A Study on Risk Management and Performance Analysis of Commercial Banks in India: (Application of CAMEL Model)

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Under the Supervision of

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ABSTRACT

Banks play a very vital role in the running of the economy in any country worldwide, emphasis is laid on the continuous development and assessment of the banks. An evaluation of the profitability and financial performance of the banks is essential to fight through the difficulties and inefficiencies faced by the banking sector. There are various financial tools and techniques to measure the performance of the banks, one of the most important one being the CAMEL model which lays emphasis on all the aspects of the performance measurement. The present study analyses the performance of selected nationalized banks in India. With the study period of 2015-2020 the performance of nationalized public sector banks and private sector banks such as Bank of Baroda, Punjab National Bank, Bank of India, Central Bank of India, Axis Bank, HDFC Bank, ICICI Bank, Kotak Mahindra Bank,Canara Bank, Union Bank Of India, Bandhan Bank and Oriental Bank Of Commerce are analyzed based on capital adequacy, assets quality, management efficiency, earning capacity and liquidity managementof banks using weightage techniques.

These financial statements need to be analyzed using various financial techniques, or through statistical analysis or any comparison studies. In this article CAMEL Model of financial statement analysis is used. CAMEL Model was designed in the year 1995. A review committee was formed for supervision of banking system and they recommended this system to have a common platform of comparison of the Indian Banks with Foreign banks. It consists of six parameters which enable financial management and system for control of the financialpositions of the banks.

The banking system is the most reachable and important aids to trade in today's economic world. There is no business without the intervention of banking system. It has become essential for the banks to measure their performance and efficiency in comparison to the other banks in order to bring changes in the current system. The banking sector in India has improved to leaps and bounds but still there is scope for betterment. CAMEL Model is one of the financial tools that analyses the performance of the banks in respect to the five elements. The above study shows that the performance of the banks is different from each other and as one bank focuses on one criteria and the other bank thinks the latter criteria's are important. Also the study gives a picture of the shortcomings of the banks and where they need to be improved.

CANDIDATE'S DECLARATION

I, hereby, certify that the work, which is being presented in the thesis, entitled **"A Study on Risk Management and Performance Analysis of Commercial Banks in India: (Application of CAMEL Model)"** in partial fulfillment of the requirement for the award of the Degree of Doctor of Philosophy, carried out under the supervision of Dr.L.C.Panjabi, former HOD, Department of ABST, Government Commerce college , Kota and submitted to the University of Kota, Kota 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 other 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/ 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 properly cited or from whom proper permission has not been taken when needed.

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This is to certify that the above statement made by Monika Ambwani (Registration No. RS/26/16) is correct to the best of my knowledge.

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ABBREVIATIONS

A: Asset Quality

AMC: Annual Maintenance Charges

C: Capital Adequacy

D/E ratio: Debt to Equity Ratio

E: Earning

HDFC: Housing Development Finance Corporation.

ICICI: Industrial Credit and Investment Corporation of India

KYC: Know your customer

L: Liquidity

M: Management Efficiency

OBC: Oriental Bank of Commerce

P/E ratio: Profit/ Earning ratio

PNB: Punjab National Bank

RBI: Reserve Bank of IndiaROA: Return on Assets

ROE: Return on Equity

S: Sensitivity

SBI: State Bank of India

Chapter – I
Introduction

CHAPTER-I
INTRODUCTION

1.1 Introduction

Banking is one of the India's fastest-growing industries. Capital growth, creativity, and monetization, as well as the facilitation of monetary policy, are aided by the banking sector. A bank's sound financial health is important for both depositors and shareholders. Additionally, it is essential for workers/employees and the entire economy [1].

A solid, sustainable, and viable banking system is critical to an economy's overall growth. Inrestructuring the economy, the banking sector has played a significant role in helping drive the sector's economic development. Reality dictates that it is crucial to a country's prosperityand one of the most critical indicators of that growth. This is an important economic indicator in measuring the performance of the overall economy. The country's financial sector reformsand economic liberalization began at the same time, as a follow-up to the country's banking sector reforms. In the financial sector reforms, the banking sector has been given due consideration, because it is vital to the economy. The purpose of the reforms in the Indian banking industry were to provide more competition, growth, and production as well as adherence to international accounting standards.

The Indian banking industry began in the early 1990s and has continued to this day. The byelaws, organization, scale, and activity level of the Indian banking sector have all changed as a result of these reforms [2]. As a result, in the post-liberalization period, the Indian banking industry has experienced tremendous growth. Implementing a regulatory banking supervision system is used to evaluate banking efficiency. The camel method is a useful tool for determining a bank's relative financial strength and recommending appropriate steps to address the bank's weaknesses. The Reserve BOI (RBI) adopted this method in 1996, based on the recommendations of the Padmanabham Working Group (1995) [3]. CAMELS (C-capital adequacy, A-asset quality, M-management quality, E-earnings, L-liquidity, and E- exposure to market and control) supervisory rating models currently risk or systems in use in India to rate banks operating in India, respectively. Indian banking stocks are once again surging. This has occurred in the wake of the banking industry's latest Non-Performing Asset(NPA) issues, which aren't going away anytime soon. In this regard, government-controlled public banks have fared much worse than their

private counterparts. With the government's recent demonetization and implementation of international banking standards such as Basel 3, banking margins may be put under even more strain. Given the importance of the banking sector to the economy, a rating and analysis of some of India's largest banks would be beneficial. Using the well-known CAMEL rating method, this study aims to comprehend and compare some of India's largest public sector banks.

Camel is an important tool to evaluate a bank's relative financial strength and to suggest measures to improve a bank's weaknesses. R Based on the Padmanabham Working Group (1995) Recommendations it was adopted in India in 1996.

The Indian banking sector is adequately capitalized and well-regulated, according to the RBI. The country's financial and economic conditions are much better than from many countries in the world. Risk studies on credit, market and liquidity show that Indian banks are resilient and well-supported by global downturn. Recently, the Indian banking industry has seen innovative banking models such as small banks and payments roll out. The new RBI measures could help the domestic banking industry to restructure a great deal. In addition to cooperative banks and credit institutions, the Indian banking system is composed of 12 government banks, 22 private sector banks, 46 foreign banks, 56 rural regional banks, 1485 urban cooperative banks and 96000 rural cooperative banks. The total ATM in India rose to 209,282 by November 2020.

Public sector banks' assets in FY20 amounted to Rs 107.83 lakh crore. Bank credit rose by 3.57 percent during FY16-FY20. Total loans increased to $1,698.97 billion in the financial year. Deposits increased by 13.93 percent in FY16–FY20 and by FY20 amounted to US$1.93 trillion. According to the RBI, Rs.108.6 trillion bank credit and deposits and Rs.151.34 trillion. Non- food industry credit amounted to Rs. 108,02 1 trillion as of April 23. In January, non- food industry grew by 5.7% compared to an increase of 8.5% in January 2020.

The growth in the banking sector is expected to be driven further by improved infrastructure spending, rapid implementation of projects and further reforms. All these factors suggest that the Indian banking sector is on the verge of robust growth with rapidly growing companies turning their credit needs to banks.

Mobile and Internet banking services have also become more prominent in technology. The banking sector emphasizes the improvement of its customer services and the upgrade of its technology to improve the overall experience of customers and to give banks a competitive edge.

India's FY18 digital lending was estimated at $75 billion and by FY23, the five-time increaseof digital disbursements is estimated to reach $1 trillion.

The CAMEL rating system is a globally recognized rating system that is used by regulatory authorities to rate and rank financial institutions based on five factors represented by the acronym "CAMEL." Capital Adequacy, Asset Quality, Management, Earnings, and Liquidity are the five criteria. Based on these criteria, a ranking is awarded to each financialinstitution. Based on the CAMEL parameters, an overall ranking is established. This will assist us in comparing various banks or financial institutions.

In this report, we will concentrate on a few public and private sector banks and attempt to develop a rankingmethodology based on the CAMEL approach for these banks. In addition, we rank the performance of these bank's stock prices in order to determine the importance of CAMEL indetermining the banking business potential.

1.2 Meaning of Bank

BANKS are the main and primary players in India's financial system. The banking industry is now the backbone of the economy and is one of the main metrics used to measure the levelof development of a country, and is in the process of transforming our reforming industry towards economic growth. There is no similar perspective to describe the root of the word "bank" since banking in different countries began at various times. The word "bank" is derived from "banco" or "banco" meaning "bench" If however, the word "bank" comes froma German word meaning "joint stock funds" when we look at it in a broader context. It was then turned into an Italian bank, franchised into a bank and eventually into a bank. Indian Banking System has achieved several good successes in its credit in the last few years. India'sbanking has extended into even the farthest parts of the world and shows its wide reach, and an inclusive Indian history of growth is also needed. The banking industry was therefore connected with currency change.

1.3 History of Bank in India

The last decade of the 18th century was the beginning of banking in India. Due to language and other issues, the English business community in India in the 17th century was unable touse indigenous banking or bankers. In the year 1786, India's first bank, the General BOI, wasfounded. In 1809, the East India Company founded the Bank of Bengal in Calcutta. According to the Central Banking Enquiry Committee, banking in India is as old as the mountains (1931). Money lending in India can be

traced all the way back to the Vedic period. Money was accepted as a deposit and disbursed as advances. Manu, the Hindu jurist, devoted a portion of his work to deposits and developments in the second or third century A.D., and developed the same rules about the rates of interest to be charged or paid. Professional banking in India can be traced back to the year 500 BC. References to borrowers, lenders, and lending rates can be found in Kautilaya's Arthashatra, which dates back to 400 BC. Banking in the country was fairly diverse, catering to the credit needs of agriculture, trade, industry and individuals. "It can be agreed that a method of banking that was eminently adapted to India then requirement was in place in that country many centuries before the science of banking became an accomplished reality in England," said Mr. W.E. Preston, a member of the Royal Commission on Indian currency and finance, which was established in1926.

1.4 Development of Banking System in India

As stated by Dr. Jalan, Former Governor of Reserve BOI "India's banking system has several outstanding achievements to its credit, the most striking of which is its reach. An extensive banking network has been established in the last thirty years and India's banking system is no longer confined to metropolitan cities and large towns; in fact, Indian banks are now spread out into the remote corners of our country. In terms of the number of branches, India's banking system is one of the largest, if not the largest in the world today. An even more significant achievement is the close association of India's banking system with India's development efforts. The diversification and development of our economy and the acceleration of the growth process are in no small measure due to the active role that banks have played in financing economic activities in different sectors." [4]

Banking Sector's history can be divided into the following phases: -

1) Evolutionary Phase (Prior to 1947)

2) Foundation Phase (1947-1968)

3) Expansion Phase (1968-1984)

4) Consolidation Phase (1984-1990)

5) Reformatory Phase (After 1990)

The stage of evolution (Prior to 1947)

Oudh Commercial Bank, founded in 1881, was the first bank with Indian ownership and management. Ayodhya Bank founded in 1884 was followed by PNB founded in 1894.

In 1865, Allahabad Bank was established with the aid of European management, which was also very popular at the time. In the twentieth century, twelve more scheduled banks were founded, the most notable of which were BOB (1906), Canara Bank (1906), The Indian Bank (1907), The BOI (1908), and the Central BOI (1909). (1911).

The Reserve Bank of India was founded in 1935. The Banking Companies Act of 1949 was enacted to regulate and supervise commercial banks. The Imperial BOI was renamed the SBI. By 1921, there was a clear need for a state bank with full government funding and money.

Phase: The Foundation (Between 1948 -1968)

The Banking Companies Act was passed in 1949 to conduct and regulate commercial banks during this period of reorganization and restructuring. The banking sector, which supported the needs of the government, wealthy individuals, and traders prior to independence, opened its doors. The Imperial BOI was transformed into the SBI, and credit was extended to small borrowers and the agricultural sector. Defining SBI's position in the Indian economy creating a mechanism for providing long-term financing to agriculture and industry by strengthening the cooperative credit system.

Phase: Expansion (1968-1984)

The "First Banking Revolution" of banking socialization occurred in 1969. Nationalization of 14 banks in order to make financial facilities more accessible to the general public (July 19, 1969). Rapid branch expansion, credit growth and deposit mobilization are all priorities. Bank penetration into rural areas by providing funding for all the major government projects and schemes. The second phase of the banking movement began in April 1980, when six more banks were nationalized. Regional Rural Bank was established in 1975, and NABARD was established in 1982. From 281 in 1968 to 268 in 1984, the number of commercial banks has decreased.

Phase: Consolidation (1984-1990)

Bank competition was at an all-time low. Many offices were plagued by inefficiency and a lack of power. Banks placed the least emphasis on customer service. Bank performance was measured in terms of deposit growth, with advances and efficiency

taking a backseat.

Steps taken during the restructuring process - loosening of previously stringent regulations under which banks operated. The banks' housekeeping, customer service, credit management, staff morale, and profitability were all given serious consideration.

To rationalize the rates of bank deposits and lending, concrete measures were taken. The asset composition was set at 63.5 percent bank funds as CRR and SLR. IBA negotiated the salary structure, which was then approved by the government.

Phase: Restructuring (After 1990)

The reforms were implemented in the midst of a "current account" crisis in early 1991.The crisis was triggered by weak macroeconomic results, which included a public deficit of 10% of GDP, a current account deficit of 3% of GDP, and an inflation rate of 10%. Rising domestic and international debt as well as a brief spike in oil prices following Iraq's invasion of Kuwait in 1990.

Phase: Restructuring (After 1990)

REFORMS IN THE FINANCIAL AND BANKING SECTORS

REFORMS... The RBI's strategy Cautious and proper sequencing of various measures, allowing sufficient time for various agents to implement necessary norms, e.g. gradual introduction of prudential norms Mutually reinforcing measures, which as a package will enable reform but not disrupt confidence in the system, e.g. refinance with CRR reduction Complementarily between banking sec and banking sec reforms.

Reform Initiatives. Interest rate liberalization- Prior to the reforms, interest rates were used to cross-subsidize various sectors of the economy, and the interest rate structure had become increasingly complicated, with the RBI setting both lending and deposit rates. At the moment, the RBI only sets interest rates for NRI deposits. Statutory Pre-emptions- The banking system had a major problem with statutory pre-emption of bank capital to fund the government's budgetary needs. The removal of these restrictions resulted in a proposed reduction in legislative pre-emption. The effective CRR decreased from 15% in 1991 to 4.75 percent today. The SLR decreased from 38.5 percent in 1992 to 24 percent.

Reform Measures (nineteenth and eighteenth centuries) Competition and Transparency- It is hoped that competition will be bolstered by allowing new private

sector banks and more liberal entry of international bank branches. In line with international practice, an independent Boardfor Financial Supervision has been formed under the aegis of the RBI, with a focus on offsiteinspections and internal bank control systems.

RBI released guidelines for licensing new private sector banks in January 1993, and from 1993 to 2000, it granted licenses to ten private sector banks. By March 2005, the new privatesector banks and international banks had a combined share of nearly 20% of total assets.

Classification of Banks

Scheduled banks and non-scheduled banks: Scheduled banks are those that have joined the Reserve BOI Act 1934's Second Schedule, whereas non-scheduled banks are those that have been removed from the list.
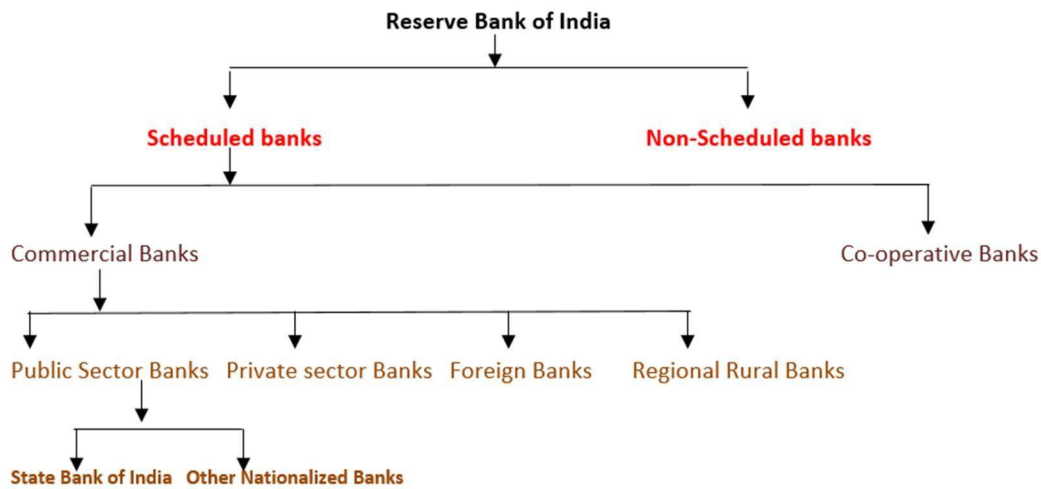
Figure No. 1.1 Reserve BOI

Commercial Banks

Commercial banks are financial institutions whose primary goal is to accept deposits and make loans to customers (General Public, Corporate and government). The Banking Regulation Act of 1949 governs commercial banks. This act gives the Reserve BOI broad regulary powers over commercial banks. It also gave it the right to audit their operations.

A Commercial Bank, in other words, is a financial institution that takes deposits and

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makes loans. It borrows money from those who have extra cash and loans it to those who are in need. In 1770, the Bank of Hindustan became India's first commercial bank. PNB, Axis Bank, and Dena Bank are some of the most well-known banks in the country. Commercial banks in India include Union Bank and Syndicate Bank, among others.

The following are some of the most important roles of commercial banks:
- It accepts deposits from both public and private businesses.
- It issues demand draughts, bank cards, traveler's checks, and other similar documents.
- It loans money to individuals, businesses, and governments in order to promote economicgrowth.
- It offers customers the option of renting a locker.
- It keeps important papers, ornaments, and other valuables secure.

Public Sector Banks: Public sector banks, also known as nationalized banks, are banks in which the Indian government owns the majority of the stock. In 1969 and 1980, the Indian government nationalized 20 privately owned banks. The aim of bank nationalization is to increase public trust in the banking system. Banking services are available in both urban and rural areas. To ensure that important sectors of society, such as agriculture and small-scale enterprises, have access to resources. Apart from being a nationalized bank, the SBI also serves as the RBI's representative.

Private Sector Banks: Private Sector Banks are banks in which the private sector owns the majority of the shares. In 1951, India had 566 private sector banks, 474 of which were non-scheduled and 92 of which were scheduled. Karur Vyasa Bank, City Union Bank, Nainital Bank, and Karnataka Bank are some of the private sector banks in India.

Foreign Banks: Foreign banks in India are those whose headquarters are located outside of the country's borders. They are regulated by the parent country's laws, while branches operating in India must adhere to the Reserve BOI's rules.

Regional Rural Banks (RRBs) were established by the Indian government on September 26,1975, under the Regional Rural Banks Act 1976. The bank's main goal is to help small and marginal producers, agricultural laborers, and artisans get credit and other services. It also aims to improve rural trade, agriculture, commerce, and industry, among other things. RRB'sapproved capital is currently Rs.5 crores, with an issued capital of Rs.1 crore. The central government will provide 50% of the released funds, the concerned state will provide 15%, and the supporting commercial bank will

provide the remaining 35%. Regional Rural Banks' shares are to be counted as "Approved Securities."
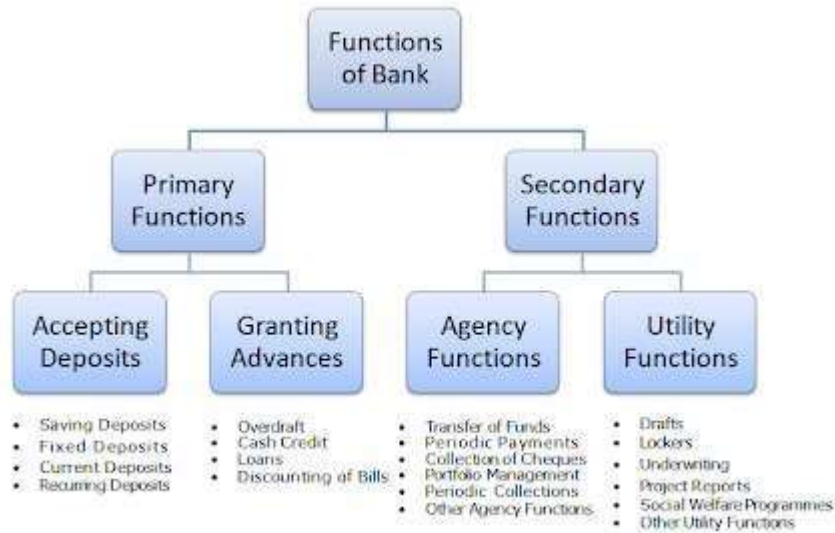
Figure 1.2 Function of Bank

A. Primary Functions of Banks

These primary functions of banks are explained below.

The bank collects deposits from the public. These deposits can be of different types, such as

a. Saving Deposits
b. Fixed Deposits
c. Current Deposits
d. Recurring Deposits

a. Savings Accounts

Savings habits are encouraged by these types of deposits. The interest rate is poor. It is currently about 4% a year. Withdrawals of deposits are permitted, but only under certain circumstances. Salary and wage workers would benefit from this account. This account maybe opened under either a single or joint name.

b. Fixed Deposits

A lump sum amount is deposited for a set period of time. A higher rate of interest is charged,which varies depending on the deposit period. Withdrawals are not approved prior to the period's end. Many with extra cash opt for a fixed deposit.

c. Short-Term Deposits

Businessmen are the ones who run this sort of account. Withdrawals are permitted at any time. There is no interest paid. There are, in truth, service charges. Account holders have access to an overdraft facility.

d. Recurring Deposits

Salaried people and small business owners use this sort of account. A fixed amount of money is deposited into the bank on a regular basis. Withdrawals are only allowed after a certain amount of time has elapsed. A higher interest rate is charged.

Granting of Loans and Advances

The bank offers loans to the corporate sector as well as the general public. The interest rate charged is higher than the interest rate paid on deposits. Its benefit is the difference between the interest rates (lending rate and deposit rate).
Overdrafts, Cash Credits, Deposits, and Bill of Exchange Discounting are examples of bank loans and advances.

a. An overdraft is when a bank account is overdrawn.

Current account holders are liable for this form of advance. There is no separate account. The current account is used for all purchases. An overdraft is approved for a certain sum that can be withdrawn within a certain time frame, say three months. On the real amount withdrawn, interest is paid. An overdraft is given in exchange for a collateral security. It is licensed for businessmen and businesses.

b. Cash Credits

The client has access to cash credit up to a predetermined limit. It can be offered to both current account holders and those who do not have a bank account. There is a separate cash credit account. The sum withdrawn in excess of the cap is subject to interest. Cash credit is issued in return for tangible assets and/or guarantees. The advance is issued over a longer period of time and for a greater loan sum than an overdraft.

c. Loans

It is usually for a short term, such as a year, or a long term, such as five years. Banks nowadays lend money for long periods of time. Money can be repaid in instalments over a period of time or in one lump sum. Interest is paid on the quantity sanctioned, whether or not it is revoked. The interest rate could be marginally lower than that on overdrafts and cash credits. Loans are usually backed by the company's tangible assets.

d. Bill of Exchange Discounting

The bank will advance money by discounting or buying domestic and foreign bills of exchange. After deducting the normal discount costs, the bank makes the payment of sum of the bill to the drawer or beneficiary of the bill. The bill is delivered to the drawee or acceptor of the bill when it reaches maturity, and the balance is received.

B. Banks' Secondary Roles

The bank conducts a variety of non-banking activities in addition to its primary functions. The following are some of the most important secondary roles of banks.

1. Functions of the Agency

The bank serves as a representative for its clients. The bank performs a variety of agency roles, including the following:

• Funds Transfer • Cheque Collection • Quarterly Payments • Portfolio Control
• Periodic Collections • Other Department Roles

a. Funds Transfers

The bank transfers money from one branch to the next or from one location to another.

b. Receipts of Cheques

The money from the cheques is collected by the bank via the clearing portion of its customers. The bank is also in charge of collecting money from bills of exchange.

c. Annual Payments

The bank makes periodic payments in respect of energy bills, rent, and other items based on the client's standing instructions.

d. Portfolio Administration

The banks also agree to buy and sell shares and debentures on behalf of their customers, debiting or crediting their accounts accordingly. Portfolio management is the name for this function.

e. Collections that occur on a daily basis

On behalf of the client, the bank receives wages, pension, dividends, and other annual payments.

f. Other Agency Responsibilities
In behalf of its clients, they serve as trustees, executors, advisers, and administrators. Theyrepresent clients in dealings with other banks and financial institutions.

1. Utility Functions in General

- Issue of Drafts, Letters of Credit, and Other Utility Functions
- Locker Facility
- Underwriting of Securities
- Trading with Foreign Exchange
- Project Reports
- Social Service Services
- Other Utility Functions

a. Drafts and Letters of Credit are issued
Banks issue draughts to allow money to be transferred from one location to another. It also issues letters of credit, which are particularly useful in the case of import trade. It even printstraveler's checks.

b. Locker Service
The bank has a locker facility where precious papers, gold ornaments, and other valuablescan be securely kept.

2. Accepting Deposits

a. Shares Underwriting

Via its merchant banking division, the bank underwrites shares and debentures.

b. Foreign Exchange Trading
The Reserve BOI allows commercial banks to trade in foreign exchange.

c. Notes on Projects
The bank can also take on the task of preparing project reports on behalf of its customers.

d. Social Assistance Programs
It runs social welfare initiatives including adult literacy programmes and public welfare campaigns, among other items.

e. Additional Useful Functions
It serves as a financial arbitrator for consumers. It gathers details on the creditworthiness of its customers' clients. It gives its customers market knowledge,

among other things. It acceptstravelers' checks as payment.

1.5 Challenges in the Banking Industry:

In recent years, the Indian financial system has grown significantly in breadth and depth. The increased importance of the banking sector in the Indian economy as well as increased deregulation and competition have put numerous demands on our banks. The negative effects of a banking system failure could be more serious than in the past. As a result, the RBI, the Indian banking system's regulator and supervisor, is focused on ensuring greater financial stability. While operating in this highly demanding environment, the banking system is exposed to various risks & challenges few of them are discussed as under:

1.5.1   Improving Risk Management System

RBI had issued guidelines on asset liability management and Risk Management Systems in Banks in 1999 and Guidance Notes on Credit Risk Management and Market Risk Management in October 2002 and the Guidance note on Operational Risk Management in 2005. Though Basel II focuses significantly on risks it implementation cannot be seen as anend in itself. The current business environment demands an integrated approach to risk management. It is no longer sufficient to manage each Risk Independently. Banks in India are moving from the individual segment system to an enterprise wide Risk Management System. This is placing greater demands on the Risk Management skills in Banks and has brought to the forefront, the need for capacity building, while the first priority would be risk integrating across the entire Bank, the desirability of Risk aggregation across the Group will also need attention. Banks would be required to allocate significant resources towards this objective over the next few years.

1.5.2   Coverage in Rural Areas

Local banks in India, especially state bank groups, have a wide coverage and a large number of branches in rural areas. However, there is a lot of room for progress in terms of technology. The services offered in cities are not available to rural branches, which are needed if banks are to compete in today's market.

Problems with Technology

Real, Indian banks have already begun computerized operations and have made numerous other technological advances, but is this enough? Indian local banks have strong comparabletechnology in metro cities, but this cannot be assisted and compared across the entire networkof other cities and village branches.

Corporate Governance

Banks not only receive and deploy vast sums of uncollateralized public funds in a fiduciary capacity, but they also exploit those funds by generating credit. Banks are also critical to the payment system's smooth operation. The profit motive cannot be the only factor to consider when making business decisions. It's a big problem for banks when goals and rewards aren't well matched by the implementation of sound corporate governance standards. If internal imbalances are not resolved immediately, external forces can force a correction, which could be painful and costly for all stakeholders. As a result, the focus should be on developing and reinforcing the implementation of sound corporate governance standards.

Customer Support

There are concerns about banking practices that appear to exclude large segments of the population, especially retirees, self-employed people, and those working in the unorganized sector. Banks are required to offer banking services on an equal basis to all segments of the population.

Furthermore, customers' interests are not always fully protected, and their complaints are not always adequately addressed by banks. Banks are required to foster a higher level of financial inclusion in the country by developing a framework to ensure fair treatment of customers and successful redress of customer complaints.

Branch Banking

To grow their business, banks have traditionally looked to expand their branch network. Other methods have enabled new private sector banks, as well as international banks, to expand their operations. Banks are looking into the possible advantages of using the agency arrangement and outsourcing routes. When moving in this direction, banks must keep in mind the new risks that they might be taking on. Outsourcing is a term used to describe the process of as a result, they must implement effective policies and processes to manage these new threats.

The Competitive Climate

Banks must prepare themselves to function in an increasingly competitive environment as the speed and scope of globalization of the Indian economy accelerates, as well as the systemic opening up of the Indian banking system to global competition. As a result, banks will need to improve their processes and procedures to meet international standards while also strengthening their financial positions.

Transparency and Disclosures

A series of steps were introduced by RBI in order to bring about meaningful disclosure of banks' true financial status, allowing users of financial statements to review and compare their positions. It addressed a variety of issues, including capital adequacy, asset quality, profitability, country risk exposure, derivatives risk exposures, segment reporting, and related party disclosures, among others. RBI has proposed improved disclosures of some qualitative dimensions in order to step closer to international best practices and International Accounting Principles, as well as the disclosure criteria under pillar 3 of Basel II. The number of banks is twenty that needed to develop a structured disclosure policy that outlines the bank's approach to deciding what disclosures it will make and the internal controls in place to oversee the disclosure process.

Follow the Know Your Customer (KYC) Guidelines

The guidelines were updated in light of the Financial Action Task Force's recommendations on Anti-Money Laundering Standards and Combating Terrorist Financing. International financial relationships have made it possible for banks/financial institutions and countries to comply with these requirements. Compliance with this requirement presents a major challenge to the entire banking industry in terms of defending itself from anti-social individuals / organizations and projecting an image of Indian banking system cohesion and financial credibility to the international community. The nine major issues that India's nationalized banks face are outlined below.

Losses in Rural Branches

Because of high overheads and the prevalence of the barter system in most parts of rural India, most of the rural branches are losing money.

Excessive Overdues

Commercial banks' small branches are now dealing with a new problem: a large number of past-due advances to farmers. The former National Front government's decision to waive all loans to farmers up to Rs. 10,000 crores have exacerbated the situation for such banks.

Non-Performing Assets

Commercial banks currently lack the requisite resources to ensure that their loans and advances are put to good use in the broader public interest. Banks are suffering massive lossesas a result of a large proportion of non-performing assets or unpaid debts owed to them by borrowers. They are therefore unable to achieve a capital adequacy ratio in

the majority of cases.

Advance to the Priority Sector
In terms of improvement in the priority sectors, it has been sluggish. This is due in part to the fact that bank officials from the top to the bottom were unable to consider nationalization gracefully, i.e. the redirection of a portion of capital to high-priority and previously ignored sectors. This is also due to the agricultural and small business sectors' low and unsatisfactory loan recovery rates.

Competition from Non-Banking Financial Institutions (Non-Banking Financial Institutions) Non-banking financial intermediaries such as mutual funds, housing finance corporations, leasing and investment firms have posed significant challenges to commercial banks in terms of deposit mobilization. Many of these institutions compete with commercial banks for public deposits, and they all pay higher interest rates than commercial banks.

International Bank Competition
Deposits have risen at a faster pace at international banks and smaller private sector banks. One explanation is that non-nationalized banks tend to have superior customer service. This gives the impression that deposits have been diverted from nationalized banks to non- nationalized banks.

Gap between Promise and Performance
One of the major shortcomings of India's nationalized banking system is its inability to maintain the required credit pattern and fill credit gaps in various sectors. Despite the fact that the bank's priorities have been reoriented, the bank's workforce has remained largely unchanged, and the bank's policies and practices have remained outdated.

The gap between pledge and results has expanded in the post-nationalization period. The key explanation seems to be the bank employees' inability to recognize the modern job ethic and social goals. If the grass-roots level workers are not imbued with the motive and vision of bringing about a quiet revolution in the countryside, then area approaches, agricultural growth divisions, village adoption plans, and so on would be of little use.

Bureaucratization.
Another problem that commercial banks face is the banking system's bureaucratization. This is, without a doubt, a product of nationalization. Red tapism, lengthy delays, a lack of ambition and an inability to make timely decisions have all hindered the smooth operation of banks.

Political Stresses

Increasing political pressures from the Centre and States have also hindered the smooth operation of nationalized banks. Owing to various political pressures, nationalized banks often face numerous difficulties. Such stresses are generated in staff selection and the granting of loans to specific parties without regard for their creditworthiness.
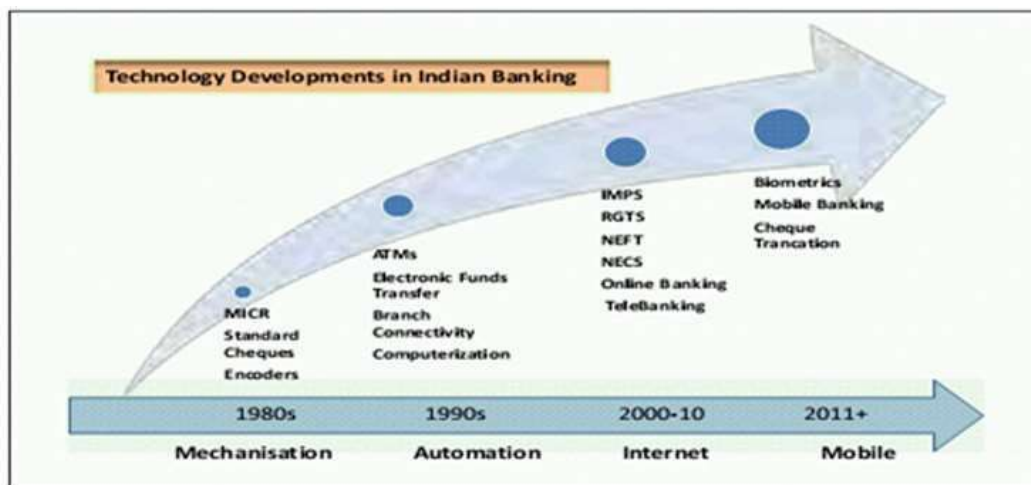
Figure No. 1.3 Technology Development in Indian BanksSource: ICMAI, Jan 2017.

In the late 1980s, the Indian banking sector recognized the need for computerization in orderto enhance customer service, bookkeeping, and MIS reporting. The Reserve BOI formed a Committee on Computerization in Banks in 1988, which was chaired by Dr.

A. Rangarajan.

Banks first began using information technology with the introduction of stand-alone PCs, then progressed to LAN connectivity. Banks began to use the Core Banking platform as technology progressed. As a result, branch banking gave way to bank banking. As a promising step toward enhancing consumer convenience through anywhere and anytime Banking, Core Banking Solution (CBS) allowed banks to increase the comfort function for customers. Finical by Infosys, BANCS by TCS, and FLEXCUBE by I-flex are some of the most common Core Banking platforms.

With the opening of the economy in 1991-92, the computerization process accelerated. Increasing competition from private and foreign banks was a major driver of this transition. To stay competitive and important in the race, a number of commercial banks have begun toshift toward digital customer services.

Adoption of newer technology has benefited banks in a number of ways. E-banking has resulted in significant cost savings and has assisted in the generation of revenue across a variety of platforms. According to the most recent data, the cost of a bank transaction on Branch Banking is estimated to be in the range of Rs.70 to Rs.75, while ATM transactions cost about Rs.15 to Rs.16, Online Banking costs Rs.2 or less, and Mobile Banking costs Rs.1 or less. Because of the convenience of 'Anywhere Banking,' the number of customers has risen as well. Human error has been minimized thanks to digitization. Data can be accessed and analyzed at any time, allowing for a robust reporting system.

The Reserve BOI (RBI) has been a driving force for banks in designing regulations and making recommendations to achieve various goals. With the introduction of MICR based cheque processing, Electronic Funds Transfer, Inter-connectivity among bank Branches, and the implementation of ATM (Automated Teller Machine) Channel, commercial banks in India have moved towards technology by way of Bank Mechanization and Automation, resulting in the convenience of Anytime banking. The Reserve BOI has taken major measures to develop the payment and settlement processes in banks.

Indian Banks' Technical Milestones:
The emerging state of affairs in the digital realm: The Indian government is encouraging digital transactions vigorously. The National Payments Corporation of India (NPCI) has launched United Payments Interface (UPI) and Bharat Interface for Money (BHIM), which are significant steps forward in the Payment Systems domain. UPI is a mobile interface that allows people to move money instantly between accounts in various banks using a virtual address rather than mentioning the bank account.

Today's banks strive to provide their customers with a fast, reliable, and high-quality banking experience. Digitization is currently the highest priority for all Indian banks.
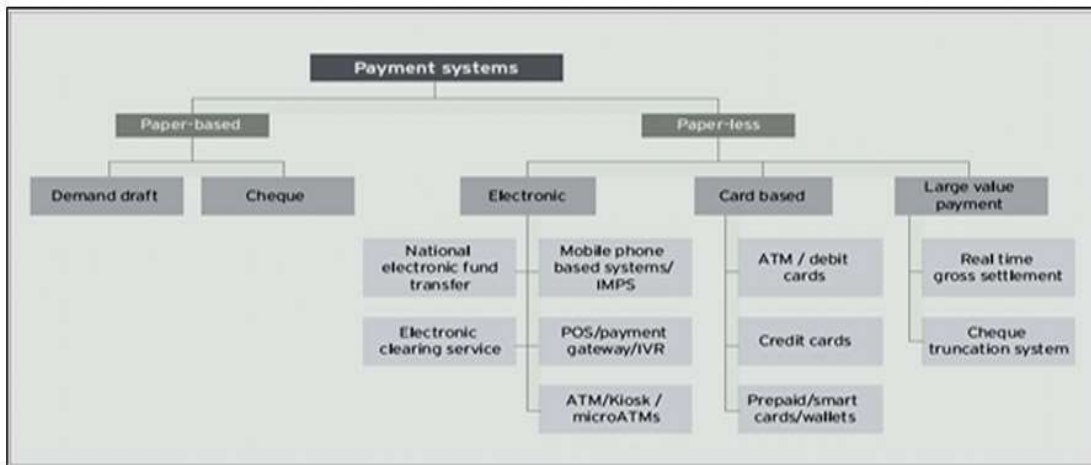
Payment System (Fig. 1.4)

Source: Banking on Technology, Perspectives on the Indian Banking Industry

In 2016-17, there were 2,22,475 automated teller machines (ATMs) and 25,29,141 point-of-sale units, according to the RBI report (POS). Electronic payment systems like NEFT (National Electronic Fund Transfer), ECS (Electronic Clearing Service), RTGS (Real Time Gross Settlement), Cheque Truncation System, Mobile banking, Debit cards, Credit Cards, and Prepaid cards have all gained widespread acceptance in Indian banks. These are all significant milestones in the banking industry's digital transformation. Online banking has transformed the face of banking and resulted in significant changes in banking operations. NEFT (National Electronic Funds Transfer) is the most widely used electronic payment system in India for transferring money from one bank to another. It works in half-hour intervals. There are actually 23 settlements.

The Real Time Gross Settlement (RTGS) system is mainly used for high-value 'real-time' transactions. The minimum amount that can be transferred through RTGS is Rupees Two Lakhs. There is no limit on what you can do.
The Immediate Payment Service (IMPS) is a 24-hour electronic funds transfer service provided by the National Payments Corporation of India (NPCI).

In recent years, the use of prepaid payment instruments (PPIs) for purchases and funds transfers has increased significantly. PPI Cards (which include mobile prepaid instruments, gift cards, international travel cards, and business cards) and mobile wallet transactions haveincreased dramatically from Rs.105 billion and Rs. 82 billion in 2014-15 to Rs. 277 billion and Rs. 532 billion in 2016-17.

Volume (Million)					
Year	RTGS	Retail Electronic Clearing (ECS,NEFT,IMPS)	Cards (debit, Credit)	Prepaid Payment Instruments (m-Wallets, PPI cards, Paper Vouchers)	Mobile Banking
2015-16	98.4	3,141.5	10,038.7	748.0	389.5
2014-15	92.8	1,687.4	8,424.0	314.5	171.9
2013-14	81.1	1,108.3	7,219.1	133.6	94.7
2012-13	68.5	694.1	6,174.5	66.9	53.3
2011-12	55.1	512.4	5,731.6	30.6	25.6

Source: RBI data and Dun & Bradstreet Research

Table No.1.1 Volume Numbers

Obstacles

- Security Risks - Banks are vulnerable to external threats such as hacking, sniffing, and spoofing. Internal threats, such as employee bribery or employee collusion with customers, are also a concern for banks.

- Financial Literacy / Customer Awareness - In India, the lack of information about how touse e-banking facilities is a major barrier.

- Fear factor - One of the most significant barriers to online banking is the older generation's preference for traditional banking methods, especially among those from rural areas. The fearof losing money while transacting online is a deterrent to using e-banking.

- Training - Employees' inability to cope with new and changing innovations in banks is hampered by a lack of sufficient awareness and skills. For banks, training at all levels on changing IT trends is a necessity of the day.

Artificial Intelligence (AI) and Business Analytics have the ability to revolutionize the industry. Robotics, enabled by AI, is expected to be a game changer in the banking industry in the future. Many private banks plan to use robots for customer support, investment advice, and credit-approval processes in order to boost services and save money in the long run. In the coming years, digital banking will be the most common type of banking.

CAMEL MODEL APPROACH
Banking performance assesses a bank's overall performance through the use of a regulatory banking supervision system. The CAMEL rating system, which was first

adopted in the United States in 1979 and is now used by three US supervisory agencies: the Federal Reserve System, the Office of the Comptroller of the Currency (OCC), and the Federal Deposit Insurance Corporation, is one such measure of supervisory knowledge (FDIC). The US government has shown that it is a valuable and effective mechanism in reacting to the financial crisis of 2008.

For rating Indian Commercial Banks and Foreign Banks operating in India, two supervisory rating models focused on CAMELS (capital adequacy, asset quality, management quality, earnings, liquidity, and exposure to market risk or systems & control) and CACS (capital, asset quality, enforcement, and systems & control) models were used. The CAMEL method is a valuable tool for defining a bank's relative financial strength and suggesting steps to fix the bank's weaknesses. In India, the Reserve BOI (RBI) adopted this strategy in 1996, based on the recommendations of the Padmanabham Working Group (1995). The explanation for this is that the CAMEL model is used because it is the easiest and allows for quick comparison of financial results across a wide variety of banks. CAMEL is a ratio-based model for measuring the efficiency of banks using a range of ratios. The acronym CAMEL stands for five aspects of bank protection and soundness.

(C)CAPITAL ADEQUACY (A)ASSETS (M)MANAGEMENT EXPERIENCE (E)EARNING(L)IQUIDITY

There were about eight bank defaults (or bankruptcies) in the United States between 1965 and 1981. Bank failures were especially prevalent in the 1980s, during what is known as the"savings and loan crisis." Banks all over the world were lending heavily, and countries' external debt was rising at an unsustainable pace.

In order to avoid such large-scale bankruptcies, the banking sector felt a compelling need for certain security and performance assessment steps. The Basel Committee on Banking Supervision was established to address this need.

Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, and the United States are represented on the Commission. Countries are represented by their central bank and in cases where this is not the central bank, by the authority with statutory responsibility for banking sector prudential supervision. Mr. Nout Wellink, President of the Netherlands Bank, is the current Chairman of the Committee, having taken over from Jaime Corona, President of the Bank of Spain on July 1, 2006.

The Basel Accord's Goals [5]

The Basel I Capital Accord was formed in 1988. The overall aim was to:

1. Improve the international banking system's stability.

2. Create a fair and consistent international banking framework to reduce competitivedisparities between international banks.

Basel I's main accomplishment was to describe bank capital and the so-called bank capital ratio. A general concept of capital was required in order to define a minimum risk-based capital adequacy that would apply to all banks and governments around the world. Indeed, there was no single concept of bank capital prior to this international agreement. The agreement's first step was to determine capital and bank capital adequacy ratios.

a) Three Pillars of Basel Accord

Basel accord for banking reforms emphasizes on risk management, managerial efficiency, and asset liability management in banks. The three pillars of Basel accord are as follows:

The First Pillar

The first pillar is concerned with the preservation of regulatory capital, which is measured for three major risk components that a bank faces: credit risk, operating risk, and market risk.At this time, other threats are not considered entirely quantifiable.

The Second Pillar

The second pillar addresses the regulatory response to the first, providing regulators with significantly better "resources" than those available under Basel I. It also defines a mechanism for dealing with all other risks that a bank might face, such as systemic risk, concentration risk, strategic risk, reputation risk, liquidity risk, and legal risk, all of which are grouped under the word "residual risk" in the agreement. It empowers banks to assess their risk management systems.

The Third Pillar

The third pillar significantly raises the amount of information that the bank must disclose. This is done to give the market a clearer understanding of the bank's overall risk position andto encourage the bank's counterparties to price and deal accordingly. The new Basel Accord is built on three interlocking pillars that allow banks and bank supervisors to better assess the various risks that banks face when performing banking functions.

1) The Banking Regulation Amendment Bill of 2020 has been approved.

   The bill helps the central bank to continue with a proposal for a bank's reconstruction or merger without having to place it on hold.

2) The reforms will have no effect on the existing powers of state registrars of cooperative societies under state law. On Wednesday, the Lok Sabha passed the Banking Regulation Amendment Bill, 2020, putting cooperative banks under the control of the Reserve BOI. In response to the country's deteriorating cooperative bank situation, the central government amended the Banking Regulation Act of 1949.

3) "For the past two years, depositors of cooperative banks and small banks have beenexperiencing difficulties. We're trying to get this amendment passed in order to protect depositors "The finance minister, Nirmala Sitharaman, said in the Lok Sabha on Thursday.

4) Instead of constructing a new network, the RBI will now tap into the existing and deeply embedded network of co-operative banks, which will help deliver services to the last mile more effectively.

5) The Bill will replace the Banking Legislation (Amendment) Ordinance, 2020. In June, the union cabinet approved an ordinance that put 1,482 urban and 58 multi-state cooperative banks under the control of the central bank.

6) What you should know about the new Banking Regulation (Amendment) Bill, which will beimplemented in 2020:

7) The bill allows the central bank to initiate a merger or amalgamation scheme for a bankwithout delaying it.

8) If the central bank imposes a moratorium on a bank, the lender is prohibited from makingany loans or investing in credit instruments during the moratorium period, according to the Bill.

9) Co-operative banks will be able to issue stock, preference, or special shares at face value or at a premium to their members or any other person residing within their area of operations. Banks may also issue unsecured debentures, bonds, or other related securities with a ten-year or longer maturity to some individuals. However, such issuance requires prior RBI approval.

10) According to the Bill, no one will be able to demand payment for shares provided to himby a cooperative bank.

11) The RBI may issue a notice exempting a cooperative bank or a class of cooperative banks from certain Act provisions, according to the Bill. Employment, board of director credentials, and the appointment of a chairman are all covered by these provisions.

12) The RBI has the right to supersede the board of directors of a multi-state cooperative bank for up to five years under such circumstances. In some situations, such as when it is in the public interest to do so and to protect depositors, the RBI can supersede the Board.

13) The Bill repeals a provision of the Banking Regulation Act of 1949 that states that cooperative banks cannot open new branches or move existing branches outside of the village, town, or city in which they are currently located without permission from the RBI.

14) The changes will have no effect on the existing powers of state registrars of cooperative societies under state law. "This bill has no impact on cooperative banks. The amendment prohibits the federal government from seizing cooperative banks." Sitharaman claims to be right.

15) The Banking Regulation Amendment Bill, 2020 will not apply to: a) Primary agricultural credit societies; and b) Cooperative societies whose primary business is long-term agricultural production financing.

These two societies are not permitted to: a) use the terms "bank," "banker," or "banking" in their names or in connection with their businesses; or b) function as a clearing house for checks.

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Chapter – II

Conceptual Framework

CHAPTER-II
CONCEPTUAL FRAMEWORK

2.1 Introduction

A solid, sustainable, and viable banking system is critical to an economy's overall growth. The banking sector has helped in bringing about a transformative shift in restructuring the sector and placing it on the road of economic development. In reality, it is the backbone of the economy and one of the most important metrics for determining a country's level of growth. The banking sector's performance is an important measure and metric for assessing the overall performance of any economy. India's banking sector reforms began as a follow- up to the country's financial sector reforms and economic liberalization. The banking sector, as the economy's lifeline, has been given due consideration in the financial sector reforms. The basic motive behind the reforms in the Indian banking industry was more competition, growth, and production, as well as adherence to international accounting standards.

The banking system is central to the economy of a country because it meets all sectors of society's credit requirements. Banking development helps the economy to develop. An efficient financial system is an indicator of the economic strength that depends on good banking policies and the system. Fusions and acquisitions lead the way in a corporate growth plan. Fusion is legal consolidation of two companies into one company, whereas purchase occurs when one company is owned by another. Fusion and acquisition was one of corporate restructuring and consolidation banks' most efficacious and common methods. Banks now enter the era of fusions and purchases to empower their businesses. In recent years, Indian banking has been hit by the fusion storm. Merger and Acquisition is mainly concerned with the synergy that the company can gain from the combination and maximize the shareholder value. Scale economies, income gains and tax gains potential are the result.

The camel method is a valuable tool for assessing a bank's relative financial strength and suggesting corrective steps to resolve the bank's weaknesses. The Reserve BOI (RBI) adopted this method in 1996, based on the recommendations of the Padmanabham Working Group (1995).

The rating scale for camel model is 1 to 5, (1 the best and 5 the worst). Before the CAMELS rating system components, the overall situation of the bank is measured by bank regulators. A rating of 1 is satisfactory and a strong performance. If performance and risk management practices are to some extent defective, a rating of 3 is given and

this gives rise to supervision.

A rating of 4 refers to poor performance, while 5 is critically poor and unsatisfactory and requires immediate corrective action. 1The CAMEL rating system is certainly an essential tool for identifying a bank's financial strengths and weaknesses by assessing the bank's overall financial situation for corrective action. The results of the CAMELS test can help regulators to develop policies and strategic initiatives to improve their financial performancedirectly by managing the banks concerned [1].

2.1 Camel Rating System

CAMEL (stands for Capital, Asset Quality, Management, Earnings, and Liquidity) was first used by the United States supervisory authorities in the 1980s to rate the compliance of on- site inspections of banking institutions. Each bank which undergoes an on-site inspection is graded on the basis of six component factors that refer to the organization's efficiency and operations. Indicators of a bank's financial performance, condition, operational soundness, and regulatory compliance include assets, capital, asset quality, management, and earnings.

To make the CAMEL rating system more risk-focused, a sixth dimension relating to exposureto market risk has been added. On a scale of 1 (best) to 5 (worst), each of the component factors is scored (worst). A composite rating is calculated by combining the component ratings and is used to determine a bank's current financial condition. In light of the individual component assessments, the composite rating ranges from 1 (best) to 5 (worst). It also requires a certain amount of institution [2].

The CAMELS rating system is a globally recognized supervisory mechanism that was created in the United States to determine the risk level of a bank or other financial entity using financial statements. Capital adequacy, asset quality, management, earnings, liquidity,and sensitivity are among the criteria used to make a decision.
The CAMELS rating system is used by a country's supervisory authorities to determine the strengths and weaknesses of different financial institutions and to rate their success in the economy.

2.3 Camel Model in India

The Narsaimham Committee of the Indian government introduced a slew of financial and banking reforms, with an emphasis on increasing bank productivity and profitability. The Padmanabhan Working Group in India introduced two supervisory rating models for Indian commercial banks and foreign banks operating in India: CAMELS (Capital Adequacy, Assets Quality, Management, Earnings, Liquidity,

Systems and Controls) and CACS (Capital Adequacy, Assets Quality, Management, Earnings, Liquidity, Systems and Controls) (Capital Adequacy, Assets Quality, Enforcement, Systems and Controls) [3].

The CAMEL system is beneficial even after accounting for a wide range of publicly available knowledge about bank condition and performance. Banks may use the CAMEL method as a failure prediction model. Both quantitative and qualitative data are used to assess the bank's ranking. In a study based on CAMEL to evaluate the performance of all nationalized banks for the year 1998, Corporation Bank was found to have the best ranking, followed by Oriental Bank of Commerce, BOB, Dena Bank, PNB, and others. The lowest-ranking bank was Indian Bank, which was followed by UCO Bank, United BOI, Syndicate Bank, and Vijaya Bank. The CAMEL Model was used to assess the efficiency of Indian banks in a study conducted in India. According to the findings of the report, consumers benefited from increased service quality, new products, and better bargains. These types of scores, according to a study, would help the Reserve BOI in identifying banks whose performance needs additional supervision. The CAMEL method's main purpose is to recognize the problems that banks face and to compile a comparative summary of their performances.

As a method for evaluating the performance of Jordanian brokerage firms, the implementation of a CAMELS-based banking rating system was proposed. This system would support supervisory agencies, consumers, employers, stakeholders, and researchers alike. Many banks don't know how to calculate their ratings, so it's important to understand how banks work and what to do if anything goes wrong. The CAMELS rating system, which is used by federal and state regulators, is important for determining the financial soundness of banks and financial institutions. A bank's CAMEL rating is kept strictly confidential and only shared with senior management and related supervisory personnel in order to project business strategies. Capital adequacy, asset quality, management quality, earning power, and liquidity are all vital aspects of bank safety and soundness, and the word CAMEL stands for them.

The CAMELS model is widely used by regulators due to its utility. This model is perfect for assessing the bank's efficiency. Since financial markets are often underdeveloped in developing countries, banks are often the only major source of finance and act as custodians of economic savings. The strength of CAMEL's factors will decide the bank's overall strength. The inner strength of each product, as well as the degree to which it can shield itself from market risks, is highlighted by the component's quality. The stable financial stability of a bank therefore ensures its creditors and the overall economy.

2.4 Components of CAMEL Rating System

The CAMELS rating system is an internationally accepted supervisory framework established in the United States to assess a bank's or other financial entity's risk level based on financial statements. The metrics used to make a decision include capital adequacy, assetquality, management, earnings, liquidity, and sensitivity.

In the United States, this concept was first used as a CAMEL ranking in 1979 as part of the Standardized Financial Institutions Rating System (UFIRS). It was updated in 1995 by the Federal Reserve and the OCC to include the sixth part, "sensitivity" to it.

The initials of the six components are combined to form the letters CAMELS. The CAMELS rating system is used by a country's supervisory authorities to assess the strengths and weaknesses of various financial institutions, as well as their economic performance [4].
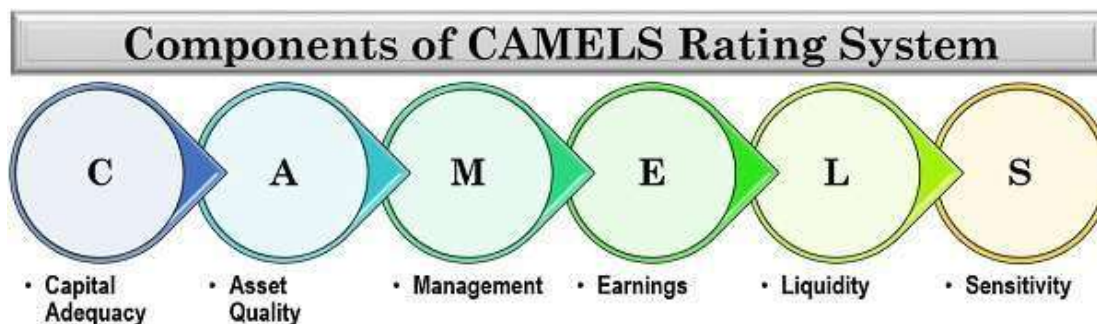
Figure 2.1: Showing CAMEL Components

2.5 Capital Adequacy

2.5.1 Components of Capital Adequacy

Ratio	Formula	Prescribed Level
Capital Adequacy Ratio	Tier 1 Capital + Tier 2 Capital Risk Weighted Assets	8%
Debt To Equity Ratio	Debt / Equity	<=5
Total Advances to Total Assets Ratio	Total Advances/ Total Assets	<=0.4
Equity Capital to Total Assets	Total Capital / Total Assets	>= 4-6%

Table 2.1: Components of Capital Adequacy

The first component is the analysis of capital adequacy ratio and capital to risk-weighted assets for determining the minimum money to be maintained by the financial institutions asper the guidelines of financial regulators.

Figure 2.2: Showing Total Capital Classification

Basel II is a revision of the original 1988 / 1996 Basel Accord (Basel I) published by the Basel Committee on Banking Supervision in June 2008. Although Basel III extends and, in some areas, supersedes Basel II, the overall framework still remains the basis for internationalbanking regulation.

The framework consists of three '"mutually reinforcing pillars":
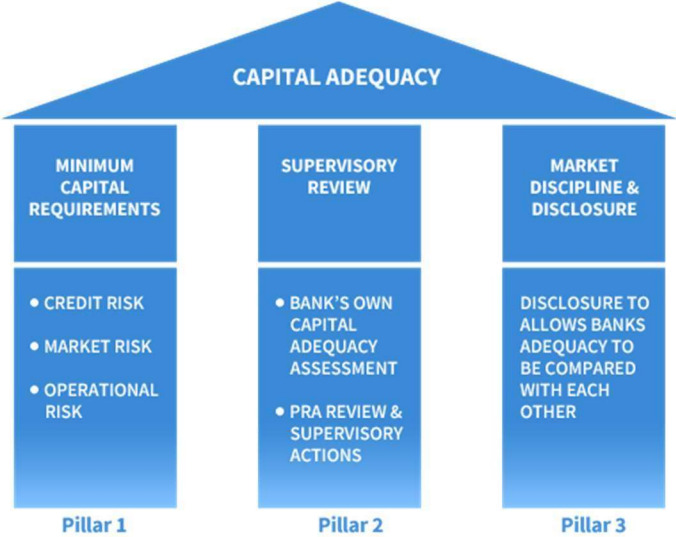
Figure 2.3: Showing Capital Adequacy

- Pillar 1 defines the minimum capital requirements for credit, business, and operating riskthat banks must meet.
- Pillar 2 allows firms and supervisors (in the UK, the FCA/PRA) to determine the amount of additional capital required to defend against Pillar 1 risks as well as risks not covered by Pillar 1, and to take appropriate action.
- Pillar 3 seeks to increase market discipline by forcing banks to report such risk, resources,and risk management practices.

A credit union is required to maintain capital that is proportional to the size and scope of the institution's risk, as well as management's ability to define, assess, track, and regulate these risks. When assessing capital adequacy, the impact of credit, industry, and other risks on the credit union's financial position is taken into account. The types and amount of risk inherent in a credit union's operations will dictate the degree to which capital must be maintained to better represent the potentially negative effects of these risks on the institution's capital. Regulatory capital requirements are minimums that are distinct from a credit union's need to retain capital that is proportional to the amount of risk it faces in its operations. The followingmeasurement criteria are used to determine a credit union's capital adequacy, but they are notthe only ones. The value of these variables is not determined by their order.

- Overall financial position
- Capital level and quality of capital
- Management's ability to react to unexpected capital requirements
- Adherence to risk-based net worth guidelines
- Capital composition
- Policies and procedures relating to interest and dividends
- Asset quality, form, liquidity, and diversification, with a special focus onclassified assets
- Concentrations of loans and savings
- The extent and sum of market risk, concentration risk, and risk associated with nontraditional activities on the balance sheet
- Growth strategies and previous experience with growth management
- New business initiative volume and risk characteristics
- Management's ability to regulate and track risk
- Earnings composition and quality
- Asset-liability management and liquidity
- The scope of contingent liability and whether or not there is any ongoinglitigation
- Membership field
- Economic situation.

2.5.2 Rating Capital Adequacy

A capital adequacy ranking of 1 suggests that the credit union has sufficient capital in relationto its present and potential risk profile.

A credit union with a ranking of 2 has enough resources in relation to its present and future risk profile.

A capital adequacy rating of 3 indicates that the credit union's capital is insufficient to meet the credit union's present and future risk profile. The score shows that there is potential for improvement.

A capital adequacy ranking of 4 means that capital is insufficient. The credit union's sustainability could be jeopardised as a result of its existing and future risk profiles. It's possible that outside financial assistance would be needed.

A ranking of 5 suggests that the credit union's survival is threatened due to critically insufficient resources in light of the credit union's current and prospective risk profile. External assistance or financial assistance is needed right away [5].

2.5.3 Rating Factors of Capital Adequacy:

The composition of the Balance Sheet;
- Overall financial condition of the institutions;
- Growth plans and prospects along with its management;
- Earning strength and quality;
- Dividend reasonableness;
- Access to the various sources of capital like capital markets;
- Quality and level of money infused;
- Management's ability to fulfill the additional capital requirement;
- Off-Balance Sheet activities exposed to risk;
- Estimation of the problem assets in terms of its nature, volume and trends;
- Capital adequacy for valuation reserves and loss due to lease or loanallowances.

2.6 Asset Quality
2.6.1 About Asset Quality:

Financial companies make money by making loans. These institutional loans are their properties, and the companies evaluate the risk of such investments in order to ensure superior asset quality and investment decisions. The gross non-performing asset (GNPA) ration is calculated to assess asset quality.

Ratios	Formula	Criteria
NPLs to total loans	$\dfrac{NPLs}{Total\ loans}$	≤ 1%
NPLs to total equity	$\dfrac{NPLs}{Total\ equity}$	≤ 1%
Allowance for loan loss ratio	$\dfrac{Allowance\ for\ loan\ loss}{Total\ loans}$	≥1.5%
Provision for loan loss ratio	$\dfrac{Provision\ for\ loan\ loss}{Total\ loans}$	≥100%
Net NPAs to Net advances	Lower ratio is a sign of credit efficiency of bank	
Total Investment to total assets	Higher ratio adversely affects the profitability of banks	
Net NPAs to total assets	Lower the ratio, better is the performance of bank	

Table 2.2 Formula for Calculating Asset Quality

Ratios Formula Criteria

NPLs to total loans ≤ 1%

NPLs to total equity ≤ 1%

Allowance for loan loss ratio ≥1.5%

Provision for loan loss ratio ≥100%

The credit risk associated with loan and investment portfolios, other real estate owned (OREO), and other properties, as well as off-balance sheet transactions, is reflected in the asset quality ranking. This also represents management's ability to define, assess, track, and regulate credit risk.

The adequacy of the allowance for loan and lease losses should be considered when assessing asset quality, as should the risk of counterparty issuer or creditor default under real or implied contractual agreements. Risks that can impact the value or marketability of a credit union's properties, including but not limited to the seven risk categories, should be considered. The asset quality of a credit union is calculated by a variety of factors, including but not limited to the ones mentioned below. The value of these variables is not determined by their order.

- The internal controls and due diligence processes in place to review new loan programmes, high concentrations, and adjustments in underwriting proceduresand practices of existing programmes;
- The consistency of loan underwriting, policies, procedures, and practices;
- The adequacy of the provision for loan and lease losses and other asset valuation reserves;
- The amount and composition of nonaccrual and restructured properties;
- Management's ability to adequately administer its assets, including the timely recognition and compilation of problem assets.
- The appropriateness of investment policies and practices;
- The investment risk factors as compared to capital and earnings structure; and
- The presence of major growth patterns suggesting asset quality deterioration or change.
- The impact of fair (market) value versus book value on investment returns.

2.6.2   Rating Asset Quality

A score of one denotes good asset quality and credit management activities. The vulnerabilities that have been identified are minor in nature, and the risk exposure is low in comparison to capital adequacy and management's skill. Asset consistency is a minor problem for managers.

A score of 2 means that the asset quality and credit management procedures are satisfactory. The magnitude and number of classifications, as well as other flaws, necessitate a restricted degree of supervisory attention. Risk exposure is proportional to the amount of resources available and the management team's skill.

If asset quality or credit administration procedures are not up to par, a rating of 3 is given. Trends can be stable or reflect asset quality degradation or increased risk exposure. The quantity and severity of classified assets, as well as other flaws and risk, necessitate a high degree of supervisory concern. Credit administration and risk control procedures need to bestrengthened in general.

Credit unions with poor asset quality or credit management activities receive a 4 ranking. The credit union is exposed to large amounts of risk and problem properties, which are poorly managed and expose the credit union to future losses that, if left unchecked, could jeopardisethe credit union's viability.

A ranking of 5 indicates that the credit union's asset quality or credit management procedures are severely deficient, posing a serious challenge to the credit union's viability.

2.6.3 Rating Factors of Asset Quality:

- The number of problem properties, delinquent or rescheduled loans.
- The Management Information System, loan portfolio management, writtenpolicies and procedures, and internal control.
- Taking into account the bank's potential as well as the development ofinstitutional loans
- Loan loss reserves in the event of bad credit, as well as other associated assets; • Asset diversification and concentration.
- The nature and volume of credit documentation exceptions; • Management'sability to control all assets and recover problem assets.
- The extent to which trading and securities underwriting counterparties areexposed.
- Credit risk analysis, nonperforming assets, issue patterns, nonaccrual, magnitude, delivery, restructuring, classification, and level of on and off-balance sheet transactions
- Acceptable risk assessment procedures, adequate underwriting requirements, and credit administration procedures.

2.7 Management

2.7.1 Method to Evaluate Management

The Institute's ability to identify, respond and manage the financial risk involved in the dayto day institutional operations like credit offers, transactions, interest rates, etc.

Ratios	Formula	Criteria
Total asset growth rate	Average of historical asset growth rate	Nominal GNP growth
Loan growth rate	Average of historical loan growth rate	Nominal GNP growth
Earning growth rate	Average of historical earning growth rate	$\geq 10\text{-}15\%$

Total advances to total deposits	Indicates the ability of the bank to convert deposits into high earning advances. Higher ratio is better
Business per Employee	Efficiency of the employees to generate business (total advances and total deposits). The higher the ratio ,better it is.
Profit per Employee	Efficiency of the employees to generate profit for the bank. Higher ratio is better.
Return on Equity	Profits available for shareholders. Higher ratio signifies efficiency of the bank.

Table 2.3 Formula to Evaluate Management Efficiency

This rating reflects the board of directors' and management's ability to define, assess, track, and regulate the risks associated with a credit union's operations, as well as to ensure a credit union's secure, sound, and effective activity in accordance with applicable laws and regulations. Directors are generally not required to be involved in day-to-day operations; however, they must provide clear guidance in determining reasonable risk exposure levels through effective policies, procedures, and practices.

Senior management is in charge of creating and enforcing policies, processes, and practices that translate the board's priorities, objectives, and risk limits into sound business practices.

The seven risk categories, as well as other risks, must be addressed by management strategies that are commensurate with the existence and complexity of a credit union's operations. Active supervision by the board of directors and management; qualified personnel; adequate procedures, processes, and controls, taking into account the credit union's size and sophistication; maintenance of an acceptable audit programme and internal control environment; and efficient risk monitoring and management information systems are all examples of sound management practices. This rating should represent the board's and management's capacity in all facets of the credit union's operations, as well as other financial service activities in which it participates.

The ability of management to adapt to changing market circumstances, such as the launch of new activities or products, is a key factor in determining a credit union's overall risk profile

and the level of supervision required. As a result, when assigning the composite ranking, the management aspect is given special consideration. Management and the board of directors' capacity and results was also evaluated based on, but not limited to, an assessment of the following evaluation factors.

2.7.2 Corporate Governance
The board of directors and management owe a fiduciary duty to the members to uphold very high ethical standards, including but not limited to:

1. Appropriate compensation plans: Compensation plans for management should be supported. The board must ensure that senior management meets performance expectations and that an appropriate systematic assessment process is used and recorded.
2. Avoid conflicts of interest: Appropriate policies and processes should be in place to prevent conflicts of interest and handle possible conflicts of interest.
3. Professional conduct and ethics: The board of directors and management should not use the credit union for personal benefit that is not approved or necessary. Property owned by a credit union can only be used for permitted purposes. In carrying out acceptable credit union policies and procedures, management should behave ethically and impartially.

2.7.3 Strategic Planning

A comprehensive framework for developing a long-term vision for the credit union is strategic planning. The strategic plan covers all aspects of a credit union's operations and establishes broad objectives that enable management to make informed decisions. The strategic plan should describe the organization's risks and challenges, as well as methods fordealing with them.

Credit unions should create a business strategy for the next one or two years as part of their strategic planning process. The business plan, which includes a budget, should be reviewed and approved by the board of directors in light of the credit union's strategic plan. The business plan is contrasted to the strategic plan to see if they are on the same page. Examiners also look at how the strategy is implemented. The proposals should be exclusive to the creditunion and represent its culture.

Information systems and technology (IS&T) should be a key component of the credit union's long-term strategy. Examiners evaluate the credit union's risk analysis, procedures, and oversight in this field based on the credit union's size and scope, as well as the form and amount of e-commerce systems and services. In evaluating the overall IS&T programme, examiners recognise the importance of e-commerce systems and services.

2.7.4 Rating Factors of Management:

• Internal control, policies and audit competence;
• The efficiency of the management information system and risk monitoringsystem;
• Level of support from the management or the board;
• Adherence to the laws, rules and regulations;
• Management's ability to plan, manage and respond to risks;
• Taking corrective measures on the advice of supervisory authorities andauditors;
• Willingness to meet the banking community requirements;
• Maintaining reasonable compensation policies;
• Institution's overall performance and risk profile.

2.8 Earnings
2.8.1 Method to Find Earnings

Interest income to total income	Represent the share of interest income in total income. Higher ratio is better
Operating profits to total assets	Indicates operating income of the bank per rupee invested in total assets. Higher ratio is better.
Net interest margin to total assets	Excess of interest earned over interest expended relative to total assets
Return on assets	Efficiency with which bank uses its assets to generate net income.

Table 2.4 Formula to Find Earnings

The ability of the financial institutions to generate returns on the asset employed determine their profits. It is an essential parameter for analysing the risk and recovery of the institution.

2.8.2   Rating Factors of Earnings:
- Earning source;
- Earning stability, trends and level;
- Level of operational expenses;
- Market risks exposure in terms of foreign exchange, interest rates and price fluctuations;
- Retained earnings as a source of adequate capital;
- Maintaining provisions for loan allowances and loss on the lease;
- Managing the forecasting process, management information system and budgeting system;

2.9 Liquidity
2.9.1   Components to Find Earnings

Ratios	Formula	Criteria
Customer deposits to total assets	$\dfrac{Total\ customer\ deposits}{Total\ assets}$	$\geq 75\%$
Total loan to customer deposits (LTD)	$\dfrac{Total\ loans}{total\ customer\ deposits}$	$\leq 80\%$

Liquid assets to total assets	Higher ratio is better .
Liquid assets to demand deposits	Higher ratio is better
Liquid assets to total deposits	Higher ratio is better
Approved securities to total assets	Higher ratio is better

Table 2.5 Formula to Find Earnings

The financial institutions need to keep sound liquidity position to ensure carrying of uninterrupted business operations. The primary ratio calculated to determine liquidity is theliquid cash to asset ratio.

2.9.2   Rating Factors of Liquidity:
- Deposit stability and trend;
- Ability to acquire funds from money market and other sources of capital;
- Institution's ability to sell off the pools of assets which are difficult to be sold individually;

- The holding of assets which are readily convertible into cash without any loss;
- Maintaining adequate liquid sources of funds to meet day to day expenses without creating burden over the institution;
- The extent of reliance on the short term sources of the fund like borrowings, brokereddeposits, etc. to invest in long term assets;
- The degree of diversification of the various sources of funds;
- Management's ability to analyze and regulate the institution's liquidity position, andensuring effective implementation of the management information system, fund management strategies, liquidity policies and contingency funding plans.

2.10 Sensitivity
2.10.1 Method to Evaluate Sensitivity
(a) Total Security to Total Asset Ratio = Total Security / Total Assets
(b) P/E Ratio

The effect of market fluctuations on the financial institutions, such as the response to changesin interest rates, commodity price, foreign exchange rates, derivatives, etc.

2.10.2 Rating Factors of Sensitivity:
- Management efficiency in identifying, analyzing and controlling the level of market risk;
- Analysis of the interest rate risk involved in non-trading positions;
- Responsiveness of the financial institutions towards the fluctuation in commodity prices, interest rates, equity prices, foreign exchange rates, etc.;
- Assess trading and international operations risk.

2.10.3 Internal Controls
Internal controls are important for a credit union's risk management. Internal controls that are effective provide protection against system failures, judgement errors, and fraud. Management would be unable to classify and monitor the credit union's risk exposure without adequate internal controls. Controls are often important for management to ensure that operating units meet the guidelines set out by the board of directors and senior management.

Internal controls should pay particular attention to the following seven aspects:

1. Information systems are number one. Effective controls are essential for ensuring the credibility, protection, and privacy of information stored on the credit union's computer systems.
2. Division of roles. In any field of service, the credit union should have sufficient

segregation of duties. The number of employees in smaller credit unions can restrict the separation of duties.

3. An auditing programme. The scale, complexity, and risk of the credit union should be reflected in the audit functions and processes. The software should be self-contained and report to the supervisory committee without intervention or dispute from management. An annual audit plan is required to ensure that all risk areas are reviewed, with the highest risk areas receiving priority. Reports should be submitted to management for comment and action, and the response should be forwarded to the board of directors. Any pending problemsmust be followed up on, and this should be included in future studies.

4. Maintaining records. Any credit union's books should be kept in compliance with agreedaccounting standards. The financial state and reliable results of operations of a credit union should be expressed in its reports and accounts. Records should be up to date and include a trail of activity. The audit trail should provide enough documentation to track a transaction from start to finish. The balance between subsidiary reports and general ledger control figuresshould be maintained.

5. Physical Assets Security Limiting access to designated staff is one of the most efficient ways to secure properties. Asset safety can be achieved through the establishment of operating policies and procedures for cash management, shared custody (dual control), telleroperations, and computer physical security.

6. Workers education. Staff and volunteers at credit unions should be fully educated in relevant daily operations. There should be a management-specific training programme in operation as well as cross-training programmes for office workers. If the credit union is able to ensure continuity of operations and service to its members, risk is reduced.

2.10.4 Other Management Issues

Other key factors considered when assessing the management of a credit union follow. The order of these factors does not signify a level of importance.

• Budget performance relative to real performance
• Adequacy of policies and procedures covering each aspect of the credit union's operations (written, board approved, followed)
• Effectiveness of risk measurement and monitoring systems
• Risk-taking practices and control mechanisms to mitigate concerns
• Risk management integration with preparation and decision-making
• Responsiveness to review and audit suggestions, guidelines, or requirements
• Obedience to all relevant laws and regulations
• Market penetration
• Rate structure
• Appropriateness of emergency preparedness preparation for operations continuity • Succession planning for key management roles

2.10.5 Ratings

A score of 1 indicates good management and board of director performance, as well as goodrisk management practices, in relation to the credit union's scale, complexity, and risk profile. All significant risks are defined, assessed, tracked, and managed in a consistent and efficientmanner. Management and the board of directors have shown their ability to respond quicklyand effectively to current and future issues and threats.

A score of 2 means that the credit union's management and board procedures are adequate for its scale, complexity, and risk profile. Significant risks are generally defined, assessed, tracked, and regulated effectively. Management and the board of directors have shown their ability to respond quickly and effectively to current and future issues and threats. Minor bugscan occur, but they aren't fatal.

A score of 3 means that management and board efficiency could be higher, or that risk management procedures aren't up to par considering the credit union's activities. It's possible that issues & problems and risks aren't being detected, assessed, tracked, or managed properly. Management or the board of directors' skills may be inadequate for the institution'sform, scale, or state.

A score of 4 suggests weak management and board performance, as well as risk management procedures that are insufficient for the credit union's activities. The number of issues and risks is just too high. Problems and significant risks are not properly defined, assessed, tracked, or regulated, necessitating urgent intervention by the board and management to maintain the institution's soundness. It's possible that the board needs to be replaced or strengthened.

A five-star rating denotes severely deficient management and board competence, as well as risk management activities. Problems and significant risks are inadequately calculated, monitored, or regulated, and now threaten the institution's continued viability. Management and the board of directors have not demonstrated the ability to fix problems and enforce acceptable risk management practices; problems and significant risks are inadequately measured, monitored, or controlled, and now threaten the institution's continued viability. It is necessary to replace or improve management or the board of directors.

2.11 CAMEL COMPOSITE RATINGS

Rating 1 - Credit unions in this category are financially stable in any way, with componentsranked 1 and 2 in most cases. Any flaws are minor and can be addressed by the board of directors and management on a regular basis. These credit unions are

the most resilient to unpredictably changing market conditions and external pressures including economic volatility in their trade region. These credit unions abide by all applicable laws and regulations. As a result, they demonstrate sound performance and risk management strategies in relation to the credit union's scale, scope, and risk profile, and they pose no threat to supervisors.

Rating 2 – This community of credit unions is fundamentally sound. No part rating should be higher than a 3 in order for a credit union to obtain this rating. Only minor flaws exist, andthey are well within the capacities and ability of the board of directors and management to address. These credit unions are dependable and can handle business ups and downs. Thesecredit unions abide by all relevant laws and regulations. In terms of scale, sophistication and risk profile, the credit union's risk management activities are sufficient. Since there are no significant supervisory issues, the supervisory response is informal and constrained.

Rating 3 –Credit unions in this category have supervisory concerns in one or more of the component regions, earning a rating of three. These credit unions have a mix of flaws that range from mild to severe; however, the severity of the flaws will not cause a part to be graded more severely than 4 in most cases. Management can lack the capacity or desire to correct vulnerabilities in a timely and efficient manner. Credit unions in this category are less likely to handle market volatility and are more susceptible to outside pressures than those in the composite 1 or 2 categories. Furthermore, these credit unions could be in flagrant violation of laws and regulations. In relation to the credit union's scale, complexity, and risk profile, risk management practices may be inadequate. These credit unions need additional oversight, which may include compliance actions. Failure remains doubtful, however, considering the credit unions' overall strength and financial ability.

Rating 4 - Credit unions in this category are known for their risky and unsound policies. Unsatisfactory performance is the result of severe financial or administrative shortcomings. The issues vary in severity from moderate to serious deficiency. The board of directors and management are not adequately addressing or resolving the shortcomings and problems. In general, credit unions in this category are unable to tolerate market volatility. There may be a lot of noncompliance with the rules and regulations. As compared to the credit union's size, sophistication, and risk profile, risk management practices are typically inappropriate. Closesupervision is required, which means that enforcement action is usually required to correct the issues. The National Credit Union Share Insurance Fund is at risk because of the credit unions in the association (NCUSIF). If the challenges and shortcomings are not adequately

addressed and fixed, failure is a distinct possibility.

Rating 5 – Credit unions in this category have highly dangerous and unsound policies and conditions; they have a critically deficient performance; they often have insufficient risk management practices in relation to their scale, sophistication and risk profile; and they are the most supervisory concern. Management's capacity or willingness to monitor or fix the number and severity of problems is minimal. The credit union needs urgent financial or other outside assistance to remain viable. A constant level of supervision is needed. This community of credit unions poses a major risk to the NCUSIF, and failure is highly likely.

The weight or importance given to each element is determined by the composite rating of the components. The CAMELS composite ranking is depicted in the pie chart below:
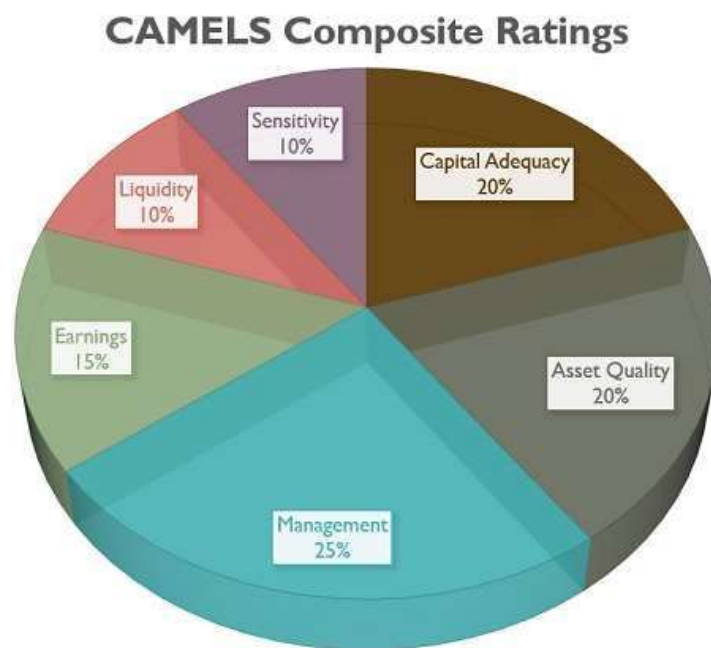
Figure 2.4 CAMELS Composite Rating

Capital Adequacy 20%: The capital acquisition and its source, play a significant role in finding out the CAMELS rating of the institution.
Asset Quality 20%: Assets here basically refers to the loans provided by these financial institutions shown in the balance sheet, which are judged by their quality.

Management 25%: Management of risk at each step, right from planning, organizing, staffing and controlling involves CAMELS rating.

Earnings 15%: The earning potential, sustainability, quality and trend are analyzed by the supervisory level.
Liquidity 10%: The movement and availability of liquid cash and cash equivalents also affects the rating.
Sensitivity 10%: The last component is the institution's sensitivity or responsiveness towards the market risk.

Bank rating is a measure of financial soundness for banks. The Federal Deposit Insurance Corporation (FDIC) grants credit scores to banks and other financial institutions in the same way that credit agencies such as Standard & Poor's (S&P), Moody's, and Fitch do with individual customers and companies.

Bank scores range from one to five rating, with one being the best and five being the worst. The CAMELS rating system, an internationally recognized rating system that calculates the financial soundness of financial institutions based on six criteria, is used to calculate bank ratings.

CAMELS numerical rating defines the position of financial institutions and chalks out the areas of improvement. Let us now find out the rating analysis and its interpretation of different components with the help of the following table:

RATING	RATING RANGE	RATING ANALYSIS	INTERPRETATION
1	1.0 - 1.4	Strong	Most suitable in all aspect.
2	1.5 - 2.4	Satisfactory	Favorable but has certain weakness
3	2.5 - 3.4	Less Than Satisfactory	Involves financial, operational or managerial weaknesses which needs supervisory concern
4	3.5 - 4.4	Deficient	Involves financial weaknesses up to an alarming stage
5	4.5 - 5.0	Critically Deficient	Involves critical financial weaknesses which may lead to failure of institution

Table 2.6 Composite Rating

RATING RANGE

RATING ANALYSIS

INTERPRETATION

1. 1.0 - 1.4 Strong Most suitable in all aspect.
2. 1.5 - 2.4 Satisfactory Favorable but has certain weakness
3. 2.5- 3.4 Less Than Satisfactory Involves financial, operational or managerial weaknesses which needs supervisory concern
4. 3.5 - 4.4 Deficient Involves financial weaknesses up to an alarming stage
5. 4.5 - 5.0 Critically Deficient Involves critical financial weaknesses which maylead to failure of institution

Each rating and its analysis is interpreted as follows:

One is "Strong": The top-rated financial institutions are the ones which range between a rating of 1.0 to 1.4; they have the most favourable financial, operational and managerial conditions. Two is "Satisfactory": The banks which are suitable but has some identified weaknesses and are rated between 1.5 to 2.4. Three is "Less Than Satisfactory": These financial institutions are rated between 2.5 to 3.4 and require supervisory concern to overcome several financial, operational and managerial weaknesses. Four is "Deficient":

Thebanks or other financial institutions which lie between a range of 3.5 to 4.4 are at an alarmingstage. It pertains many economic weaknesses which may lead to loss or risk of failure. Fiveis "Critically Deficient": The most inferior rating is between 4.5 to 5. Here, the financial institutions have crucial financial weaknesses and need serious attention; otherwise, it will lead to a high degree of failure.

2.12 Purpose of CAMELS Rating System

The CAMELS rating system is highly efficient to determine the risk level associated with financial institutions. It has majorly served the following purposes:

Financial condition: CAMELS rating system is widely used to determine the financial healthand soundness of the institution.

Operational Condition: CAMELS rating system is used to assess the financial health of the institution and mitigate risk.

There is also an indicator known as managerial condition that indicates the effectiveness of a management team in risk management, funds management, liquidity position, and potentialearnings.

- A bank with a score of one has a strong record, is financially stable, and follows risk management guidelines.
- A score of two indicates that a business is financially stable but has some weaknesses.
- A ranking of three means that the organization has supervisory issues in many fields.
    - A score of four means that an organization has questionable activities and is thereforedangerous due to severe financial difficulties.
- A scale of five means that a financial institution is inherently unsound and has poor risk management practices.

Component	Ratio	Rank				
		1	2	3	4	5
Capital Adequacy	$\frac{Equity\ Capital}{Total\ Assets}$	Above 11%	8%-11%	4%-8%	1%-4%	Below 1%
Asset Quality	$\frac{Non-Performing\ Loans}{Total\ Loans}$	Below 1.5%	1.5%-3.5%	3.5%-7%	7%-9.5%	Above 9.5%
Management Quality	$\frac{Personnel\ Expenses}{Average\ Assets}$	Below 25%	30%-26%	38%-31%	45%-39%	Above 46%
Earnings Quality	Return on Assets	Above 1.50%	1.25%-1.50%	1.01%-1.25%	0.75%-1.00%	Below 0.75%
	Return on Equity	Above 22%	17%-21.99%	10%-16.99%	7%-9.99%	Below 6.99%
Liquidity	$\frac{Net\ Loans}{Deposit\ and\ Short\ Term\ Funding}$	Below 60%	60%-65%	65%-70%	70%-80%	Above 80%
	$\frac{Liquid\ Assets}{Deposit\ and\ Short\ Term\ Funding}$	Below 60%	60%-65%	65%-70%	70%-80%	Above 80%
Sensitivity	Total Security / Total Assets	Above 80%	70%-80%	65%-70%	60%-65%	Below 60%

Source: Majithiya & Pattani (2010); Babar & Zeb (2011); Sarwar & Asif (2011); Masngut & Abdul Rahman (2012)

Table No.2.7 Purpose of CAMELS Rating System

2.13 Risk in Banking

A bank is exposed to a range of threats, all of which must be carefully handled. Banks are exposed to risks as a result of anticipated or unexpected developments in the economy or financial markets. Risks may also occur as a result of employee negligence or malice, resulting in asset value depletion and a decrease in the bank's intrinsic value.

Risks in the banking sector are classified into two categories: systemic risks and unsystematicrisks. Let us describe these two types of bank risks and comprehend the

concepts that underpin them.

1. Systematic Risks:

This is a risk that affects a large number of assets and is intrinsic to the whole industry or a market segment. Undiversifiable risk, also known as uncertainty and market risk, is a form of systemic risk. Systematic risk affects the entire economy, not just a single stock or sector. This form of risk is unpredictably high and difficult to absolutely prevent. Interest rate increases, inflation, recessions, and conflicts are all examples.

2. Risks that aren't well-defined:

It is a risk that only a limited number of assets are exposed to. Nonsystematic risk is also known as Real risk, Diversifiable risk, and Residual risk. This form of risk refers to the volatility that comes with investing in a business or sector. A change of management, a product recall, a regulatory change that could reduce company revenue, and a new competitor in the market with the ability to steal market share from a company in which you've invested are all examples of potential threats. Diversification may be used to minimize Unsystematic Risks. There are some other unique threats that the banking sector faces in addition to these large categories of risks.

3. Credit Default Risk:

This is the risk that a borrower will default on its debt obligations, either in terms of interest or principal. Credit risk is described by the Basel Committee on Banking Supervision as the possibility that a bank creditor, or counter-party, will fail to meet its payment obligations under the terms agreed upon with the bank. It involves both the risks of not repaying the bank's dues and the risks of not repaying the bank's dues on time.

4. Market Risk:

Market risk is defined by the Basel Committee on Banking Supervision as the risk of losses in on-balance sheet or off-balance sheet positions as a result of market price movement. For investment banks, the most significant risk is market risk. The four elements of business risk are as follows:

Interest Risk: It refers to the risk of losing money as a result of interest rate fluctuations. This risk stems from the fact that a bank's assets typically have a much longer maturity than its liabilities. Interest rate risk management is also known as asset-liability management in the banking world (ALM).

Since banks accept equity in exchange for disbursing loans, it exposes them to the

risk of future losses due to shifts in stock prices. Banks can use equity as leverage for loans and use their free or investable cash to buy ownership stakes in other firms as investments. Any negative shift in stock price results in a loss or a decline in the value of an investment.

Commodity Risk: It refers to the risk of possible losses as a result of price changes in commodities (agricultural, manufacturing, and energy). Due to constant differences in demand and supply, these rates undergo significant fluctuations. Banks may retain them as part of their portfolios, and as a result, they may suffer losses. Because of fluctuations in demand and supply, the prices of goods fluctuate a lot. Commodity risk exists for every bank that keeps them as part of an investment. its assets or liabilities as a result of exchange rate fluctuations when the bank transacts with its customers or other stakeholders in multiple currencies.

Banks trade with foreign exchange on behalf of their clients or for their own accounts. Any negative movement will depreciate the foreign currency's value, resulting in a loss for the bank.

5. Liquidity Risk:
This is the risk that a bank may be unable to fund its day-to-day operations. Failure to handle this risk may have serious implications for the bank's credibility, as well as its bond pricing and money market ratings.

6. Country Danger:
The risk that a country may be unable to meet its financial obligations is referred to as country risk. When a country defaults on its obligations, it can have a negative impact on the performance of all other financial instruments in that country, as well as other countries with which it has trade ties. Stocks, shares, mutual funds, options, and futures issued in a specific country are subject to country risk.

Banking institutions that have gone through the Basel Committee on Banking Supervision (BCBS) process have accepted operational risk as a part of their mission.

Loss resulting from insufficient or failed internal processes, people, and systems, as well as external events is referred to as operational risk.

In their day-to-day activities, all banks face operational risks across all divisions, including treasury, credit, finance, and information technology. This risk is caused by three key factors:

• Error & Human Intervention
• IT/internal device and infrastructure failure.
• Internal Processes Fail to properly transmit data and information

7. Reputational Risk:

Reputational risk refers to the public's lack of trust in a bank as a result of a negative impression or picture that may be generated with or without proof of the bank's wrongdoing. Brand value is often used to determine reputational value. Advertisements play an importantrole in shaping and sustaining public opinion, which is why banks invest millions of dollars in content marketing. The following factors could jeopardise your reputation:

• The bank's failure to keep its obligations to the government and regulators
• Noncompliance with the code of ethics in the context of corporate governance
• Customer records are mismanaged or manipulated.
• Customer care and after-sales systems are ineffective.

8. Systemic Risk:

This risk entails the potential for the entire financial system to come to a halt. This is due to a domino effect, in which the failure of one bank will trigger the failure of its counter- parties/other stakeholders, putting the entire financial services sector in jeopardy. The risk need to be minimized by proper management of the banking money providing business.

Systemic risk, which banks have little to no influence over, can only be mitigated if banks have a large capital base, which ensures a stable infrastructure.

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Chapter-III

Review of Literature

CHAPTER-III
Review of Literature

3.1 Introduction

After the choice of research subject, it is most vital to think about the depth and importance of this subject related research. So the investigation of related writing is fundamental applicable material and writing has been uncovered below. Desai and Desai (1989) stated that review of related study is most necessary to identify the various problems and matters and investigate the research planning.

The study of related literature is helpful for the topic concerns data, findings of the researchers, solved issues, different analysis techniques, utilizations of the research findings etc. The study of related literature is additionally helpful for the implementation of effective approach to resolve the unknown issues. Present study enclosed review of literature connected to job satisfaction. A human can develop and progress with the experiences of the past similarly because it provides steerage and guidance to the new corner.

The researcher ought to have thought of following factors before decide the direction and the dimension of his work.
1. The researcher decides quality of his research in completely fields.

2. The researcher take awareness for his research ought to be the monotonous research than other research.
3. The researcher indicates the extraordinary matters of the present study than other research.

The reviews of the pre research analysis is guide for drawback resolution and to facilitate in identification of the matter for present researcher. The horizon of knowledge expands by the study of the past analysis. The research is a whole unit. Related research analysis is necessary for an identity of the special matters of this study. There is no any definite method to deliver the presentation the appropriate type of connected literature. Here the researcher has given the connected study with their time.

3.2 Literature Review

C. Sloan Swindle, Sloan Swindle, Sloan Swindle, Sloan S (1995)[1] The capital adequacy part of the CAMEL rating system is used in this study to see whether regulators in the 1980s influenced undercapitalized banks to increase their capital. I found that undercapitalized banks responded to regulators' demands for more capital using a measure of regulatory pressure based on publicly accessible data.

Asset Quality is mainly used as a to measure risk for financial institutions, and it also determines the reliability of capital ratios, according to Kwan and Eisenbeis (1997)[2]. Their research found that capitalization has an impact on the operation of financial institutions. Higher the money, higher the efficiency.

Shankaraiah (1999)[3] attempted to investigate customer awareness and preferences for banking services. A sample of about 140 customers is selected using a stratified random sampling method and a structured questionnaire is administered to them in order to represent all people from all walks of life. During the study period of 1997-1998, the study only included respondents who lived in Hyderabad. According to the findings of this study, banks provide a variety of deposit, credit, ancillary, and diversified services to customers to meet their diverse needs. Customers, on the other hand, are often unaware of many of these schemes. He also noted that a scheme that provides high security, return, growth, flexibility, promptness, care, attention, simplicity, convenience, and low cost would entice customers to use it. In this study, he proposed that a continuous effort be made to analyse customer preferences and awareness in order to better serve customers and improve through innovations.

In the context of financial sector reforms, Kohli (1999)[4] attempted to assess the efficacy of bank branch licencing. Performance appraisal criteria have changed as a result of developments in India's banking perspective. Previously used performance metrics such as deposits, Priority Sector lending, and branch expansion have been replaced by newer ones such as productivity and profitability.

Cole and Gunther are a couple (2000)[5] The researchers used an off-site tracking system based on publicly accessible accounting data as a benchmark to determine the accuracy of CAMELS ratings in predicting failure. Their results indicate that if a bank hasn't been checked in more than two quarters, off-site surveillance systems are typically a better predictor of survival than CAMELS scores. Off-site control systems can continue to play an important role in the supervisory process due to their higher predictive accuracy.

Saha et al. (2000)[6] used Data Envelopment Analysis to score 25 PSBs from 1991-92 to 1994-95 and discovered that, with a few exceptions, PSBs have increased their efficiency in general over the study period. Corporation Bank, OBC, SBI, Canara Bank, SBH, BOB, and Dena Bank were found to be consistently productive banks, while UBI, UCO Bank, Syndicate Bank, and Central BOI were found to be at the lower end of the relative efficiency scale.

Subrahmani et al. (2001)[7] contrasted the performance of six public sector banks. For the fiscal year 1996-97, there were four private sector banks and three foreign banks. The overall company and wage cost per employee are used to measure operational productivity. The investigation revealed that a higher per-employee wage does not have to imply inefficiency.

Shanmugam et al. (2001)[8] used three methods to quantify efficiency: a non-parametric approach, a stochastic frontier function, and a random coefficient approach, and assessed the robustness of the efficiency measures using data from domestic Indian banks in 1999. The overall mean technical efficiency was found to vary between 52 and 80 percent depending on the method. The results showed that deposits were the most important factor in deciding bank production in all of the models, with a strong rank correlation among efficiency values computed using different approaches.

Das M R (2001)[9] examined the performance of private sector banks in 1999-00 in comparison to the previous year. Data was primarily gathered for this project from the RBI Report on the Trend and Progress of Banking in India, 1999-2000. In comparison to the previous year, the overall performance of private banks improved in 1999-2000, according to the report. Most old Private Banks were lagging behind the new Private Banks, which were fitted with cutting-edge technology.

The importance of NPAs in PSBs was highlighted by Ramachandra Reddy et al (2001)[10]. They said that the implementation of international income identification, asset classification, provisioning norms, and managing nonperforming assets (NPAs) in the banking sector has become one of the major challenges facing PSBs. They also believe that, due to a number of externalities, complete NPA elimination is not feasible in the banking industry, but that the incidence of NPAs can be reduced.

Kumar (2001)[11] Banks in the private sector have played a significant role in the growth of the Indian economy. The banking sector undergone significant changes after liberalization. The banking sector was fully transformed as a result of the economic reforms. According to the recommendations of the Narasimham committee, the RBI has enabled new banks to be formed in the private sector. This article's main purpose was to assess the financial performance of Indian private sector banks.

Rammohan (2002)[12] attempted to analyze the PSBs' performance in absolute and relative terms after deregulation, as well as to consider the factors that contributed to their improved performance. PSBs have increased their efficiency both in absolute and relative terms.

Das Uday (2002)[13] conducted a study that provided a crucial assessment of the Lead Bank Scheme in light of recent banking reforms. The performance of Public Sector Banks has been harmed by a high level of nonperforming assets (NPAs), a large number of unprofitable branches, low efficiency, overstaffing, and outdated methods of operations, according to Das.

Ballabh (2002)[14] investigated different methods for the employee efficiency. Many changes in the banking sector were necessitated by the changing economic climate. The importance of aspects such as technology support for improving customer care, evolving e-contact and eye-contact, redeployment strategies, and so on were highlighted in the report strategies for the employee productivity It was also suggested that parameters be set need to be widened to account for non-fund related activities' contribution.

The effect of liberalization on the Indian banking sector was examined by Bisht et al. (2002)[15]. They're founded that the current banking structure is the result of a long-term process of growth, reorganization, and consolidation. Pre-nationalization, Post-nationalization and Post-liberalization are the three major stages that the country went through. With the emergence of the internet, the introduction of the fourth step can clearly be discerned, which resulted in massive systemic changes in banking by replacing brick and mortar branches with electronic distribution networks to provide consumers with more options. Traditional banking is no longer an option, and technology has altered the game's rules.

In their paper, Bhinde et al. (2002)[16] took a critical view of ongoing banking sector reforms. They discovered that the conventional face of banking has shifted from one of from that of a middleman to that of a provider of fast, cost-effective, and productive

services that the Indian banking sector is currently confronted with issues such as restructuring, recapitalization, the enforcement of prudential norms, the legal system, corporate governance, and Basel II norms, among others.

"CAMEL ranking criterion has become a succinct and indispensable method for examiners and regulators," according to Barr et al. (2002)[17]. This rating criterion ensures that a bank is in good health by examining various aspects of the bank using data sources such as final statements (balance sheet & P&L Account), macroeconomic data, budget, and cash flow.

In their study, Mukherjee Avinandan et al. (2002)[18] did not calculate marketing success directly, but rather overall business performance of banks, relating performance to the strategic problem of resource management to be cost effective. Over a four-year period, the researchers used an updated DEA methodology to understand issues of performance benchmarking and strategic homogeneity in the banking sector by applying an output-oriented CCR model. Furthermore, it was discovered that publicly owned banks are more successful, while foreign banks are the most vulnerable, and that business strategies were not sufficiently designed to withstand the nature of market competition. PSBs were also scored uniformly in terms of self-appraisal and peer group appraisal, according to the report.

In a comparison of private sector bank financial results from 1994 to 1995, Pathak (2003)[19] stated that private sector banks have provided a new banking experience. Because of the increasing success of their services, their public-sector counterparts have begun to imitate them. He looked at the financial results of these banks in terms of deposits, loans, earnings, return on assets, and productivity.

The aim of Sheeba Kapil et al's (2003)[20] paper was to review and analyse the current financial health of Indian public sector banks in light of banking reforms, as well as to forecast the future and scale of the same. The CAMEL off-site supervisory model was used to assess the feasibility of the 27 PSBs.

Veni (2004)[21] investigated bank's capital adequacy standards and interventions. They used it to boost their capital ratios. The author emphasized the importance of the ranking. Capital Adequacy is given a lot of attention by government agencies. Bank ratios are used to assess a bank's creditworthiness. Certificates of Deposit, Bonds, and other financial instruments They typically use the CAMEL Model to rate banks. The core component of a bank's ranking is capital adequacy.

Sooden et al. (2004)[22] looked at the profitability of PSBs before and after reform periods of time. They used a correlation matrix as well as regression analysis in their research. The research Many PSBs' profitability increased after the changes, but at the expense of others. At the same time, falling priority sector lending has reduced the social viability associated with it with the PSBs, to be precise.

In banks, Padwal (2004)[23] put a greater focus on technology. Technology has been a key enabler in the transformation phase. The application of new technology entails creating innovative goods and services and providing them to consumers in the manner, where, when, and at the price that they desire. Banks and consumers are increasingly accepting of new methods and approaches to providing services and facilities. The study concluded that technology is critical to the future of banking.

Prasuna (2004)[24] used the CAMEL model to analyze the performance of Indian banks. The output of 65 banks was examined from 2003 to 2004. According to the source, competition was fierce, and customers gained as a result. Indian consumers will be greeted with improvedservice quality, creative goods, and better bargains.

Sathy (2005)[25] I made a rough draught on a piece of paper. The aim of this paper was to use Data Envelopment Analysis to determine the productivity quality (DIA). Two models were created to demonstrate how efficiency scores change as inputs and outputs change. The efficiency scores of three types of banks were calculated: publicly owned, privately owned, and foreign owned. According to the report, private sector commercial banks' average efficiency score and efficiency as a group are paradoxically lower than public sector banks and foreign banks in India.

Satish et al. (2005)[26] used the CAMEL Model to evaluate Indian bank results. Using the CAMEL Model, the authors looked at the output of 55 banks from 2004 to 2005. They cameto the conclusion that the Indian banking system appears to be sound, and that information technology would aid the banking system's future growth.

Arora et al (2005)[27] studied the performance evaluation of PSBs in the post reforms period. The performance of PSBs was determined using four parameters: financial parameters, operational parameters, profitability parameters, and productivity parameters. During the study period, I found it to be quite satisfactory.

Such ratings, according to Bodla and Verma (2006)[28], will assist the Reserve BOI in identifying banks whose output requires extra supervision. The main goal of the CAMEL method is to identify challenges that banks face and to compile a

comparative overview of the results of various banks. He used the CAMEL model to examine the performance of SBIand ICICI from 2000-01 to 2004-05. With regards to Capital Adequacy, it was determined that SBI has a competitive advantage over ICICI. Therefore, it is concluded that Bank ICICIhas an advantage over SBI Bank in terms of asset quality, earnings quality, and managementquality.

Dr. Benson (2006)[29] conducted research on "Banking Sector Reforms and Their Effect on Banking Services." This study found that the Indian banks' strategies are still insufficient and have failed to produce the desired results. Indian banks would be better able to compete andprosper in today's dynamic banking market if they prepare ahead and introduce customer- oriented and personalized products and services. In a competitive market climate, banks

should take measures to improve personal communication with their customers in order to maintain and expand their customer base. Banks must focus on improving the efficiency of their staff and attempting to improve it further.

According to Srivastava (2006)[30], the post-nationalization era in India saw an unprecedentedexpansion of the banking industry. Since 1991, however, various tech-tonic steps have beentaken to solve the problems of inefficiency and poor financial health, as well as to increase the efficiency of banks. As a result, the banks' efficiency, profitability, and financial status have improved to the point that they now outperform those of advanced nations.

Biswas (2006)[31] The author used the CAMELS model to assess the success of new private sector banks in this paper. The data for CAMELS analysis was collected over a five-year period, from 2000-2001 to 2004-2005. According to the study's results, IDBI bank had the best overall performance of all the banks, followed by UTI bank.

Kumar and Rengasamy (2007)[32] The study focused on the standard of service and customer satisfaction in India's private, public, and foreign banks. A study was conducted to determine the degree of customer knowledge and to determine the best sector for providing excellent customer service.

Kimball and James (2007)[33] investigated the relationship between bank ownership patterns and their CAMELS ranking in a study conducted in the United Kingdom. The research wasdivided into two parts in order to determine the relationship between different CAMELS parameters and the form of bank – public or private. In comparison to private sector banks, it was found that maintaining sufficient resources

was easier for public sector banks. In comparison to public sector banks, private sector banks were much more effective in handling nonperforming assets (NPAs) and risk profiles of bank assets.

Brinda J et al. (2007)[34] conducted an econometric study of India's public sector banks' results. They used two profitability metrics to evaluate a bank's performance: Return on Assets (ROA) and Operating Profit Ratio (OPR), They came to the conclusion that International banks and private sector banks are not considered to be equivalent to public sector banks. Banks (PSBs) in each of the performance metrics, and PSBs outperformed benchmarks in the areas of ROA, NPAs, and liquidity. Operating expenses as a percentage of total assets Requirements for capital adequacy, and so on.

The changing paradigm in Indian banking was studied by Gupta S et al (2008)[35], who discovered that Also after experiencing several reforms, the banking sector has continued to serve society's critical needs. Technology, global competition, customers (population), policies (politics), governance, and economic conditions, according to the authors, are the six main drivers of a paradigm shift in Indian banking. They came to the conclusion that the Indian banking industry is one of the economy's most powerful pillars.

Sadavarti, Yalapati, and Kannungo (2008)[36]. The relationship between selected aspects of organizational culture and IT-Strategy in public sector units is examined in this paper (PSUs). The impact of IT-Strategies on organizational culture which is described as a common collection of norms and values. The data for the study was gathered through a nationwide survey of 72 public sector organizations in India.

Suresh.V. (2008)[37] used Model CAMEL to systematically investigate key profitability measures components, incomplete assets and financial results of nationalized banks and SBI and their member banks over a ten-year period from 1997-98 to 2006-07. The research used accounting ratios and statistical methods and techniques such as the fundamental arithmetic mean, the variance coefficient and techniques such as one-way ANOVA, multiple correlations, multiple regression and trend analysis, respectively.

Over the course of nine years, Wrinker, Iraker, and Tanko (2008)[38] studied 11 Nigerian commercial banks. As a result, the Camel Model cannot provide a comprehensive picture of a bank's financial results. In addition, they discovered the optimum balance of the various CAMEL acronyms. CLEAM is reportedly the new acronym for CAMEL.

Using the DEA technique and bank-specific data from 1997 to 2004, Ketkar Kusum (2008)[39] investigated the performance of Indian banks after structural reforms started in the 1990s. The findings revealed that whether deposits are viewed as an input (intermediation approach) or output (output approach) has no bearing on the relative efficiency of banks by ownership (production approach). International banks are the most successful, according to the report, followed by new private sector banks. The study also highlights efficiency differences among banks, demonstrating that mandates on priority sector lending have harmed the efficiency of state-owned and nationalized banks, but mandates on bank branch expansion have not. AlinaRoman, Angela Roman Camelia's argument In the last decade, the Romanian banking system has undergone significant changes, with financial soundness and performance being critical in achieving stable and sustainable economic growth. The study is a comparative analysis of the financial soundness of Romania's commercial banks. To accomplish this, we used the CAMELS framework, which is one of the most widely used methods for assessing a bank's

financial soundness. The outcomes present the strengths and weaknesses of the banks examined, indicating the need to strengthen the points of consideration for bank management in order to strengthen and increase the soundness of the banks.

Mihir Dash and Annyesha Das (2009)[40] Since 1991, With an effort that has been extensive, complex, and thorough, the banking sector has undergone a substantial restructuring to create a sounding and productive organization while also developing strong connections with the real sector to aid savings, investment, and growth. Some progress has been made in the Indian banking sector after the reforms. The CAMELS structure requires banks to increase capital adequacy, strengthen asset quality, improve management, increase earnings, and reduce exposure to various financial risks, is a natural framework for analyzing this change. This study utilizes the CAMELS method to study public and private/foreign banks' similarities and differences. Data used in the study was derived from the financial statements of five Indian banks that had been audited for the previous five years. It was found that private and foreign banks did better on the majority of CAMELS factors than state-owned banks during the study period. The two main factors in private/foreign banks' improved results were management soundness and earnings and profitability. Mihir Dash and AnnyeshaDas (2009) used camel analysis to investigate public and private/foreign banks. In terms of management, profits, and profitability, private/foreign banks outperform public sector banks, according to the report.

Using a two-stage performance assessment model, Kumar Sunil (2009)[41] assessed the reliability, effectiveness, and performance of 27 PSBs operating in India. The study's empirical findings showed that high efficiency does not imply high effectiveness for PSBs, and that there is a positive and clear relationship between effectiveness and performance measures.

TabbusumNazir (2010)[42] used camel analysis to test the PNB and the Jammu and Kashmir Bank. Both banks are performing well, but the Jammu and Kashmir bank outperforms the PNB bank in terms of asset quality, earning capacity, and management efficiency in terms of business per employee and profit per employee, while the PNB bank's income ratio is higher.

From 2001 to 2005, Sangmi and Nazir (2010)[43] looked at the CAMEL ratings of PNB and Jammu and Kashmir Bank in India. They discovered that, according to the CAMEL system,both banks were financially sound.

In their report, Raju M Thiripal et al (2010)[44] looked at the cost of equity for major Indian banks in the aftermath of the financial crisis. The single factor CAPM is used to calculate the cost of equity. According to the report, the cost of equity has increased for almost all banks, particularly in 2008, and has decreased marginally in 2009. However, the increase in cost of equity is mostly due to an increase in the risk free rate, as well as a rise in the exposure of Bank stock returns to market risks.

Uppal R K (2010)[45] investigated the performance of Indian commercial banks from 1997 to 2008 and found that profitability and productivity were both high. In comparison to Indian PSBs, new private sector banks and foreign banks had much higher capital ratios, although their liquidity positions were much better. Likewise, when compared to their peers, they sound.

Malhotra P. (2010)[46] concentrated their efforts on presenting the implications of internet banking for the Indian banking sector. It was discovered that experienced internet banks had higher profitability than novice internet banks in almost all cases. The findings also show that, despite having relatively higher expenses, banks that have only recently started to provide internet banking have relatively higher costs. In contrast to non-internet banks, however, these banks are able to sustain ample overall profitability.

Kumar Lakshmi et al (2011)[47] used the CES Production feature model to analyse ATM technology as a proxy for capital and teller as a proxy for labour in the banking sector in India. They discovered that the degree of substitutability of the Teller by the ATM is strong,although the ATM is not a perfect substitute.

Using the DEA technique and three supplementary performance metrics, Manjula Kumara Wanniarachchige (2011)[48] investigated how state-owned, nationalized, and domestic private banks lag behind international banks. Domestic banks' success in terms of cost and revenue efficiencies has not yet met that of international banks, according to the findings. The studygoes on to say that domestic private banks are the least productive in the market, while foreign banks outperform their domestic counterparts in a variety of ways; their contribution to expanding banking services outside metropolitan areas is negligible.

Agarwal Pankaj K et al (2011)[49] attempted to use the globally accepted CAMEL model to compare the performance of PSBs and Private sector peers. Private sector banks' capital adequacy is lower than that of PSBs, but their asset quality is better, as evidenced by gross nonperforming assets (NPA) and net NPA. It was also discovered that PSBs have comparable management efficiency and earnings results to private sector banks, whereas private sector banks have outperformed PSBs on the liquidity front.

Shrivastava Urvashi et al (2011)[50] used correlation and T-test to evaluate the financial strength and soundness of AXIS bank in terms of capital adequacy as well as the efficacy ofthe financial ratios used to assess the results. They found that raising non-equity capital has helped the bank continue its growth strategy while also strengthening its capital adequacy ratio. It is also noted that properly mapping credit, operational, and market risk to expected business growth allows for capital assignment that not only meets the minimum capital requirement but also leaves space for expansion.

Siraj K K et al (2011)[51] used data from 1999 to 2011 to examine the performance of Indian Scheduled Commercial Banks before and after the global financial crisis (2007-09). The study revealed Scheduled's weakness. Commercial banks have responded to the financial crisis by claiming that numerous indicators that represent the crisis have emerged. During the financial crisis, banks' productivity was harmed. A noteworthy discovery was the increased susceptibility of the private sector and financial stability of public sector banks During the financial crisis, international banks played an important role.

Kumar et al., (2012)[52] used the CAMEL rating methodology to examine the performance of the top 12 Indian private and public banks by market capitalization between 2000 and 2011. They discovered that private sector banks did much better than public sector banks. In a cross-section of Nepalese commercial banks, Jha and Hui (2012) found that private sector banks outperformed their public counterparts. Kaur (2010) used the CAMEL methodology to study public and private sector banks in India over a seven-year period from 2001 to 2007. The best public sector banks were Andhra Bank and State Bank of Patiala, while the best private sector bank was Jammu and Kashmir Bank.

Syed Imran Nawab Ali, Adeel Maqbool, and Syed M. Tariq Zafar (2012)[53] analyzed the financial performance of ten Indian commercial banks from 2005 to 2010. From 2005-06 to 2009-10, the banks' performance had improved in all areas, according to the research. Furthermore, when comparing public and private sector banks, public sector banks performed better than private sector banks. Variables in the CAMEL model have a major impact on bank results. However, when compared to other factors such as capital adequacy, asset quality, management qualities, and earning efficiency, liquidity had little impact on results.

According to Aswini (2012)[54], the Indian banking sector has outperformed the global banking industry in terms of competitiveness, development, productivity, profitability, and soundness, especially in recent years.

Camel is a rating method used to determine the soundness of a savings organisation or a bank by the government policy cycle, regulators of commercial banks, such as central banks and NGO policy research centres, according to Kabir (2012)[55].

Prasad and Ravinder (2012)[56] used CAMEL analysis to test twenty nationalised banks. According to the findings, Andhra Bank was ranked first on average, followed by BOB and Punjab & Sindh Bank. The Central BOI was also found to be at the bottom of the list.

Misra & Aspal (2013)[57] examined the State Bank Group's results using the CAMEL method. According to the report, SBBJ ranks first in capital adequacy ratios and has good asset quality, but it needs to improve its management skills. The SBP has a sufficient capital base, but its earning potential is inadequate. SBI, on the other hand, had a strong liquidity role but needed to improve asset quality. SBT had strong earnings ratios and efficient management, but it lacked a sufficient capital base. SBM

had a decent earning potential at the time, but it lacked liquidity ratios. Misra and Aspal (2013) used the CAMEL rating approach to compare SBI and its associate banks. He discovered that SBI's CAMEL ratings were substantially lower than those of its smaller affiliate banks. Misra and Aspal (2013) assess the performance and financial health of the State bank sector, which includes the SBI, State Bank of Hyderabad, State Bank of Patiala, State Bank of Mysore, State Bank of Bikaner and Jaipur, and State Bank of Travancore, over a three-year period from 2009 to 2011. To see if there is a noticeable difference between the means of the CAMEL ratio, a one-way ANOVA is used. They point out that the SBI should concentrate on capital adequacy and asset quality, while the State Banks of Bikaner and Jaipur and Patiala should work on improving management performance and earning quality, respectively.

Vincent Okoth Ongore and Gemechu Berhanu Kusa (2013)[58] All domestic and international commercial banks approved by Kenya were investigated. The author has used micro and macro variables as independent variables, with (ROA, ROE, and NIM) as the proxy for profits. From 2007 to 2011 according to the results of the report.

Aspal and Malhotra (2013)[59] used the CAMEL rating model to examine the financial performance of selected midsized Indian public sector banks. The BOB and Andhra Bank were found to have the highest CAMEL scores. Using the CAMEL model,

Lakhtaria (2013)[60] investigated the top three largest public sector banks, namely SBI (SBI),

BOB, and PNB

(PNB). He discovered that the BOB had the highest CAMEL score, followed by the PNB and the SBI.

Channaveere Gowda, Anand M.B, and Arun Kumar (2013)[61], Because of the country's unique regional, social, and economic characteristics, India's banking system differs greatly from that of other Asian countries. India has an enormous population and territory, a diverse community and major income inequalities across its regions. A substantial proportion of the population is analphabets but there is also a large pool of talent from managers and technologically advanced. The aim of this article is to classify the different commercial banks in India. The three types of banks in India are public, private and foreign. The profitability review was carried out with a total of 26 public sector companies, 18 private sector and 15 foreign banks. To assess the results, CAMEL analysis was used. CAMEL parameters were evaluated: capital

suitability, asset quality, management quality, income quality and liquidity. The purpose of this study was to establish the efficacy of CAMEL to collect overall results from the bank. In addition, the best ratios were found between public, private and foreign banks in each of the CAMEL factors. The fact has been established that there is no significant difference between public sector, private sector and foreign banks' capital adequacy in India,and that the public, private and foreign banks' capital adequacy in India differs significantlyfrom that in public, private, and foreign sectors. Bhayani, S. J In this paper, the author used the CAMEL model for assessing the performance of new private sector banks. Four key banking sectors were used as examples in the study: ICICI, HDFC, UTI and IDBI. The author assigned rankings to all the banking authorities based on their results in various CAMEL parameters following an analysis of the CAMEL parameters and then assigned them an overall rating. The results of this report indicate that IDBI had the best overall performance of all the banks and that UTI followed.

During the study period 2007-08 to 2012-13, Praveen Kumar (2014)[62] Evaluated the productivity, profitability, and overall performance of public and private sector banks and bank groups. Effectiveness of the bank is measured by CAMEL and DEA methods. The CAMEL methodology showed that private sector banks, as a matter of average, were well ahead of public sector banks in terms of financial performance, both for public and for the private sector. In the opinion of CAR, ICICI banks, Axis banks and Yes banks are far more strong than other banks, as the findings of this report indicate. In terms of asset quality, new private sector banks outperform other banks. In terms of business per employee, public sectorbanks are more successful than new private sector banks. New private sector banks

outperform private sector banks when profit is taken into account per employee. New banks in the private sector outweigh other banks in terms of income efficiency, indicating a premium for new banks from the private sector for their income and efficient asset use. Withliquidity, most new banking institutions in the private sector are stronger than banks in the public sector. SBI, HDFC and ICICI banks are the best DMUs, according to the DEA study.Inputs and outputs are more effective than other banks. The new private-sector banks are performing better on average than old public-sector and private-sector banks, according to an interbank community report. The TE and SE banks' performance is considered to be poor compared to other categories. SBI's, PNB, Corporate Bank and other banks like Central BOI, Vijaya Bank, Punjab and Sind Bank appeared to have applied substantial improvements in the report. It was concluded, in contrast to new banking firms, that less progress in productivity was shown by private sector banks.

Dr.P.Karthikeyan and B.Shangari (2014)[63] attempt to disclose each bank's relative financial position and efficiency, as well as a comparative outcome, over a five-year period from 2009 to 2013. The top six private sector banks were chosen for this study based on net profit, total assets, and market capitalization in 2013. Judgmental sampling approach was used to pick bank samples, and the CAMEL model was used to compare the performance of these banks Foreign Exchange Risk: It is the risk of a bank losing money due to a change in the value of

using various financial ratios and statistical methods including Ratio Analysis, Descriptive Statistics, Correlation, Analysis of Variance, Composite Ranking Method, and Correspondence Analysis. The entire analysis was focused on secondary data, and the research design was analytical. HDFC bank was found to be more competitive than other banks in this analysis. Banks in the private sector are just as productive as other industries.

Gupta (2014)[64] applied the CAMEL approach to evaluate and assess the performance of public sector banks in India over a five-year period from 2009 to 2013, According to the CAMEL ranking Andhra Bank stood first, BOB was second, State Bank of Hyderabad was third and United BOI was last.

Deepti Tripathi, Kishore Meghani, and Swati Mahajan (2014)[65] Used the Axis and Kotak Mahindra Banks camel method to compare them following the reforms. No bank is perfect in every aspect of the camel model, according to the findings. The result concluded, however, that the output of Axis Bank is greater than that of Kotak Mahindra Bank.

For his research, Golam Mohiuddin (2014)[66] chose two big Bangladeshi banks. According to the acronym of the CAMEL model, the performance of both banks was very satisfactory over a five-year period.

Krupa R, Trivedi (2014)[67] used the CAMEL model on cooperatives in the city of Surat and found that capital sufficiency was adequate and that the recovery mechanism was very strong. The cooperative banks used their assets effectively as well, but their return on equity ratio was not as good. The management is competent, but the company's overall liquidity situation is precarious.

S.K Khatik and Amit kr. Nag (2014)[68] used the CAMEL method to examine five nationalised banks. They graded the banks based on their results in each CAMEL acronym. According to their ranking, BOB was ranked first, followed by the Union BOI and Dena Bank in second place, the SBI in fourth place, and the UCO Bank in

fifth place.

Palaneswri and Suriya (2015)[69] used the camel rating method to assess the financial performance of Tamilnadu Mercantile banks. Overall, the analysis found that the company'sresults and financial position are satisfactory. Capital adequacy ratio, asset quality ratio, management efficiency ratio, earning capacity ratio, and liquidity ratios were all calculated.

Singh (2015)[70] examines the overall profitability of AXIS Bank, ICICI Bank, Karur Vysya Bank, and Yes Bank, four private sector banks. Interest spread, return on long-term funds, net profit margin, adjusted cash margin, return on assets, and return on net worth are some of the profitability ratios he uses to evaluate bank results. ANOVA is often used to determinethe significance of interest spread, return on long-term funds, net profit margin, adjusted cash margin, return on assets, and return on net worth within a group of private-sector banks.

Garg and Kumari (2015)[71] The ANOVA methodology and the ratio analysis are employed inexamining the different profitability perspectives of the five main private banks over a 10- year period 2004-2014. They conclude that over the past 10 years, HDFC Bank hasperformed best.

Using the CAMEL model, Hari Krishna Karri, Kishore Meghani, and Bharti Meghani Mishra(2015)[72] examine the financial position and performance of the BOB and the PNB in India based on their financial characteristics in order to compare the relative performance of Indianbanks. The CAMEL model and t-test were chosen by the author to assess a bank's performance using a variety of parameters such as capital adequacy, asset quality, management efficiency, earning quality, liquidity, and sensitivity. According to the CAMELS report, there is no significant difference in financial results between BOB and PNB, and PNB's performance is marginally lower than BOB's.

Dipesh B Nathwani (2015)[73] attempted to research the six selected banks for a period of tenyears from 2004-05 to 2013-14 with respect to the CAMEL model, three from the public sector (SBI, BOB, and PNB) and three from the private sector (Axis Bank, HDFC Bank, and ICICI Bank). Capital Adequacy, Asset Quality, Management Performance, Earnings Quality, and Liquidity are the five main CAMEL Model parameters that have been divided into six chapters in this research work. Different types of parameters are used with the aid of ratios to assess the financial performance of each bank and company. In this report, it was discovered that in terms of overall

profitability, public sector banks are less profitable than private sector banks.

Dr. Raghunatha Reddy (B.Raghunatha Reddy) (2015)[74] The banking sector is the backbone of a country's economy and holds a central role. Banks have pledged a large share of the money supply in a rising economy in order to fulfil the multiple obligations of their regulars, patrons, and various organisations in a day-to-day marketable setting, even as the banks can generate income from business transactions despite the unpredictability of their operations. By properly defining the association between the products of the balance sheet and the profit and loss account, a bank's financial output shows the strength and weakness of that particular bank. The aim of this paper is to use the CAMEL approach to examine the financial performance of PNB (PNB) and SBI (SBI) over a three-year period (2010-2012). Financial ratio analysis was used for this reason. The thesis covered three years and covered all facets of financial performance assessment. The public sector banks will be chosen based on their market capitalization as measured by the BSE (available on money control). This model evaluates the performance of financial institutions, especially banks, based on a variety of factors such as capital adequacy, asset quality, management efficiency, earnings quality, and liquidity, among others. Average, standard deviation, coefficient of variance, and correlation are all measured statistically. Over PNB, the overall condition of capital adequacy of the nationalised bank SBI is considered to be satisfactory. The overall state of asset quality was strong in terms of the portfolio. The quality of management was also satisfactory.

K. Garg (2015)[75]. An empirical review of the profitability of a few private sector banks in India. 22-28 in Journal of Management Science and Technology.

From 2012 to 2014, Srinivasan and Saminathan (2016)[76] use the CAMEL model to rate public, private, and international banks based on financial results. They also discovered that during the study period, there was a large difference in the mean Camel ratios of public, private, and international banks.

Meena (2016)[77] The performance of different public and private banks is evaluated. In his report, he also examines factors which affect the financial performance of selected banks in the public and private sectors, and finds that the management of incompetent assets (NPAs).

P. B. Purohit, A Purohit (2018)[78]An study of selected public and private sector banks in India using the Camel model. The ASAR International Conference is held every two years.

Purohit and Bothra (2018)[79] use CAMEL parameters to compare the performance of SBI and ICICI Bank. They come to the conclusion that ICICI Bank needs to improve its capital adequacy and asset quality, while SBI needs to improve its management performance, earning quality, and liquidity.

Risal Hari Gopal, Panta Sabin Bikram (2019)[80] The effectiveness of CAMELS (Capital Adequacy, Assets Quality, Management Performance, Earning Efficiency, Liquidity, and Market Risk Sensitivity) based supervision in risk management of A class commercial banks is examined in this paper. Downside Deviation (volatility of returns below the minimum average return) and Standard Deviation of ROA and ROE are used to assess riskiness. The causal relationship between supervision and risk management has been examined using the Generalized Method of Moments (GMM) in secondary balanced panel data from all 28 commercial banks of Nepal during major financial development (i.e., 2004 to 2018; BASEL-I-II-III). The findings show that by reducing non-performing loans (NPLs), retaining adequate liquidity, and improving management performance, commercial banks in Nepal can reduce their downside deviation as well as standard deviation of ROA and ROE. Furthermore, the findings support the importance of the central bank's risk-based supervision and interest spread setting. Increased capital base, on the other hand, hasn't helped banks become less risky. Overall, the study finds that of the six supervision criteria (i.e., CAMELS), five (i.e., AMELS in the AMLSE priority order) are capable of reducing the riskiness of commercial banks if strictly followed by the central bank.

Kiran Kajal is a Bollywood actress (2019)[81] Banking is a fast-growing industry in India. The banking sector supports the growth of capital, creativity and monetization and facilitation of monetary policy. It is also vital for shareholders, employees, and the whole country's economy not only for depositors to view the healthy financial health of a bank as a guarantee. In this study, CAMEL Analysis is used to evaluate India's top public and private-sector banks' financial health. A sample was selected from seven public sector banks, including SBI, BOB,

BOI, PNB Bank, Union BOI, Canara Bank and IDBI Bank and four banks of the private sector, among which ICICI Bank, HDFC Bank, AXIS Bank and Indusind Bank. The data for analysis were collected from the respective banks' annual reports and cover the years 2013- 2014 to 2016-2017. Different ratios were used to

investigate the principal variable, which contributes to a better variable analysis. The results show that banks of the private sector exceed banks of the public sector, with all the banks selected as the top four. Private sector banks must increase their cash outcomes, while public sector banks must focus on capital adequacy, asset quality, productivity management and income quality.

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Chapter-IV

Research Methodology

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RESEARCH METHODOLOGY

4.1 Introduction of the Research

The word "study" comes from a Latin word that means "to know." It is a standardized and repeatable process for identifying and defining problems within specified parameters. It collects data and analyses the findings using a well-designed process. It disseminates the results in order to lead to knowledge generalization [1].

This study is performed in a structured and coordinated manner in order to learn more about the CAMEL approach to risk management in the banking industry. This is an observational analysis focused on observations and data obtained directly from the organisations. Data was gathered from both primary and secondary sources in order to better understand the reality of the CAMEL rating system and its effectiveness in evaluating banking organisation knowledge.

This is an investigational study. Exploratory study is the preliminary investigation of a conceptual or theoretical concept. When a researcher has an idea or notices something, he or she wants to learn more about it. An exploratory research project is an effort to set the foundations for future experiments or to see if what is being observed can be clarified by a hypothesis that already exists.

One of India's fastest growing industries is banking. The banking industry is becoming increasingly complex. It is not easy to evaluate the Indian banking sector. There are several variables to consider when deciding which banks are good and which are poor. The RBI has chosen the CAMEL model to assess the banking sector's success, which tests each of the important parameters such as capital adequacy, asset quality, management efficiency, earning quality, and liquidity. We selected nationalized banks after agreeing on the model. Each parameter is given equal weights based on the significance of the sample.

The **research type is Descriptive**. This is empirical research in which the CAMELS analysis is done on some selected banks [2].

The following research process is followed:
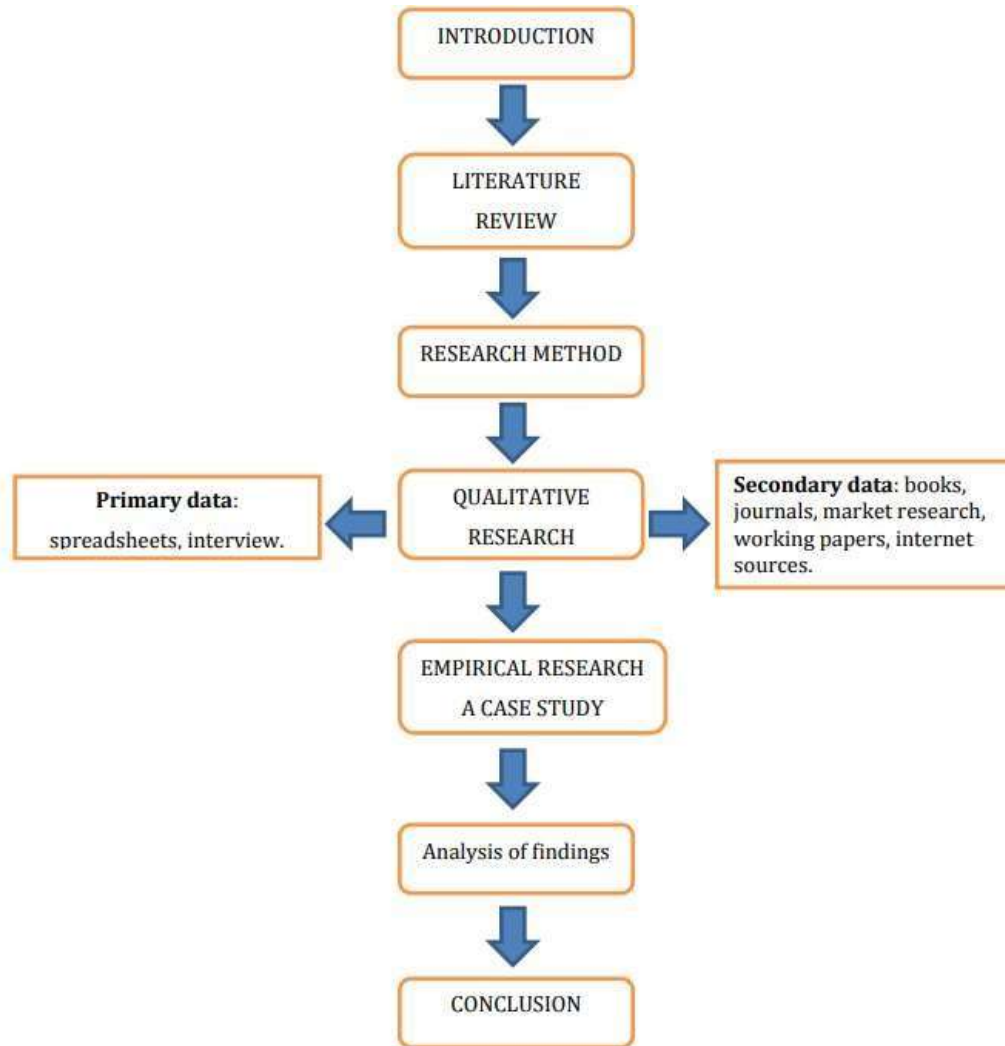
Figure:4.1 Research Process

4.2 Research Gap and Rationale of the Study

From the foregoing discussions on the previous studies in banking, it may be observed that the following are the major research gaps.

(i)   Studies that focus on the performance of Banks on basis of CAMELS concept in India in the post-reforms era are virtually nil; all the previous studies being those focusing on either all private sector banks (both old and new) or just new private sector banks alone.

(ii)   Studies on risk management in banks in connection with the need to comply with the latest Basel- II norms by banks in India are nil.

(iii) Empirical studies that focus on technology and its impact on operational efficiency and risk management in banks are also nil.

Since we have a strong regulatory system of RBI to look after the health and goodness of the banking system in India but so many things are still need to be reviewed to see where banks are lacking and NPA problems is being happening in the banking of India. So to study the various facts and figures and the real system in practices in Banking this research is being conducted [4].

Through the CAMEL Analysis Model, the current study aims to highlight the comparative analysis on financial results of selected top public and private sector banks in India. The analysis of the various ratios will help the bankers to understand the financial position of the banks and their overall status of operating banking business about the financial position of the selected 13 top banks operating in India as a result of the report.

4.3 Objective of the study

The main objective of the study is to analyze the financial position and performance of the public sector banks in India using CAMEL model. Apart from this, following objectives has been assessed during research:

1. Study on relationship between risk of credit, market and operational risks.
2. Credit risk management practices of commercial banks in India and the standards set out under the New Basel Capital Accord
3. Analysis of trends in credit portfolio diversification.
4. Studying relationship between diversified portfolio and non-performing assets of public sector banks vis-à-vis private sector banks.
5. Profiling and analysis of concentration risk in public sector banks vis-à-vis private sector banks.
6. Evaluating the credit risk management practices in public sector banks vis-à-vis private sector banks.
7. Reviewing the New Basel Capital Accord norms and their likely impact on credit risk management practices of Indian commercial banks.
8. Examining the role of Risk Based Supervision in strengthening credit risk management practices of Indian commercials banks.
9. Suggesting a broad outline of measures for improving credit risk management practices of Indian commercial banks.
10. To undertake the factors which have led to the current financial performance.
11. To suggest measures, on the basis of the study results, to improve further the financial performance of the banks under study.

4.4 Collection of Data

Primary Data: A questionnaire was prepared to collect the data from the banking personals. There are more than 50,000 employees in banks in Rajasthan. The sample size was 400. Data collected using simple random sampling from the banks located in Rajasthan. Moreover, the primary data was collected by way of in-depth interviews with the principal officers of the respective banks using a carefully drafted Interview Schedule. Thus officers who are in charge of the management of credit risk and other types of risks as per the risk management architecture stipulated by the Reserve Bank of India (RBI) are approached to collect the information regarding the risk management system [3].

Likewise, the officers in charge of technology management are approached to collect information as to the level of technology adoption, investments in technology, and its trend over the years.

Secondary Data:

These are collected from authentic secondary sources like the publications of the RBI, websites of the banks & others such as moneycontrol.com, Indian Banks' Association (IBA), Indian Institute of Banking & Finance (IIBF) etc. Besides, national journals like 'Bank Quest' and 'IBA Bulleting'; and international journals like 'The Banker' and 'The Economist' etc. are also used.

Data is also collected from different websites of major commercial banks RBI and various correspondents.

Research Design: The private and public sectors banks are selected and the various ratios are calculated and analyses to understand the banking business position. The CAMELS is a model used for the banks analysis as per the RBI guidelines, so in this research the CAMEL is a ratio-based model is being used to evaluate the performance of banks with the help of different criteria, viz. Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity. The present study is a **descriptive research** in which various ratios are used to analyze and describe the bank [5].

4.5 Hypothesis of the research

The following hypothesis is created to understand the performance of banks and their banking management style.

First Hypothesis

Null Hypothesis Ho: There is no significant difference in performance of Public Sector Banks in India assessed by CAMEL model

Alternate Hypothesis H_1: There is a significant difference in performance of Public Sector Banks in India assessed by CAMEL model.

Second Hypothesis

Null Hypothesis Ho: There is no relation between risk management of credit, market and operational risks of the banks.
Alternative Hypothesis H_1: There is relation between risk management of credit, market and operational risks of the banks.

Third Hypothesis

Null Hypothesis Ho: There is no significant difference between banks in management of risk.
Alternate Hypothesis H1: There is a significant between difference between banks in management of risk.

Fourth Hypothesis

Null Hypothesis H_0: There is no significant difference between credit risk management practices of different commercial banks in India and they do not meet the standards set out under the New Basel Capital Accord.
Alternate Hypothesis H_1: There is a significant difference between credit risk management practices of different commercial banks in India and they do not meet the standards set out under the New Basel Capital Accord.

4.6 Data Analysis

Each bank is assigned a uniform composite rating based on six parameters. It is a standardized procedure providing an assessment of the quality of the bank based on standard criteria.

When assigning a composite rating, some components may be given more weight than other depending on the situation at the bank. Composite ratings may include that have a significant bearing on overall condition and soundness.

The ratios for each of the five heads are computed and graded. The calculated ranks are thenused to calculate the group rank. The statistical tools that were used, as well as their purposes,are listed below:

1. Graphical analysis has been done using bar charts.
2. Arithmetic mean & Retios for calculating values for the purpose of evaluation
3. F-Test and one-way ANOVA for analysis and interpretation. Also, the banks have been highlighted as follows "The private sector banks and public sector banks.

4.7 Limitations

This study is completed in the given time frame for the Ph.D. work so only few banks and limited sample has been taken for the study purpose. Therefore, the sampling limitations are inherited in it.

Only few banks are selected to analyze the overall public and private banks position. The generalization of the results may vary in some cases with the facts of the banking.

No proper procedure is defined in the books of the RBI to follow the CAMELS evaluation procedure for ranking banks. So, we have considered the prominent ratios only for CAMELS evaluation of the ranking of the banking performance [6].

Findings of the research are subject to the limitations of financial statements and the limitations of CAMELS rating system; hence these are to be interpreted in the light of these limitations. Further to it the finding is not be taken for a generalized interpretation rather these confine to the period of study.

4.8 Future Scope

The study can be conducted by taking some other banks to understand their overall performance using CAMELS model. The CAMELS model study can be done by considering some more rations to get the real position of the banks on various parameters. Thus the studycan be taken as a sample or for guidance to understand the CAMELS model of evaluating bank performance by the researcher. The CAMELS model can be used to find the absolute and relative position of the bank in the present economic scenario and the suitable measurescan be taken by the management of the banks or RBI on the basis of this research report conducted.

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6. Reed, Edward, W., (2009), "Commercial Bank Management", Harper and Row New York.

Chapter - V
Data Presentation and Analysis

CHAPTER-V
DATA ANALYSIS

5.1 Introduction

The data collected through questionnaire to know the bank overall working and performancehas been tabulated and presented in this chapter. The bar charts have been used for analyzing the data collected on various parameters of banks taken under study. The questions about CAMEL asked from the employees are categorized as C, A, M, E, L.

The data taken from the balance sheet and P&L account for the calculation of the CAMEL Model and to know the banking performance is also described and analyzed in this chapter.

The rating scale for camel model is 1 to 5, (1 the best and 5 the worst). Before the CAMELS rating system components, the overall situation of the bank is measured by bank regulators. A rating of 1 is satisfactory and a strong performance. If performance and risk management practices are to some extent defective, a rating of 3 is given and this gives rise to supervision. A rating of 4 refers to poor performance, while 5 is critically poor and unsatisfactory and requires immediate corrective action. The CAMEL rating system is certainly an essential tool for identifying a bank's financial strengths and weaknesses by assessing the bank's overall financial situation for corrective action. The results of the CAMELS test can help regulators to develop policies and strategic initiatives to improve their financial performance directly by managing the banks concerned.

C- Capital Adequacy

1. Bank is having sufficient shareholder capital (Tier-I capital) to run its business.

Table No. 5.1

Response	Numbers	Percentage
Strongly Agree	37	9.25
Agree	196	49
Neutral	80	20
Disagree	76	19
Strongly Disagree	11	2.75
Total	400	100

Fig. No 5.1

Interpretation: Out of the total respondents 9.25% strongly agreed, 49% agreed, 20% neutral, 19% disagreed and 2.75% strongly disagreed about banks is having sufficient shareholder capital (Tier-I capital) to run its business. This shows that banks are having sufficient shareholder capital (Tier-I capital) to run its business.

2. Bank is having sufficient Borrowings (Tier-2 capital) to run its business.

Table No 5.2

Response	Numbers	Percentage
Strongly Agree	30	7.5
Agree	198	49.5
Neutral	59	14.75
Disagree	100	25
Strongly Disagree	13	3.25
Total	400	100

Fig. No 5.2

Interpretation: Out of the total respondents 7.5% strongly agreed, 49.5% agreed, 14.75% neutral, 25% disagreed and 3.25% strongly disagreed about banks is having sufficient Borrowings (Tier-2 capital) to run its business. This shows that banks is having sufficient Borrowings (Tier-2 capital) to run its business.

3. Bank is having assets (loans and advances) which are less risky.

Table No 5.3

Response	Numbers	Percentage
Strongly Agree	26	6.5
Agree	205	51.25
Neutral	56	14
Disagree	101	25.25
Strongly Disagree	12	3
Total	400	100
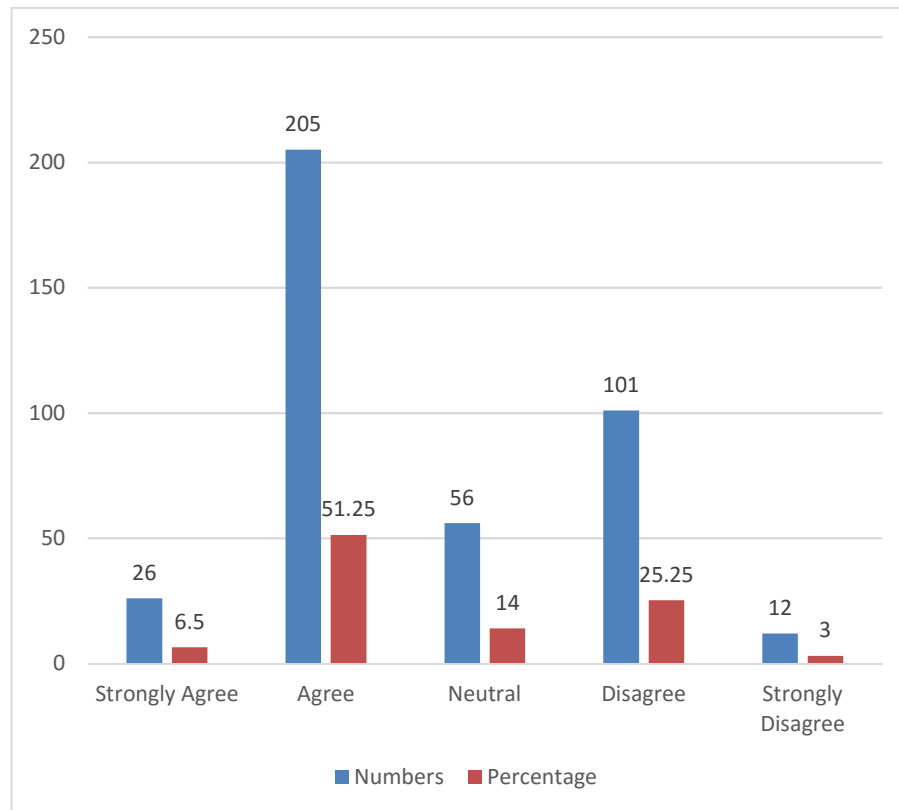
Fig. No 5.3

Interpretation: Out of the total respondents 6.5% strongly agreed, 51.25% agreed, 14 % neutral, 25.25% disagreed and 3% strongly disagreed about that banks are having assets (loans and advances) which are less risky. This shows that banks are having assets (loans andadvances) which are less risky.

4. Bank has maintained a balance composition of capital.

Table No 5.4

Response	Numbers	Percentage
Strongly Agree	19	4.75
Agree	188	47
Neutral	73	18.25
Disagree	107	26.75
Strongly Disagree	13	3.25
Total	400	100

Fig. No 5.4

Interpretation: Out of the total respondents 4.75% strongly agreed, 47% agreed, 18.25% neutral, 26.75% disagreed and 3.25% strongly disagreed about that banks have maintained a balance composition of capital. This shows that banks have maintained a balance composition of capital.

5. Bank always have a minimum capital reserve amount.

Table No 5.5

Response	Numbers	Percentage
Strongly Agree	37	9.25
Agree	196	49
Neutral	80	20
Disagree	76	19
Strongly Disagree	11	2.75
Total	400	100

Fig. No 5.5

Interpretation: Out of the total respondents 9.25% strongly agreed, 49% agreed, 20% neutral, 19% disagreed and 2.75% strongly disagreed about banks always have a minimum capital reserve amount. This shows that banks always have a minimum capital reserve amount.

A- Asset Quality

6. Banks have made loans and advances and very low NPA has been recorded.

Table 5.6

Response	Numbers	Percentage
Strongly Agree	27	6.75
Agree	231	57.75
Neutral	85	21.25
Disagree	41	10.25
Strongly Disagree	16	4
Total	400	100

Fig. No 5.6

Interpretation: Out of the total respondents 6.75% strongly agreed, 57.75% agreed, 21.25%neutral, 10.25% disagreed and 4% strongly disagreed about Banks have made loans and advances and very low NPA has been recorded. This show that Banks have made loans andadvances and a nominal NPA has been recorded.

7. Loans and advances are made by following a proper procedure.

Table 5.7

Response	Numbers	Percentage
Strongly Agree	27	6.75
Agree	248	62
Neutral	76	19
Disagree	46	11.5
Strongly Disagree	3	0.75
Total	400	100

Fig. No 5.7

Interpretation: Out of the total respondents 6.75% strongly agreed, 62% agreed, 19% neutral, 11.5% disagreed and 075% strongly disagreed about Loans and advances are made by following a proper procedure. This show that Loans and advances are made by followinga proper procedure by the banks.

8. Large number of loans and assets are reliable and less risky.

Table 5.8

Response	Numbers	Percentage
Excellent	28	7
Good	258	64.5
Ok	99	24.75
Poor	11	2.75
Very Poor	4	1
Total	400	100

Fig. No 5.8

Interpretation: Out of the total respondents 7% strongly agreed, 64.5% agreed, 24.75% neutral, 2.75% disagreed and 1% strongly disagreed about large number of loans and assetsare reliable and less risky. This shows that large number of loans and assets are reliable andless risky.

9. Business customer loans converting into NPA.

Table 5.9

Response	Numbers	Percentage
Strongly Agree	31	7.75
Agree	259	64.75
Neutral	85	21.25
Disagree	15	3.75
Strongly Disagree	10	2.5
Total	400	100

Fig. No 5.9

Interpretation: Out of the total respondents 7.75% strongly agreed, 64.75% agreed, 21.25% neutral, 3.75% disagreed and 2.5% strongly disagreed about business customer loans more become NPA. This shows that business customer loans of banks are converting into NPA.

10. Home loans turning less into NPA.

Table 5.10

Response	Numbers	Percentage
Strongly Agree	28	7
Agree	270	67.5
Neutral	87	21.75
Disagree	10	2.5
Strongly Disagree	5	1.25
Total	400	100

Fig. No 5.10

Interpretation: Out of the total respondents 7% strongly agreed, 6.75% agreed, 21.75% neutral, 2.5% disagreed and 1.25% strongly disagreed about home loans less becomes NPA. This shows that home loans given by banks less becomes NPA.

11. Car Loans less becomes NPA.

Table 5.11

Response	Numbers	Percentage
Strongly Agree	28	7
Agree	269	67.25
Neutral	89	22.25
Disagree	10	2.5
Strongly Disagree	4	1
Total	400	100

Fig. No 5.11

Interpretation: Out of the total respondents 7% strongly agreed, 67.25% agreed, 22.25% neutral, 2.5% disagreed and 1% strongly disagreed about car loans less becomes NPA. Thisshows that car loans given by banks less becomes NPA.

12. Personal Loans become less NPA.

Table 5.12

Response	Numbers	Percentage
Strongly Agree	19	4.75
Agree	188	47
Neutral	73	18.25
Disagree	107	26.75
Strongly Disagree	13	3.25
Total	400	100

Fig. No 5.12

Interpretation: Out of the total respondents 4.75% strongly agreed, 47% agreed, 18.25% neutral, 26.75% disagreed and 3.25% strongly disagreed about personal loans become less NPA. This shows that personal loans given by banks become less NPA.

13. All types of loans less become NPA.

Table 5.13

Response	Numbers	Percentage
Strongly Agree	10	2.5
Agree	200	50
Neutral	79	19.75
Disagree	106	26.5
Strongly Disagree	5	1.25
Total	400	100

Fig. No 5.13

Interpretation: Out of the total respondents 2.5% strongly agreed, 50% agreed, 19.75% neutral, 26.5% disagreed and 1.25% strongly disagreed about all types of loans less becomesNPA. This shows that all types of loans become less NPA.

14. Management review the status of NPA regularly.

Table 5.14

Response	Numbers	Percentage
Strongly Agree	3	0.75
Agree	205	51.25
Neutral	78	19.5
Disagree	110	27.5
Strongly Disagree	4	1
Total	400	100

Fig. No 5.14

Interpretation: Out of the total respondents 0.75% strongly agreed, 51.25% agreed, 19.5%neutral, 2.75% disagreed and 1% strongly disagreed about management review the status of NPA regularly. This shows that management of the banks reviews the status of NPA regularly.

15. Management takes necessary actions to prevent NPA.

Table 5.15

Response	Numbers	Percentage
Strongly Agree	5	1.25
Agree	122	30.5
Neutral	89	22.25
Disagree	174	43.5
Strongly Disagree	10	2.5
Total	400	100

Fig. No 5.15

Interpretation: Out of the total respondents 1.25% strongly agreed, 30.5% agreed, 22.25% neutral, 43.5% disagreed and 2.5% strongly disagreed about management takes necessary actions to prevent NPA. This shows that management of the banks takes necessary actions toprevent NPA.

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16. There is no liquidity problem faced by the banks.

Table 5.16

Response	Numbers	Percentage
Strongly Agree	13	3.25
Agree	200	50
Neutral	79	19.75
Disagree	106	26.5
Strongly Disagree	2	0.5
Total	400	100

Fig. No 5.16

Interpretation: Out of the total respondents 3.25% strongly agreed, 50% agreed, 19.75% neutral, 26.5% disagreed and 0.5% strongly disagreed about there is no liquidity problem faced by your bank. This shows that there is no liquidity problem faced by the banks.

17. Financial statements of the banks are audited at regular intervals.

Table 5.17

Response	Numbers	Percentage
Strongly Agree	14	3.5
Agree	160	40
Neutral	61	15.25
Disagree	156	39
Strongly Disagree	9	2.25
Total	400	100

Fig. No 5.17

Interpretation: Out of the total respondents 3.5% strongly agreed, 40% agreed, 15.25% neutral, 39% disagreed and 2.25% strongly disagreed about the bank's financial statements are audited at regular intervals. This is show that the financial statements of the banks are audited at regular intervals.

18. Banks always consider the trends of major asset in financing.

Table 5.18

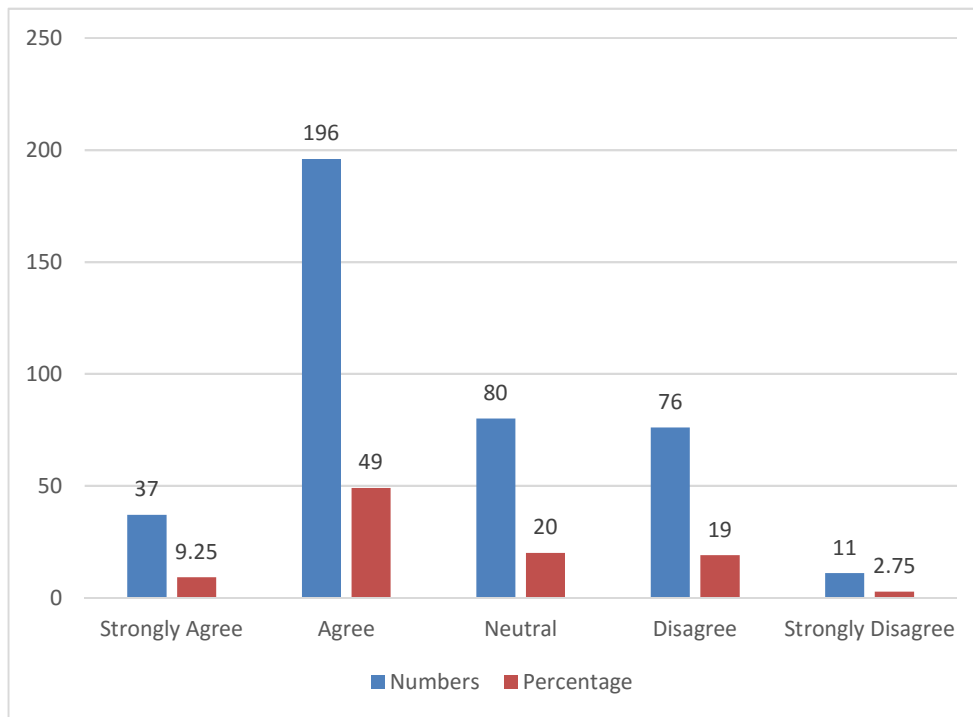| Response	Numbers	Percentage
Strongly Agree	18	4.5
Agree	171	42.75
Neutral	51	12.75
Disagree	151	37.75
Strongly Disagree	9	2.25
Total	400	100

Fig. No 5.18

Interpretation: Out of the total respondents 4.5% strongly agreed, 42.75% agreed, 12.75% neutral, 37.75% disagreed and 2.25% strongly disagreed about bank always consider the trends of major asset in financing. This shows that banks always consider the trends of major asset in financing.

19. Bank keeps a check on the quality of credit portfolio.

Table 5.19

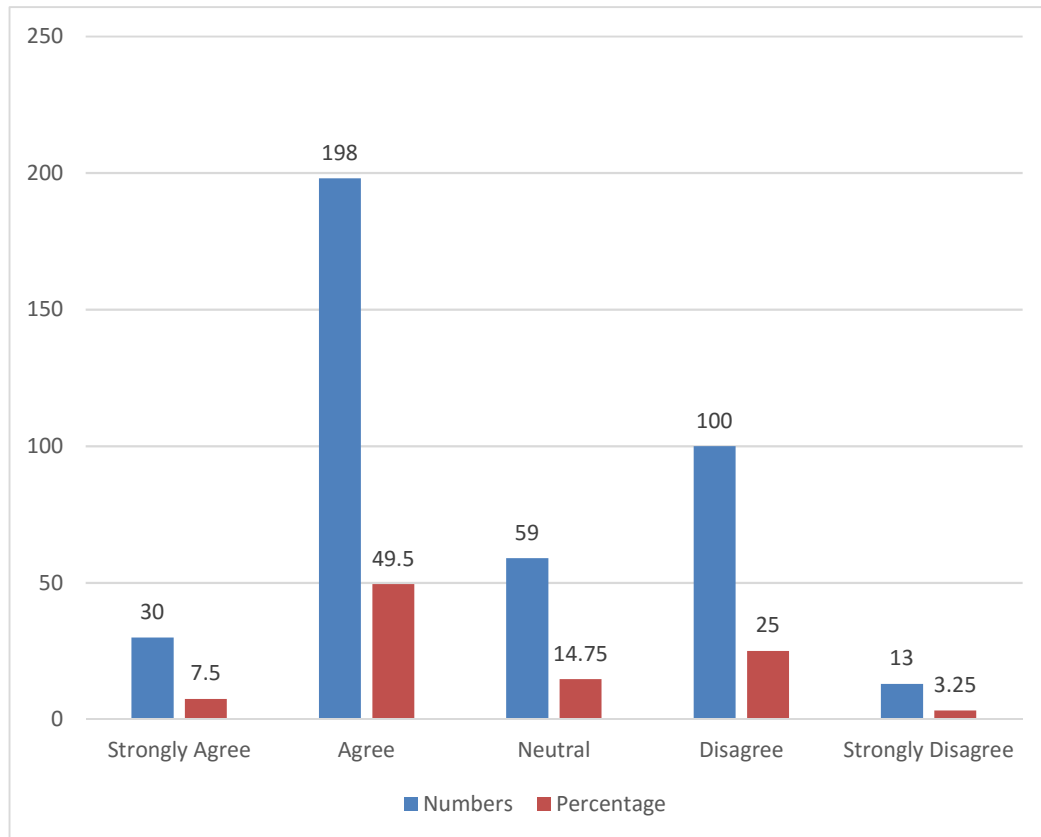| Response	Numbers	Percentage
Strongly Agree	26	6.5
Agree	155	38.75
Neutral	58	14.5
Disagree	152	38
Strongly Disagree	9	2.25
Total	400	100

Fig. No 5.19

Interpretation: Out of the total respondents 6.5% strongly agreed, 38.75% agreed, 14.5% neutral, 38% disagreed and 2.25% strongly disagreed about bank keeps a check on the qualityof credit portfolio. This shows that bank keeps a check on the quality of credit portfolio.

20. Bank takes steps to ismprove its asset quality.

Table 5.20

Response	Numbers	Percentage
Strongly Agree	13	3.25
Agree	168	42
Neutral	62	15.5
Disagree	151	37.75
Strongly Disagree	6	1.5
Total	400	100

Fig. No 5.20

Interpretation: Out of the total respondents 3.25% strongly agreed, 42% agreed, 15.5% neutral, 37.75% disagreed and 1.5% strongly disagreed about Bank takes steps to improve its asset quality. This shows that banks take steps to improve its asset quality.

M-Management

21. Management is efficient to comply with the banking norms and regulations.

Table 5.21

| Response	Numbers	Percentage
Strongly Agree	3	0.75
Agree	54	13.5
Neutral	56	14
Disagree	246	61.5
Strongly Disagree	41	10.25
Total	400	100

Fig. No 5.21

Interpretation: Out of the total respondents 0.75 % strongly agreed, 13.5% agreed, 14% neutral, 61.5% disagreed and 10.25% strongly disagreed about management is efficient to comply with the banking norms and regulations. This show that banks management is efficient to comply with the banking norms and regulations.

22. Management is having good internal control.

Table 5.22

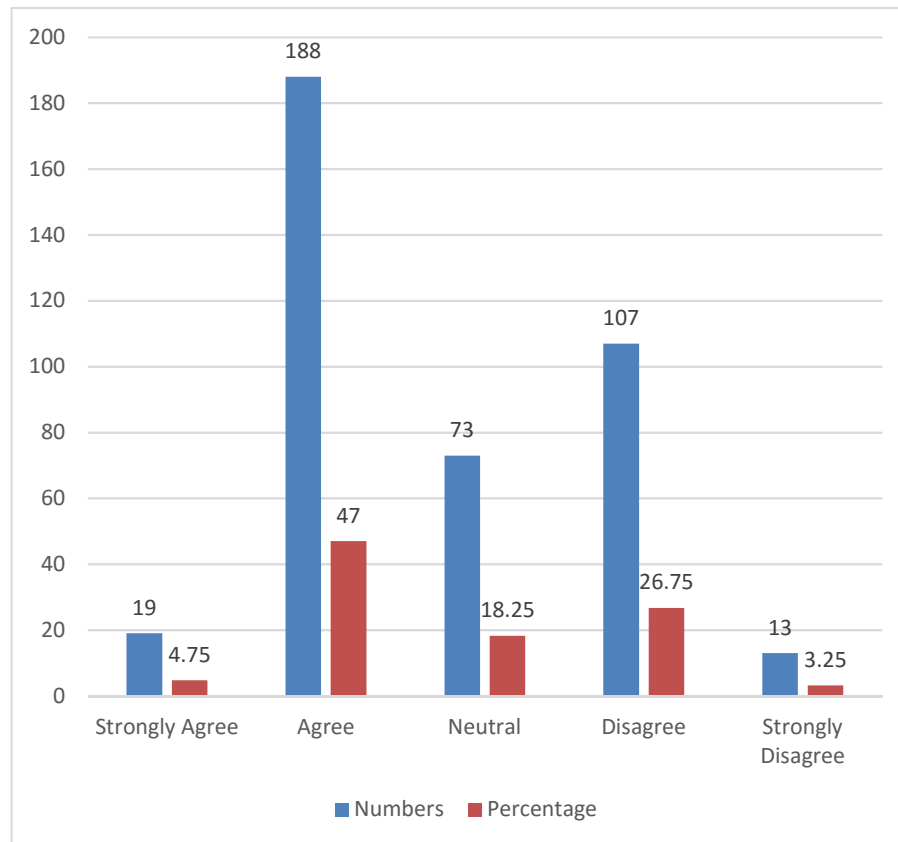| Response	Numbers	Percentage
Strongly Agree	17	4.25
Agree	106	26.5
Neutral	83	20.75
Disagree	180	45
Strongly Disagree	14	3.5
Total	400	100

Fig. No 5.22

Interpretation: Out of the total respondents 4.25 % strongly agreed, 26.5% agreed, 20.75%neutral, 20% disagreed and 2% strongly disagreed about Management is having good internal control. This shows that banks management is having good internal control.

23. Management is focused on profit making.

Table 5.23

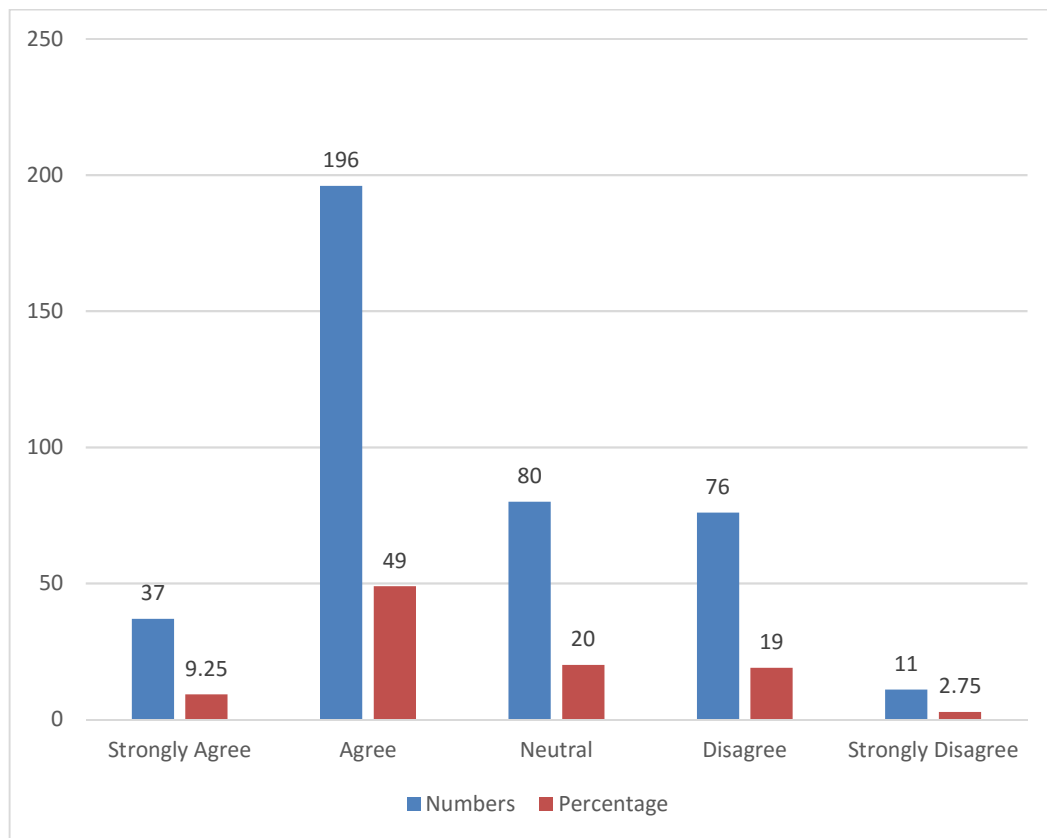| Response	Numbers	Percentage
Strongly Agree	22	5.5
Agree	191	47.75
Neutral	70	17.5
Disagree	107	26.75
Strongly Disagree	10	2.5
Total	400	100

Fig. No 5.23

Interpretation: Out of the total respondents 5.5% strongly agreed, 47.75% agreed, 17.5% neutral, 26.75% disagreed and 2.5% strongly disagreed about management is focused on profit making. This shows that management is focused on profit making.

24. Management takes immediate action against the defaulters.

Table 5.24

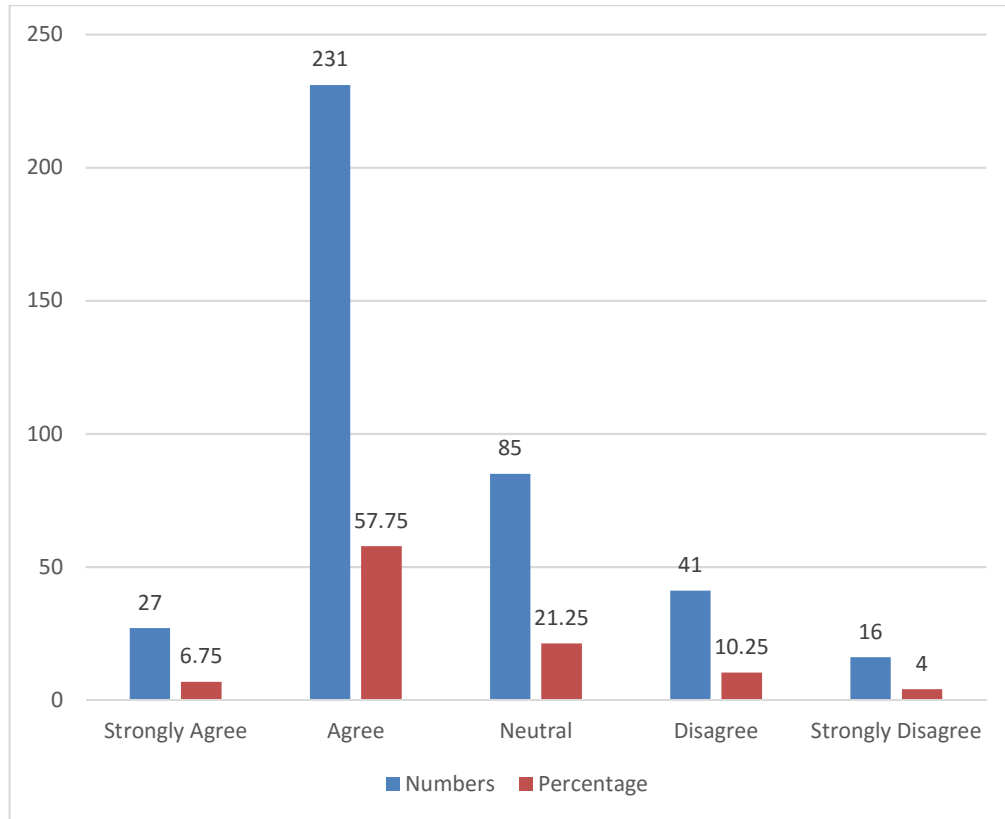| Response	Numbers	Percentage
Strongly Agree	17	4.25
Agree	106	26.5
Neutral	83	20.75
Disagree	180	45
Strongly Disagree	14	3.5
Total	400	100

Fig. No 5.24

Interpretation: Out of the total respondents 4.25% strongly agreed, 26.5% agreed, 20.75%neutral, 45% disagreed and 3.5% strongly disagreed about management takes immediate action against the defaulters. This shows that management of the banks take immediate actionagainst the defaulters.

25. Management makes keeps check and make decisions in the interest of the bank.

Table 5.25

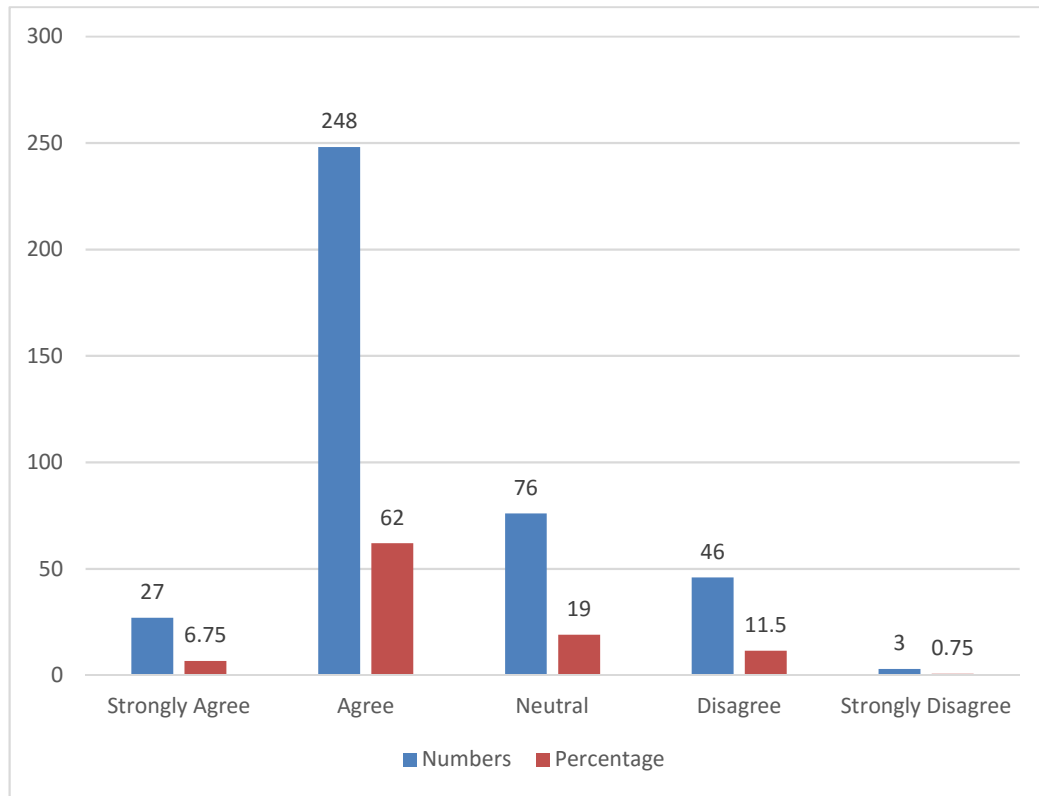| Response	Numbers	Percentage
Strongly Agree	30	7.5
Agree	198	49.5
Neutral	59	14.75
Disagree	100	25
Strongly Disagree	13	3.25
Total	400	100

Fig. No 5.25

Interpretation: Out of the total respondents 7.5% strongly agreed, 49.5% agreed, 14.75% neutral, 25% disagreed and 3.25% strongly disagreed about management makes keeps check and make decisions in the interest of the bank. This shows that management makes keeps check and make decisions in the interest of the bank.

26. Management is having ability to identify and exploit profit opportunities while managingrisk.

Table 5.26

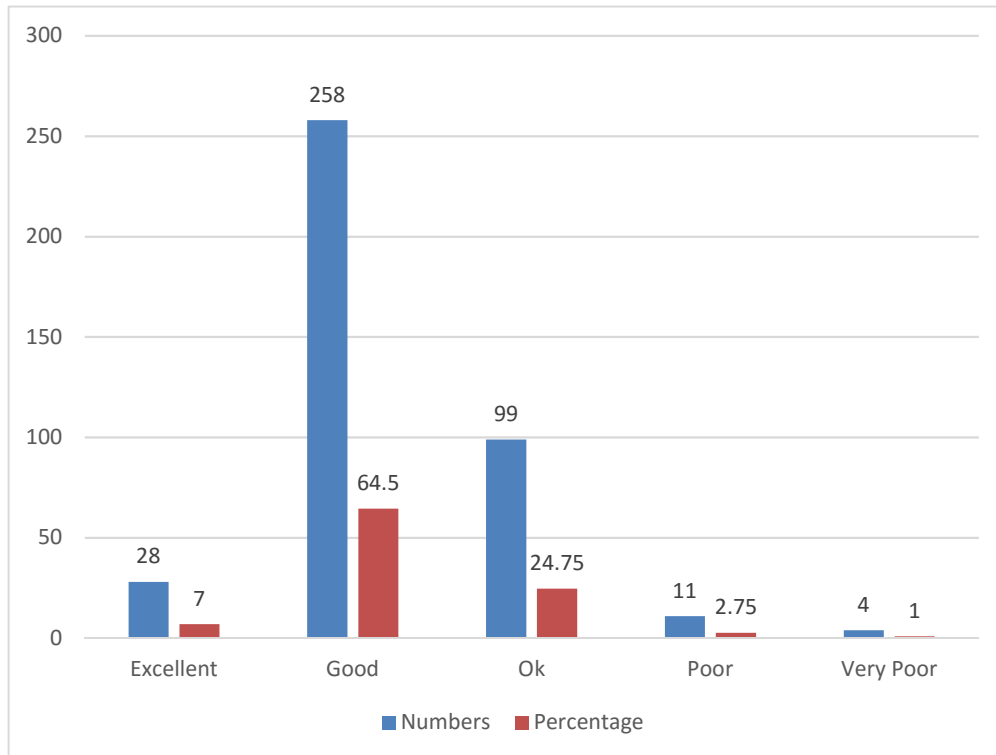| Response	Numbers	Percentage
Strongly Agree	26	6.5
Agree	205	51.25
Neutral	56	14
Disagree	101	25.25
Strongly Disagree	12	3
Total	400	100

Fig. No 5.26

Interpretation: Out of the total respondents 6.5% strongly agreed, 51.25% agreed, 14% neutral, 25.25% disagreed and 3% strongly disagreed about management is having ability to identify and exploit profit opportunities while managing risk. This shows that management of banks are having ability to identify and exploit profit opportunities while managing risk.

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27. Bank is having proper Governance structure.

Table 5.27

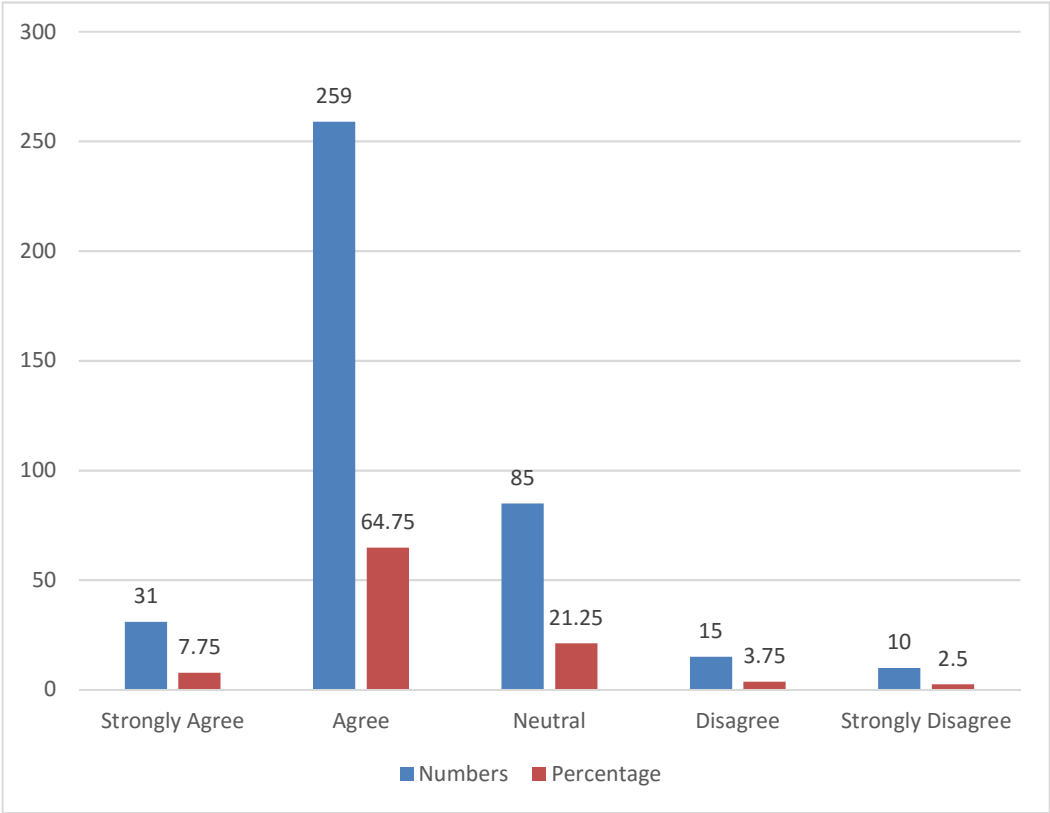| Response	Numbers	Percentage
Strongly Agree	19	4.75
Agree	188	47
Neutral	73	18.25
Disagree	107	26.75
Strongly Disagree	13	3.25
Total	400	100

Fig. No 5.27

Interpretation: Out of the total respondents 4.75% strongly agreed, 47% agreed, 18.25% neutral, 26.75% disagreed and 3.25% strongly disagreed about bank is having proper governance structure. This shows that banks are having proper governance structure.

28. Compliance with laws and regulations.

Table 5.28

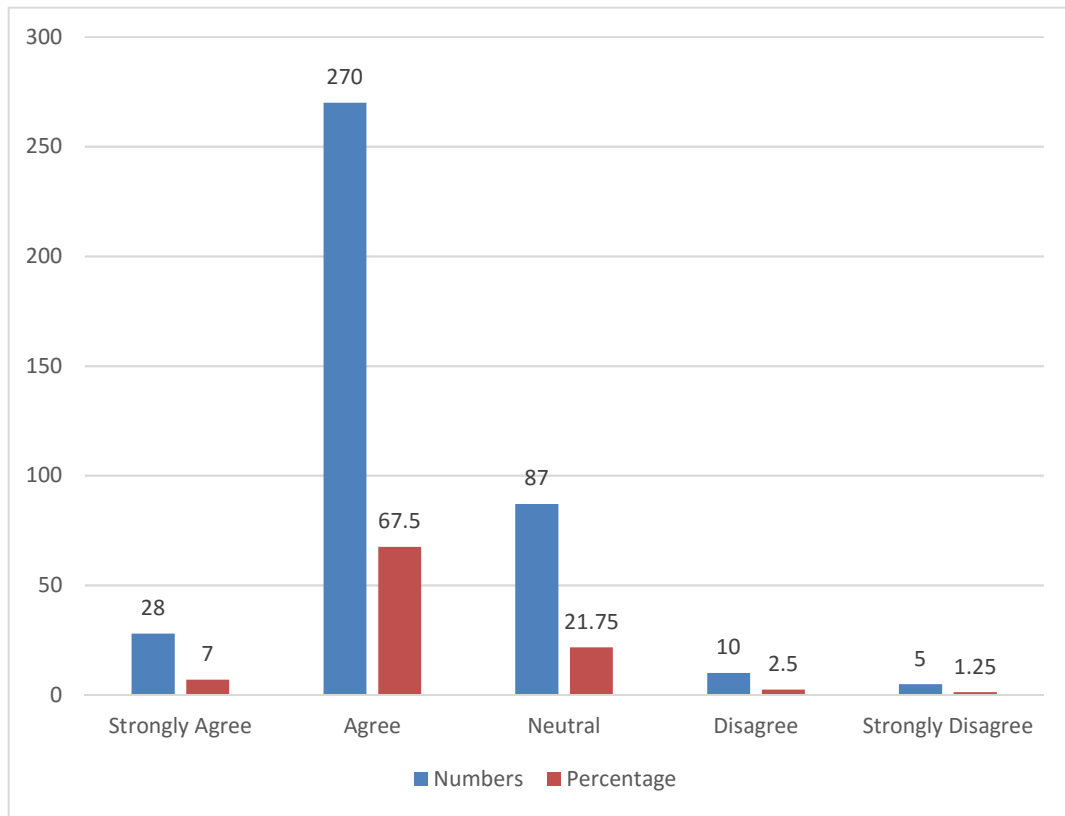| Response	Numbers	Percentage
Strongly Agree	4	1
Agree	119	29.75
Neutral	86	21.5
Disagree	177	44.25
Strongly Disagree	14	3.5
Total	400	100

Fig. No 5.28

Interpretation: Out of the total respondents 1% strongly agreed, 29.75% agreed, 21.5% neutral, 44.25% disagreed and 3.5% strongly disagreed about compliance with laws and regulations. This shows that banks comply with laws and regulations.

29. Transparency of management communications, financing reporting quality.

Table 5.29

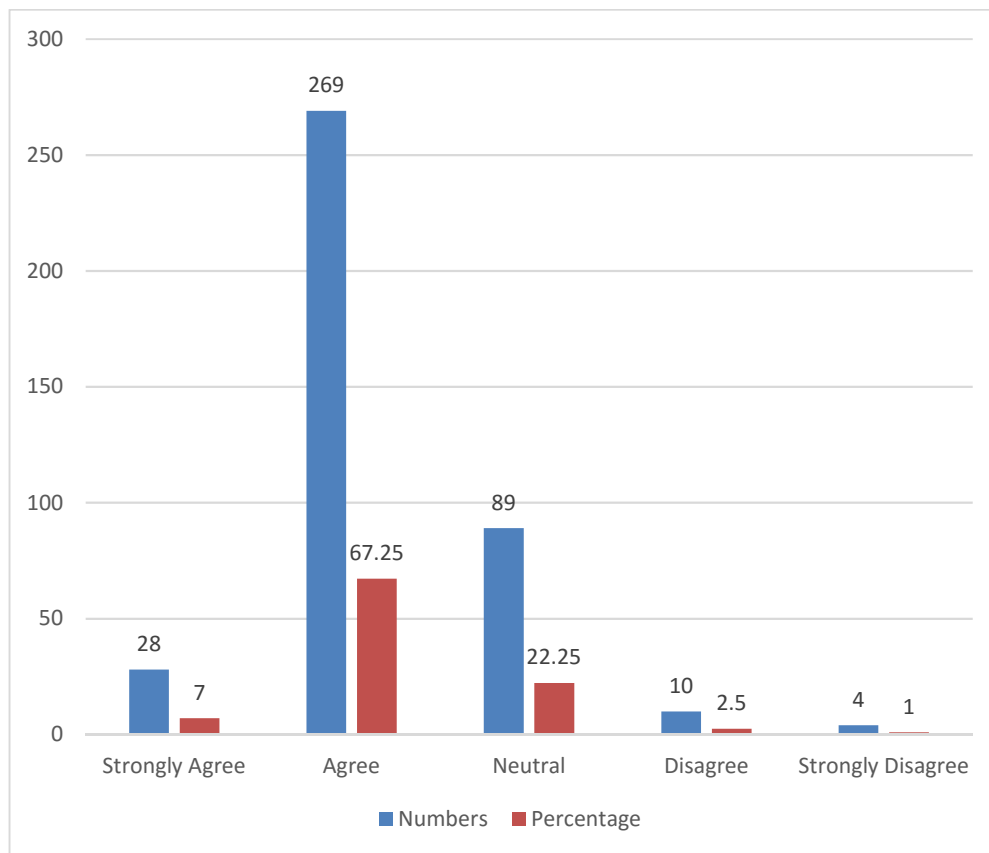| Response	Numbers	Percentage
Strongly Agree	4	1
Agree	119	29.75
Neutral	86	21.5
Disagree	177	44.25
Strongly Disagree	14	3.5
Total	400	100

Fig. No 5.29

Interpretation: Out of the total respondents 1% strongly agreed, 29.75% agreed, 21.5% neutral, 44.25% disagreed and 3.5% strongly disagreed about transparency of management communications, financing reporting quality. This shows that transparency of management communications, financing reporting quality is there in banks.

30. Our bank is managing its advances and assets in proper manner.

Table 5.30

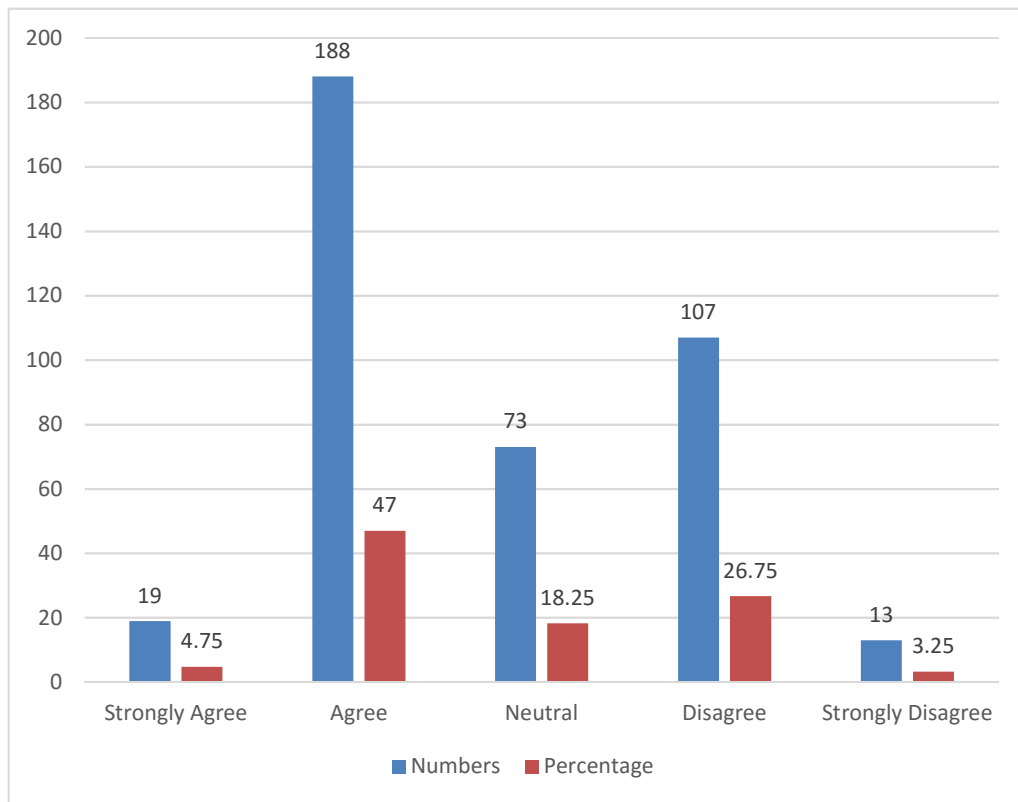| Response	Numbers	Percentage
Strongly Agree	5	1.25
Agree	122	30.5
Neutral	89	22.25
Disagree	174	43.5
Strongly Disagree	10	2.5
Total	400	100
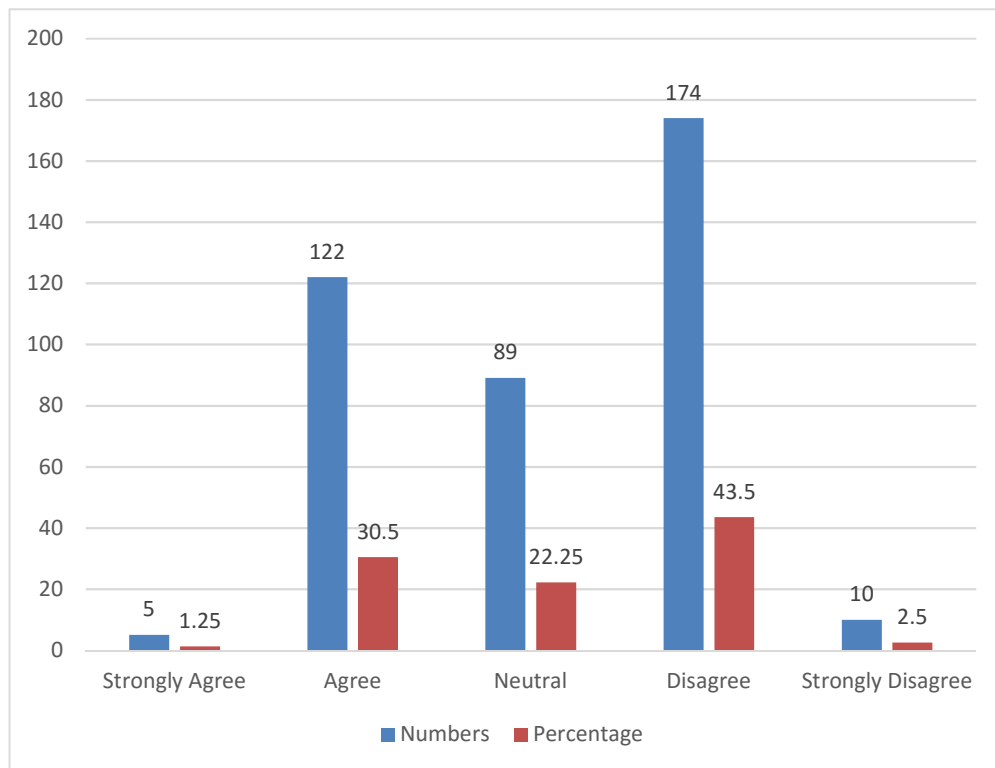
Fig. No 5.30

Interpretation: Out of the total respondents 1.25% strongly agreed, 30.5% agreed, 22.25% neutral, 43.5% disagreed and 2.5% strongly disagreed about the bank is managing its advances and assets in proper manner. This shows that the banks are managing its advancesand assets in proper manner.

31. Norms and Regulations are good.

Table 5.31

Response	Numbers	Percentage
Strongly Agree	2	0.5
Agree	41	10.25
Neutral	28	7
Disagree	318	79.5
Strongly Disagree	11	2.75
Total	400	100
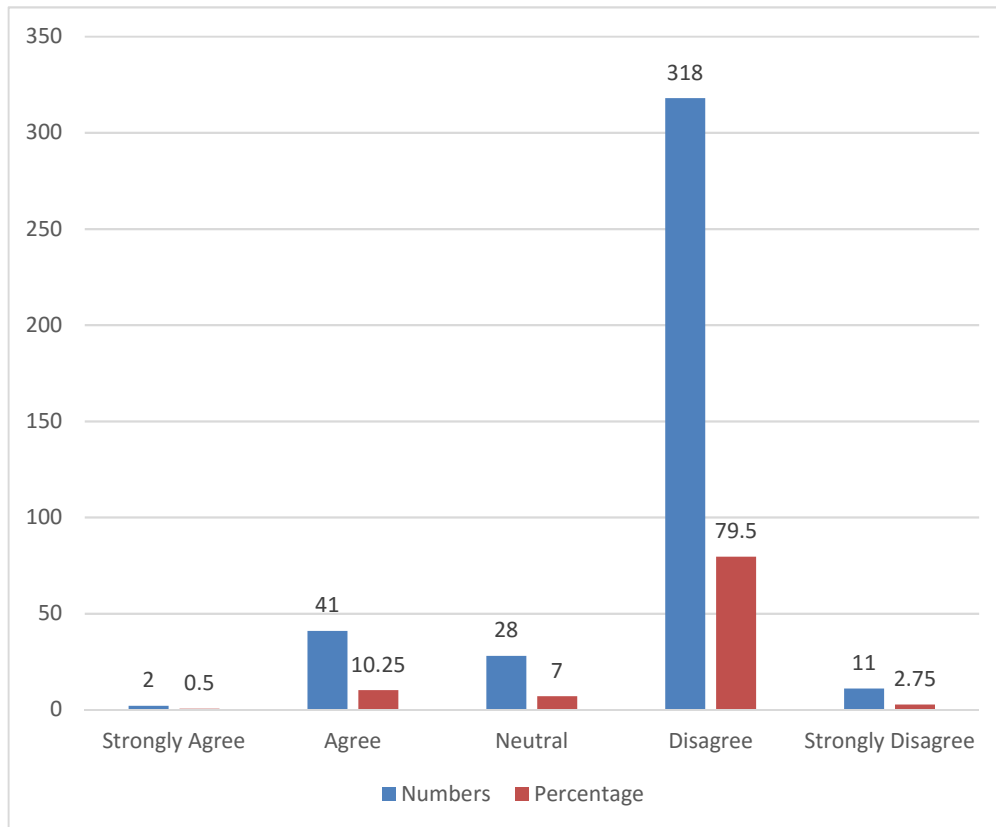
Fig. No 5.31

Interpretation: Out of the total respondents 0.5% strongly agreed, 10.25% agreed, 7% neutral, 79.5% disagreed and 2.75% strongly disagreed about norms and regulations are good. This shows that banks norms and regulations are good.

32. Internal control system is efficient.

Table 5.32

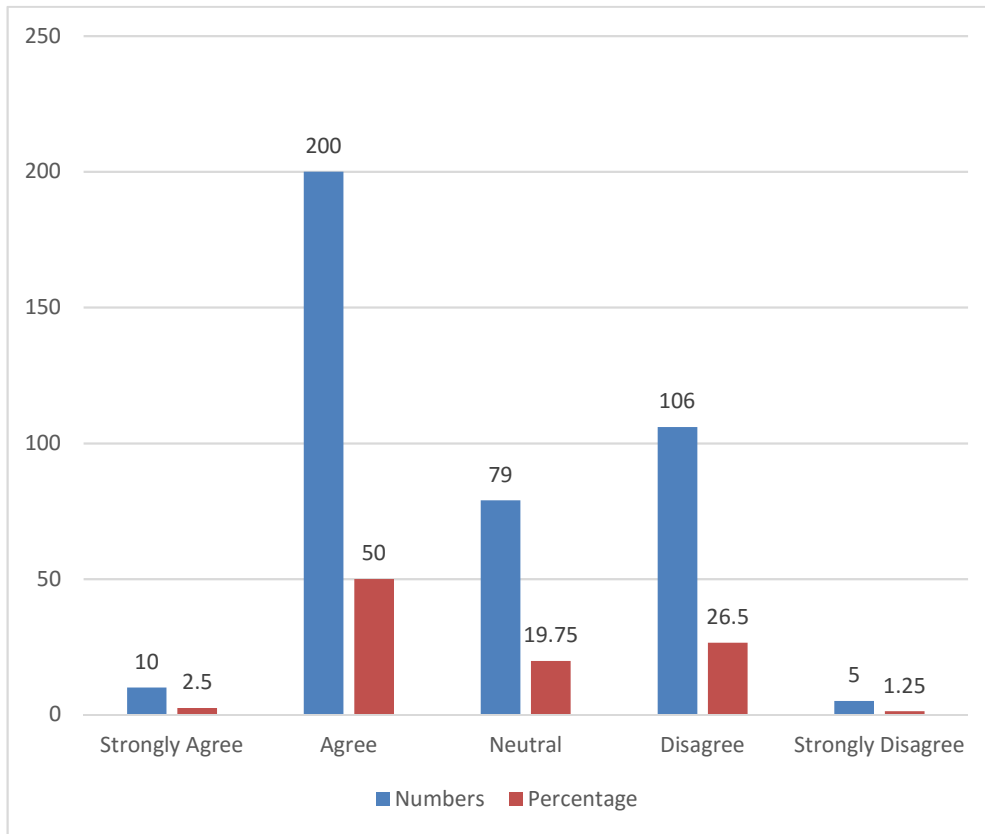| Response	Numbers	Percentage
Strongly Agree	6	1.5
Agree	91	22.75
Neutral	37	9.25
Disagree	262	65.5
Strongly Disagree	4	1
Total	400	100
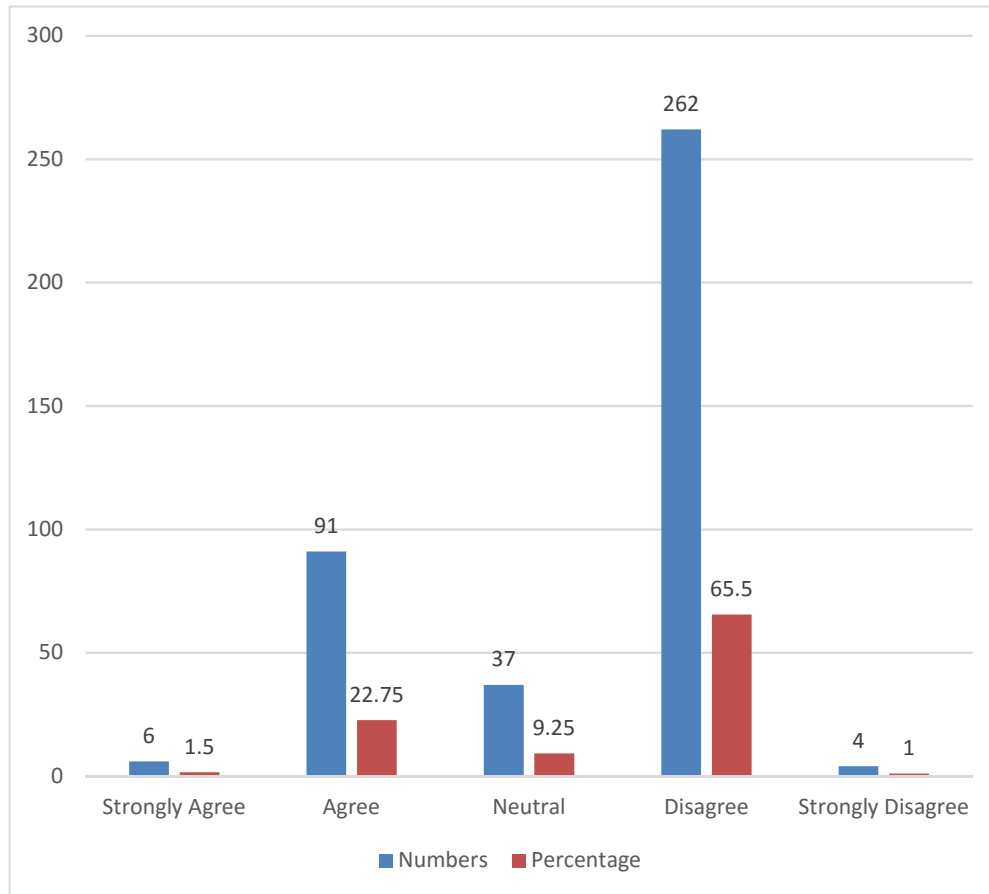
Fig. No 5.32

Interpretation: Out of the total respondents 1.5 % strongly agreed, 22.75% agreed, 9.25% neutral, 66.5% disagreed and 1% strongly disagreed about internal control system is efficient.This shows that banks internal control system is efficient.

33. Management formulates products and policies which are good for the banking

Table 5.33

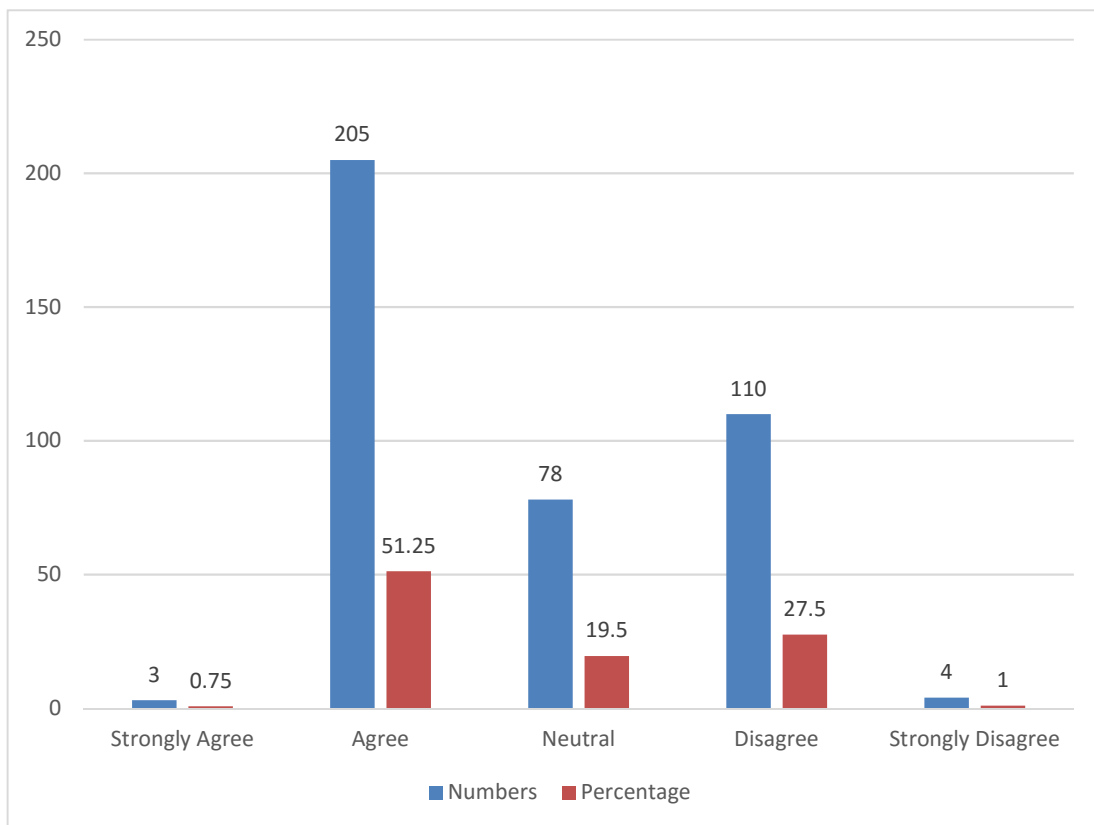| Response	Numbers	Percentage
Strongly Agree	28	7
Agree	273	68.25
Neutral	86	21.5
Disagree	10	2.5
Strongly Disagree	3	0.75
Total	400	100
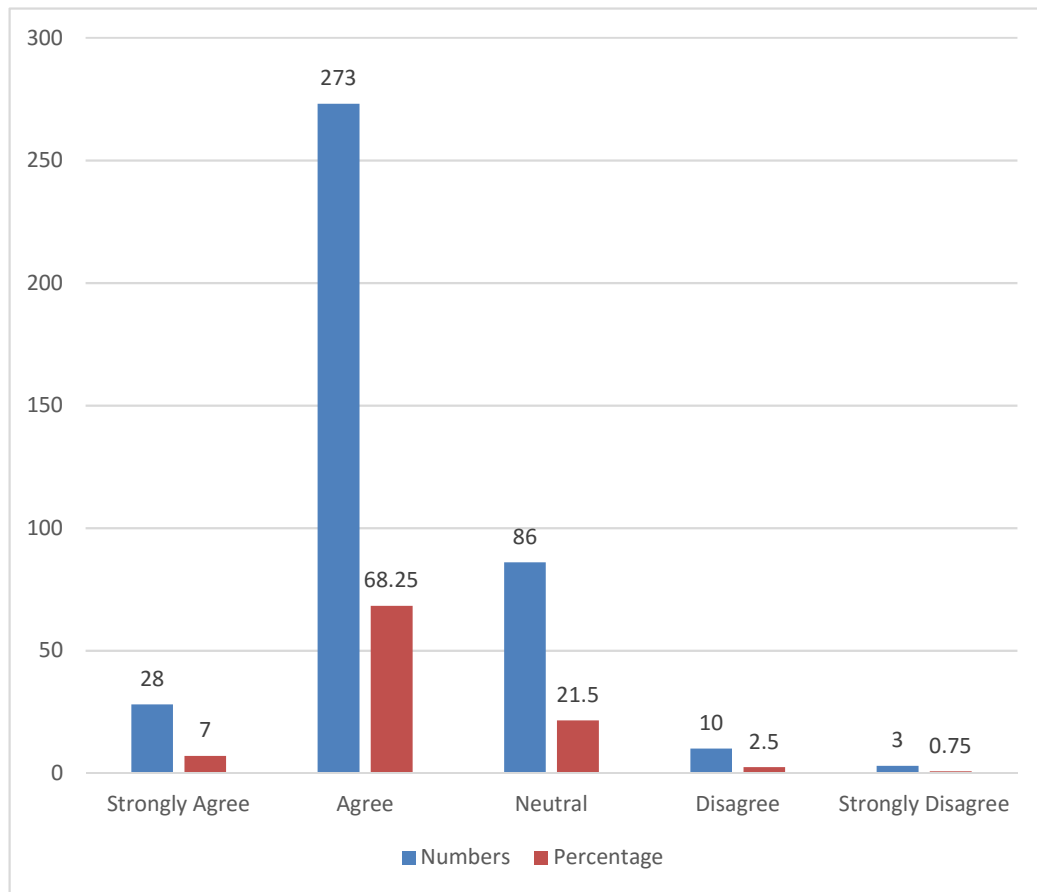
Fig. No 5.33

Interpretation: Out of the total respondents 7% strongly agreed, 68.25% agreed, 21.5% neutral, 2.5% disagreed and 0.75% strongly disagreed about Management formulates products and policies which are good for the banking This shows that management formulates products and policies which are good for the banking.

34. Management is takes measures to minimize the risk

Table 5.34

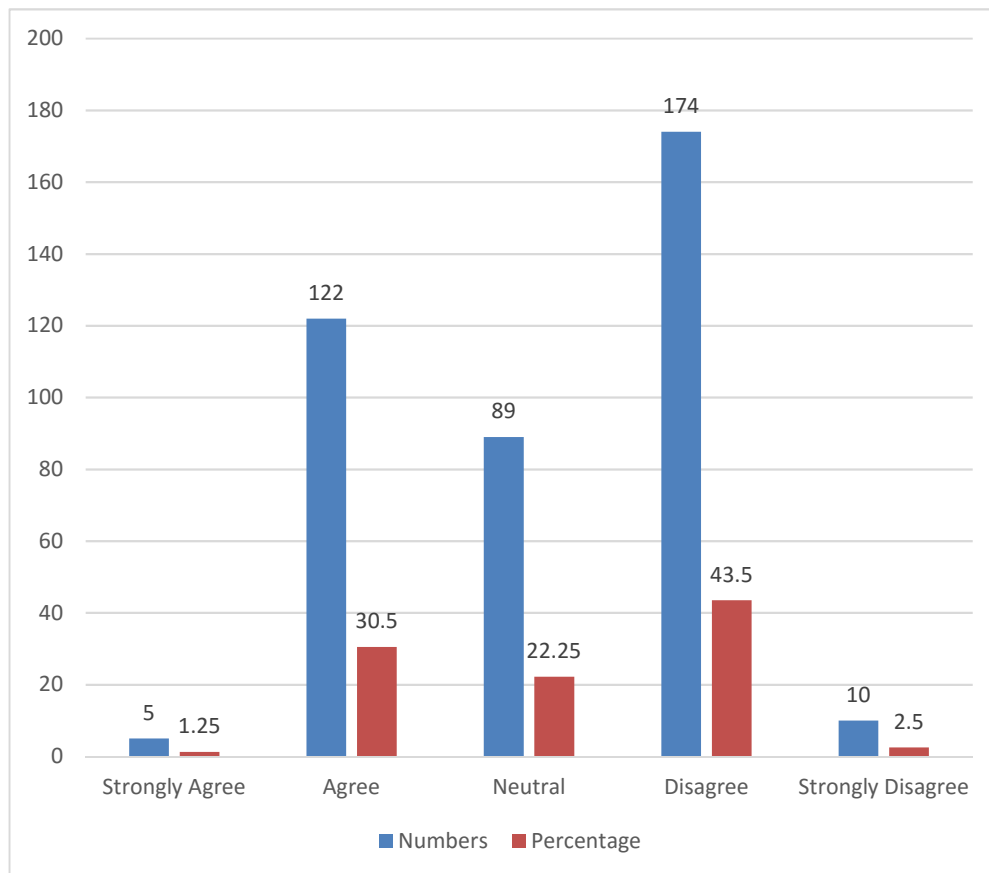| Response	Numbers	Percentage
Strongly Agree	28	7
Agree	258	64.5
Neutral	99	24.75
Disagree	11	2.75
Strongly Disagree	4	1
Total	400	100
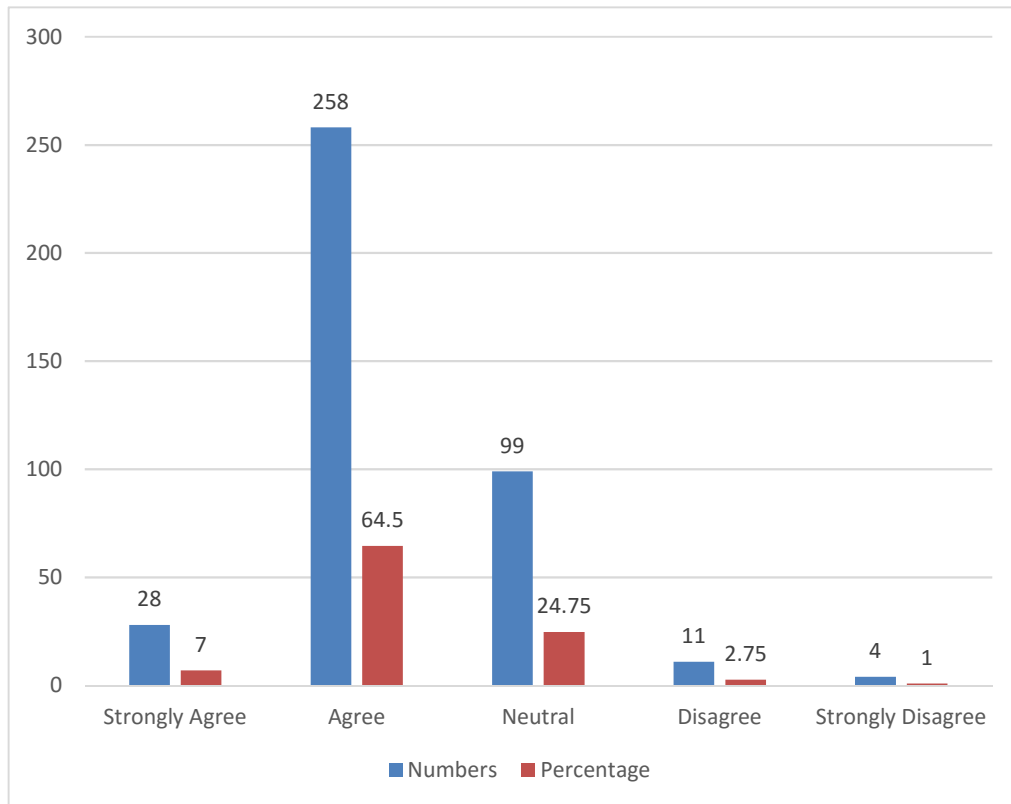
Fig. No 5.34

Interpretation: Out of the total respondents 7% strongly agreed, 64.5% agreed, 24.75% neutral, 2.75% disagreed and 1% strongly disagreed about management is takes measures to minimize the risk. This show that management of banks takes measures to minimize the risk.

35. Management is capable to manage all types of adversities

Table 5.35

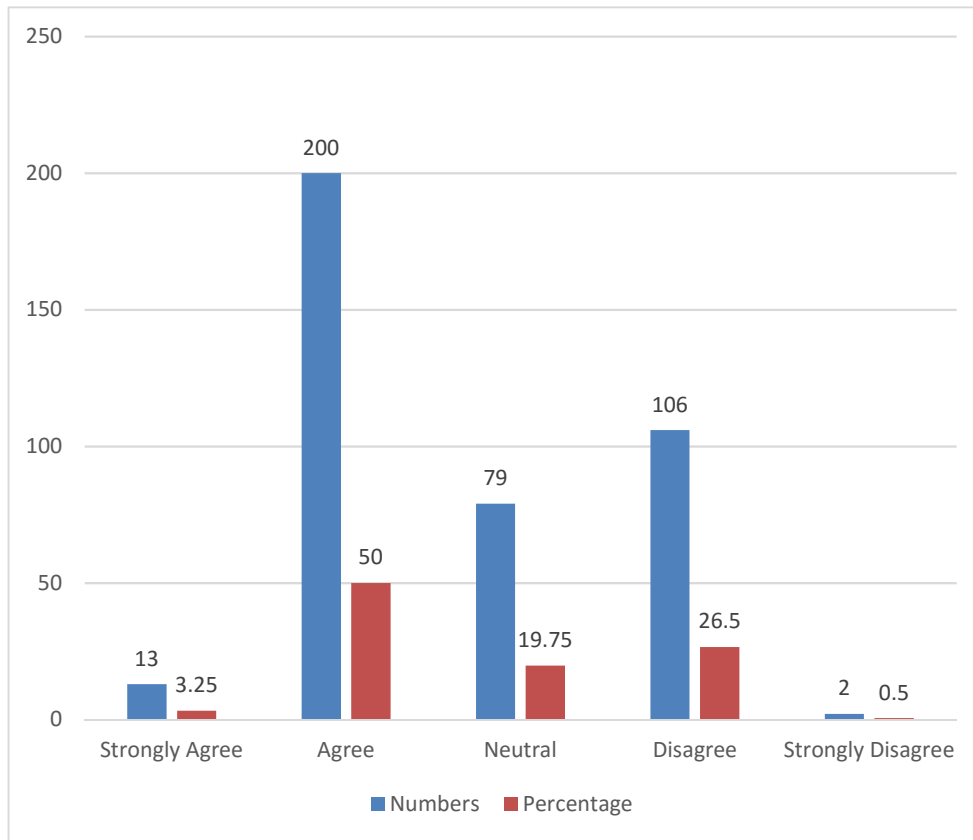| Response	Numbers	Percentage
Strongly Agree	27	6.75
Agree	232	58
Neutral	84	21
Disagree	41	10.25
Strongly Disagree	16	4
Total	400	100
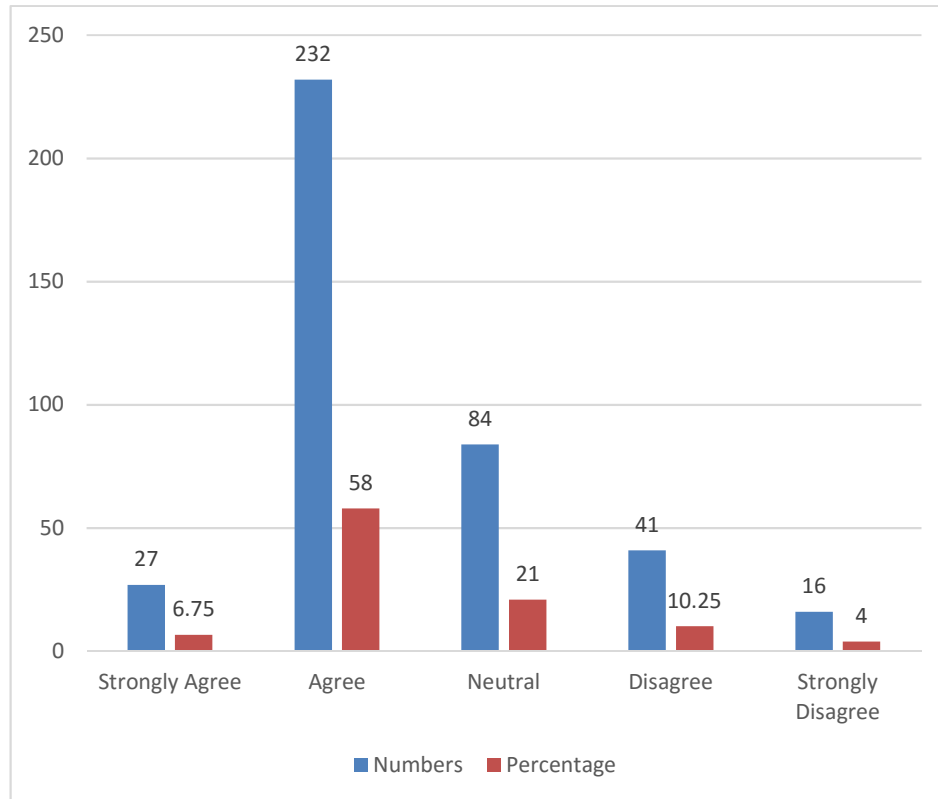
Fig. No 5.35

Interpretation: Out of the total respondents 6.75% strongly agreed, 58% agreed, 21% neutral, 10.25% disagreed and 4% strongly disagreed about management is capable to manage all types of adversities. This shows that management of banks are capable to manageall types of adversities.

36. Management takes actions to increase shareholder funds (Tier-I capital) for improvingthe bank position.

Table 5.36

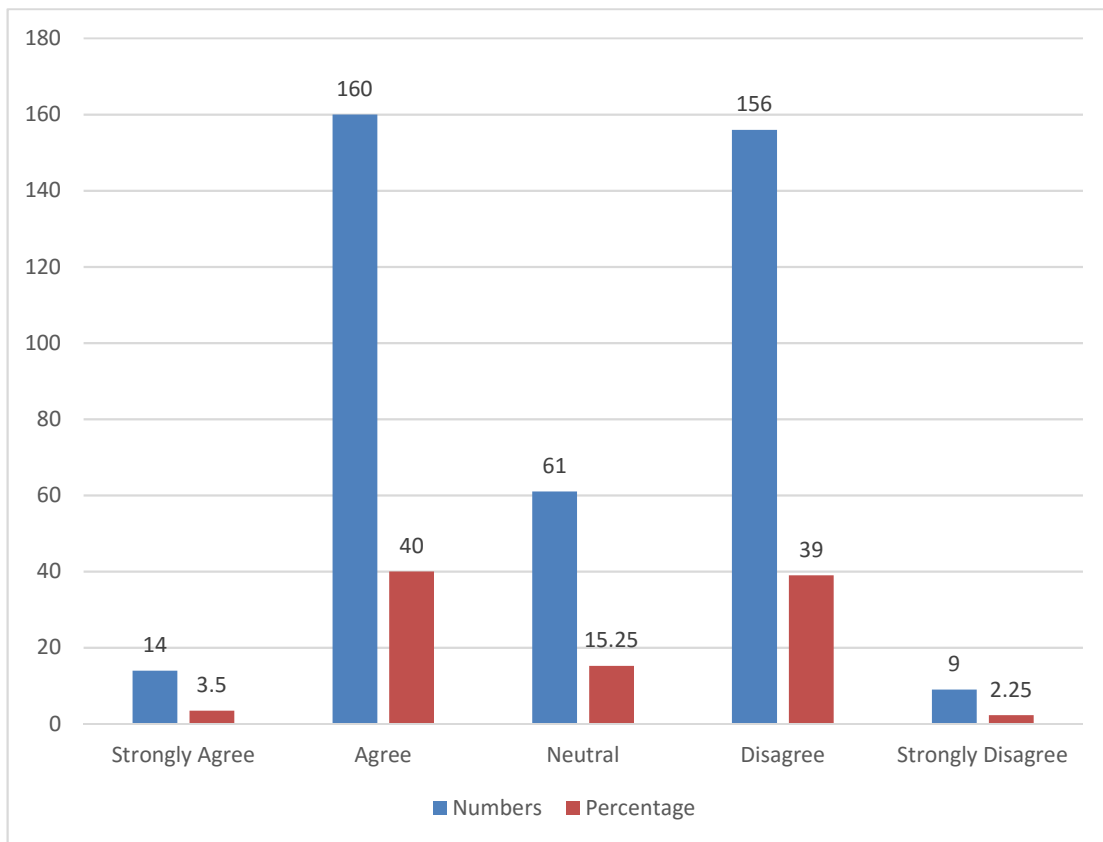| Response	Numbers	Percentage
Strongly Agree	9	2.25
Agree	181	45.25
Neutral	179	44.75
Disagree	12	3
Strongly Disagree	19	4.75
Total	400	100
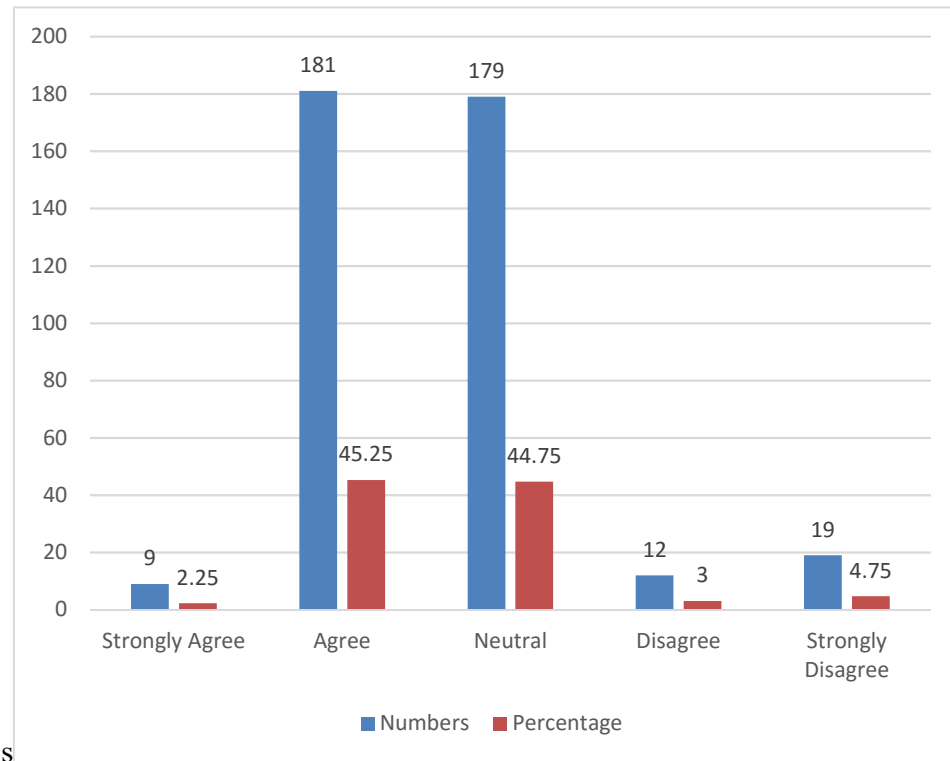
Fig. No 5.36

Interpretation: Out of the total respondents 2.25% strongly agreed, 45.25% agreed, 44.75%neutral, 3% disagreed and 4.75% strongly disagreed about Management takes actions to increase shareholder funds (Tier-I capital) for improving the bank position. This shows that management takes actions to increase shareholder funds (Tier-I capital) for improving the bank position.

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37. Management takes suitable action to take more borrowing (Tier-II capital) for improvingthe bank business.

Table 5.37

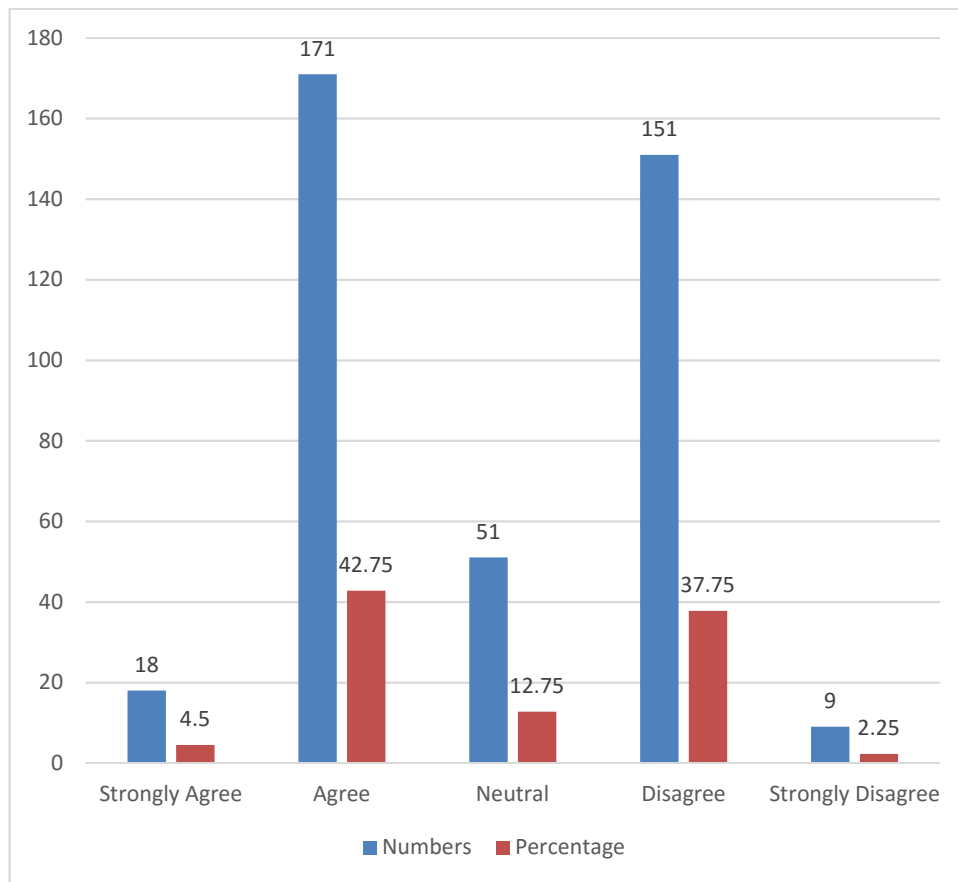| Response	Numbers	Percentage
Strongly Agree	10	2.5
Agree	75	18.75
Neutral	205	51.25
Disagree	89	22.25
Strongly Disagree	21	5.25
Total	400	100
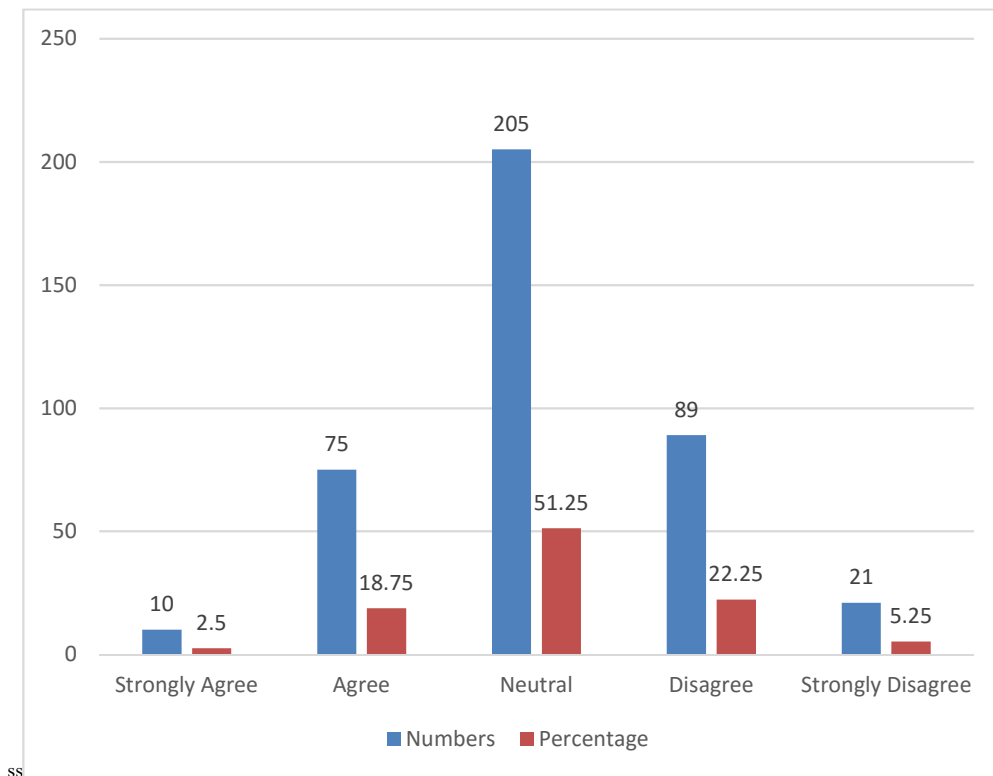
Fig. No 5.37

Interpretation: Out of the total respondents 2.5% strongly agreed, 18.75% agreed, 51.25% neutral, 22.25% disagreed and 5.25% strongly disagreed about Management takes suitable action to take more borrowing (Tier-II capital) for improving the bank business. This shows that management takes suitable action to take more borrowing (Tier-II capital) for improvingthe bank business.

38. We strictly abide the BASEL-III norms.

Table 5.38

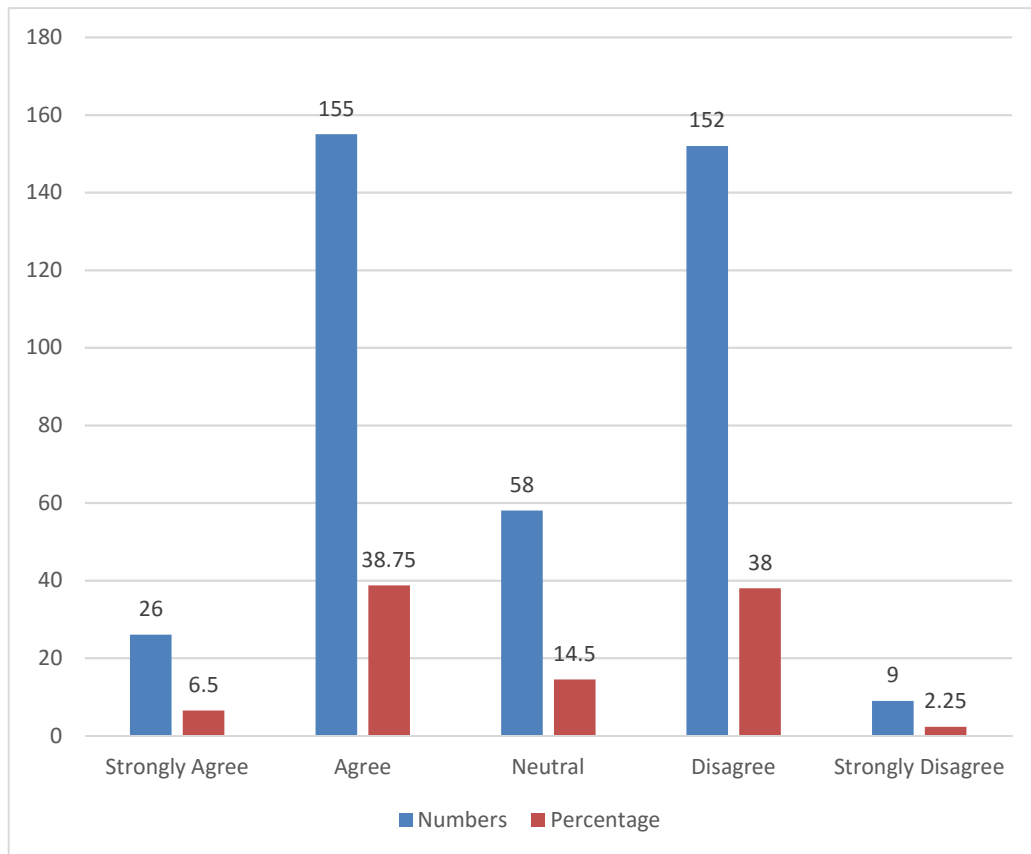| Response	Numbers	Percentage
Strongly Agree	30	7.5
Agree	268	67
Neutral	85	21.25
Disagree	12	3
Strongly Disagree	5	1.25
Total	400	100
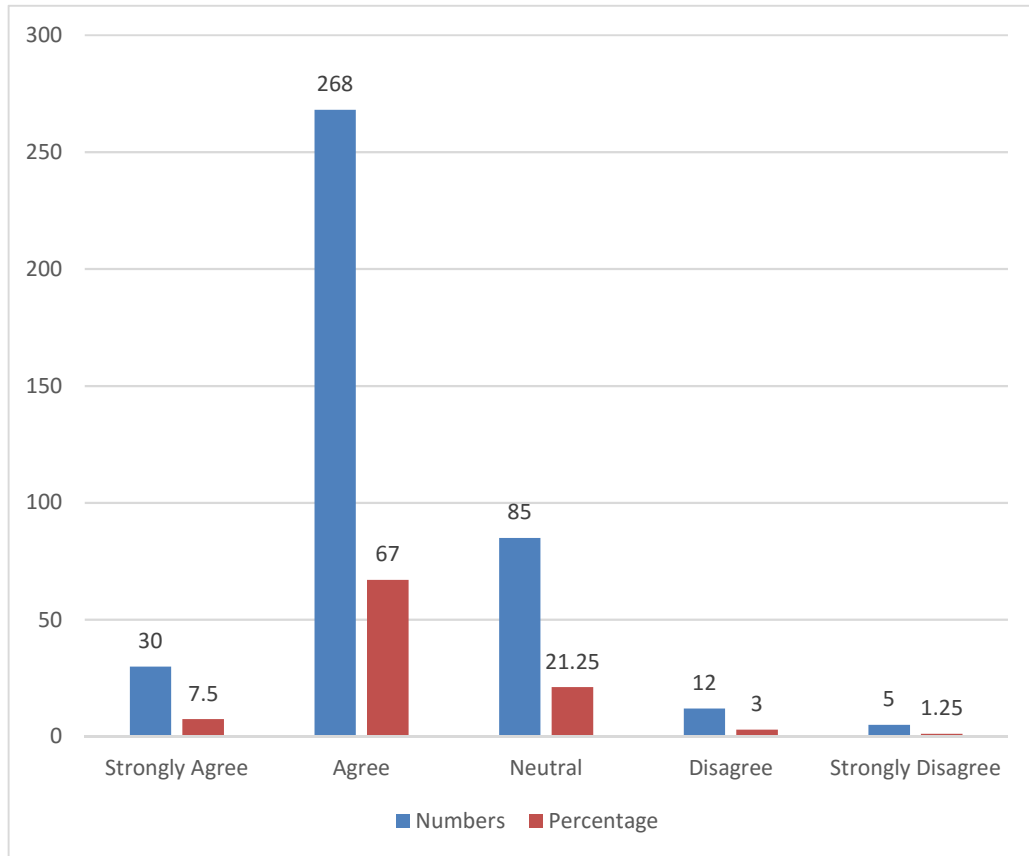
Fig. No 5.38

Interpretation: Out of the total respondents 7.5% strongly agreed, 67% agreed, 21.25% neutral, 3% disagreed and 1.25% strongly disagreed about banks strictly abide the BASEL- III norms. This shows that banks strictly abide the BASEL-III norms

39. No transfer policy does affect the performance.

Table 5.39

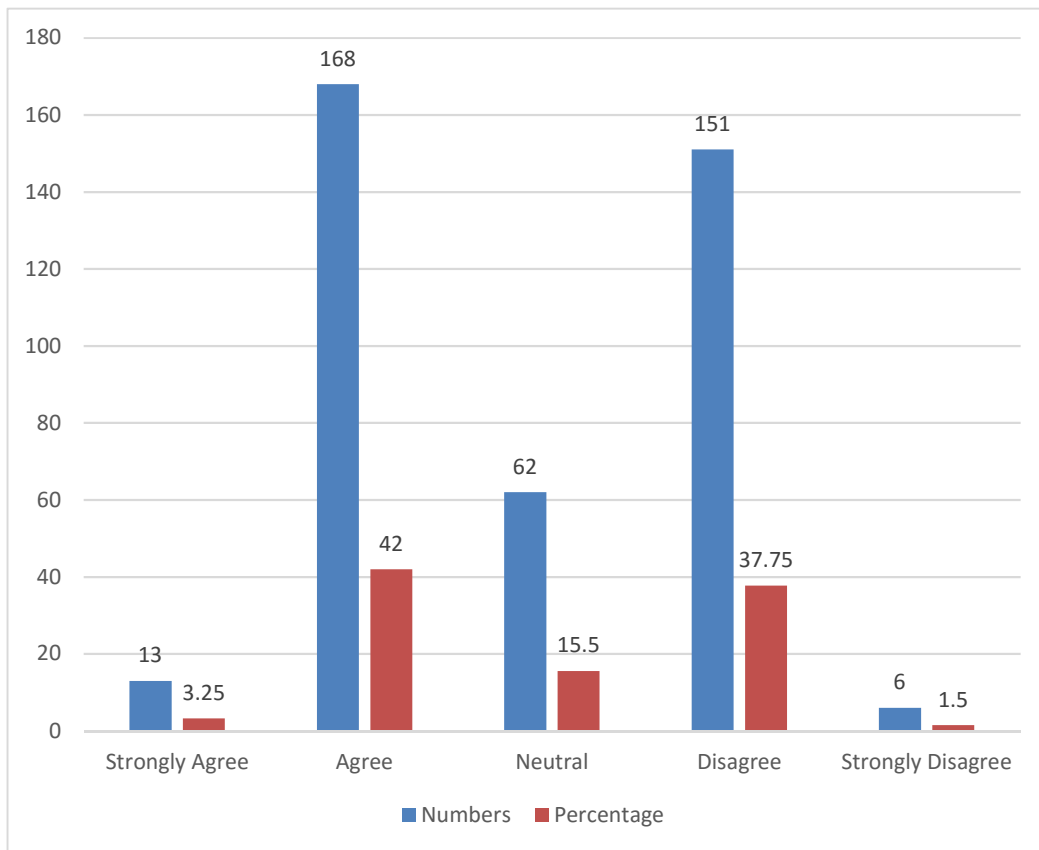| Response	Numbers	Percentage
Strongly Agree	31	7.75
Agree	259	64.75
Neutral	85	21.25
Disagree	15	3.75
Strongly Disagree	10	2.5
Total	400	100
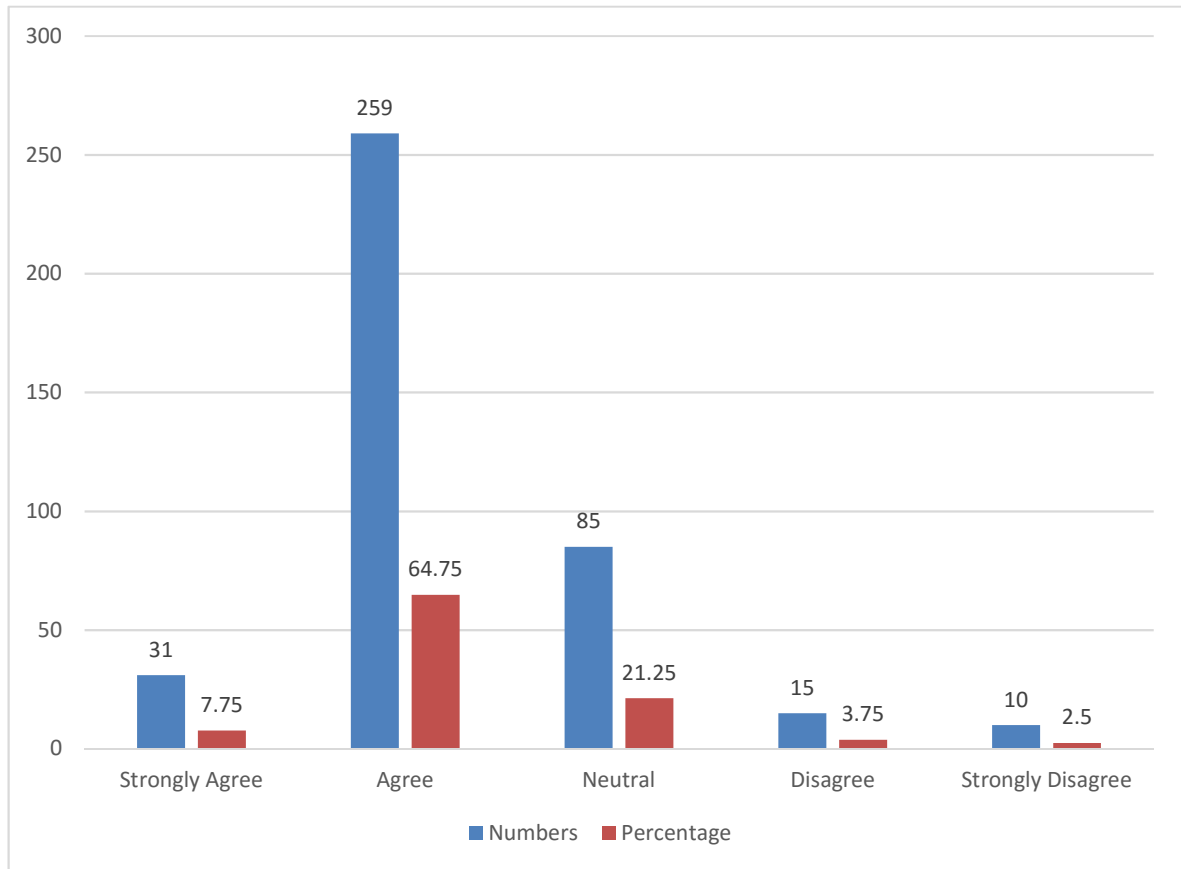
Fig. No 5.39

Interpretation: Out of the total respondents 7.75% strongly agreed, 64.75% agreed, 21.25% neutral, 3.75% disagreed and 2.5% strongly disagreed about No transfer policy does affect your performance. This shows that No transfer policy does affect the performance.

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40. Bank is having proper communication and control using software.

Table 5.40

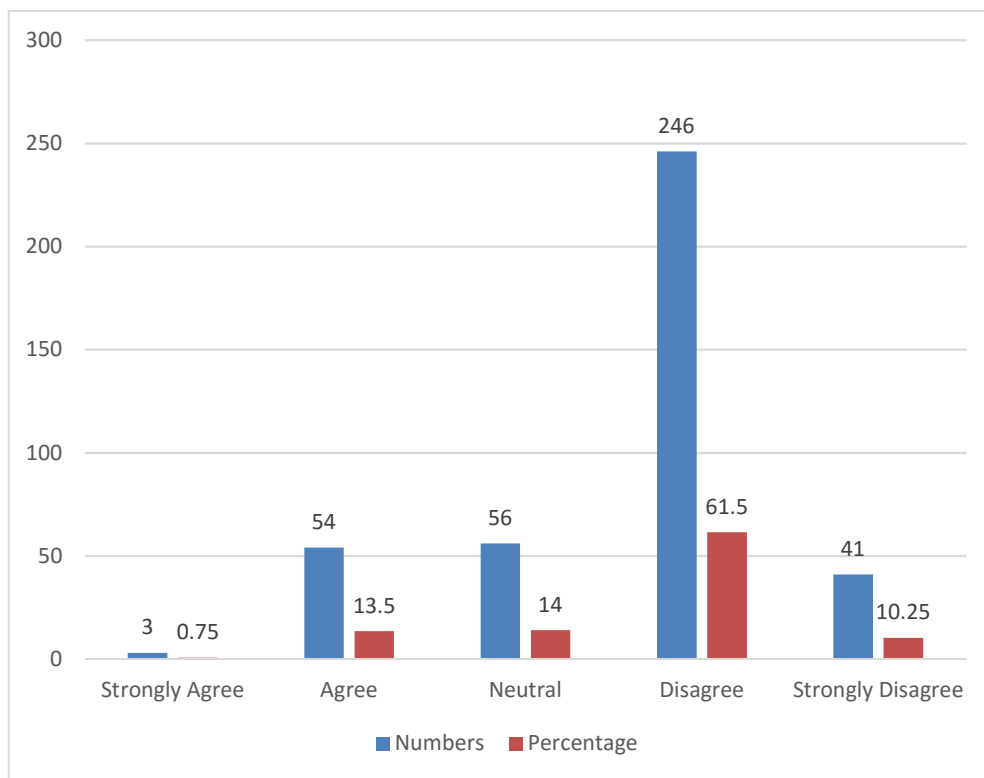| Response	Numbers	Percentage
Strongly Agree	28	7
Agree	270	67.5
Neutral	87	21.75
Disagree	10	2.5
Strongly Disagree	5	1.25
Total	400	100
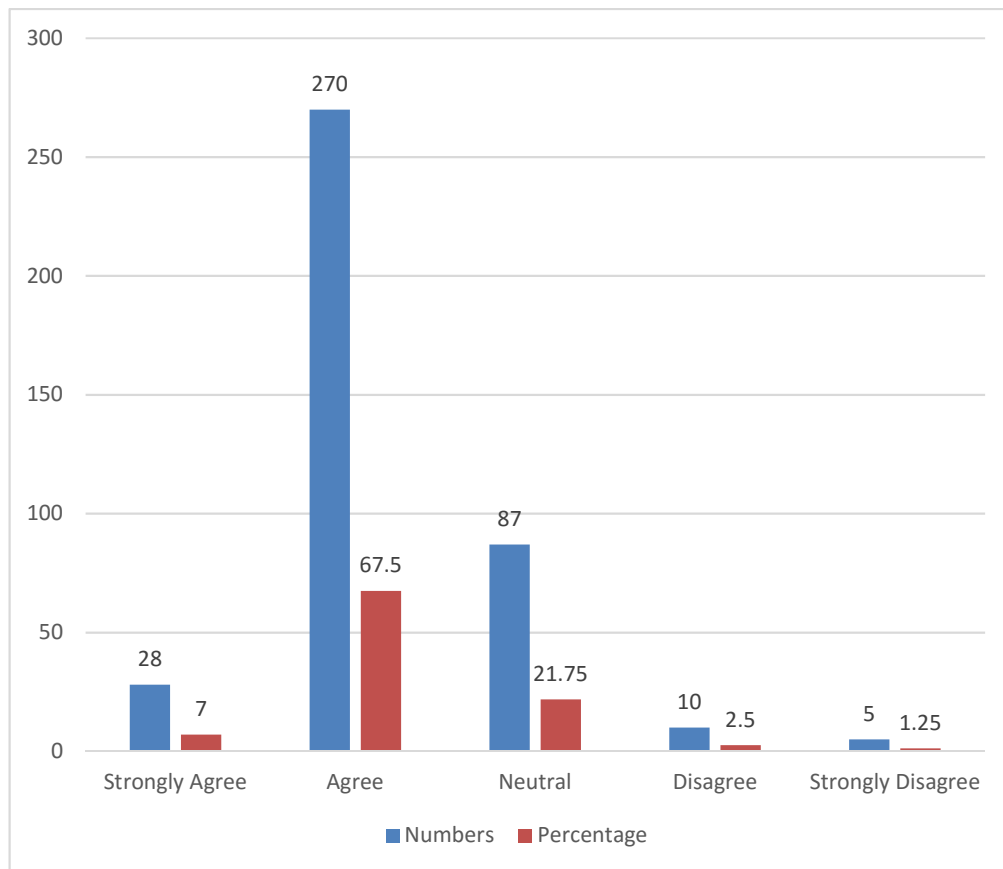
Fig. No 5.40

Interpretation: Out of the total respondents 7% strongly agreed, 67.5% agreed, 21.75% neutral, 2.5% disagreed and 1.25% strongly disagreed about Bank is having proper communication and control using software. This shows that Bank is having proper communication and control using software.

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41. Bank is having all types of products to grow in future

Table 5.41

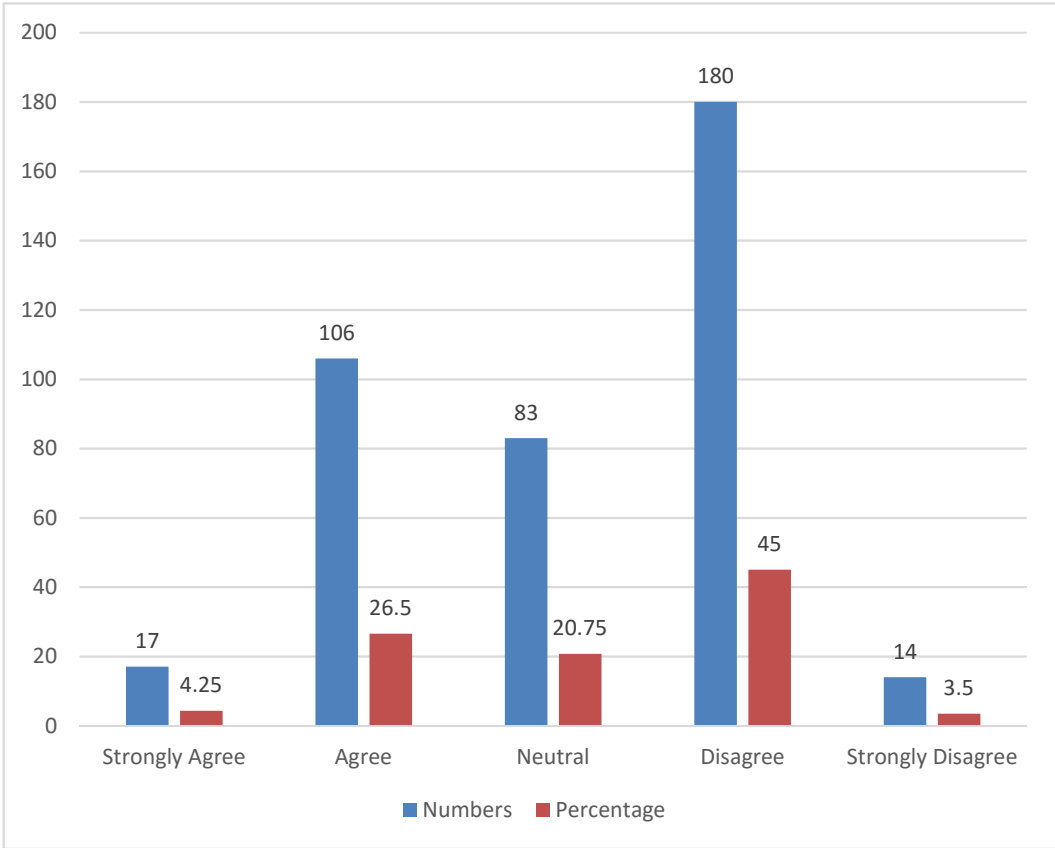| Response	Numbers	Percentage
Strongly Agree	28	7
Agree	269	67.25
Neutral	89	22.25
Disagree	10	2.5
Strongly Disagree	4	1
Total	400	100
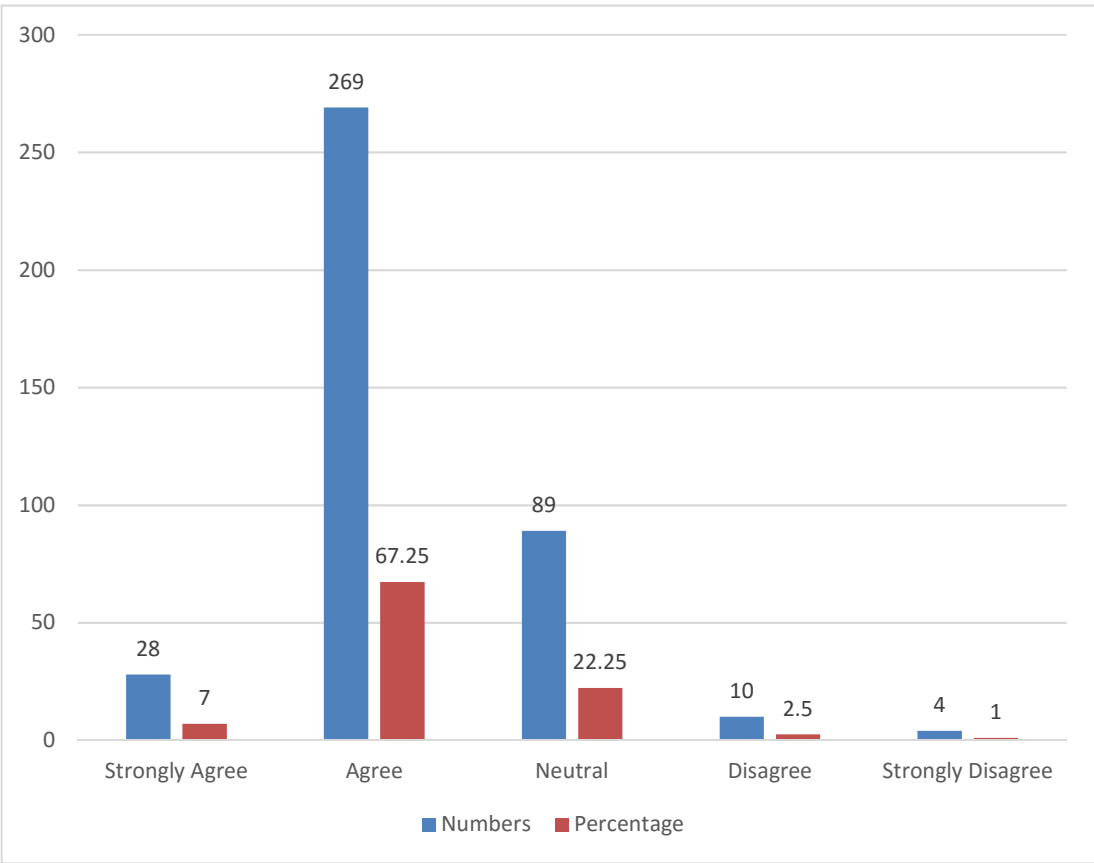
Fig. No 5.41

Interpretation: Out of the total respondents 7% strongly agreed, 67.25% agreed, 22.25% neutral, 2.5% disagreed and 1% strongly disagreed about bank is having all types of products to grow in future. This shows that banks are having all types of products to grow in future.

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42. Banks management keeps designing the new product for growing banking business.

Table 5.42

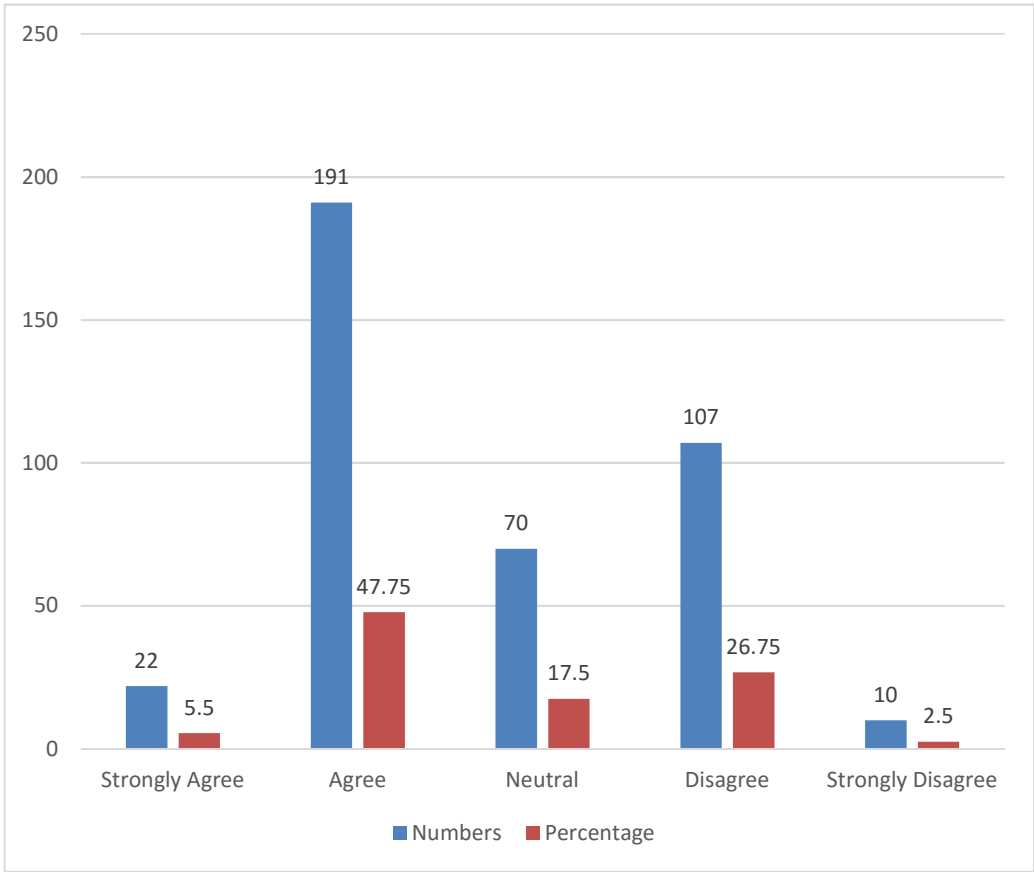| Response	Numbers	Percentage
Strongly Agree	19	4.75
Agree	188	47
Neutral	73	18.25
Disagree	107	26.75
Strongly Disagree	13	3.25
Total	400	100
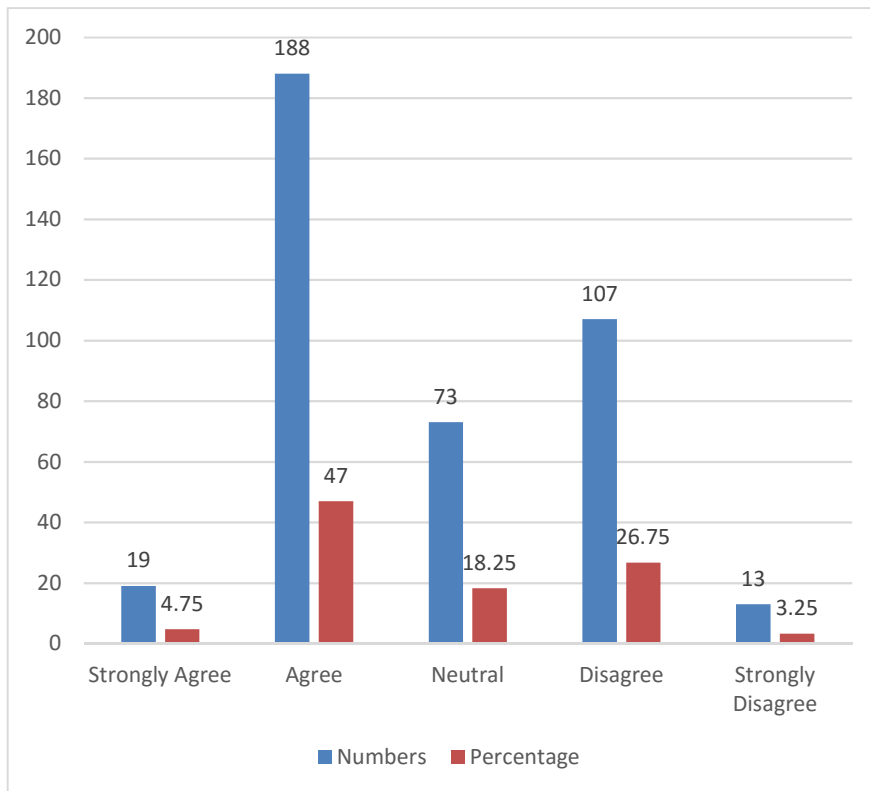
Fig. No 5.42

Interpretation: Out of the total respondents 4.75% strongly agreed, 47% agreed, 18.25% neutral, 26.75% disagreed and 3.25% strongly disagreed about banks management keeps designing the new product for growing banking business. This shows that bank's management keep designing the new product for growing banking business.

43. Management is having ability to identify and take profit opportunities while managingrisk.

Table 5.43

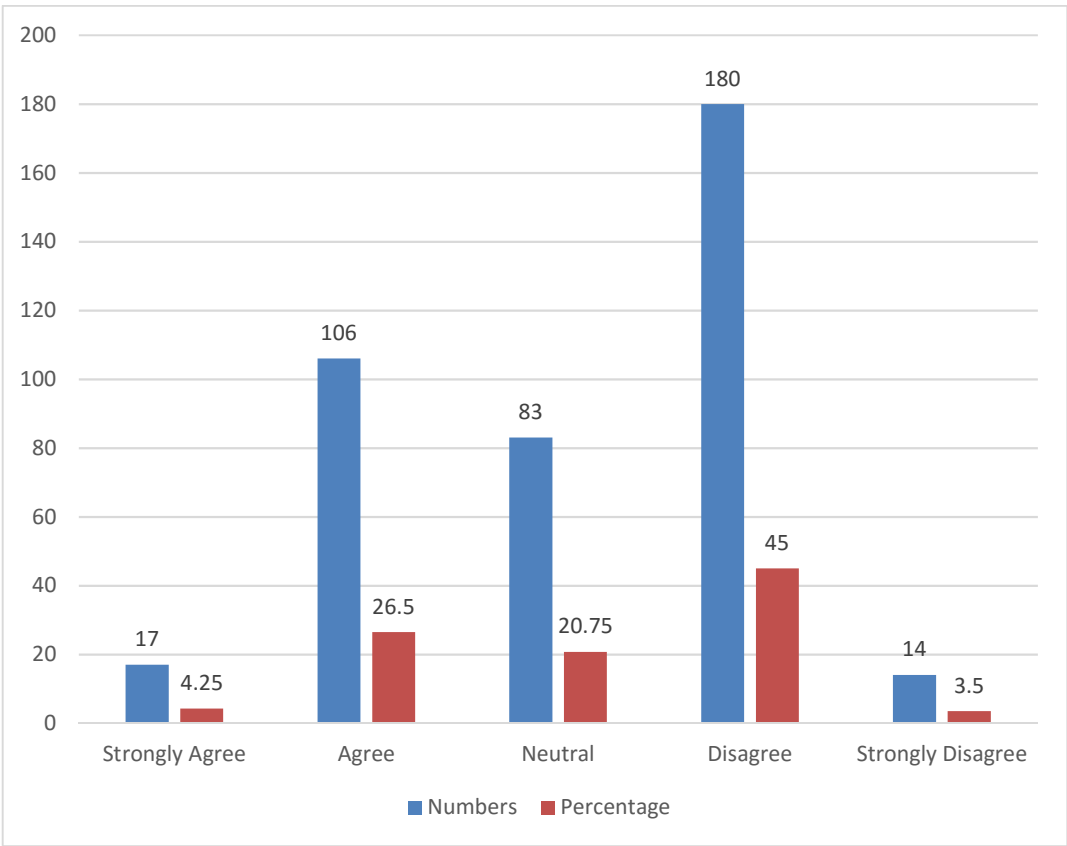| Response	Numbers	Percentage
Strongly Agree	10	2.5
Agree	200	50
Neutral	79	19.75
Disagree	106	26.5
Strongly Disagree	5	1.25
Total	400	100
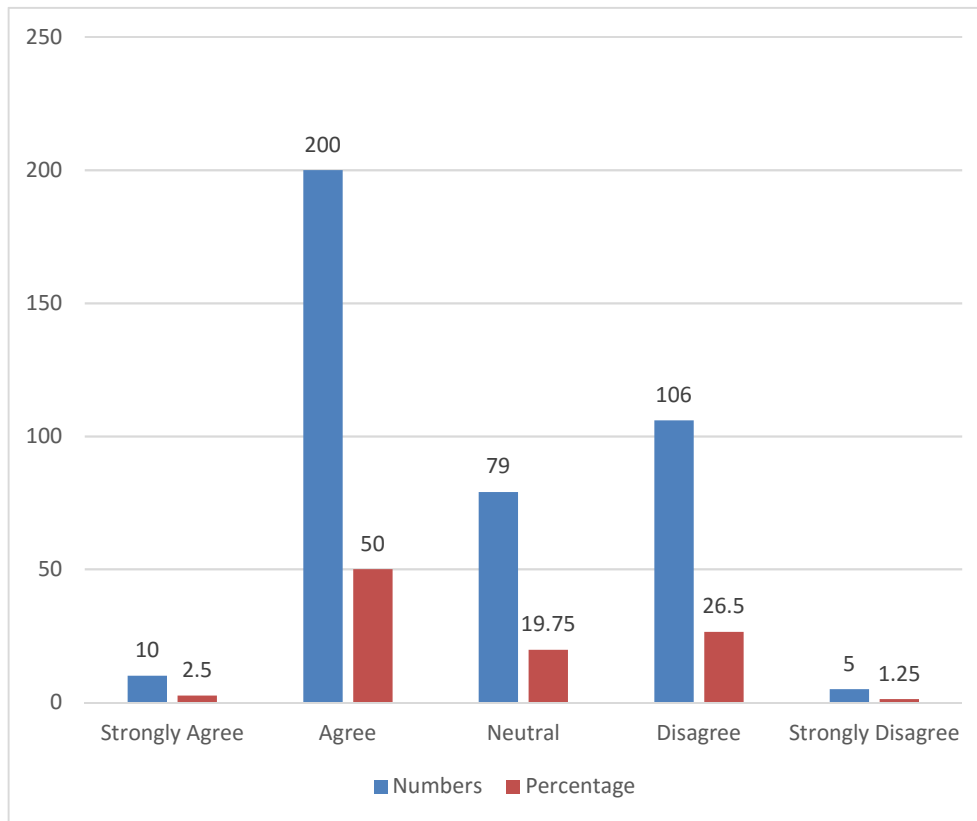
Fig. No 5.43

Interpretation: Out of the total respondents 2.5% strongly agreed, 50% agreed, 19.75% neutral, 26.5% disagreed and 1.25% strongly disagreed about management is having ability to identify and take profit opportunities while managing risk. This shows that management is having ability to identify and take profit opportunities while managing risk.

44. Bank timely update its business strategy time to time.

Table 5.44

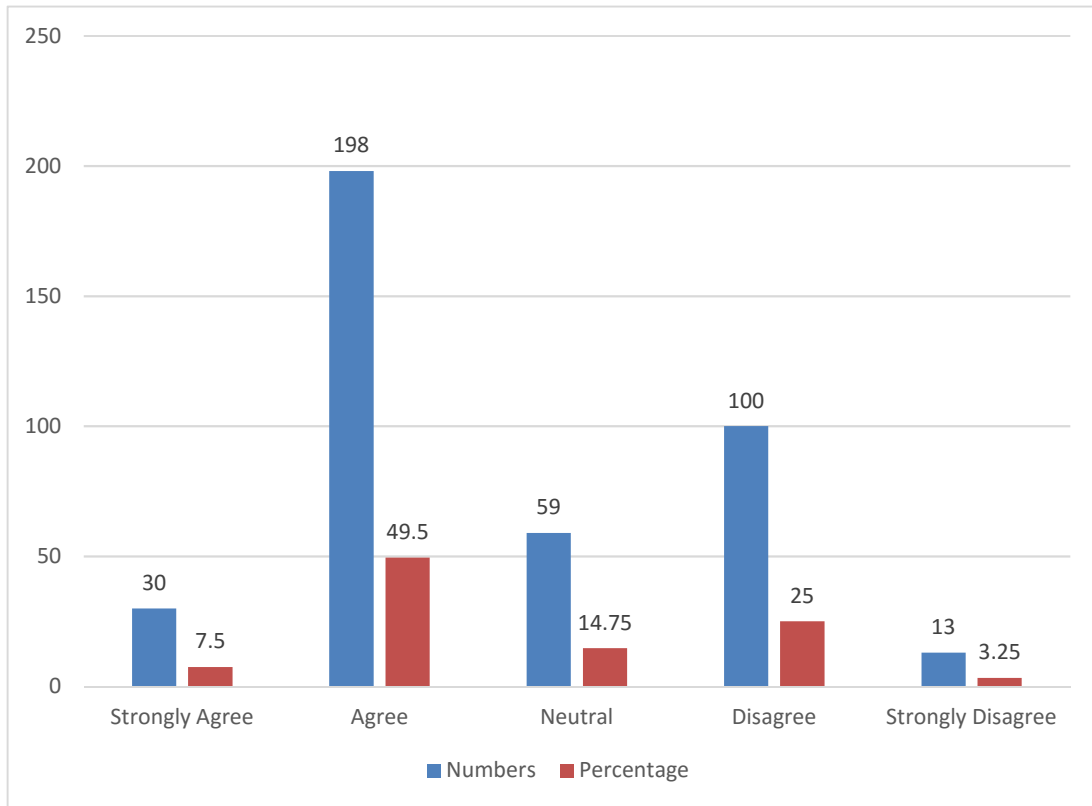| Response	Numbers	Percentage
Strongly Agree	3	0.75
Agree	205	51.25
Neutral	78	19.5
Disagree	110	27.5
Strongly Disagree	4	1
Total	400	100
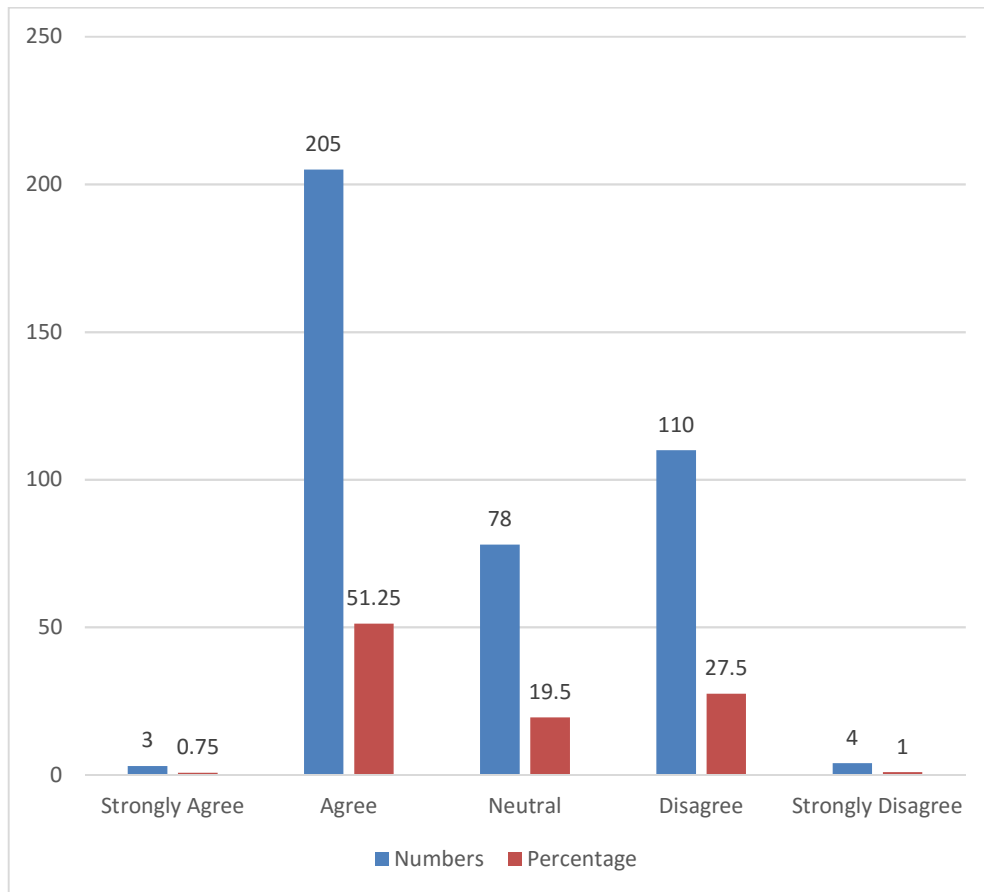
Fig. No 5.44

Interpretation: Out of the total respondents 0.75% strongly agreed, 51.25% agreed, 19.5%neutral, 27.5% disagreed and 1% strongly disagreed about bank timely update its business policy time to time. This shows that bank timely update its business strategy time to time.

45. Bank is capable to encounter to the changing environment.

Table 5.45

Response	Numbers	Percentage
Strongly Agree	5	1.25
Agree	122	30.5
Neutral	89	22.25
Disagree	174	43.5
Strongly Disagree	10	2.5
Total	400	100
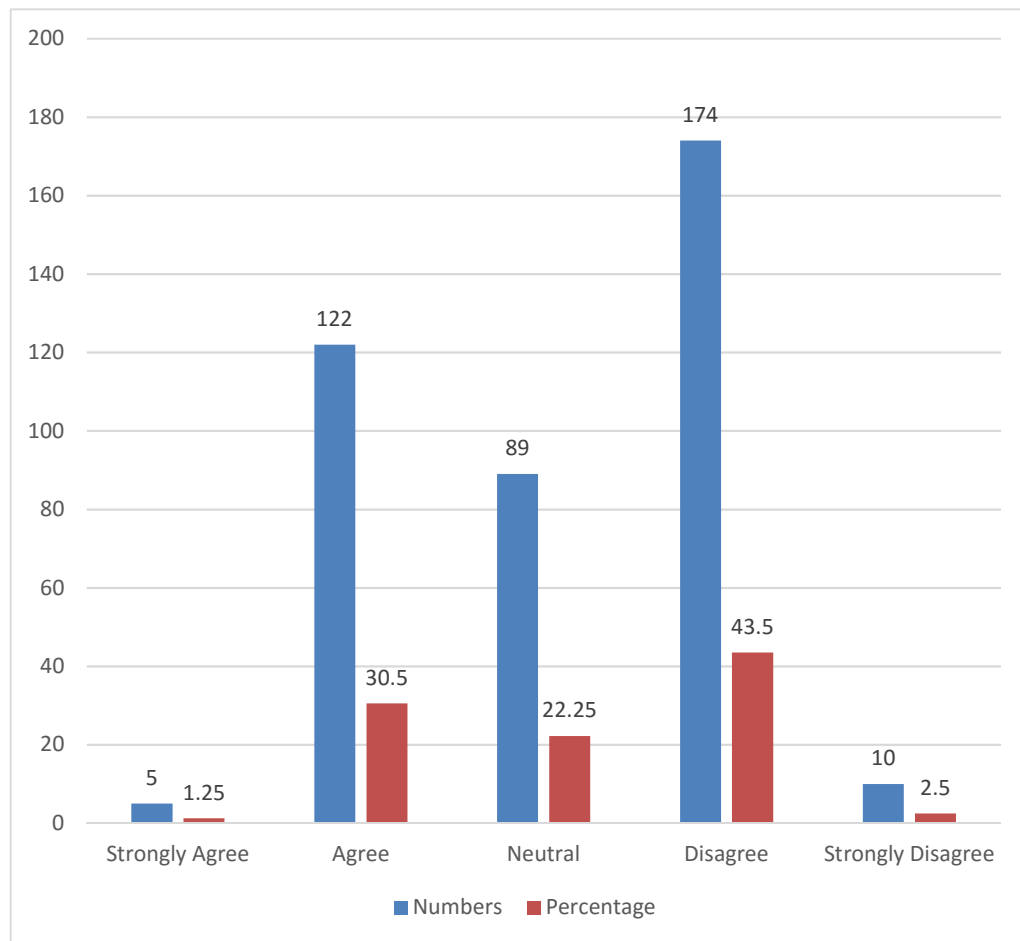
Fig. No 5.45

Interpretation: Out of the total respondents 1.25% strongly agreed, 30.5% agreed, 22.25% neutral, 43.5% disagreed and 2.5% strongly disagreed about bank is capable to encounter to the changing environment. This shows that banks are capable to encounter to the changing environment.

E- Earnings

46. Bank has appropriate return to grow its operations.

Table 5.46

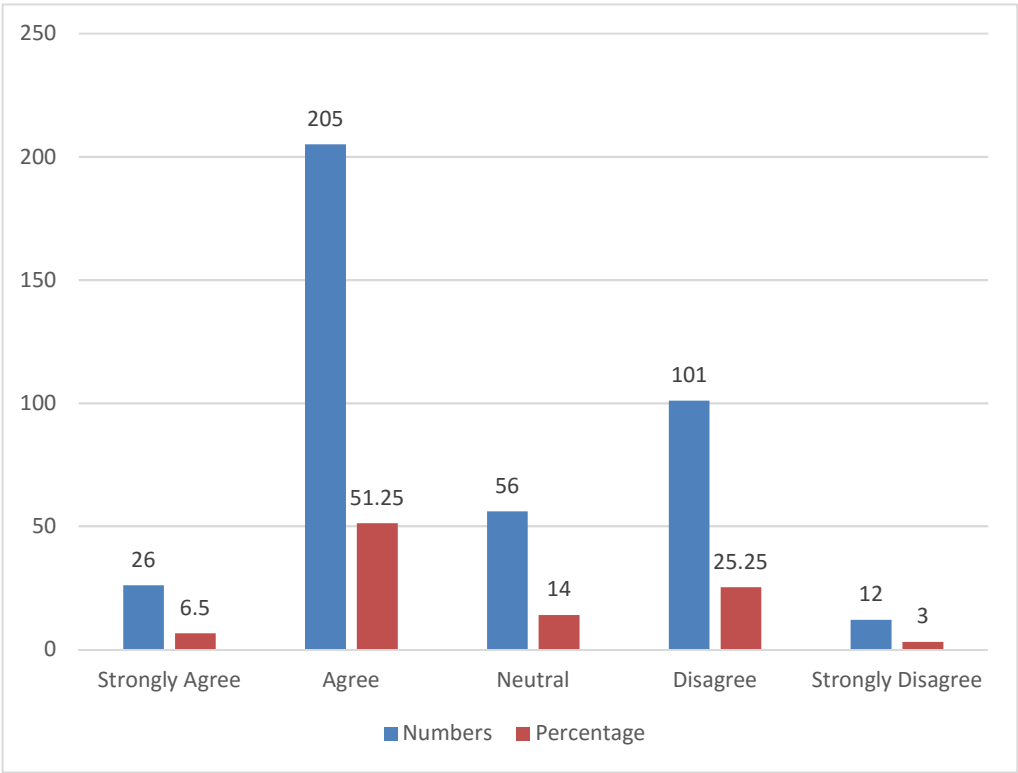| Response	Numbers	Percentage
Strongly Agree	30	7.5
Agree	268	67
Neutral	85	21.25
Disagree	12	3
Strongly Disagree	5	1.25
Total	400	100
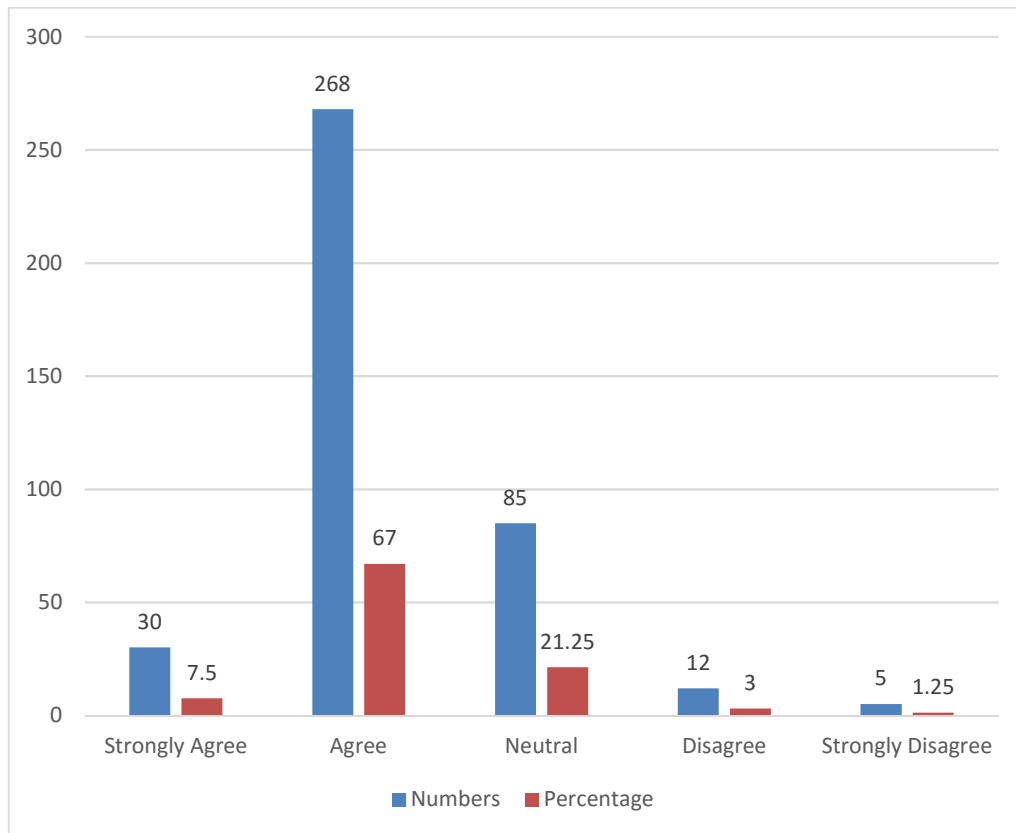
Fig. No 5.46

Interpretation: Out of the total respondents 7.5% strongly agreed, 67% agreed, 21.25% neutral, 3% disagreed and 1.25% strongly disagreed about bank has appropriate return to grow its operations. This shows that banks have appropriate return to grow its operations.

47. Bank can sustain its competitiveness in long term

Table 5.547

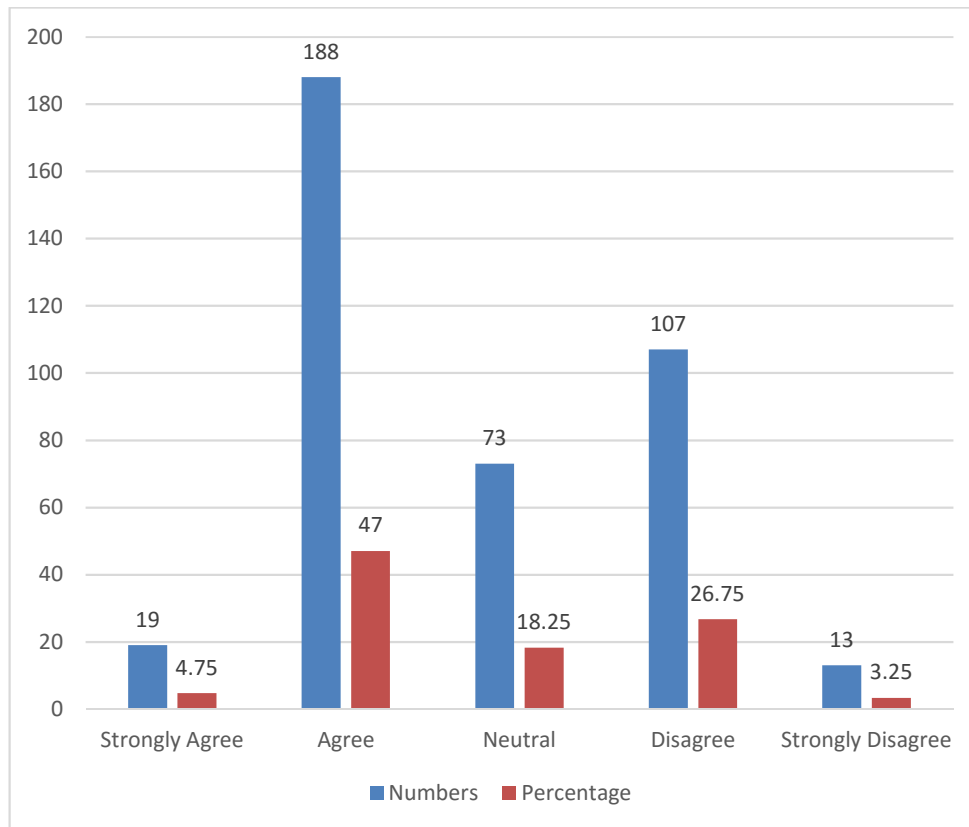| Response	Numbers	Percentage
Strongly Agree	10	2.5
Agree	75	18.75
Neutral	205	51.25
Disagree	89	22.25
Strongly Disagree	21	5.25
Total	400	100
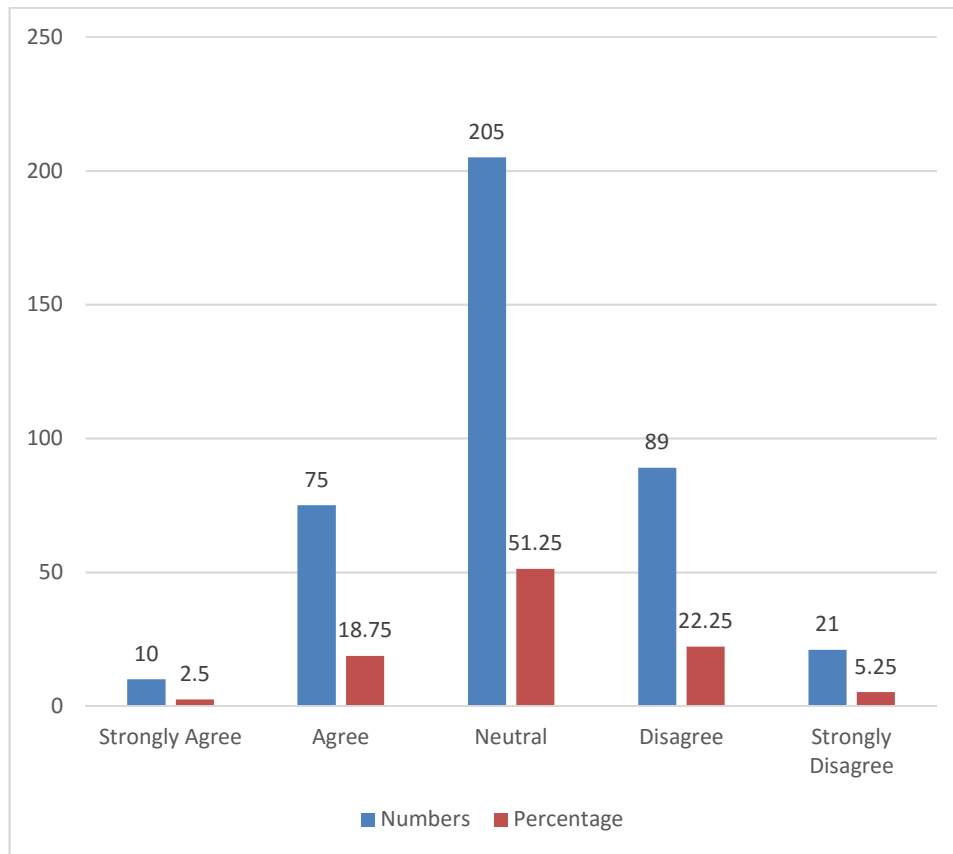
Fig. No 5.47

Interpretation: Out of the total respondents. 2.5% strongly agreed, 18.75% agreed, 51.25% neutral, 22.25% disagreed and 5.25% strongly disagreed about bank can sustain its competitiveness in long term This shows that bank can sustain its competitiveness in long term.

48. Bank has sufficient core earnings.

Table 5.48

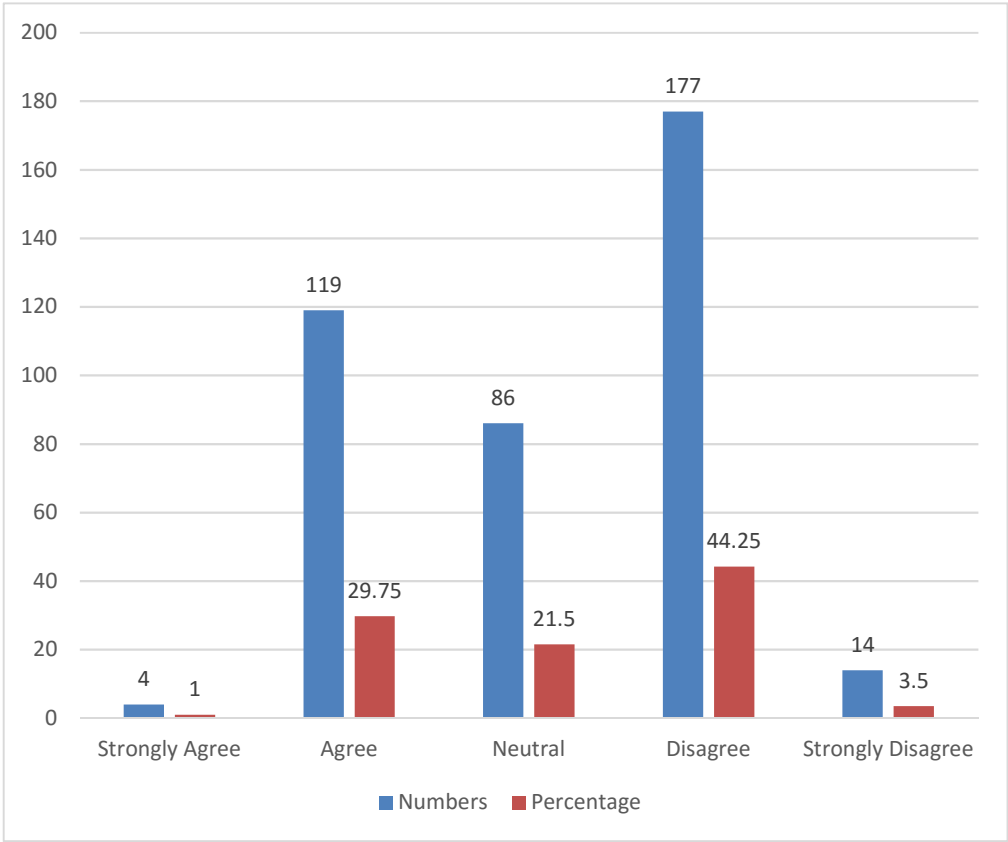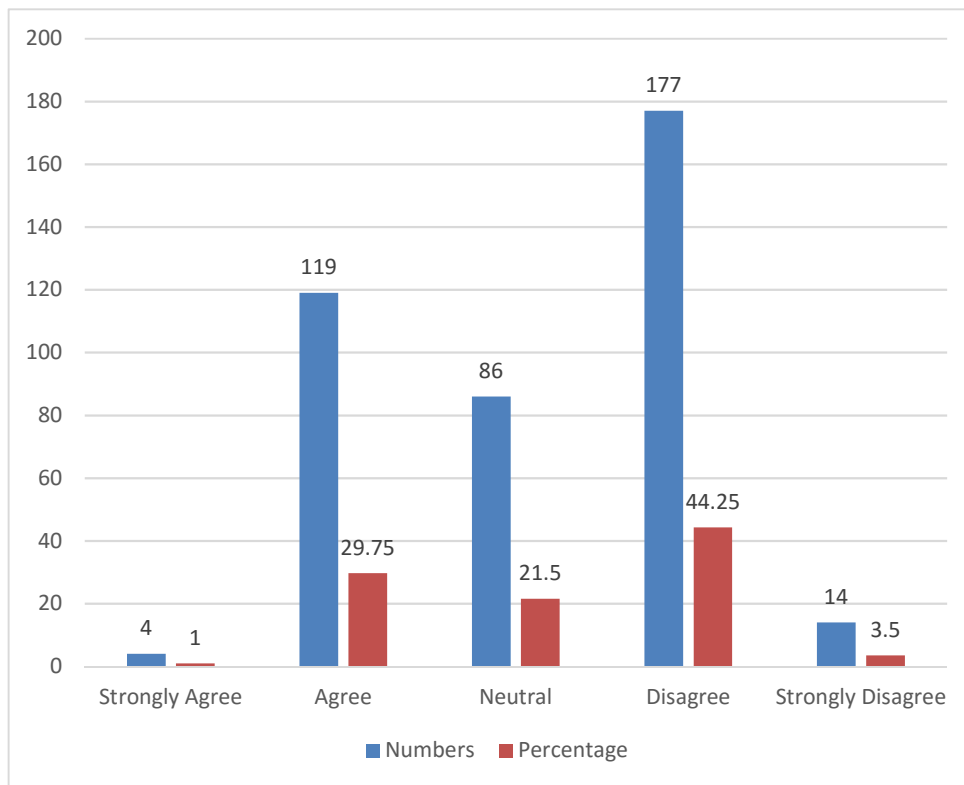| Response	Numbers	Percentage
Strongly Agree	30	7.5
Agree	268	67
Neutral	85	21.25
Disagree	12	3
Strongly Disagree	5	1.25
Total	400	100
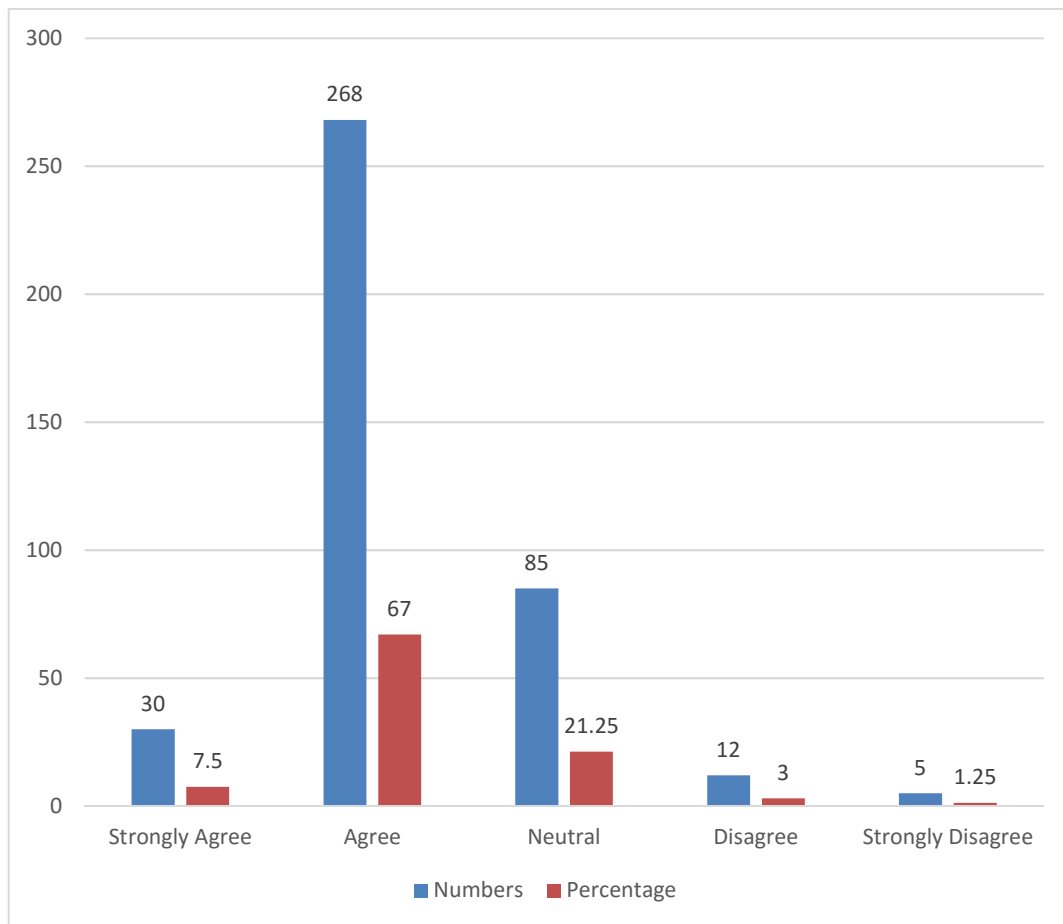
Fig. No 5.48

Interpretation: Out of the total respondents 7.5% strongly agreed, 67% agreed, 21.25% neutral, 3% disagreed and 1.25% strongly disagreed about bank has sufficient core earnings. This shows that banks have be sufficient core earnings.

Table:5.49 Capital Adequacy

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	RANK
1	Axis Bank	18	16	17	15	15	16.20	5
2	Bandhan Bank	27	29	31	0	0	**17.4**	1
3	Bank of Baroda	13	13	12	13	13	12.8	7
4	Bank of India	13	14	13	12	12	12.8	8
5	Canara Bank	14	12	13	13	11	12.6	9
6	Central Bank of India	12	10	9	11	10	10.4	13
7	HDFC Bank	19	17	15	15	16	16.4	4
8	ICICI Bank	16	17	18	17	17	17	3
9	Kotak Mahindra Bank	18	17	18	17	16	17.2	2
10	OBC	13	11	12	12	11	11.8	11
11	PNB	14	10	9	12	11	11.2	12
12	State Bank of India	13	13	13	13	13	13	6
13	UBI	13	12	12	12	11	12	10
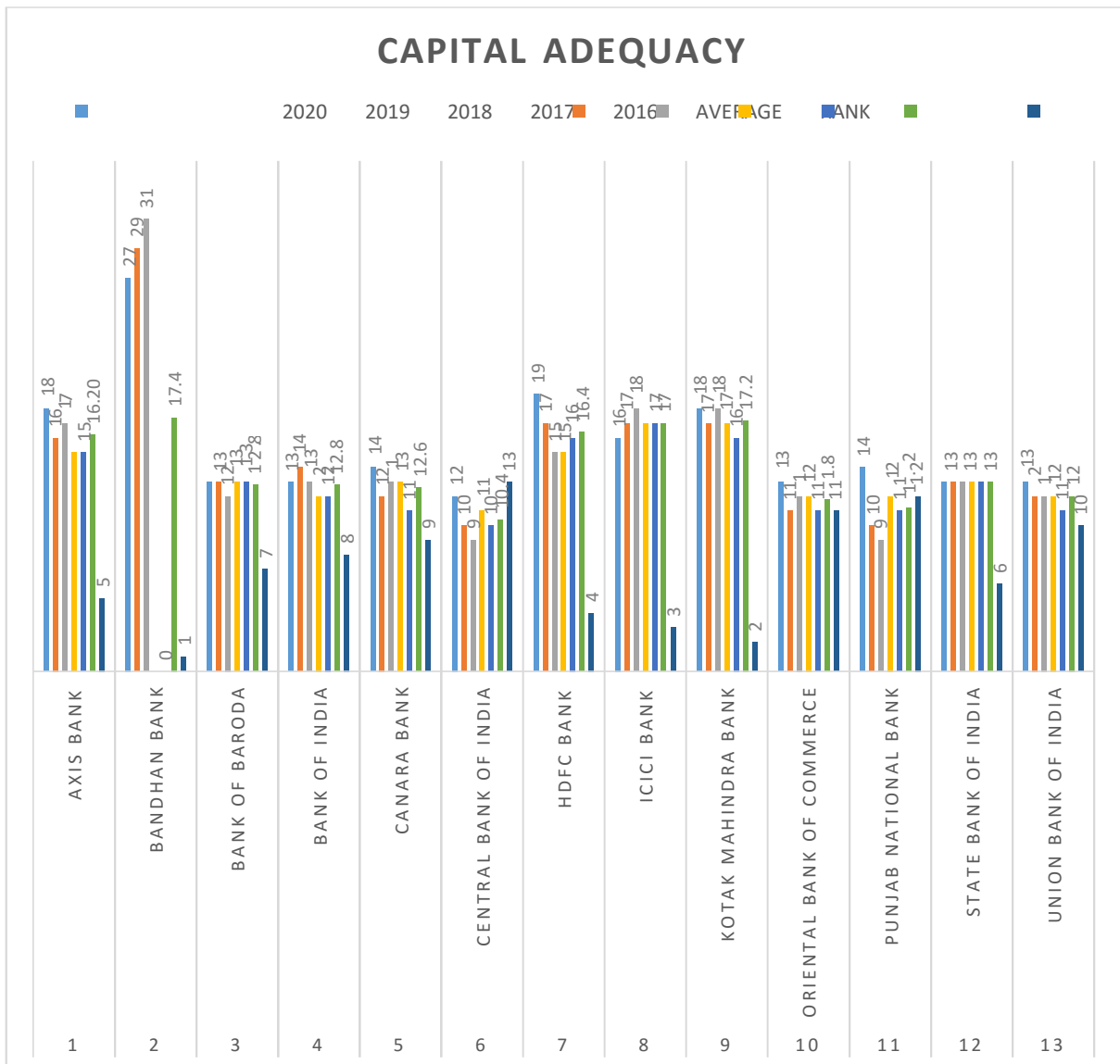
Figure:5.49 Capital Adequacy Ratio (CAR)

Interpretation: Capital Adequacy Ratio (CAR) is the ratio of a bank's capital in relation toits risk weighted assets and current liabilities. It is decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process. The banks are ranked as per their decreasing Capital Adequacy ratio in the order Bandhan Bank, Kotak Mahindra Bank, ICICI Bank, HDFC Bank, Axis Bank, State Bank of India, Bank of Baroda, Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce. Punjab National Bank, Central Bank of India. All banks are having goodcapital adequacy ratio and the Bandhan Bank is ranking first in them.

Table: 5.50 DEBT-EQUITY RATIO

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	Rank
1	Axis Bank	9.7733	11.013	9.89647	9.78623	8.8837301	9.870580553	7
2	Bandhan Bank	5.0359	4.0387	3.72291	5.80004	4.9248763	4.704467968	3
3	Bank of Baroda	15.114	15.89	15.5919	16.2412	15.701327	15.70774065	9
4	Bank of India	13.994	13.889	16.1515	19.3018	18.623999	16.39208561	11
5	Canara Bank	17.423	18.205	16.3259	16.3225	16.496987	16.95449537	13
6	Central Bank of India	15.633	16.455	17.1382	18.2678	16.248073	16.74837981	12
7	HDFC Bank	7.9511	7.3411	9.00926	8.65591	8.7532663	8.342118902	6
8	ICICI Bank	8.4277	7.8998	7.36057	6.7216	7.0313195	7.488221087	5
9	Kotak Mahinda Bank	6.3493	6.2767	6.06794	6.76995	7.0233711	6.497454234	4
10	OBC	13.386	18.797	16.9207	14.8784	15.728916	15.942194	10
11	PNB	0.9249	0.9422	0.94637	0.94191	0.9425971	0.939601277	1
12	State Bank of India	16.031	15.662	14.7659	13.3716	15.3412	15.03443634	8
13	UBI	15.299	17.652	18.4211	18.2942	16.679096	0.944803588	2
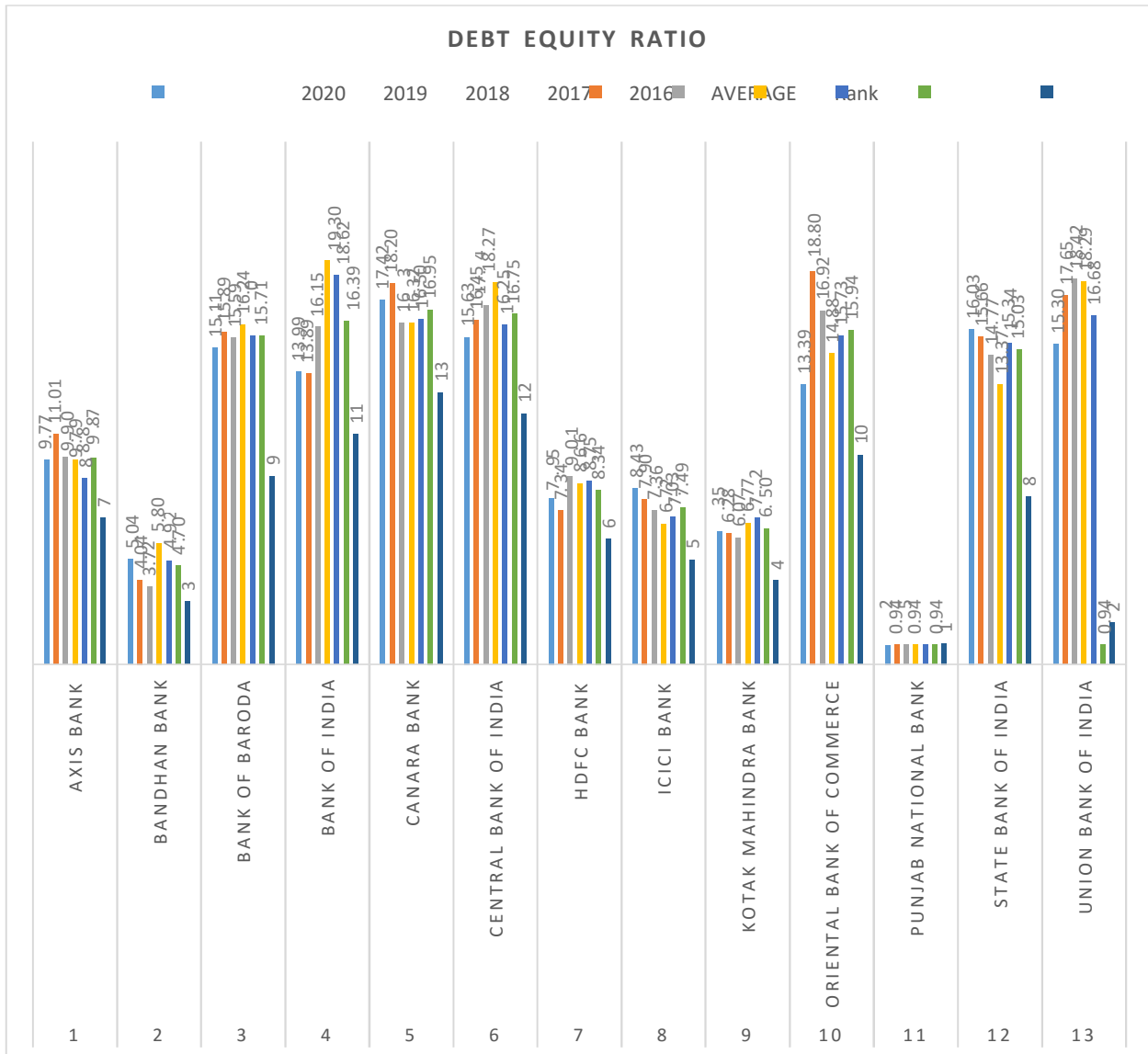
Figure: 5.50 Debt Equity Ratio

Conclusion: A low debt-to-equity ratio indicates a lower amount of financing by debt via lenders, versus funding through equity via shareholders. A higher ratio indicates that the company is getting more of its financing by borrowing money, which subjects the company to potential risk if debt levels are too high. The debt equity ratio of is in the order of increasing debt-equity ratio is Punjab National Bank, Union Bank of India, Bandhan Bank, Kotak Mahindra Bank, ICICI Bank, HDFC Bank, Axis Bank, State Bank of India, Bank of Baroda, Oriental Bank of Commerce, Bank of India, Central Bank of India, Canara Bank

Table: 5.51 Advance to asset ratio

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	RANK
1	Axis Bank	0.62	0.62	0.64	0.62	0.64	0.63	9
2	Bandhan Bank	0.73	0.70	0.67	0.56	0.63	0.66	12
3	Bank of Baroda	0.60	0.60	0.59	0.55	0.57	0.58	3
4	Bank of India	0.56	0.55	0.56	0.59	0.59	0.57	2
5	Canara Bank	0.60	0.62	0.62	0.59	0.59	0.60	6
6	Central Bank of India	0.42	0.44	0.48	0.42	0.59	0.47	1
7	HDFC Bank	0.65	0.66	0.62	0.64	0.66	0.64	11
8	ICICI Bank	0.59	0.61	0.58	0.60	0.60	2.50	13
9	Kotak Mahindra Bank	0.61	0.66	0.64	0.63	0.62	0.63	10
10	OBC	0.59	0.58	0.62	0.63	0.63	0.61	7
11	PNB	0.57	0.59	0.57	0.58	0.62	0.59	4
12	State Bank of India	0.59	0.59	0.56	0.58	0.62	0.59	5
13	UBI	0.57	0.60	0.59	0.63	0.66	0.61	8

ADVANCE TO ASSET RATIO

Legend: 2020 2019 2018 2017 2016 AVERAGE

Banks (1-13): AXIS BANK, BANDHAN BANK, BANK OF BARODA, BANK OF INDIA, CANARA BANK, CENTRAL BANK OF INDIA, HDFC BANK, ICICI BANK, KOTAK MAHINDRA BANK, ORIENTAL BANK OF COMMERCE, PUNJAB NATIONAL BANK, STATE BANK OF INDIA, UNION BANK OF INDIA
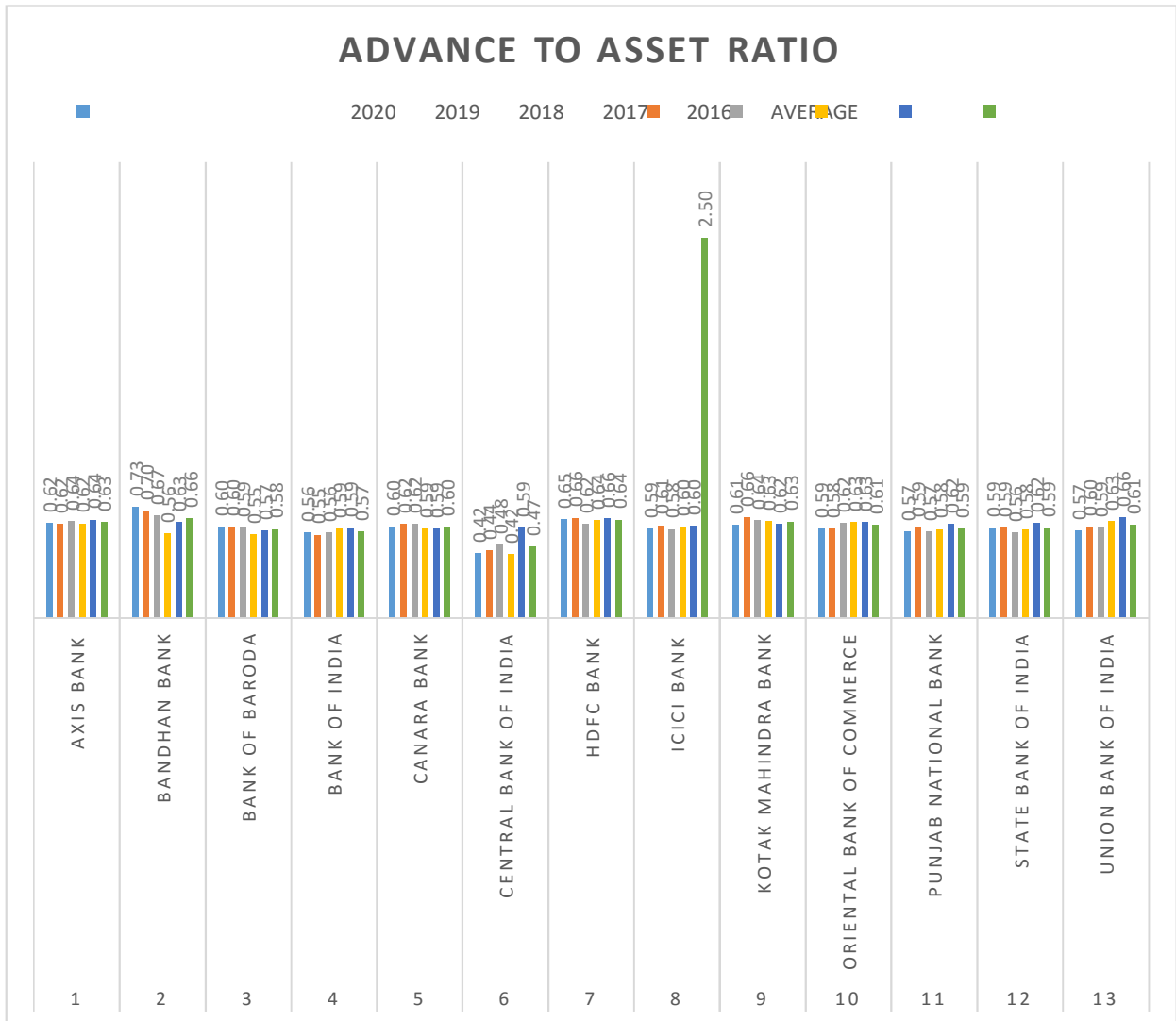
Figure 5.51 Advance to asset ratio

Conclusion: The loans to assets ratio measures the total loans outstanding as a percentage of total assets. The higher this ratio indicates a bank is loaned up and its liquidity is low. The higher the ratio, the riskier a bank may be to higher defaults. The loans to assets ratio of the banks is ranked in the order of HDFC Bank, Bank of Baroda, Bandhan Bank, Kotak Mahindra Bank, Axis Bank, State Bank of India, Canara Bank Union Bank of India, Bank of India, Oriental Bank of Commerce, Punjab National Bank, Central Bank of India, ICICI Bank. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also having good liquid position. The ratio Central Bank of India, Bank of India, Bank of Baroda, Punjab National Bank, State Bank of India, Canara Bank, Oriental Bank of Commerce, Union Bank of India, Axis Bank, Kotak Mahindra Bank, HDFC Bank, BandhanBank, ICICI Bank.

Table: 5. 52 Net NPA to Advances

Sr. No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	RANK
1	Axis Bank	2	2	4	2	1	2.2	5
2	Bandhan Bank	1	1	1	0	0	0.6	3
3	Bank of Baroda	0.03	0.03	0.05	0.05	0.05	0.04	2
4	Bank of India	4	6	8	7	8	6.6	9
5	Canara Bank	4	5	7	6	6	5.6	7
6	Central Bank of India	8	8	11	10	7	8.8	12
7	HDFC Bank	0	0	0	0	0	0	1
8	ICICI Bank	2	2	5	5	3	14.6	13
9	Kotak Mahindra Bank	1	1	1	1	1	1	4
10	Oriental Bank of Commerce	6	10	9	7	3	7	10
11	Punjab National Bank	6	7	11	8	9	8.2	11
12	State Bank of India	2	3	6	4	4	3.8	6
13	Union Bank of India	5	7	8	7	5	6.4	8
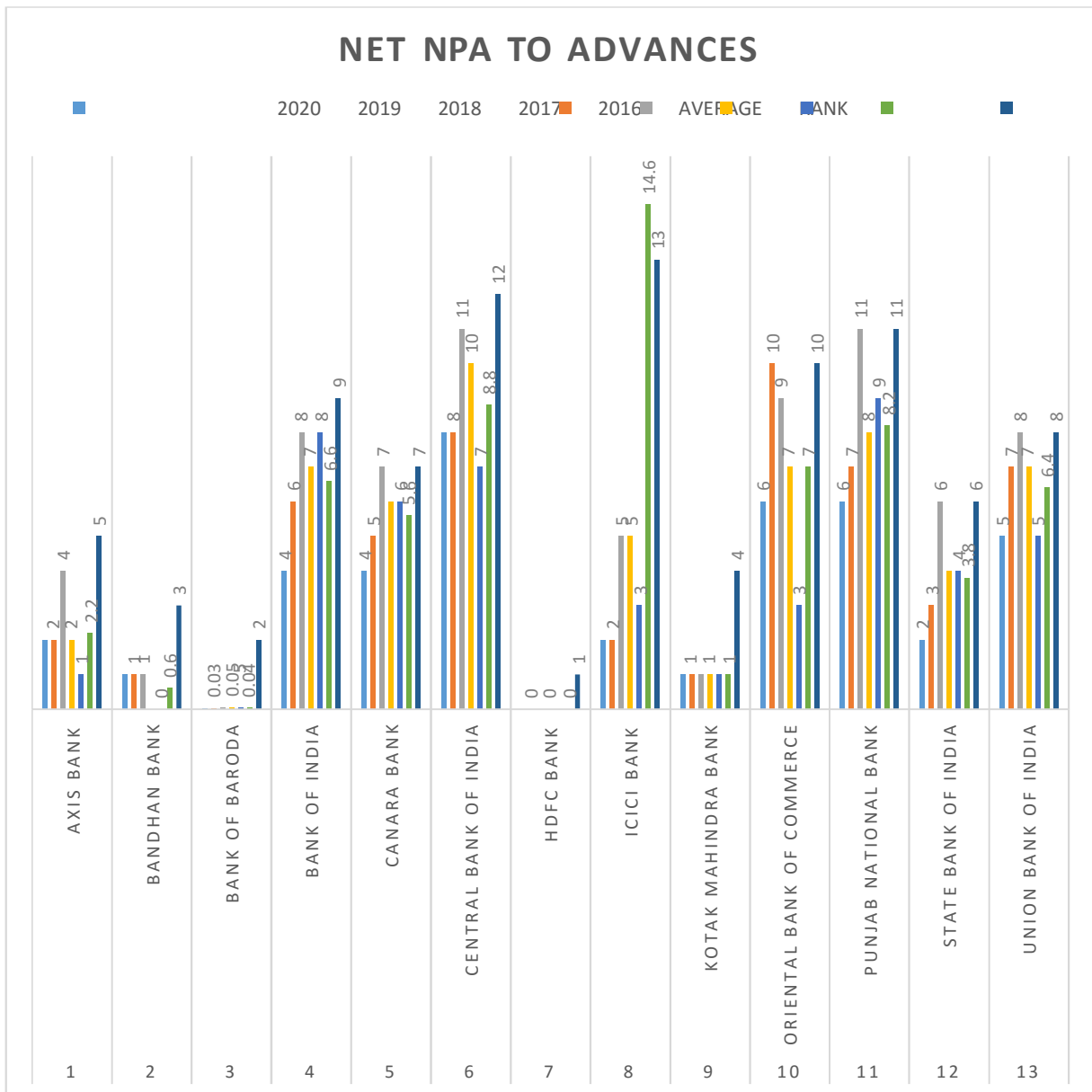
Figure 5.52 Net NPA to advances

Conclusion: Banks are required to classify non-performing assets into one of three categories according to how long the asset has been non-performing: sub-standard assets, doubtful assets, and loss assets. A sub-standard asset is an asset classified as an NPA for less than 12 months. Standard asset for a bank is an asset that is not classified as an NPA. The asset exhibits no problem in the normal course other than the usual business risk More specifically, according to RBI circular, sub-standard asset is an asset that has continued to remain an NPA for a period less than or equal to 1 year

The calculation is pretty simple: GNPA ratio is the ratio of the total GNPA of the total advances. NNPA ratio uses net NPA to find out the ratio to the total advances.

Net non-performing assets = Gross NPAs – Provisions. Gross NPA Ratio is the ratio of totalgross NPA to total advances (loans) of the bank. Net NPA to Advances (loans) Ratio is the ratio of Net NPA to advances. It is used as a measure of the overall quality of the bank's loanbook. The net NPA to loans (advances) ratio is used as a measure of the overall quality of thebank's loan book. An NPA are those assets for which interest is overdue for more than 90 days (or 3 months). Net NPAs are calculated by reducing cumulative balance of provisions outstanding at a period end from gross NPAs. Higher ratio reflects rising bad quality of loans. *NPA ratio = Net non-performing assets / Loans given*

The *NPA ratio* of the banks is ranked in the order of HDFC Bank, Bank of Baroda, BandhanBank, Kotak Mahindra Bank, Axis Bank, State Bank of India, Canara Bank Union Bank of India, Bank of India, Oriental Bank of Commerce, Punjab National Bank, Central Bank of India, ICICI Bank. Therefore, it is concluded that the private sector banks are heading ahead but the government sector banks are also trying to match there level.

Table: 5. 53 Total Investment to Total Assets

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	Rank
1	Axis Bank	0.17	0.22	0.22	0.21	0.23	0.21	12
2	Bandhan Bank	0.17	0.18	0.19	0.18	0.19	0.18	13
3	Bank of Baroda	0.24	0.23	0.23	0.19	0.18	0.21	11
4	Bank of India	0.24	0.24	0.22	0.20	0.19	0.22	10
5	Canara Bank	0.24	0.22	0.23	0.26	0.26	0.24	6
6	Central Bank of India	0.40	0.38	0.31	0.28	0.29	0.33	1
7	HDFC Bank	0.26	0.23	0.23	0.25	0.23	0.24	7
8	ICICI Bank	0.23	0.22	0.23	0.21	0.22	0.22	9
9	Kotak Mahindra Bank	0.21	0.23	0.24	0.21	0.27	0.23	8
10	Oriental Bank of Commerce	0.29	0.30	0.23	0.28	0.30	0.28	2
11	Punjab National Bank	0.29	0.26	0.26	0.26	0.24	0.26	4
12	State Bank of India	0.26	0.26	0.31	0.28	0.24	0.27	3
13	Union Bank of India	0.28	0.26	0.25	0.25	0.22	0.25	5
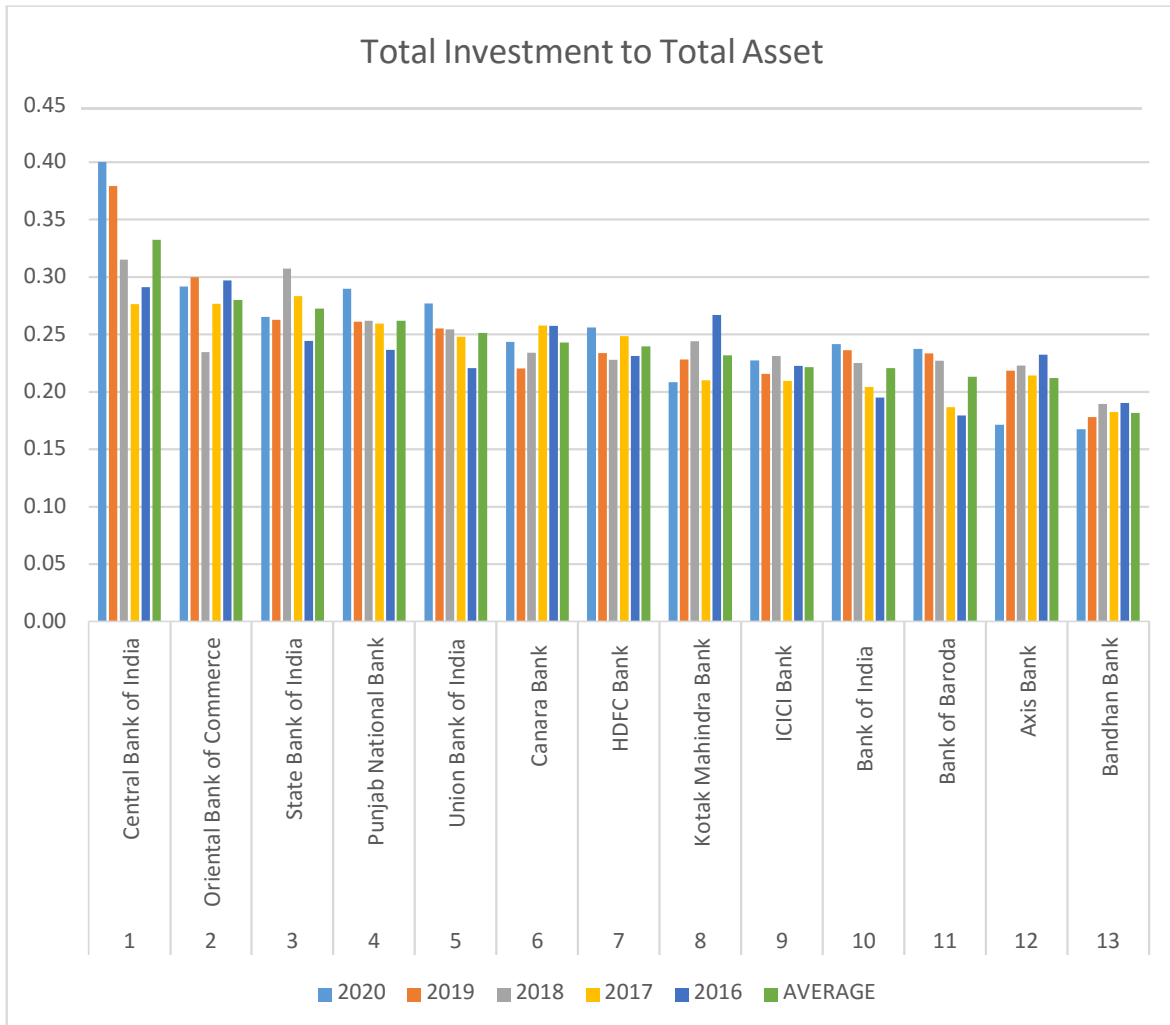
Figure 5.53 Total investment to total asset

Conclusion: Investment Assets-To-Total Assets Ratio= Investment Assets/Total Assets. Throughout your life, you want to accumulate investment assets. These assets include stocks, bonds, money markets, mutual funds, and retirement accounts

Investment Assets to *Total Assets* Meaning: This *ratio* compares the liquid *assets* being held by an individual against the *total assets* accumulated. *Investments* in stocks, mutual funds or other such *investments* which can be converted to cash easily are considered as liquid *assets*. The Investment Assets-To-Total Assets Ratio of the banks is ranked in the order of Central Bank of India, Oriental Bank of Commerce, State Bank of India, Punjab National Bank Union Bank of India, Canara Bank, HDFC Bank, Kotak Mahindra Bank, ICICI Bank, Bank of India, Bank of Baroda, Axis Bank, Bandhan Bank. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also having good position.

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Table: 5. 54 Return on equity net worth

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	RANK
	Return on Equity / Net worth							
1	Axis Bank	1.91	7.01	0.43	6.59	15.46	6.28	5
2	Bandhan Bank	19.89	17.42	14.34	25	8.25	16.98	2
3	Bank of Baroda	6.95	0.39	-3.37	6.69	6.89	3.51	6
4	Bank of India	-7.88	- 15.66	- 20.15	-5.06	- 19.63	-13.676	12
5	Canara Bank	-6.78	1.16	- 14.51	3.96	- 10.75	-5.384	8
6	Central Bank of India	-5.23	- 29.79	- 28.38	-14.12	-9.85	-17.474	13
7	HDFC Bank	15.35	14.12	16.45	16.26	16.91	15.818	3
8	ICICI Bank	6.99	3.19	6.63	10.11	11.19	29.158	1
9	Kotak Mahindra Bank	12.25	11.47	10.89	12.35	8.72	11.136	4
10	Oriental Bank of Commerce	0.31	- 56.55	-8.63	1.16	3.77	-11.988	10
11	Punjab National Bank	0.58	-24.2	- 32.85	3.47	-11.2	-12.84	11
12	State Bank of India	8.69	0.98	-2.21	0.13	6.82	2.882	7
13	Union Bank of India	-9.46	- 12.15	-20.9	2.36	6.65	-6.7	9
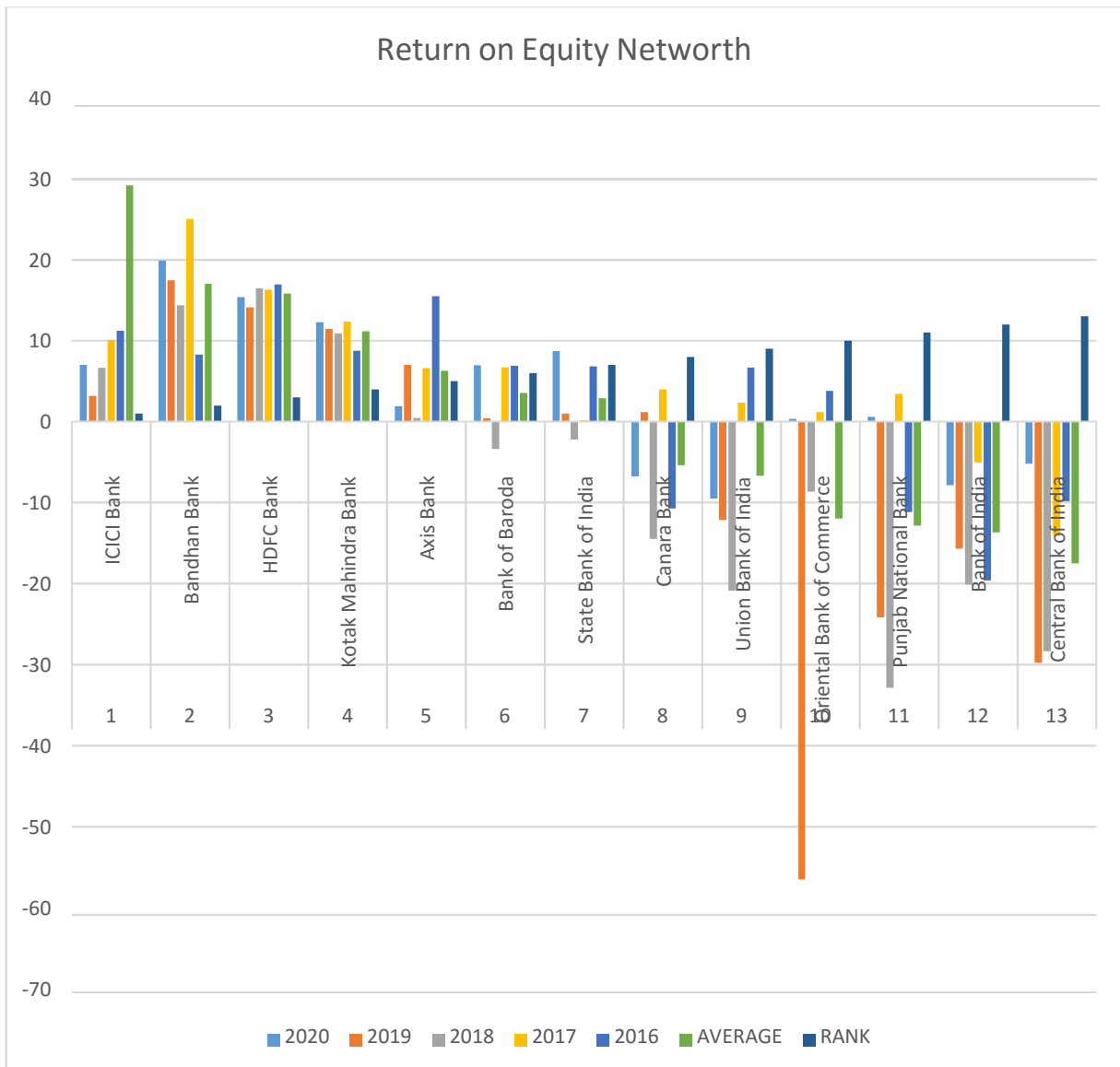
Figure. 54 Return on equity net worth

Return on *equity* (ROE) is a financial ratio that shows how well a company is managing thecapital that shareholders have invested in it.

Conclusion: The Interest Income to Total Assets ratio of the banks is ranked in the order of ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, Bank of Baroda, State Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Bank of India, Central Bank of India. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also having good position.

S.No	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	RANK
		Table: 5. 55		**Business/ Employee (Rs.)**				
1	Axis Bank	16341 0991.87	1684 32242.98	1498 42826.65	13908 3338.45	13897 3029.46	15194 8485.88	6
2	Bandhan Bank	3112 2377.67	256 24579.19	2257 9650.58	0.00	0.00	1586 5321.49	13
3	Bank of Baroda	22316 9169.33	0.00	1757 76620.83	1725 38127.46	15377 0974.81	14505 0978.49	9
4	Bank of India	18574 3219.94	17658 7024.98	1771 22959.10	1898 45795.79	0.00	14585 9799.96	8
5	Canara Bank	18036 6758.51	1759 65817.17	15401 8324.14	15027 4423.07	14896 0595.86	16191 7183.75	4
6	Central Bank of India	1388 44133.06	12512 4259.96	12251 4733.98	11771 6759.31	1184 00895.66	12452 0156.39	11
7	HDFC Bank	183054 361.58	17769 9813.90	1639 72185.69	14209 4024.12	11547 2348.91	15645 8546.84	5
8	ICICI Bank	14259 6981.88	142868 072.08	1297 53214.80	11519 3098.71	11869 6176.03	55415 0602.68	1
9	Kotak Mahindra Bank	96448 156.57	103363 871.51	7247 2239.16	66706 361.07	81919 235.15	84181 972.69	12
10	Oriental Bank of Commerce	18037 1941.23	15639 7113.94	17494 6821.08	16665 6484.19	17290 6434.50	17025 5758.99	3
11	Punjab National Bank	170930 059.65	16018 6321.72	14365 8746.44	14085 6500.49	13635 0747.60	15039 6475.18	7
12	State Bank of India	22316 9169.33	0.00	175776 620.83	17253 8127.46	15377 0974.81	14505 0978.49	10
13	Union of Bank India	20518 7271.37	191306 806.53	18550 6217.10	18029 0737.45	17198 2637.81	186854 734.05	2
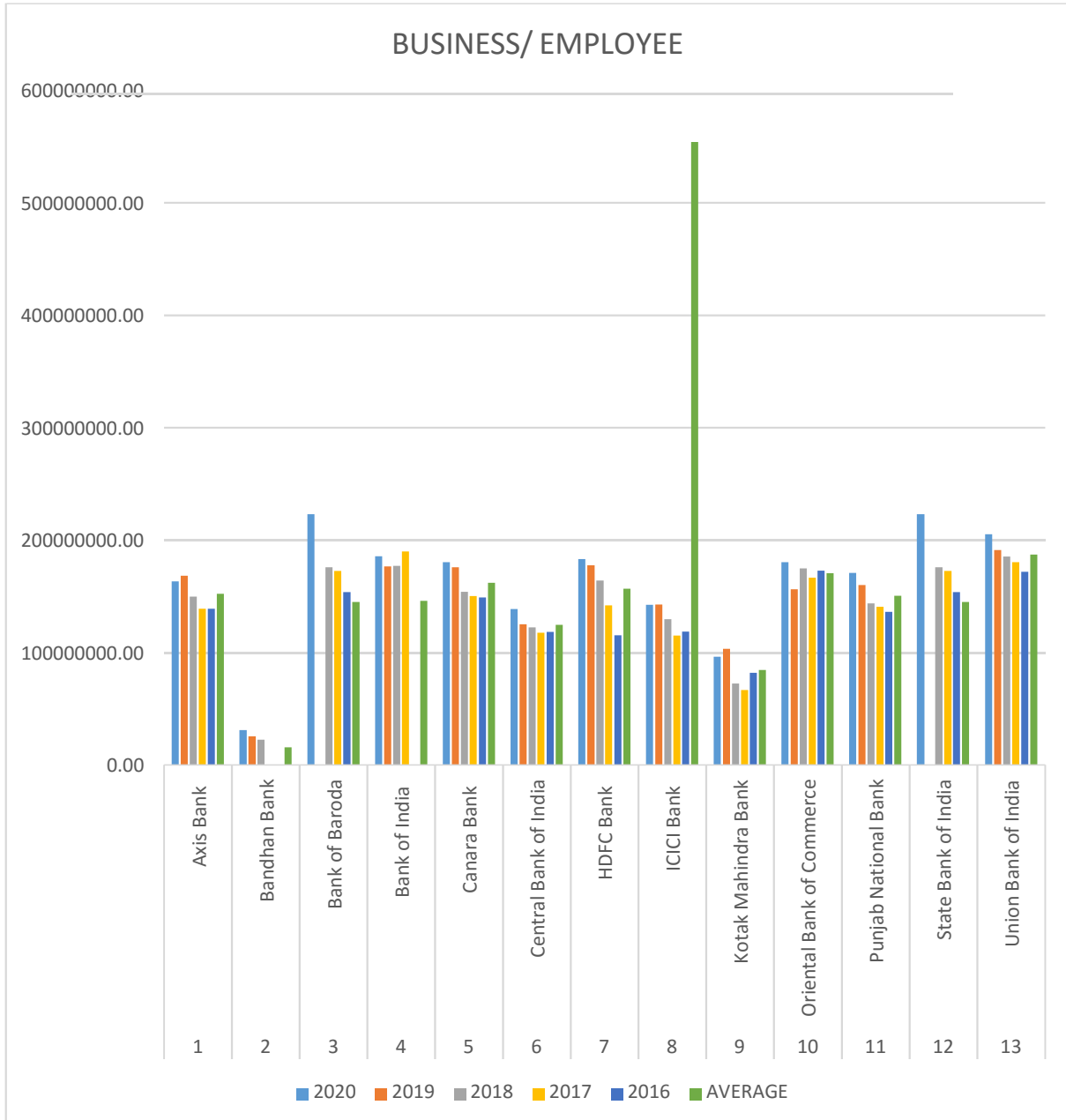
Figure 5.55 Business/Employee

Conclusion: The Interest Income to Total Assets ratio of the banks is ranked in the order of ICICI Bank,,Union Bank of India, Oriental Bank of Commerce, Canara Bank, HDFC Bank, Axis Bank, Punjab National Bank, Bank of India, Bank of Baroda, State Bank of India, Central Bank of India, Kotak Mahindra Bank, Bandhan Bank. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also having good position.

Table: 5. 56 Net Profit/ Employee (Rs.)

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	RANK
1	Axis Bank	2194 78.74	7550 22.33	46244.39	649854.14	1640303.74	662180.67	4
2	Bandhan Bank	7606 88.69	6033 95.55	477842.54	0.00	0.00	368385.36	5
3	Bank of Baroda	580 806.85	0.00	-247971.10	500274.50	478997.86	262421.62	6
4	Bank of India	-5941 45.96	-1136 496.92	- 1241517.07	- 326348.65	0.00	-659701.72	11
5	Canara Bank	-3813 13.21	594 71.31	-717396.58	201360.84	-520815.97	-271738.72	8
6	Central Bank of India	-334 921.99	-1581 353.86	- 1385581.36	- 658432.59	- 376327.45	-867323.45	13
7	HDFC Bank	224 4771.35	2149 495.24	1981431.60	1725424.39	1404398.73	1901104.26	2
8	ICICI Bank	7985 19.16	3876 42.38	819281.33	1183120.75	1347597.82	3458083.18	1
9	Kotak Mahindra Bank	1188 628.09	11652 65.18	816860.68	775340.41	665322.83	922283.44	3
10	Oriental Bank of Commerce	253 08.94	-26717 67.62	- 507642.35	72699.33	246076.88	-567064.96	10
11	Punjab National Bank	488 78.96	-14087 68.54	- 1639961.57	179223.45	- 561347.44	-676395.03	12
12	State Bank of India	5808 06.85	0.00	-247971.10	500274.50	478997.86	262421.62	7
13	Union Bankof India	-7765 09.06	-7910 06.47	- 1396059.41	150558.10	381022.83	-486398.80	9
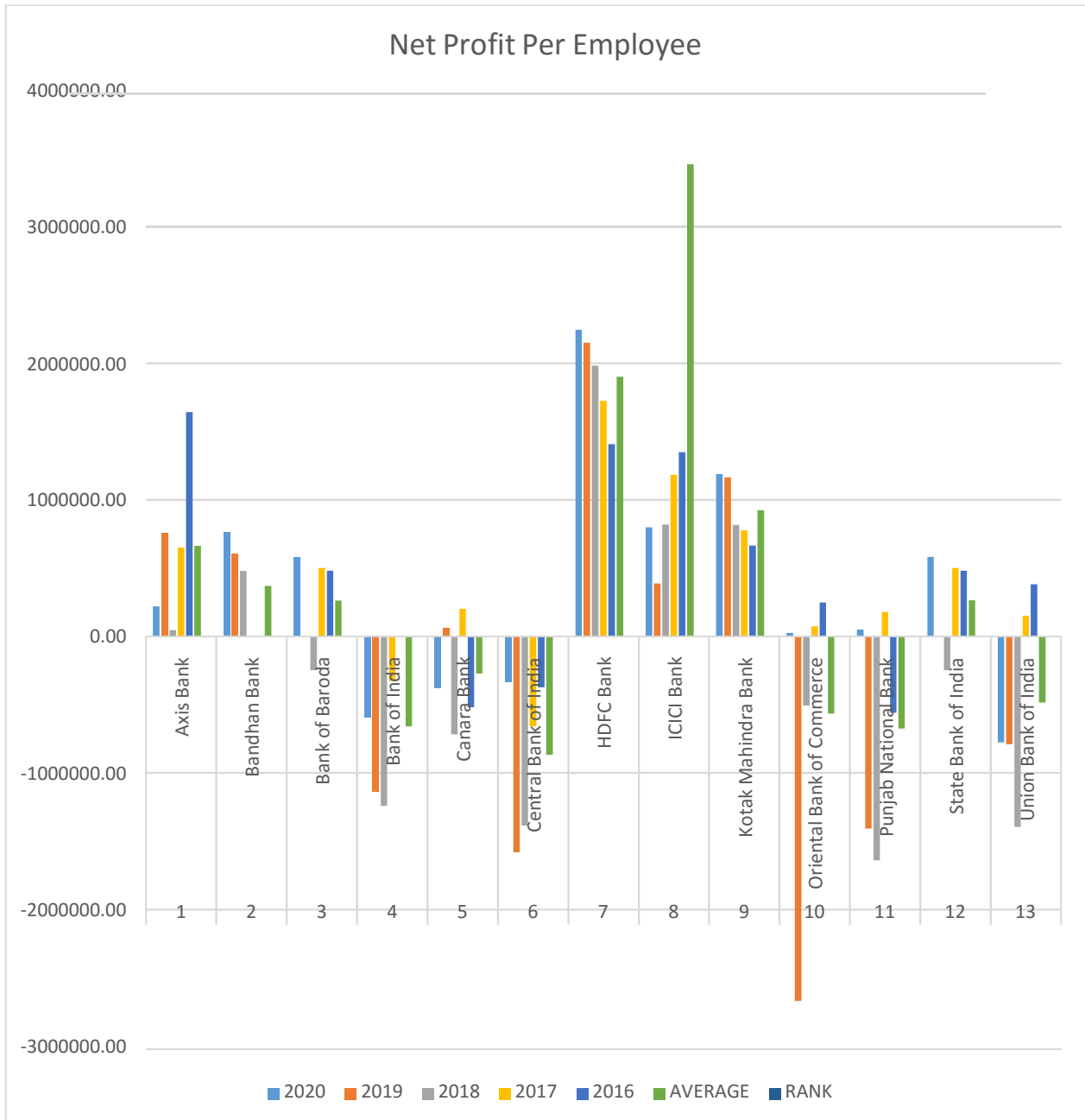
Figure 5.56 Net profit per employee

Conclusion: The Interest Income to Total Assets ratio of the banks is ranked in the order of ICICI Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, Bandhan Bank, Bank of Baroda , State Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Bank of India, Punjab National Bank, Central Bank of India. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also having good position.

Table: 5. 57

	Return on Assets							
S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	Rank
1	Axis Bank	0.17	0.58	0.03	0.61	1.56	0.59	5
2	Bandhan Bank	3.29	3.45	3.03	3.67	1.39	2.966	2
3	Bank of Baroda	0.36	0.02	-0.18	0.38	0.42	0.2	6
4	Bank of India	-0.45	-0.88	-0.99	-0.24	-0.99	-0.71	12
5	Canara Bank	-0.3	0.04	-0.68	0.19	-0.5	-0.25	8
6	Central Bank of India	-0.31	-1.7	-1.56	-0.73	-0.46	-0.952	13
7	HDFC Bank	1.71	1.69	1.64	1.68	1.73	1.69	3
8	ICICI Bank	0.72	0.34	0.77	1.26	1.34	3.358	1
9	Kotak Mahindra Bank	1.65	1.55	1.54	1.58	1.08	1.48	4
10	Oriental Bank of Commerce	0.02	-2.51	-0.43	0.06	0.21	-0.53	10
11	Punjab National Bank	0.04	-1.28	-1.6	0.18	-0.59	-0.65	11
12	State Bank of India	0.47	0.05	-0.12	0	0.39	0.158	7
13	Union Bank of India	-0.52	-0.59	-1.07	0.12	0.33	-0.346	9
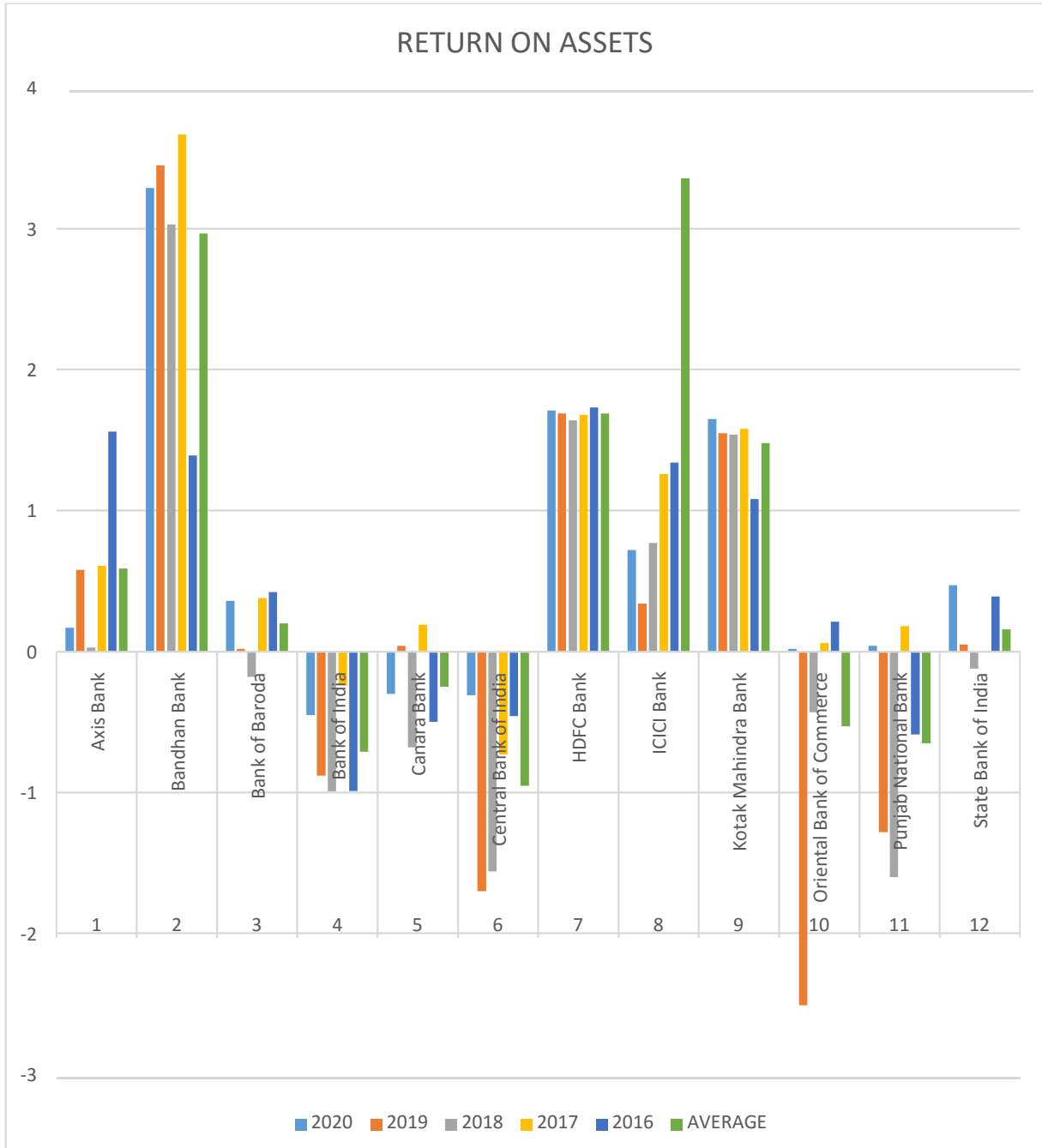
Figure 5.57 Return on asset

Conclusion: The Interest Income to Total Assets ratio of the banks is ranked in the order of ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, Bank of Baroda, State Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Bank of India, Central Bank of India. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also having good position.

Table: 5. 58

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	Rank
	Net Interest Margin (X)							
1	Axis Bank	2.75	2.71	2.69	3.00	3.20	2.87	5
2	BandhanBank	6.89	7.96	6.84	7.94	4.72	6.87	2
3	Bank of Baroda	2.48	2.40	2.16	2.28	2.42	2.35	7
4	Bank of India	2.32	2.18	1.72	1.88	1.92	2.00	12
5	Canara Bank	1.81	2.08	1.97	1.69	1.76	1.86	13
6	Central Bankof India	2.14	2.04	1.99	1.97	2.31	2.09	9
7	HDFC Bank	3.67	3.87	3.76	3.83	3.89	3.80	3
8	ICICI Bank	3.02	2.80	2.61	2.81	2.94	11.83	1
9	Kotak Mahindra Bank	3.74	3.60	3.59	3.78	3.58	3.66	4
10	Oriental Bankof Commerce	2.02	1.93	1.94	2.26	2.20	2.07	10
11	Punjab National Bank	2.09	2.21	1.94	2.08	2.29	2.12	8
12	State Bank of India	2.59	2.50	2.27	2.36	2.52	2.45	6
13	Union Bank of India	2.07	2.06	1.90	1.96	2.05	2.01	11
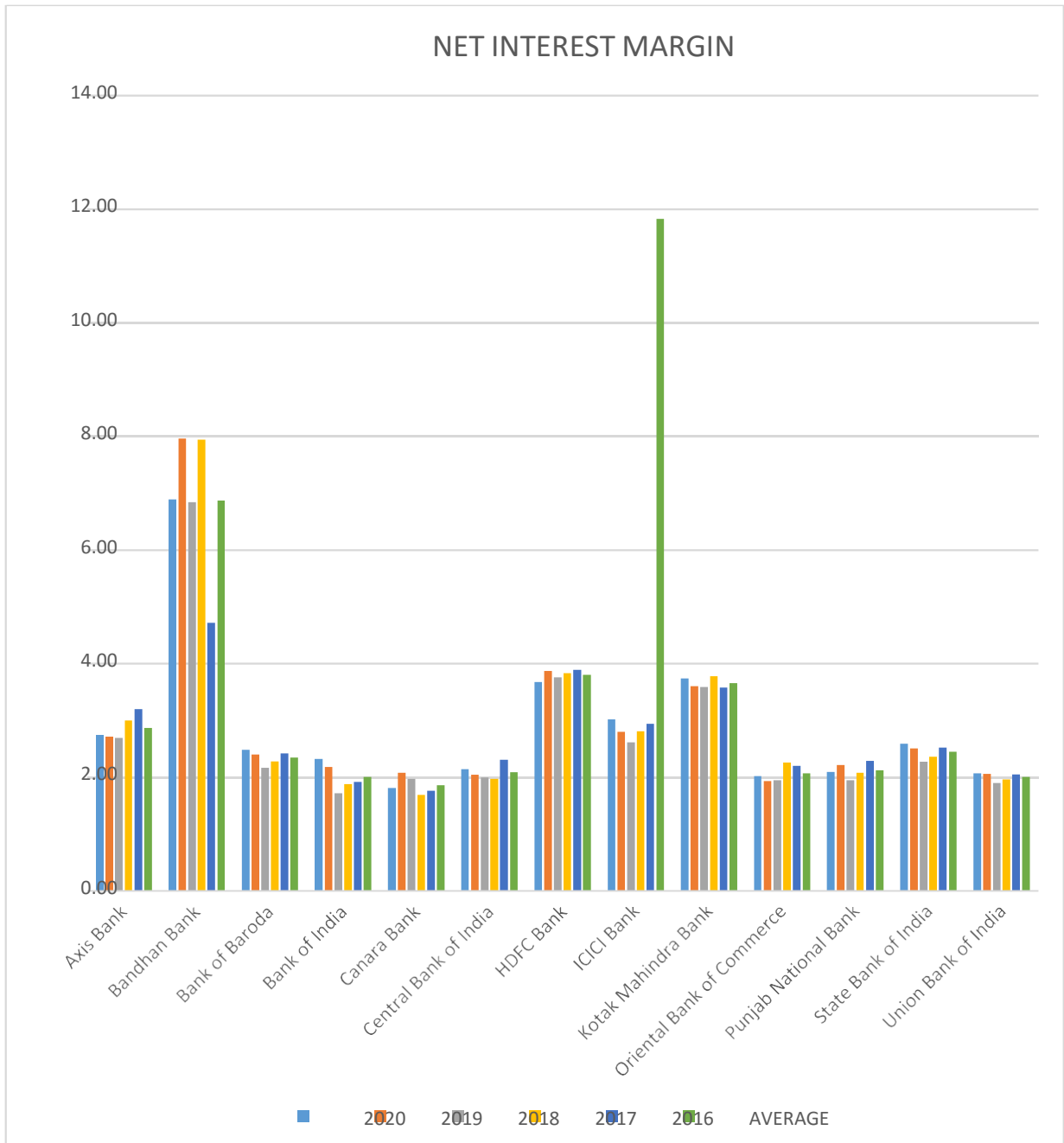
Figure 5.58 Net interest margin

Conclusion: The Interest Income to Total Assets ratio of the banks is ranked in the order of ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, State Bank of India, Bank of Baroda, Punjab National Bank, Central Bank of India, Oriental Bank of Commerce, Union Bank of India, Bank of India and Canara Bank. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also having good position.

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	Rank
	Table: 5. 59 Operating Profit/Total Assets							
1	Axis Bank	-1.51	-1.05	-1.54	-1.33	-0.21	-1.13	1
2	Bandhan Bank	1.60	1.57	1.44	2.31	0.63	1.51	2
3	Bank of Baroda	-0.77	-0.93	-1.48	-0.92	-0.75	-0.97	3
4	Bank of India	-1.47	-1.70	-1.93	-1.33	-1.59	-1.60	4
5	Canara Bank	-1.38	-0.89	-1.80	-1.10	-1.39	-1.31	5
6	Central Bank of India	-1.33	-2.43	-2.36	-1.59	-1.09	-1.76	6
7	HDFC Bank	0.19	0.27	0.21	0.26	0.21	0.23	7
8	ICICI Bank	-0.77	-1.15	-1.21	-1.25	-0.77	-4.53	8
9	Kotak Mahindra Bank	0.15	0.08	0.01	-0.03	-0.27	-0.01	9
10	Oriental Bank of Commerce	-0.96	-3.70	-1.52	-0.67	-0.70	-1.51	10
11	Punjab NationalBank	-1.07	-2.23	-2.76	-1.05	-1.62	-1.75	11
12	State Bank of India	-1.90	-1.89	-2.26	-1.99	-1.30	-1.87	12
13	Union Bank of India	-1.48	-1.50	-2.10	-0.97	-0.56	-1.32	13
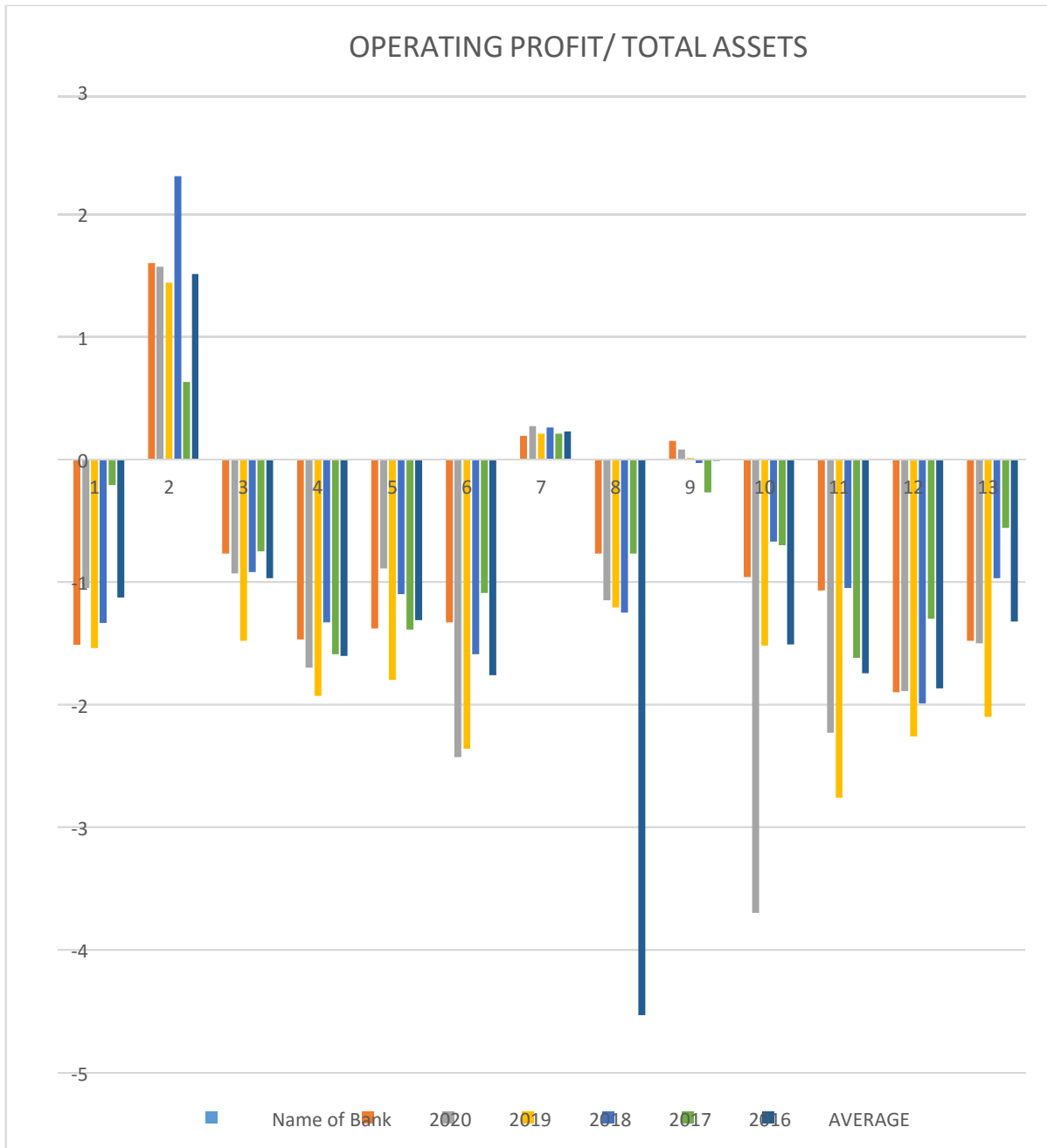
Figure 5.59 Operating profit per total asset

Conclusion: The Interest Income to Total Assets ratio of the banks is ranked in the order of Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Bank of Baroda, Axis Bank, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Bank of India, Punjab National Bank, Central Bank of India, State Bank of India and ICICI Bank. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also in a good state.

Table: 5. 60

	Interest Income/Total Assets						
S.No.	Name of Bank	**2020**	**2019**	**2018**	**2017**	**2016**	**AVERAGE**	**Rank**
1	Axis Bank	6.84	6.86	6.62	7.40	7.80	7.10	8
2	Bandhan Bank	11.86	11.77	10.83	12.92	8.00	11.08	2
3	Bank of Baroda	6.51	6.59	6.38	6.48	6.95	6.58	11
4	Bank of India	6.44	6.52	6.24	6.27	6.85	6.46	12
5	Canara Bank	6.76	6.73	6.68	7.09	7.96	7.04	9
6	Central Bank of India	6.61	6.84	7.36	7.39	8.47	7.33	6
7	HDFC Bank	7.50	7.95	7.54	8.02	8.49	7.90	3
8	ICICI Bank	6.80	6.57	6.25	7.01	7.31	28.09	1
9	Kotak Mahindra Bank	7.47	7.66	7.45	8.24	8.52	7.87	4
10	Oriental Bank of Commerce	6.57	7.45	7.27	8.44	8.65	7.68	5
11	Punjab National Bank	6.47	6.62	6.26	6.56	7.10	6.60	10
12	State Bank of India	6.42	6.51	6.33	6.68	7.17	2.88	13
13	Union Bank of India	6.76	6.89	6.71	7.21	7.95	7.10	7

INTEREST INCOME/ TOTAL ASSETS
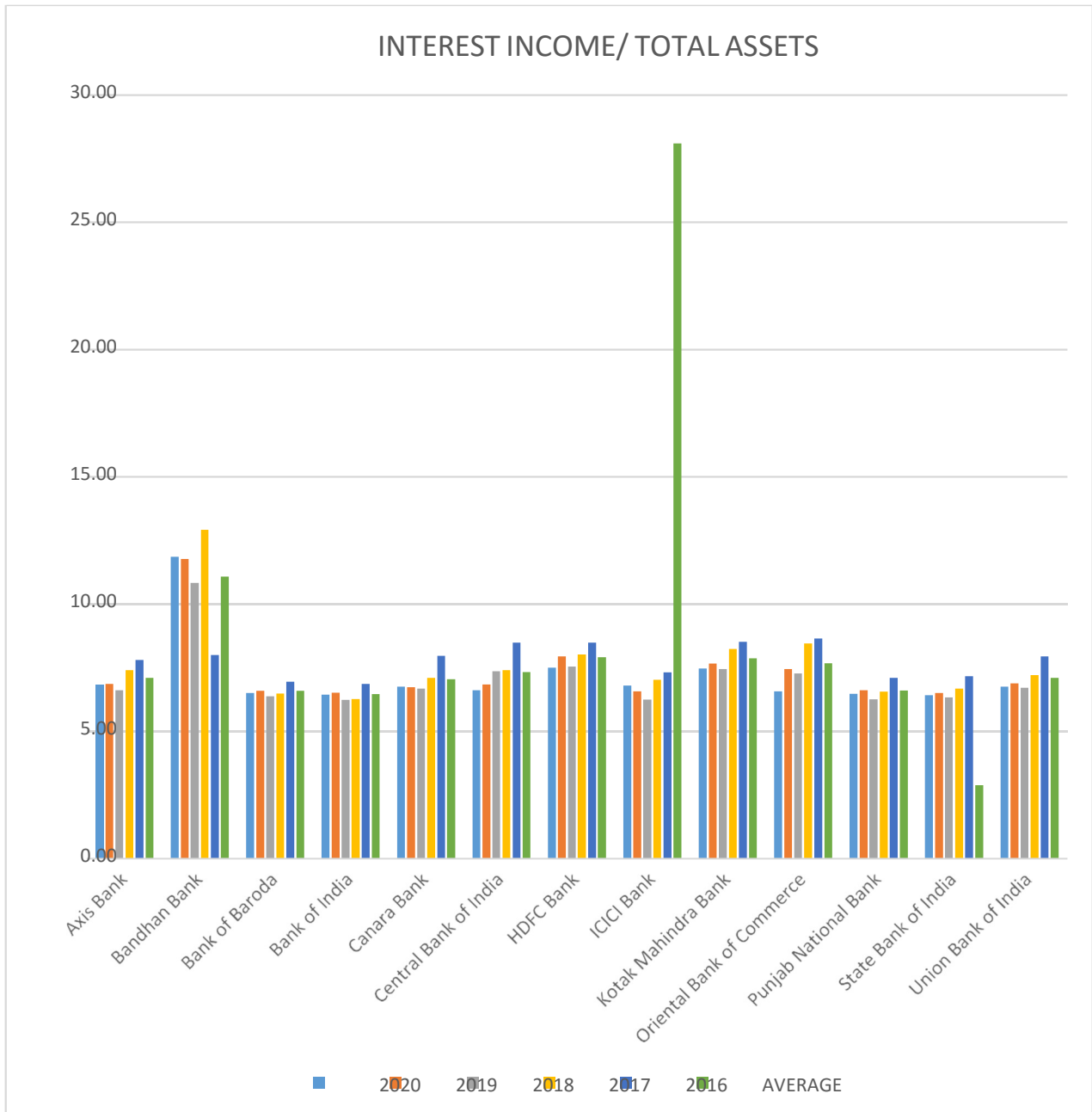
Figure 5.60 Interest income per total asset

Conclusion: The Interest Income to Total Assets ratio of the banks is ranked in the order ofICICI Bank, Bank of Baroda, Bank of India,Bandhan Bank, Central Bank of India, Punjab National Bank, Canara Bank, Kotak Mahindra Bank,Union Bank of India, Axis Bank, HDFC Bank, State Bank of India, Oriental Bank of Commerce. Therefore, it is concluded that the private sector banks are performing much better than public sector but public sector banks are trying there level best.

Table: 5. 61 LIQUID ASSETS TO TOTAL ASSETS

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	RANK
1	Axis Bank	0.11	0.08	0.06	0.08	0.06	0.08	10
2	Bandhan Bank	0.09	0.10	0.12	0.24	0.16	0.14	4
3	Bank of Baroda	0.11	0.11	0.13	0.22	0.20	0.15	2
4	Bank of India	0.13	0.15	0.16	0.15	0.16	0.15	3
5	Canara Bank	0.09	0.10	0.08	0.10	0.10	0.09	7
6	Central Bank of India	0.10	0.09	0.12	0.24	0.05	0.12	5
7	HDFC Bank	0.06	0.07	0.12	0.06	0.05	0.07	11
8	ICICI Bank	0.08	0.04	0.06	0.06	0.05	0.24	1
9	Kotak Mahindra Bank	0.15	0.08	0.07	0.11	0.06	0.09	8
10	Oriental Bank of Commerce	0.06	0.06	0.07	0.04	0.05	0.06	13
11	Punjab National Bank	0.09	0.10	0.12	0.12	0.11	0.11	6
12	State Bank of India	0.06	0.06	0.06	0.06	0.07	0.06	12
13	Union Bank of India	0.10	0.09	0.10	0.07	0.07	0.09	9
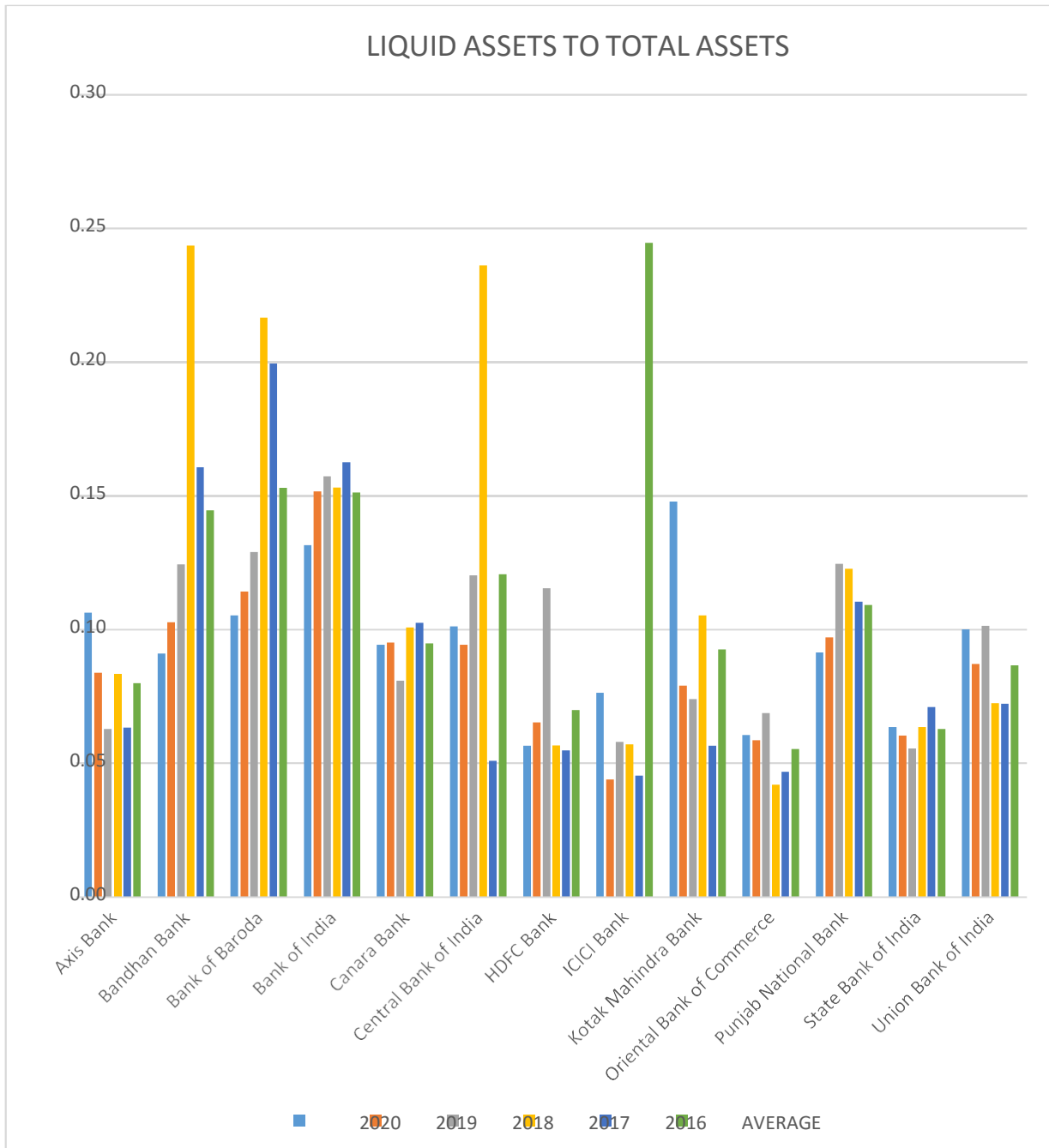
Figure 5.61 Liquid assets to total assets

Conclusion: The liquid assets to total assets ratio of the banks is ranked in the order of ICICI Bank, Bandhan Bank, Bank of Baroda, Bank of India, Central Bank of India, Punjab,National Bank, Kotak Mahindra Bank, Axis Bank, Canara Bank, HDFC Bank, Oriental Bankof Commerce, Union Bank of India and State Bank of India. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also coping up in a good way.

Table: 5. 62

S.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	RANK
	LIQUID ASSETS TO TOTAL DEPOSIT							
1	ICICI Bank	0.1546	0.1230	0.1500	0.1545	0.1421	0.6105	1
2	Bandhan Bank	0.1463	0.1342	0.1627	0.3171	0.2625	0.2046	2
3	Bank of Baroda	0.1289	0.1397	0.1571	0.2501	0.2333	0.1818	3
4	Bank of India	0.1556	0.1820	0.1841	0.1776	0.1933	0.1785	4
5	Central Bank of India	0.1149	0.1040	0.1331	0.2655	0.0584	0.1352	5
6	Punjab National Bank	0.1080	0.1114	0.1486	0.1421	0.1331	0.1286	6
7	Kotak Mahindra Bank	0.2028	0.1092	0.1018	0.1434	0.0785	0.1271	7
8	Axis Bank	0.1520	0.1225	0.0958	0.1213	0.0931	0.1169	8
9	Canara Bank	0.1092	0.1104	0.0951	0.1188	0.1182	0.1103	9
10	HDFC Bank	0.0755	0.0881	0.1558	0.0761	0.0712	0.0933	10
11	Oriental Bank of Commerce	0.0708	0.0660	0.0794	0.0477	0.0528	0.0634	11
12	Union Bank of India	0.0002	0.0002	0.0002	0.0001	0.0001	0.0002	12
13	State Bank of India	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	13
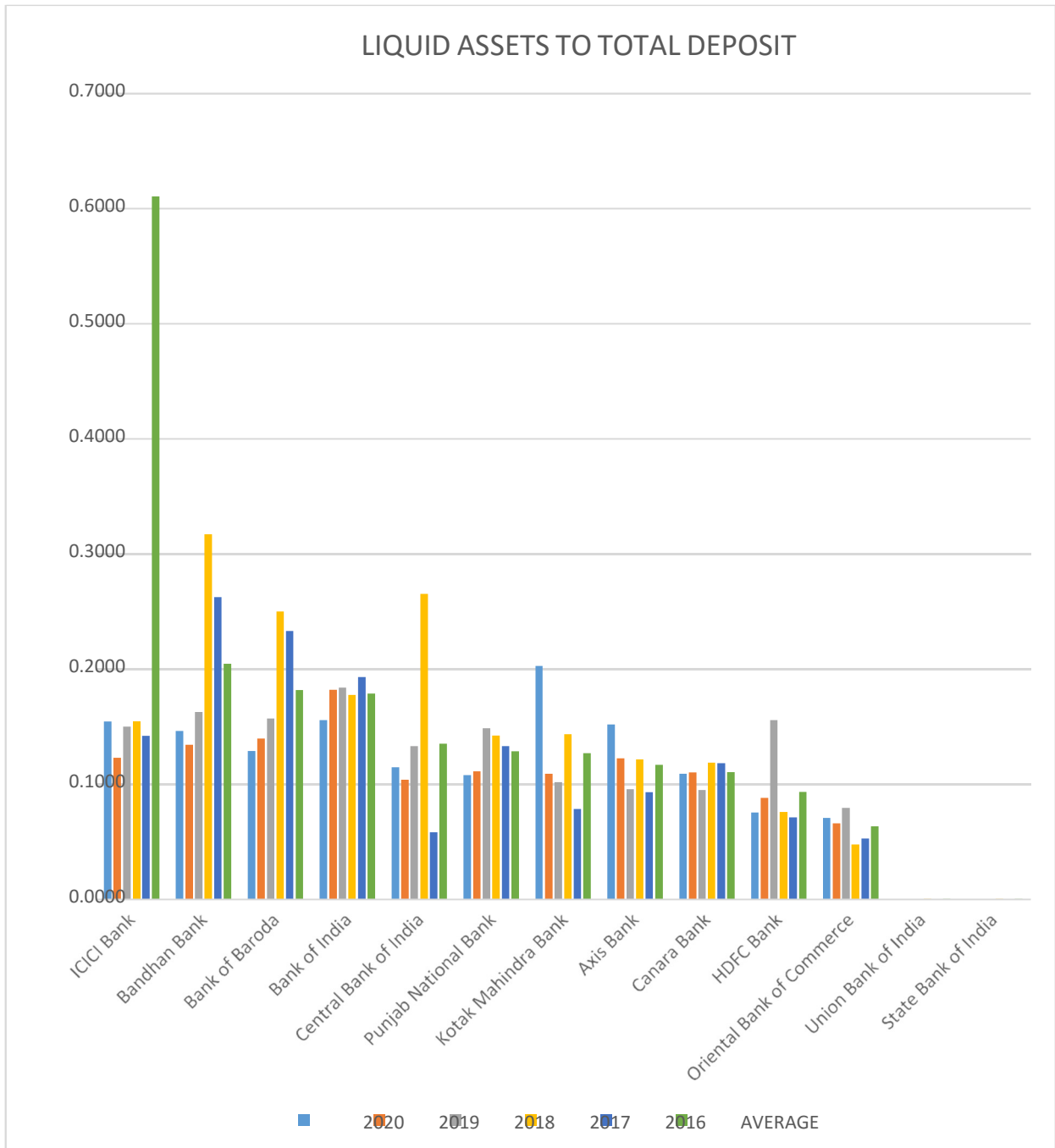
Figure 5.62 Liquid assets to total deposit

Conclusion: The liquid assets to total deposit ratio of the banks is ranked in the order of ICICI Bank, Bank of India, Central Bank of India, Bank of Baroda, Canara Bank, Punjab National Bank, Union Bank of India, State Bank of India, Kotak Mahindra Bank, Oriental Bank of Commerce, HDFC Bank, Axis Bank, Bandhan Bank. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also having good position.

S.N..	Bank	2020	2019	2018	2017	2016	AVERAGE	Rank
			Table: 5. 63 LIQUID ASSETS TO DEMAND DEPOSIT					
1	ICICI Bank	0.000117	0.000083	0.000095	0.000101	0.000102	0.000416	1
2	Bank of India	0.000285	0.000342	0.000325	0.000338	0.000422	0.000342	2
3	Central Bank of India	0.000234	0.000190	0.000267	0.000596	0.000130	0.000283	3
4	Bank of Baroda	0.000182	0.000181	0.000202	0.000354	0.000387	0.000261	4
5	Canara Bank	0.000258	0.000284	0.000200	0.000261	0.000286	0.000258	5
6	Punjab National Bank	0.000166	0.000170	0.000236	0.000193	0.000204	0.000194	6
7	Union Bank of India	0.000209	0.000162	0.000197	0.000125	0.000098	0.000158	7
8	State Bank of India	0.000110	0.000108	0.000101	0.000113	0.000120	0.000110	8
9	Kotak Mahindra Bank	0.000126	0.000064	0.000062	0.000082	0.000047	0.000076	9
10	Oriental Bank of Commerce	0.000000	0.000096	0.000126	0.000055	0.000084	0.000072	10
11	HDFC Bank	0.000050	0.000057	0.000103	0.000042	0.000044	0.000059	11
12	Axis Bank	0.000075	0.000054	0.000040	0.000051	0.000033	0.000050	12
13	Bandhan Bank	0.000000	0.000001	0.000000	0.000001	0.000001	0.000001	13
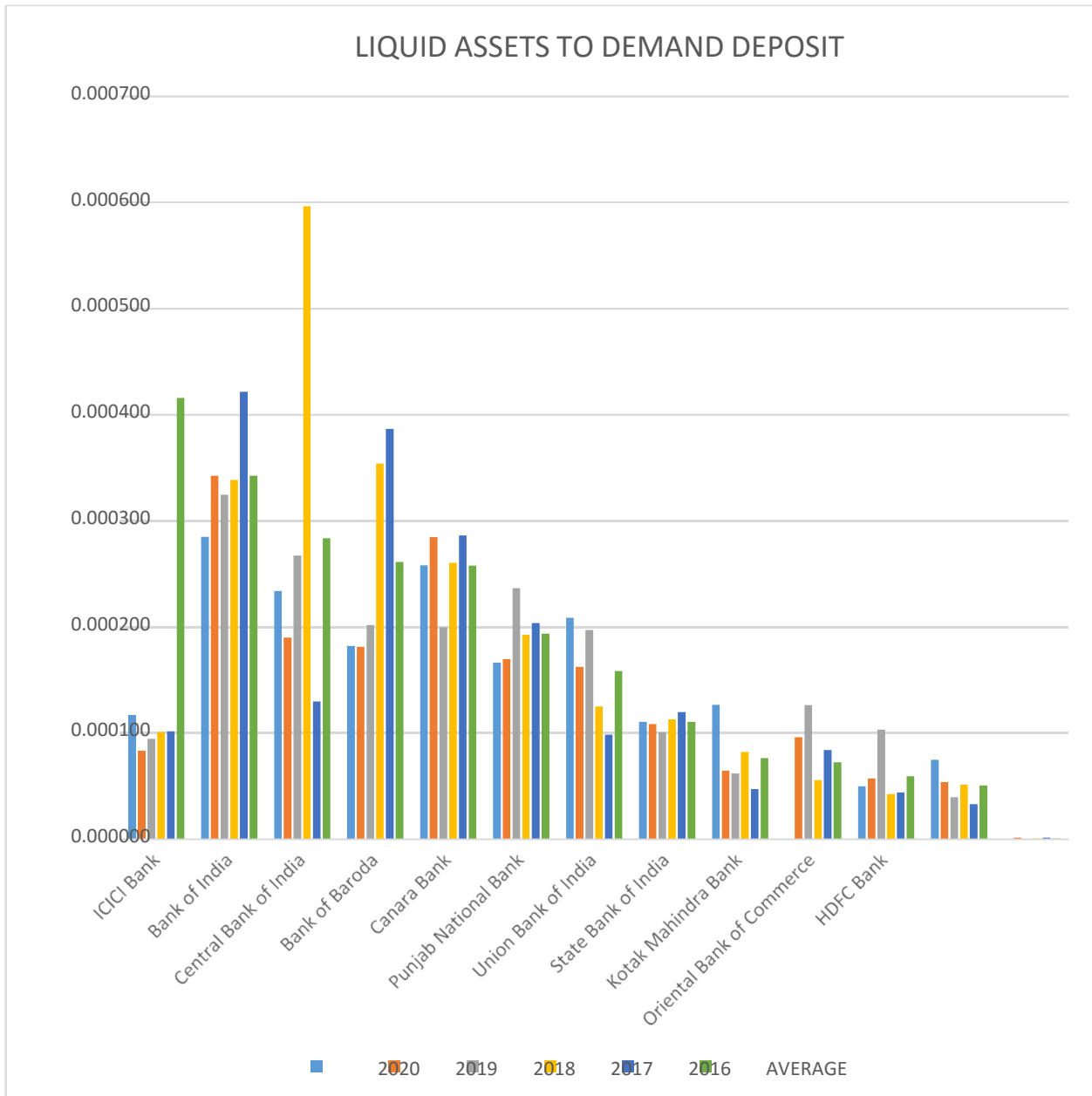
Figure 5.63 Liquid assets to demand deposit

Conclusion: The liquid assets to demand deposit ratio of the banks is ranked in the order of Bandhan Bank, ICICI Bank, Bank of India, Central Bank of India, Kotak Mahindra Bank Canara Bank, State Bank of India, HDFC Bank, Bank of Baroda, Oriental Bank of commerce, Punjab National Bank, Axis Bank, Union Bank of India. Therefore, it is concluded that the private sector banks are ranked top but the government sector banks are also having good position.

Table: 5. 64

Sr.No.	Name of Bank	2020	2019	2018	2017	2016	AVERAGE	RANK
1	Axis Bank	0.09	0.08	0.09	0.09	0.10	0.12	5
2	Bandhan Bank	0.17	0.20	0.21	0.15	0.17	0.18	4
3	Bank of Baroda	0.06	0.06	0.06	0.06	0.06	0.06	8
4	Bank of India	0.07	0.07	0.06	0.05	0.05	0.06	10
5	Canara Bank	0.05	0.05	0.06	0.06	0.06	0.06	11
6	Central Bank of India	0.95	0.81	0.77	0.92	1.06	0.90	2
7	HDFC Bank	0.11	0.12	0.10	0.10	0.10	0.11	6
8	ICICI Bank	0.70	0.68	0.64	0.63	0.58	2.77	1
9	Kotak Mahindra Bank	0.73	0.72	0.73	0.73	0.72	0.73	3
10	Oriental Bank of Commerce	0.07	0.05	0.06	0.06	0.06	0.06	9
11	Punjab National Bank	0.08	0.06	0.05	0.06	0.06	0.06	7
12	State Bank of India	0.00	0.00	0.00	0.00	0.00	0.00	13
13	Union Bank of India	0.06	0.05	0.05	0.05	0.06	0.05	12
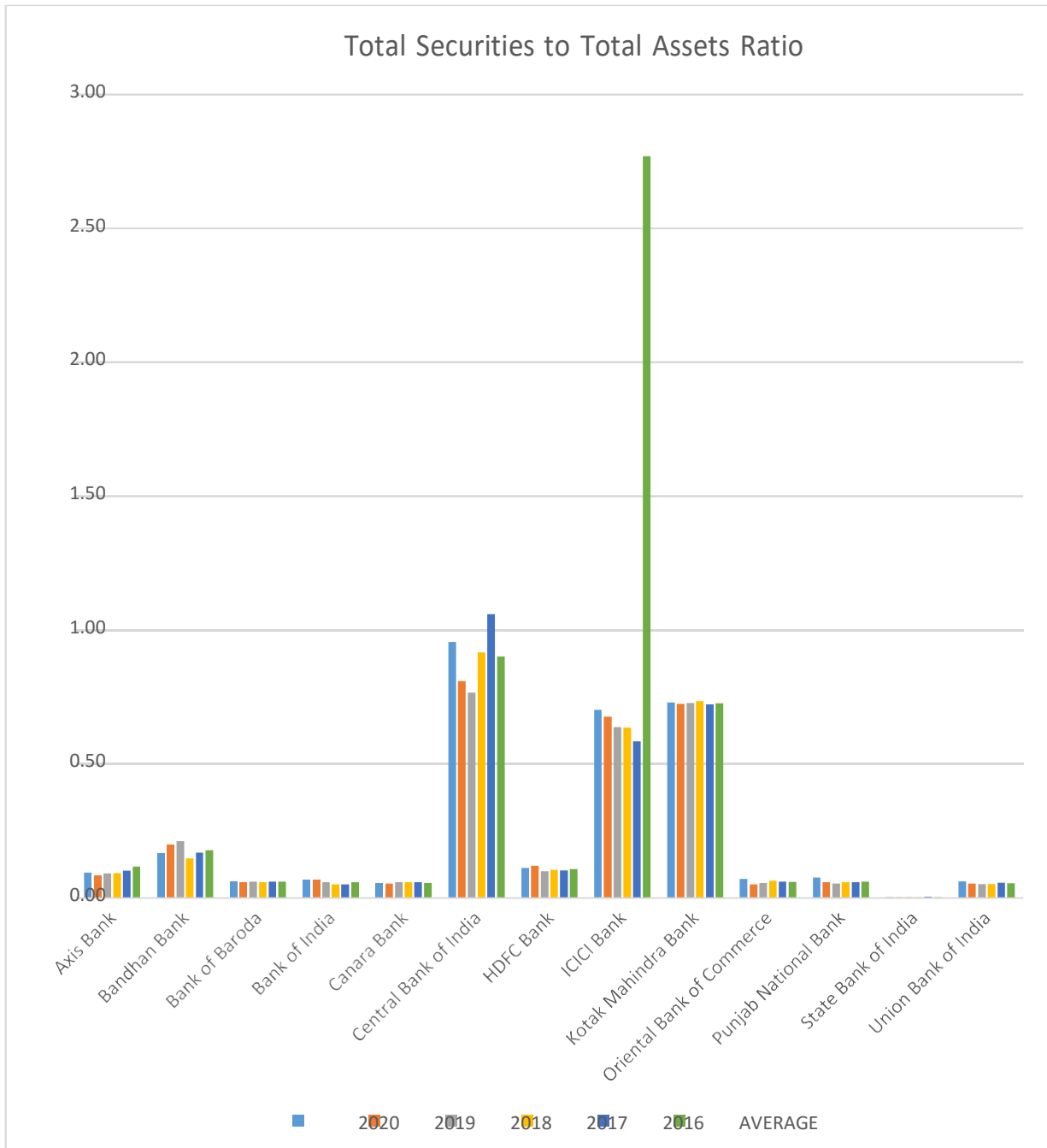
Figure 5.64 Total securities to total asset ratio

Conclusion: The ranking of the banks as per sensitivity ratio (Total Securities to Total Assets Ratio) of CAMEL is ICICI Bank, Central Bank of India, Kotak Mahindra Bank, Bandhan Bank, Axis Bank, HDFC Bank, Punjab National Bank, Bank of Baroda, Oriental Bank of Commerce, Bank of India, Canara Bank, Union Bank of India and State Bank of India. This shows that public sector banks such as State Bank of India are also lagging behind the private sector bank.

Table: 5. 65

BANK NAME	C	A	M	E	L	S	WEIGHTED AVEARGE CAMEL SCORE	COMPOSITE RANKING
Bandhan Bank	1	3	5	2	4	10	3.75	1
HDFC Bank	4	1	2	3	11	8	3.85	2
Kotak Mahindra Bank	2	4	3	4	8	11	4.45	3
ICICI Bank	3	13	1	1	1	13	5	4
Bank of Baroda	7	2	6	6	2	6	5	5
Axis Bank	5	5	4	5	10	9	5.65	6
State Bank of India	6	6	7	7	12	1	6.5	7
Canara Bank	9	7	8	8	7	3	7.4	8
Bank of India	8	9	11	12	3	2	8.3	9
Union Bank of India	10	8	9	9	9	4	8.65	10
Oriental Bank of Commerce	11	10	10	10	13	5	10	11
Punjab National Bank	12	11	12	11	6	7	10.55	12
Central Bank of India	13	12	13	13	5	12	11.9	13
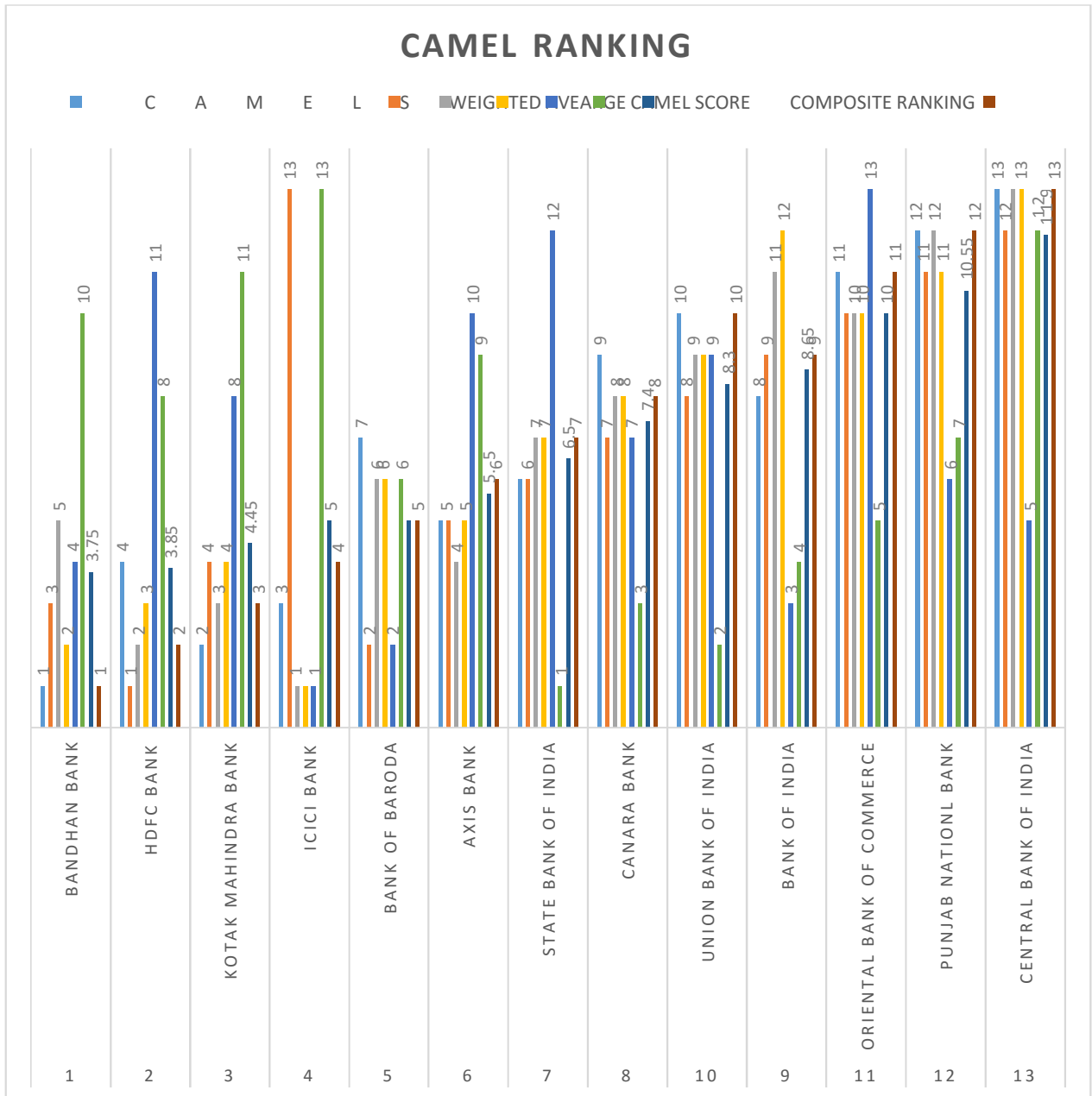
Figure 5.65 Camel ranking

Conclusion: The above table shows the ranking of the banks Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, ICICI Bank, Bank of Baroda, Axis Bank, State Bank of India, Canara Bank, Bank of India, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Central Bank of India CAMELS. This above CAMELS ranking shows that the private sector banks are performing better than the government sector bank.

4.5 Hypothesis of the research

According to the objectives of the research, the present research is probing to find the answerof the following questions:

First Hypothesis

Null Hypothesis Ho: There is no significant difference in performance of Public Sector Banks in India assessed by CAMEL model

Alternate Hypothesis H_1: There is a significant difference in performance of Public Sector Banks in India assessed by CAMEL model.

Solution

Table No.5.66

BANK NAME	C	A	M	E	L	S	WEIGHTED AVEARGE CAMEL SCORE	COMPOSITE RANKING
Bank of Baroda	7	2	6	6	2	6	**5**	1
State Bank of India	6	6	7	7	12	1	**6.5**	2
Canara Bank	9	7	8	8	7	3	**7.4**	3
Bank of India	8	9	11	12	3	4	**8.65**	4
Union Bank of India	10	8	9	9	9	2	**8.3**	5
Oriental Bank of Commerce	11	10	10	10	13	5	**10**	6
Punjab National Bank	12	11	12	11	6	7	**10.55**	7
Central Bank of India	13	12	13	13	5	12	**11.9**	8

Table No.5.67

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Bank of Baroda	6	29	4.833333	4.966667
State Bank of India	6	39	6.5	12.3
Canara Bank	6	42	7	4.4
Bank of India	6	47	7.833333	13.36667
Union Bank of India	6	47	7.833333	8.566667
Oriental Bank of Commerce	6	59	9.833333	6.966667
Punjab National Bank	6	59	9.833333	6.966667
Central Bank of India	6	68	11.33333	9.866667

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	186.25	7	26.60714	3.158118	0.009395	2.249024
Within Groups	337	40	8.425			
Total	523.25	47				

Conclusion: P is less than .05 so Ho is rejected. Therefore, it is concluded that there is a significant difference in performance of Public Sector Banks in India assessed by CAMEL model.

Second Hypothesis

Null Hypothesis Ho: There is no relation between risk management of credit, market and operational risks of the banks.

Alternative Hypothesis H_1: There is relation between risk management of credit, market and operational risks of the banks.

Solution   Table No.5.68

S.No.	Name of the Bank	NPA/Advances	Earning per Employee	Debt-Equity Ratio	Liquidity to total Assets	Total Security to debt	Return on Equity
1	Axis Bank	2.2	662180.67	9.87	0.08	0.12	29.158
2	Bandhan Bank	0.6	368385.36	4.70	0.14	0.18	16.98
3	Bank of Baroda	0.04	262421.62	15.71	0.15	0.06	15.818
4	Bank India of	6.6	-659701.72	16.39	0.15	0.06	11.136
5	Canara Bank	5.6	-271738.72	16.95	0.09	0.06	6.28
6	Central Bank of Bank	8.8	-867323.45	16.75	0.12	0.90	3.51
7	HDFC Bank	0	1901104.26	8.34	0.07	0.11	2.882
8	ICICI Bank	14.6	3458083.18	7.49	0.24	2.77	-5.384
9	Kotak Mahindra Bank	1	922283.44	6.50	0.09	0.73	-6.7
10	Oriental Bank of Commerce	7	-567064.96	15.94	0.06	0.06	- 11.988
11	Punjab National Bank	8.2	-676395.03	0.94	0.11	0.06	-12.84
12	State Bank of India	3.8	262421.62	15.03	0.06	0.00	-13.676
13	Union Bank of India	6.4	-486398.80	0.94	0.09	0.05	- 17.474

Table No. 5.69

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
NPA/Advances	13	64.84	4.987692	18.32997
Debt-Equity Ratio	13	135.55	10.42692	36.59134
Liquidity to total Assets	13	1.45	0.111538	0.002481
Total Security to debt	13	5.16	0.396923	0.587256
Return on Equity	13	17.702	1.361692	201.9598

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	986.3015	4	246.5754	4.788413	0.002029	2.525215
Within Groups	3089.65	60	51.49417			
Total	4075.952	64				

Conclusion: P is less than .05 so Ho is rejected. Therefore, it is concluded that there is relation between risk management of credit, market and operational risks of the banks.

Third Hypothesis

Null Hypothesis Ho: There is no significant difference between banks in management of risk. Alternate Hypothesis H1: There is a significant between difference between banks in management of risk.

Table No.5.70

S.No.	Name of Bank	SA	A	N	DA	SDA
1	Axis Bank	10	13	5	1	1
2	Bandhan Bank	21	5	2	1	1
3	Bank of Baroda	10	15	3	1	1
4	Bank of India	12	15	2	1	0
5	Canara Bank	10	17	2	1	0
6	Central Bank of India	7	20	2	1	0
7	HDFC Bank	11	15	2	1	1
8	ICICI Bank	10	17	1	1	1
9	Kotak Mahindra Bank	14	15	1	0	0
10	Oriental Bank of Commerce	10	19	1	0	0
11	Punjab National Bank	13	21	1	0	0
12	State Bank of India	12	23	0	0	0
13	Union Bank of India	12	18	0	0	0

Table No. 5.71

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Axis Bank	5	30	6	48.5
Bandhan Bank	5	30	6	91
Bank of Baroda	5	30	6	91
Bank of India	5	30	6	113.5
Canara Bank	5	30	6	102
Central Bank of India	5	30	6	113.5
HDFC Bank	5	35	7	115.5
ICICI Bank	5	30	6	83
Kotak Mahindra Bank	5	30	6	55.5
Oriental Bank of Commerce	5	30	6	50.5
Punjab National Bank	5	30	6	48.5
State Bank of India	5	35	7	56
Union Bank of India	5	30	6	56

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8.461538	12	0.705128	0.008947	1	1.943617
Within Groups	4098	52	78.80769			
Total	4106.462	64				

Conclusion: P is greater than .05 so Ho is accepted. Therefore, it is concluded that there is no significant between difference between banks in management of risk.

Fourth Hypothesis

Null Hypothesis H_0: There is no significant difference between credit risk management practices of different commercial banks in India and they do not meet the standards set out under the New Basel Capital Accord.

Alternate Hypothesis H_1: There is a significant difference between credit risk management practices of different commercial banks in India and they do not meet the standards set out under the New Basel Capital Accord.

Table No.5.72

S.No.	Name of Bank	SA	A	N	DA	SDA
1	Axis Bank	10	13	5	1	1
2	Bandhan Bank	21	5	2	1	1
3	Bank of Baroda	10	15	3	1	1
4	Bank of India	12	15	2	1	0
5	Canara Bank	10	17	2	1	0
6	Central Bank of India	7	20	2	1	0
7	HDFC Bank	5	20	2	1	1
8	ICICI Bank	10	17	1	1	1
9	Kotak Mahindra Bank	12	17	1	0	0
10	Oriental Bank of Commerce	11	19	1	0	0
11	Punjab National Bank	13	21	1	0	0
12	State Bank of India	11	24	0	0	0
13	Union Bank of India	12	18	0	0	0

Table No.5.73

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Axis Bank	5	30	6	73
Bandhan Bank	5	30	6	101.5
Bank of Baroda	5	30	6	91
Bank of India	5	30	6	113.5
Canara Bank	5	30	6	102
Central Bank of India	5	30	6	113.5
HDFC Bank	5	35	7	115.5
ICICI Bank	5	30	6	83
Kotak Mahindra Bank	5	30	6	55.5
Oriental Bank of Commerce	5	30	6	50.5
Punjab National Bank	5	30	6	48.5
State Bank of India	5	35	7	56
Union Bank of India	5	30	6	44

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8.461538	12	0.705128	0.008751	1	1.943617
Within Groups	4190	52	80.57692			
Total	4198.462	64				

Conclusion: P is less than .05 so Ho is rejected. Therefore, it is concluded that there is a significant difference between credit risk management practices of different commercial banks in India and they do not meet the standards set out under the New Basel Capital Accord.

Chapter - VI

Findings & Conclusion

CHAPTER -VI
FINDINGS & CONCLUSION

CAMELS ranking is a true scale for understanding the true position of the bank as it covers all the aspects of the Bank performance. Indian banks both public and private sector bank follow the RBI guidelines as they try to improve the bank performance. In this study while calculating CAMELS model parameter it has been seen most of the ratios for the prominent banks under study are favorable. Most of the banks employees responded positive towards their banks but at the same time they were bounded with number of constraints and limitations and were not comfortable with some questions and disclosing detailing of the required information. Hence we can say that the results are aggregative in nature and may not reflect the true performance of the respective banks. Also, they accepted that their banks can improve the banking performance by introducing some changes in their system.

The banks are focused and management is very active to improve the overall performance of banks. But NPA problem is less as the banks norms are very proper in place but still the NPA exist for the banks. Banks are improvising their policies and putting their efforts to improve the position of the banks.

All the component of CAMELS model can be improved to ensure the better banking performance. Capital adequacy, Asset quality, Management efficiency, earning capacity, Liquidity and Sensitivity can be improved. There is no bank which is having an ideal banking system. Some private sector banks such as ICICI, HDFC and Kotak Mahindra etc. have high earnings though they have high debt to equity ratio. So all the aspects have to be taken care of for better and safe banking business.
The most common techniques used in the above study are Ratio Analysis , ANOVA and various other statistical tools like charts ,graphs ,diagrams , bars etc. to make it more understandable.

The capital adequacy is more than 8% which is the minimum percentage need to be maintained by a bank as per the RBI guidelines. The banks in the decreasing order of Capital Adequacy is Bandhan Bank, Kotak Mahindra Bank, ICICI Bank, HDFC Bank, Axis Bank, State Bank of India, Bank of Baroda, Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Central Bank of India. This shows that the banks are having proper capital adequacy ratio.

Debt to equity ratio: A good debt to equity ratio is around 1 to 1.5. However, the ideal debt to equity ratio will vary depending on the industry because some industries use more debt financing than others. The order of banks in decreasing order of their debt to equity ratio is Punjab National Bank, Union Bank of India, Bandhan Bank, Kotak Mahindra Bank, ICICI Bank, HDFC Bank, Axis Bank, State Bank of India, Bank of Baroda, Oriental Bank of Commerce, Bank of India Central Bank of India, Canara Bank. All the banks are having debt to equity ratio more than 1.5 except Punjab National Bank this shows that private sector banks as well as most of the public sector banks are not having proper debt equity ratio. This reduces their CAMELS Score.

Advances to Total Assets: The loans to assets ratio measures the total loans outstanding as a percentage of total assets. The higher this ratio indicates a bank is loaned up and its liquidity is low. The higher the ratio, the riskier a bank may be to higher defaults. The banks in their decreasing order of loans to asset ratio is Central Bank of India, Bank of India, Bank of Baroda, Punjab National Bank, State Bank of India, Canara Bank, Oriental Bank of Commerce, Union Bank of India, Axis Bank, Kotak Mahindra Bank, HDFC Bank, Bandhan Bank, ICICI Bank. The advance to total assets are well managed by the banks.

Net NPA to Advances: Net NPAs are calculated by reducing cumulative balance of provisions outstanding at a period end from gross NPAs. Higher ratio reflects rising bad quality of loans. The banks in the decreasing order of the net NPA to Advances ratio is HDFC Bank, Bank of Baroda, Bandhan Bank, Kotak Mahindra Bank, Axis Bank, State Bank of India, Canara Bank, Union Bank of India, Bank of India, Oriental Bank of Commerce, Punjab National Bank, Central Bank of India, ICICI Bank. This shows that HDFC is the only bank which is well managing its loans. The other banks are having high Net NPA to Advance ratio that need to be reduced as it is affecting both the management's poor distribution of loans and asset quality of the business. This is badly affecting the absolute ranking of the banks using CAMEL ranking of the banks.

Total Investment to Total Assets: Investments in stocks, mutual funds or other such investments, which can be converted to cash easily are considered as liquid assets. Apart from these liquid assets, total assets also include liquid assets and fixed assets such as real estate or other such investments which require more time to convert to cash. One should hold at least 20 per cent of total assets as liquid assets. The banks in the decreasing order of Total Investment to Total Assets are Central Bank of India, Oriental Bank of Commerce, State Bank of India, Punjab National Bank, Union Bank of India, Canara Bank, HDFC Bank, Kotak Mahindra Bank, ICICI Bank, Bank of

India, Bank of Baroda, Axis Bank, Bandhan Bank. This shows that the most of the banks are having more than 20% of total investment to total assets and only Bandhan bank is holding less than 20 per cent of his total liquid assets.

Return on Equity/Networth: Generally, a minimum 15% Return on net worth indicates better valuation and profitable stock and below 10% RoNW considers as poor rates for a company. The banks in the decreasing order of Return on Equity /Networth are ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, Bank of Baroda, State Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National

Bank, Bank of India, Central Bank of India. Only ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, Bank of Baroda, State Bank of India is having good return on equity to networth ratio and rest of the banks i.e. Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Bank of India, Central Bank of India are having negative return on equity to networth ratio.

Business/Employee: Higher the business to employee ratio shows that the bank management and its policies are good. The banks in the decreasing order of Business/Employee ratio are ICICI Bank, Union Bank of India, Oriental Bank of Commerce, Canara Bank, HDFC Bank, Axis Bank, Punjab National Bank, Bank of India, Bank of Baroda, State Bank of India, Central Bank of India, Kotak Mahindra Bank, Bandhan Bank. The highest Business/Employee ratio is of ICICI Bank. It has been found that some private sector banks are really performing well.

Net profit/Employee: Higher the net profit to employee ratio shows that the banks management is very effective and the employees are encouraged to bring more business. The banks in the decreasing order is Net profit/Employee is ICICI Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, Bandhan Bank, Bank of Baroda, State Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Bank of India, Punjab National Bank, Central Bank of India. The highest Net Profit/Employee ratio is of ICIC Bank. The private sector banks are having high net profit to employee ratio and the public sector banks are having low net profit to employee ratio.

ROA: The return on asset shows how the bank is utilizing its assets to generate profits. The banks in the decreasing order of return on assets ICICI Bank, Bandhan

Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, Bank of Baroda, State Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Bank of India, Central Bank of India. The figures show that the private sector banks are having high return on assetsin comparison to public sector banks.

Net Interest Margin: NIM is one indicator of a bank's profitability and growth. The banks in the decreasing order of Net Interest Margin ratio are ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, State Bank of India, Bank of Baroda, Punjab National Bank, Central Bank of India, Oriental Bank of Commerce, Union Bank of India, Bank of India, Canara Bank. The net margin ratio is high for the private sector banks.

Operating Profit/Total Assets: This ratio shows how banks assets are utilized to generate operating profit The banks in the decreasing order of Operating Profit/Total Assets ratio are Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Bank of Baroda, Axis Bank, Canara

Bank, Union Bank of India, Oriental Bank of Commerce, Bank of India, Punjab National Bank, Central Bank of India, State Bank of India and ICICI Bank. This shows that the private sector banks are doing good but the ICICI bank is having low operating profit to total assets ratio.

Interest Income/Total Assets: This ratio shows how banks assets are utilized to generate interest income. The banks in the decreasing order of Interest Income / Total Assets ratio are ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Oriental Bank of Commerce, Central Bank of India, Union Bank of India, Axis Bank, Canara Bank, Punjab National Bank, Bank of Baroda, Bank of India, State Bank of India. The interest income to total assets ratio is high of the private sector banks in comparison to the public sector banks.

Liquid Assets to Total Assets: This ratio shows how banks liquid position in comparison toits total assets. The LCR is calculated by dividing a bank's high-quality liquid assets by its total net cash flows, over a 30-day stress period. The high-quality liquid assets include only those with a high potential to be converted easily and quickly into cash. The banks in the decreasing order of Liquid Assets to Total Assets ratio are ICICI Bank, Bank of Baroda, Bank of India, Bandhan Bank, Central Bank of India, Punjab National Bank Canara Bank, Kotak Mahindra Bank, Union Bank of India, Axis Bank, HDFC Bank, State Bank of India, Oriental Bank of Commerce.

This shows that the banks are having adequate liquid assets to manage its operations.

Liquid Assets to Total Deposit: A liquid asset requirement or ratio, is defined as the obligation of commercial banks to maintain a predetermined percentage of total deposits and certain other liabilities in the form of liquid assets. In a number of countries this requirement is calculated as a percentage of short-term liabilities. The banks in the decreasing order of Liquid Assets to Total Deposit ratio are ICICI Bank, Bandhan Bank, Bank of Baroda, Bank of India, Central Bank of India, Punjab National Bank, Kotak Mahindra Bank, Axis Bank, Canara Bank, HDFC Bank, Oriental Bank of Commerce, Union Bank of India, State Bank of India. This shows that the liquid asset requirement is well managed by the private banks.

Liquid Assets to Demand Deposit: The ratio of these liquid assets to the demand and time liabilities is called the Statutory Liquidity Ratio (SLR). The Reserve Bank of India (RBI) has the authority to increase this ratio by up to 40%. An increase in the ratio constricts the ability of the bank to inject money into the economy. The loan-to-deposit ratio is used to assess a bank's liquidity by comparing a bank's total loans to its total deposits for the same period. To calculate the loan-to-deposit ratio, divide a bank's total amount of loans by the total amount of deposits for the same period. Typically, the ideal loan-to-deposit ratio is 80% to 90%.

A loan-to-deposit ratio of 100 percent means a bank loaned one dollar to customers for every dollar received in deposits it received. The banks in the decreasing order of Liquid Assets to Demand Deposit ratio are ICICI Bank, Bank of India, Central Bank of India, Bank of Baroda, Canara Bank, Punjab National Bank Union Bank of India, State Bank of India, Kotak Mahindra Bank, Oriental Bank of Commerce, HDFC Bank, Axis Bank, Bandhan Bank. This shows that the liquid assets to demand deposit ratio is quite low of most of the banks.

Total Securities to Total Assets Ratio: The final indicator is Sensitivity to market risk which refers to the risk that changes in market conditions such as alterations in foreign exchange and interest rates could negatively affect a bank's earnings or capital or both. This can be measured by the extent to which these changes can affect the bank's earnings. For instance, high total securities to total assets ratio is an indication of a high susceptibility to market risk. The banks in the decreasing order of Total Securities to Total Assets Ratio are ICICI Bank, Central Bank of India, Kotak Mahindra Bank, Bandhan Bank, Axis Bank, HDFC Bank, Punjab National Bank, Bank of Baroda, Oriental Bank of Commerce, Bank of India, Canara Bank, Union Bank of India, State Bank of India. This shows that the ICICI Bank is very sensitive

and its P/E ratio is also very high.

In the CAMELS composite ranking the Bandhan Bank ranked first, HDFC Bank ranked second, Kotak Mahindra Bank ranked third, ICICI Bank ranked fourth, Bank of Baroda ranked fifth, Axis Bank ranked sixth, State Bank of India ranked seventh, Canara Bank ranked eighth, Bank of India ranked ninth, Union Bank of India ranked tenth, Oriental Bank of Commerce ranked eleventh, Punjab National Bank ranked twelfth, Central Bank of India ranked thirteen . This above CAMELS ranking shows that the private sector banks are performing better than the government sector bank.

On the basis of the CAMELS evaluation done of the prominent public and private sector banks it can be concluded that the private sector banks are having high performance in comparison to the public sector banks. But the private sector banks are working at a higher risk as their debt-equity ratio is high. The profit of the private sector banks is high in comparison to the public sector banks. The policies and management control is rigid and very much concerned about increasing the business of the banks. The public sector banks management policies are not so good as of the private sector banks. The capital adequacy or say capital requirement is well managed by almost all the commercial banks. The Non- performing asset problem exists in almost all the banks that need to be improved. Therefore, there is a large scope of improvements in the performance of the banks on all the aspects of the CAMELS model.

Chapter-VII

Suggestions

CHAPTER-VII
SUGGESTIONS

The following suggestions are made on the basis of the research work conducted to evaluatedand understand the banking performance using CAMELS

1. The capital adequacy can be improved and some of the banks are having good capitaladequacy they need to manage it. The management has to take suitable steps to manage capital adequacy and to maintain it.
2. Private sector banks have high debt to equity ratio that needs to be reduced in the admissible range and this will reduce the risk of the banks in case of NPA increases.
3. To reduce the NPA and to permanently solve the NPA problem the bank need to formulate the norms and should give the secured loans only. The procedure of loan disbursement of a bank should be ethically followed and proper enquiry need to be done before giving any loan to its customers.
4. It is difficult to recover losses of the bank in case of NPA of Non secured loans. So bank should give any non-secured loan with the utmost care.
5. Every employee should be set responsible for the poor performance of any bank branch and proper training and motivational session should be organized in such cases.
6. Public sector banks should train their employees, as done in the private sector banks, there promotion and increment should be done on the basis of the business they generate for the banks.
7. The incentive should be given in the public sector bank to its employees who bringsbusiness for the banks.
8. The banks should higher the agents or third party companies to boost their business.
9. The public sector bank's employees should deal its every customer in a nice manner. They should put up some additional manpower, if required, to complete the work at the counter where it is overburdened.
10. The employees working for extra hours should be provided additional remuneration for overtime work.
11. The banks of both the sectors should maintain the sufficient level of securities to reduce any sort of business risk particularly credit risk.

12. The banks need to maintain the enough liquidity to run its operations in a smooth manner. The adequate level of liquid assets is required to run the banking operations.
13. The bank should invest in the liquid assets so that they can get some return and can convert their investment in liquid if required for running the banking business with some amount of liquidity.
14. Public sector bank's earning efficiency is low in comparison to the private sector banks. This can be improved by motivating the employees to get more business for the bank.
15. The banking system in India is well regulated by RBI but as it has been seen recentlythat NPA problem in private sector banks exposed them to credit risk the risk can be managed by following proper loan disbursement procedure and by keeping market value of security higher than the loan amount.
16. The dynamic team can improve the banking business so it is required to train the employees in the public sector banks so that they generate more business for their banks.
17. The bank should transfer the right person at the right place in the public sector bank as it has been seen that the north India candidate gets transferred to south India wherethey face lot of problem in convincing the customers so it is must to keep a fair transfer policy based on the interest and their basis traits.
18. Public sector banks need to improve their online banking services and customer support to improve the banking business by making their customer delight.
19. The team work is essential for improving a branch business so every employee should be trained and should move to such places where the banking is still not so comfortable.
20. Like the private sector bank does, the public sector banks should appoint a personal banker to every customer who can assist them in the banking operations in case theyface any problem or it is difficult for them due to lack of knowledge.

Therefore, there is a lot of scope of improvement of banking business for all private and public sector banks. Public sector banks are lagging behind in overall performance in comparison to the private sector banks. Public sector banks need to improve their working methodology to fetch more business and to match the expectations of the customers and thus reduce the bridge between the public and private sector banks too.

Summary

SUMMARY

1. Introduction

Banking is one of the India's fastest-growing industries. The banking sector aids in capital growth, creativity, and monetization, as well as monetary policy facilitation. Not only depositors regard a bank's sound financial health as a guarantee, but it is also essential for shareholders, workers, and a country's entire economy.

A solid, sustainable, and viable banking system is critical to an economy's overall growth. The banking sector has aided in bringing about a transformative shift in restructuring the sector and putting it on the road of economic development. In reality, it is the backbone of the economy and one of the most important metrics for determining a country's level of growth. The banking sector's performance is an important measure and metric for assessing the overall performance of any economy. India's banking sector reforms began as a follow-up to the country's financial sector reforms and economic liberalization. The banking sector, as the economy's lifeline, has been given due consideration in the financial sector reforms. The basic intentions behind the inception of reforms in the Indian banking industry were more competition, growth, and production, as well as adherence to international accounting standards.

The Indian banking industry began in the early 1990s and has continued to this day. The bye laws, organization, scale, and activity level of the Indian banking sector have all changed as a result of these reforms. As a result, in the post-liberalization period, the Indian banking industry has experienced tremendous growth. Implementing a regulatory banking supervision system is used to evaluate banking efficiency. The CAMEL rating system is one such example of supervisory control. The CAMEL rating system was adopted by US supervisory authorities in the 1980s as a system of rating banks for on-site inspections of banking institutions. It proved to be a useful and effective tool in the US government's response to the financial crisis of 2008. The camel method is a useful tool for determining a bank's relative financial strength and recommending appropriate steps to address the bank's weaknesses. The Reserve Bank of India (RBI) adopted this method in 1996, based on the recommendations of the Padmanabham Working Group (1995). CAMELS (capital adequacy, asset quality, management quality, earnings, liquidity, and exposure to market risk or systems & control) and CACS (capital, asset quality, enforcement, and systems & control) are

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the two supervisory rating models currently in use in India for rating Indian Commercial Banks and Foreign Banks operating in India, respectively. Indian banking stocks are once again surging. This has occurred in the wake of the banking industry's latest Non-Performing Asset (NPA) issues, which aren't going away anytime soon. In this regard, government-controlled public banks have fared much worse than their private counterparts. With the government's recent demonetization and implementation of international banking standards such as Basel 3, banking margins may be put under even more strain. Given the importance of the banking sector to the economy, a rating and analysis of some of India's largest banks would be beneficial. Using the well-known CAMEL rating method, this study aims to comprehend and compare some of India's largest public sector banks.

The CAMEL rating system is a globally recognized rating system that is used by regulatory authorities to rate and rank financial institutions based on five factors represented by the acronym "CAMEL." Capital Adequacy, Asset Quality, Management, Earnings, and Liquidity are the five criteria. Based on these criteria, a ranking is awarded to each financial institution. Based on the CAMEL parameters, an overall ranking is established. This will assist us in comparing various banks or financial institutions.

In this report, we concentrate on a few public and private sector banks and attempt to develop a ranking methodology based on the CAMEL approach for these banks. In addition, we rank the performance of these bank's stock prices in order to determine the importance of CAMEL in determining the banking business potential.

The initials of the six components are combined to form the letters CAMELS. The CAMELS rating system is used by a country's supervisory authorities to assess the strengths and weaknesses of various financial institutions, as well as their economic performance.
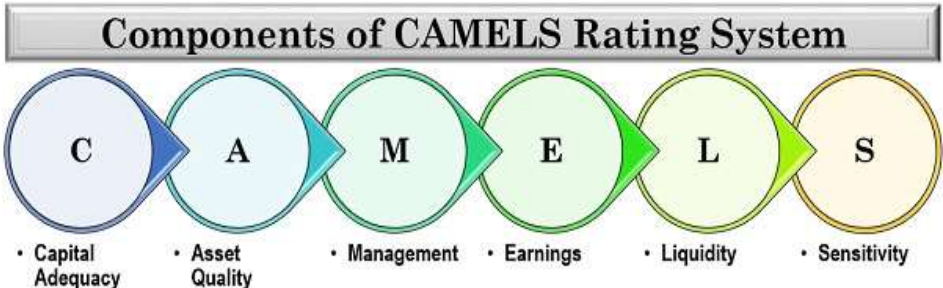
Figure 2.1: Showing CAMEL Components

2. Research Methodology

This study is performed in a structured and coordinated manner in order to learn more about the CAMEL approach to risk management in the banking industry. This is an observational analysis focused on observations and data obtained directly from the organizations. Data was gathered from both primary and secondary sources in order to better understand the reality of the CAMEL rating system and its effectiveness in evaluating banking organization knowledge.

The private and public sectors banks are selected and the various ratios are calculated and analyzed to understand the banking business position. The CAMELS is a model used for the banks analysis as per the RBI guidelines, so in this research the CAMEL is a ratio-based model is being used to evaluate the performance of banks with the help of different criteria, viz. Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity. The present study is a **descriptive research** in which various ratios are used to analyze and describe the bank

3. Research Gap and Rationale of the Study

From the foregoing discussions on the previous studies in banking, it may be observed that the following are the major research gaps.

(i)   Studies that focus on the performance of Banks on basis of CAMELS concept in India in the post-reforms era are virtually nil; all the previous studies being those focusing on either all private sector banks (both old and new) or just new private sector banks alone.

(ii) Studies on risk management in banks in connection with the need to comply with the latest Basel- II norms by banks in India are nil.

(iii) Empirical studies that focus on technology and its impact on operational efficiency and risk management in banks are also nil.

Since we have a strong regulatory system of RBI to look after the health and goodness of the banking system in India, but so many things are still need to be reviewed to see where banks are lacking and NPA problems is being happening in the banking of India. So to study the various facts and figures and the real system in practices in banking this research is being conducted.

Through the CAMEL Model Analysis, the current study aims to highlight the comparative analysis on financial results of selected top public and private sector banks in India. The analysis of the various ratios will help the bankers to understand the financial position of the banks and their overall status of operating banking business about the financial position of the selected 13 top banks operating in India as a result of the report.

4. Objective of the study

The main objective of the study is to analyze the financial position and performance of the commercial banks in India using CAMEL model. Apart for this, following objectives has been assessed during research:

1. Study on relationship between risk of credit, market and operational risks.
2. Credit risk management practices of commercial banks in India and the standards set out under the New Basel Capital Accord
3. Analysis of trends in credit portfolio diversification.
4. Studying relationship between diversified portfolio and non-performing assets of public sector banks viz-a-viz private sector banks.
5. Profiling and analysis of concentration risk in public sector banks vis-a-vis private sector banks.
6. Evaluating the credit risk management practices in public sector banks vis-a-vis private sector banks.
7. Reviewing the New Basel Capital Accord norms and their likely impact on credit risk management practices of Indian commercial banks.
8. Examining the role of Risk Based Supervision in strengthening credit risk management practices of Indian commercials banks.
9. Suggesting a broad outline of measures for improving credit risk management practices of Indian commercial banks.
10. To undertake the factors which have led to the current financial performance.
11. To suggest measures, on the basis of the study results, to improve further the financial performance of the banks under study.

5. Sampling & Collection of Data

Primary Data: A questionnaire was prepared to collect the data from the banking personals. There are about 50,000 employees in banks in Rajasthan. The sample size was 400. Data collected using simple random sampling from the banks located in Rajasthan. Moreover, the primary data was collected by way of in-depth interviews with the principal officers of the respective banks using a carefully drafted Interview Schedule. Thus officers who are in charge of the management of credit risk and other types of risks as per the risk management architecture stipulated by the Reserve Bank of India (RBI) are approached to collect the information regarding the risk management system. Likewise, the officers in charge of technology management are approached to collect information as to the level of technology adoption, investments in technology, and its trend over the years.

Secondary Data:

These are collected from authentic secondary sources like the publications of the RBI, websites of the banks & others such as moneycontrol.com, Indian Banks' Association (IBA), Indian Institute of Banking & Finance (IIBF) etc. Besides, national journals like 'Bank Quest' and 'IBA Bulleting'; and international journals like 'The Banker' and 'The Economist' etc. are also used.

Data is also collected from different websites of major commercial banks RBI and various correspondents.

6. Camel Model in India

The Narasimham Committee of the Indian government introduced a slew of financial and banking reforms, with an emphasis on increasing bank productivity and profitability. The Padmanabhan Working Group in India introduced two supervisory rating models for Indian commercial banks and foreign banks operating in India: CAMELS (Capital Adequacy, Assets Quality, Management, Earnings, Liquidity, Systems and Controls) and CACS (Capital Adequacy, Assets Quality, Management, Earnings, Liquidity, Systems and Controls) (Capital Adequacy, Assets Quality, Enforcement, Systems and Controls).

The CAMEL system is beneficial even after accounting for a wide range of publicly available knowledge about bank condition and performance. Banks may use the CAMEL method as a failure prediction model. Both quantitative and qualitative data are used to assess the bank's ranking. In a study based on CAMEL to evaluate the performance of all nationalized banks for the year 1998, Corporation Bank was found to have the best ranking, followed by Oriental Bank of Commerce, Bank of Baroda, Dena Bank, Punjab National Bank, and others. The lowest-ranking bank was Indian Bank, which was followed by UCO Bank, United Bank of India, Syndicate Bank, and Vijaya Bank. The CAMEL Model was used to assess the efficiency of Indian banks in a study conducted in India. According to the findings of the report, consumers benefited from increased service quality, new products, and better bargains. These types of scores, according to a study, would help the Reserve Bank of India in identifying banks whose performance needs additional supervision. The CAMEL method's main purpose is to recognise the problems that banks face and to compile a comparative summary of their performances.

As a method for evaluating the performance of Jordanian brokerage firms, the implementation of a CAMELS-based banking rating system was proposed. This system would support supervisory agencies, consumers, employers, stakeholders, and researchers alike. Many banks don't know how to calculate their ratings, so it's

important to understand how banks work and what to do if anything goes wrong. The CAMELS rating system, which is used by federal and state regulators, is important for determining the financial soundness of banks and financial institutions. A bank's CAMEL rating is kept strictly confidential and only shared with senior management and related supervisory personnel in order to project business strategies. Capital adequacy, asset quality,

management quality, earning power, and liquidity are all vital aspects of bank safety and soundness, and the word CAMEL stands for them.

The CAMELS model is widely used by regulators due to its utility. This model is perfect for assessing the bank's efficiency. Since financial markets are often underdeveloped in developing countries, banks are often the only major source of finance and act as custodians of economic savings. The strength of CAMEL's factors will decide the bank's overall strength. The inner strength of each product, as well as the degree to which it can shield itself from market risks, is highlighted by the component's quality. The stable financial stability of a bank therefore ensures its creditors and the overall economy.

Purohit and Bothra (2018) use CAMEL parameters to compare the performance of SBI and ICICI Bank. They come to the conclusion that ICICI Bank needs to improve its capital adequacy and asset quality, while SBI needs to improve its management performance, earning quality, and liquidity.

Risal Hari Gopal, Panta Sabin Bikram (2019)[65] The effectiveness of CAMELS (Capital Adequacy, Assets Quality, Management Performance, Earning Efficiency, Liquidity, and Market Risk Sensitivity) based supervision in risk management of A class commercial banks is examined in this paper. Downside Deviation (volatility of returns below the minimum average return) and Standard Deviation of ROA and ROE are used to assess riskiness. The causal relationship between supervision and risk management has been examined using the Generalized Method of Moments (GMM) in secondary balanced panel data from all 28 commercial banks of Nepal during major financial development (i.e., 2004 to 2018; BASEL-I-II-III). The findings show that by reducing non-performing loans (NPLs), retaining adequate liquidity, and improving management performance, commercial banks in Nepal can reduce their downside deviation as well as standard deviation of ROA and ROE. Furthermore, the findings support the importance of the central bank's risk-based supervision and interest spread setting. Increased capital base, on the other hand, hasn't helped banks become less risky. Overall, the study finds that of the six supervision criteria (i.e.,

CAMELS), five (i.e., AMELS in the AMLSE priority order) are capable of reducing the riskiness of commercial banks if strictly followed by the central bank.

Kiran Kajal is a Bollywood actress (2019)[66] Banking is a fast-growing industry in India. The banking sector supports the growth of capital, creativity and monetization and facilitation of monetary policy. It is also vital for shareholders, employees, and the whole country's economy not only for depositors to view the healthy financial health of a bank as a guarantee. In this study, CAMEL Analysis is used to evaluate India's top public and private-

sector banks' financial health. A sample was selected from seven public sector banks, including SBI, BOB, BOI, PNB Bank, Union BOI, Canara Bank and IDBI Bank and four banks of the private sector, among which ICICI Bank, HDFC Bank, AXIS Bank and IndusInd Bank. The data for analysis were collected from the respective banks' annual reports and cover the years 2013-2016 to 2020. Different ratios were used to investigate the principal variable, which contributes to a better variable analysis. The results show that banks of the private sector exceed banks of the public sector, with all the banks selected as the top four. Private sector banks must increase their cash outcomes, while public sector banks must focus on capital adequacy, asset quality, productivity management and income quality.

Table: 8.1 CAMELS COMPOSITE RANKING OF THE BANK

BANK NAME	C	A	M	E	L	S	WEIGHTED AVEARGE CAMEL SCORE	COMPOSITE RANKING
Bandhan Bank	1	3	5	2	4	4	3.15	1
HDFC Bank	4	1	2	3	11	6	3.65	2
Kotak Mahindra Bank	2	4	3	4	8	3	3.65	3
ICICI Bank	3	13	1	1	1	1	3.8	4
Bank of Baroda	7	2	6	6	2	8	5.2	5
Axis Bank	5	5	4	5	10	5	5.25	6
State Bank of India	6	6	7	7	12	13	7.7	7
Canara Bank	9	7	8	8	7	11	8.2	8
Bank of India	8	9	11	12	3	10	9.25	9
Union Bank of India	10	8	9	9	9	12	9.3	10
Oriental Bank of Commerce	11	10	10	10	13	9	10.4	11
Punjab National Bank	12	11	12	11	6	7	10.55	12
Central Bank of India	13	12	13	13	5	2	10.9	13
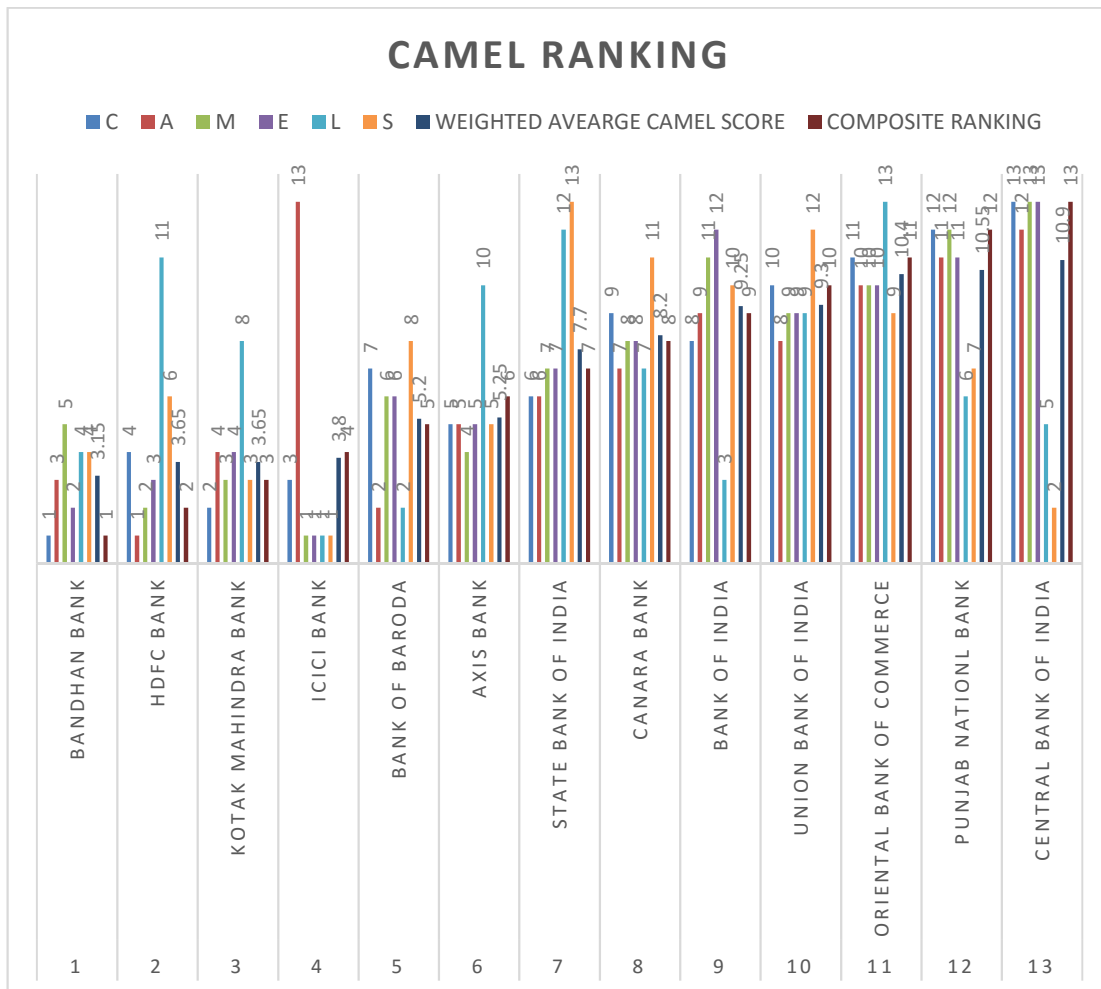
Figure 5.72 Camel ranking

Conclusion: The above table shows the ranking of the banks Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, ICICI Bank, Bank of Baroda, Axis Bank, State Bank of India, Canara Bank, Bank of India, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Central Bank of India CAMELS. This above CAMELS ranking shows that the private sector banks are performing better than the government sector banks.

7.Hypothesis of the research

According to the objectives of the research, the present research is probing to find the answer of the following questions:

First Hypothesis

Null Hypothesis Ho: There is no significant difference in performance of Public Sector Banks in India assessed by CAMEL model

Alternate Hypothesis H_1: There is a significant difference in performance of Public Sector Banks in India assessed by CAMEL model.

Conclusion: Using ANOVA we get P is less than .05 so Ho is rejected. Therefore, it is concluded that there is a significant difference in performance of Public Sector Banks in India assessed by CAMEL model.

Second Hypothesis

Null Hypothesis Ho: There is no relation between risk management of credit, market and operational risks of the banks.

Alternative Hypothesis H_1: There is relation between risk management of credit, market and operational risks of the banks.

Conclusion: Using ANOVA we get P is greater than .05 so Ho is accepted. Therefore, it is concluded that there is no relation between risk management of credit, market and operational risks of the banks.

Third Hypothesis

Null Hypothesis Ho: There is no significant difference between banks in management of risk.

Alternate Hypothesis H1: There is a significant between difference between banks in management of risk.

Conclusion: Using ANOVA we getP is less than .05 so Ho is rejected. Therefore, it is concluded that there is a significant between difference between banks in management of risk.

Fourth Hypothesis

Null Hypothesis H_0: There is no significant difference between credit risk management practices of different commercial banks in India and they do not meet the standards set out under the New Basel Capital Accord.

Alternate Hypothesis H_1: There is a significant difference between credit risk management practices of different commercial banks in India and they do not meet the standards set out under the New Basel Capital Accord.

Conclusion: Using ANOVA we get P is less than .05 so Ho is rejected. Therefore, it is concluded that there is a significant difference between credit risk management practices of different commercial banks in India and they do not meet the standards set out under the New Basel Capital Accord.

8. Findings & Conclusion

Most of the bank's employees responded positive towards their banks. They also accepted that their banks can improve the banking performance by introducing some changes in their system.

The banks are focused and management is very active to improve the overall performance of banks. But NPA problem is less as the banks norms are very proper in place but still the NPA exist for the banks. Banks are improvising their policies and putting their efforts to improve the position of the banks.

All the component of CAMELS model can be improved to ensure the better banking. Capital adequacy, Asset quality, Management efficiency, earning capacity, Liquidity and Sensitivity can be improved. There is no bank which is having an ideal banking system. Some private sector banks such as ICICI, HDFC and Kotak Mahindra etc. have high earnings though they have high debt to equity ratio. So all the aspects have to be taken care of for better and safe banking business.

The capital adequacy is more than 8% which is the minimum percentage need to be maintained by a bank as per the RBI guidelines. The banks in the descending order of Capital Adequacy is Bandhan Bank, Kotak Mahindra Bank, ICICI Bank, HDFC Bank, Axis Bank, State Bank of India, Bank of Baroda, Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Central Bank of India. This shows that the banks are having proper capital adequacy ratio.

A good **debt to equity ratio** is around 1 to 1.5. However, the ideal debt to equity ratio will vary depending on the industry because some industries use more debt financing than others. The order of banks in decreasing order of their debt equity is Punjab National Bank, Union Bank of India, Bandhan Bank, Kotak Mahindra Bank, ICICI Bank, HDFC Bank, Axis Bank, State Bank of India, Bank of Baroda, Oriental Bank of Commerce, Bank of India Central Bank of India, Canara Bank. All the banks are having debt to equity ratio more than 1.5 except Punjab National Bank, this shows that private sector banks as well as most of the public sector banks are not having proper debt equity ratio. This reduces their CAMELS Score.

Advances to Total Assets Ratio: The loans to assets ratio measures the total loans outstanding as a percentage of total assets. The higher this ratio indicates a bank is loaned up and its liquidity is low. The higher the ratio, the riskier a bank may be to higher defaults. The banks in their decreasing order of loans to asset ratio is Central Bank of India, Bank of India, Bank of Baroda, Punjab National Bank, State Bank of India, Canara Bank, Oriental Bank of Commerce, Union Bank of India, Axis Bank, Kotak Mahindra Bank, HDFC Bank, Bandhan Bank, ICICI Bank. The advance to total assets are well managed by the banks.

Net NPA to Advances Ratio: Net NPAs are calculated by reducing cumulative balance of provisions outstanding at a period end from gross NPAs. Higher ratio reflects rising bad quality of loans. The banks in the decreasing order of the net NPA to Advances raio is HDFC Bank, Bank of Baroda, Bandhan Bank, Kotak Mahindra Bank, Axis Bank, State Bank of India, Canara Bank, Union Bank of India, Bank of India, Oriental Bank of Commerce, Punjab National Bank, Central Bank of India, ICICI Bank. This shows that HDFC is the only bank which is well managing its loans. The other banks are having high Net NPA to Advance ratio that need to be reduced as it is effecting both the management poor distribution of loans, asset quality of the business. This is badly affecting the absolute ranking of the banks using CAMEL ranking of the banks.

Total Investment to Total Assets Ratio: Investments in stocks, mutual funds or other such investments, which can be converted to cash easily, are considered as liquid assets. Apart from these liquid assets, total assets also include liquid assets such as real estate or other such investments which require more time to convert to cash. One should hold at least 20 per cent of his/her total assets as liquid assets.The banks in the decreasing order of Total Investment to Total Assets are Central Bank of India, Oriental Bank of Commerce, State Bank of India, Punjab National Bank, Union Bank of India, Canara Bank, HDFC Bank, Kotak Mahindra Bank, ICICI Bank, Bank of India, Bank of Baroda, Axis Bank, Bandhan Bank. This shows that the most of the banks are having more than 20% of total investment to total assets & only Bandhan bank is holding less than 20 per cent of his total liquid assets.

Return on Equity /Networth Ratio: Generally, a minimum 15% Return on net worth indicates better valuation and profitable stock and below 10% RoNW considers as poor rates for a company. The banks in the decreasing order of Return on Equity /Networth are ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis

Bank, Bank of Baroda, State Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Bank of India, Central Bank of India. Only ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, Bank of Baroda, State Bank of India is having good return on equity to networth ratio and rest of the banks i.e Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Bank of India, Central Bank of India are having negative return on equity to networth ratio.

Business/Employee Ratio: Higher the business to employee ratio shows that the bank management and its policies are good. The banks in the decreasing order of Business/Employee ratio are ICICI Bank, Union Bank of India, Oriental Bank of Commerce, Canara Bank, HDFC Bank, Axis Bank, Punjab National Bank, Bank of India, Bank of Baroda, State Bank of India, Central Bank of India, Kotak Mahindra Bank, Bandhan Bank. The highest Business/Employee ratio is of ICICI Bank. It has been found that some private sector banks are really doing well and on the other hand the public sector banks are not performing so well.

Net profit/Employee Ratio: Higher the net profit to employee ratio shows that the banks management is very effective and the employees are encouraged to bring more business. The banks in the decreasing order is Net profit/Employee is ICICI Bank,HDFC Bank ,Kotak Mahindra Bank, Axis Bank, Bandhan Bank, Bank of Baroda, State Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Bank of India, Punjab National Bank, Central Bank of India. The highest Net Profit/Employee ratio is of ICIC Bank. The private sector banks are having high net profit to employee ratio and the public sector banks are having low net profit to employee ratio.

ROA Ratio: The banks in the decreasing order of return on assets ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, Bank of Baroda, State Bank of India, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Punjab National Bank, Bank of India, Central Bank of India. The figures show that the private sector banks are having high return on assets in comparison to public sector banks.

Net Interest Margin Ratio: The banks in the decreasing order of Net Interest Margin ratio are ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, State Bank of India, Bank of Baroda, Punjab National Bank, Central Bank of India, Oriental Bank of Commerce, Union Bank of India, Bank of India, Canara Bank. The net margin ratio is high for the private sector banks.

Operating Profit/Total Assets Ratio: The banks in the decreasing order of Operating Profit/Total Assets ratio are Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Bank of Baroda, Axis Bank, Canara Bank, Union Bank of India, Oriental Bank of Commerce, Bank of India, Punjab National Bank, Central Bank of India, State Bank of India, ICICI Bank. This shows that the private sector banks are doing good but the ICICI bank is having low operating profit to total assets ratio.

Interest Income / Total Assets Ratio: The banks in the decreasing order of Interest Income / Total Assets ratio are ICICI Bank, Bandhan Bank, HDFC Bank, Kotak Mahindra Bank, Oriental Bank of Commerce, Central Bank of India, Union Bank of India, Axis Bank, Canara Bank, Punjab National Bank, Bank of Baroda, Bank of India, State Bank of India. The interest income to total assets ratio is high of the private sector banks in comparison to the public sector banks.

Liquid Assets to Total Assets Ratio: The LCR is calculated by dividing a bank's high-quality liquid assets by its total net cash flows, over a 30-day stress period. The high-quality liquid assets include only those with a high potential to be converted easily and quickly into cash. The banks in the decreasing order of Liquid Assets to Total Assets ratio are ICICI Bank, Bank of Baroda, Bank of India, Bandhan Bank, Central Bank of India, Punjab National Bank Canara Bank, Kotak Mahindra Bank, Union Bank of India, Axis Bank, HDFC Bank, State Bank of India, Oriental Bank of Commerce. This shows that the banks are having adequate liquid assets to manage its operations.

Liquid Assets to Total Deposit Ratio: A liquid asset requirement, or ratio, is defined as the obligation of commercial banks to maintain a predetermined percentage of total deposits and certain other liabilities in the form of liquid assets. In a number of countries this requirement is calculated as a percentage of short-term liabilities. The banks in the decreasing order of Liquid Assets to Total Deposit ratio are ICICI Bank, Bandhan Bank, Bank of Baroda, Bank of India, Central Bank of India, Punjab National Bank, Kotak Mahindra Bank, Axis Bank, Canara Bank, HDFC Bank, Oriental Bank of Commerce, Union Bank of India, State Bank of India. This shows that the liquid asset requirement is well managed by the private banks.

Liquid Assets to Demand Deposit Ratio: The ratio of these liquid assets to the demand and time liabilities is called the Statutory Liquidity Ratio (SLR). The Reserve Bank of India (RBI) has the authority to increase this ratio by up to 40%. An increase in the ratio constricts the ability of the bank to inject money into the economy.

The loan-to-deposit ratio is used to assess a bank's liquidity by comparing a bank's total loans to its total deposits for the same period. To calculate the loan-to-deposit ratio, divide a bank's total amount of loans by the total amount of deposits for the same period. Typically, the ideal loan-to-deposit ratio is 80% to 90%. A loan-to-deposit ratio of 100 percent means a bank loaned one dollar to customers for every dollar received in deposits it received. The banks in the decreasing order of Liquid Assets to Demand Deposit ratio are ICICI Bank, Bank of India, Central Bank of India, Bank of Baroda, Canara Bank, Punjab National Bank Union Bank of India, State Bank of India, Kotak Mahindra Bank, Oriental Bank of Commerce, HDFC Bank, Axis Bank, Bandhan Bank. This shows that the liquid assets to demand deposit ratio is quite low of most of the banks.

Approved Securities to Total Assets Ratio: The banks in the decreasing order of Approved Securities to Total Assets ratio are Bandhan Bank, ICICI Bank, Bank of India, Central Bank of India, Kotak Mahindra Bank, Canara Bank, State Bank of India, HDFC Bank, Bank of Baroda, Oriental Bank of Commerce, Punjab National Bank, Axis Bank, Union Bank of India.

Total Securities to Total Assets Ratio: The final indicator is Sensitivity to market risk which refers to the risk that changes in market conditions such as alterations in foreign exchange and interest rates could negatively affect a bank's earnings or capital or both. This can be measured by the extent to which these changes can affect the bank's earnings. For instance, high total securities to total assets ratio is an indication of a high susceptibility to market risk. The banks in the decreasing order of Total Securities to Total Assets Ratio are ICICI Bank, Central Bank of India, Kotak Mahindra Bank, Bandhan Bank, Axis Bank, HDFC Bank, Punjab National Bank, Bank of Baroda, Oriental Bank of Commerce, Bank of India, Canara Bank, Union Bank of India, State Bank of India. This shows that the ICICI Bank is very sensitive and its P/E ratio is also very high.

In the CAMELS composite ranking the Bandhan Bank ranked first, HDFC Bank ranked second, Kotak Mahindra Bank ranked third, ICICI Bank ranked fourth, Bank of Baroda ranked fifth, Axis Bank ranked sixth, State Bank of India ranked seventh, Canara Bank ranked eighth, Bank of India ranked ninth, Union Bank of India ranked tenth, Oriental Bank of Commerce ranked eleventh, Punjab National Bank ranked twelfth, Central Bank of India ranked thirteen CAMELS. This above CAMELS ranking shows that the private sector banks are performing better than the government sector bank.

On the basis of the CAMELS evaluation done of the prominent public and private sector banks it can be concluded that the private sector banks are having high performance in comparison to the public sector banks. But the private sector banks are working at a higher risk as their debt-equity ratio is high. The profit of the private sector banks is high in comparison to the public sector banks. The policies and management control is rigid and very much concerned about increasing the business of the banks. The public sector banks management policies are not so good as of the private sector banks. The capital adequacy or say capital requirement is well managed by almost all the commercial banks. The Non-performing asset problem exists in almost all the banks that needs to be improved.

9. Suggestions

The following suggestions are made on the basis of the research work conducted to evaluated and understand the banking performance using CAMELS

1. The capital adequacy can be improved and some of the banks are having good capital adequacy they need to manage it. The management has to take suitable steps to manage capital adequacy and to maintain it.
2. Private sector banks have high debt to equity ratio that need to be reduced in the admissible range and this will reduce the risk of the banks in case of NPA increases.
3. To reduce the NPA and to permanently solve the NPA problem the bank need to formulate the norms and should give the secured loans only. The procedure of loan disbursement of a bank should be ethically followed and proper enquiry need to be done before giving any loan to its customers.
4. It is difficult to recover losses of the bank in case of NPA of Non secured loans. So bank should give any non-secured loan with the utmost care.
5. Every employee should be set responsible for the poor performance of any bank branch and proper training and motivational session should be organized in such cases.
6. Public sector banks should train their employees on the regular basis as it is done in the private sector banks. Also there promotion and increment should be done on the basis of the business they generate for the banks.
7. The incentive should be given in the public sector banks to its employees who brings business for the banks.
8. The banks should hire the agents or third party companies to boost their business.
9. Public sector bank's employees should deal its every customer in a nice manner. They should put up some additional manpower if required to complete the work at the counter where it is overburdened.

10. The employees working for extra hours should be provided additional remuneration for overtime work.
11. The banks should maintain the sufficient level of securities to reduce any sort of business risk particularly credit risk.
12. The banks need to maintain the enough liquidity to run its operations in a smooth manner. The adequate level of liquid assets is required to run the banking operations.
13. The banks should invest in the liquid assets so that they can get some return and can convert their investment in liquid if required for running the banking business with some amount of liquidity.
14. Public sector bank's earning efficiency is low in comparison to the private sector banks this can be improved by motivating the employees to get more business for the bank.
15. The banking system in India is well regulated by RBI but as it has been seen recently that NPA problem in private sector banks exposed them to credit risk the risk can be managed by following proper loan disbursement procedure and by keeping market value of security higher than the loan amount.
16. The dynamic team can improve the banking business so it is required to train the employees in the public sector banks so that they generate more business for their banks.
17. The banks should transfer the right person at the right place in the public sector bank as it has been seen that the north India candidate gets transferred to south India where they face lot of problem in convincing the customers so it is must to keep a fair transfer policy based on the interest and their basis traits.
18. Public sector banks need to improve their online banking services and customer support to improve the banking business by making their customer delight.
19. The team work is essential for improving a branch business so every employee should be trained and should move to such places where the banking is still not so comfortable.
20. Like the private sector banks does, the public sector banks should appoint a personal banker to every customer who can assist them in the banking operations in case they face any problem or it is difficult for them due to lack of knowledge.

Therefore, there is a lot of scope of improvement of banking business for all private and public sector banks. Public sector banks are lagging behind in overall performance in comparison to the private sector banks. Public sector banks need to improve their working methodology to improve the business of their banks.

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PERFORMANCE ANALYSIS OF SELECTED BANKS IN INDIA USING CAMEL MODEL

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1. INTRODUCTION

Banks square measure in the business of managing risk and not avoiding it . Risk is the elementary part that drives money behaviour. While not risk, the money system would be immensely simplified. However, risk is ubiquitous in the real world money establishments , therefore , ought to manage the risk expeditiously to survive in the extremely unsure world . The future of banking without doubt rests on the risk management dynamics . Only those banks that have economical management of risk can survive in the market in the long run. The effective management of credit risk is terribly a vital part of comprehensive risk management and is essential for the long term success of a banking establishment .

Credit risk is the oldest and the biggest risk that a bank ,by the virtue of its terribly nature of business , inherits .This has but no heritable a bigger important in the recent past for numerous reasons . Foremost among them is the wind of economic alleviation that is processing across the globe . Asian nations are no exception to this swing towards market -driven economy .

Sound financial health of a bank is the guarantee not solely to its depositors but equally important for the shareholders , workers and whole economy as well .As a sequel to this maxim ,efforts have been made from time to time , to live the performance of money banks of two major banks operative in the northern Asian nations. This analysis has been done by mistreatment artiodactyl. Parameters, the latest model of money analysis. Through this model , it is highlighted that the position of the banks beneath study is therefore satisfactory so much as their capital adequacy , quality management capabilities and liquidity are involved .

Banking sector has contributed in bringing a revolutionary change in reforming sector on the path of economic what.

A banks success lies in its ability to assume and combination risk inside tolerable and

managerial limits. Bank square measure in the business of managing risk , not avoiding it.

2. RISK MANAGEMENT

The future of banking can without doubt rest on the risk management dynamics . Solely those banks that have economical risk management system can survive in the market in the long run . The effective management of credit risk is the vital part of comprehensive risk management essential for long term success of banking establishment . Credit risk is the oldest and the biggest risk that bank , by virtue of its terribly nature of its business , inherits .This has but , non-heritable a bigger important in the recent past for numerous reasons . Foremost among them is the wind of economic alleviation that is processing across the globe . Asian nation is no exception to this swing towards market driven economy . Competition from inside and outside the country has intense. This has resulted in multiplicity of risk each in range and volume ensuing in volatile markets . A precursor to winning management of credit risk is a clear understanding regarding risks concerned in loaning , qualifications of risks inside every item of the portfolio and reaching a conclusion as to the possible composite credit risk profile of a bank.

The corner stone of credit risk management is the institution of a framework that defines company priorities , loan approval method , credit risk classification system , risk adjusted evaluation system , loan review mechanism and comprehensive coverage system .

With the integration of Indian money sector with the rest of the world , the thought of banks and the banking has undergone a paradigm shift .. Before money reforms , Indian Banks were enjoying , in a very protected setting with the sturdy cushion of the government and their banks . This has created them operationally inefficient and commercially nearly wreck , as they had cumulated an excessive amount of NP Advances .

However , with the run taking sturdy measures primarily based on the recommendations of the Norseman Committee , the landscape of the Indian norms of capital adequacy , quality , provisioning for NPA S prudent norms , speech act necessities , acceleration of pace and reaching of latest technology , streamlining the procedure and obliging with the accounting standards and creating money clear . Towards this finish , they redefined their objectives , strategies , policies , processes , ways and technologies that have a direct bearing on the money health and performance of these banks . In this method , these banks were not solely needed to take on the top of the step however continually valuates their money health and performance of these banks .

The progression of associate degree economy is considerably dependent upon preparation as well as optimum utilization of the resources and most insignificantly operational potency of numerous sectors , of that banking play an important role .

Banking sector helps in stimulation of capital formation , innovation and validation in addition to facilitation of financial policy. It is imperative to fastidiously valuate associate degree analysis the performance of the bank to guarantee a healthy money system and an

economical economy . The gift study tries to evaluate the performance of banks for amount of 5 years from 2012-16.

3. OBJECTIVE OF THE STUDY

The gift study tries to accomplish the following objectives-

The main objective of the study is to analyse the money position and performance of public sector bank in Asian nation mistreatment artiodactyl model. Apart from it , credit risk management practices of industrial banks in Asian nation and the standard set out beneath the New Bale Capital Accord , analysis of concentration of risk in public sector banks has been highlighted. Also the factors that have briefed that has light emitting diode o the current money performance .

4. SIGNIFICANCE OF THE STUDY

The elementary business of loaning has brought bother to the individual banks and entire system . It is imperative too fastidiously measure and analysis the performance of the banks to guarantee a healthy monetary and economic system . The study also measure the performance of national banks for a period of 5 years .

The elementary business of disposition has brought bother to the individual banks and entire banking system .It is therefore imperative that the banks are unit the adequate system for the current assessment of individual comes and evaluating risk associated thereupon as well as the business as a whole family .Generally banks measure the proposal through ancient tools of project finance , computing most permissible limits , assessing management capabilities and a ceiling for a business exposure .

Credit risk , that is , default by the receiver to repay lent cash , remains the most necessary risk to manage until date. The predominance of the credit riak is even mirrored in the composition of economic capital , that the banks area unit needed to keep a facet for protection against varied risks . According to one estimate Credit risk takes regarding seventieth and half hour remaining is shared between alternative 2 primarily risks , specially market risks and operational risk . Quality borrowers (Tier 1 borrowers) were in a position to access the capital market directly while not going through the debt route . Hence the credit route is currently a lot of open to lesser mortals .

With margin level going down , banks area unit unable to absorb the level of loan losses .There has been terribly very little efforts to develop a technique where risk might be known and measured . Most of the banks have developed internal rating system for the borrowers , however there has fine tune the rating system . Also risks peculiar to every business area unit additionally not known and evaluate brazenly .

There is a would like for Strategic approach to CREDIT RISK MANAGEMENT in Indian banks notably in read of ,

1. Higher NPA level in comparison with international benchmarks
2. RBI s stipulation regarding dividend

3. Revised NPAs level and automobile norms
4. New Basels Capital Accord revolution

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	12.92	12.96	12.00	13.12	13.11	12.82	2
BOB	13.30	12.28	12.60	13.17	13.17	12.904	1
PNB	12.72	12.11	12.89	11.28	11.66	12.132	3
BOI	11.02	9.97	10.73	12.01	12.14	11.174	5
Canara	12.40	10.63	10.56	11.08	12.86	11.506	4

5. RESEARCH METHODOLOGY

Five major players in the banking sector have been analysed for the aim of study
STATE BANK OF INDIA
BANK OF INDIA
BANK OF BARODA
CANARA BANK
PUNJAB NATIONAL BANK
The present study attempts to evaluate the performance of commercial banks in India through CAMEL approach for a period of five years 2012-13 to 2016-17.

6. RESEARCH STYLE

CAMEL is magnitude relation based model used to measure the performance of the banks with the facilitate of completely different criteria viz , Capital Adequacy , Asset Quality , Management Quality , Earnings And Liquidity. (Kaur and Singh 2015)

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	13.87	13.34	13.87	14.24	15.08	14.08	1
BOB	15.65	16.83	16.39	15.11	15.69	15.934	3
PNB	13.80	14.48	14.51	17.28	17.39	15.492	2
BOI	17.44	17.56	18.19	18.19	18.83	18.042	4
Canara	16.47	18.57	18.88	19.37	18.89	18.436	5

The gift study is the descriptive analysis study based on analytical analysis style .

7. DATA ANALYSIS

Each bank is assigned a uniform composite rating and is normalized procedure providing an assessment of the quality of the bank based mostly on the standard criteria .
When assigning the composite ratings , some components might be given more weight than others depending on the situation at the banks . Composite ratings may include factors that have significant bearing on the overall condition and the soundness.
The ratio under respective five heads are calculated and then ranked .\

1 CAPITAL ADEQUACY RATIO (Amount in Cr.)

All the five banks namely State Bank Of India , Bank Of Baroda , Punjab National Bank , Bank

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.051	0.057	0.043	0.073	0.79	0.2028	1
BOB	0.54	1.28	1.52	3.09	4.72	2.231	3
PNB	1.52	2.35	2.85	4.097	8.556	3.875	5
BOI	1.47	2.05	2.00	2.78	2.22	2.102	2
Canara	1.46	2.17	2.00	3.951	5.74	3.064	4

Of India , Canara Bank have fairly equal amount of CRAR with 12.82, 12.904, 12.132, 11.174, 11.506 which means these banks have greater capacity to adapt the loss if occur. And among these, Bank of Baroda has highest ranking in CRAR (basel2). Likewise, Bank of India scored minimum rank. Still we can conclude that the banks are able to maintain the minimum CRAR of 9% as per RBI norms.

2. DEBT EQUITY RATIO (Amount in Cr.)
State Bank of India secured first rank among all five with 14.08 followed by Punjab National Bank, Bank of Baroda, Bank of India and lastly Canara Bank which secured fifth rank which means State Bank of India and Punjab National Banks are more secured and their respective depositors and creditors are at less risk than other three banks.

3. Total Advances to Total Assets Ratio
State Bank of India secured highest position in the advances to assets ratio by Avg. Of 0.634 followed by Punjab National Bank, Bank Of India, Canara Bank and lastly Bank Of Baroda. It is clearly noticeable that the performance of all Banks are approximately the same , which implies that the banks are able to maintain good lending policy , State Bank Of India and Punjab National Bank have better lending policy than other three banks which states that the profit of such banks will boost favourably.

4. Net NPA to Total Advances Ratio

State Bank of India got first position with lower NPA of 0.2028 against Total Advances followed by Bank Of India, Bank Of Baroda, Canara Bank and finally Punjab National Bank. It clearly denotes that State Bank of India has been able to manage Net Performing Assets in a better way than rest other banks.

5   Net NPA to Total Assets Ratio (Amount in Cr.)

Bank of India secured first position with the lowest NPA of 1.232 followed by Bank Of Baroda, State Bank Of India, Punjab National Bank and finally Canara Bank which states that Bank Of

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.66	0.675	0.634	0.620	0.580	0.634	1
BOB	0.599	0.601	0.598	0.571	0.551	0.584	5
PNB	0.644	0.634	0.630	0.617	0.582	0.622	2
BOI	0.639	0.646	0.649	0.588	0.585	0.621	3
Canara	0.587	0.612	0.602	0.587	0.586	0.594	4

India has better credit policy and are able to recover the loan from the debtors than the other banks. They are at lower risk of increasing Non-Performing Assets whereas NPA of other four banks is comparatively high, it means that these banks are not making many efforts to decrease their NPA as BOI is doing.

6. Total Investments to Total Assets Ratio

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.86	1.34	1.76	2.12	2.57	1.73	3
BOB	0.33	0.75	0.89	1.837	4.614	1.684	2
PNB	0.95	1.45	1.72	2.83	4.04	2.20	4
BOI	0.94	1.30	1.28	1.33	1.30	1.232	1
Canara	0.89	1.25	1.20	2.64	6.41	2.480	5

Bank Of Baroda got first position with 0.1869% and Bank Of India secured 0.200% in investments to assets ratio which means both the Banks are focusing on advancing the money rather than investing, for the further growth of the business and adopting an aggressive policy whereas SBI and Canara Bank focuses on making a cushion against Non-performing assets by investing the money more with investments to assets ratio. These both banks are using conservative policy.

7 Total Advances to Total Deposits (Amount in Cr.)

Banks	2012	2013	2014	2015	2016	Avg	Rank
SBI	0.86	0.8676	0.8244	0.8457	0.76834	0.833208	1
BOB	0.6925	0.6978	0.6934	0.6685	0.6369	0.62782	5
PNB	0.7884	0.7737	0.7589	0.7455	0.6747	0.74824	2

| BOI | 0.7578 | 0.7772 | 0.7558 | 0.7001 | 0.6786 | 0.7339 | 3 |
| Canara | 0.6805 | 0.7155 | 0.6965 | 0.6767 | 0.69054 | 0.691948 | 4 |

SBI stands first with advances to deposits ratio of 0.833 followed by Punjab National Bank , Bank

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.063	0.051	0.061	0.047	0.0519	0.05478	2
BOB	0.12	0.10	0.098	0.068	-0.0105	0.07526	1
PNB	0.084	0.080	0.054	0.044	-0.05613	0.04133	3
BOI	0.064	0.064	0.062	-0.1335	-0.0342	-0.23584	5
Canara	0.082	0.069	0.050	0.050	-0.050	0.0402	4

Of India , Canara Bank and lastly Bank Of Baroda which signifies that SBI has made efficient and appropriate utilisation of its depositors deposit by advancing the money for the bank whereas other four banks has though utilised their money but not as appropriately as done by SBI in an efficient way.

8. Profit per Employee (Amount in Cr.)

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	14.26	9.20	10.20	6.89	6.69	9.448	1
BOB	14.01	12.61	8.53	-13.42	3.43	5.032	3
PNB	15.2	9.69	8.12	-11.20	3.47	5.056	2
BOI	11.49	9.12	5.43	-19.63	-5.06	0.27	5
Canara	12.57	9.10	10.21	-10.75	3.96	5.018	4

Bank Of Baroda secured first position which indicates it has higher profit for the employees and the company SBI, PNB, Canara Bank and then finally Band of India secured second , third , fourth and fifth position. While second, third, fourth positional banks are approximately on the same average but the fifth one i.e. Bank Of India is earning (-ve) profits with the average of (-0.23584) which states that BOI is not able to earn sufficient profits for employees and the company.

9 Return on Net Worth

State Bank Of India secured first position with average of 9.448 followed by PNB, BOB, Canara and lastly BOI. It signifies that SBI is able to earn good amount of profits for the company based on the fund with which the company conducts it business. PNB , BOB and Canara are earning almost eaqual profit but BOI is earning least profit among all which denotes that BOI is not able to deploy the shareholder s fund in the most appropriate manner.

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.009	0.006	0.006	0.004	0.0021	0.0055	1
BOB	0.008	0.006	0.004	-0.008	0.001	0.002	4
PNB	0.009	0.006	0.005	-0.005	0.001	0.003	3
BOI	0.006	0.004	0.002	-0.009	-0.002	0.0002	5
Canara	0.006	0.004	0.004	0.005	0.001	0.004	2

10 Net Profit to Total Assets Ratio

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	20.12	20.56	20.21	20.28	20.11	20.256	1
BOB	20.21	20.33	21.42		24.06	17.204	3
PNB	20.10	10.83	20.51			10.288	5
BOI	20.12	20.56	20.21	20.28	20.11	20.256	2
Canara	20.05	20.80	20.01			12.172	4

Higher the Net Profits, better the earning capacity of the bank. Here, SBI secured first position as it is able to maintain adequate earning potential followed by Canara, PNB, BOB and lastly BOI with second, third, fourth and fifth position, which denotes that BOI is not earning good amount of return on their total assets then rest other banks.

11 Dividend Pay-out Ratio

A pay out ratio greater than 100% may be interpreted to mean that the company is paying out more in dividends that it is earning, which is an unsustainable move. SBI have secured first position with average of 20.256 which denotes that the company is able to distribute 20.256 of average earnings to its investors BOI, BOB, Canara and PNB secured second, third, fourth and fifth positions which states that these banks are not paying as much as like SBI to its shareholders.

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	8.25	8.12	7.94	7.44	6.98	7.74	3
BOB	7.08	6.45	6.25	6.36	6.18	6.46	5
PNB	8.97	8.42	8.05	7.49	6.85	7.95	2
BOI	7.63	7.39	7.29	6.80	6.36	7.094	4
Canara	8.71	8.82	8.50	8.08	7.35	8.292	1

12. Interest Income to Total Funds Ratio

Interest Income is the major income of banks and is generated by its assets like loans, advance overdrafts, cash credits and discount from the bills. Higher the ratio, better it is.

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.095	0.095	0.098	0.096	0.084	0.093	5
BOB	0.18	0.23	0.24	0.23	0.25	0.226	2
PNB	0.069	0.100	0.11	0.133	0.14	0.111	4
BOI	0.14	0.12	0.14	0.19	0.177	0.15	3
Canara	0.97	0.10	0.10	0.11	0.11	0.28	1

Canara scored first position to earn average of 8.292 which indicates that its assets are strong enough to generate interest in an adequate manner.

PNB, SBI, BOI secured second, third and fourth position and lastly BOB with fifth position which signifies that BOB is generating least income from its assets among rest.13. Liquid Assets to Total Deposits

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.0733	0.073	0.075	0.071	0.063	0.071	5
BOB	0.156	0.198	0.025	0.199	0.216	0.159	1
PNB	0.056	0.082	0.092	0.110	0.122	0.092	4
BOI	0.121	0.107	0.123	0.162	0.153	0.133	2
Canara	0.084	0.0911	0.088	0.102	0.100	0.093	3

Higher the Liquid assets to total deposits, higher the cash available for depositors of the bank , from the above table we can conclude that Canara bank is on the first position with the average of 0.28 for their depositors to fulfil their demand, whereas BOB is on second place followed by BOI, PNB , and finally SBI , which denotes that all these banks has lesser capacity to fulfil the demand and advance the money to the people than Canara Bank.

14 Liquid Assets to Total Assets Ratio

Higher the liquidity, better the solvency and working capital of the bank which is required for day to day operations. Bank of Baroda scored first position which indicates that the BOB is more solvent and has required potential to fulfil the demand whereas BOI scored second followed by Canara at third, PNB forth and finally SBI at fifth which indicates that these banks has maintained less liquid assets with them and hence , less working capital for daily operating activities then BOB.

8. **Conclusion**

According to the research conducted by the CAMEL Model for leading Five banks , it is noted that the SBI has performed better in Capital Adequacy and has good risk management system . All the banks may take stringiest policies to overcome increasing NPA,s in the future . BOI must take appropriate steps to overcome its negative profit per employee . PNB should try to improve its earnings to distribute more dividend to its investors . Canara bank has generate adequate income from its assets . There has been significant change in the performance of these banks over few years . BOB has better solvency and working capacity for day to day operations . SBI has lesser capacity to fulfil the demand and advance the money to the people . Due to the technological advancement , banks all around the world has increase their supervision quality too. Overall , we can say that BOB and SBI has performed better than other banks as due to passage of time there has been fluctuations in the other selected bank

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PERFORMANCE ANALYSIS OF SELECTED BANKS IN INDIA USING CAMEL MODEL

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1. INTRODUCTION

Banks square measure in the business of managing risk and not avoiding it . Risk is the elementary part that drives money behaviour. While not risk, the money system would be immensely simplified. However, risk is ubiquitous in the real world money establishments , therefore , ought to manage the risk expeditiously to survive in the extremely unsure world . The future of banking without doubt rests on the risk management dynamics . Only those banks that have economical management of risk can survive in the market in the long run. The effective management of credit risk is terribly a vital part of comprehensive risk management and is essential for the long term success of a banking establishment .

Credit risk is the oldest and the biggest risk that a bank ,by the virtue of its terribly nature of business , inherits .This has but no heritable a bigger important in the recent past for numerous reasons . Foremost among them is the wind of economic alleviation that is processing across the globe . Asian nations are no exception to this swing towards market -driven economy .

Sound financial health of a bank is the guarantee not solely to its depositors but equally important for the shareholders , workers and whole economy as well .As a sequel to this maxim ,efforts have been made from time to time , to live the performance of money banks of two major banks operative in the northern Asian nations. This analysis has been done by mistreatment artiodactyl. Parameters, the latest model of money analysis. Through this model , it is highlighted that the position of the banks beneath study is therefore satisfactory so much as their capital adequacy , quality management capabilities and liquidity are involved .

Banking sector has contributed in bringing a revolutionary change in reforming sector on the path of economic what.

A banks success lies in its ability to assume and combination risk inside tolerable and

managerial limits. Bank square measure in the business of managing risk , not avoiding it.

2. RISK MANAGEMENT

The future of banking can without doubt rest on the risk management dynamics . Solely those banks that have economical risk management system can survive in the market in the long run . The effective management of credit risk is the vital part of comprehensive risk management essential for long term success of banking establishment . Credit risk is the oldest and the biggest risk that bank , by virtue of its terribly nature of its business , inherits .This has but , non-heritable a bigger important in the recent past for numerous reasons . Foremost among them is the wind of economic alleviation that is processing across the globe . Asian nation is no exception to this swing towards market driven economy . Competition from inside and outside the country has intense. This has resulted in multiplicity of risk each in range and volume ensuing in volatile markets . A precursor to winning management of credit risk is a clear understanding regarding risks concerned in loaning , qualifications of risks inside every item of the portfolio and reaching a conclusion as to the possible composite credit risk profile of a bank.

The corner stone of credit risk management is the institution of a framework that defines company priorities , loan approval method , credit risk classification system , risk adjusted evaluation system , loan review mechanism and comprehensive coverage system .

With the integration of Indian money sector with the rest of the world , the thought of banks and the banking has undergone a paradigm shift .. Before money reforms , Indian Banks were enjoying , in a very protected setting with the sturdy cushion of the government and their banks . This has created them operationally inefficient and commercially nearly wreck , as they had cumulated an excessive amount of NP Advances .

However , with the run taking sturdy measures primarily based on the recommendations of the Norseman Committee , the landscape of the Indian norms of capital adequacy , quality , provisioning for NPA S prudent norms , speech act necessities , acceleration of pace and reaching of latest technology , streamlining the procedure and obliging with the accounting standards and creating money clear . Towards this finish , they redefined their objectives , strategies , policies , processes , ways and technologies that have a direct bearing on the money health and performance of these banks . In this method , these banks were not solely needed to take on the top of the step however continually valuates their money health and performance of these banks .

The progression of associate degree economy is considerably dependent upon preparation as well as optimum utilization of the resources and most insignificantly operational potency of numerous sectors , of that banking play an important role .

Banking sector helps in stimulation of capital formation , innovation and validation in addition to facilitation of financial policy. It is imperative to fastidiously valuate associate degree analysis the performance of the bank to guarantee a healthy money system and an

economical economy . The gift study tries to evaluate the performance of banks for amount of 5 years from 2012-16.

3. OBJECTIVE OF THE STUDY

The gift study tries to accomplish the following objectives-

The main objective of the study is to analyse the money position and performance of public sector bank in Asian nation mistreatment artiodactyl model. Apart from it , credit risk management practices of industrial banks in Asian nation and the standard set out beneath the New Bale Capital Accord , analysis of concentration of risk in public sector banks has been highlighted. Also the factors that have briefed that has light emitting diode o the current money performance .

4. SIGNIFICANCE OF THE STUDY

The elementary business of loaning has brought bother to the individual banks and entire system . It is imperative too fastidiously measure and analysis the performance of the banks to guarantee a healthy monetary and economic system . The study also measure the performance of national banks for a period of 5 years .

The elementary business of disposition has brought bother to the individual banks and entire banking system .It is therefore imperative that the banks are unit the adequate system for the current assessment of individual comes and evaluating risk associated thereupon as well as the business as a whole family .Generally banks measure the proposal through ancient tools of project finance , computing most permissible limits , assessing management capabilities and a ceiling for a business exposure .

Credit risk , that is , default by the receiver to repay lent cash , remains the most necessary risk to manage until date. The predominance of the credit riak is even mirrored in the composition of economic capital , that the banks area unit needed to keep a facet for protection against varied risks . According to one estimate Credit risk takes regarding seventieth and half hour remaining is shared between alternative 2 primarily risks , specially market risks and operational risk . Quality borrowers (Tier 1 borrowers) were in a position to access the capital market directly while not going through the debt route . Hence the credit route is currently a lot of open to lesser mortals .

With margin level going down , banks area unit unable to absorb the level of loan losses .There has been terribly very little efforts to develop a technique where risk might be known and measured . Most of the banks have developed internal rating system for the borrowers , however there has fine tune the rating system . Also risks peculiar to every business area unit additionally not known and evaluate brazenly .

There is a would like for Strategic approach to CREDIT RISK MANAGEMENT in Indian banks notably in read of ,

1. Higher NPA level in comparison with international benchmarks
2. RBI s stipulation regarding dividend

3. Revised NPAs level and automobile norms
4. New Basels Capital Accord revolution

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	12.92	12.96	12.00	13.12	13.11	12.82	2
BOB	13.30	12.28	12.60	13.17	13.17	12.904	1
PNB	12.72	12.11	12.89	11.28	11.66	12.132	3
BOI	11.02	9.97	10.73	12.01	12.14	11.174	5
Canara	12.40	10.63	10.56	11.08	12.86	11.506	4

5. RESEARCH METHODOLOGY

Five major players in the banking sector have been analysed for the aim of study
STATE BANK OF INDIA
BANK OF INDIA
BANK OF BARODA
CANARA BANK
PUNJAB NATIONAL BANK
The present study attempts to evaluate the performance of commercial banks in India through CAMEL approach for a period of five years 2012-13 to 2016-17.

6. RESEARCH STYLE

CAMEL is magnitude relation based model used to measure the performance of the banks with the facilitate of completely different criteria viz , Capital Adequacy , Asset Quality , Management Quality , Earnings And Liquidity. (Kaur and Singh 2015)

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	13.87	13.34	13.87	14.24	15.08	14.08	1
BOB	15.65	16.83	16.39	15.11	15.69	15.934	3
PNB	13.80	14.48	14.51	17.28	17.39	15.492	2
BOI	17.44	17.56	18.19	18.19	18.83	18.042	4
Canara	16.47	18.57	18.88	19.37	18.89	18.436	5

The gift study is the descriptive analysis study based on analytical analysis style .

7. DATA ANALYSIS

Each bank is assigned a uniform composite rating and is normalized procedure providing an assessment of the quality of the bank based mostly on the standard criteria .

When assigning the composite ratings , some components might be given more weight than others depending on the situation at the banks . Composite ratings may include factors that have significant bearing on the overall condition and the soundness.
The ratio under respective five heads are calculated and then ranked .\

1 CAPITAL ADEQUACY RATIO (Amount in Cr.)

All the five banks namely State Bank Of India , Bank Of Baroda , Punjab National Bank , Bank

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.051	0.057	0.043	0.073	0.79	0.2028	1
BOB	0.54	1.28	1.52	3.09	4.72	2.231	3
PNB	1.52	2.35	2.85	4.097	8.556	3.875	5
BOI	1.47	2.05	2.00	2.78	2.22	2.102	2
Canara	1.46	2.17	2.00	3.951	5.74	3.064	4

Of India , Canara Bank have fairly equal amount of CRAR with 12.82, 12.904, 12.132, 11.174, 11.506 which means these banks have greater capacity to adapt the loss if occur. And among these, Bank of Baroda has highest ranking in CRAR (basel2). Likewise, Bank of India scored minimum rank. Still we can conclude that the banks are able to maintain the minimum CRAR of 9% as per RBI norms.

2. DEBT EQUITY RATIO (Amount in Cr.)
State Bank of India secured first rank among all five with 14.08 followed by Punjab National Bank, Bank of Baroda, Bank of India and lastly Canara Bank which secured fifth rank which means State Bank of India and Punjab National Banks are more secured and their respective depositors and creditors are at less risk than other three banks.

3. Total Advances to Total Assets Ratio
State Bank of India secured highest position in the advances to assets ratio by Avg. Of 0.634 followed by Punjab National Bank, Bank Of India, Canara Bank and lastly Bank Of Baroda. It is clearly noticeable that the performance of all Banks are approximately the same , which implies that the banks are able to maintain good lending policy , State Bank Of India and Punjab National Bank have better lending policy than other three banks which states that the profit of such banks will boost favourably.

4. Net NPA to Total Advances Ratio

State Bank of India got first position with lower NPA of 0.2028 against Total Advances followed by Bank Of India, Bank Of Baroda, Canara Bank and finally Punjab National Bank. It clearly denotes that State Bank of India has been able to manage Net Performing Assets in a better way than rest other banks.

5 Net NPA to Total Assets Ratio (Amount in Cr.)

Bank of India secured first position with the lowest NPA of 1.232 followed by Bank Of Baroda, State Bank Of India, Punjab National Bank and finally Canara Bank which states that Bank Of

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.66	0.675	0.634	0.620	0.580	0.634	1
BOB	0.599	0.601	0.598	0.571	0.551	0.584	5
PNB	0.644	0.634	0.630	0.617	0.582	0.622	2
BOI	0.639	0.646	0.649	0.588	0.585	0.621	3
Canara	0.587	0.612	0.602	0.587	0.586	0.594	4

India has better credit policy and are able to recover the loan from the debtors than the other banks. They are at lower risk of increasing Non-Performing Assets whereas NPA of other four banks is comparatively high, it means that these banks are not making many efforts to decrease their NPA as BOI is doing.

6. Total Investments to Total Assets Ratio

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.86	1.34	1.76	2.12	2.57	1.73	3
BOB	0.33	0.75	0.89	1.837	4.614	1.684	2
PNB	0.95	1.45	1.72	2.83	4.04	2.20	4
BOI	0.94	1.30	1.28	1.33	1.30	1.232	1
Canara	0.89	1.25	1.20	2.64	6.41	2.480	5

Bank Of Baroda got first position with 0.1869% and Bank Of India secured 0.200% in investments to assets ratio which means both the Banks are focusing on advancing the money rather than investing, for the further growth of the business and adopting an aggressive policy whereas SBI and Canara Bank focuses on making a cushion against Non-performing assets by investing the money more with investments to assets ratio. These both banks are using conservative policy.

7 Total Advances to Total Deposits (Amount in Cr.)

Banks	2012	2013	2014	2015	2016	Avg	Rank
SBI	0.86	0.8676	0.8244	0.8457	0.76834	0.833208	1
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PNB	0.7884	0.7737	0.7589	0.7455	0.6747	0.74824	2

| BOI | 0.7578 | 0.7772 | 0.7558 | 0.7001 | 0.6786 | 0.7339 | 3 |
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SBI stands first with advances to deposits ratio of 0.833 followed by Punjab National Bank , Bank

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Of India , Canara Bank and lastly Bank Of Baroda which signifies that SBI has made efficient and appropriate utilisation of its depositors deposit by advancing the money for the bank whereas other four banks has though utilised their money but not as appropriately as done by SBI in an efficient way.

8. Profit per Employee (Amount in Cr.)

BANK	2012	2013	2014	2015	2016	Avg.	Rank
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BOB	0.008	0.006	0.004	-0.008	0.001	0.002	4
PNB	0.009	0.006	0.005	-0.005	0.001	0.003	3
BOI	0.006	0.004	0.002	-0.009	-0.002	0.0002	5
Canara	0.006	0.004	0.004	0.005	0.001	0.004	2

10 Net Profit to Total Assets Ratio

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	20.12	20.56	20.21	20.28	20.11	20.256	1
BOB	20.21	20.33	21.42		24.06	17.204	3
PNB	20.10	10.83	20.51			10.288	5
BOI	20.12	20.56	20.21	20.28	20.11	20.256	2
Canara	20.05	20.80	20.01			12.172	4

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BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	8.25	8.12	7.94	7.44	6.98	7.74	3
BOB	7.08	6.45	6.25	6.36	6.18	6.46	5
PNB	8.97	8.42	8.05	7.49	6.85	7.95	2
BOI	7.63	7.39	7.29	6.80	6.36	7.094	4
Canara	8.71	8.82	8.50	8.08	7.35	8.292	1

12. Interest Income to Total Funds Ratio

Interest Income is the major income of banks and is generated by its assets like loans, advance overdrafts, cash credits and discount from the bills. Higher the ratio, better it is.

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.095	0.095	0.098	0.096	0.084	0.093	5
BOB	0.18	0.23	0.24	0.23	0.25	0.226	2
PNB	0.069	0.100	0.11	0.133	0.14	0.111	4
BOI	0.14	0.12	0.14	0.19	0.177	0.15	3
Canara	0.97	0.10	0.10	0.11	0.11	0.28	1

Canara scored first position to earn average of 8.292 which indicates that its assets are strong enough to generate interest in an adequate manner.

PNB, SBI, BOI secured second, third and fourth position and lastly BOB with fifth position which signifies that BOB is generating least income from its assets among rest.13. Liquid Assets to Total Deposits

BANK	2012	2013	2014	2015	2016	Avg.	Rank
SBI	0.0733	0.073	0.075	0.071	0.063	0.071	5
BOB	0.156	0.198	0.025	0.199	0.216	0.159	1
PNB	0.056	0.082	0.092	0.110	0.122	0.092	4
BOI	0.121	0.107	0.123	0.162	0.153	0.133	2
Canara	0.084	0.0911	0.088	0.102	0.100	0.093	3

Higher the Liquid assets to total deposits, higher the cash available for depositors of the bank , from the above table we can conclude that Canara bank is on the first position with the average of 0.28 for their depositors to fulfil their demand, whereas BOB is on second place followed by BOI, PNB , and finally SBI , which denotes that all these banks has lesser capacity to fulfil the demand and advance the money to the people than Canara Bank.

14 Liquid Assets to Total Assets Ratio

Higher the liquidity, better the solvency and working capital of the bank which is required for day to day operations. Bank of Baroda scored first position which indicates that the BOB is more solvent and has required potential to fulfil the demand whereas BOI scored second followed by Canara at third, PNB forth and finally SBI at fifth which indicates that these banks has maintained less liquid assets with them and hence , less working capital for daily operating activities then BOB.

8. **Conclusion**

According to the research conducted by the CAMEL Model for leading Five banks , it is noted that the SBI has performed better in Capital Adequacy and has good risk management system . All the banks may take stringiest policies to overcome increasing NPA,s in the future . BOI must take appropriate steps to overcome its negative profit per employee . PNB should try to improve its earnings to distribute more dividend to its investors . Canara bank has generate adequate income from its assets . There has been significant change in the performance of these banks over few years . BOB has better solvency and working capacity for day to day operations . SBI has lesser capacity to fulfil the demand and advance the money to the people . Due to the technological advancement , banks all around the world has increase their supervision quality too. Overall , we can say that BOB and SBI has performed better than other banks as due to passage of time there has been fluctuations in the other selected bank

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QUESTIONNAIRE

For the research entitled

"A Study on Risk Management and Performance Analysis of Commercial Banks in India: (Application of CAMEL Model)"

(To be filled in by the Employees of the Bank)

Name:		Contact No.	
Bank Name		Designation	

Capital Adequacy

1. Bank is having sufficient shareholder capital (Tier-I capital) to run its business.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

2. Bank is having sufficient Borrowings (Tier-2 capital) to run its business.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

3. Bank is having assets (loans and advances) which are less risky.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

4. Bank has maintained a balance composition of capital.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

5. Bank always have a minimum capital reserve amount.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

Asset Quality

6. Bank has made loans and advances and very low NPA has been recorded.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

7. Loans and advances are made by following a proper procedure.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

8. Large number of loans and assets are reliable and less risky.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

9. Business customer loans more becomes NPA.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

10. Home loans less becomes NPA.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

11. Car Loans less becomes NPA.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

12. Business loans less becomes NPA.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

13. All types of loans less become NPA.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

14. Management review the status of NPA regularly.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

15. Management takes necessary actions to prevent NPA.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

16. There is no liquidity problem faced by your bank.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

17. Your financial statements are audited at regular intervals.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

18. Bank always consider the trends of major asset.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

19. Bank keeps a check on the quality of credit portfolio.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

20. Bank takes steps to improve its asset quality.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

Management

21. Management is efficient to comply with the banking norms and regulations.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

22. Management is having good internal control.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

23. Management is focused on profit making.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

24. Management takes immediate action against the defaulters.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

25. Management makes keeps check and make decisions in the interest of the bank.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

26. Management is having ability to identify and exploit profit opportunities while

managing risk.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

27. Bank is having proper Governance structure.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

28. Compliance with laws and regulations

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

29. Transparency of management communications, financing reporting quality.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

30. Our bank is managing its advances and assets in proper manner

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

31. Norms and Regulations are good

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

32. Internal control system is efficient.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

33. Management formulates products and policies which are good for the banking

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

34. Management is takes measures to minimize the risk

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

35. Management is capable to manage all types of adversities

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

36. Management takes actions to increase shareholder funds (Tier-I capital) for improving

the bank position.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

37. Management takes suitable action to take more borrowing (Tier-II capital) for

improving the bank business.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

38. We strictly abide the BASEL-III norms for the banking work and risk reduction.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

39. No transfer policy does affect your performance.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

40. Bank is having proper communication and control using softwares.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

41. Bank is having all types of products to grow in future

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

42. Banks management keeps designing the new product for growing banking business.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

43. Management is having ability to identify and take profit opportunities while managing

risk.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

44. Bank timely update the quality of it business strategy

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

45. Bank is capable to encounter to the changing environment.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

Earnings

46. Bank has appropriate return to grow its operations.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

47. Bank can sustain its competitiveness in long term

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

48. Bank has sufficient core earnings.

( ) Strongly Agree   ( ) Agree   ( ) Neutral   ( ) Disagree   ( )Strongly Disagree

Thank you for sparing your time …