

Analysis and Performance of Public & Private Sector Banks in India through CALS Rating System

¹Vadumula Srijia, Research Scholar,

²Dr.R.K.Kushwaha, Research Guide.

Sri Satya Sai University Of Technology & Medical Sciences, Bhupal, Madhyapradesh

Abstract

In now a day the banking sector is one of the fastest growing sectors and many funds are invested in Banks. Also today's banking system is becoming more complex. So, we thought of evaluating the performance of the banks. There are so many models of evaluating the performance of the banks; CALS Rating has been considered as one of the widely used tools for judging capital adequacy, asset quality, management capacity, earnings ability, and liquidity of the financial institutions including commercial banks by the principal regulators all around the world.

This paper examines the comparative performance of leading public and private sector banks, i.e. Axis Bank and Kotak Mahindra Bank from Private Sector and Bank of Baroda and State Bank of India from the public sector. Data have been collected through annual reports of the consecutive five years i.e. 2001-11 to 2016-17 of all the banks. Then calculated ratios for all the banks and interpreted them. After that weight age was assigned to each parameter of the CALS Model. According to their importance and understandings the weight age were allocated to each ratios of the each parameter. From the weighted results of each ratio, The marks have allocated on the bases of the performance of the bank. In addition, after addition of all the marks, the rank to the banks was given.

Keywords: CALS Rating System, Performance Analysis, Capital Adequacy, Assets Quality etc.

I. INTRODUCTION

In present era banks play a vital role in all countries? In addition, their policies and strategies influence economic development, employment, prices, national income, etc. The procedure of banks is known as one of the most crucial economic occupation in the world. Any occupation, which needs investments and financial resources, certainly requires the participation of banks and financial institutions. Thus, banks have the apex role in economy. On the contrary, managing of a

country's financial organization demands a different ways that facilitate financial organization to recognize management issues to be liable for defending the citizens and the financial organization, because current issues which occurred due to poor management of bank, pressurize the entire financial organization of a country.

Accomplishing the mechanism of a strong and effective banking system, achieving goals, optimum use of resources and operating efficiently have been measured for many years so it demands evaluation of bank's performance. Evaluation of bank performance is very significant for Bankers due to the necessity to safeguard the banking operations against constant risks or due to gambling, incentives related to capital market. Moreover, there are various studies on financial interference and its effect on efficiency of economic growth and other studies on bank failures and its relationship with systemic crisis, which reveals the significance of performance evaluation.

Nowadays, the bank performance has become a preferred subject for many stakeholders such as customers, investors and the public. There is a wide scope of indicators of financial reports to evaluate financial performance. However, the major principle to determine the compatibility and health of a financial organization act as some intermediaries to determine profitability and liquidity of the organization. Among the various criteria, Basel Committee on Banking Supervision proposed the CALS component to investigate financial organizations in 1988.

II. LITERATURE REVIEW

Many researchers have tried to analyze the financial performance of banks (both public and private) by using CALS model in the last decade. Some of the prominent studies are given below:

Cole et al. (1995) conducted a study on "A CALS Rating's Shelf Life" and their findings suggest that, if a bank has not been examined for more than two quarters, off-site monitoring systems usually provide a more accurate indication of survivability than its CALS rating.

Kwan and Eisenbeis (1997) observed that Asset Quality is commonly used as a risk indicator for financial institutions, which also determines the reliability of capital ratios. Their study indicated that capitalization affects the operation of financial institution. More the capital, higher is the efficiency.

Godlewski (2003) tested the validity of the CAMEL rating typology for bank's default monetization in emerging markets. He focused explicitly on using a logical model applied to a database of defaulted banks in emerging markets.

Prasuna (2003) analyzed the performance of 65 Indian banks according to the CAMEL Model. The performance of 65 banks was studied for the period 2003-04. The author concluded that the competition was tough and consumers benefited from better services quality, innovative products and better bargains.

Said and Saucier (2003) examined the liquidity, solvency and efficiency of Japanese Banks using CAMEL rating methodology, for a representative sample of Japanese banks for the period 1993-1999, they evaluated capital adequacy, assets and management quality, earnings ability and liquidity position.

Sarker (2005) scrutinized the CAMEL model for regulation and supervision of Islamic banks by the central bank in Bangladesh. The study enabled the regulators and supervisors to get a Shariah benchmark to supervise and inspect Islamic banks and financial institutions from an Islamic perspective.

Bhayani (2006) analyzed the performance of new private sector banks through the help of the CAMEL model. Four leading private sector banks – Industrial Credit & Investment Corporation of India, Housing Development Finance Corporation, Unit Trust of India and Industrial Development Bank of India - had been taken as a sample.

Derviz et al. (2008) investigated the determinants of the movements in the long term Standard & Poor's and CAMEL bank ratings in the Czech Republic during the period when the three biggest banks, representing approximately 60% of the Czech banking sector's total assets, were privatized (i.e., the time span 1998-2001).

Gupta and Kaur (2008) conducted the study with the main objective to assess the performance of Indian Private Sector Banks based on Camel Model and gave rating to top five and bottom five banks. They ranked

20 old and 10 new private sector banks based on CAMEL model. They considered the financial data for the period of five years i.e., from 2003-07.

Siva and Natarajan (2011) empirically tested the applicability of CAMEL norms and its consequential impact on the performance of SBI Groups. The study concluded that annual CAMEL scanning helps the commercial bank to diagnose its financial health and alert the bank to take preventive steps for its sustainability.

Chaudhry and Singh (2012) analyzed the impact of the financial reforms on the soundness of Indian Banking through its impact on the asset quality. The study identified the key players as risk management, NPA levels, effective cost management and financial inclusion.

III. CALS RATING SYSTEM

The CAMEL rating system is based upon an evaluation of five critical elements of a credit union's operations: Capital Adequacy, Asset Quality, Management, Earnings and Liquidity. This rating system is calculated to take into account and reproduce all-important financial and operational factors examiners assess in their estimation of a credit union's performance. Credit unions are evaluated using an amalgamation of financial ratios and examiner judgment. Since the multifaceted CALS rating is a meter of the feasibility of a credit union, it is significant that auditor rate credit unions based on their performance in absolute terms rather than against peer averages or predetermined benchmarks. The auditor must use specialized judgment and regard both qualitative and quantitative factors when analyzing a credit union's performance. Since numbers are often lagging indicators of a credit union's condition, the auditor must also conduct a qualitative analysis of current and projected operations when assigning CALS ratings. Although the CALS composite rating should normally bear a close association to the component ratings, the auditor should not derive the composite rating exclusively by computing and arithmetic average of the component ratings.

A. Capital Adequacy

Capital base of financial organization make easy to depositors in forming their risk awareness about the organization. In addition, it is the key factor for financial managers to uphold adequate levels of capitalization. In addition, gripping unexpected shocks, it signals that the organizations will continue to respect its obligations. The most widely used factor of capital adequacy is capital to risk-weighted assets ratio

(CRWA). According to Bank Supervision Regulation Committee (The Basle Committee) of Bank for International Settlements, a minimum 8 percent CRWA is required.

- 1) **Capital Risk Adequacy Ratio:** CRAR is a ratio of Capital Fund to Risk Weighted Assets. Reserve Bank of India prescribes Banks to maintain a minimum Capital to risk-weighted Assets Ratio (CRAR) of 9 % with regard to credit risk, market risk and operational risk on an ongoing basis, as against 8 % prescribed in Basel documents.
- 2) **Debt Equity Ratio:** This ratio denotes the scale of influence of a bank. It specifies how much of the bank business is financed through debt and how much through equity. This is evaluated as the part of total asset liability to net worth. 'Outside liability' contains total borrowing, deposits and other liabilities.
- 3) **Total Advance to Total Asset Ratio:** This is the ratio of the total advanced to total asset. This ratio indicates banks aggressiveness in lending which ultimately results in better profitability. Higher ratio of advances of bank deposits (assets) is preferred to a lower one. Total advances also include receivables. The value of total assets is excluding the revolution of all the assets.

B. Asset Quality

Asset quality establishes the toughness of financial organization in opposition to loss of value in the assets. The failing value of assets, being major source of banking troubles, directly transfer into other areas, as losses are eventually written-off against capital, which at last put at risk the earning capacity of the organization. With this background, the asset quality is estimated in relation to the level and harshness of non-performing assets, adequacy of provisions, recoveries, distribution of assets etc.

- 1) **NPA: Non-Performing Assets:** Advances are categorized into performing and non-performing advances (NPAs) as per RBI guidelines. NPAs are extended into sub-standard, doubtful and loss assets based on the principle predetermined by RBI. An asset, consist of a leased asset, becomes nonperforming when it ceases to generate income for the Bank.
- 2) **Gross NPA:** This ratio is exercise to ensure whether the bank's gross NPAs are increasing quarter on quarter or year on year. If it is, representing that the bank is adding up a fresh stock of bad loans. It would mean the bank is also not exercising sufficient concern when offering loans or is too permissive in terms of following up with borrowers on timely repayments.

- 3) **Net NPA Ratio:** Net NPAs reveal the functioning of banks. A high level of NPAs proposes high probability of a large number of credit non-payments that affect the profitability and net-worth of banks and wear down the value of the asset. Loans and advances usually symbolize the largest asset of most of the banks. It observes the quality of the bank loan portfolio. The higher the ratio, the higher the credits risk.

C. Earnings

Earnings and profitability, the prime source of increase in capital base, is examined about interest rate policies and adequacy of provisioning. In addition, it also helps to support present and future operations of the institutions. The single best indicator used to gauge earning is the Return on Assets (ROA), which is net income after taxes to total asset ratio. Strong earnings and profit ability profile of banks reflects the ability to support present and future operations.

- 1) **Return on Assets (ROA):** A pointer of how profitable a company is competent to its total assets. ROA gives an idea as to how effective management is at using its assets to produce earnings. Considered by dividing a company's annual earnings by its total assets, ROA is designed as a percentage. Sometimes this is referred to as "return on investment". The continued viability of a credit union depends on its ability to earn an appropriate return on its assets.
- 2) **Total Advance to Total Deposit Ratio:** This ratio measures the efficiency and ability of the banks management in converting the total deposits available with the banks (excluding other funds like equity capital, etc.) into high earning advances. Total deposits include demand deposits, saving deposits, term deposit and deposit of other bank. Total advances also include the receivables.
- 3) **Business per Employee:** Revenue per employee is a measure of how efficiently a particular bank is utilizing its employees. Ideally, a bank wants the highest business per employee possible, as it denotes higher productivity. In general, rising revenue per employee is a positive sign that suggests the bank is finding ways to squeeze more sales/revenues out of each of its employee.
- 4) **Profit per Employee:** This ratio shows the surplus earned per employee. It is arrived at by dividing profit after tax earned by the bank by the total number of employee. The higher the ratio shows good efficiency of the management.

D. Liquidity

A sufficient liquidity position refers to a situation, where financial organization can obtain

adequate funds, either by increasing liabilities or by exchanging its assets rapidly at a reasonable cost. It is, consequently, generally assessed in terms of overall assets and liability management, as mismatching gives rise to liquidity risk. Efficient fund management refers to a situation where a spread between rate sensitive assets (RSA) and rate sensitive liabilities (RSL) is preserved. The mainly used tool to calculate the interest rate exposure is the Gap between RSA and RSL, while liquidity is measured by liquid to total asset ratio.

- 1) **Liquidity Asset to Total Asset:** Liquidity for a bank means the aptitude to encounter its financial duty as they come due. Bank lending finances investments in relatively illiquid assets, but it fund its loans with mostly short term liabilities. Therefore one of the major threaten to a bank is assuring its own liquidity under all reasonable circumstances. Liquid assets include cash in hand, balance with the RBI, balance with other banks (both in India and abroad), and money at call and short notice.
- 2) **Government Securities to Total Asset:** Government Securities are the most liquid and safe investments. This ratio calculates the government securities as a proportion of total assets. Banks invest in government securities chiefly to meet their SLR requirements, which are around 25% of net require and time liabilities. This ratio measures the risk involved in the assets hand by a bank
- 3) **Approved Securities to Total Asset:** Approved securities consist of securities other than government securities. This ratio calculates the Standard Securities as a proportion of Total Assets. Banks invest in Standard securities mainly after meeting their SLR requirements, which are around 25% of net demand and time liabilities. This ratio measures the risk involved in the assets hand by a bank.
- 4) **Liquidity Asset to Demand Deposit:** This ratio calculates the aptitude of a bank to meet the order from deposits in a specific year. Demand deposits offer increased liquidity to the depositor and hence banks have to invest these assets in a liquid form.
- 5) **Liquidity Asset to Total Deposit:** This ratio measures the liquidity available to the deposits of a bank. Total deposits include demand deposits, savings deposits, term deposits and deposits of other financial institutions. Liquid assets include cash in hand, balance with the RBI, balance with other banks (both in India and abroad), and money at call and short notice.

E. Sensitivity to Markets

Sensitivity to the market risk is the measurement scale to which a bank might be revealed to adverse

financial market situations. It is also asses on the development of interest rate of a bank. Interest spread gap is also a wing of sensitivity measurement. If the interest gap between deposit and advance goes up more than 4% then the market sensitivity earmarks as satisfactory, fair, marginal or unsatisfactory gradually.

IV. OBJECTIVE OF STUDY

- To comprehend the financial performance of the banks.
- To explain the CALS model of ranking banking institutions so as to make a comparative analysis of various banks.
- To analyze the banks performance through CAMEL model and give suggestion for improvement if necessary.
- Provide recommendations for improvement of bank performance.

V. RESEARCH METHODOLOGY

A. Methodology Adopted

Research Design: To achieve our objective we have done descriptive research. We have selected four banks for our study.

- Private Sector Bank – Axis Bank and Kotak Mahindra Bank,
- Public Sector Bank – Bank of Baroda and State Bank of India.
- The period for evaluating performance through CALS in this study is five years, i.e. from financial year 2009 to 2013. The data is collected from various sources as follows:
- Primary Data: Primary data collected from the Bank's Balance Sheets, Profit & Loss statements and also by taking personal visit to the employees of the banks.

VI. ANALYSIS AND INTERPRETATION

Now each parameter will be taken separately & discussed in detail

A. Capital Adequacy

1. Capital Adequacy Ratio (CAR)

Ratio= Capital/ Risk

Where, Risk can be either weighted assets (a) or the respective national regulator's minimum total capital requirement.

Capital Adequacy Ratio

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	12.92	13.86	11.98	13.39	14.25
BOB	13.3	14.67	14.52	14.36	14.05
KOTAK BANK	16.05	17.52	19.92	18.35	20.01
AXIS BANK	17	13.66	12.65	15.8	13.69

Sources: Authors Compilation

Interpretation: CRAR is the ratio of capital funds to risk weighted assets. Reserve Bank of India prescribes bank to maintain a CRAR of 9% about credit risk, market risk and operational risk on an ongoing basis as against 8% prescribed in BASEL. From the above table it is clear that Axis bank has the most favorable Capital Adequacy Ratio for the year 2012-2013. Higher the ratio, higher is the risk taking capacity of bank due to unexpected loss in banking portfolio. With respect to RBI norms of 9%, every bank analyzed is in favorable position

2. Debt Equity Ratio

Debt= Deposits + borrowings + unsecured debts debt

Equity = Capital + Reserves and surplus equity

Ratio = Debt/ equity

Debt to Equity Ratio

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	12.16	12.43	14.37	12.19	12.81
BOB	14.82	14.01	14.51	15.96	14.99
KOTAK BANK	5.4	4.85	4.31	5.26	4.01
AXIS BANK	7.63	9.65	9.96	8.81	11.49

Sources: Authors compilation

Interpretation: The Debt to Equity Ratio measures how much money a bank should safely be able to borrow over long periods. Generally, any bank that has a debt to equity ratio of over 40% to 50% should be looked at more carefully to make sure there are no liquidity problems. Higher ratio indicates less

protection for the creditors and depositors in the banking system. If we look at debt to equity ratio of Bank of Baroda is highest as it relies more on cheaper funds like CASA, which is the cheapest form of debt available to banks. Private Banks like Kotak Mahindra bank had less debt to equity ratio mainly because the bank raises equity capital more than debt.

3. Total Advance to Total Asset Ratio

Ratio= Total Advances/ Total Assets

Interpretation: This ratio indicates a bank's aggressiveness in lending which ultimately results in better profitability. Higher ratio of advance/deposits (assets) is preferred to a lower one. Here in SBI, this ratio has continuously increased because of increase in advances more than the increase in assets, which shows growth in investment. Axis bank too shows the same trend until 2012-2013 where the invested more on assets.

B. Asset Quality

1. Gross NPA to Net Advances

Ratio= Gross NPA/ Net Advances

Gross NPA to Advances (%)

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	4.89	4.57	3.34	3.09	2.87
BOB	2.43	1.55	1.37	-	-
KOTAK BANK	1.56	1.57	2.05	-	-
AXIS BANK	1.21	1.06	0.12	-	-

Sources: Authors compilation

Interpretation: This ratio is used to check whether the bank's gross NPAs are increasing quarter on quarter or year on year. If it is, indicating that the bank is adding afresh stock of bad loans. It would mean the bank is either not exercising enough caution when offering loans or is too lax in terms of following up with borrowers on timely repayments. The NPAs of SBI are increasing year on year, which is a threat to the bank.

2. Net NPA to Net Advances

Ratio= Net NPA/ Net Advances

Net NPA to Advances (%)**Sources:** Authors Compilation

Interpretation: Net NPAs reflects the performance of banks. A high level of NPAs suggests high probability of a large number of credit defaults that affect the profitability and net-worth of banks and wear down the

Advances to Deposits (%)

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	86.93	83.13	81.02	78.58	73.1
BOB	69.25	74.66	74.86	72.61	74.83
KOTAK BANK	94.98	101.4	100.23	86.97	106.26
AXIS BANK	77.66	77.12	75.25	73.84	69.48

value of the asset. Loans and advances usually represent the largest

asset of most of the banks. It monitors the quality of the bank's loan portfolio. The higher the ratio, the higher the credits risk. The ratio for Axis bank is the lowest and so it is the best performer among the four banks.

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	6.17	5.12	3.22	4.01	4
BOB	10.39	11.61	9.83	7.09	5.16
KOTAK BANK	10.07	8.03	6.06	4.15	2.04
AXIS BANK	13.66	11.19	8.94	6.63	4.78

C. Management**1. Total Advance to Total Deposit Ratio**

Ratio= Advances/ Deposits

Sources: Authors Compilation

Interpretation: This ratio shows the investment of the bank through approving the loans against accepting the loan. In SBI the ratio is continuously increasing year-on-year. This shows a good sign of the bank.

2. Business per Employee

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	2.1	1.82	1.63	1.72	1.76
BOB	1.27	0.5	0.34	-	-
KOTAK BANK	0.64	0.61	0.72	-	-
AXIS BANK	0.36	0.28	0.03	-	-

Business= Advances+ deposits

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	44331.3	43291.08	32526.4	23671.45	20873.14
BOB	11315.26	10317	8802.26	5939.48	5123.41
KOTAK BANK	3205.67	2512.5	2097.57	1858.14	1518.54
AXIS BANK	9666.26	8017.75	6563	5004.47	3686.23

Ratio= Business/ Number of Employees

Business per Employee (Rs Lakhs)

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	9.848	8.37	7.41	6.29	5.62
BOB	18.6	15.59	12.39	9.65	7.8
KOTAK BANK	7.37	5.74	4.34	3.3	2.39
AXIS BANK	11.86	10.28	8.75	6.48	5.24

Sources: Authors compilation

Interpretation: Revenue per employee is a measure of how efficiently a particular bank is utilizing its employees. Ideally, a bank wants the highest business per employee possible, as it denotes higher productivity. In general, rising revenue per employee is a positive sign that suggests the bank is finding ways to squeeze more sales/revenues out of each of its employee. The maximum revenue per employee is for Bank of Baroda, which is 18.6lakh. This shows the quality of workforce with has increased the profit year-on-year.

3. Profit per Employee

Profit = Net Profit

Ratio= Profit/ Number of Employees

Profit per Employee (Rs Lakhs)

Sources Authors Compilation

Interpretation: Profit per employee is a measure of how efficiently a particular bank is utilizing its employees. Ideally, a bank wants the highest profit per employee. Here all the banks profit per employee is increasing year on year. Axis Bank employees have highest profit per employee.

D. Earnings

1. Operating profit To Average Working Capital

Ratio= Operating profit/Average Working Capital

growth prospects. The earnings were highest for Kotak Mahindra Bank for the year 2009-10. Later it decreased due to more working capital funds. However, among the four banks it still has a better ratio .

2. Interest Spread

Ratio= Interest Earned - Interest expenditure

Interest Spread (Rs Cr)

Sources: Authors Compilation

Interpretation: This ratio helps in calculating how much interest the bank has gained after paying its own interest on debt. Higher the ratio better is the interest gained by the bank. From the above table all of the four banks have consistently gained more interest than the previous year. No bank has a negative interest spread. Thus, performance wise all the banks are doing well. However, the highest gain is by Bank of Baroda.

3. Net profit To Average Assets

Average Assets = (Opening Assets+ Closing Assets) /2

Ratio= Net Profit/ Avg. Assets

Interpretation: Net profit to average asset indicates the efficiency of the banks in utilizing their assets in generating profits. A higher ratio indicates the better income generating capacity of the assets and better

efficiency of management. In the current scenario, all banks have profits well above their investment in assets. The State Bank of India has a better consistency though the highest profit is for Kotak Bank.

4. Interest Income to Total Income

Ratio= Interest income / Total income

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	1.18	0.91	0.73	0.90	0.89
BOB	0.90	1.24	1.33	1.20	1.07
KOTAK BANK	1.88	1.95	1.98	1.87	1.92
AXIS BANK	1.70	0.91	0.73	0.91	0.94

Interpretation: Interest income to total income ratio shows that how much interest income earn from total income. Higher the ratio better is the proportion of interest earned from the total income. The interest income of Bank of Baroda is constitute almost 91% of total income for the year 2016-17 and is lowest for Axis bank, which is 74% in the

5. Return On Assets

Ratio= Net Income / Average Total Assets

Return on Assets

Banks	Year s				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
	7	6	5	4	3
SBI	1,445.60	1,251.05	1,023.40	1,038.76	912.73
BOB	758.91	668.34	537.45	414.71	352.37
KOTAK BANK	126.53	107.28	92.23	130.4	112.98
AXIS BANK	707.5	551.99	462.77	395.99	284.5

Sources: Authors Compilation

Interpretation: Return on Asset Ratio shows that how much return bank can get from their total asset. Higher the ratio is good for the bank. Because if ratio is higher than we can say that the return of bank is high. The ratio is consistently increasing for Axis bank and Bank of Baroda for the five years. However, it is highest for State Bank of India. This shows that the investment of SBI in its assets give a higher return.

6. Dividend Payout

Ratio= Dividend/ Net profit

Dividend Payout Ratio (%)

Banks	Year s				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	22.79	22.59	26.03	23.36	22.9
BOB	23.64	16.22	17.76	17.92	17.22
KOTAK BANK	4.38	4.76	5.04	5.28	10.07
AXIS BANK	19.06	18.15	19.78	22.56	23.16

Sources: Authors Compilation

Interpretation: Dividend payout ratio shows the percentage of profit shared with the shareholders. The more the ratio will increase the goodwill of the bank in the share market. The shareholders of Bank of Baroda enjoy more percentage of profit of the bank. However, this ratio does not give how much is the exact amount of profit given to the shareholders.

E. Liquidity

1. Liquid Asset to Total Asset

Liquid Asset= Cash with RBI+ Cash for short notice

Ratio= Liquid asset/ Total Asset

Interpretation: Liquidity for a bank means the ability to meet its financial obligations as they come. Bank lending finances investments in relatively illiquid assets, but it fund its loans with mostly short-term liabilities. Thus, one of the main challenges to a bank is ensuring its own liquidity under all reasonable conditions. SBI has highest liquid assets. It can easily build up cash immediately whenever necessary by liquidating its assets.

2. Liquid Asset to Total Deposit

Ratio= Liquid Assets/ Total Deposits

Table-13: Liquid Assets to Total Assets (%)

Banks	Year s				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	100.66	97.52	98.86	94.91	92.26
BOB	89.32	93.99	93.21	89.13	89.73
KOTAK BANK	106.5	113.26	113.81	102.55	123.93
AXIS BANK	88.85	86.40	89.01	87.36	85.46

Sources: Authors Compilation

Interpretation: The ratio shows how much part of the deposits invested into the liquidity asset, which can be easily convert in to monetary value in the time of need.

3. Liquid Asset to Demand Deposit

Ratio= Liquid Assets/ Demand Deposits

Liquid Assets on Demand Deposits

Banks	Years				
	MAR'17	MAR'16	MAR'15	MAR'14	MAR'13
SBI	100.46	97.52	98.86	6.22	6.18
BOB	89.32	93.99	93.21	11.34	11.94
KOTAK BANK	106.51	113.32	113.82	4.90	5.67
AXIS BANK	88.85	86.40	89.01	3.83	4.04

Sources: Authors Compilation

Interpretation: The ratio shows the power of liquidity asset against total demand deposits. It means what part of the demand deposits can be easily converted into monetary form in need.

VII. FINDINGS

Now, after analyzing the ratio next, task to do is find the average of the ratio of all five years and then give the rank for each parameter as per the value.

VIII. CONCLUSION

The report makes an effort to inspect and distinguish the performance of four banks of India i.e. from private sector banks, Axis Bank and Kotak Mahindra Bank and from the public sector banks, Bank of Baroda and State Bank of India. The analysis is based on the CAMEL Model. The study has brought

many interesting results, some of which are mentioned as below:

- For the capital adequacy, all banks have capital above the required level of capital required. This proves that the risk of default of these banks is less. Furthermore Bank of Baroda has the highest capital base reinforcement the confidence of the depositors.
- The asset quality can be measure as the number of non-performing loans to the total loans sanctioned by the bank. The bank with lowest non-performing loans from the above four banks is Axis bank. This indicates that Axis bank adopts and enforces effective policies for all its loans sanctioned. The bank has strong asset quality and minimal portfolio risk. The highest non-performing assets are with State Bank of India. There may have to monitor the portfolios of the customers more efficiently before approval of the loan.
- The management quality is the most important factor. The performance of all other five CALS factors depend on it. The management and board of Kotak Mahindra Bank as per the ratio analysis of the four banks are fully effective. On the other hand, the Axis bank is applicable to critically deficient management. Replacing or strengthening may be needed to achieve sound and safe operations.
- The quality and trend of earning of the bank depends largely on how well the management manages its assets and liabilities. In the context of earning, a rating of 1, given to State Bank of India, reflects strong earnings that are sufficient to maintain adequate capital and loan allowance, and support operations. On the other hand, a rating of 4 given to Kotak Mahindra Bank, experiences consistent losses and represents a distinct threat to the institution's solvency through the erosion of capital.
- In the context of liquidity, Kotak Bank represents strong liquidity levels and well-developed funds as the institution has access to sufficient sources of funds to meet present and anticipated liquidity needs. On the other hand, the Axis bank signifies critical liquidity deficiency, and the institution demands immediate external assistance to meet liquidity needs.

REFERENCES

- [1] Barr, R. S., Seiford, L. M., & Siems, T. F. (1994). Forecasting bank failure: A non-parametric frontier estimation approach. *Recherches Economiques de Louvain*, 60, 417-429.
- [2] Barth, J. R., Caprio, G., & Levine, R. (2008). *Bank Regulations Are Changing: For Better or Worse?* (Working Paper). World Bank.
- [3] Bhayani, S. (2006). Performance of the New Indian Private Sector Banks: A Comparative Study. *Journal of Management Research*, 5(11), 53-70.
- [4] Chaudhry, Sahila, & Singh, Sultan. (2012). Impact of Reforms on the Asset Quality in Indian Banking. *International Journal of Multidisciplinary*, 5(2), 17-24.
- [5] Cole, Rebel A., & Gunther, Jeffery. (1995). A CAMEL Rating's Shelf Life. Retrieved from <http://ssrn.com/abstract=1293504>.
- [6] Cole, R. A., & Gunther, J. W. (1998). Predicting bank failures: A comparison of on-and off- site monitoring systems. *Journal of Financial Services Research*, 13, 103-117.
- [7] Derviz, A., & Podpiera, J. (2008). Predicting Bank CAMEL and S&P Ratings: The Case of the Czech Republic. *Emerging Markets, Finance & Trade*, 44(1), 117. Retrieved on April 13, 2010, from ABI/INFORM Global. (Document ID: 1454963901).
- [8] Godlewski, C. (2003). Bank's Default Modelisation: An Application to Banks from Emerging Market Economies. *Journal of Social Science Research Network*, 4(3), 150-155.
- [9] Gupta, Omprakash K., & Chinubhai, Aneesh. (2008). Dynamics of Productive Efficiency of Indian Banks. *International Journal of Operations Research*, 5(2), 52-58.
- [10] Gupta, R. (2008). A CAMEL Model Analysis of Private Sector Banks in India. *Journal of Gyan Management*, 2(1), 3-8.
- [11] Hirtle, B. J., & Lopez, J. A. (1999). Supervisory information and the frequency of bank examinations. *Federal Reserve Bank of the US, New York. Economic Policy Review*, 5, 1-20.
- [12] Kwan, S., & Eisenbeis, R. A. (1997). Bank risk, capitalization, and operating efficiency. *Journal of Financial Services Research*, 12(2/3), 117-131.
- [13] Prasad, K. V. N. G., Ravinder, & D., Maheshwari Reddy. (2011). A CAMEL Model Analysis of Public and Private Sector Banks in India. *Journal of Banking Financial Services and Insurance Research*, 1(5), 16-23.
- [14] Prasuna, D. G. (2003). Performance Snapshot 2003-04. *Chartered Financial Analyst*, 10(11), 6-13.
- [15] Purohit, K. K., & Majumder, B. C. (2003). Post-mortem of financial performance and prediction of future earning capability of a bank: An application of CAMEL rating and balanced scoreboard. *The Indian Journal of Accounting*.
- [16] Said, M. (2003). Liquidity, solvency, and efficiency: An empirical analysis of the Japanese banks' distress. *Journal of Oxford*, 5(3), 354-358.
- [17] Sarker, A. (2005). CAMEL Rating System in the Context of Islamic Banking: A Proposed "S" for Shariah Framework. *Journal of Islamic Economics and Finance*, 1(1), 78-84.