminals	Nos.	N.D.	N.D.	N.D.	1885	4770	7501	8922	8822	8953	10437
	Number of Mobile Transactions	Nos.	0	0	0	1678	28902	142779	317089	666952	2405486	10301924
	Number of NEFT Transactions	Nos.	N.D.	273981	704976	2180161	3892093	6603641	12507728	16128822	20937856	29746022

Table 5.80: Performance Score of Federal Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	10	10	10	10	10	10	10	10	10	10
	Expenditure Per Employee	20	20	20	30	30	30	30	40	40	50
	Percentage of employees trained	-	-	-	40	20	-	20	-	30	30
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	20	20	20	20	30	30	30
	Number of Credit Cards	-	-	-	0	0	0	0	0	0	0
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	-	10	10	10	10	10	20	50
	Number of NEFT Transactions	-	10	10	10	10	10	20	30	30	40
Total	400	30	40	40	130	110	90	120	130	170	220

Observations: Table 5.80 presents that

1. the performance score of Federal bank on Learning & Growth and Innovation Perspective has increased to 220 in 2016-17 form 30 in 2007-08. The difference in score was mainly due to non-availability of data on few measures in early years and speedy growth in mobile and internet banking transactions.

2. Score on growth in number of skilled employees was 10 in all the years. Score on expenditure per employee increased rapidly than growth in number of employees. The score reached to 50 in 2016-17 from 20 in 2007-08. Percentage of employees trained was low in all the years of disclosure of information on this measures as shown in Table 5.79. Less number of skilled employees, less trained employees might have affected the operational efficiency of the bank.

3. Score on number of debit cards increased to 30 in 2016-17 from 20 in 2010-11. No credit cards have been issued by the bank yet. Score on number of POS terminals was 10 in all the years. Score on number of mobile transactions and NEFT transaction have been increased to 50 and 40 in 2016-17 respectively from 10 in starting years. Poor customer experiences might have affected the business growth and profits of the bank as there has not been any significant changes in quantity of transactions through digital channels.

Suggestions:

1. Bank should recruit skilled employees and trained maximum number of employees on technical and behavioural skills to enhance operational efficiency and productivity growth.

2. Bank should proliferate the quantity, quality and innovations in digitalised products & services to attract new customers and to retain the existing ones.

5.5.8 Measurement of Performance of City Union Bank on Learning & Growth and Innovation Perspective

Table 5.81: Performance of City Union Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	2170	2424	2628	2840	3347	3785	4215	4364	4517	4688
	Expenditure Per Employee	000	221	268	305	358	365	399	440	482	472	636
	Percentage of employees trained	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	45.93
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	455442	732220	937182	1205398	1461551	1502382	1633790
	Number of Credit Cards	Nos.	0	0	0	0	0	0	0	0	0	626
	Number of POS Terminals	Nos.	0	0	0	678	1424	2415	2672	3209	4044	9798
	Number of Mobile Transactions	Nos.	0	0	0	2929	12912	28901	33664	92736	407606	2346076
	Number of NEFT Transactions	Nos.	N.D.	40432	142758	564284	1236241	3384784	5519211	7011615	23915260	12438166

Table 5.82: Performance Score of City Union Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	10	10	10	10	10	10	10	10	10	10
	Expenditure Per Employee	10	20	20	20	20	20	20	20	20	30
	Percentage of employees trained	-	-	-	-	-	-	-	-	-	30
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	10	10	10	10	10	10	10
	Number of Credit Cards	-	-	-	-	-	-	-	-	-	10
	Number of POS Terminals	-	-	-	10	10	10	10	10	10	10
	Number of Mobile Transactions	-	-	-	10	10	10	10	10	10	20
	Number of NEFT Transactions	-	10	10	10	10	10	10	10	30	20
Total	**400**	**20**	**40**	**40**	**70**	**70**	**70**	**70**	**70**	**90**	**140**

Observations: Table 5.82 demonstrates that

1. the performance score of City Union Bank on Learning & Growth and Innovation Perspective was too low due to poor performance on different measures of this perspective. Score increased to 140 in 2016-17 from 20 in 2007-08.

2. Score on growth in number of skilled employees remained 10 in all the years. Table 5.81 shows that bank has increased the expenditure on employees every

year with the increase in number of employees and score reached to 30 in 2016-17 from 10 in 2007-08. Table 5.81 also shows that bank has not disclosed the information on training of employees from the year 2007-08 to 2015-16 in its annual reports. Percentage of employees trained was too low as depicted in Table 5.81 and scored 30 in 2016-17. Less skilled employees, less expenditure on them and less trained employees have affected the productivity and operational efficiency of the bank.

3. Score on debit cards and POS terminals remained 10from 2010-11 to 2016-17. Bank started issuing credit cards in 2016-17 therefore it scored 10. Number of mobile transactions and NEFT transactions has an increasing trend as shown in Table 5.81. Score increased to 20 in 2016-17 from 10 in starting years.

Suggestions:

1. Bank should disclose the quantitative information on training and development of employees and should provide training to maximum number of employees on technical and behavioural skills to improve operational efficiency.

2. Bank should take more initiatives to provide more reliable, secured, user friendly facilities in digitalized products & services to increase the number of cashless transactions, transactions through mobile and internet banking.

5.5.9 Measurement of Performance of RBL Bank on Learning & Growth and Innovation Perspective

Table 5.83: Performance of RBL Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	544	565	704	907	1328	1859	2798	3295	3872	4902
	Expenditure Per Employee	000	315	363	325	797	634	673	661	868	955	910
	Percentage of employees trained	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	69.7	88.4	100.0
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	6993	33038	47310	110764	335314	740805	586004
	Number of Credit Cards	Nos.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	138426	88405	149820	281236
	Number of POS Terminals	Nos.	0	0	0	0	0	0	10	419	807	80672
	Number of Mobile Transactions	Nos.	0	0	0	0	0	0	97	26493	145785	634771
	Number of NEFT Transactions	Nos.	0	1944	8133	46146	76471	181501	555567	1879234	4684069	7250910

Table 5.84: Performance Score of RBL Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	10	10	10	10	10	10	10	10	10	10
	Expenditure Per Employee	20	20	20	40	30	30	30	40	40	40
	Percentage of employees trained	-	-	-	-	-	-	-	40	50	50
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	10	10	10	10	10	10	10
	Number of Credit Cards	-	-	-	-	-	-	10	10	10	10
	Number of POS Terminals	-	-	-	-	-	-	10	10	10	20
	Number of Mobile Transactions	-	-	-	-	-	-	10	10	10	10
	Number of NEFT Transactions	-	10	10	10	10	10	10	10	10	10
Total	**400**	**30**	**40**	**40**	**70**	**60**	**60**	**90**	**140**	**150**	**160**

Observations: Table 5.84 manifests that

1. the performance score of RBL Bank on Learning & Growth and Innovation Perspective has improved gradually and increased to 160 in 2016-17 from 30 in 2007-08 as the information for few measures of this perspective have not been disclosed in beginning years. Besides this, the performance score on all the measures was also low.

2. Table 5.83 shows that number of skilled employees has increased every year but the growth was lower than other banks so scored 10 in each year. With the increase in no. of employees bank has increased expenses also. The score increased to 40 in 2016-17 from 20 in 2007-08. Bank has provided training to its maximum employees in last three year as shown in Table 5.83 and scored 40 in 2014-15 and 50 in 2015-16 and 2016-17.

3. Score on number of debit cards and credit cards was 10 in some years. Bank acquired credit card business of RBS in 2013-14. Score on number of POS terminals has increased to 20 in 2016-17 from 10 in 2013-14. Score on mobile banking and NEFT transactions remained 10 in last four years. Although there has been a growing trend in both as shown in Table 5.83 but the growth was lower than other banks in the industry. All this depicts that bank is too behind in introducing innovative and highly digitalised product and services which resulted in poor customer experiences with the bank.

Suggestions:

1. Bank should recruit more skilled employees and trained them on various technical and behavioural skills to improve the operational efficiency and productivity.

2. Bank should offer simplified, customer friendly, secured and authenticated products and services to increase the transactions through digital channels.

5.5.10 Measurement of Performance of Karur Vysya Bank on Learning & Growth and Innovation Perspective

Table 5.85: Performance of Karur Vysya Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	Nos.	3580	3941	4175	4574	5673	6730	7339	7197	7211	7400
	Expenditure Per Employee	000	284	312	391	502	466	511	719	760	759	822
	Percentage of employees trained	%	55.8	51.3	63.6	63.2	71.6	55.05	49.4	70.9	54.5	27.0
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	Nos.	N.D.	N.D.	N.D.	2126332	2630283	2232768	2848556	3507481	3867468	4422799
	Number of Credit Cards	Nos.	0	0	0	0	0	0	0	0	0	0
	Number of POS Terminals	Nos.	0	0	0	0	0	5844	8434	9234	10157	22068
	Number of Mobile Transactions	Nos.	0	0	0	29	5154	34754	109631	297455	968762	5070389
	Number of NEFT Transactions	Nos.	0	172850	396306	1222056	2386895	4029746	6934121	11908412	13128048	18758375

Table 5.86: Performance Score of Karur Vysya Bank on Learning & Growth and Innovation Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Recruit skilled employees and Retrain & Retain Employees	Number of Skilled Employees	10	10	10	10	10	10	10	10	10	10
	Expenditure Per Employee	20	20	20	30	20	30	30	40	40	40
	Percentage of employees trained	30	30	40	40	40	30	30	40	30	20
Improving Digital Customer Experience through increasing Quantity, Quality and Innovations in digital products and services	Number of Debit Cards	-	-	-	20	20	20	20	20	20	30
	Number of Credit Cards	-	-	-	-	-	-	-	-	-	-
	Number of POS Terminals	-	-	-	-	-	10	10	10	10	10
	Number of Mobile Transactions	-	-	-	10	10	10	10	10	10	30
	Number of NEFT Transactions	-	10	10	10	10	10	10	20	20	30
Total	**400**	**60**	**70**	**80**	**120**	**110**	**120**	**120**	**150**	**140**	**170**

Observations: Table 5.86 indicates that

1. the performance score of Karur Vysya Bank on Learning & Growth and Innovation Perspective had no significant changes. The score increased to 170 in 2016-17 from 60 in 2007-08.

2. Number of skilled employees was low than other banks as shown in Table 5.85 so it scored 10 during the study period. Table 5.85 shows that bank increased the expenditure on employees with the increase in number of employees so score increased to 40 in 2014-15 and remained the same upto 2016-17. Percentage of employees trained was too low 27.0 in 2016-17 as shown in Table 5.85.

3. Score on number of debit cards issued by the bank increased to 30 in 2016-17 from 20 in previous years. No credit cards has been issued by the bank. Score on POS terminals remained 10 in last five years. Score on number of transactions through mobile banking and NEFT has been increased to 30 in 2016-17 from 10 in starting years.

Suggestions:

1. Percentage of employees trained was too low in each year so bank should try to impart training to maximum employees on technical and behavioural skills so as to improve the operational efficiency of the bank.

2. More innovations in digitalised products and services with convenient, user-friendly, secured facilities should be launched by the bank to attract new customers and to retain existing ones.

5.5.11 Intra-Bank Comparison of Performance of Private Sector Banks on Learning & Growth and Innovation Perspective

Intra-Bank Hypothesis

H_0- There is no significant difference in the performance of Private Sector bank on Learning & Growth and Innovation Perspective during last 10 years.

H_1- There is a significant difference in the performance of Private Sector bank on Learning & Growth and Innovation Perspective during last 10 years.

Table 5.87: Mean Ranks of Years for Private Sector Banks on Learning & Growth and Innovation Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
HDFC Bank	4	2.1	5	4.5	6	4.5	7	5.4	7	6.1	8	6.1	8	6.1	8	6.1	8	6.7	8	7.4	69	-
ICICI Bank	3	4.83	4	4	5	4.83	7	4.83	8	4.83	8	6.17	8	6.17	8	6.17	8	6.17	8	7	67	-
Axis Bank	5	3.5	6	4.1	7	5.1	8	5.1	8	4.1	8	4.9	8	6.8	8	6.8	8	7.2	8	7.4	74	-
Indusind Bank	3	3.13	4	3.88	4	5.13	5	5.13	8	5.13	8	5.13	8	6	8	6	8	7.63	8	7.88	64	-
Yes Bank	2	3	3	5.5	4	5.5	7	5.5	7	5.5	7	5.5	7	5.5	7	5.5	7	5.5	8	8	59	-
Kotak Mahindra Bank	2	3.75	4	3.75	5	3.75	6	6.25	6	3.75	7	6.25	6	3.75	6	6.25	7	8.75	7	8.75	56	-
Federal Bank	2	3.75	3	3.75	3	3.75	8	5.5	8	5.5	7	5.5	8	5.5	7	7	8	7	8	7.75	62	-
City Union Bank	2	2.5	3	5.33	3	5.33	7	5.33	7	5.33	7	5.33	7	5.33	7	5.33	7	7	8	8.17	58	-
RBL Bank	2	3.75	3	3.75	3	3.75	4	7	4	5.25	4	5.25	7	5.25	8	7	8	7	8	7	51	-
Karur Vysya Bank	3	4	3	4	3	5.5	6	6.67	6	5.5	7	5.17	7	5.17	7	7.67	7	6.17	7	5.17	56	-

Table 5.88: Results of Kruskal Wallis Test for Private Sector Banks on Learning & Growth and Innovation Perspective

Name of the Bank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	24.664	9	0.003	Rejected
ICICI Bank	9	9	0.437	Accepted
Axis Bank	19.073	9	0.025	Rejected
Indusind Bank	18.474	9	0.03	Rejected
Yes Bank	10	9	0.350	Accepted
Kotak Mahindra Bank	13.39	9	0.146	Accepted
Federal Bank	9	9	0.437	Accepted
City Union Bank	15.821	9	0.071	Accepted
RBL Bank	9	9	0.437	Accepted
Karur Vysya Bank	6.511	9	0.688	Accepted

Inferences:

Following inferences have been drawn from the above Table 5.87 and 5.88:

1. **HDFC Bank-** Mean rank 7.40 is maximum of the year 2016-17. Table 5.88 shows that since p-value is 0.003, which is significantly less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of HDFC Bank on Learning & Growth and Innovation perspective during last 10 years.

2. **ICICI Bank-** Mean rank 7.00 is maximum of the year 2016-17. Table 5.88 shows that since p-value is 0.437, which is significantly greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of ICICI Bank on Learning & Growth and Innovation perspective during last 10 years.

3. **Axis bank-** Mean rank 7.4 for the year 2016-17 is maximum. Table 5.88 shows that since p-value is 0.025, which is less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of Axis Bank on Learning & Growth and Innovation perspective during last 10 years.

4. **IndusInd Bank-** Mean rank 7.88 is maximum for the year 2016-17. Table 5.88 shows that since p-value is 0.030, which is less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of IndusInd Bank on Learning & Growth and Innovation Perspective during last 10 years.

5. **Yes Bank-** Mean rank 8 is maximum for the year 2016-17. Table 5.88 shows that since p-value is 0.350, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Yes Bank on Learning & Growth and Innovation Perspective during last 10 years.

6. **Kotak Mahindra Bank-** Mean rank 8.75 is maximum for the year 2015-16 and 2016-17. Table 5.88 shows that since p-value is 0.146, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Kotak Mahindra Bank on Learning & Growth and Innovation Perspective during last 10 years.

7. **Federal Bank-** Mean rank 7.75 is maximum for the year 2016-17. Table 5.88 shows that since p-value is 0.437, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Federal Bank on Learning & Growth and Innovation Perspective during last 10 years.

8. **City Union Bank-** Mean rank 8.17 is maximum for the year 2016-17. Table 5.88 shows that since p-value is 0.071, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of City Union Bank on Learning & Growth and Innovation Perspective during last 10 years.

9. **RBL Bank-** Mean rank 7 is same and maximum for the year 2010-11 and from year 2014-15 to 2016-17. Table 5.88 shows that since p-value is 0.437, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of RBL Bank on Learning & Growth and Innovation Perspective during last 10 years.

10. **Karur Vysya Bank-** Mean rank 7.67 is maximum for the year 2014-15. Table 5.88 shows that since p-value is 0.688, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Karur Vysya Bank on Learning & Growth and Innovation Perspective during last 10 years.

Major Findings and Conclusion:

It is here concluded that no significant difference has been found in the performance of all private sector banks except HDFC Bank, Axis Bank and IndusInd Bank on Learning & Growth and Innovation Perspective when an intra-bank comparison has been drawn. Highest mean in the last years of the study period denotes the better performance in these years on this Perspective of BSC.

5.6 Measurement of Performance of Private Sector Banks on Social and Environment Perspective

To measure and evaluate the performance of banks on Social and Environment Perspective 4 common sustainability related strategic objectives with 8 measures have been selected. The performance is then measured and scored using the

performance scale created separately for each measure. Kruskal Wallis test has been applied separately on performance scores of individual bank using IBM SPSS22 to test whether bank shows any difference in the performance on social and environment Perspective when intra-bank comparison is drawn for year 2007-08 to 2016-17. Performance and intra-bank comparison on Social and Environment Perspective of all the selected Private Sector Banks is being given below:

5.6.1 Measurement of Performance of HDFC Bank on Social and Environment Perspective

Table 5.89: Performance of HDFC Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	0.97	1.33	1.75	1.51	2.96
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	15.35	17.72	13.31	16.62	17.18	17.28
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	23.78	27.76	28.00	37.36	45.01	51.99	56.01	54.98	55.00	52.41
	Ratio of Priority Sector Advances to Total Advances	%	27.47	30.12	35.09	34.24	32.68	32.01	29.58	29.03	30.52	29.31
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1330752	1593634	1733139
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	33.05	46.17

Table 5.90: Performance of HDFC Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. in Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.95	1.67	2.68
	Do you have policies for Environnment Sustainability?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes

Table 5.91: Performance Score of HDFC Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	20	30	40	40	50
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	30	30	20	30	30	30
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	20	20	20	30	40	40	40	40	40	40
	Ratio of Priority Sector Advances to Total Advances	30	40	40	40	40	40	30	30	40	30
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	20	20
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	10	20	30
	Steps Taken for Environment Protection	-	-	-	-	-	50	50	50	50	50
Total	400	50	60	60	70	110	180	170	210	250	260

Observations: Table 5.91 reveals that

1. the performance score of HDFC bank on has been increased to 260 in 2016-17 from 50 in 2007-08 due to emphasis of bank on social and environment concerns in last years of the study period.

2. CSR expenditure of the bank has an increasing trend in the last five years as shown in Table 5.89 so score increased to 50 in 2016-17 from 20 in 2011-12.

3. Score on number of female employees scored 30 in all the last six years of the study except 2013-14 where the score was 20. The percentage of female employees in the total workforce was low as shown in Table 5.90.

4. To promote financial inclusion plans, bank has continuously expanded its branches more in rural and semi-urban areas as shown in Table 5.89 therefore ratio scored 40 from 2011-12 to 2016-17. Score on ratio of priority sector lending to total advances ratio scored 30 or 40 in all the years. Number of PMJDY accounts and deposits in these accounts have not increased much and scored 10 or 20 in all years.

5. Score on investment in promoting environment has increased from 10 in 2014-15 to 30 in 2016-17. Table 5.90 shows that bank has taken all the necessary steps for protecting environment and scored 50 in last five years.

Suggestions:

1. To promote gender equality bank should increase the number of female employees in its workforce.

2. Bank should try to increase the advances given to priority sectors to promote the development of all sectors of the economy.

3. To provide financial assistance to weaker sections of the society bank should try to increase the beneficiaries in PMJDY accounts.

4. Bank should increase the percentage of expenditure on environment protection.

5.6.2 Measurement of Performance of ICICI Bank on Social and Environment Perspective

Table 5.92: Performance of ICICI Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	0.15	0.56	2.23	2.53	1.90	1.76	1.78
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	23.61	24.54	24.82	25.38	26.83
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	40.97	42.21	38.49	42.03	44.19	46.87	52.04	51.85	51.53	51.81
	Ratio of Priority Sector Advances to Total Advances	%	26.48	28.42	29.79	24.68	23.37	20.60	19.06	19.67	21.24	22.95
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	2168005	2909202	3346385
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	-14.93	52.40

Table 5.93: Performance of ICICI Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	2.89
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No

Table 5.94: Performance Score of ICICI Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	10	20	50	50	40	40	40
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	40	40	40	50	50
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	30	30	30	30	30	40	40	40	40	40
	Ratio of Priority Sector Advances to Total Advances	30	30	30	30	30	30	20	20	30	30
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	-	30
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	-	-	30
	Steps Taken for Environment Protection	-	-	-	-	-	10	10	10	10	10
Total	400	60	60	60	70	80	170	160	160	180	240

Observations: Table 5.94 shows that

1. the performance score of ICICI bank on Social and Environment Perspective has been improving during the study period. Score increased to 240 in 2016-17 from 60 in 2007-08.

2. The amount spent on CSR activities has been decreased after 2013-14 as shown in Table 5.92 due to decline in profits. Score on percentage of CSR Expenditure to Net Profits was maximum 50 in 2012-13 and 2013-14.

3. Bank has continuously increased the number of female employees in its workforce to maintain the gender equality and empowering women as shown in Table 5.92. Score was maximum 50 in last two years of the study.

4. Table 5.92 shows that to reach to customers in unbanked areas bank has continuously increased its branches in rural and semi-urban areas. The ratio of Rural and semi-urban branches to total branches has been increased to 51.81% in 2016-17 from 40.97% in 2007-08. The ratio of priority sector advances to total advances was lower than the prescribed rate by RBI in all the years as shown in Table 5.92. Scores on growth in number and deposits in PMJDY accounts was too low.

5. Table 5.93 depicts that bank has spent too low on environment protection and the information is disclosed only for the year 2016-17. Bank has taken few steps for protecting environment but no policy or committee has been framed and no

quantitative disclosure has been made by the bank for promoting environment sustainability.

Suggestions:

1. Reserve should be made for spending on CSR activities to make available funds in the year of losses.

2. Bank should increase the percentage of advances provided to priority sectors and should concentrate on increasing beneficiaries and deposits in PMJDY accounts to promote financial inclusion plans.

3. A separate board or committee and policies should be made by the bank to look after the activities on environment protection.

4. Bank should initiate the disclosure of quantitative measurement on energy consumption, e-waste recycled, carbon emissions etc.

5.6.3 Measurement of Performance of Axis Bank on Social and Environment Perspective

Table 5.95: Performance of Axis Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	0.45	0.73	1.25	1.21	2.36	2.20	1.86
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	18.78	20.43	20.54	21.47	22.59
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	24.53	29.04	32.96	40.58	41.99	44.99	52.00	50.98	55.30	45.01
	Ratio of Priority Sector Advances to Total Advances	%	27.78	28.14	28.69	28.99	28.56	24.62	27.28	24.82	24.09	25.16
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	477314	589659	700096
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	128.92	123.92

Table 5.96: Performance of Axis Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	5.75	28.35	18.49
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes

Table 5.97: Performance Score of Axis Bank on Social & Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	10	20	30	30	50	50	40
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	30	40	40	40	40
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	20	20	30	30	30	30	40	40	40	40
	Ratio of Priority Sector Advances to Total Advances	30	30	30	30	30	30	30	30	30	30
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	50
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	50	50	50
	Steps Taken for Environment Protection	-	-	-	-	-	20	20	50	50	50
Total	**400**	**50**	**50**	**60**	**70**	**80**	**140**	**160**	**270**	**320**	**310**

Observations: Table 5.97 manifests that

1. the performance score of Axis Bank on Social and Environment Perspective increased to 320 in 2015-16 from 50 in 2007-08 due to increased focus of bank on social and environment issues.

2. Score on percentage of CSR Expenditure to net profits has increased continuously and reached to 50 in 2015-16 from 10 in 2010-11. It has been decreased to 40 in 2016-17 due to decline in average net profits of the bank.

3. Table 5.95 shows that percentage of female employees to total employees has also been increased continuously by the bank to encourage gender equality.

4. To provide financial services in unbanked locations bank increased the number of branches in rural and semi urban locations as shown in Table 5.95. The score on this measure increased to 40 in 2013-14 from 20 in 2007-08.

5. Table 5.95 depicts that ratio of priority sector lending to total advances has no noteworthy improvement and ratio remained lower than the prescribed rate of 40 % of adjusted net credit therefore the score was 30 in all the years. Number of beneficiaries in PMJDY accounts was low in all the last 3 years of the study period thus it scored 10. Growth rate in deposits in PMJDY accounts ratio scored 50 in last two years.

6. Score on amount invested on environment protection was 50 in all last 3 years of the study. Bank has taken all the necessary steps to protect and promote environment sustainability.

Suggestions:

1. Bank should try to increase the ratio of advances to priority and weaker sectors for the overall development of the economy.

2. Bank should concentrate on increasing PMJDY savings accounts or provide any other basic financial services to the economical weaker sections of the society.

3. Bank can create reserves for CSR expenditure so that in the year of losses or low profits it can provide funds for spending on social activities.

5.6.4 Measurement of Performance of IndusInd Bank on Social and Environment Perspective

Table 5.98: Performance of IndusInd Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	1.58	1.56	1.61	1.92	1.85
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	15.10	15.90	16.27	17.35	18.58
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	22.78	22.78	20.95	33.33	33.25	42.20	41.20	40.57	42.50	42.50
	Ratio of Priority Sector Advances to Total Advances	%	39.12	35.31	30.79	35.76	35.67	32.32	32.95	33.30	31.74	30.79
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	174572	313065	531340
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	134.46	123.16

Table 5.99: Performance of IndusInd Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainability	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	13.72	22.47	21.53
	Do you have policies for Environnment Sustainability	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes

Table 5.100: Performance Score of IndusInd Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	40	40	40	40	40
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	30	30	30	30	30
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	20	20	20	30	30	30	30	30	30	30
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	40	40	40	40	40	40
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	50
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	50	50	50
	Steps Taken for Environment Protection	-	-	-	-	-	50	50	50	50	50
Total	**400**	**60**	**60**	**60**	**70**	**70**	**190**	**190**	**250**	**300**	**300**

Observations: Table 5.100 shows that

1. the performance of IndusInd Bank on Social and Environment Perspective has improved during the study period and score has reached to 300 in 2015-16 from 60 in 2007-08 due to increasing focus of bank on Social and environment concerns in last few years.

2. Percentage of CSR expenditure to net profits was less than the 2 % of average 3 years net profits therefore scored 40 in all last 5 years.

3. To promote gender equality bank has continuously increased the female employees in its workforce as shown in Table 5.98 and scored 30 in all the years.

4. There has been a continuous expansion in the number of branches in rural and semi-urban areas by the bank to provide financial services in unbanked and

economical weaker areas as shown in Table 5.98. Ratio of priority sector advances to total advances was below than the prescribed rate of 40% by RBI and scored 40 in all the years. Table 5.99 also shows that growth in number of beneficiaries in PMJDY accounts was low than competitive banks so scored 10 in all last 3 years whereas growth in deposits of such accounts was higher so scored 50 in all the 3 years.

5. Bank has invested sufficient amount on environment sustainability and has taken all the necessary steps to protect environment as depicted in Table 5.99.

Suggestions:

1. Bank should increase number of female employees to promote gender equality as the percentage of female employees is low.

2. Advances to priority and weaker sectors should be increased by the bank to encourage overall development of the economy.

3. Bank should take initiatives to increase the number of beneficiaries in PMJDY any other accounts which are specially meant for weaker sections on low charges.

5.6.5 Measurement of Performance of Yes Bank on Social and Environment Perspective

Table 5.101: Performance of Yes Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	0.93	1.23	2.27	3.66	2.03
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	17.87	16.51	16.69	17.90	18.61	18.40
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	32.79	29.91	31.33	39.50	46.07	47.67	42.68	38.67	44.88	44.50
	Ratio of Priority Sector Advances to Total Advances	%	25.58	27.23	20.24	26.30	25.92	22.39	26.18	25.08	27.00	22.06
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	11109	13352	15478
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	114.93	78.58

Table 5.102: Performance of Yes Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainability	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	3.72	2.45	2.45
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes

Table 5.103: Performance Score of Yes Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	20	30	50	50	50
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	30	30	30	30	30	30
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	30	20	30	30	40	40	30	30	30	30
	Ratio of Priority Sector Advances to Total Advances	30	30	30	30	30	30	30	30	30	30
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	40
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	30	20	20
	Steps Taken for Environment Protection	-	-	-	-	-	50	50	50	50	50
Total	400	60	50	60	60	100	170	170	230	270	260

Observations: Table 5.103 shows that

1. the performance score Yes Bank on Social and Environment Perspective has improved during the study period as there has been an enhancement in the performance of bank on various social and environment dimensions. The score increased to 270 in 2015-16 from 60 in 2007-08.

2. Percentage of CSR expenditure to net profits was higher than the required 2% as prescribed by Companies Act, 2013 in the year 2014-15, 2015-16 and 2016-17. This depicts bank spent sufficient funds on promotion of CSR activities.

3. Number of female employees in total employees was low as shown in Table 5.101 and scored 30 in all the years.

4. Table 5.101 depicts that to cover the unbanked areas and promote financial inclusion bank has increased the number of branches in rural and semi-urban areas every year. The percentage of rural and semi urban branches has decreased in last year's thus the score decreased to 30. Ratio of priority sector lending to total advances was less than the prescribed rate of 40% by RBI in all the years as shown in Table 5.101 and scored 30. Number of beneficiaries in PMJDY accounts scored 10 while the deposits growth in such accounts was higher and scored 50 and 40 in 2015-16 and 2016-17 respectively.

5. Score on amount invested on environment sustainability decreased to 20 in 2015-16 from 30 in 2014-15. Bank has taken all the necessary steps to protect and promote environment protection and scored 50 in all the years.

Suggestions:

1. Bank should increase the number of female employees in their workforce to promote gender equality and to increase the efficiency in banking operations.

2. Bank should focus on providing advances to priority and weaker sectors to promote the overall development of the economy.

3. To promote financial inclusion bank should provide more facilities on basic savings accounts so that the number of accounts with deposits can be increased in such accounts.

5.6.6 Measurement of Performance of Kotak Mahindra Bank on Social and Environment Perspective

Table 5.104: Performance of Kotak Mahindra Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	0.50	0.33	0.91	1.04	0.95
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	19.82	24.54	18.53	19.33	20.57
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	23.33	23.50	19.60	24.22	28.93	32.88	35.21	33.19	38.63	34.92
	Ratio of Priority Sector Advances to Total Advances	%	37.96	37.76	32.89	29.79	31.47	28.92	33.86	30.98	34.84	35.80
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	113567	184109	180988
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	157.26	21.85

Table 5.105: Performance of Kotak Mahindra Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.1	0.13	0.06
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	Yes	Yes	Yes	Yes	Yes

Table 5.106: Performance Score of Kotak Mahindra Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	10	10	20	30	20
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	30	40	30	30	40
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	20	20	20	20	20	30	30	30	30	30
	Ratio of Priority Sector Advances to Total Advances	40	40	40	30	40	30	40	40	40	40
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	10
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	10	10	10
	Steps Taken for Environment Protection	-	-	-	-	-	50	50	50	50	50
Total	400	60	60	60	50	60	150	170	190	250	210

Observations: Table 5.106 shows that

1. the performance score of Kotak Mahindra Bank on Social and Environment Perspective has an upward moving trend as the score reached to 250 in 2015-16 from 60 in 2017-08 and again declined to 210 in 2016-17 primarily due to decline in score on growth in deposits in PMJDY accounts.

2. Bank's expenditure on CSR activities was the highest in 2015-16 as shown in Table 5.104 but it was less than the prescribed percentage of 2% of average net profits of last 3 years by Companies Act, 2013 in each year and scored between 10 and 30.

3. Table 5.104 shows that percentage of female employees to total employees was the highest 24.54% in 2013-14. Score on this measure was either 30 or 40 during the study period.

4. Bank has enriched its network in rural and semi-urban areas with each passing year as seen in Table 5.104. Score increased to 30 in 2012-13 from 20 in the previous years. Ratio of priority sector advances to total advances scored 40 in all the years except 30 in 2010-11 and 2012-13. Growth in beneficiaries of PMJDY accounts was the highest in 2015-16 as shown in 5.104 and declined in 2016-17. Deposit growth in such accounts was maximum in 2015-16 and scored 50.

5. Table 5.105 shows that Kotak bank has spent too low on environment protection during 2014-15 to 2016-17 and scored 10 all the last 3 years of the study period. Bank has initiated all the necessary steps for promoting environment protection and scored 50 in all the years of the study.

Suggestions:

1. Bank should try to increase the expenditure done on its CSR activities at least as prescribed by Companies Act'2013. Amount spent on environment protection is also too low which should be increased by the bank.

2. To promote gender equality bank should increase the number of female employees in the staff.

3. Bank should increase its branches in rural and semi urban locations to cover the areas where financial assistance is not available and increase the percentage of advances to priority sectors such as agriculture or any other weaker sectors for the overall development of the economy.

5.6.7 Measurement of Performance of Federal Bank on Social and Environment Perspective

Table 5.107: Performance of Federal Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.89	1.38	1.99
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	31.34	34.00	35.00	36.20	38.48	40.29
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	59.37	58.82	58.18	60.70	65.05	66.46	66.95	68.00	67.97	67.01
	Ratio of Priority Sector Advances to Total Advances	%	36.51	37.80	36.55	33.13	32.28	26.07	35.72	33.81	31.90	27.46
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	267416	418967	460574
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	29.27	39.58

Table 5.108: Performance of Federal Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainability	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.53	0.56	0.65
	Do you have policies for Environnment Sustainability	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No

Table 5.109: Performance Score of Federal Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	-	-	20	30	40
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	50	50	50	50	50	50
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	40	40	40	50	50	50	50	50	50	50
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	40	30	40	40	40	30
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	20	20
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	10	10	10
	Steps Taken for Environment Protection	-	-	-	-	-	-	-	-	-	40
Total	400	80	80	80	90	140	130	140	180	210	250

Observations: Table 5.109 highlights that

1. the performance score of Federal Bank on Social and Environment Perspective has been increased to 250 in 2016-17 from 80 in beginning 3 years. Improvement in score was basically due to the disclosure of information was made in last year's only.

2. Expenditure on CSR activities has increased by the bank continuously after 2014-15 and score reached to 40 in 2016-17 from 20 in 2014-15.

3. Score on percentage of female employees to total employees was 50 in all the years from 2011-12. Highest score shows that bank promotes gender equality at work place.

4. Table 5.107 shows that bank has opened more than 50 % of its branches in rural and semi-urban areas to provide financial assistance to poor and rural people. Score on this ratio was 50 in all the years from 2010-11. Ratio of priority sector advances to total advances scored 40 in almost all years except 2012-13 and 2016-17 where the score was 30. Number of beneficiaries in PMJDY accounts was lower than others banks as shown in Table 5.107 and scored 10 in all the last 3 years. Growth in deposits in such accounts scored 20 in last two years of the study.

5. Table 5.108 shows that amount spent on environment sustainability was too low by the bank and scored 10 in all the last 3 years of the study. Bank has not taken any step on environment protection during the year 2007-08 to 2015-16. Bank has not disclosed any information on quantitative measurement of carbon emissions, energy consumption, e-waste recycled etc.

Suggestions:

1. Bank should spend at least as prescribed by Companies Act, 2013 on CSR activities. Bank can create reserves to spend on CSR activities in the year of losses or low profits.

2. Bank should increase the percentage of advances to priority and weaker sectors for the overall development of the economy.

3. Banks should promote financial inclusion plans for the overall development of the society.

4. To protect environment bank should start quantifying the carbon emissions, energy efficiency , e-waste recycled etc. to better know how much bank have contributed in protecting environment.

5.6.8 Measurement of Performance of City Union Bank on Social and Environment Perspective

Table 5.110: Performance of City Union Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1.12	2.27	2.06
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	26.54
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	46.11	46.63	43.69	47.15	48.67	51.73	57.65	58.53	57.90	55.82
	Ratio of Priority Sector Advances to Total Advances	%	34.12	32.33	36.83	36.96	36.23	37.65	46.03	46.27	48.78	49.57
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	74611	78576	84008
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	62.01	67.24

Table 5.111: Performance of City Union Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainability	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.15	1.08	0.71
	Do you have policies for Environnment Sustainibility	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No

Table 5.112: Performance Score of City Union Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	-	-	30	50	50
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	-	-	-	-	50
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	40	40	30	40	40	40	40	40	40	40
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	40	40	50	50	50	50
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	30	30
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	10	10	10
	Steps Taken for Environment Protection	-	-	-	-	-	-	-	-	-	-
Total	400	80	80	70	80	80	80	90	140	190	240

Observations: Table 5.112 indicates that

1. the performance score of City Union Bank on Social and Environment Perspective was too low in the starting years. Bank scored the highest 240 in 2016-17 and the lowest 70 in 2009-10.

2. Score on percentage of CSR expenditure to net profits was maximum 50 in 2015-16 and 2016-17 as CSR expenditure shown in Table 5.110 was higher than the prescribed rate of 2 % by the Companies Act, 2013.

3. Bank has not disclosed the information on number of female employees in its workforce in reports from the year 2007-08 to 2015-16. Bank scored 50 in 2016-17 on this ratio.

4. Bank has opened more than 50% of its branches in rural & semi-urban areas in last 5 years of the study to cover untouched areas and to provide financial assistance as shown in Table 5.110 and scored 40. Table 5.110 shows that percentage of priority sector advances has been continuously increased and bank provide advances to priority sectors higher than the prescribed rate by RBI and scored 40 in last 4 years. Increase in number of beneficiaries in PMJDY accounts was too low as shown in Table 5.110 and scored 10. Growth in deposits scored 30 in the last two years.

5. Bank has spent too low on environment protection as shown in Table 5.111 and scored 10 in all the last 3 years. Bank has not taken any necessary steps on promoting environment protection yet.

Suggestions:

1. Bank should disclose the information regarding number of female employees in their annual report every year and should increase the number of female employees also to promote gender equality at workplace.

2. Bank should emphasises on increase the number of beneficiaries in PMJDY accounts to promote financial inclusion.

3. Bank should initiate taking necessary step for promoting environment sustainability and should quantify and disclose the information on carbon emissions, energy efficiency or e-waste recycled etc.

5.6.9 Measurement of Performance of RBL Bank on Social and Environment Perspective

Table 5.113: Performance of RBL Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	1.93	1.22	1.86
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	18.09
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	60.76	59.52	55.43	55.00	54.46	56.45	54.91	54.10	50.25	49.17
	Ratio of Priority Sector Advances to Total Advances	%	41.03	29.58	25.59	26.74	20.42	20.62	26.03	30.72	32.32	31.73
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	95307	95307	95307
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	273.51	-40.42

Table 5.114: Performance of RBL Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainability	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	Do you have policies for Environnment Sustainability	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No

Table 5.115: Performance Score of RBL Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	-	-	-	-	-	-	-	40	30	40
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	-	-	-	-	-	-	-	-	-	30
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	50	40	40	40	40	40	40	40	40	40
	Ratio of Priority Sector Advances to Total Advances	50	30	30	30	30	30	30	40	40	40
	Total No. of beneficiaries of PMJDY accounts	-	-	-	-	-	-	-	10	10	10
	Total Deposits in PMJDY accounts	-	-	-	-	-	-	-	-	50	0
Promoting Environment Sustainability	Amount invested on Environment Sustainability	-	-	-	-	-	-	-	-	0	0
	Steps Taken for Environment Protection	-	-	-	-	-	0	0	0	0	40
Total	400	100	70	70	70	70	70	70	130	170	200

Observations: Table 5.115 reflects that

1. the performance score of RBL Bank on Social and Environment Perspective has increased to 200 in 2016-17 from 70 in starting 5 years of the study.

2. Percentage of CSR expenditure to net profits was lower than the 2 % of average net profits as shown in Table 5.113 so scored 40 in 2014-15 and 2016-17 and 30 in 2015-16.

3. Table 5.113 shows that bank has not disclosed the information on number of female employees in their annual reports upto 2015-16. The information was disclosed in 2016-17 where the score was 30.

4. Bank has spread its network in rural and semi-urban areas to reach and provide financial services to poor and weaker section in unbanked locations as shown in Table 5.113 and scored 40 in all the years except 2007-08. Table 5.113 shows that ratio of priority sector advances to total advances was lower than 40% as prescribed by RBI in all the years except 2007-08 and scored either 30 or 40. Table 5.113 also shows that there has been no growth in beneficiaries of PMJDY accounts therefore scored 10 in last three years. Deposits growth in such accounts declined in 2016-17 and scored 0.

5. No amount has been spent by the bank on environment sustainability as shown in Table 5.114 and scored 0 in all the years. Table 5.114 also shows that bank has taken some initiatives for environment protection. Bank has not disclosed information on clean technology initiatives, energy efficiency or recycling of e-waste in last year of the study and scored 40 in 2016-17.

Suggestions:

1. Bank should create reserves for spending on CSR activities and environment sustainability in the year of losses or low profits.

2. Bank should disclose and increase the number of female employees in their talent hunt to increase gender equality and empowering women.

3. Bank should also increase the advances lend to priority sectors, agriculture or any other weaker sectors to improve the overall development.

4. There was no increase in the number of beneficiaries in PMJDY accounts so bank should identify the reasons for it and take efforts to improve the deposits and beneficiaries for promoting financial inclusion.

5. Bank should also take the necessary steps for environment protection.

5.6.10 Measurement of Performance of Karur Vysya Bank on Social and Environment Perspective

Table 5.116: Performance of Karur Vysya Bank on Social Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Monetary Contribution towards Society	Percentage of CSR Expenditure to Net Profits	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.13	0.23	0.43	0.33
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees	%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	28.65
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	%	37.80	41.03	41.19	43.63	45.00	48.64	50.17	52.15	52.17	51.90
	Ratio of Priority Sector Advances to Total Advances	%	33.71	36.22	33.10	31.58	31.27	34.43	37.02	39.52	43.47	44.89
	Total No. of beneficiaries of PMJDY accounts	Nos.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	108502	143868	174247
	Growth in Deposits in PMJDY accounts	Crore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	117.71	68.64

Table 5.117: Performance of Karur Vysya Bank on Environment Perspective

Strategic Objectives	Measures	Unit	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Promoting Environment Sustainability	Amount invested on Environment Sustainabilty	Rs. In Crore	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.292	0.633	0.041
	Do you have policies for Environnment Sustainibilty	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	Yes
	Do these policies confirm to any National/International Standards?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	Yes
	Do you have Board/Committee to see the implementation of the Policy?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	Yes
	Have you taken initiatives for Clean technology, energy efficiency, Renewable energy recycling of e-waste?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	Yes	Yes	Yes
	Have you started Quantitative measurement of Carbon emissions, energy consumption, and e-waste recycled etc. ?	Yes/No	N.D.	N.D.	N.D.	N.D.	N.D.	No	No	No	No	No

Table 5.118: Performance Score of Karur Vysya Bank on Social and Environment Perspective

Strategic Objectives	Measures	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Increasing Responsibility towards society	Percentage of CSR Expenditure to Net Profits							10	10	10	10
Promoting Gender Equality and Empowering Women	Percentage of Female employees to Total employees										50
Promoting Financial Inclusion Plans	Growth in Branches in Rural & Semi urban Areas	30	30	30	30	40	40	40	40	40	40
	Ratio of Priority Sector Advances to Total Advances	40	40	40	40	40	40	40	40	50	50
	Total No. of beneficiaries of PMJDY accounts								10	10	10
	Total Deposits in PMJDY accounts									50	30
Promoting Environment Sustainability	Amount invested on Environment Sustainability								10	10	10
	Steps Taken for Environment Protection								10	10	40
Total	400	70	70	70	70	80	80	90	120	180	240

Observations: Table 5.118 shows that

1. the performance score of Karur Vysya Bank on Social and Environment perspective has increased to 240 in 2016-17 from 70 in starting 5 years.

2. The CSR expenditure done by the bank was too low in all the years as shown in Table 5.116 and scored 10. It was due to the low net profits in these years.

3. Table 5.116 shows that the information on number of female employees in total employees has been disclosed in 2016-17 only where the score was 50.

4. Bank has expanded its branches in rural and semi-urban locations every year as depicted in Table 5.116 and score increased to 40 in 2012-13 from 30 in previous years. Score on priority sector advances to total advances increased to 50 in last two years from 40 in previous years. Growth in number of beneficiaries of PMJDY accounts was too low as shown in Table 5.116 so scored 10 in all the three years. Deposits in such accounts scored 50 in 2015-16 and 30 in 2016-17.

5. Table 5.117 shows that bank has spent too low for environment protection in last three years and bank has not started the quantitative measurement on carbon emission or energy efficiency, e-waste recycled etc.

Suggestions:

1. Bank should try to increase its monetary contribution towards CSR activities.

2. Bank should disclose information regarding number of female employees or any other information on women empowerment every year in their annual reports.

3. To provide financial assistance to unbanked and weaker sections of the society bank should try to increase the beneficiaries in PMJDY accounts by smooth functioning of such accounts.

4. Bank should take all the necessary steps for environment protection and invest more on environment protection. Bank should start quantifying the carbon emissions, energy consumption, e-waste recycled etc. and take necessary measures.

5.6.11 Intra-Bank Comparison of Performance of Private Sector Banks on Social and Environment Perspective

Intra Bank Hypothesis

H_0- There is no significant difference in the performance of Private Sector bank on Social and Environment Perspective during last 10 years.

H_1- There is a significant difference in the performance of Private Sector bank on Social and Environment Perspective during last 10 years.

Table 5.119: Mean Ranks of Years for Private Sector Banks on Social and Environment Perspective

Name of the Bank	2007-08		2008-09		2009-10		2010-2011		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		Total	
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank
HDFC Bank	2	2.5	2	4.17	2	4.17	2	4.83	3	6	5	7	5	5.67	7	6.17	8	7.83	8	6.67	44	-
ICICI Bank	2	4.75	2	4.75	2	4.75	3	4.75	3	4.75	5	7.25	5	4.75	6	4.75	7	7.25	8	7.25	43	-
Axis Bank	2	3.17	2	3.17	2	4.17	3	4.17	3	5	5	5.5	5	6.83	7	7.83	8	7.83	8	7.33	45	-
Indusind Bank	2	3.75	2	3.75	2	3.75	2	6.25	2	6.25	5	6.25	5	6.25	7	6.25	8	6.25	8	6.25	43	-
Yes Bank	2	5.25	2	3.25	2	5.25	2	5.25	3	7.5	5	7.5	5	5.25	7	5.25	8	5.25	8	5.25	44	-
Kotak Mahindra Bank	2	4.75	2	4.75	2	4.75	2	2.25	2	4.75	5	4.75	5	7.25	7	7.25	8	7.25	8	7.25	43	-
Federal Bank	2	4.25	2	4.25	2	4.25	2	6.75	3	6.75	3	4.25	3	6.75	6	6.75	7	6.75	8	4.25	38	-
City Union Bank	2	5	2	5	2	2.5	2	5	2	5	2	5	2	7.5	5	7.5	6	7.5	7	5	32	-
RBL Bank	2	10	2	4.25	2	4.25	2	4.25	2	4.25	2	4.25	2	4.25	5	6.5	7	6.5	8	6.5	34	-
Karur Vysya Bank	2	3.5	2	3.5	2	3.5	2	3.5	2	6	2	6	2	6	6	6	7	8.5	8	8.5	35	-

Table 5.120: Results of Kruskal Wallis Test for Private Sector Banks on Social and Environment Perspective

Name of the Bank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	9.462	9	0.396	Accepted
ICICI Bank	4.61	9	0.867	Accepted
Axis Bank	16.758	9	0.053	Accepted
Indusind Bank	9	9	0.437	Accepted
Yes Bank	9	9	0.437	Accepted
Kotak Mahindra Bank	9	9	0.437	Accepted
Federal Bank	6.081	9	0.732	Accepted
City Union Bank	10.8	9	0.290	Accepted
RBL Bank	13.737	9	0.132	Accepted
Karur Vysya Bank	12.6	9	0.182	Accepted

Inferences:

From the above Table 5.119 and 5.120, following conclusions have been drawn on Social and Environment Perspective of private sector banks:

1. **HDFC Bank-** Mean rank 7.83 is maximum for the year 2015-16. Table 5.120 shows that since p-value is 0.396, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of HDFC Bank on Social and Environment Perspective during last 10 years.

2. **ICICI Bank-** Mean rank 7.25 is same and maximum for the years 2012-13, 2015-16 and 2016-17 Table 5.120 shows that since p-value is 0.867, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of ICICI Bank on Social and Environment Perspective during last 10 years.

3. **Axis Bank-** Mean rank 7.83 is same and maximum for the year 2014-15 and 2015-16. Table 5.120 shows that since p-value is 0.053, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Axis Bank on Social and Environment Perspective during last 10 years.

4. **IndusInd Bank-** Mean rank 6.25 is same and maximum from the year 2010-11 to 2016-17. Table 5.120 shows that since p-value is 0.437, which is greater than

0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of IndusInd Bank on Social and Environment Perspective during last 10 years.

5. **Yes Bank-** Mean rank 7.5 is same and maximum for the year 2011-12 and 2012-13. Table 5.120 shows that since p-value is 0.437, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Yes Bank on Social and Environment Perspective during last 10 years.

6. **Kotak Mahindra Bank-** Mean rank 7.25 is same and maximum from the year 2013-14 to 2016-17. Table 5.120 shows that since p-value is 0.437, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Kotak Mahindra Bank on Social and Environment Perspective during last 10 years.

7. **Federal Bank-** Mean rank 6.75 is same and maximum from the year 2010-11 to 2011-12 and from 2013-14 to 2015-16. Table 5.120 shows that since p-value is 0.732, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Federal Bank on Social and Environment Perspective during last 10 years.

8. **City Union Bank-** Mean rank 7.5 is same and maximum from the year 2013-14 to 2015-16. Table 5.120 shows that since p-value is 0.290, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of City Union Bank on Social and Environment Perspective during last 10 years.

9. **RBL Bank-** Mean rank 10 is maximum for the year 2007-08. Table 5.120 shows that since p-value is 0.132, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of RBL Bank on Social and Environment Perspective during last 10 years.

10. **Karur Vysya Bank-** Mean rank 8.50 is same and maximum for the year 2015-16 and 2016-17. Table 5.120 shows that since p-value is 0.182, which is greater

than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Karur Vysya Bank on Social and Environment Perspective during last 10 years.

Major Findings and Conclusion:

It has been concluded here that no significant difference has been found in the performance of all private sector banks on Social and Environment Perspective of BSC when an intra-bank comparison has been drawn. Performance of all private sector banks on this has improved in last years of the study period as the mean ranks were the highest in these years.

5.7 Measurement of Performance of Private Sector Banks on Balanced Scorecard

To identify the significant difference in the overall performance of banks on Balanced Scorecard in each studied year, Kruskal Wallis test has been applied separately on performance scores of individual bank on all perspectives using IBM SPSS22 to test whether bank shows any difference in the performance on Balanced Scorecard when intra-bank comparison is drawn for year 2007-08 to 2016-17. Overall performance score on all perspectives and intra-bank comparison on Balanced Scorecard of all the selected Private Sector Banks is being given below:

5.7.1 Overall Performance Score of Private Sector Banks on Balanced Scorecard

The total performance score of each private sector bank on different perspectives viz. Financial Perspective, Customer Perspective, Internal Business Process Perspective, Learning & Growth and Innovation Perspective and Social & Environment Perspective and total score on Balanced Scorecard for each year is being given below:

Table 5.121: Overall Performance Score of HDFC Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	340	330	340	350	340	340	340	320	300	300
Customer Perspective	320	290	300	280	230	250	250	280	280	310
Internal Business Process Perspective	150	170	180	180	190	210	260	270	280	300
Learning & Growth and Innovation Perspective	110	170	180	240	260	310	320	360	370	390
Social & Environment Perspective	50	60	60	70	110	180	170	210	250	260
Total Score	**970**	**1020**	**1060**	**1120**	**1130**	**1290**	**1340**	**1440**	**1480**	**1560**

Table 5.122: Overall Performance Score of ICICI Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	270	200	250	270	280	300	280	270	230	230
Customer Perspective	270	180	240	250	230	230	240	230	240	260
Internal Business Process Perspective	220	220	210	230	250	250	280	300	290	270
Learning & Growth and Innovation Perspective	110	120	140	230	280	320	350	340	340	370
Social & Environment Perspective	60	60	60	70	80	170	160	160	180	240
Total Score	**930**	**780**	**900**	**1050**	**1120**	**1270**	**1310**	**1300**	**1280**	**1370**

Table 5.123: Overall Performance Score of Axis Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	**310**	**320**	**320**	**310**	**320**	**310**	**310**	**300**	**280**	**200**
Customer Perspective	330	270	260	280	230	250	230	240	240	250
Internal Business Process Perspective	200	210	210	240	250	250	260	290	290	250
Learning & Growth and Innovation Perspective	140	160	180	230	220	270	320	320	330	350
Social & Environment Perspective	50	50	60	70	80	140	160	270	320	310
Total Score	**1030**	**1010**	**1030**	**1130**	**1100**	**1220**	**1280**	**1420**	**1460**	**1360**

Table 5.124: Overall Performance Score of IndusInd Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	190	260	320	330	310	310	310	290	290	310
Customer Perspective	130	200	260	260	230	240	220	230	230	250
Internal Business Process Perspective	210	180	200	210	210	220	200	200	220	210
Learning & Growth and Innovation Perspective	80	90	100	110	140	140	150	160	180	230
Social & Environment Perspective	60	60	60	70	70	190	190	250	300	300
Total Score	**670**	**790**	**940**	**980**	**960**	**1100**	**1070**	**1130**	**1220**	**1300**

Table 5.125: Overall Performance Score of Yes Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	330	350	340	350	320	320	310	300	300	300
Customer Perspective	280	220	280	280	200	250	190	230	240	290
Internal Business Process Perspective	220	220	270	280	250	260	230	250	240	220
Learning & Growth and Innovation Perspective	40	60	70	90	140	150	160	190	210	240
Social & Environment Perspective	60	50	60	60	100	170	170	230	270	260
Total Score	**930**	**900**	**1020**	**1060**	**1010**	**1150**	**1060**	**1200**	**1260**	**1310**

Table 5.126: Overall Performance Score of Kotak Mahindra Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	330	230	340	320	290	310	280	300	270	320
Customer Perspective	300	140	280	230	270	230	190	260	320	230
Internal Business Process Perspective	110	90	160	130	140	170	150	150	190	180
Learning & Growth and Innovation Perspective	40	60	70	90	80	150	100	140	240	260
Social & Environment Perspective	60	60	60	50	60	150	170	190	250	210
Total Score	**840**	**580**	**910**	**820**	**840**	**1010**	**890**	**1040**	**1270**	**1200**

Table 5.127: Overall Performance Score of Federal Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	310	300	270	320	300	270	260	280	220	270
Customer Perspective	210	180	190	210	170	180	150	190	180	220
Internal Business Process Perspective	180	200	190	190	210	220	190	190	210	220
Learning & Growth and Innovation Perspective	30	40	40	130	110	90	120	130	170	220
Social & Environment Perspective	80	80	80	90	140	130	140	180	210	250
Total Score	**810**	**800**	**770**	**940**	**930**	**890**	**860**	**970**	**990**	**1180**

Table 5.128: Overall Performance Score of City Union Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	340	280	310	340	320	300	270	290	280	280
Customer Perspective	210	190	240	190	210	190	140	160	180	190
Internal Business Process Perspective	200	200	180	190	190	200	180	180	200	190
Learning & Growth and Innovation Perspective	20	40	40	70	70	70	70	70	90	140
Social & Environment Perspective	80	80	70	80	80	80	90	140	190	240
Total Score	**850**	**790**	**840**	**870**	**870**	**840**	**750**	**840**	**940**	**1040**

Table 5.129: Overall Performance Score of RBL Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	280	290	230	180	290	290	230	300	280	300
Customer Perspective	180	130	210	230	270	270	260	280	260	270
Internal Business Process Perspective	150	160	170	170	200	220	200	210	220	220
Learning & Growth and Innovation Perspective	30	40	40	70	60	60	90	140	150	160
Social & Environment Perspective	100	70	70	70	70	70	70	130	170	200
Total Score	**740**	**690**	**720**	**720**	**890**	**910**	**850**	**1060**	**1080**	**1150**

Table 5.130: Overall Performance Score of Karur Vysya Bank on Balanced Scorecard

Name of the Perspective/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Perspective	320	290	330	320	300	280	250	260	270	240
Customer Perspective	240	150	210	220	180	200	170	130	170	190
Internal Business Process Perspective	190	180	210	200	210	200	180	190	180	190
Learning & Growth and Innovation Perspective	60	70	80	120	110	120	120	150	140	170
Social & Environment Perspective	70	70	70	70	80	80	90	120	180	240
Total Score	**880**	**760**	**900**	**930**	**880**	**880**	**810**	**850**	**940**	**1030**

5.7.2 Intra-Bank Comparison of Performance of Private Sector Banks on Balanced Scorecard

Intra Bank Hypotheses

H_0- There is no significant difference in the performance of Private Sector bank on Balanced Scorecard during last 10 years.

H_1- There is a significant difference in the performance of Private Sector bank on Balanced Scorecard during last 10 years.

Table 5.131: Mean Ranks of Years for Private Sector Banks on Balanced Scorecard and Result of Kruskal Wallis Test

Year /Name of the Bank	HDFC Bank	ICICI Bank	Axis Bank	InduSind Bank	Yes Bank	Kotak Mahindra	Federal Bank	City Union Bank	RBL Bank	Karur Vysya Bank
2007-08	4.00	4.30	3.80	2.30	4.20	4.90	4.30	6.30	3.10	5.40
2008-09	3.50	1.70	4.60	1.80	3.50	1.70	4.40	4.70	3.20	2.90
2009-10	4.80	3.20	4.90	5.30	6.20	6.30	3.70	4.50	3.00	6.60
2010-11	5.30	5.20	5.50	6.90	6.90	4.10	6.70	6.00	3.60	6.70
2011-12	4.60	5.40	5.10	5.60	4.80	4.50	5.70	6.30	5.70	6.20
2012-13	5.70	6.50	5.80	7.00	6.40	6.40	5.30	6.00	6.40	6.20
2013-14	5.90	7.60	5.90	5.20	4.50	4.70	3.80	3.40	4.80	4..10
2014-15	6.40	6.60	6.30	5.50	5.70	6.30	6.30	4.60	8.50	5.20
2015-16	6.70	6.80	6.80	7.30	6.20	8.20	6.10	4.60	7.40	5.30
2016-17	8.10	7.70	6.30	8.10	6.60	7.90	8.70	6.50	9.30	6.40
N	5	5	5	5	5	5	5	5	5	5
Chi-Square	9.486	19.289	4.185	21.916	6.809	18.656	12.192	6.648	28.812	7.5
Degree of freedom	9	9	9	9	9	9	9	9	9	9
p-value	0.394	0.023	0.899	0.009	0.657	0.028	0.203	0.674	0.001	0.585
Null Hypothesis Accepted Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Accepted	Rejected	Accepted

Observations and Inferences: From the above tables, following inferences have been drawn on the overall performance of Private Sector Banks on Balanced Scorecard:

1. **HDFC Bank-** Table 5.121 shows that the overall performance score of HDFC Bank on Balanced Scorecard has increased to 1560 in 2016-17 from 970 in 2007-08 primarily due to improvement in performance on all other perspectives. Table 5.131 shows that mean rank 8.10 is maximum for the year 2016-17. Since p-value 0.394 is greater than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of HDFC Bank on Balanced Scorecard during last 10 years.

2. **ICICI Bank-** Table 5.122 exhibits that the overall performance score of ICICI Bank has been increased to 1370 in 2016-17 from 780 in 2008-09 because the performance of the bank has improved on Learning & Growth and Innovation and Social & Environment Perspective. Table 5.131 shows that mean rank 7.70 is the highest in 2016-17. Since p-value is 0.023 is less than 0.05, this implies that null hypothesis is rejected at 5 % level of significance. Hence, there is a

significant difference in the performance of ICICI Bank on Balanced Scorecard during last 10 years.

3. **Axis Bank-** Table 5.123 presents that the overall performance score of Axis Bank on Balanced Scorecard is the highest 1460 in 2015-16. The score declined to 1360 in 2016-17 primarily due to decline in score on Financial and Internal Business Process Perspective. Table 5.131 shows that mean rank 6.80 is the highest for the year 2015-16. Since p-value 0.899 is greater than 0.05, this implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Axis Bank on Balanced Scorecard during last 10 years.

4. **IndusInd Bank-** Table 5.124 conveys that IndusInd Bank scored the highest 1300 in 2016-17 and the lowest 670 in 2007-08. Improvement in performance on Customer perspective, Learning & Growth and Innovation Perspective and Social & Environment Perspective led the bank improved its overall performance. Table 5.131 depicts that mean rank 8.10 is the highest in 2016-17. Since p-value 0.009 is less than 0.05, this implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of IndusInd Bank on Social and Environment Perspective during last 10 years.

5. **Yes Bank-** Table 5.125 conveys that the overall performance score of Yes Bank on Balanced Scorecard has increased to 1310 in 2016-17 from 930 in 2007-08 as the performance of bank on different perspectives except Financial Perspective has improved in the last four years of the study. Table 5.131 shows that mean rank 6.60 is the highest in 2016-17. Since p-value 0.657 is greater than 0.05, this implies that null hypothesis is accepted at 5% level of significance. Hence, there is no significant difference in the performance of Yes Bank on Balanced Scorecard during last 10 years.

6. **Kotak Mahindra Bank-** Table 5.126 portrays that the overall performance score of Kotak Mahindra Bank is the highest 1270 in 2015-16 and then declined to 1200 in 2016-17 mainly due to decline in performance score on customer perspective. Table 5.131 shows that mean rank 8.20 is maximum in the year 2015-16. Since p-value 0.028 is below 0.05, this implies that null hypothesis is

accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Kotak Mahindra Bank on Balanced Scorecard during last 10 years.

7. **Federal Bank-**Table 5.127 reveals that the overall performance score of Federal Bank reached to 1180 in 2016-17 from 810 in 2007-08 as the performance of bank has improved on all perspectives of Balanced Scorecard. Table 5.131 shows that mean rank 8.70 is the highest in 2016-17. Since p-value 0.203 is greater than 0.05, his implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Federal Bank on Balanced Scorecard during last 10 years.

8. **City Union Bank-** Table 5.128 demonstrates that the overall performance score of City Union Bank on Balanced Scorecard has increased to 1040 in 2016-17 from 850 in 2007-08. Table 5.131 shows that mean rank 6.50 is the highest foe the year 2016-17. Since p-value 0.674 is more than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of City Union Bank on Balanced Scorecard over the mentioned financial years.

9. **RBL Bank-** Table 5.129 conveys that the overall performance score of RBL Bank on Balanced Scorecard is the highest in 2016-17. Table 5.131 shows that mean rank 9.30 is the highest for the year 2016-17. Since p-value 0.001 is less than 0.05, this implies that null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of RBL Bank on Balanced Scorecard during last 10 years.

10. **Karur Vysya Bank-** Table 5.130 manifests that the performance score of Karur Vysya Bank on Balanced Scorecard has been increased to 1030 in 2016-17 from 880 in 2007-08. Table 5.131 shows that mean rank 6.70 is maximum for the year 2010-11. Since p-value 0.585 is greater than 0.05, this implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of Karur Vysya Bank on Balanced Scorecard during last 10 years.

Major Findings and Conclusion:

It has been observed that the overall performance score of Private Sector Banks has an increasing trend during the study period. Mean rank for almost all the Private Sector Banks is the highest in last years of the study. No significant difference has been found in the overall performance of HDFC Bank, Axis Bank, Yes Bank, Federal Bank, City Union Bank and Karur Vysya Bank whereas a significant difference has been found in the performance of ICICI Bank, IndusInd Bank, Kotak Mahindra Bank and RBL Bank when an intra-bank comparison has been drawn on overall performance on Balanced Scorecard.

5.8 Conclusion

Overall it is concluded here that the performance of almost all Private Sector Banks on Financial Perspective has declined in the last years of the study period. Performance of few Private Sector Banks such as HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank etc. was better than other Private Sector Banks on Customer and Internal Business Process Perspective. Performance on Learning & Growth and Innovation Perspective and Social and Environment Perspective has improved for all banks. Overall performance score of all sampled Private Sector Banks has improved in the last years of the study. Banks should improve their performance on Internal Business Perspective, Learning & Growth and Innovation Perspective and Social & Environment Perspective to improve the performance on Customer and Financial Perspective.

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Chapter-6

Inter-Bank and Inter-Sector Comparison of Performance of Public Sector Banks and Private Sector Banks on Balanced Scorecard

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CHAPTER-6

INTER-BANK AND INTER-SECTOR COMPARISON OF PERFORMANCE OF PUBLIC SECTOR BANKS AND PRIVATE SECTOR BANKS ON BALANCED SCORECARD

6.1 Introduction

Previous two chapters focused and accomplished the objective of intra-bank evaluation of performance of all the public and private sector banks on each perspective and on an overall performance on Balanced Scorecard.

This chapter has been designed to attain the major objectives of the study and focuses on inter-bank and inter-sector comparison of performance of selected Public and Private sector banks on different perspectives and on Balanced Scorecard at a whole performance. For illustrating this, the present chapter is diverged into the following sections:-

1. Performance and Inter-Bank Comparison of Public Sector Banks on Balanced Scorecard.

2. Performance and Inter-Bank Comparison of Private Sector Banks on Balanced Scorecard.

3. Inter-sector Comparison of Performance of Public Sector Banks and Private Sector Banks on Balanced Scorecard.

4. Grading and Ranking of Overall Performance of Banks on Balanced Scorecard.

This chapter is based on different articles published by us in different journals. (See reference no. 1, 2 & 3).

6.2 Performance and Inter-Bank Comparison of Public Sector Banks on Balanced Scorecard

Using IBM SPSS22, Kruskal Wallis test has been applied to test whether on the basis of all the different perspectives and overall performance on Balanced Scorecard, public sector banks shows any significant difference in the performance when inter-bank comparison is drawn for ten banks namely, State Bank of India, Bank of Baroda, Punjab National Bank, IDBI Bank, Canara Bank, Bank of India, Indian Bank, Central Bank of India, Union Bank, and Syndicate Bank for the years from 2007-08 to 2016-17.

6.2.1 Inter-Bank Comparison of Performance of Public Sector Banks on Financial Perspective

Table 6.1: Performance Score of Public Sector Banks on Financial Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
State Bank of India	310	290	250	230	280	250	220	230	200	220
Bank of Baroda	300	310	300	330	300	220	220	200	130	150
Punjab National Bank	310	340	320	310	260	240	200	190	140	140
IDBI Bank	190	200	220	280	240	200	160	160	120	170
Canara bank	250	270	310	310	240	200	200	190	120	150
Bank of India	340	320	230	300	220	210	210	170	150	130
Indian Bank	320	320	320	300	270	230	210	200	160	230
Central Bank of India	230	220	300	260	180	240	140	170	120	90
Union Bank	350	300	290	270	220	240	200	190	150	150
Syndicate Bank	280	270	240	290	280	320	210	210	130	160

Inter-Bank Hypotheses

H_0- There is no significant difference in the performance on Financial Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Financial Perspective among Public Sector Banks.

Table 6.2: Mean Ranks of Public Sector Banks

Bank	SBI Bank	Bank of Baroda	Punjab National Bank	IDBI Bank	Canara Bank	Bank of India	Indian Bank	Central Bank of India	Union Bank	Syndicate Bank	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	59.15	57	56.75	32.6	47.15	48.65	61.6	35.8	51.35	54.95	-

Table 6.3: Results of Kruskal Wallis Test for Public Sector Banks

	Chi-Square	Degree of freedom	p-value
Public Banks	10.147	9	0.339

Major Findings: Table 6.2 depicts that:

1. Indian Bank is the best performer followed by State bank of India on Financial Perspective of BSC as the mean rank is the highest 61.60 for Indian Bank and 59.15 for SBI. Although the performance score of both the banks as shown in

Table 6.1 has decreased during the last years of study period yet it was higher than other Public Sector Banks as both Indian Bank and SBI have higher profitability and liquidity ratios and has also maintained sufficient capital adequacy ratio and maintained satisfactory Net Interest Margin.

2. IDBI and Central Bank of India have the least mean ranks as 32.60 and 35.80 respectively due to low performance score of both banks in almost all years. Low profitability ratios, decreased shareholder value, low liquidity, poor asset quality and low interest margin due to high credit cost might have resulted in low performance of these banks on financial parameters.

3. Table 6.3 shows that since p-value is 0.339, which is greater than 0.05. This implies that null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of all the ten Public Sector Banks over the mentioned financial years.

Suggestions:

1. Public Sector Banks should concentrate on improving their profitability ratios through concentrating on acquiring more business and customers by providing them satisfactory and quality services.

2. These Banks should try to maintain best portfolio of assets and liabilities through acquiring low cost deposits and high yielding assets and try to reduce their cost of business operations particularly the cost incurred on employees. These will simultaneously improve the net interest margin and profitability of these banks.

3. To maintain good quality assets, banks should have strong credit management policies on providing and maintaining loans. Proper monitoring & recovery mechanism should be there in order to decrease NPA's.

4. Public Sector Banks should try to improve their liquidity position by maintaining sufficient cash so that contingent liabilities be paid on time.

6.2.2 Inter-Bank Comparison of Performance of Public Sector Banks on Customer Perspective

Table 6.4: Performance Score of Public Sector Banks on Customer Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
State Bank of India	280	320	270	280	250	280	260	250	260	260
Bank of Baroda	250	280	290	290	270	270	300	220	170	230
Punjab National Bank	250	260	280	270	250	220	240	220	230	260
IDBI Bank	240	270	320	260	260	200	150	210	160	180
Canara bank	190	240	260	280	220	190	250	200	180	210
Bank of India	230	200	270	270	220	240	240	200	190	250
Indian Bank	200	210	240	200	200	170	190	170	170	190
Central Bank of India	260	180	240	210	170	200	160	160	150	190
Union Bank	190	200	250	230	200	230	200	180	210	220
Syndicate Bank	200	150	170	180	190	200	180	220	140	150

Inter-Bank Hypotheses

H_0- There is no significant difference in the performance on Customer Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Customer Perspective among Public Sector Banks.

Table 6.5: Mean Ranks of Public Sector Banks

Bank	SBI Bank	Bank of Baroda	Punjab National Bank	IDBI Bank	Canara Bank	Bank of India	Indian Bank	Central Bank of India	Union Bank	Syndicate Bank	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	83.85	74.3	69.35	51.15	49.85	56.65	29.45	28.20	42.30	19.90	-

Table 6.6: Results of Kruskal Wallis Test for Public Sector Banks

	Chi-Square	Degree of freedom	p-value
Public Banks	48.005	9	0.000

Major Findings: Table 6.5 manifests that

1. State Bank of India followed by Bank of Baroda performed the best on Customer Perspective among all public sector banks as the mean rank is the highest 83.85 for SBI and 74.30 for Bank of Baroda. The performance score of both the banks is the highest than other public sector banks in almost each year

as shown in Table 6.4 primarily due to high customer base in deposits and credit accounts as compared to other public banks, better competitive position due to high market share in deposits and credits, satisfactory after sales services and query handling mechanism.

2. Performance of Syndicate Bank, Central Bank of India and Indian Bank was the poorest among all public sector banks as the mean rank is the lowest i.e. 19.90, 28.20 and 29.45. Total performance score for Customer Perspective scored low in each year primarily due to low or declining growth rate of customers' accounts and low market share in deposits and credits which may be on account of unsatisfactory services provided by these banks.

3. Table 6.6 shows that since p-value is 0.000, which is less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of all the ten Public Banks over the mentioned financial years based on Customer perspective.

Suggestions:

1. Public Sector Banks are suggested to renovate their bundle of products and services using the latest technology and incorporating customer experiences.

2. These banks should develop aggressive marketing strategies for promoting their products and services and attract new customers.

3. Banks should ensure smooth, prompt and quality services at front and backend through skilled and knowledgeable staff so that they can retain existing customers for long term.

4. Banks should try to attract customers in low cost CASA deposits through providing additional facilities and attractive offers on such accounts.

6.2.3 Inter-Bank Comparison of Performance of Public Sector Banks on Internal Business Process Perspective

Table 6.7: Performance Score of Public Sector Banks on Internal Business Process Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
State Bank of India	210	240	230	250	260	250	270	270	280	290
Bank of Baroda	190	180	240	240	270	270	270	280	240	260
Punjab National Bank	200	220	220	260	260	250	250	250	250	260
IDBI Bank	270	270	280	260	270	250	240	240	220	200
Canara bank	180	220	220	240	230	230	270	280	260	250
Bank of India	220	230	220	230	230	260	280	240	240	250
Indian Bank	190	180	200	210	230	220	230	220	220	230
Central Bank of India	200	200	210	170	210	220	210	230	200	200
Union Bank	200	210	230	210	230	250	250	250	240	270
Syndicate Bank	190	200	190	190	220	240	240	250	220	210

Inter-bank Hypotheses

H_0- There is no significant difference in the performance on Internal Business Process Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Internal Business Process Perspective among Public Sector Banks.

Table 6.8: Mean Ranks of Public Sector Banks

Bank	SBI Bank	Bank of Baroda	Punjab National Bank	IDBI Bank	Canara Bank	Bank of India	Indian Bank	Central Bank of India	Union Bank	Syndicate Bank	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	72.2	62.85	60.15	67.8	55.45	56.5	28.2	20.3	50.7	30.85	-

Table 6.9 Results of Kruskal Wallis Test for Public Sector Banks

	Chi-Square	Degree of freedom	p-value
Public Banks	34.493	9	0.000

Major Findings: Table 6.8 demonstrates that

1. State Bank of India followed by IDBI and Bank of Baroda performed the best on Internal Business Process perspective as the mean ranks for SBI, IDBI and BOB are the highest 72.20, 67.80 and 62.85 respectively among all public sector banks. This was primarily due to Banks's excellency in business operations, good operational capabilities through improved productivity, their efficiency in

reducing cost of business operations and enhanced reach to customers through expansion of ATM's and branches in multiple locations.

2. Performance of Central Bank of India and Indian Bank was the poorest on Internal Business Process Perspective as the mean rank was the lowest 20.30 and 28.20 respectively. This was primarily due to poor operational efficiency of these banks which resulted in poor customer experiences and low growth in business, high cost of business operation particularly on employees and far reach to customers due to low number of ATM's and branches than competitive banks.

3. Table 6.9 shows that since p-value is 0.000, which is less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence there is a significant difference in the performance of all the ten Public Banks over the mentioned financial years.

Suggestions:

1. Public sector banks should try to improve their internal business operational efficiency through providing prompt, convenient and quality services.

2. Banks should try to improve and ensure the efficiency at front and backend at branch level so that operational capabilities and productivity of employees can be improved.

3. To attract new customers, banks should adapt new attractive advertisement and marketing activities for the promotion of their products and services.

4. Banks should expand their network in different locations through expansion of ATM's & Branches so that easy reach to customers can help in improving the business and profitability.

6.2.4 Inter-Bank Comparison of Performance of Public Sector Banks on Learning & Growth and Innovation Perspective

Table 6.10: Performance Score of Public Sector Banks on Learning & Growth and Innovation Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
State Bank of India	120	130	160	240	330	320	350	370	380	390
Bank of Baroda	50	100	130	180	200	210	230	230	260	280
Punjab National Bank	50	110	130	210	220	240	260	260	250	270
IDBI Bank	70	90	110	160	160	180	200	240	220	230
Canara bank	50	140	140	160	190	220	240	250	280	290
Bank of India	110	120	140	170	190	200	230	240	240	240
Indian Bank	40	70	140	150	170	200	200	200	220	260
Central Bank of India	40	80	100	160	150	190	230	240	250	260
Union Bank	40	70	90	140	150	200	230	250	270	270
Syndicate Bank	70	80	100	140	160	160	180	200	210	250

Inter-Bank Hypotheses

H_0- There is no significant difference in the performance on Learning & Growth and Innovation Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Learning & Growth and Innovation Perspective among Public Sector Banks.

Table 6.11: Mean Ranks of Public Sector Banks

Bank	SBI Bank	Bank of Baroda	Punjab National Bank	IDBI Bank	Canara Bank	Bank of India	Indian Bank	Central Bank of India	Union Bank	Syndicate Bank	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	74.30	51.60	58.70	42.00	55.25	50.40	42.35	45.75	46.75	37.90	-

Table 6.12: Results of Kruskal Wallis Test for Public Sector Banks

	Chi-Square	Degree of freedom	p-value
Public Banks	11.809	9	0.224

Major Findings: Table 6.11 portrays that

1. The mean rank is the highest 74.30 for State Bank of India on Learning & Growth and Innovation Perspective followed by Punjab National Bank with mean rank 58.70 and Canara Bank mean rank 55.25 which depicts the better

performance of these banks on this perspective. This is primarily because these public sector banks are able to recruit and retain large number of skilled employees and spent the highest on each employee. They also imparts training to maximum number of their employees in each year. These banks were able to improve their customer experiences on digital platforms as they have issued the highest number of debit cards and have installed maximum POS terminals. Number of mobile and internet banking transactions were also high than other banks.

2. Performance of Syndicate Bank and Indian Bank is the poorest among public sector banks on this perspective as the mean ranks is the lowest 37.90 and 42.35 respectively. This was due to low score on number of skilled employees, percentage of employees trained, expenditure per employee. Number of issued debit and credit cards, installed POS, mobile and internet banking transactions were also low than other public sector banks which enabled them to score low on this perspective.

3. Table 6.12 shows that since p-value is 0.224, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of all the ten Public Banks over the mentioned financial years based on L&G and Innovation perspective.

Suggestions:

1. Public Sector banks should impart training and upgrade maximum number of their employees on continuous basis on technical and behavioural skills and spent more to empower them so that their productivity and efficiency is increased.

2. To meet the customer expectations and improve their digital experiences, banks should focus on introducing continuous innovations in products & services and business processes so that number of transactions through digital channels can be increased.

6.2.5 Inter-Bank Comparison of Performance of Public Sector Banks on Social and Environment Perspective

Table 6.13: Performance Score of Public Sector Banks on Social and Environment Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
State Bank of India	80	80	90	100	110	200	200	270	340	320
Bank of Baroda	70	70	70	70	70	150	170	200	250	280
Punjab National Bank	90	90	90	120	120	170	180	200	260	260
IDBI Bank	40	60	60	60	60	80	140	220	260	240
Canara bank	80	120	120	120	110	190	220	240	280	270
Bank of India	70	80	80	80	80	160	170	200	250	260
Indian Bank	80	110	110	120	120	120	180	190	230	230
Central Bank of India	90	90	90	90	80	100	110	130	180	240
Union Bank	80	80	110	120	120	160	180	200	260	240
Syndicate Bank	80	80	80	80	70	70	70	180	240	210

Inter-Bank Hypotheses

H_0- There is no significant difference in the performance on Social and Environment Perspective among Public Sector Banks.

H_1- There is a significant difference in the performance on Social and Environment Perspective among Public Sector Banks.

Table 6.14: Mean Ranks of Public Sector Banks

Bank	SBI Bank	Bank of Baroda	Punjab National Bank	IDBI Bank	Canara Bank	Bank of India	Indian Bank	Central Bank of India	Union Bank	Syndicate Bank	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	60.6	43.25	59.5	35.2	64.85	47.85	56.45	45.25	57.05	35.0	-

Table 6.15: Results of Kruskal Wallis Test for Public Sector Banks

	Chi-Square	Degree of freedom	p-value
Public Banks	12.311	9	0.196

Major Findings: Table 6.14 exhibits that

1. The performance of Canara Bank followed by SBI Bank and Punjab National Bank is the best as the mean rank is the highest 64.85, 60.6 and 59.5 respectively on Social and Environment Perspective. These banks have spent more on CSR activities than other public sector banks. They are ahead in promoting gender

equality through increasing number of female employees each year and in promoting financial inclusion through increasing number of branches in unbanked rural areas and providing financial assistance to maximum people through opening maximum PMJDY accounts.

2. Performance of Syndicate Bank and IDBI Bank is the poorest among public sector banks as the mean rank is the lowest i.e. 35.0 and 35.2 respectively. Low expenditure on CSR activities, less number of females employees in the workforce, fewer beneficiaries in PMJDY accounts and low deposits, low ratio of priority sector advances to total advances were the primary reasons for their poor performance on social and environment perspective.

3. Table 6.15 shows that since p-value is 0.196, which is higher than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of all the ten Public Banks over the mentioned financial years on Social and Environment Perspective.

Suggestions:

1. Banks should spend minimum expenditure on CSR activities and environment protection. For spending in the year of losses and low profits, banks can create reserves when profits are high.

2. To promote gender equality and empower women, banks should increase the number of female employees in their workforce.

3. Banks should provide more facilities on basic saving accounts like PMJDY to encourage the saving habits of women, poor people, and farmers in rural and semi-urban areas.

4. Banks should take necessary steps for environment protection such as creating policies and separate board for environment protection, initiatives taken for emission of carbon or recycling of e-waste, energy efficiency initiatives etc. Banks should disclose the information regarding this in their reports.

6.2.6 Inter-Bank Comparison of Overall Performance of Public Sector Banks on Balanced Scorecard

Table 6.16: Overall Performance Score of Public Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
State Bank of India	1000	1060	1000	1100	1230	1300	1300	1390	1460	1480
Bank of Baroda	860	940	1030	1110	1110	1120	1190	1130	1050	1200
Punjab National Bank	900	1020	1040	1170	1110	1120	1130	1120	1130	1190
IDBI Bank	810	890	990	1020	990	910	890	1070	980	1020
Canara bank	750	990	1050	1110	990	1030	1180	1160	1120	1170
Bank of India	970	950	940	1050	940	1070	1130	1050	1070	1130
Indian Bank	830	890	1010	980	990	940	1010	980	1000	1140
Central Bank of India	820	770	940	890	790	950	850	930	900	980
Union Bank	860	860	970	970	920	1080	1060	1070	1130	1150
Syndicate Bank	820	780	780	880	920	990	880	1060	940	980

Inter-Bank Hypotheses

H_0- There is no significant difference in the Overall Performance among Public Sector Banks.

H_1- There is a significant difference in the Overall Performance among Public Sector Banks.

Table 6.17: Mean Ranks of Public Sector Banks

Bank	SBI Bank	Bank of Baroda	Punjab National Bank	IDBI Bank	Canara Bank	Bank of India	Indian Bank	Central Bank of India	Union Bank	Syndicate Bank	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	81.7	64.7	70.35	35	65.15	54.35	41.85	19	48.6	24.4	-

Table 6.18: Results of Kruskal Wallis Test for Public Sector Banks

	Chi-Square	Degree of freedom	p-value
Public Banks	45.020	9	0.000

Major Findings: Table 6.17 displays that

1. State Bank of India followed by Punjab National Bank and Canara Bank performed the best on Balanced Scorecard as the mean rank is the highest i.e. 81.7, 70.35 and 65.15 respectively. This is because of these banks have the highest performance score on Balanced Scorecard in almost each year than other

public sector banks as shown in Table 6.16. Highest performance score is the result of better performance of these banks on different perspectives of Balanced Scorecard.

2. Central Bank of India and Syndicate Bank are the poor performers among all public sector banks on Balanced Scorecard as the mean is the lowest as 19.00 and 24.40 respectively. The overall performance score of these banks is lower than other public sector banks in almost each year as shown in Table 6.16.

3. Table 6.18 shows that since p-value is 0.000, which is less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence there is a significant difference in the overall performance of all the ten Public Sector Banks over the mentioned financial years.

Suggestions:

Public Sector Banks should focus on improving their performance on various parameters of Customer Perspective, Internal Business Process Perspective, Learning & Growth and Innovation Perspective and Social and Environment Perspective as the improved performance on these perspectives will simultaneously improve the financial performance therefore it will result in better overall performance.

6.3 Performance and Inter-Bank Comparison of Private Sector Banks on Balanced Scorecard

Using IBM SPSS22, Kruskal Wallis test has been applied to test whether on the basis of all the different perspectives and overall performance on Balanced Scorecard, private sector banks shows any significant difference in the performance when inter-bank comparison is drawn for ten banks namely, HDFC Bank, ICICI Bank, Axis Bank, IndusInd Bank, Yes Bank, Kotak Mahindra Bank, Federal Bank, City Union Bank, RBL Bank and Karur Vysya Bank for year 2007-08 to 2016-17.

6.3.1 Inter-Bank Comparison of Performance of Private Sector Banks on Financial Perspective

Table 6.19: Performance Score of Private Sector Banks on Financial Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
HDFC Bank	340	330	340	350	340	340	340	320	300	300
ICICI Bank	270	200	250	270	280	300	280	270	230	230
Axix Bank	310	320	320	310	320	310	310	300	280	200
InduSind Bank	190	260	320	330	310	310	310	290	290	310
Yes Bank	330	350	340	350	320	320	310	300	300	300
Kotak Mahindra Bank	330	230	340	320	290	310	280	300	270	320
Federal Bank	310	300	270	320	300	270	260	280	220	270
City Union Bank	340	280	310	340	320	300	270	290	280	280
RBL Bank	280	290	230	180	290	290	230	300	280	300
Karur Vysya Bank	320	290	330	320	300	280	250	260	270	240

Inter-Bank Hypotheses

H_0- There is no significant difference in the performance on Financial Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Financial Perspective among Private Sector Banks.

Table 6.20: Mean Ranks of Private Sector Banks

Bank	HDFC Bank	ICICI Bank	Axis Bank	Indusind Bank	Yes Bank	Kotak Bank	Federal Bank	City Union	RBL Bank	Karur Vysya	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	83	22.15	57.55	52.1	75	55.1	36.15	53.6	27.8	42.55	-

Table 6.21: Results of Kruskal Wallis Test for Private Sector Banks

	Chi-Square	Degree of freedom	p-value
Private Banks	39.945	9	0.000

Major Findings: Table 6.20 depicts that

1. HDFC Bank with a mean rank 83 performed the best on financial perspective followed by Yes Bank with a mean rank 75 during the studied period as the performance of both these banks was better than other private sector banks in

terms of profitability, liquidity, asset quality, capital adequacy ratio and earning quality thus scored the highest.

2. The performance of ICICI Bank and RBL bank was the poor among all Private sector sampled banks as the mean rank for both the banks are 22.15 and 27.8 respectively. Low profitability ratios, increased NPA's, poor earning quality were the primary reasons for low performance score of these banks on financial perspective.

3. Table 6.21 shows that since p-value is 0.000, which is significantly less than 0.05. This implies that null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of all the ten Private sector Banks over the mentioned financial years.

Suggestions:

1. Private Sector Banks should try to improve their profitability margins through controlling their operational and infrastructural cost and through improving the net interest margins by acquiring more profitable assets.

2. Banks should ensure the proper procurement, monitoring and timely recovery of their assets so that NPA's can be reduced.

6.3.2 Inter-Bank Comparison of Performance of Private Sector Banks on Customer Perspective

Table 6.22: Performance Score of Private Sector Banks on Customer Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
HDFC Bank	320	290	300	280	230	250	250	280	280	310
ICICI Bank	270	180	240	250	230	230	240	230	240	260
Axis Bank	330	270	260	280	230	250	230	240	240	250
InduSind Bank	130	200	260	260	230	240	220	230	230	250
Yes Bank	280	220	280	280	200	250	190	230	240	290
Kotak Mahindra Bank	300	140	280	230	270	230	190	260	320	230
Federal Bank	210	180	190	210	170	180	150	190	180	220
City Union Bank	210	190	240	190	210	190	140	160	180	190
RBL Bank	180	130	210	230	270	270	260	280	260	270
Karur Vysya Bank	240	150	210	220	180	200	170	130	170	190

Inter-Bank Hypotheses

H_0- There is no significant difference in the performance on Customer Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Customer Perspective among Private Sector Banks.

Table 6.23: Mean ranks of Private Sector Banks

Bank	HDFC Bank	ICICI Bank	Axis Bank	InduSind Bank	Yes Bank	Kotak Bank	Federal Bank	City Union	RBL Bank	Karur Vysya	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	83.05	55.65	69.75	48.55	60.8	60.8	21.3	24.55	57.9	22.65	-

Table 6.24: Results of Kruskal Wallis test for Private Banks

	Chi-Square	**Degree of freedom**	**p-value**
Private Banks	48.184	9	0.000

Major Findings: Table 6.23 demonstrates that:

1. HDFC Bank performed the best on Customer Perspective followed by Axis Bank as the mean rank for HDFC Bank and Axis Bank is the highest among all private sector banks which is 83.05 and 69.75 respectively. This is primarily due to highest score of these bank on account of their ability to retain existing and acquire new customers in deposits and credit accounts through providing efficient services and offering customized innovated and differentiated products & services. These banks have also the strong complaints & queries handling mechanism so the customer satisfaction level is the highest with banks. All these three banks enjoys the highest market share among all private sector banks.

2. Performance of Federal Bank, Karur Vysya Bank and City Union Bank was the poorest among Private sector Banks as the mean rank is the lowest i.e. 21.30, 22.65 and 24.55 respectively. Low market share in deposits and credits than competitive banks and low growth rate of customers are the main reasons for poor performance score on customer perspective.

3. Table 6.24 shows that since p-value is 0.000, which is significantly less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of all the ten Private sector Banks over the mentioned financial years based on customer perspective.

Suggestions:

1. Poor performers among Private sector banks should try to attract and acquire new customers through providing more suitable, tech-savvy, updated products & services with improved business processes.

2. Private sector banks should try improve the customer base in CASA accounts through attractive offers and economical services on such accounts as they are low cost funds and can improve the profitability of the banks.

3. More advertisement and promotional activities should be conducted by the banks to attract customers.

6.3.3 Inter-Bank Comparison of Performance of Private Sector Banks on Internal Business Process Perspective

Table 6.25: Performance Score of Private Sector Banks on Internal Business Process Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
HDFC Bank	150	170	180	180	190	210	260	270	280	300
ICICI Bank	220	220	210	230	250	250	280	300	290	270
Axix Bank	200	210	210	240	250	250	260	290	290	250
InduSind Bank	210	180	200	210	210	220	200	200	220	210
Yes Bank	220	220	270	280	250	260	230	250	240	220
Kotak Mahindra Bank	110	90	160	130	140	170	150	150	190	180
Federal Bank	180	200	190	190	210	220	190	190	210	220
City Union Bank	200	200	180	190	190	200	180	180	200	190
RBL Bank	150	160	170	170	200	220	200	210	220	220
Karur Vysya Bank	190	180	210	200	210	200	180	190	180	190

Inter-Bank Hypotheses

H_0- There is no significant difference in the performance on Internal Business Process Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Internal Business Process Perspective among Private Sector Banks.

Table 6.26: Mean Ranks of Private Sector Banks

Bank	HDFC Bank	ICICI Bank	Axis Bank	InduSind Bank	Yes Bank	Kotak Bank	Federal Bank	City Union	RBL Bank	Karur Vysya	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	52	82	76.75	51.9	80.25	9.65	44.3	33.05	39.45	35.65	-

Table 6.27: Results of Kruskal Wallis Test for Private Sector Banks

	Chi-Square	Degree of freedom	p-value
Private Banks	59.086	9	0

Major Findings: Table 6.26 conveys that

1. ICICI Bank followed by Yes Bank and Axis Bank performed the best on Internal Business Process Perspective of Balanced Scorecard as the mean is the highest as 82, 80.25 and 76.25 respectively for these three banks. This was primarily result of better operational efficiency, high productivity and operational capabilities, better connectivity in all locations through multiple ATM's and branches of these banks.

2. Kotak Mahindra Bank and City Union Bank were the poor performers among private sector banks on Internal Business Process Perspective as the mean rank is the lowest which is 9.65 and 33.05 respectively. Poor operational efficiency, low productivity of employees, high cost of business operations are the primary reasons for their poor performance.

3. Table 6.27 shows that since p-value is 0.000, which is significantly less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a significant difference in the performance of all the ten Private sector Bank over the mentioned financial years.

Suggestions:

1. Private Sector Banks should control the cost of their business operations and other infrastructural costs so that the profit margin can be improved.

2. Although private sector banks are more inclined towards adopting technological up gradations fast but at the same time they should ensure that employees are trained enough to serve customers so that operational efficiency and capabilities can be improved.

6.3.4 Inter-Bank Comparison of Performance of Private Sector Banks on Learning & Growth and Innovation Perspective

Table 6.28: Performance Score of Private Sector Banks on Learning & Growth and Innovation Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
HDFC Bank	110	170	180	240	260	310	320	360	370	390
ICICI Bank	110	120	140	230	280	320	350	340	340	370
Axis Bank	140	160	180	230	220	270	320	320	330	350
InduSind Bank	80	90	100	110	140	140	150	160	180	230
Yes Bank	40	60	70	90	140	150	160	190	210	240
Kotak Mahindra Bank	40	60	70	90	80	150	100	140	240	260
Federal Bank	30	40	40	130	110	90	120	130	170	220
City Union Bank	20	40	40	70	70	70	70	70	90	140
RBL Bank	30	40	40	70	60	60	90	140	150	160
Karur Vysya Bank	60	70	80	120	110	120	120	150	140	170

Inter-Bank Hypotheses

H_0- There is no significant difference in the performance on Learning and Growth and Innovation Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Learning and Growth and Innovation Perspective among Private Sector Banks.

Table 6.29: Mean Ranks of Private Sector Banks

Bank	HDFC Bank	ICICI Bank	Axis Bank	InduSind Bank	Yes Bank	Kotak Bank	Federal Bank	City Union	RBL Bank	Karur Vysya	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	81.45	77.05	79.35	51.25	47.95	41.4	37.05	20.55	27.75	41.4	-

Table 6.30: Results of Kruskal Wallis Test for Private Sector Banks

	Chi-Square	Degree of freedom	p-value
Private Banks	50.910	9	0.000

Major Findings: Table 6.29 indicates that

1. HDFC Bank followed by Axis Bank and ICICI bank performed the best on Learning & Growth and Innovation Perspective as the mean rank is the highest for these banks i.e. 81.45, 79.35 and 77.05 respectively among all Private Sector Banks. This is because these banks are able to recruit and retain the highest

number of employees in all the years. They spent highest on their employees to motivate them and imparted training to maximum number of employees on regular basis. They are also able to improve their customer experiences through continuous innovations in products and services and business processes which has enabled these bank to increase their mobile and internet banking transactions and cash less transactions through debit cards, Credit cards, and POS terminals.

2. Mean rank of City Union Bank and RBL Bank is the lowest 20.55 and 27.75 respectively which depicts the poor performance of these banks on Learning & Growth and Innovation Perspective. This was primarily because these banks scored low on number of skilled employees, expenditure on employees and percentage of employees trained. Transactions through mobile and NEFT and number of debit cards and credit cards, installed POS were also low than other private sector banks.

3. Table 6.30 shows that since p-value is 0.000, which is significantly less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence there is a significant difference in the performance of all the ten Private sector banks over the mentioned financial years based on Learning and Growth perspective.

Suggestions:

1. Although Private sector banks recruit more skilled employees, imparts training on regular basis but they should ensure the effectiveness of the trainings given whether it is able to improve the operational efficiency and productivity of employees or not.

2. Private sector banks are more inclined towards digitalisation, technology and automation but they should try to introduce those products and services which are user friendly and more secured keeping in mind the cost involved with them.

6.3.5 Inter-Bank Comparison of Performance of Private Sector Banks on Social and Environment Perspective

Table 6.31: Performance Score of Private Sector Banks on Social and Environment Perspective

Name of the Bank	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
HDFC Bank	50	60	60	70	110	180	170	210	250	260
ICICI Bank	60	60	60	70	80	170	160	160	180	240
Axix Bank	50	50	60	70	80	140	160	270	320	310
InduSind Bank	60	60	60	70	70	190	190	250	300	300
Yes Bank	60	50	60	60	100	170	170	230	270	260
Kotak Mahindra Bank	60	60	60	50	60	150	170	190	250	210
Federal Bank	80	80	80	90	140	130	140	180	210	250
City Union Bank	80	80	70	80	80	80	90	140	190	230
RBL Bank	100	70	70	70	70	70	70	130	170	200
Karur Vysya Bank	70	70	70	70	80	80	90	120	180	240

Inter-Bank Hypotheses

H_0- There is no significant difference in the performance on Social and Environment Perspective among Private Sector Banks.

H_1- There is a significant difference in the performance on Social and Environment Perspective among Private Sector Banks.

Table 6.32: Mean Ranks of Private Sector Banks

Bank	HDFC Bank	ICICI Bank	Axis Bank	InduSind Bank	Yes Bank	Kotak Bank	Federal Bank	City Union	RBL Bank	Karur Vysya	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	52.6	47.6	51.35	54.3	51.05	44.15	60.95	52.55	44.15	46.3	-

Table 6.33: Results of Kruskal Wallis Test for Private Sector Banks

	Chi-Square	Degree of freedom	p-value
Public Banks	28.83	9	0.969

Major Findings: Table 6.32 presents that

1. Federal Bank performed the best on Social and Environment Perspective followed by HDFC Bank and IndusInd Bank as the mean rank is the highest as 60.95, 52.60 and 54.30 respectively. This is primarily because of these banks spend minimum required amount on CSR activities and environment protection.

All these 3 banks retained the highest female employees in their workforce which depicts that they have promoted gender equality and empower women in their organizations. They have the maximum no. of branches in rural and semi-urban areas and they also provides maximum advances to priority sectors. These private banks have taken all the necessary steps to protect environment.

2. Kotak Mahindra Bank and RBL Bank were the poor performers among private sector banks on this perspective as the mean rank is the lowest 44.15 for both the banks. The amount spent on CSR activities and environment protection was too low by both banks. No. of female employees to total employees, growth in branches in rural and semi-urban locations, ratio of priority sector advances to total advances, growth in number of beneficiaries and deposits in PMJDY accounts were too low than other private sector banks. Therefore their performance score was poor than other banks.

3. Table 6.33 shows that since p-value is 0.969, which is significantly above 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence, there is no significant difference in the performance of all the ten Private sector Bank over the mentioned financial years.

Suggestions:

1. Banks should spent more on CSR activities and environment protection to improve their social image.

2. To promote gender equality and empower women, bank should recruit more females in their employees' base.

3. Bank should increase its branches in rural and unbanked areas so that more financial assistance can be provided to more rural people and farmers.

4. Banks should increase the percentage of advances to priority sectors to support overall economic development of the country.

6.3.6 Inter-Bank Comparison of Overall Performance of Private Sector Banks on Balanced Scorecard

Table 6.34: Overall Performance Score of Private Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
HDFC Bank	970	1020	1060	1120	1130	1290	1340	1440	1480	1560
ICICI Bank	930	780	900	1050	1120	1270	1310	1300	1280	1370
Axix Bank	1030	1010	1030	1130	1100	1220	1280	1420	1460	1360
InduSind Bank	670	790	940	980	960	1100	1070	1130	1220	1300
Yes Bank	930	900	1020	1060	1010	1150	1060	1200	1260	1310
Kotak Mahindra Bank	840	580	910	820	840	1010	890	1040	1270	1200
Federal Bank	810	800	770	940	930	890	860	970	990	1180
City Union Bank	850	790	840	870	870	840	750	840	940	1040
RBL Bank	740	690	720	720	890	910	850	1060	1080	1150
Karur Vysya Bank	880	760	900	930	880	880	810	850	940	1030

Inter-Bank Hypotheses

H_0- There is no significant difference in the Overall Performance among Private Sector Banks.

H_1- There is a significant difference in the Overall Performance among Private Sector Banks.

Table 6.35: Mean Ranks of Private Sector Banks

Bank	HDFC Bank	ICICI Bank	Axis Bank	InduSind Bank	Yes Bank	Kotak Bank	Federal Bank	City Union	RBL Bank	Karur Vysya	Total
N	10	10	10	10	10	10	10	10	10	10	100
Mean Rank	79.3	66.6	77.05	53.65	64.35	40.2	35.6	25.65	31.95	31.05	-

Table 6.36: Results of Kruskal Wallis Test for Private Sector Banks

	Chi-Square	Degree of freedom	p-value
Private Banks	43.287	9	0.000

Major Findings: Table 6.35 reveals that

1. HDFC Bank followed by Axis bank and ICICI bank performed the best on Balanced Scorecard as the mean rank is the highest i.e. 79.3, 77.05 and 66.60 respectively.

2. The performance of City Union Bank, Karur Vysya Bank and RBL Bank was the poorest among private sector banks as the mean rank is the lowest as 25.65, 31.05 and 31.95 respectively. Low performance scores on different perspective

of Balanced Scorecard have affected the overall score of these private sector banks.

3. Table 6.35 shows that since p-value is 0.000, which is significantly less than 0.05. This implies null hypothesis is rejected at 5 % level of significance. Hence, there is a difference in the overall performance of all the ten Private sector Bank over the mentioned financial years.

Suggestions:

Poor performing private sector banks should focus on improving their performance on all perspectives of Balanced Scorecard which will lead to improve their overall performance.

6.4 Inter-Sector Comparison between Public Sector Banks and Private Sector Banks on Balanced Scorecard

To test the significant difference in the performance between public sector banks and private sector banks on Financial, Customer, Internal Business Process, Learning & Growth and Innovation and Social & Environment perspectives and overall performance on Balanced Scorecard for the year 2007-08 to 2016-17, Mann-Whitney U-test has been applied using IBM SPSS22.

6.4.1 Inter-Sector Comparison between Public Sector Banks and Private Sector Banks on Financial Perspective

Table 6.37: Average Performance Score of Banks on Financial Perspective

Public Sector Bank	Average Score	Private Sector Bank	Average Score
State Bank of India	248	HDFC Bank	330
Bank of Baroda	246	ICICI Bank	258
Punjab National Bank	245	Axis Bank	298
IDBI Bank	194	InduSind Bank	292
Canara bank	224	Yes Bank	322
Bank of India	228	Kotak Mahindra Bank	299
Indian Bank	256	Federal Bank	280
Central Bank of India	195	City Union Bank	301
Union Bank	236	RBL Bank	267
Syndicate Bank	239	Karur Vysya Bank	286

<p style="text-align:center">Inter-Sector bank Hypotheses</p>

H_0- There is no significant difference in the performance on Financial Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Financial Perspective between Public and Private Sector Banks.

<p style="text-align:center">Table 6.38: Mean Ranks of the Sectors</p>

Sector	Public	Private	Total
N	10	10	20
Mean Rank	6.85	14.15	-

<p style="text-align:center">Table 6.39: Results of Mann-Whitney U test</p>

	Mann-Whitney U	Z-score	p-value
Score	13.5	-2.765	0.000

Major Findings:

1. Table 6.38 reveals that Private Sector Banks are the best performers than Public Sector Banks on Financial Perspective as the mean rank for Private Sector Banks is the highest 14.5. Private Sector Banks enjoys the benefit of high customer base as they are able to use the upgraded technology and innovated products and services as per customer preferences and ease of use. This has led them acquire more business and more business has led them acquired the healthy growth in profitability ratios than Public Sector Banks. Private Sector Banks also performed well on maintaining sufficient liquidity ratios, improved earning quality and asset quality.

2. Table 6.39 demonstrates that since p-value is 0.000, which is significantly below 0.05. This implies null hypothesis is rejected at 5% level of significance. Hence there is a significant difference in the performance of both public and private sector banks over the mentioned financial years based on financial perspective.

➤ **Conclusion & Recommendations:**

It is concluded that Private Sector Banks are better performers than Public sector Banks on financial parameters although the performance of both the sectors have deteriorated in the last years of study period. Financial measures depict only the performance in the short run. They do not depict why the performance of banks

have declined in long run. They are outcome based measures through which one cannot know the actual areas of improvement that really affects the financial performance. For better financial outcomes, banks can contemplate the following recommendations:

1. Banks should consider the improvements in intangible factors as banks are knowledge intensive service industry where these factors represent the real picture of banks' performance on different areas of improvement and they directly or indirectly affects the long term financial success of banks.

2. Now-a-days, banks are more inclined towards upgrading their technology which might have increased their operational and infrastructural cost so these banks should try to minimize their operational, infrastructural and employees cost to improve the profitability margin.

3. Banks should have robust policies for procurement, management and recovery of their assets in order to maintain high quality assets and reducing NPA's.

4. Banks should concentrate on improving their net interest margin as they directly affects the profitability of banks through acquiring low-cost deposits, high yielding assets, maintaining effective rate of interest on both advances and deposits.

5. Banks are also required to focus upon offering innovations in product & services and business processes, adopting offensive technology and automations, modernizing branches, acquiring trained and skilled staff etc. which will attract new customers into the banks and lead to more business. More customers and more business will automatically improve the profitability of banks.

6. To keep uniformity common strategic objectives and measures are used by the researcher. Banks should identify their own strategic objectives and measures on financial perspective and then analyse their performance.

6.4.2 Inter-Sector Comparison between Public Sector Banks and Private Sector Banks on Customer Perspective

Table 6.40: Average Performance Score of Banks on Customer Perspective

Public Sector Bank	Average Score	Private Sector Bank	Average Score
State Bank of India	271	HDFC Bank	279
Bank of Baroda	257	ICICI Bank	237
Punjab National Bank	248	Axis Bank	258
IDBI Bank	225	InduSind Bank	225
Canara bank	222	Yes Bank	246
Bank of India	231	Kotak Mahindra Bank	245
Indian Bank	194	Federal Bank	188
Central Bank of India	192	City Union Bank	190
Union Bank	211	RBL Bank	236
Syndicate Bank	178	Karur Vysya Bank	186

Inter-Sector Bank Hypotheses

H_0- There is no significant difference in the performance on Customer Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Customer Perspective between Public and Private Sector Banks.

Table 6.41: Mean Ranks of the Sectors

Sector	Public	Private	Total
N	10	10	20
Mean Rank	9.95	11.05	-

Table 6.42: Results of Mann-Whitney U test

	Mann-Whitney U	Z-score	p-value
Score	44.500	-0.416	0.677

Major Findings:

1. Table 6.41 exhibits that Private Sector Banks performed the best than Public Sector Banks on Customer Perspective of the Balanced Scorecard as the mean rank of private sector banks is the highest 11.05 than public sector banks. Strong

marketing strategies, prompt and quality services at front and backend, updated IT infrastructure , updated and latest alternative channels for delivering products & services etc. have enabled private sector banks to attract more customers towards them and providing satisfactory services to them. High customer base and market share enabled private sector banks to achieve highest average score on Customer Perspective.

2. Table 6.42 reveals that since p-value is 0.677, which is greater than 0.05. This implies null hypothesis is accepted at 5% level of significance. Hence there is no significant difference in the performance of both public and private sector banks over the mentioned financial years based on Customer Perspective.

Conclusion & Recommendations:

Customer Perspective is one of the leading perspective of Bank's Balanced Scorecard. The performance of banks on this perspective is positively related to financial outcomes as satisfied customers' leads to more business for the bank thus leads to high profits. Customers who are retained by the banks for the long-term, who purchase multiple products & services who recommend their bank to their friends and relatives are helpful in providing superior returns to bank's shareholders. No significant difference has been found between Public Sector Banks and Private Sector Banks when an inter-sector comparison has been drawn on Customer Perspective.

Following recommendations are being given for banks to improve their performance on Customer perspective:

1. To increase value to the customers and for innovative customer experiences, banks should enhance the use of right and updated digital platforms for providing different banking and specialty services.

2. As it is not possible for a bank to target all the segments of the customers, so bank should target on a clustering a customer base and try to match its needs with suitable products & services.

3. As during the study it has been found that most of the banks have not yet started conducting or disclosing customer survey score annually in their reports so banks should conduct customer satisfaction survey on annual basis to know the

feedback of their products and services so that products and services can be customized accordingly and disclose the customer survey score in their reports.

4. Banks are suggested to incorporate customer satisfaction index, customer retention rate and customer loyalty rate while designing their individual scorecard.

5. Banks should adopt aggressive marketing and promotional strategies like offering unique selling prepositions, introducing first to market products, market segmentation, customized products, use of different marketing channels, promoting social activities etc. to attract new customers and retain the existing ones.

6. As few banks disclose data on number of customers in different accounts, it is suggested to all banks to disclose data on numbers of customer in different accounts so that customer growth rate in particular accounts and profitability per customer can be ascertained.

7. For a smooth, prompt and quality services to customers, efficient and organised knowledge based solutions should be provided by the trained frontline staff so that bank can gain the confidence of customers and retain them for long-term.

8. A right mix of physical and digital channels should be adopted by the banks as both are required by different types of customers.

9. Banks should use multiple marketing channels to reach to their desired customers and to inform them about different offers, special incentives, reward points, low rate or high rate etc. as use of single channel may take away a customer by the competitive bank.

6.4.3 Inter-Sector Comparison between Public Sector Banks and Private Sector Banks on Internal Business Process Perspective

Table 6.43: Average Performance Score of Banks on Internal Business Process Perspective

Public Sector Bank	Average Score	Private Sector Bank	Average Score
State Bank of India	255	HDFC Bank	219
Bank of Baroda	244	ICICI Bank	252
Punjab National Bank	242	Axis Bank	245
IDBI Bank	250	InduSind Bank	206
Canara bank	238	Yes Bank	244
Bank of India	240	Kotak Mahindra Bank	147
Indian Bank	213	Federal Bank	200
Central Bank of India	205	City Union Bank	191
Union Bank	234	RBL Bank	192
Syndicate Bank	215	Karur Vysya Bank	193

Inter-Sector Bank Hypotheses

H_0- There is no significant difference in the performance on Internal Business Processes Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Internal Business Processes Perspective between Public and Private Sector Banks.

Table 6.44: Mean Ranks of the Sectors

Sector	Public	Private	Total
N	10	10	20
Mean Rank	12.65	8.35	-

Table 6.45: Results of Mann-Whitney U test

	Mann-Whitney U	Z-score	p-value
Score	28.500	-1.626	0.104

Major Findings:

1. Table 6.44 shows that the mean rank of Public Sector Banks is the highest 12.65 than Private Sector Banks which shows the best performance on internal business process perspective. This is primarily due to more convenient

geographical reach to customers of public sector banks through availability of ATM's and branches in all the locations and low operational cost of business operations.

2. Table 6.45 reveals that since p-value is 0.104, which is higher than 0.05. This implies that null hypothesis is accepted at 5% level of significance. Hence, there is no significant difference in the performance of both public and private sector banks over the mentioned financial years based on Internal Business perspective.

Conclusion and Recommendations:

Internal Business Process Perspective of Balanced Scorecard helps in identifying the operational efficiency, operational capabilities and operational excellence of any bank. Performance on this perspective directly affects the performance of customer and financial perspective. Better performance on this perspective directly leads to highly satisfied customers which are retained by the banks for the long term thus lead to improved business growth and financial performance. Outstanding operational efficiency through improved speed, timely, prompt, convenient, accurate and cost efficient services, achieving proficiency in operational capabilities through improved productivity of employees, achieving operational excellence through cost efficiency, cross sell efficiency, CRM capacity, improved distributional channel capacity are the key strategic drivers for any bank which lead to improvement in customer experiences with the banks thus leads to profitability.

It is finally concluded here that no significant difference has been found between public sector banks and private sector banks when an inter-sector comparison has been drawn. To improve the performance of banks on internal business process perspective following suggestions are being given below:

1. Banks should ensure that the delivery of their products and services is done with a greater accuracy with quality and diversified portfolio using the upgraded technology and automations with trained and updated and trained manpower so that operational efficiency can be enhanced.

2. Investment in technology and automations, expansion of branches, ATM's, e-kiosks and on other operational & infrastructural activities should be done

keeping in view the cost involved so that cost efficiency is achieved and profitability is not affected to a great extent.

3. Banks should ensure the effectiveness of the expenses done for the promotion and advertisement of bank's product and services.

4. To improve the internal operational efficiency and for effective customer experiences, banks should increase the adoption of artificial intelligence enabled digital transformation at front and backend for smooth customer identification and their authentications, simulating live employees through chatbots, voice assistants etc., deepening relationship with customers and for providing personalized insights and recommendations.

5. Banks should focus on realignment of their business through leaving business lines with low margins and move on into cost effective business lines which requires minimum resources and provide opportunities to differentiate them from competitors.

6. Banks should try to minimize the process cost through reducing unit cost to value ratio of each transaction and activity such as cost of opening any account of handling of any type of transaction. This will require banks to continuously monitor, analyse, map, benchmark and rethink the back-office processes for process improvement.

7. To improve operational capabilities, banks should try to improve employee productivity with automation tools which will enabled bank to handle more activities and more transactions in minimum time with less no. of employees. To improve the employee's productivity banks should create performance management techniques like defining the expectations from a particular employee or create scorecards for their performance. They should improve the reward and incentives system to motivate them and provide better training facilities and supervision.

8. In a current scenario, to improve the operational efficiency, adopting new technology and automation in banking sector is the need of the hour. For this banks are required to have applications which customer can use on its own and obtain information without involving staff efforts, to use technologies which

reduces time for obtaining and providing information by employees and have automated business processes to work more quickly and efficiently.

6.4.4 Inter-Sector Comparison between Public Sector Banks and Private Sector Banks on Learning & Growth and Innovation Perspective

Table 6.46: Average Performance Score of Banks on Learning & Growth and Innovation Perspective

Public Sector Bank	Average Score	Private Sector Bank	Average Score
State Bank of India	279	HDFC Bank	271
Bank of Baroda	187	ICICI Bank	260
Punjab National Bank	200	Axis Bank	252
IDBI Bank	166	InduSind Bank	138
Canara bank	196	Yes Bank	135
Bank of India	188	Kotak Mahindra Bank	123
Indian Bank	165	Federal Bank	108
Central Bank of India	170	City Union Bank	68
Union Bank	171	RBL Bank	84
Syndicate Bank	155	Karur Vysya Bank	114

Inter-Sector Bank Hypotheses

H_0- There is no significant difference in the performance on Learning & Growth and Innovation Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Learning & Growth and Innovation Perspective between Public and Private Sector Banks.

Table 6.47: Mean Ranks of the Sectors

Sector	Public	Private	Total
N	10	10	20
Mean Rank	12.80	8.20	-

Table 6.48: Results of Mann-Whitney U test

	Mann-Whitney U	Z-score	p-value
Score	27.000	-1.739	0.082

Major Findings:

1. Table 6.46 displays that the mean rank of Public Sector Banks is the highest 12.80 than Private Sector Banks on Learning & Growth and Innovation Perspective. This is primarily on account of largest number of employees, more expenditures on employees, training to maximum employees, large number of issued debit cards and installed POS terminals with these banks.

2. Table 6.47 shows that since p-value is 0.082, which is greater than 0.05. This implies null hypothesis is accepted at 5 % level of significance. Hence there is no significant difference in the performance of both public and private sector banks over the mentioned financial years based on Learning & Growth and Innovation perspective.

Conclusion and Recommendations:

Measures on Learning & growth and innovation perspective of Balanced Scorecard are the enablers to achieve excellent outcomes on other three perspective named Financial, Customer, and Internal Business Process. To achieve the objectives of these three perspective, an organization must have a strong organizational infrastructure of employee's skills, information systems, IT infrastructure and innovations. As being highly intellectual intensive and tech-savvy organizations, employees and innovation are the main assets of the banks. Skilled, trained, empowered and committed employees and highly innovated products, services and business processes are the necessities to improve the efficiency of banking operations and improve the quality of customer digital experiences which ultimately leads to more business and more profits. It has been finally concluded that no significant difference has been found when an inter-sector comparison has been drawn between Public sector banks and Private sector banks on Learning & Growth and Innovation Perspective. Following recommendations are being given below to improve the performance of banks on Learning & Growth and Innovation Perspective:

1. Automation, digitalisation, robotics etc. are being talked about these days but it requires human intervention also so while introducing innovations in products & services and business processes banks should try to train their human

resources on technical, behavioural and operational skills so that they can serve their customers in a smooth way.

2. To enhance the skills set of employees, banks should conduct different training programmes, workshops, seminars, different courses, personal mentoring sessions etc. in order to improve their efficiency and productivity.

3. Banks should ensure the effectiveness of training programmes conducted. For this they can conduct performance reviews of each training activity and appraise the performance of employees so that areas for further improvement can be known.

4. All banks should disclose the complete information related to expenditure on training of employees, number of training programs conducted, average training hours/days for each employee, employee turnover ratio, employee's satisfaction survey score in their annual reports as these are the measures which should be incorporated into this perspective of BSC.

5. To cope up with increased competition due to technology, automation, digitalisation, banks should try to introduce first-to market innovated products and services which are more user friendly, reliable and secured so that quality of customer digital experiences and expectations are met and customers retain by the bank for long term.

6. Introduction of new technology in products, services, processes might have increased the operational and infrastructural costs for the banks so banks should try to control this cost in order to improve their profit margin. `

6.4.5 Inter-Sector Comparison between Public Sector Banks and Private Sector Banks on Social and Environment Perspective

Table 6.49: Average Performance Score of Banks on Social and Environment Perspective

Public Sector Bank	Average Score	Private Sector Bank	Average Score
State Bank of India	179	HDFC Bank	142
Bank of Baroda	140	ICICI Bank	124
Punjab National Bank	158	Axis Bank	151
IDBI Bank	122	InduSind Bank	155
Canara bank	175	Yes Bank	143
Bank of India	143	Kotak Mahindra Bank	126
Indian Bank	149	Federal Bank	138
Central Bank of India	120	City Union Bank	112
Union Bank	155	RBL Bank	102
Syndicate Bank	116	Karur Vysya Bank	107

Inter-Sector Bank Hypotheses

H_0- There is no significant difference in the performance on Social and Environment Perspective between Public and Private Sector Banks.

H_1- There is a significant difference in the performance on Social and Environment Perspective between Public and Private Sector Banks.

Table 6.50: Mean Ranks of the Sectors

Sector	Public	Private	Total
N	10	10	20
Mean Rank	12.50	8.50	-

Table 6.51: Results of Mann-Whitney U test

	Mann-Whitney U	Z-score	p-value
Score	30.000	-1.513	0.130

Major Findings:

1. Table 6.50 reveals that the performance of Public Sector Banks was the best on Social and Environment Perspective as the mean rank is the highest 12.50 for

Public banks. This is primarily because these banks spent more on CSR activities. They have the largest number of branches in rural and semi-urban areas. They acquired more beneficiaries in PMJDY accounts and provided more advances to priority sectors.

2. Table 6.51 shows that since p-value is 0.130, which is more than 0.05. This implies null hypothesis is accepted at 5% level of significance. Hence there is no significant difference in the performance of both public and private sector banks over the mentioned financial years based on Social and Environment perspective.

Conclusion & Recommendations:

The strategic focus of banks these days is moving around achieving sustainable competitive advantage and thinking beyond maintaining liquidity and improving profitability. Actions are needed to get engage in the activities which are law abiding and beneficial for all stakeholders including society so that they can survive in the long run. Focusing on social and environment concerns improve the image and reputation of the bank in the eyes of stakeholders thus it leads to satisfied employees, satisfied customers, improved business growth, increased market share and high profitability. Banks should identify measures on Social and Environment Perspective and incorporate within their Balanced Scorecard and continuously evaluate and improve their performance as it effects the long term profitability of the banks.

This study shows that no significant difference is found in the performance between public sector banks and private sector banks on Social and Environment Perspective when an inter-sector comparison is drawn. To improve the performance of banks on social and environment perspective following suggestions are being given hereunder:

1. All Public and Private sector banks should spend minimum expenditure on CSR activities as prescribed by Companies Act, 2013. Banks can create reserve for CSR activities to spend in the year of losses or low profits so that they can maintain a positive image in the eyes of stakeholders.

2. Due to non-availability of information by most of the banks on various identified measures are excluded from social and environment perspective

which should be incorporated by the banks while creating their individual Balanced Scorecard. The measures are as follows:

Measures
➢ Number of Activities for Health, Education, Skill development, Natural Calamities, Rural Development, Women and Children Welfare, Financial Literacy etc.
➢ Expenditure Incurred Per Social Activity
➢ Emission Per Employee
➢ Energy Consumption Per Employee
➢ E-Waste Recycled
➢ Paper Conservation
➢ Measures on Ethics and Corporate Governance

3. Banks should disclose all the information required for the above mentioned measures and variables taken for the study in their annual reports or sustainability reports.

4. Banks should increase the number of females in total employees so as to promote gender equality and empower women and to include a major part of the society.

5. Banks should conduct more awareness programmes for promoting financial schemes /facilities in rural and semi-urban areas. Banks should offer customized products & services as per the needs of local area population.

6.4.6 Inter-Sector Comparison between Public Sector Banks and Private Sector Banks on Balanced Scorecard

Inter Sector bank Hypotheses

H_0- There is no significant difference on Balanced Scorecard between Public and Private Sector Banks.

H_1- There is a significant difference on Balanced Scorecard between Public and Private Sector Banks.

Table 6.52: Overall Performance Score of Public Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Average Score	Rank
State Bank of India	1000	1060	1000	1100	1230	1300	1300	1390	1460	1480	1232	1
Bank of Baroda	860	940	1030	1110	1110	1120	1190	1130	1050	1200	1074	3
Punjab National Bank	900	1020	1040	1170	1110	1120	1130	1120	1130	1190	1093	2
IDBI Bank	810	890	990	1020	990	910	890	1070	980	1020	957	8
Canara bank	750	990	1050	1110	990	1030	1180	1160	1120	1170	1055	4
Bank of India	970	950	940	1050	940	1070	1130	1050	1070	1130	1030	5
Indian Bank	830	890	1010	980	990	940	1010	980	1000	1140	977	7
Central Bank of India	820	770	940	890	790	950	850	930	900	980	882	10
Union Bank	860	860	970	970	920	1080	1060	1070	1130	1150	1007	6
Syndicate Bank	820	780	780	880	920	990	880	1060	940	980	903	9

Table 6.53: Overall Performance Score of Private Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Average Score	Rank
HDFC Bank	970	1020	1060	1120	1130	1290	1340	1440	1480	1560	1241	1
ICICI Bank	930	780	900	1050	1120	1270	1310	1300	1280	1370	1131	3
Axis Bank	1030	1010	1030	1130	1100	1220	1280	1420	1460	1360	1204	2
InduSind Bank	670	790	940	980	960	1100	1070	1130	1220	1300	1016	5
Yes Bank	930	900	1020	1060	1010	1150	1060	1200	1260	1310	1090	4
Kotak Mahindra Bank	840	580	910	820	840	1010	890	1040	1270	1200	940	6
Federal Bank	810	800	770	940	930	890	860	970	990	1180	914	7
City Union Bank	850	790	840	870	870	840	750	840	940	1040	863	10
RBL Bank	740	690	720	720	890	910	850	1060	1080	1150	881	9
Karur Vysya Bank	880	760	900	930	880	880	810	850	940	1030	886	8

Table 6.54: Ranking to Banks on the Basis of Average Score on Balanced Scorecard

Bank Name	Average Score	Rank	Bank Name	Average Score	Rank
HDFC Bank	1241	1	Union Bank	1007	11
State Bank of India	1232	2	Indian Bank	977	12
Axis Bank	1204	3	IDBI Bank	957	13
ICICI Bank	1131	4	Kotak Mahindra Bank	940	14
Punjab National Bank	1093	5	Federal Bank	914	15
Yes Bank	1090	6	Syndicate Bank	903	16
Bank of Baroda	1074	7	Karur Vysya Bank	886	17
Canara bank	1055	8	Central Bank of India	882	18
Bank of India	1030	9	RBL Bank	881	19
InduSind Bank	1016	10	City Union Bank	863	20

Table 6.55: Mean Ranks of the Sectors

Sector	Public	Private	Total
N	10	10	20
Mean Rank	10.9	10.1	-

Table 6.56: Results of Mann-Whitney U test

	Mann-Whitney U	Z-score	p-value
Score	46.00	-0.302	0.762

Major Findings:

1. Table 6.52 portrays that State Bank of India has the highest 1232 average score on Balanced Scorecard among Public Sector Banks therefore it ranked on first whereas Central Bank of India ranked on the last as the average score was the lowest 882 on Balanced Scorecard.

2. Table 6.53 exhibits that HDFC Bank followed by Axis Bank performed the best on Balanced Scorecard and ranked on 1st and 2nd position respectively as the average score is the highest for the banks among all private sector banks. City Union Bank and RBL Bank ranked on the 10th and 9th position as their average score was the lowest on Balanced Scorecard.

3. Table 6.54 manifests that HDFC Bank ranked on the 1st position on Balanced Scorecard among all Public and Private Sector banks in India as the average score 1241 was the highest among all banks whereas City Union Bank ranked on the last as the average score was the lowest 863 on Balanced Scorecard.

Table 6.55 displays that mean rank of public sector banks is the highest 10.9 than private sector banks. Table 6.56 shows that since p-value is 0.762, which is greater than 0.05. This implies null hypothesis is accepted at 5% level of significance. Hence there is no significant difference in the performance of both public and private sector banks over the mentioned financial years in the overall performance.

6.5 Grading and Ranking of Performance of Public Sector Banks and Private Sector Banks on Balanced Scorecard

Grading and ranking of the overall performance of Public and Private sector banks on Balanced Scorecard, performance score has been converted into percentage for each year and each bank. Further each bank has been given a remark (Excellent-Above 80, Very Good-Above 70, Good-Above 60, Satisfactory-Above 50, and Poor-Below 50) on the basis of percentage in overall performance for each year separately. Subsequently ranking to each bank in each year sector wise has been given from highest to lowest to identify the best performing banks and poor performing banks on Balanced Scorecard. Below tables highlight the grading and ranking of Public and Private Sector Banks:

Table 6.57: Percentage of Overall Performance of Public Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
State Bank of India	50	53	50	55	62	65	65	70	73	74
Bank of Baroda	43	47	52	56	56	56	60	57	53	60
Punjab National Bank	45	51	52	59	56	56	57	56	57	60
IDBI Bank	41	45	50	51	50	46	45	54	49	51
Canara bank	38	50	53	56	50	52	59	58	56	59
Bank of India	49	48	47	53	47	54	57	53	54	57
Indian Bank	42	45	51	49	50	47	51	49	50	57
Central Bank of India	41	39	47	45	40	48	43	47	45	49
Union Bank	43	43	49	49	46	54	53	54	57	58
Syndicate Bank	41	39	39	44	46	50	44	53	47	49

Table 6.58: Grading of Performance of Public Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
State Bank of India	Poor	Satisfactory	Poor	Satisfactory	Good	Good	Good	Good	Very Good	Very Good
Bank of Baroda	Poor	Poor	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Punjab National Bank	Poor	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory
IDBI Bank	Poor	Poor	Poor	Satisfactory	Poor	Poor	Poor	Satisfactory	Poor	Satisfactory
Canara bank	Poor	Poor	Satisfactory	Satisfactory	Poor	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Bank of India	Poor	Poor	Poor	Satisfactory	Poor	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Indian Bank	Poor	Poor	Satisfactory	Poor	Poor	Poor	Satisfactory	Poor	Poor	Satisfactory
Central Bank of India	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Union Bank	Poor	Poor	Poor	Poor	Poor	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Syndicate Bank	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Satisfactory	Poor	Poor

Table 6.59: Ranking of Performance Public Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
State Bank of India	1	1	4	3	1	1	1	1	1	1
Bank of Baroda	4	5	3	3	2	2	2	3	5	2
Punjab National Bank	3	2	2	1	2	2	4	4	2	2
IDBI Bank	6	6	4	5	3	8	7	5	7	6
Canara bank	7	3	1	2	3	4	3	2	3	3
Bank of India	2	4	6	4	4	3	4	6	4	5
Indian Bank	6	6	3	6	3	7	6	7	6	5
Central Bank of India	6	9	6	7	6	6	9	8	9	7
Union Bank	5	7	5	6	5	3	5	5	2	4
Syndicate Bank	6	8	7	8	5	5	8	6	8	7

Major Findings: Table 6.58 and 6.59 show that:

➤ **For the Year 2007-08:-** All Public Sector Banks got poor remark in this year. State Bank of India ranked first on Balanced Scorecard in this year and Canara bank on the last.

➤ **For the Year 2008-09:-** State Bank of India and Punjab National Bank got satisfactory remark in this year whereas all other public banks got poor remark. State bank of India ranked on 1st position and Central Bank of India ranked on the last position on Balanced Scorecard.

➤ **For the Year 2009-10:-** Bank of Baroda, Punjab National Bank, Canara Bank and Indian Bank got satisfactory remark and rest all other banks got poor remark. Canara Bank ranked on 1st position whereas Syndicate Bank ranked on last position.

➤ **For the Year 2010-11:-** State Bank of India, Bank of Baroda, Punjab National Bank, IDBI Bank, Canara Bank and Bank of India got satisfactory remark whereas all other

bank got poor remark. Punjab National Bank got the 1st rank and Syndicate Bank ranked on the last in this year.

➢ **For the Year 2011-12:-** State Bank of India got good remark, Bank of Baroda and Punjab National Bank got satisfactory remark whereas all other banks got poor remark in this year. State Bank of India ranked on 1st position and Central Bank of India on the last position.

➢ **For the Year 2012-13:-** State Bank of India got good remark. Bank of Baroda, Punjab National Bank, Bank of India and Union Bank got satisfactory remark and all other banks got poor remark. State Bank of India ranked on 1st position whereas IDBI bank ranked on the last.

➢ **For the Year 2013-14:-** State Bank of India got good remark. IDBI bank, Central Bank of India and Syndicate Bank got poor remark and rest other public banks were remarked as satisfactory. State Bank of India ranked on first position and Central Bank of India on the last.

➢ **For the year 2014-15:-** State Bank of India got good remark. Indian Bank and Central Bank of India got poor remark whereas all other banks got satisfactory remark. State Bank of India ranked on 1st position and Central Bank of India on the last.

➢ **For the Year 2015-16:-** State Bank of India got very good remark in this year where as all other public banks got either poor or satisfactory remark. State bank of India ranked on first position and Central Bank of India on the last position.

➢ **For the Year 2016-17:-** State Bank of India got very good remark, Central Bank of India and Syndicate bank got poor remark, and rest other banks got satisfactory remark. State Bank of India ranked on 1st position and Central Bank of India and Syndicate Bank ranked on the last.

Table 6.60: Percentage of Overall Performance of Private Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
HDFC Bank	49	51	53	56	57	65	67	72	74	78
ICICI Bank	47	39	45	53	56	64	66	65	64	69
Axis Bank	52	51	52	57	55	61	64	71	73	68
InduSind Bank	34	40	47	49	48	55	54	57	61	65
Yes Bank	47	45	51	53	51	58	53	60	63	66
Kotak Mahindra Bank	42	29	46	41	42	51	45	52	64	60
Federal Bank	41	40	39	47	47	45	43	49	50	59
City Union Bank	43	40	42	44	44	42	38	42	47	52
RBL Bank	37	35	36	36	45	46	43	53	54	58
Karur Vysya Bank	44	38	45	47	44	44	41	43	47	52

Table 6.61: Grading of Performance of Private Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
HDFC Bank	Poor	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Good	Good	Very Good	Very Good	Very Good
ICICI Bank	Poor	Poor	Poor	Satisfactory	Satisfactory	Good	Good	Good	Good	Good
Axis Bank	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Good	Good	Very Good	Very Good	Good
InduSind Bank	Poor	Poor	Poor	Poor	Poor	Satisfactory	Satisfactory	Satisfactory	Good	Good
Yes Bank	Poor	Poor	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Good	Good
Kotak Mahindra Bank	Poor	Poor	Poor	Poor	Poor	Satisfactory	Poor	Satisfactory	Good	Satisfactory
Federal Bank	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Satisfactory
City Union Bank	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Satisfactory
RBL Bank	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Satisfactory	Satisfactory	Satisfactory
Karur Vysya Bank	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Satisfactory

Table 6.62 Ranking of Performance of Private Sector Banks on Balanced Scorecard

Name of the Bank/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
HDFC Bank	2	1	1	1	1	1	1	1	1	1
ICICI Bank	3	3	6	2	2	2	2	3	3	2
Axis Bank	1	1	2	1	3	3	3	2	2	3
Indusind Bank	9	4	4	3	5	5	4	5	5	5
Yes Bank	3	2	3	2	4	4	5	4	4	4
Kotak Mahindra Bank	6	7	5	6	9	6	6	7	3	6
Federal Bank	7	4	8	4	6	8	7	8	7	7
City Union Bank	5	4	7	5	8	10	9	10	8	9
RBL Bank	8	6	9	7	7	7	7	6	6	8
Karur Vysya Bank	4	5	6	4	8	9	8	9	8	9

Major Findings: Table 6.61 and 6.62 show that:

➢ **For the Year 2007-08:-** Axis Bank got satisfactory remark whereas all other private sector banks got poor remark in this year. Axis bank ranked on 1st position and IndusInd Bank ranked on the last position on Balanced Scorecard in this year.

➢ **For the Year 2008-09:-** HDFC Bank and Axis Bank got satisfactory remark where as other private banks were remarked as poor. HDFC Bank and Axis Bank ranked on 1st position and Kotak Mahindra Bank on last position.

➢ **For the Year 2009-10:-** HDFC Bank, Axis Bank and Yes Banks got satisfactory remark in this year where as rest other private banks were remarked as poor. HDFC bank was ranked on 1st position and RBL Bank on the last.

➢ **For the Year 2010-11:-** HDFC Bank, ICICI Bank, Axis Bank and Yes Bank got satisfactory remark in this year whereas other private sector banks got poor remark in this year. HDFC Bank and Axis Bank got first rank and RBL Bank ranked the last in this year.

➢ **For the Year 2011-12:-** HDFC Bank, ICICI Bank, Axis Bank and Yes Bank got satisfactory remark in this year whereas other private sector banks got poor remark in this year. HDFC Bank was ranked on 1st position and Kotak Mahindra Bank on the last position.

➢ **For the Year 2012-13:-** HDFC Bank, ICICI Bank, Axis Bank got good remark, IndusInd Bank. Kotak Mahindra Bank and Yes Bank got satisfactory remark and all other banks got poor remark in this year. HDFC bank ranked on 1st position and City Union Bank on the last position.

➢ **For the Year 2013-14:-** HDFC Bank, ICICI Bank, Axis Bank got good remark, IndusInd Bank and Yes Bank got satisfactory remark and all other banks got poor remark in this year. HDFC bank ranked on 1st position and City Union Bank on the last position.

➢ **For the year 2014-15:-** HDFC Bank and Axis bank got very good remark in this year. Other private sector banks got either poor or satisfactory remark in this year. HDFC bank ranked on 1st position and City Union Bank on the last position.

➢ **For the Year 2015-16:-** . HDFC Bank and Axis bank got very good remark in this year. Other private sector banks got either good, poor or satisfactory remark in this year. HDFC bank ranked on 1st position. City Union Bank and Karur Vysya Bank were ranked on the last position.

➢ **For the Year 2016-17:-** HDFC Bank got very good remark in this year. Other private sector banks got either good or satisfactory remark in this year. HDFC bank ranked on

1st position. City Union Bank, Karur Vysya Bank and City Union Bank were ranked on the last position.

Major Findings and Conclusion: It has concluded here that no public sector banks and no private sector bank got excellent remark on Balanced Scorecard. The performance of all public and private sector banks was either poor or satisfactory in most of the years. State Bank of India among Public sector banks and HDFC and Axis Bank among private sector banks were ranked on 1st position on Balanced Scorecard in most of the years. On the basis of average score during the studied years, HDFC bank was on the top position and City Union Bank on the last position among all Public and Private Sector Banks in India.

6.6 Conclusion

On the basis of the results of the study, it can be finally concluded that the overall performance of Indian Public and Private sector banks has a continuous decline on Balanced Scorecard. To make an organization a "Sustainable Organization" and to achieve long term financial success, it is not always a high scale of operations or quantum of investment done but it is its Strong Performance Measurement and Management system which is required to continuously measure, evaluate, and monitor the performance time to time on all the financial and non-financial parameters and take corrective actions on time. Measurement of performance on profitability is not enough but measuring performance on sustainability and stability is also equally important. The proposed methodology for measuring and evaluating the performance of banks in India using Balanced Scorecard incorporated with sustainability issues and the results of the study can become a base for performance measurement of Banks in India. It will help them to identify the loopholes for their poor performance and improve them.

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Chapter-7

Summary of Findings and Suggestions

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CHAPTER-7
SUMMARY OF FINDINGS AND SUGGESTIONS

7.1 Introduction

7.1.1 Prologue: Digitalisation has occupied a massive space in each functioning area of banking sector in yesteryears. High technological revolution has fetched a highly competitive environment in this sector and enforced banks to emphasis their strategic focus on digitising internal business processes, reassess their organizational structures, offer innovative and technically upgraded products & services, introduce multiple online delivery platforms, recruit highly skilled talents and nurture them, meet customers and all stakeholders' expectations etc. Therefore, they can survive and sustain in this competitive era and achieve long term financial growth and success. Changed strategic focus necessitate refinement of their business models and execution of strategies effectively. Banks are entailed to pay attention on measuring, evaluating and improving their performance on all aspects of strategies. For this they need an accurate, comprehensive and reliable performance measurement and management system through which they can measure their performance on all strategic financial and non-financial areas. Balanced Scorecard emerged as a momentous Performance Measurement and Management tool in the field of management accounting that helps in identifying the major strategic objectives of an organization from their vision and mission statements and then measures and manages the performance on all financial and non-financial aspects thus contributes to achieve long term goals, growth and sustainability. This study is a step towards underlining the importance of Balanced Scorecard as a Strategic Performance Measurement and Management tool for evaluating the performance of Indian Banks on all strategic parameters of success.

7.1.2 Evolution of Balanced Scorecard: Different theories, concepts, surveys, studies etc. in the past have become the base for evolution of Balanced Scorecard by Kaplan and Norton. These primarily include the "Tableau de bord" by France Engineers (1930), a BSC type performance measurement tool by General Electric (1950's), Concept of "Management by Objectives" by Peter Drucker (1954), Framework suggested by Robert Anthony on Planning and Control and System (1960s), Japanese concepts of Just in Time (JIT) , Total Quality Management (TQM), Short Cycle Time (1970s and 1980s), A survey by National Association of Accountants and Computer Aided Manufacturing (1987), A study by Johnson and Kaplan(1987), Agency Theory and Stakeholders Theory etc.

7.1.3 Need for development of Balanced Scorecard-

A number of studies recognized that financial measures based on past performance are only post mortem techniques and excludes intangible measures. Traditional performance system neglects non-financial factors and unable to link long term strategy. Focus on internal evaluation and on creating shareholders value may defeat the long term growth and success of organization. A crises came during 1990s in the development of design and implementation of performance measurement systems due to different obscurities prevailed in the conventional financial performance measurement systems. These obscurities and fruitful insights of different theories and concepts became the roots of emergence of new performance measurement and management system in the form of Balanced Scorecard which integrates all the aspects of measurement of performance on a single dashboard.

7.1.4 Conceptual Framework of Balanced Scorecard

The concept of Balanced was introduced by Robert Kaplan and David Norton in their first article in 1992, "The Balanced Scorecard-Measures that Drives Performance". According to **Kaplan and Norton (1992),** "Balanced Scorecard is a business management concept that transforms both financial and non-financial data into a detailed roadmap that helps the organization measure its performance and meet long and short term objectives. It translates mission and vision statements into a comprehensive set of objectives and performance measures that can be quantified and appraised". Kaplan & Norton (2000) said that "Balanced Scorecard tells you the knowledge, skills and systems that your employees will need (Learning & Growth) to innovate and build the right strategic capabilities and efficiencies (Internal Processes) that deliver specific value to the market (Customer) which will eventually lead to higher shareholder value (Financial)".It is a Birds' Eye View of Company's Performance as against Strategic Goals.

7.1.5 Four Basic Pillars of Balanced Scorecard

7.1.5.a Financial Perspective: Company's performance in front of Shareholders –The Destination Perspective: Financial perspective helps organization in getting familiar with the financial position and shareholders' perception. Banks are profit making institutions, thus this perspective of the banks is mainly created around the strategic objectives like increasing profitability, increasing shareholders value, maintaining liquidity or asset quality, improving earning quality, reducing cost etc. **7.1.5.b Customer Perspective: View of Company's Performance from Customer Angle:** In this perspective, the performance of organization is measured in terms of customers' experiences with the value created by

them. The strategic focus of banks on this perspective revolves around achieving high customer satisfaction, customer retention, customer loyalty, growth in customer's accounts, improving market share, providing best after sales services etc. **7.1.5.c Internal Business Process Perspective: Drivers/Priorities to outshine in front of Customers and Shareholders:** This perspective emphases on identifying the critical business processes and competencies at which company must excel at to meet the objectives on financial and customer perspectives. Excellency in business operations through effective utilization of intellectual capital with other resources, decreased operating cost, gaining high productivity of employees, expanding distribution channels in the form of increase in branches, ATM's , POS terminals, E-kiosk etc are main strategic focus areas on this perspective. **7.1.5.d Learning & Growth Perspective: Key drivers for pushing excellence in business operations:** This perspective deals with constructing a mechanism to fill the gaps in knowledge, processes, information systems, organization culture and to be continually innovative. This perspective of the banks aims at providing & developing the employees' capabilities & productivity, employee's satisfaction, information technology capabilities, and creating a strong work culture so that objectives of customer and internal business processes can be achieved. **7.1.5.e Cause-effect Relationship among Measures/Perspectives of Balanced Scorecard:** There must be a cause effect relationship among the measures in various perspectives of Balanced Scorecard so that they can be monitored, managed and validated. (Kaplan & Norton, 1996). A hierarchical model of Balanced Scorecard depicts this cause effect relationship. Improvements in learning & growth lead to better internal processes which in turn lead to increase in value prepositions delivered to customers and thus lead to increased revenues and improved financial performance.

7.1.6 Advantages of the Balanced Scorecard to the Corporate Sector: Implementation of BSC in Corporate Sector has delivered several benefits such as it provides fruitful insights on critical drivers of organizations' success and transparency on strategies througout the organization. It ensures that every employee is focused towards their aligned goals. It provides a visual presentation of a Company's strategy, highlights strategic objectives, cause-effect relationship among the perspectives and its performance on a single dashboard. It enables an organization to identify the strategic areas which need to be focused for fetching better results.

7.1.7 Hindrances in Successful Implementation of Balanced Scorecard: Many problems are being faced by practitioners in corporate sector in implementation of BSC like requirement of high Skills & expertise, time and expenditure, limited understanding of the concept, too much focus on technical aspects of the concept, lack of support from top management, improper planning and lack of communication to employees, technical issues like inadequate IT support, problems in collection of data gathering and automation, lack of technical infrastructure, lack of software packages etc.

7.1.8 Integrating the Social and Environment Sustainability Issues into Balanced Scorecard: All stakeholders forestalls greater accountability from corporate management. Without taking into consideration to all stakeholders and sustainability issues, no organization can succeed in the competitive era. The strategic focus of every organization is now on sustainable development and long term success. Contribution towards sustainable development depends on improvement in the performance on all the dimensions of sustainability i.e. economic, social and environment and in order to improve it needs to be measured first. Balanced Scorecard has been found as an appropriate tool to measure the performance of organization on four strategic dimensions i.e. Financial, Customer, Internal Business Perspective and Learning & Growth. To integrate a new perspective named Social and Environment, Balanced Scorecard can be a worthful tool as it helps in identifying the strategic objectives from vision and mission statements and establishes a casual linkages among all measures and perspectives. Therefore, objectives and measures from sustainability strategies can be identified, measured and managed through this tool in a structured manner and casual linkages between social and environment measures and financial performance can be established.

7.2 Review of Literature

7.2.1 Introduction: Detailed reviews of different studies on conceptual overviews of BSC, its uses, implementation and implications at national and international level in banking industry have been carried out to have an in-depth insights on Balanced Scorecard and to ascertain the research gap on this tool of strategic performance and measurement in banking sector. Different books, journals, research papers, project reports, thesis, websites etc. have been covered under the scope of this chapter.

7.2.2 Literature Review on Conceptual Structure of Balanced Scorecard

7.2.2.1 Studies at International Level: Kaplan and Norton (1992, 1993, 1996, and 2000) introduced the concept of Balanced Scorecard and recommended that in order to

improve the management of the intangible assets, integration of measurement of intangible assets into existing management systems by the companies it is required. After defining strategic objectives and measures and measuring intangible assets strategic readiness, employee's everyday actions should be link to company's long term goals, and company's vision should be translated into metrics that everyone can understand. Strategy must be communicated throughout the organization for its execution so that employees can see how their everyday actions support or hamper the strategy and for this use a strategy map which is a new tool built on the Balanced Scorecard. An empirical study by **Malina and Selto (2001)** have conducted a study to analyse the effectiveness of the Balanced Scorecard (BSC) as a management control and strategy communication device and found that there is a disagreement between top level and middle level management regarding appropriateness of BSC aspects. **Salem et al. (2012)** discussed the benefits, strengths and weaknesses of Balanced Scorecard as compared to other performance measurement. Authors also discussed and evaluated the ability of BSC to integrate the social and environment issues. **Asa et al. (2013)** investigated the contribution of BSC as a prototype measurement tool in improving and synergy of the business strategy and firm performance. **Abdullah et al. (2013)** concluded that BSC must not focus only on past, it must be future oriented to affect future organizational performance. **Zizlavsky (2014)** summarized that Balanced Scorecard has the merit of balance between financial and non-financial metrics and between internal and external factors affecting business innovation strategy. **Oghuvwu and Omoye (2016)** examined the various determinants which affects the adoption of Balanced Scorecard as a performance measurement tool by different organization and recommended to incorporate environment and culture as a fifth perspective of BSC model as there is a positive relationship found between environment uncertainty and BSC usage.

7.2.2.2 Studies at National Level: Anand, Sahay and Saha (2005) explored the usage of all the four perspectives of BSC by Indian firms in their performance scorecard. **IM Pandey (2005)** stated Balanced Scorecard helps in tracking the performance and providing quick feedback for control and evaluation. **Ghosh and Mukerjee (2006)** concluded that although Balanced Scorecard tool has theoretical superiority and comprehensiveness yet it has some practical difficulties in its development and implementation. **Singh and Sohani (2014)** abstracted on how to enhance organizational performance through Balanced Scorecard with strategic management activities. **Muniraju & Nadhiya (2017)** explained the importance

of Balanced Scorecard and identified the ways how BSC can help Indian companies to achieve competitive advantage over their competitors.

7.2.3 Literature Review of Different Theoretical and Empirical Articles on Balanced Scorecard with Reference to Banking Sector

Year	Reviews
2004	**Davis and Albright** studied the effect of implementation of BSC on financial performance of sampled bank branches and found that the performance of experimental branches improved subsequently after its implementation while the performance of control branches did not improve and suggested to incorporate non-financial measures.
2009	**Wu et al.** examined the performance of banks based on Balanced Scorecard using A Fuzzy MCDM Approach and found customer satisfaction, return on assets, earning per share, customer retention rate, profit per customer as top five evaluation Index and suggested that performance evaluation index should be tailor made as per organizational and industrial goals.
2009	**Zhang and Li** found that the BSC raises the value of Performance Management Appraisal System based on the introduction of customer factors, internal business processes, employee learning and growth and financial factors and suggested to improve smile services, personal mechanism and incentive mechanism.
2009	**Yahaya** found that all perspectives of Balanced Scorecard provide additional information to managers, shareholders and other stakeholders regarding performance of banks which enables banks to focus upon core strategies in order to create and deliver superior value and returns to their shareholders.
2010	**Al-Mawali et al.** identified a positive relationship between the financial performance and overall BSC measures and found that more customer oriented and product/service oriented indicators enhanced the financial performance of bank branches. They suggested to modify architecture of BSC.
2010	**Fago** compared the overall performance of two commercial banks of Nepal using Balanced Scorecard from four different interlinked perspectives and found Bank B as stronger bank than Bank A on overall performance measured through BSC.
2010	**Abay** exposed that the assessment of the performance of commercial banks in Ethiopia is highly affected by Customer perspective, learning and growth perspective and internal business processes perspective. He suggested that multi-dimensional measures helps stakeholders to know and evaluate about the performance and competitiveness of commercial banks in a better way.
2011	**Umar and Olatunde** found that Cost of transactions. Information technology, services delivery, quality of service, bank offering, loan application, and customer satisfaction are important non-financial measures for measuring performance of banks. They suggested to include non-financial measures.
2011	**Tekar et al.** revealed that measures like customer satisfaction, effective management and leadership, advances technology contributed in measurement of overall performance of banks and suggested that measurement of performance should focus on non-financial measures with financial ones.
2011	**Shaverdi et al.** evaluated the performance of 3 non-governmental banks of Iran using the Multiple Criteria Decision Making Model (MCDM) and Balanced Scorecard. They found Customer Perspective as an important perspective and Customer satisfaction, return on assets, customer retention rate, market share rate, earning per share and profit per customer as important indexes.
2012	**Najjar and Kalaf** measured the performance of Large Local Bank (LLB) in Iraq through designed Balanced Scorecard from the year 2006 to 2009 and found that in first three years the performance of banks was weak whereas it improved slightly in the last year of the study. They suggested that more studies on identification of measures of BSC is required.
2012	**Wu** found that Customer perspective is the key Perspective of Balanced Scorecard Customer satisfaction in customer perspective, Employee stability in learning and Growth, earning per share in financial perspective were found as critical success factors for banks and suggested to concentrate on non-financial measures.

2012	**Karasneh and Al-Dahir** found a significant relationship between IT Application and the internal business process, financial and strategic competitiveness perspective and no significant relationship between customer and employee perspective has been found.
2013	**Ombuna et al.** found that there is a positive correlation exists between BSC and its implementation and organization mission & strategy and with involvement of employees. It provides feedback on the internal processes and external outcomes. Effectiveness of BSC depends on organization dynamics and its manner of execution, monitoring and evaluation procedure.
2013	**Asante (2013)** recognised the different performance measures used by local Ghanaian banks and divisional branch managers. Both financial and non-financial measures have been used by local Ghanaian banks for the assessment of the performance of their branches.
2013	**Eskandari et al.** visualised a structured performance evaluation methodology that link the key performance indicators into a strategy map of the Balanced Scorecard for banking institutions. Among the BSC perspectives, customer perspective was ranked on the top and learning & growth on the last. The top five crucial indicators were found as customer satisfaction, operating revenues, customer retention rate, employee's satisfaction and sales performance.
2013	**Panicker and Seshadri** formulated a Balanced Scorecard in order to determine the performance of Standard Chartered Bank. The study found that the Performance of SCB has declined in last two years of the study period. The performance on learning and growth perspective has been found better among all perspectives. They suggested that Indian Banks should adopt BSC and identification of relevant measures is required.
2014	**Tariq et al.** investigated the effectiveness of implementing the Balanced Scorecard (BSC) in improving the performance of Banking Sector in Pakistan. Financial, Internal control, learning & Growth and Customer perspective had significant impact on bank's overall performance whereas vision and strategy perspective had an insignificant role.
2014	**Ozturk & Coskun** asserted that implementation of BSC helps in getting desired result in strategic performance and offers quality and efficient financial services. Bank should use Balanced Scorecard to evaluate their performance rather than measuring on financial measures.
2014	**Michael and Tobi** explored the different Performance Measurement Systems in the United Kingdom (UK) in retail banking industry. Balanced Scorecard, Performance Dashboards and Financial Measures were found as most commonly used performance measurement systems in UK Banks. They suggested to consider all the stakeholders and externalities while adopting PMS.
2014	**Shahroodi and Bahraloloom** appraised the efficiency of Sadrat Bank Branches in Guilan by Data Envelopment Analysis (DEA) using Balanced Scorecard approach.
2015	**Akter** explored the scope of Adopting Multidimensional Performance Measurement Models in Banking Sector of Bangladesh and found that nine performance factors are considered to evaluate their overall performance. Factors are market indicator, HRM, effectiveness of Internal process, market strategy implementation, adaptability to changes, customer perception, efficiency of management, earning capacity and social image.
2015	**Rostami, Goudarzi and Zaj** defined the Balanced Scorecard Model for bank as an evaluation system and examined the aspects, importance and related indicators of BSC.
2016	**Rillyan** studied the linkages among Balanced Scorecard Perspectives by taking the case of Indonesian Local Banks and analysed the relationship between financial and non-financial perspective that comes from corporate strategy established by the local banks and suggested that variables from strategy should be used to measure performance.
2016	**Balkovskaya and Filneva** constructed a strategy map of the BSC for banking institutions by taking the Russian regional bank as sample bank and found three critical factors that have high impact on bank's performance were identified as transaction efficiency, sales channel development and rationalised processes.
2016	**Dincer et al.** assessed the performance of 33 deposit banks of Turkish through BSC using Analytic Network Process Approach and demonstrated that financial perspective as the most important perspective then is the customer perspective followed by learning & growth and internal factors respectively.

2016	**Baber and Akter** assessed the different perspectives of BSC and it impact on the performance measurement and management of banks. They developed a BSC model for the banking sector in Bangladesh through extracting the key performance indicators under different perspectives.
2016	**Chowdhury and Saha** applied Balanced Scorecard and examined the performance of Bangladeshi Banks. The performance of sampled bank was found good on financial perspective of Balanced Scorecard rather than on other perspectives. Re-examination of the strategies and implementation of BSC by the Bangladeshi banks is required.
2017	**Agyeman** assessed the perceptions of selected Ghanaian banks about the effect of BSC for measuring performance in banks and found that the four perspectives of Balanced Scorecard greatly affects the performance of banks but most of the banks in Ghana relies on financial measures only.
2017	**Annapurna and Manchala** evaluated the performance of New Generation Private Sector Banks using Balanced Scorecard and found a significant difference in the performance of sampled banks on four perspectives of balanced scorecard. Banks were suggested to improve their performance on all the perspectives of BSC so that the overall performance can be improved significantly.
2018	**Kasasbeh** identified the different barriers and problems in implementation of BSC in Jordanian Commercial Banks such as lack of support of top management, different organization culture, technical issues, political issues, conceptual issues, lack of software packages etc. It has been recommended to enhance the coverage of research on more banks.
2018	**Al-Dweikat and Nour (2018)** recognized the critical success factors of Balanced Scorecard at Jordanian Commercial banks and evaluated their effect on financial performance of banks. Top Management, Strategic Intent, HR Aspects, and systems & techniques were found as critical success factors of BSC which had a positive impact and helpful in obtaining better financial performance in Jordanian Commercial Banks.
2019	**Abagissa (2019)** assessed the implementation issues of Balanced Scorecard and its challenges from employee and management perspective of different branches of commercial bank of Ethiopia and suggested to focus on changing the attitude of employees towards BSC.
2019	**Nnamseh and Umoh (2019)** examined the effect of Balanced Scorecard on the performance of Nigerian Banks. The study proved that relying solely on financial indicators alone for measuring bank performance is not enough. An approach that measure performance from different perspectives is needed.
2020	**Turshan and Karim (2020)** investigated the effect of BSC on the financial performance and relationship between both BSC and financial performance and found that customer's perspective did not have the effect on financial performance of banks as other perspective has. They suggested to implement BSC as a Strategic performance management and a means of decision making.

7.2.4 Studies on Incorporating Social and Environment Issues into Balanced Scorecard

Year	Reviews
2002	**Figge et al.** discussed the various possible forms of Sustainability Balanced Scorecard and described the process and steps for formulating a Sustainability Balanced Scorecard for a business unit.
2002	**Gminder and Beiker** presented a possibility of managing corporate social responsibility and corporate sustainability with the management tool Balanced Scorecard
2002	**Brignall** criticised and argued on the multidimensional performance models specifically BSC primarily due to omission of social and environment aspects. Inclusion of these aspects will be difficult for many reasons like difficulty in determining the legality of these aspects, different approaches for different companies on these aspects, need to understand the interrelationship among BSC existing and new measures on these aspects.
2009	**Hubbard** developed a Sustainability Balanced Scorecard with adding two social and environment quadrants of performance into conventional BSC and acknowledged that organizations will require to report their sustainability performance and adopt a stakeholder's view to develop their strategies in near future.

2014	**Purnamasari et al.** analysed the effect of environment perspective on four basic perspective of BSC and found that environment perspective is affected only with financial perspective and companies with good financial performance cares and more attentive on environment perspective.
2016	**Kalender and Vayvay** aimed to highlight the sustainability issue as a fifth pillar of the Balanced Scorecard. The importance of social and environment aspects should be realized by every company and integrate them as important part of core management. By doing so companies can achieve several financial benefits.
2017	**Chaker et al.** evaluated the Sustainability Balanced Scorecard as a decision aid framework and proposed directions for research in constructing a promising SBSC.
2018	**Yilmaz and Inel** developed a Sustainability Performance Scorecard Model with 20 indicators on economic, environmental, social and Corporate Sustainability Area and concluded that all these activities are necessary for confirming the sustainability of the organizations for long-term. Methods like expert opinion, group interviews, and extensive research can be used to develop sustainability models.

7.3 Research Methodology

7.3.1 Introduction: This chapter states the research problem, research objectives and describes the best suited methodology to conduct this research.

7.3.2 Problem Identification: In this research, problem is identified as "**APPLICATION OF BALANCED SCORECARD IN MEASURING PERFORMANCE OF BANKS-A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA**".

7.3.3 Objectives of the Study: This research study mainly aims to evaluate, compare and analyse the overall performance of Public and Private Sector banks in India using Balanced Scorecard Model. The specific objectives of the study include the following:

1. To assess and compare the performance of Public and Private Sector Banks on **Financial Perspective, Customer Perspective, Internal Business Perspective, Learning & Growth and Innovation Perspective** of BSC.

2. To explore new perspectives and measures and then evaluate and compare the performance of Public and Private Sector Banks on such perspectives.

3. To determine the overall performance of Public and Private Sector Banks in India using Proposed Balanced Scorecard Model.

4. To observe whether BSC can provide more worthwhile information on performance of the selected banks and then suggest ways for improvement in the overall performance of selected Public and Private Sector Banks in India using Balanced Scorecard Model.

7.3.4 Sample Design: 10 Public Sector Banks and 10 Private Sector Banks have been selected as a sample banks for the study on the basis of the highest market capitalization in BSE Sensex as on 1st Feb'2018.

7.3.5 Sources and Collection of Data: This research study is mainly based on secondary data which have been compiled through annual reports, business responsibility reports, sustainability reports and websites of the sampled banks, Reserve Bank of India's various publications, statistical tables related to banks in India for study years, website of RBI and from different websites, various journals, books, reports, relevant thesis, etc.

7.3.6 Period of the Study: The study is consists of 10 consecutive financial year from 2007-08 to 2016-17.

7.3.7 Research Process for the achievement of Research Objectives
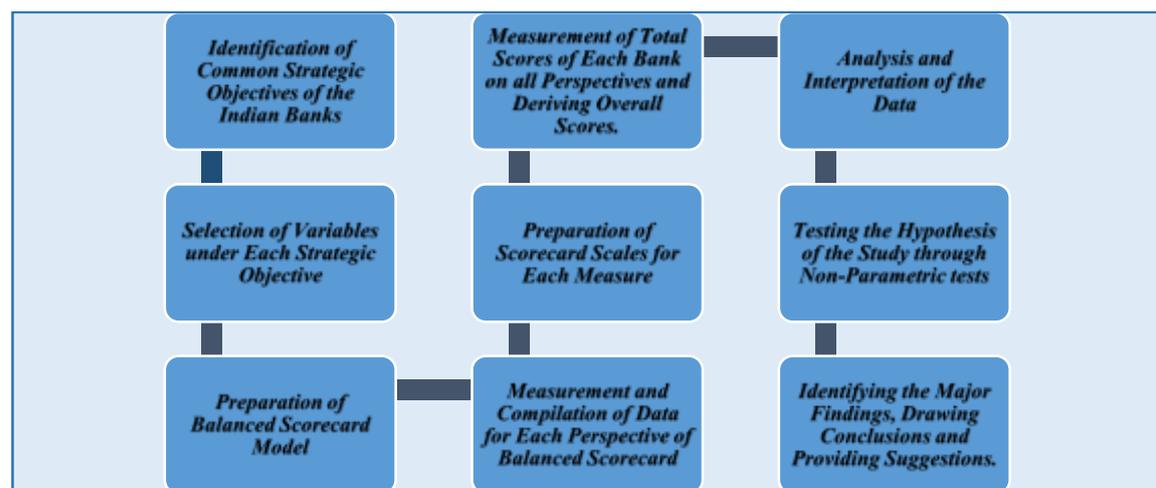
7.3.8 Hypotheses of the Study: Null and alternative hypotheses have been framed for the study. Here, in this summary only null hypothesis (H0) is being given:

Financial Perspective

A). Intra-bank Hypothesis

H_0- There is no significant difference in the performance of Public sector banks and Private sector banks on financial perspective during the last 10 years.

B). Inter-bank Hypothesis

H_0- There is no significant difference in the performance on financial perspective among Public Sector Banks and among Private Sector Banks.

C). Inter-Sector bank Hypothesis

H_0- There is no significant difference in the performance on financial perspective between Public and Private Sector Banks.

Customer Perspective

A). Intra-bank Hypothesis

H_0- There is no significant difference in the performance of Public sector banks and Private sector banks on Customer perspective during the last 10 years.

B). Inter-bank Hypothesis

H_0- There is no significant difference in the performance on Customer perspective among Public Sector Banks and among Private Sector Banks.

C). Inter-Sector bank Hypothesis

H_0- There is no significant difference in the performance on Customer perspective between Public and Private Sector Banks.

Internal Business Process Perspective

A). Intra-bank Hypothesis

H_0- There is no significant difference in the performance of Public sector banks and Private sector banks on Internal Business processes perspective during the last 10 years.

B). Inter-bank Hypothesis

H_0- There is no significant difference in the performance on Internal Business processes perspective among Public Sector Banks and among Private Sector Banks.

C). Inter-Sector bank Hypothesis

H_0- There is no significant difference in the performance on Internal Business processes perspective between Public and Private Sector Banks.

Learning & Growth and Innovation Perspective

A). Intra-bank Hypothesis

H_0- There is no significant difference in the performance of Public sector banks and Private sector banks on Learning and Growth perspective during the last 10 years.

B). Inter-bank Hypothesis

H_0- There is no significant difference in the performance on Learning and Growth perspective among Public Sector Banks.

C). Inter-Sector bank Hypothesis

H_0- There is no significant difference in the performance on Learning and Growth perspective between Public and Private Sector Banks.

Social and Environment Perspective

A). Intra-bank Hypothesis

H_0- There is no significant difference in the performance of Public Sector Banks and Private Sector Banks on Social and Environment perspective during the last 10 years.

B). Inter-bank Hypothesis

H_0- There is no significant difference in the performance on Social and Environment perspective among Public Sector Banks and among Private Sector Banks.

C). Inter-Sector bank Hypothesis

H_0- There is no significant difference in the performance on Social and Environment perspective between Public and Private Sector Banks.

Overall Performance Hypotheses

A). Intra-bank Hypothesis

H_0- There is no significant difference in the overall performance of Public Sector Banks and Private Sector Banks during the last 10 years.

B). Inter-bank Hypothesis

H_0- There is no significant difference in the overall performance among Public Sector Banks and among Private Sector Banks.

C). Inter-Sector bank Hypothesis

H_0- There is no significant difference in the overall performance between Public and Private Sector Banks.

7.3.9 Balanced Scorecard Model for Indian Banks:

A Balanced Scorecard Model for Sampled Banks has been designed by incorporating one more perspective named Social and Environment Perspective with the four basic perspectives of BSC. The justification behind combining this new perspective is that achieving economic, social and environment Sustainability has become the core strategic objectives of the banks in the recent years. For selecting measures under each perspective the study concentrates the strategic objectives of the sampled bank and literature on Balanced Scorecard in banking industry. As every bank has different mission, vision and different objectives, some common strategic objectives and their measures to keep uniformity for comparison have been considered. It is to be noted here that while selecting measures, the availability of data on these measures was kept in mind so that the research work does not get hampered. From the selected measures, individual bank while designing its Balanced Scorecard can subtract or add measures as per its strategic objectives.

7.3.10 Compilation of data for each perspective of Balanced Scorecard:

By using the designed Balanced Scorecard Model for Indian Banks, data have been collected for each measure under different perspectives for the sampled banks from the financial year 2007-08 to 2016-17.

7.3.11 Preparation of Scorecard Scales for each Variable with the Assignment of their Respective Scores:

Performance Score Scale for each selected measure has been created separately by keeping in view the lowest and highest values. Equal weights have been assigned to each measure to keep uniformity. Banks can assign more weights to some measures as per the importance of those particular measures in their scorecards. Scales for the scores are subjective and have been designed keeping in mind various researches and requirements to create scorecards. Maximum marks assigned for each perspective were 400 i.e. 50 Scores x 8 measures so total maximum scores for Comprehensive Performance on BSC are 2000 i.e. 400 Scores x 5 perspective.

7.3.12 Statistical tools and Techniques

In this research study, non-parametric tests have been applied using IBM SPSS 22 to draw statistical conclusions. For intra-bank and inter-bank comparisons Kruskal-Wallis H-Test has been used whereas for inter-sector comparisons Mann-Whitney-Wilcoxon U test has been applied to draw conclusions about the sampled banks.

7.3.13 Grading and Ranking of Total Performance Scores of a Bank on Balanced Scorecard: Ranks will be given to each bank in each year according to total average score on Balanced Scorecard and total scores gained by each bank on Balanced Scored will be converted into the percentage and will be graded as Excellent to More than 80%, Very Good to More than 70%, Good to More than 60%, Satisfactory to More than 50% and Poor to Less than 50%.

7.3.14 Limitations of the Study: The limitations attached to this study are: 1. The study is completely based on secondary data. Primary data for analysing customer, Internal Business Processes & Learning and growth perspective might have given more appropriate results. 2. The study is confined to Indian Commercial Banks only while inclusion of foreign banks, small finance banks, and regional rural banks may influence the results of the study. 3. Although utmost care has been taken while selecting the measures under each perspective of Balanced Scorecard still the inclusion of other measures may affect the results. 4. Score Assignment is completely based on subjective decision which has its own limitations. 5. Scores are affected due to non-availability of data on some measures for some years which might have affected the results of the study.

7.4 Measurement and Intra-Bank Comparison of Performance of Public Sector Banks on Balanced Scorecard

7.4.1 Introduction: The detailed analysis of the performance of sampled Public Sector Banks on Balanced Scorecard has been presented in this chapter. The performance of individual bank on each perspective of Balanced Scorecard has been measured and calculated using the data available from various reports of that particular bank. The scores have been assigned on the basis of performance scale. An intra-bank comparison has been drawn for year 2007-08 to 2016-17 applying Kruskal Wallis Test using IBM SPSS22 to compare the performance of individual bank on different perspectives and overall performance on Balanced Scorecard separately during the studied period.

7.4.2 Measurement of Performance of Public Sector Banks on Financial Perspective

7.4.2.i Key Observations and Suggestions on Financial Perspective:

1. The performance score of SBI has declined to 230 in 2010-11 from 310 in 2007-08 then increased to 280 in 2011-12. It declined again in subsequent years due to reduction in growth rate of profits, increased NPA's and low interest margins so bank should try to maximize its net interest margin and improve their asset quality.

2. The performance score of Bank of Baroda has been dropped to 150 in 2016-17 from 300 in 2007-08 primarily due to decrease in growth rate of profits and increased NPA's therefore bank should improve its net interest margin and maintain quality assets.

3. The performance score of Punjab National Bank has been dropped to 140 in 2016-17 from 310 in 2007-08 mainly due to decline in profits, increased NPA's and low interest margins thus bank should try to increase its net interest margin and maintain liquidity and quality assets.

4. The performance score of IDBI bank has an erratic trend as the score increased to 280 in 2010-11 from 190 in 2007-08 then again declined to 120 in 2015-16 because of high decrease in profitability ratio and increased NPA's. Bank should create efficient portfolio of assets and deposits and improve liquidity.

5. The score of Canara Bank was the highest 310 in 2009-10 and 2010-11 primarily due to high profitability ratios and the lowest 120 in 2015-16 as bank incurred losses and has high NPA's thus bank should create efficient portfolio of assets and reduce NPAs.

6. The performance score of Bank of India declined to 130 in 2016-17 from 340 on 2007-08 due to decline in profitability ratios, interest margins and growth in Net NPA's of

the bank therefore banks should increase its net interest margin and maintain good quality assets.

7. The performance score of Indian Bank declined to 160 in 2015-16 from 320 in first 3 years of the study period primarily due to decline in profits, increased Net NPA's and low earning quality of the bank hence bank should mobilize low cost deposits and high yielding quality assets.

8. The performance score of Central Bank of India has been decreased to 90 in 2016-17 from 300 in 2009-10 mainly on account of decrease in profits, low interest margins and high NPA's which should be improved through maintaining efficient portfolio of deposits and advances.

9. The performance score of Union Bank has decreased to 150 in last two years of the study from 350 in 2007-08 due to low profitability, increased NPA's, decrease in interest earned etc. so banks should acquire low cost deposits and high yielding assets and try to reduce cost of business operations.

10. The performance score of Syndicate Bank was the highest 320 in 2012-13 as the growth rate of profits was high and the NPA's were low in this year and the lowest 130 in 2015-16 due to decline in profitability and increased Net NPA's so banks should create efficient portfolio of assets and deposits and focus on proper credit monitoring and recovery of assets on time.

7.4.2.ii Intra-Bank Comparison of Performance of Public Sector Banks on Financial Perspective

7.4.2.ii.a Inferences Drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison for Public Sector Banks on Financial Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
State Bank of India	2007-08	8.06	22.490	9	0.007	Rejected
Bank of Baroda	2007-08	7.38	17.333	9	0.044	Rejected
Punjab National Bank	2008-09	7.94	49.583	9	0.000	Rejected
IDBI Bank	2010-11	8.19	23.560	9	0.005	Rejected
Canara Bank	2010-11	8.63	44.562	9	0.000	Rejected
Bank of India	2007-08	8.63	40.141	9	0.000	Rejected
Indian Bank	2008-09 and 2009-10	7.56	34.421	9	0.000	Rejected
Central Bank of India	2009-10	7.94	35.326	9	0.000	Rejected
Union Bank	2007-08	8.88	46.328	9	0.000	Rejected
Syndicate Bank	2012-13	7.94	33.000	9	0.000	Rejected

7.4.2.ii.b Major Findings and Conclusion: It has been found that there is a significant difference in the performance of all the public sector banks on Financial Perspective when

an intra-bank comparison is drawn for the study period but this difference in performance on this perspective shows a declining trend. The performance of the banks has declined in the last years of the study period as the mean ranks were the lowest in these years.

7.4.3 Measurement of Performance of Public Sector Banks on Customer Perspective

7.4.3.i Key Observations and Suggestions on Customer Perspective:

1. The performance score of SBI has declined to 250 in 2014-2015 from 320 in 2008-09 so bank should try to incrase business and customer growth through improving internal operational efficiency.

2. The performance score of Bank of Baroda was the highest 300 in 2013-14 and the lowest 170 in 2015-16 mainly due to low or negative growth rate in customer accounts therefore bank should focus on acquiring more business and customers.

3. The performance score of Punjab National Bank was the highest 280 in 2009-10 and the lowest 220 in 2012-13 and 2014-15 due to low growth in deposits and credits of the bank so bank should introduce innovative products and services to acquire new customers.

4. The score of IDBI bank was the highest 320 in 2009-10 due to high growth in deposits and advances and the lowest 150 in 2013-14 as there has been a decline in deposits and credit growth rate so bank should introduce innovative products and ensure quality services.

5. The performance score of Canara bank was the highest 280 in 2010-11 and the lowest 180 in 2015-16 due to low growth rate in deposits and advances so bank should try to increase their customer base through offering customized products.

6. The performance score of Bank of India was the highest 270 in 2009-10 and 2010-11 whereas the score was the lowest 190 in 2015-16 which may be due to negative or low growth rate in deposits and advances and low market share of deposits and advances so bank should improve its operational efficiency.

7. The performance score of Indian bank was the highest 240 in 2009-10 and then ranges between 170-210 in all remaining years so bank should provide innovative products and improve its operational efficiency.

8. The score of Central Bank of India has deteriorated to 200 in 2016-17 from 260 in 2007-08 due to low growth in deposits and advances and low market share of bank which should be improved through introducing differentiated products to attract new customer.

9. The performance score of Union bank was the highest 250 in 2009-10 and the lowest 180 in 2014-15 due to low deposits growth rate so bank should try to attract new customers through introducing new products and services.

10. The performance score of Syndicate bank has decreased to 150 in 2016-17 from 220 in 2014-15 due to negative growth in deposits and credit growth rate so bank should attract new customers and provide efficient services.

7.4.3.ii Intra-Bank Comparison of Performance of Public Sector Banks on Customer Perspective

7.4.3.ii.a Inferences Drawn from Table of Mean Ranks of Years and Summarized Hypothesis testing Results for Intra-bank Comparison of Public Sector Banks on Customer Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
State Bank of India	2008-09	7.25	10.705	9	0.296	Accepted
Bank of Baroda	2009-10 and 2010-11	6.56	18.924	9	0.026	Rejected
Punjab National Bank	2009-10	6.75	14.603	9	0.102	Accepted
IDBI Bank	2009-10	7.69	22.942	9	0.006	Rejected
Canara Bank	2010-11	7.56	18.728	9	0.028	Rejected
Bank of India	2010-11	6.93	14.602	9	0.102	Accepted
Indian Bank	2009-10	7.29	16.325	9	0.060	Accepted
Central Bank of India	2007-08	7.38	17.333	9	0.044	Rejected
Union Bank	2009-10	7.36	15.102	9	0.088	Accepted
Syndicate Bank	2007-08	7.14	12.356	9	0.194	Accepted

7.4.3.ii.b Major Findings and Conclusion: It has been found that the mean rank of performance score on Customer Perspective of almost all public sector banks was high in the early years of the study period and deteriorated in the last years of the study. The performance of Bank of Baroda, IDBI, Canara Bank and Central Bank of India has a significant difference on customer Perspective whereas other banks have no significant difference.

7.4.4 Measurement of Performance of Public Sector Banks on Internal Business Process Perspective

7.4.4.i Major Observations and Suggestions on Internal Business Perspective:

1. The performance score of SBI bank on Internal Business Process Perspective increased to 290 on 2016-17 from 210 in 2007-08. Bank should control employees and other operational cost and improve operational efficiency.

2. The performance score of Bank of Baroda was the highest 280 in 2014-15 and the lowest 180 in 2008-09 due to negative business growth rate, low productivity ratios

and high wage bills so bank should improve its operational efficiency and expand number of ATMs.

3. There was no significant difference in the performance score of Punjab National Bank after 2010-11 so bank should improve its operational efficiency, reduce operational cost and spend more on advertisement and promotional activities.

4. The performance score of IDBI bank declined to 200 in 2016-17 from 280 in 2009-10 primarily due to decline in operational efficiency and low geographical reach to customers therefore banks should improve operational efficiency and productivity of employees.

5. The performance score of Canara bank was the highest 280 in 2014-15 and declined to 250 in 2016-17 due to decline in business growth rate , high wage bills and low productivity so bank should improve efficiency in business operations and enhance productivity of employees.

6. The performance score of Bank of India was maximum 280 in 2013-14 and after that it declined due to low business growth, low profit per employee so bank should try to improve operational efficiency and employee productivity.

7. The performance score of Indian Bank was 190 in 2007-08 which moved up to 230 in 2016-17 as there has been an improvement in operational capabilities of the bank and due to low cost of business operations in this year. Expansion of more branches and ATMs to reach to more customers is required.

8. The performance score of Central Bank of India was the highest 230 in 2014-15 and the lowest 170 in 2010-11 due to poor operational efficiency and high cost of business operations so bank should improve operational efficiency and productivity.

9. The performance score of Union bank increased to 270 in 2016-17 from 200 in 2007-08 primarily due to improvement in productivity ratio and increased geographical reach of the bank. It is suggested to spend more on advertisement and to control the cost of its business operations.

10. The performance score of Syndicate Bank has been increased to 250 in 2014-15 from 190 in 2007-08 then again declined to 210 in 2016-17 due to low operational efficiency, high cost of business operations primarily wage bills & infrastructural cost on expansion of branches so bank should try to control cost and improve operational efficiency.

7.4.4.ii Intra-Bank Comparison of Performance of Public Sector Banks on Internal Business Process Perspective

7.4.4.ii.a Inferences drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Public Sector Banks on Internal Business Process Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
State Bank of India	2016-17	6.94	12.969	9	0.164	Accepted
Bank of Baroda	2014-15	6.88	20.703	9	0.014	Rejected
Punjab National Bank	2011-12	6.44	11.962	9	0.215	Accepted
IDBI Bank	2011-12	6.38	6.838	9	0.654	Accepted
Canara Bank	2013-14	7.13	18.186	9	0.033	Rejected
Bank of India	2013-14	7.25	9.288	9	0.411	Accepted
Indian Bank	2011-12	6.38	8.961	9	0.441	Accepted
Central Bank of India	2014-15	6.94	8.414	9	0.493	Accepted
Union Bank	2016-17	7	9.02	9	0.435	Accepted
Syndicate Bank	2014-15	7.06	14.573	9	0.103	Accepted

7.4.4.ii.b Major Findings and Conclusion: It has been found that except Bank of Baroda and Canara Bank all other sampled public sector banks have no significant difference in their performance on Internal Business Process Perspective. It is concluded here that the performance of most of the Public sector banks has not improved during the study period which might have affected the performance on Financial and Customer Perspective adversely.

7.4.5 Measurement of Performance of Private Sector Banks on Learning & Growth and Innovation Perspective

7.4.5.i Major Observations and Suggestions on Learning & Growth and Innovation Perspective:

1. The performance score of SBI has increased to 390 in 2016-17 from 120 in 2007-08 due to increase in the number of skilled employees, expenditure on employees, number of debit cards and credit cards and number of digital transactions through mobile and internet. Bank should maintain the performance on this perspective by providing training to employees on technical and behavioural skills.

2. The performance score of Bank of Baroda has been increased to 280 in 2016-17 from 50 in 2007-08 due to increased digital transactions through innovated products & services. Bank should install more POS terminals and issue more credit and debit cards.

3. The performance score of Punjab National Bank has increased to 270 in 2016-17 from 50 in 2007-08 as there was increase in NEFT and mobile transactions, growth in number

of skilled employees. Bank should impart training to all employees to improve productivity.

4. The performance score of IDBI bank reached to 230 in 2016-17 from 70 in 2007-08 as there has been an increase in the number of transactions through digitalised channels. Bank should recruit more skilled staff, trained them to improve operational efficiency and productivity.

5. The performance score of Canara Bank on Learning & Growth and Innovation Perspective has increased to 290 in 2016-17 from 50 in 2007-08 primarily due to increase in digital transactions, number of trained employees and issued debit cards. Bank should install more POS terminals and issue more credit cards.

6. The performance score of Bank of India reached to 240 in 2014-15 from 110 in 2007-08 due to high NEFT transactions, highest number of debit cards and high expenditure on employees. Bank should recruit more skilled staff and impart training to improve their productivity.

7. The performance score of Indian Bank increased to 260 in 2016-17 from 40 in 2007-08 due to increase in the number of digital transactions through mobile and internet banking in last years. Bank should impart training to all employees and increase alternative digital channels.

8. The performance score of Central Bank of India has increased to 260 in 2016-17 from 40 in 2007-08 due to increase in number of debit cards, digital transactions through internet and mobile banking, highest percentage of employees trained and increase in per employee expenditure in last years of the study period.

9. The performance score of Union Bank has increased to 270 in 2016-17 from 40 in 2007-08. This was due to improvement in the quantity, quality and innovations in products & services offered by the bank which has impacted the number of transactions through digital channels. Banks should recruit more skilled employees and trained them so that customers' expectations can be met.

10. The performance score of Syndicate bank reached to 250 in 2016-17 from 70 in 2007-08 because of increase in number of debit cards issued and increase in number of digital transactions through mobile and internet banking. To enhance productivity and operational efficiency, banks should recruit more skilled employees and trained them.

7.4.5.ii Intra-Bank Comparison of Performance of Public Sector Banks on Learning & Growth and Innovation Perspective

7.4.5.ii.a Inferences Drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Public Sector Banks on Learning & Growth and Innovation Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
State Bank of India	2013-14 to 2016-17	6.50	9	9	0.437	Accepted
Bank of Baroda	2012-13 to 2016-17	7.50	14.87	9	0.095	Accepted
Punjab National Bank	2013-14 to 2016-17	8.75	15.381	9	0.081	Accepted
IDBI Bank	2014-15	7.67	10.679	9	0.298	Accepted
Canara Bank	2012-13	6.75	9	9	0.437	Accepted
Bank of India	2014-15 to 2016-17	6.75	6.217	9	0.718	Accepted
Indian Bank	2014-15 to 2016-17	7.75	9	9	0.437	Accepted
Central Bank of India	2013-14	8.25	9.923	9	0.357	Accepted
Union Bank	2014-15 and 2015-16	7.50	9	9	0.437	Accepted
Syndicate Bank	2016-17	7.50	16.525	9	0.057	Accepted

7.4.5.ii.b Major Findings & Conclusion: Public Sector Banks have highest mean ranks during the last years of the study period as the score is the highest of in last years on Learning & Growth and Innovation Perspective. It has been found that there is no significant difference in the performance of all Public Sector Banks on this Perspective of BSC. Performance has improved on this perspective but upto some extent.

7.4.6 Measurement of Performance of Public Sector Banks on Social and Environment Perspective

7.4.6.i Key Observations and Suggestions on Social and Environment Perspective:

1. The performance score of State Bank of India has increased to 320 in 2016-17 from 80 in 2007-08 primarily due to highest score gained on the number of branches in rural & semi-urban areas, high deposits and beneficiaries in PMJDY accounts. Bank should spend more on CSR activities and lend more advances to priority sectors.

2. The performance score of Bank of Baroda has been increased to 280 in 2016-17 from 70 in first five years of the study period due to increased concern of the bank on social and environment activities. Bank should focus more on providing credit to priority sectors and take all steps to protect environment.

3. The performance score of Punjab National Bank has increased from 90 in 2007-08 to 260 in 2016-17 due to highest score gained on ratios on promoting financial inclusion plans. Bank should spend more on CSR activities and environment protection.

4. The performance score of IDBI bank has been increased to 240 in 2016-17 from 40 in 2007-08. To improve the performance on this perspective, bank should spend more on CSR and promote financial inclusion plans.

5. The performance score of Canara Bank has been increased to 270 in 2016-17 from 80 in 2007-08 due to increased monetary contribution towards CSR, highest number of female employees, more branches in rural and semi-urban areas. Bank should try to increase accounts like PMJDY to promote financial inclusion and spend more on environment protection.

6. The performance score Bank of India increased from 70 in 2007-08 to 260 in 2016-17. Bank should contribute more on CSR activities and provide more credits to priority & weaker sections.

7. The performance score of Indian Bank on has increased to 230 in 2016-17 from 80 in 2007-08. Bank should increase its contribution towards CSR activities and environment protection and promote accounts like PMJDY.

8. The performance score of Central Bank of India has increased to 240 in 2016-17 from 90 in first four years of the study period. Bank should increase monetary contribution towards CSR and Environment protection and disclose data of number of female employees.

9. The performance score of Union Bank has increased from 80 in first two years to 260 in 2015-16. Bank should provide more advances to priority sectors and increase its contribution towards CSR initiatives and environment sustainability.

10. The performance score of Syndicate Bank has increased to 240 in 2015-16 from 70 or 80 in previous years. Bank should try to promote financial inclusion plans and monetary contribution towards CSR activities.

7.4.6.ii Intra-Bank Comparison of Performance of Public Sector Banks on Social and Environment Perspective

7.4.6.ii.a Inferences drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Public Sector Banks on Social and Environment Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
State Bank of India	2010-11	7.75	9	9	0.437	Accepted
Bank of Baroda	2013-14 to 2016-17	7	9	9	0.437	Accepted
Punjab National Bank	2007-08 to 2016-17	5.5	0	9	1.000	Accepted
IDBI Bank	2011-12	9	11.815	9	0.224	Accepted
Canara Bank	2013-14 to 2016-17	7.25	11.182	9	0.263	Accepted
Bank of India	2008-09 to 2016-17	5.75	9	9	0.433	Accepted
Indian Bank	2016-17	7.5	9	9	0.437	Accepted
Central Bank of India	2015-16 to 2016-17	7.5	9	9	0.437	Accepted
Union Bank	2015-16	8	10	9	0.350	Accepted
Syndicate Bank	2015-16	8.75	11.182	9	0.263	Accepted

7.4.6.ii.b Major Findings and Conclusion: No significant difference has been found in the performance of all Public Sector Banks on Social and Environment Perspective during the study years. The mean rank for performance score of maximum banks is the highest in last years of the study period on this Perspective which depicts that all public banks performed the best during the last years of the study period.

7.4.7 Measurement of Overall Performance of Public Sector Banks on Balanced Scorecard

7.4.7.i Key Observations on Overall Performance on Balanced Scorecard:

1. The overall performance score of State Bank of India has increased to 1480 in 2016-17 from 1000 in 2007-08 primarily due to improvement in score gained on Learning & Growth and Innovation Perspective.

2. The overall performance score of Bank of Baroda increased to 1200 in 2016-17 from 860 in 2007-08 due to improvement in score on Learning & Growth and Innovation Perspective and Social & Environment Perspective.

3. The performance score of Punjab National Bank was the highest 1190 in 2016-17 as the bank performed the best on all perspectives in this year.

4. The overall performance score of IDBI Bank was the highest in 2014-15 and the score declined to 980 in 2014-15 because of decline in performance on all perspectives.

5. Canara Bank performed the best in the year 2013-14 and scored 1180. After 2013-14 the score declined in last years primarily due to decline in score on Financial, Customer and Internal Business Process Perspective.

6. The overall performance score of Bank of India was the highest 1130 in 2013-14 and 2016-17 and the lowest 940 in 2009-10 and 2011-12.

7. The overall performance score of Indian Bank increased to 1140 in 2016-17 from 980 in 2014-15 due to improvement in scores on all perspectives.

8. The overall performance score of Central Bank of India was the highest 980 in 2016-17 and the lowest 770 in 2008-09.

9. The overall performance score of Union Bank has increased to 1150 in 2016-17 from 1060 in 2013-14.

10. Syndicate Bank scored the highest 1060 in 2014-15 which declined to 940 in 2015-16 because of decline in performance score on Financial Perspective.

7.4.7.ii Intra-Bank Comparison of Performance of Public Sector Banks on Balanced Scorecard

7.4.7.ii.a Inferences Drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Public Sector Banks on Balanced Scorecard

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
State Bank of India	2016-17	7	4.911	9	0.842	Accepted
Bank of Baroda	2013-14	7.40	6.376	9	0.702	Accepted
Punjab National Bank	2016-17	7.50	6.508	9	0.688	Accepted
IDBI Bank	2009-10	6.90	4.5	9	0.876	Accepted
Canara Bank	2013-14	7.10	9.541	9	0.389	Accepted
Bank of India	2016-17	7.20	6.978	9	0.639	Accepted
Indian Bank	2016-17	7.40	4.404	9	0.883	Accepted
Central Bank of India	2012-13	7.20	5.558	9	0.783	Accepted
Union Bank	2016-17	7.40	9.211	9	0.418	Accepted
Syndicate Bank	2014-15	7.90	7.378	9	0.598	Accepted

7.4.7.ii.b Major Findings, Conclusion and Suggestions : No significant difference has been found in the overall performance of all Public Sector Banks on Balanced Scorecard. The overall performance score has improved in last years due to improvement in the performance on Learning & growth and innovation perspective and Social & Environment perspective of all banks. To improve the overall performance on Balanced Scorecard, banks should try to improve their performance on all perspectives to achieve long term growth and success.

7.5 Measurement and Intra-Bank Comparison of Performance of Private Sector Banks on Balanced Scorecard

7.5.1 Introduction: This chapter demonstrates the performance and intra-bank comparison of Top 10 Private sector banks of BSE Sensex on Balanced Scorecard from financial year 2007-08 to 2016-17. To attain the objectives of this chapter, performance of each private sector bank has been measured for each measure of each perspective and for each year separately using the secondary data collected from different reports of each bank. The scores have been assigned to each measure using the performance scale after measuring the performance, To compare the performance of individual bank on different perspectives separately, an intra-bank comparison has been drawn applying Kruskal Wallis test using IBM SPSS22.

7.5.2 Measurement of Performance of Private Sector Banks on Financial Perspective

7.5.2.i Key Observations and Suggestions on Financial Perspective:

1. The performance score of HDFC Bank has been declined to 300 in 2016-17 from 340 in 2007-2008 due to decrease in profit growth rate and low cash-deposit ratio therefore bank should increase its net interest margin and improve liquidity.

2. The performance score of ICICI Bank in 2016-17 has been declined to 230 from 270 in 2007-08 due to decline in growth rate of profits, increased NPA's, low liquidity ratios etc. so bank should try to increase net interest margin, cut the operational cost and reduce NPAs.

3. The performance score of Axis bank decreased to 200 in 2016-17 from 280 in 2015-16 due to decline in performance of bank on various financial parameters therefore, bank should improve its net interest margin, reduce operational cost and improve asset quality.

4. The performance score of Indusind Bank increased to 330 in 2010-11 from 190 in 2007-08 and then declined to 290 in 2014-15 and 2015-16 due to decline in net interest margin and low liquidity ratio thus bank should maintain sufficient liquidity and improve net interest margin.

5. The performance score of Yes bank 350 was the highest in 2008-09 and 2010-11. It reached to 300 in 2014-15 due to decrease in growth rate of profits and low liquidity ratios so bank should improve its net interest margin and maintain sufficient liquidity.

6. Kotak Mahindra Bank scored 330 in 2007-08 and then score decreased to 230 in 2008-09 due to low scores on different financial measures. Bank should try to maintain sustainable growth rate of profits and maintain liquidity.

7. The performance score of Federal Bank was 310 in 2007-08 which decreased to 270 in 2009-10. Bank scored the lowest 220 in 2015-16 due to decline in profits and low cash-deposit ratio therefore, bank should try to improve its net interest margin and maintain liquidity.

8. The performance score of City Union bank has been decreased to 280 in 2016-17 from 340 in 2007-08 due to fluctuations in growth rate of profits, low liquidity ratios, increased NPAs and decrease in net interest margin hence, bank should try to improve its net interest margin and maintain quality assets and liquidity.

9. The performance score of RBL bank declined to 230 in 2013-14 from 290 in 2012-13 and 2013-14 due to decline in growth rate of profits, net interest margin and low return on equity subsequently bank should try to increase its interest margin through efficient portfolio of advances and different deposits.

10. The performance score of Karur Vysya Bank has been decreased to 240 in 2016-17 from 320 in 2007-08 primarily due to increased NPA's and low growth rate of profits hence, bank should acquire high yielding assets, maintain quality assets and liquidity.

7.5.2.ii Intra-Bank Comparison of Performance of Private Sector Banks on Financial Perspective

7.5.2.ii.a Inferences drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Private Sector Banks on Financial Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	2012-13	6.50	10.763	9	0.292	Accepted
ICICI Bank	2012-13	7.31	14.494	9	0.106	Accepted
Axis Bank	2011-12	6.31	15.547	9	0.077	Accepted
Indusind Bank	2010-11	6.81	21.063	9	0.012	Rejected
Yes Bank	2008-09 and 2010-11	6.63	7.849	9	0.549	Accepted
Kotak Mahindra Bank	2009-10	6.94	11.685	9	0.232	Accepted
Federal Bank	2010-11	7.56	22.822	9	0.007	Rejected
City Union Bank	2010-11	7.5	23.482	9	0.005	Rejected
RBL Bank	2008-09	6.44	13.144	9	0.156	Accepted
Karur Vysya Bank	2008-09	7	15.122	9	0.088	Accepted

7.5.2.ii.b Major Findings & Conclusion: No significant difference has been found in the performance of all private sector banks except Indusind Bank, Federal Bank and City Union Bank on Financial perspective of Balanced Scorecard when an intra-bank comparison is drawn. Low mean ranks in the last years shows that the performance has declined in last years of the study period.

7.5.3 Measurement of Performance of Private Sector Banks on Customer Perspective

7.5.3.i Key Observations and Suggestion on Customer Perspective:

1. The performance score of HDFC bank decreased to 230 in 2011-12 due to low deposit and credit growth, low growth in current & saving accounts and then increased to 310 in 2016-17 as there has been a high growth in saving & current accounts. Bank should improve its operational efficiency and offer qaulity products and services.

2. ICICI Bank scored the highest 270 in 2007-08 and the lowest 180 in 2008-09. The score fluctuated after this due to variations in deposits growth rate in different accounts. Bank should attract more and more customers by providing quality services.

3. The performance score of Axis Bank has been declined to 250 in 2016-17 from 330 in 2007-08 due to decline in scores on business and customer growth rate in both deposits and advances therefore bank should focus on maintaining growth rate in different customers' accounts through improving operational efficiency.

4. The performance score of Indusind bank has been increased to 250 in 2016-17 from 130 in 2007-08 due to proliferation in business growth and customer growth rate in saving accounts and current accounts. Bank should provide updated products and services to improve customer experiences and increase market share.

5. The performance score of YES bank declined to 200 in 2011-12 from 280 in 2007-08 as there has been a sharp decline in deposit and credit growth rate and then the score increased to 290 in 2016-17. Bank should improve its operational efficiency and provide more updated products and services to acquire more customers.

6. The performance score of Kotak Mahindra Bank declined to 140 in 2008-09 from 300 in 2007-08 due to sharp decline in deposits and credit growth rate. It fluctuated after 2008-09 then reached to 320 in 2015-16 so bank should provide innovative and quality products to acquire more customers.

7. Federal Bank scored the highest 220 in 2016-17 and the lowest 150 in 2013-14 due to low growth rate of deposits and advances therefore, bank should provide suitable, tech-savvy and quality products and services to attract more customers in different accounts.

8. City Union Bank scored the highest 240 in 2009-10 primarily due to high growth in current and saving accounts and the lowest 140 in 2013-14 due to decline in growth rate of deposits and advances therefore bank should improve its operational efficiency and provide innovated products and services to attract and retain customers.

9. The performance score of RBL bank has been increased to 270 in 2016-17 from 180 in 2007-08 primarily due to improvement in business growth rate in both the deposits and advances. Bank should increase low cost deposits and try to attract more customers to increase market share.

10. The performance score of Karur Vysya bank has been declined to 190 in 2016-17 from 240 in 2007-08 primarily due to decrease in deposits and credit advances growth rate so bank should provide quality services and provided innovated products to retain existing customers and attract new ones.

7.5.3.ii Intra-Bank Comparison of Performance of Private Sector Banks on Customer Perspective

7.5.3.ii.a Inferences Drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Private Sector Banks on Customer Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	2007-08 and 2016-17	6.5	8.356	9	0.499	Accepted
ICICI Bank	2016-17	6.94	6.429	9	0.70	Accepted
Axis Bank	2007-08	6.88	5.689	9	0.771	Accepted
Indusind Bank	2009-10 and 2010-11	6.5	21.809	9	0.010	Rejected
Yes Bank	2016-17	7.06	16.365	9	0.060	Accepted
Kotak Mahindra Bank	2015-16	7.94	25.467	9	0.002	Rejected
Federal Bank	2016-17	7.13	16.193	9	0.063	Accepted
City Union Bank	2009-10	6.88	16.106	9	0.065	Accepted
RBL Bank	2014-15	6.36	9.026	9	0.435	Accepted
Karur Vysya Bank	2007-08	7.5	14.749	9	0.098	Accepted

7.5.3.ii.b Major Findings and Conclusion: It has been found that there is no significant difference in the performance of all Private Sector Banks when an intra-bank comparison has been drawn for Customer Perspective of Balanced Scorecard except Indusind Bank and Kotak Mahindra Bank. HDFC bank, ICICI bank, Indusind Bank, Yes Bank, Federal Bank

and RBL Bank have the highest mean ranks in least years of the study period whereas other private sector banks have highest mean ranks in early years.

7.5.4 Measurement of Performance of Private Sector Banks on Internal Business Process Perspective

7.5.4.i Key Observations and Suggestions on Internal Business Process Perspective

1. The Performance Score of HDFC was 150 in 2007-08 which increased to 300 in 2016-17 mostly due to improvement in operational capabilities, cost efficiency and increased reach to customers through expansion of branches and ATMs subsequently bank should improve its operational efficiency and reduce cost of business operations.

2. The performance score of ICICI increased to 300 in 2014-15 from 220 in 2007-08 and then declined to 270 in 2016-17 primarily due to increased cost of Business operations and low business growth therefore, bank should control operational cost and improve its operational efficiency.

3. The performance score of Axis Bank has been increased to 290 in 2014-15 from 200 in 2007-08 then again declined to 250 in 2016-17 primarily due to decrease in score on productivity and cost of business operations' ratios thus bank should try to improve productivity of its employees and control cost incurred on employees and infrastructural development.

4. The performance score of Indusind Bank fluctuated between 180 to 220 during the study period. Bank should control its operational cost, expand its reach in unbanked locations and improve operational efficiency.

5. Yes Bank scored the highest 280 in 2010-11 which decreased to 250 in 2011-12 mainly due to sharp decline in business growth rate hence bank should try to improve its internal business process efficiency.

6. Kotak Mahindra Bank scored the highest 190 in 2015-16 and the lowest 90 in 2008-09 due to the changes in the business growth and cost of business operations so bank should try to improve operational efficiency, employees' productivity and control cost of business operations.

7. The performance score of Federal Bank fluctuated between 180 and 220 during the study period therefore, bank should try to improve its internal operations efficiency to improve business growth rate, control the cost of business operations and expand its network.

8. The performance score of City Union Bank has no significant changes. The score was fluctuated between 180 and 200. Bank should ensure the effectiveness of advertisement and promotional activities, control the staffing cost and expand its network in different locations.

9. The performance score of RBL bank has been increased to 220 in 2016-17 from 150 in 2007-08 due to minor improvements in operational efficiency and productivity of the bank still bank should try to reduce operating cost and expand its network in more areas.

10. The performance of score of Karur Vysya Bank fluctuated between 180-210 during the study period. Bank should expand its network, control its operating cost and improve operational efficiency.

7.5.4.ii Intra-Bank Comparison of Performance of Private Sector Banks on Internal Business Process Perspective

7.5.4.ii.a Inferences drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Private Sector Banks on Internal Business Process Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	2016-17	8.19	35	9	0.000	Rejected
ICICI Bank	2014-15	7.56	21.267	9	0.012	Rejected
Axis Bank	2014-15 and 2015-16	7.38	20.525	9	0.015	Rejected
Indusind Bank	2007-08	6.44	6.816	9	0.656	Accepted
Yes Bank	2010-11	6.75	10.994	9	0.276	Accepted
Kotak Mahindra Bank	2015-16	7.33	28.553	9	0.001	Rejected
Federal Bank	2012-13	6.75	8.131	9	0.521	Accepted
City Union Bank	2012-13	6.19	2.645	9	0.977	Accepted
RBL Bank	2012-13	6.88	21.385	9	0.011	Rejected
Karur Vysya Bank	2009-10 and 2011-12	6.38	5.579	9	0.781	Accepted

7.5.4.ii.b Major Findings and Conclusion: It has been found that there is no significant difference in the performance of Indusind Bank, Yes Bank, Federal Bank, City Union Bank and Karur Vysya Bank on Internal Business Process Perspective of BSC when an intra-bank comparison has been drawn whereas other private sector banks have a significant difference. Low mean ranks of few private sector banks in last years of the study period shows that the performance has decreased in these years which indicates that the operational efficiency of the banks is decreasing that might have affected the performance of banks on Customer and Financial Perspective.

7.5.5. Measurement of Performance of Private Sector Banks on Learning & Growth and Innovation Perspective

7.5.5.i Key Observations and Suggestions on Learning & Growth and Innovation Perspective:

1. The performance score of HDFC bank has increased to 390 in 2016-17 from 110 in 2007-08 because of improvement in score on number of skilled employees, percentage of employee's trained, increased in number of debit cards, credit cards, POS Terminals, mobile transactions and NEFT transactions.

2. The performance of ICICI bank increased to 370 in 2016-17 from 110 in 2007-08 mainly due to increase in number of skilled employees and expenditure on them, percentage of employees trained, increase in number of transactions through digital channels.

3. The performance score of Axis Bank has increased to 350 in 2016-17 from 110 in 2007-08. Bank should recruit more skilled employees and increase expenditure on their training and development to improve their efficiency.

4. The performance score of Indusind Bank has increased to 230 in 2016-17 from 80 in 2007-08 primarily due to increase in score on transactions through digitalised channels. Bank should introduce more innovative, digitalised, user friendly and secured product & services and impart training to all employees.

5. The performance score of Yes Bank reached to 240 in 2016-17 from 40 in 2007-08 due to increased number of mobile and NEFT transactions, increase in growth in number of employees and expenditure on them. Bank should recruit more skilled employees and increase the number of debit cards, credit cards and POS terminals.

6. The performance score of Kotak Mahindra bank reached to 260 in 2016-17 from 40 in 2007-08. Bank should recruit more skilled employees and issue more debit cards, credit cards and install more POS terminals.

7. The performance score of Federal bank increased to 220 in 2016-17 form 30 in 2007-08 mainly due to speedy growth in mobile and internet banking transactions subsequently bank should proliferate the quantity, quality and innovations in digitalised products and services to attract more customers.

8. The performance score of City Union Bank increased to 140 in 2016-17 from 20 in 2007-08 but too low as compared to other competitive banks so bank should recruit

more employees and trained them to improve operational efficiency and also introduce innovative digitalised products and services.

9. The performance score of RBL Bank increased to 160 in 2016-17 from 30 in 2007-08. The performance score on all the measures under this perspective were low therefore bank should recruit more skilled staff and trained them to improve their productivity.

10. The performance score of Karur Vysya increased to 170 in 2016-17 from 60 in 2007-08 but the score was low as compared to other banks because of low score on number of skilled employees and less transactions through digitalised channels. Bank should trained all employees and introduce innovative products and services to increase transactions on digital platforms.

7.5.5.ii Intra-Bank Comparison of Performance of Private Sector Banks on Learning & Growth and Innovation Perspective

7.5.5.ii.a Inferences drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Private Sector Banks on Learning & Growth and Innovation Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	2016-17	7.40	24.664	9	0.003	Rejected
ICICI Bank	2016-17	7.00	9	9	0.437	Accepted
Axis Bank	2016-17	7.4	19.073	9	0.025	Rejected
Indusind Bank	2016-17	7.88	18.474	9	0.03	Rejected
Yes Bank	2016-17	8	10	9	0.350	Accepted
Kotak Mahindra Bank	2015-16 and 2016-17	8.75	13.39	9	0.146	Accepted
Federal Bank	2016-17	7.75	9	9	0.437	Accepted
City Union Bank	2016-17	8.17	15.821	9	0.071	Accepted
RBL Bank	2010-11, 2014-15 to 2016-17	7.00	9	9	0.437	Accepted
Karur Vysya Bank	2014-15	7.67	6.511	9	0.688	Accepted

7.5.5.ii.b Major Findings and Conclusion: It has been found that there is no significant difference in the performance of all private sector banks except HDFC Bank, Axis Bank and Indusind Bank on Learning & Growth and Innovation Perspective when an intra-bank comparison has been drawn. All private sector banks performed well in last years as the mean ranks was the highest in these years.

7.5.6 Measurement of Performance of Private Sector Banks on Social and Environment Perspective

7.5.6.i Key Observations and Suggestions on Social and Environment Perspective:

1. The performance score of HDFC bank increased to 260 in 2016-17 from 50 in 2007-08 due to increased focus of bank on social and environment concerns still bank should focus on promoting gender equality, provide more advances to priority sectors and spent more on environment protection.

2. The performance score of ICICI bank increased to 240 in 2016-17 from 60 in 2007-08 due to increased expenditure on CSR activities, increase in percentage of female employees in workforce and increased branches in rural and semi-urban areas. Bank should promote more financial inclusion plans and spent more on environment protection.

3. The performance score of Axis Bank increased to 320 in 2015-16 from 50 in 2007-08 due to high score on expenditure on CSR activities and environment protection, growth in rural and semi-urban areas. Bank should focus on increasing beneficiaries in accounts like PMJDY and provide more advances to priority sectors to promote financial inclusion.

4. The performance of Indusind Bank reached to 300 in 2015-16 from 60 in 2007-08 due to increased expenditure on CSR activities and environment protection. Bank should promote more financial inclusion activities.

5. The performance score of Yes Bank on Social and Environment Perspective increased to 270 in 2015-16 from 60 in 2007-08 due to high expenditure on CSR activities and increase in beneficiaries in PMJDY accounts. Bank should increase number of female employees and promote various financial inclusion plans.

6. The performance score of Kotak Mahindra Bank reached to 250 in 2015-16 from 60 in 2007-08 and then again declined to 210 in 2016-17 primarily due to decline in score on growth in deposits in PMJDY accounts so bank should try to mobilize deposits in these accounts.

7. The performance score of Federal Bank increased to 250 in 2016-17 from 80 in beginning 3 years due to increase in score on expenditure on CSR activities, growth in number of female employees, growth in branches in rural and semi-urban areas. Bank should promote different financial inclusion plans.

8. City Union Bank scored the highest 240 in 2016-17 and the lowest 70 in 2009-10. Bank should increase the number of female employees to encourage gender quality and women empowerment and promote other financial inclusion plans.

9. The performance score of RBL Bank on Social and Environment Perspective has increased to 200 in 2016-17 from 70 in starting 5 years of the study. Bank should spend more on CSR activities and environment protection and promote diverse financial inclusion activities.

10. The performance score of Karur Vysya Bank on Social and Environment perspective has increased to 240 in 2016-17 from 70 in starting 5 years. Bank should increase expenditure on CSR activities and environment protection and mobilize more beneficiaries and deposits in PMJDY accounts.

7.5.6.ii Intra-Bank Comparison of Performance of Private Sector Banks on Social and Environment Perspective

7.5.6.ii.a Inferences Drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Private Sector Banks on Social and Environment Perspective

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	2015-16	7.83	9.462	9	0.396	Accepted
ICICI Bank	2012-13, 2015-16 and 2016-17	7.25	4.61	9	0.867	Accepted
Axis Bank	2014-15 and 2015-16	7.83	16.758	9	0.053	Accepted
Indusind Bank	2010-11 to 2016-17	6.25	9	9	0.437	Accepted
Yes Bank	2011-12 and 2012-13	7.5	9	9	0.437	Accepted
Kotak Mahindra Bank	2013-14 to 2016-17	7.25	9	9	0.437	Accepted
Federal Bank	2010-11, 2011-12 and 2013-14 to 2015-16	6.75	6.081	9	0.732	Accepted
City Union Bank	2013-14 to 2015-16	7.5	10.8	9	0.290	Accepted
RBL Bank	2007-08	10	13.737	9	0.132	Accepted
Karur Vysya Bank	2015-16 and 2016-17	8.5	12.6	9	0.182	Accepted

7.5.6.ii.b Major Findings and Conclusion: It is found that there is no significant difference in the performance of all private sector banks on Social and Environment Perspective of BSC when an intra-bank comparison has been drawn. High mean ranks in last years of the study period depicts better performance of banks in these years.

7.5.7 Measurement of Overall Performance of Private Sector Banks on Balanced Scorecard

7.5.7.i Key Observations on Overall Performance :

1. The overall performance score of HDFC has increased to 1560 in 2016-17 from 970 in 2007-08 primarily due to improvement in performance on all other perspectives.

2. The overall performance score of ICICI Bank has been increased to 1370 in 2016-17 from 780 in 2008-09 because the performance of the bank has improved on Learning & Growth and Innovation and Social & Environment Perspective.

3. Axis Bank scored the highest 1460 in 2015-16 and then the score declined to 1360 in 2016-17 primarily due to decline in score on Financial and Internal Business Process Perspective.

4. Indusind Bank scored the highest 1300 in 2016-17 due to improvement in performance on Customer perspective, Learning & Growth and Innovation Perspective and Social & Environment Perspective led the bank improved its overall performance.

5. The overall performance score of Yes Bank increased to 1310 in 2016-17 from 1060 in 2013-14 as the performance of bank on different perspectives except Financial Perspective has improved in the last four years of the study.

6. The overall performance score of Kotak Mahindra Bank was the highest 1270 in 2015-16 and then declined to 1200 in 2016-17 mainly due to decline in performance score on customer perspective.

7. The overall performance score of Federal Bank reached to 1180 in 2016-17 from 810 in 2007-08 as the performance of bank has improved on all perspectives of Balanced Scorecard.

8. The overall performance score of City Union Bank has increased to 1040 in 2016-17 from 850 in 2007-08.

9. The overall performance score of RBL Bank was the highest 1150 in 2016-17.

10. The performance score of Karur Vysya Ban increased to 1030 in 2016-17 from 880 in 2007-08.

7.5.7.ii Intra-Bank Comparison of Performance of Private Sector Banks on Balanced Scorecard

7.5.7.ii.a Inferences drawn from Table of Mean Ranks of Years and Summarized Hypothesis Testing Results for Intra-bank Comparison of Private Sector Banks on Balanced Scorecard

Name of the Bank	Best Performing Year	Mean Rank	Chi-Square	Degree of Freedom	p-Value	Null Hypothesis Accepted /Rejected
HDFC Bank	2016-17	8.1	9.486	9	0.394	Accepted
ICICI Bank	2016-17	7.7	19.289	9	0.023	Rejected
Axis Bank	2015-16	6.8	4.185	9	0.899	Accepted
Indusind Bank	2016-17	8.1	21.916	9	0.009	Rejected
Yes Bank	2016-17	6.6	6.809	9	0.657	Accepted
Kotak Mahindra Bank	2015-16	8.2	18.656	9	0.028	Rejected
Federal Bank	2016-17	8.7	12.192	9	0.203	Accepted
City Union Bank	2016-17	6.5	6.648	9	0.674	Accepted
RBL Bank	2016-17	9.3	28.812	9	0.001	Rejected
Karur Vysya Bank	2010-11	6.7	7.5	9	0.585	Accepted

7.5.7.ii.c Major Findings and Conclusion: It has been found that there is no significant difference in the overall performance of HDFC Bank, Axis Bank, Yes Bank, Federal Bank, City Union Bank and Karur Vysya Bank. Mean rank for almost all the Private Sector Banks was the highest in last years of the study which depicts that banks performed the best in last years.

7.6 Inter-Bank and Inter-Sector Comparison of Performance of Public Sector Banks and Private Sector Banks on Balanced Scorecard

7.6.1 Introduction: This chapter is intended to attain the key objectives of the study and focuses on inter-bank and inter-sector comparison of performance of selected Public and Private sector banks on different perspectives and on Balanced Scorecard.

7.6.2 Performance and Inter-Bank Comparison of Public Sector Banks on Balanced Scorecard: To test whether public sector banks shows any significant difference in the performance on the basis of all the different perspectives and overall performance on Balanced Scorecard when inter-bank comparison is drawn for the year 2007-08 to 2016-17, Kruskal Wallis Test has been applied.

7.6.2.i Findings on Performance of Public Sector Banks on Different Perspectives and Balanced Scorecard

Name of the Perspective	Best Performers	Mean Ranks	Poor Performers	Mean Ranks
Financial Perspective	Indian Bank	61.6	IDBI Bank	32.6
	State Bank of India	59.15	Central Bank of India	35.8
Customer Perspective	State Bank of India	83.85	Syndicate Bank	19.90
	Bank of Baroda	74.3	Central Bank of India	28.20
Internal Business Process Perspective	State Bank of India	72.2	Central Bank of India	20.3
	IDBI Bank	67.8	Indian Bank	28.2
Learning & Growth and Innovation Perspective	State Bank of India	74.30	Syndicate Bank	37.90
	Punjab National Bank	58.70	Indian Bank	42.35
Social and Environment Perspective	Canara Bank	64.85	Syndicate Bank	35.0
	State Bank of India	60.6	IDBI Bank	35.2
Balanced Scorecard	State Bank of India	81.70	Central Bank of India	19
	Punjab National Bank	70.35	Syndicate Bank	24..4

7.6.2.ii Key Observations and Suggestions on Inter-bank Comparison of Public Sector Banks on Different Perspectives and Balanced Scorecard:

1. **Financial Perspective:** The best performers have higher profitability and liquidity ratios and they also maintained sufficient capital adequacy ratio and maintained satisfactory net interest margin whereas poor performers have low profitability ratios, decreased shareholder value, low liquidity, increased NPAs, high provisioning and low interest margin. These banks should improve their profitability through improving net interest margin and reducing operating cost. A strong credit monitoring and recovery system is also needed to decrease NPA's.

2. **Customer Perspective:** The best performers have high customer base in deposits and credit accounts as compared to other public banks, better competitive position due to high market share in deposits and credits, satisfactory after sales services and query handling mechanism whereas poor performers have low or declining growth rate in different customers' accounts and low market share in deposits and credits. Banks should introduce renovated and technically upgraded products and services and adopt aggressive marketing strategies to attract more customers.

3. **Internal Business Process Perspective:** The best performers have maintained excellency in business operations, improved operational capabilities, attained efficiency in reducing cost of business operations and increased geographical reach to customers through expansion of ATM's and branches. Poor performers have deprived operational efficiency resulted in poor customer experiences and low growth in business, high operational cost on employees and limited reach to customers due to low number of ATM's and branches. Banks should improve their operational efficiency at bank branches through ensuring prompt, convenient and quality services and try to reduce operational cost.

4. **Learning & Growth and Innovation Perspective:** The best performers recruited and retained large number of skilled employees and spent the highest on each employee. Training imparted to employees, issued debit cards, installed POS terminals and number of mobile and internet banking transactions were also high than other banks. Low score on number of skilled employees, percentage of employees trained, expenditure per employee, number of issued debit and credit cards, installed POS and low mobile and internet banking transactions were the reasons for poor performance of few banks. Banks should conduct more training programs to improve the efficiency and

productivity of employees and introduce innovative digitalised products and services to improve customers' digital experiences.

5. **Social and Environment Perspective:** Best performing banks spent more on CSR activities than other public banks. They encouraged gender equality at work place and also promoted financial inclusion plans through increasing number of branches in unbanked rural areas and provided financial assistance to maximum people. Poor performers spent low on CSR activities. They have less number of female employees in the workforce and fewer beneficiaries & deposits in PMJDY accounts, low ratio of priority sector advances to total advances. These banks should spend more on CSR activities and environment protection and promote financial inclusion plans.

6. **Overall Performance on Balanced Scorecard:** Best performing banks have the highest performance score on Balanced Scorecard in almost each year than other public sector banks due to their better performance on different perspectives of Balanced Scorecard. Poor performers should try to improve performance on all perspectives of Balanced Scorecard to achieve long term financial success and growth.

7.6.2.iii Hypothesis Testing Results of Kruskal Wallis Test for Public Sector Banks

Name of the Perspective	Chi-Square	Degree of Freedom	p-Value	Hypothesis Accepted/Rejected
Financial Perspective	10.147	9	0.339	Accepted
Customer Perspective	48.005	9	0.00	Rejected
Internal Business Process Perspective	34.493	9	0.00	Rejected
Learning & Growth and Innovation Perspective	11.809	9	0.224	Accepted
Social & Environment Perspective	12.311	9	0.196	Accepted
Balanced Scorecard	45.020	9	0.000	Rejected

Conclusion: It has been concluded here that Public Sector Banks have a significant difference in their performance on Customer Perspective, Internal Business Process Perspective and on Balanced Scorecard and no significant difference has been found on Financial, Learning & Growth and Innovation Perspective and Social & Environment Perspective.

7.6.3 Performance and Inter-Bank Comparison of Private Sector Banks on Balanced Scorecard: By applying Kruskal Wallis it has been tested whether on the basis of all the different perspectives and overall performance on Balanced Scorecard, private sector banks shows any significant difference in the performance when inter-bank comparison is drawn for year 2007-08 to 2016-17.

7.6.3.i Findings on Performance of Private Sector Banks on Different Perspectives and Balanced Scorecard

Name of the Perspective	Best Performers	Mean Ranks	Poor Performers	Mean Ranks
Financial Perspective	HDFC Bank	83	ICICI Bank	22.15
	Yes Bank	75	RBL Bank	27.8
Customer Perspective	HDFC Bank	83.05	Federal Bank	21.3
	Axis Bank	69.75	Karur Vysya Bank	22.65
Internal Business Process Perspective	ICICI Bank	82	Kotak Mahindra Bank	9.65
	Yes Bank	80.25	City Union Bank	33.05
Learning & Growth and Innovation Perspective	HDFC Bank	81.45	City Union Bank	20.55
	Axis Bank	79.35	RBL Bank	27.75
Social and Environment Perspective	Federal Bank	60.95	Kotak Mahindra Bank	44.15
	Indusind Bank	54.3	RBL Bank	44.15
Balanced Scorecard	HDFC Bank	79.3	City Union Bank	25.65
	Axis Bank	77.05	Karur Vysya Bank	31.05

7.6.2.ii Key Observations and Suggestions on Inter-bank Comparison of Private Sector Banks on Different Perspectives and Balanced Scorecard:

1. **Financial Perspective:** Performance of few banks was better than other private sector banks in terms of profitability, liquidity, asset quality, capital adequacy ratio and earning quality thus scored the highest. Low profitability ratios due to high IT infrastructural development cost, increased NPA's, poor earning quality were the primary reasons for low performance score of few private banks on financial perspective so these banks should improve their profitability ratios through cost efficiency and improving net interest margin through acquiring efficient portfolio of assets and deposits. They should have efficient credit monitoring and recovery mechanism.

2. **Customer Perspective:** Best Performing banks gained highest performance score on this perspective mainly due to their ability to retain existing and acquire new customers by providing efficient services and offering customized innovated and differentiated products & services. High customer satisfaction level facilitated them to enjoy the highest market share among all private sector banks. Low market share in deposits and credits than competitive banks and low growth rate of customers are the main reasons for poor performance score of few banks on customer perspective therefor these banks should focus on acquiring more customers through offering more suitable, tech-savvy customized and updated products and services through efficient delivery channels and conduct more promotional activities.

3. **Internal Business Process Perspective:** Performance of best performers was due to their better operational efficiency, high productivity and operational capabilities, better connectivity in all locations through multiple ATM's and branches. Poor operational efficiency, low productivity of employees, high cost of business operations are the primary reasons for the poor performance of few banks which should be improved through controlling cost of business operations specially cost incurred on IT infrastructure development and ensure efficiency and productivity of employees.

4. **Learning & Growth and Innovation Perspective:** Best Performers recruited and retained the highest number of skilled employees and spent the highest on their employees, imparted trainings to maximum employees. They are enable to increase their transactions through digital channels. Poor performing banks scored low on number of skilled employees, expenditure on employees and percentage of employees trained. Transactions through mobile and NEFT and number of debit cards and credit cards, installed POS were also low than other private sector banks so these banks should recruit more skilled employees, trained them to improve their efficiency and productivity. Banks should also introduce user-friendly and more secured digitalised products and services.

5. **Social and Environment Perspective:** Sufficient amount spent on CSR activities and environment protection, highest female employees in workforce, maximum no. of branches in rural and semi-urban areas and all steps taken to protect environment were the primary reasons for best performance of few private sector banks. Poor performance of few banks was due to low amount spent on CSR activities and environment protection, less no. of female employees, limited branches in rural and semi-urban locations, low ratio of priority sector advances to total advances, and low growth in number of beneficiaries and deposits in PMJDY accounts. Therefore, banks should spent more on CSR & environment protection and promote financial inclusion plans.

6. **Overall Performance on Balanced Scorecard:** HDFC Bank, Axis bank and ICICI bank performed the best on Balanced Scorecard. The performance of City Union Bank, Karur Vysya Bank and RBL Bank was the poorest among private sector banks so these banks should try to improve their performance on all perspectives of Balanced Scorecard so that overall performance can be improved.

7.6.3.iii Hypothesis Testing Results of Kruskal Wallis test for Private Sector Banks

Name of the Perspective	Chi-Square	Degree of Freedom	p-Value	Hypothesis Accepted/Rejected
Financial Perspective	39.945	9	0.00	Rejected
Customer Perspective	48.184	9	0.00	Rejected
Internal Business Process Perspective	59.086	9	0.00	Rejected
Learning & Growth and Innovation Perspective	50.910	9	0.00	Rejected
Social & Environment Perspective	28.83	9	0.969	Accepted
Balanced Scorecard	43.287	9	0.000	Rejected

Conclusion: It has been found that there is a significant difference in the performance among private sector banks on all perspectives and on Balanced Scorecard except Social and Environment Perspective when an inter-bank comparison has been drawn.

7.6.4 Inter-Sector Comparison between Public Sector Banks and Private Sector Banks on Balanced Scorecard

The significant difference in the performance between public sector banks and private sector banks on Financial, Customer, Internal Business Process, Learning & Growth and Innovation and Social & Environment Perspectives and overall performance on Balanced Scorecard has been tested applying Mann-Whitney U-Test.

7.6.4.i Findings on Inter-Sector Comparison between Public Sector Banks and Private Sector Banks on Different Perspectives and Balanced Scorecard

	Financial Perspective	*Customer Perspective*	*Internal Business Process Perspective*	*Learning & Growth and Innovation Perspective*	*Social and Environment Perspective*	*Balanced Scorecard*
Best Performing Sector	**Private**	**Private**	**Public**	**Public**	**Public**	**Public**
Mean Rank	14.15	11.05	12.65	12.80	12.5	10.9

7.6.4.ii Key Observations:
1. **Financial Perspective:** Private Sector Banks use the upgraded technology and innovated products and services to serve their customers so they have largest customer base. More customers and more business has led them acquired the healthy growth in profitability ratios than Public Sector Banks. Private Sector Banks also maintained sufficient liquidity ratios, improved earning quality and asset quality.

2. **Customer Perspective:** Private Sector Banks are able to attract more satisfactory customer towards them due to their strong marketing strategies, prompt and quality services at front and backend, updated IT infrastructure, updated and latest alternative

channels. High customer base and market share enabled private sector banks to achieve highest average score on customer perspective.

3. **Internal Business Process Perspective:** Public Sector Banks have been found as best performers on this perspective as compared to Private Sector Banks due to convenient geographical reach to customers through availability of ATM's and branches in all the locations and low operational cost.

4. **Learning & Growth and Innovation Perspective:** Public Sector Banks performed the best on Learning & Growth and Innovation Perspective primarily on account of retaining largest number of employees, more expenditures on employees, training to maximum employees, large number of issued debit cards and installed POS terminals with these banks.

5. **Social and Environment Perspective:** Public Sector Banks performed the best on Social and Environment Perspective as they have the highest mean rank than Private Sector Banks primarily because of high spent more on CSR activities, largest number of branches in rural and semi-urban areas, acquisition of more beneficiaries in PMJDY accounts and providing more advances to priority sectors.

6. **Balanced Scorecard:** The mean rank of public sector banks is little higher than private sector banks as these banks performed better than private sector banks on social and environment perspective, learning & growth perspective and internal business perspective.

7.6.4.iii Key Suggestions:

1. **Financial Perspective:** Banks should consider the improvements in intangible factors to improve financial performance on financial perspective. Banks should try to minimize their operational, infrastructural and employees cost to improve the profitability margin. Banks should have strong policies for procurement, management and recovery of their assets to maintain high quality assets and reduce NPA's. Banks should improve their net interest margin through acquiring low-cost deposits, high yielding assets, maintaining effective rate of interest on both advances and deposits.

2. **Customer Perspective:** To increase esteemed customers, banks should increase the use of right and updated digital platforms for providing different banking and specialty services. As targeting the customer segments is not possible so bank should target on clustering a customer base and try to match its needs with suitable products & services. Banks should conduct customer satisfaction survey on annual basis and disclose in their

reports so that they can provide customized products. Banks should adopt aggressive marketing and promotional strategies like offering unique selling prepositions, introducing first to market products, market segmentation, customized products, use of different marketing channels, promoting social activities etc. Banks should use multiple marketing channels to reach to their desired customers and to increase their awareness level about different offers, special incentives, reward points, low rate or high.

3. **Internal Business Process Perspective:** Banks should ensure a greater accuracy in delivering products & services. They should provide quality and diversified portfolio of products using the upgraded technology and automations. They should ensures that services are delivered by trained and updated employees so that operational efficiency can be enhanced. Investment in technology and automations, expansion of branches, ATM's, e-kiosks and on other operational & infrastructural activities should be done keeping in view the cost involved. Banks should ensure the effectiveness of the expenses done for the promotion and advertisement of bank's product and services. Banks should increase the adoption of artificial intelligence enabled digital transformation at front and backend for smooth customer identification and their authentications, simulating live employees through chatbots, voice assistants etc., deepening relationship with customers and for providing personalized insights and recommendations. Banks should try to improve employee productivity with automation tools which will enabled bank to handle more activities and more transactions in minimum time with less no. of employees.

4. **Learning & Growth and Innovation Perspective:** Banks should train their human resources on technical, behavioural and operational skills so that they can serve their customers efficiently. Different training programmes, workshops, seminars, different courses, personal mentoring sessions etc. should be conducted to improve efficiency and productivity. Banks should disclose the information related to expenditure on training of employees, number of training programs conducted, average training hours/days for each employee, employee turnover ratio, employee's satisfaction survey score in their annual reports as these are the measures which should be incorporated into this perspective of BSC of Banks.

5. **Social and environment perspective:** Banks should spend minimum expenditure on CSR activities as prescribed by Companies Act, 2013. Banks can create reserve for spending on CSR activities to spend in the year of losses or low profits so that a positive

image can be maintained in the eyes of stakeholders. Banks should incorporate other measures also while creating their individual Balanced Scorecard. Banks should conduct more awareness programmes for promoting financial schemes /facilities in rural and semi-urban areas. Banks should offer customized products & services as per the needs of local area population.

7.6.4.iv Hypothesis Testing Results of Mann-Whitney U Test for Inter-Sector Comparison

Name of the Perspective	Mann-Whitney U	Z-Score	p-value	Hypothesis Accepted/Rejected
Financial Perspective	13.5	-2.765	0.00	Rejected
Customer Perspective	44.500	-0.416	0.677	Accepted
Internal Business Process Perspective	28.500	-1.626	0.104	Accepted
Learning & Growth and Innovation Perspective	27.00	-1.739	0.082	Accepted
Social and Environment Perspective	30.000	-1.513	0.130	Accepted
Balanced Scorecard	46	-0.302	0.762	Accepted

7.6.5 Grading and Ranking of Performance of Public Sector Banks and Private Sector Banks on Balanced Scorecard: Neither any public sector bank nor any private sector bank got excellent remark on Balanced Scorecard. All Public and Private Sector Banks were remarked as either poor or satisfactory in most of the years. State Bank of India among Public sector banks and HDFC and Axis Bank among private sector banks were ranked on 1st position on Balanced Scorecard in most of the years. On the basis of average score during the studied years, HDFC bank was on the top position and City Union Bank on the last position among all Public and Private Sector Banks in India.

7.7 Suggestions and Policy Recommendations

1. As the top level management of the banks is responsible for implementing performance measurement tools, mounting of strategies and their execution, so they should adopt Balanced Scorecard as their Strategic Performance Measurement and Management Tool as it depicts the visual presentation of Bank's overall performance on a single dashboard.

2. Individual Bank should create its own Balanced Scorecard by keeping in concern the Key Strategic Objectives of the Bank based on their Vision and Mission Statements. It should filter the Key Performance Indicators as per their strategic objectives and then cluster them into suitable perspective as per their strategic objectives of the bank.

3. Assigning weights to each perspective and measure is crucial issue as the importance of each perspective and measure is different to different organization. Appropriate weights should be given to each perspective and measure as per their importance to the specific bank need.

4. A unified mix of Performance Drivers and Outcome Measures should be taken into consideration while designing Balanced Scorecard for Banks.

5. Banks are suggested to frame strategic objectives and measures in different perspectives in such a way which is logical and define a casual linkages among all. As this tool fails just because of this lacuna.

6. An appropriate number of measures in a Balanced Scorecard is a primary concern as high number of measures will mess up the things and less number of measures might not reveal the results which are necessarily required.

7. An adequate technical infrastructure & support for data collection and automation, specialized software packages, spreadsheets for implementing and managing Balanced Scorecard and retrieval of information required information for Balanced Scorecard as and when required should be arranged by the top management for the successful implementation of Balanced Scorecard.

8. Many organizations use Balanced Scorecard only for reporting purpose. Banks are suggested to use Balanced Scorecard for Strategic Performance Management and Operational Management also.

9. Although banks in India evaluate their performance on various financial and non-financial parameters but no systematic approach is used by them. Balanced Scorecard

provides a systematic framework to measure, evaluate and improve their performance so banks are recommended to adopt this tool.

10. Implementing BSC is a complicated task and a team effort. It requires effective, focused, trained, efficient and vibrant team members. Top Management should arrange proper training on conceptual and technical aspects of Balanced Scorecard to members of Implementation team of Balanced Scorecard.

11. Banks should provide a positive work culture at work place. They should provide proper mentoring and guidance to all employees and maintain a healthy relationships with them. As these are the people who actively involved in strategy implementation. It is a key to success for effective implementation of Balanced Scorecard.

12. For better decision making, both financial and non-financial measures are required by the management and stakeholders. A mandatory reporting on both the financial and non-financial indicators in the annual reports and other reports by the banks can be implemented by regulatory authorities such as Reserve Bank of India, ICAI or SEBI etc.

13. Measures on CSR, Corporate Governance and Ethical Behaviour of banks should be incorporated in Balanced Scorecard as these are the major sustainability issues and drivers. These measures can be included in Compliance and Regulatory Framework Perspective or Social and Environment perspective of banks. For this, a modification may require in the classic model of Balanced Scorecard given by Kaplan and Norton.

14. As this study is secondary data base, banks should incorporate primary data in their Balanced Scorecard for measuring performance on various measures of Customer, Internal Business Process and Learning & Growth and Innovation Perspectives. Merging secondary data with primary data will give a clear picture of Bank's Performance.

15. Banks in India are competent enough and have the adequate infrastructure to implement Balanced Scorecard as tool for performance measurement and management.

7.8 Scope for the Future Research

This study has few limitations which can be overcome in future research studies. Some of the suggestions for future research are being given below:

1. More comprehensive, empirical and comparative studies on evaluating overall performance through implementing Balanced Scorecard are needed for Foreign Banks, Payments Banks, Small Finance banks, Regional Rural Banks and other financial institutions in India.

2. Studies including primary data with secondary data in Balanced Scorecard and then measuring the overall performance are needed.

3. Studies on identification of measures on social and environment perspective, Corporate Governance and other sustainability measures are needed for different sectors.

4. Studies on combining sustainability social and environment issues with Balanced Scorecard and then evaluating the performance are needed for all sectors and companies.

5. More empirical studies on determining the relationship between performance on social and environment perspective and overall performance are need to be conducted.

6. Implementation of Balanced Scorecard in India is too low so to promote its benefits more studies are required which depicts its importance in Performance measurement and management by applying it and evaluating performance of different organizations and sectors.

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Published Papers in UGC

Referred Journals

Published Papers in UGC Referred Journals

S. No.	Paper Title	Journal Name	ISSN	Impact Factor	Type of Journal	Vol./ Issue No.	Page No.	Year
1	Performance Evaluation Using Balanced Scorecard Model in Banking Industry: A Case Study of HDFC Bank	Pacific Business Review International	0974-438X	6.56	UGC List No. -28633	10(9)	64-78	2018
2	A Comparative Study on Performance Measurement of HDFC Bank and SBI using Balanced Scorecard	Pacific Business Review International	0974-438X	6.56	UGC List No. -28633	11(8)	15-32	2019
3	Internal Business Process Perspective of Balanced Scorecard: Driver to Outshine in Front of Customers and Shareholders (An Empirical Study on Inter-Bank And Inter-Sector Comparison of Public And Private Sector Banks In India).	Journal of Critical Reviews.	2394-5125	0.6	UGC Care List Journal-Group II-Scopus Indexed	7(13)	255-261	2020
4	Customer Perspective of Balanced Scorecard: An Empirical View of Company's Performance from Customer Outlook (An Inter-Bank and Inter-Sector Comparison of Public and Private Sector Banks in India)	Pacific Business Review International	0974-438X	6.56	UGC Care List Journal Group II-Web of Science	12(10)	80-88	2020

Annexures

List of Research Papers Presented in Conferences/Seminars

S. No.	Paper Title	National/ International	Conference Topic	Organized by	Place	Date and Year
1	Balanced Scorecard: A Conceptual Framework	International	Innovative Research in Science, Technology and Management	Modi Institute of Management & Technology, Kota (Raj.)	Kota (Raj.)	22-23 January' 2017
2	A Study on Performance Evaluation of HDFC Bank Using Financial Perspective of Balanced Scorecard	National	Sustainable Development and Inclusive Growth: Prospects and Challenges	37th Annual Conference of Rajasthan Economic Association	University of Kota, Kota(Raj.)	27-28 January 2017
3	Goods & Services Tax-An Overview on Impacts on Major Sectors of Indian Economy	National	GST: Implications for Indian Economy	70th All India Commerce Conference of ICA	IIS UNIVERSITY, Jaipur	12-14 October 2017
4	Application of Balanced Scorecard in Banking Industry: A Study of HDFC Bank	International	International Seminar on Accounting Education and Research	40th All India Accounting Association Conference	Mohanlal Sukhadia University, Udaipur	18-19 November 2017
5	A Study on Performance Evaluation of SBI Using Financial Perspective of Balanced Scorecard	National	Modern Management Strategies E-Commerce and Global Economy-In Indian Context	Inspira Research Association	LBS PG College, Jaipur	02-03 February 2018
6	A Comparative Study on Performance Measurement of HDFC Bank and SBI using Balanced Scorecard	International	International Seminar on Accounting Education and Research	41st All India Accounting Asscoiation Conference	Manipal University, Jaipur	05-06 January 2019
7	Customer Perspective of Balanced Scorecard: An Empirical View of Company's Performance from Customer Outlook (An Inter-Bank and Inter-Sector Comparison of Public and Private Sector Banks in India)	International	International Seminar on Accounting Education and Research	42nd All India Accounting Conference	Jai Narayan Vyas University, Jodhpur	28-29th December ,2019