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A Study on Performance Analysis using Camel Rating

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Abstract: The report presents the outcomes of the research on the performance analysis of a banking system using the CAMEL rating technique. It aimed to rank the functioning of the banking system by analyzing its capital adequacy, asset quality, management efficiency, earnings, and liquidity. The research was conducted on a sample of top five banks of India, and the CAMEL rating was calculated based on the financial reports and performance metrics of the banks. The study found that the CAMEL rating was effective in evaluating the strengths and weaknesses of the banks and providing a comprehensive assessment of their overall performance. The report provides a detailed analysis of the results and discusses the implications for the banking industry. The study highlights the importance of strong capital adequacy, asset quality, and management efficiency for maintaining a healthy and stable banking system. The study also identifies areas for improvement, including the need to enhance earnings and liquidity management. Overall, this study contributes to the field of banking performance analysis by demonstrating the effectiveness of the CAMEL rating technique and providing insights into the performance of banks. The study offers recommendations for policymakers and bank managers to improve the performance and stability of the banking system.
Keywords: Bank, CAMEL, Performance analysis, risk management, financial performance

I. INTRODUCTION

A company's financial performance can reveal a lot to investors about its overall health. The financial situation of the company and the results of the management are outlined in the analysis of results, which also gives a look into the future, suggesting whether the operations and results are at a growth rate and what are the prospects for the shares of the company. Additionally, it provides financial information about the company's asset structure, asset liquidity, source of funding, level of debt, and liabilities structure. Therefore, according to financial tools, it is beneficial to analyse each section of financial statements in order to prevent financial risks. The CAMELS evaluation system evaluates the strength of the bank in six different areas. The terms solvency, asset, manageability, income, liquidity and sensitivity are all abbreviated CAMEL. Scores are given on a scale of one to five, with one being the best and five being the worst**.**

A. Capital Adequacy Ratios

The level of capital adequacy measures how well an Organisation meets the minimum capital requirements. The rating is determined by regulatory authorities looking at the current and past capital situation of a financial institution. The future capital situation is predicted based on the institution's future plans, for example whether it plans to pay dividends or buy another company. In addition, the CAMEL researcher considers trend analysis, capital composition and capital liquidity.

B. Assets Quality

This classifier classifies the value of the assets of the bank. Asset quality is critical because high-risk assets can quickly decline in value. For example, if the money is offered to someone with a high risk of default, the value of the loans as an asset may be jeopardised. The inspector considers the bank's lending and investment practices as well as credit issues such as interest and liquidity risk. The quality and trends of the most important assets are considered. A financial organisation would be downgraded if significant assets were found to be impaired as a result of credit risk.

C. Management Quality Ratios

Managerial competence measures management's ability to identify and deal with financial crises. The criteria for this category are the effectiveness of the bank's internal control, financial performance and business strategy. A CAMELS researcher evaluates the business strategy and the financial performance part, taking into account the long-term goals of the institution. Besides growth and capital accumulation, it shows the main dangers.

An internal control assessment is used to evaluate a facility's ability to monitor and detect potential threats. Internal control includes, among other things, accounting, audit programs and information systems. Information systems ensure the integrity of computer systems and protect customer data. Audit programs check whether companies' principles are being followed.

D. Earnings Capacity Ratios

The long-term viability of an institution can be assessed using income. The bank needs reasonable income to expand its business and maintain its competitiveness. The auditor mainly looks at the future income potential in difficult economic conditions, the return on capital (ROA) and net interest margin (NIM) and the stability of the company's results. The base salary is the most important when evaluating salaries. The main income of the institution is a long-term stable salary, which is affected by the costs of one-time items.

E. Liquidity Ratios

Because the lack of liquid capital can be caused by bank runs, banks must maintain a high level of liquidity. This category of CAMELS examines both interest rate risk and liquidity risk. Interest rates affect the bank's capital market trading results. The value of the institution's investment and loan portfolio is unstable if interest rate risk is significant. Liquidity risk is the risk that current or future cash flow requirements cannot be met without disrupting normal business operations.

II. REVIEW OF LITERATURE

(B & T, 2018), analysed the performance of selected private banks by using CAMEL model to assess the financial growth of the select banks to rank the banks under the study based on performance and efficiency. While evaluating the function of the banks the study unfolded that many of the developed countries are now following uniform financial rating system (CAMEL RATING) along with other existing procedures and techniques. The study concluded that there is no continuous growth with respect to any parameters in all selected Banks. As the result showed that with reference to Capital adequacy & Management quality ratios ICICI bank is performing well than other banks & as per Asset quality ratios HDFC and YES banks are performing well. Whereas while earning capacity ratios is considered HDFC and KOTAK are performing better than other banks & as per the Liquidity ICICI is in top among 5 selected banks while HDFC and YES banks are in last place.

(Talreja & Shivappa, 2020), examined the financial performance of selected private and public sector banks. The study concluded that Camel model is a good measure to evaluate overall performance of the banks but using it solely may not be advised. A combination of different methods will give better performance measurement. The result showed that in terms of earning capacity private sector banks have performed better in all the ratios & have performed better in management capability whereas public sector banks have also incurred losses during the study period & in terms of liquidity selected public sector banks have better liquidity position than the selected private sector banks.

(V, M, & Reddy, 2016), examined performance of selected private banks using five important parameters such as solvency, asset quality, management efficiency, earnings quality and liquidity to effectively and accurately determine the factors that primarily affect the financial performance of the Indian banking sector. The study looked at how central banks around the world have improved the quality of their supervision and techniques such as the CAMEL approach. In addition, the analysis concluded that four factors: profit per employee, debt-to-value ratio, total asset-to-deposit ratio, and net collateral to net advance ratio are the most important independent factors affecting the financial performance of profitable banks assets as the dependent variable.

(Singhal & Shelly, 2020), analysed the financial capability of public sector banks in Using CAMEL model. A sample of 21 of banks was choose over a period of 2008-2009 to 2018-2019.The research suggested that 13 out of 21 banks were able to achieve a CARof 12% which was set by RBI,where as the remaining Banks had a average CAR of 11%.. 10 out of 21 banks had a net NPA above 3.66%.The study also revealed that the public banks are slowly losing their market to private banks , foreign banks and NBFCs .

(Ray & Shantnu, 2021), examined that by putting in place a regulatory framework for financial supervision, banking performance is evaluated. The banks' overall performance is assessed, along with their strengths and shortcomings, using the CAMEL rating methodology. Due to the RBI's attempts to foster specialist industries, small financing banks have emerged. These are the financial organizations that offer the fundamental banking services of accepting deposits and making loans. The objective is to provide financial inclusion to economic segments such as small businesses, small and marginal farmers, micro and small scale industries and unorganised sector units that are not served by other banks in unbanked and underbanked areas.

(Kulshrestha & Srivastava, 2022) There is a significant performance gap among all Indian public sector banks and private sector banks overall. The research findings are consistent with those who stated that private sector banks are in a stronger situation. The overall findings show that modern technology-based banking reforms and recovery mechanisms have enhanced the performance of private sector banks. Another factor is that private sector banks are more financially stable than public sector banks due to the adoption of cutting-edge banking reforms and recovery mechanisms. Another factor is that private sector banks have a stronger financial standing than public sector banks.

(Kadam & Sapkal, 2019), it was analysed that the capital of all banks exceeds the minimum required for solvency. This indicates that these banks are less likely to fail. In addition, Kotak Bank has the highest capital base, which increases the confidence of depositors. The ratio of non-performing loans and loans approved by the bank can be used to measure the quality of assets. Axis Bank has the lowest NPL ratio among the above four banks. This shows that Axis Bank implements and adheres to effective policies for all sanctioned loans. The bank has low portfolio risk and good asset quality. State Bank of India has the largest non-performing assets. Before accepting the request, it may be necessary to check customer portfolios more carefully.

(Karri, 2015)The financial performance of six public sector banks in India is compared in "A Comparative Study of Financial Performance of Public Sector Banks in India: An Analysis of CAMEL Model." The CAMEL model is employed by the author to assess the banks. The acronym CAMEL (Capital Adequacy, Asset Quality, Management Quality, Earnings, and Liquidity) stands for a model of financial stability. The analysis is based on secondary data that was gathered from the banks' annual reports for the years 2012 to 2017. The survey also noted a few difficulties India's public sector banks were facing. The difficulties include the necessity to embrace new technologies, the escalating rivalry from private sector banks, and the requirement to raise asset quality.

III. RESEARCH METHODOLOGY

A. Objectives

To clarify the relationship between CAMEL ratings and financial performance of banks in a specific region or country over a period of time.

To suggest policy implications and recommendations to improve the financial health and stability of banks based on the findings of the study.

B. Scope Of The Study

The purpose of this study is to analyse the performance of banks using the CAMEL rating system to make recommendations to improve the financial condition and stability of banks based on the results of the study. The purpose of the report is to examine the application of the CAMEL classification system to assess the performance of banks located in different geographic regions and to identify factors that contribute to differences in performance. The research is conducted using a mixed method that combines both quantitative and qualitative methods. The method collects and analyses financial data from banks located in different locations using secondary data found on the Internet.

C. Source

The research is based on the secondary data that has been collected through various journal articles, books, magazines and the content found on internet. The content which has been taken through various media included different surveys conducted from a sample which have been discussed on the literature review section briefly. Both qualitative & quantitative data have been taken into consideration while conducting the research study.

D. Research Gap

Regulating authorities and financial institutions frequently utilize the CAMEL rating system to evaluate the security and stability of the financial institutions. The ability of the CAMEL rating system to correctly forecast the financial health of organizations has however received little research. The CAMEL rating system has come under criticism in the recent years for failing to appropriately identify institutions at danger of failing despite its widespread use. This raises questions about the effectiveness of the system and the need for changes.

E. Problem Statement

The CAMEL rating system, which relies heavily on past data, may not accurately predict an institution's future financial health.

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Additionally, the system is criticized for being subjective, with different examiners assigning different ratings to the same institution. These issues raise concerns about the effectiveness of the CAMEL rating system and its ability to provide reliable information for decision-making.

IV. ANALYSIS & DISCUSSION

A. *Capital Adequacy*

Table 1: Capital adequacy ratio of top 5 Indian banks

Year/Bank	State Bank Of India	ICICI Bank	HDFC Bank	AXIS Bank	Kotak Mahindra Bank
2017-18	12.60	18.42	17.11	16.57	18.22
2018-19	12.72	16.89	18.52	15.84	17.45
2019-20	13.06	16.11	18.79	17.53	17.89
2020-21	13.74	19.12	18.90	19.12	22.26
2021-22	13.83	19.16	19.26	18.54	22.69
AVERAGE	13.19	17.94	18.516	17.52	19.702
RANK	5	3	2	4	1

Source: https://www.moneycontrol.com

Solvency and financial strength of banks are indicated by higher CAR ratio values, whereas worse solvency and financial strength are indicated by lower values. Top 5 Indian banks' capital adequacy ratios change yearly. Here, Kotak Mahindra Bank's average Capital adequacy ratio of 19.702 is higher than all other banks' averages. Kotak Mahindra Bank is therefore better able to tolerate losses than the other four banks.

B. *Assets Quality*

Table 3: %NPA of Top 5 Indian Banks

Banks	2022	2021	2020	2019	2018	Average	Rank
SBI Bank	1.02	1.5	2.23	3.01	5.73	2.698	5
ICICI Bank	0.48	0.76	1.14	1.41	2.06	1.17	4
HDFC Bank	0.27	0.32	0.4	0.36	0.39	0.348	1
Axis Bank	0.39	0.73	1.05	1.56	2.06	1.158	3
Kotak Mahindra Bank	0.37	0.64	1.21	0.71	0.75	0.736	2

Source: https://www.moneycontrol.com/

Assets Quality basically shows whether the Non-Performing Assets of bank has improved or degraded over time. One of the measures of measuring the status of NPA is %NPA as shown by the above table. The % NPA is calculated by dividing NPA by total loan multiplied by 100. If the % NPA has improved over time, we can say that Assets Quality has improved over time and vice versa. Similarly, the above table shows the %NPA of commercial bank for over last 5 years. The assets quality of all the banks has improved over time. However, if we compare them on average basis, HDFC bank holds the first position with least %NPA over the time.

C. *Management Efficiency*

Table 3: Management Efficiencyratio of top 5 Indian banks. (RNR)

Year/Bank	State Bank Of India	ICICI Bank	HDFC Bank	AXIS Bank	Kotak Mahindra Bank
2017-18	-3.37	6.63	19.50	7.01	10.89
2018-19	0.39	3.19	16.47	1.91	11.47
2019-20	6.95	6.99	16.19	6.48	12.25
2020-21	8.86	11.21	16.26	11.30	11.01
2021-22	12.33	13.97	16.45	7.66	11.90
AVERAGE	5.032	8.398	16.974	6.872	11.504
RANK	5	3	1	4	2

Source: https://www.moneycontrol.com/

Governance measures the ability of an institution's management to recognise and then respond to financial stress. Return on Net Assets Ratio is a profitability ratio that measures a company's ability to earn a return on its shareholders' investments in the company HDFC Bank average Return on Net Assets ratio is the highest among all selected banks at 16.974. Hence, HDFC Bank manages funds more efficiently than other selected banks. A higher or positive return on net assets increases the creditworthiness of the company and helps to make better investments and finance future plans. A lower or negative return on net worth creates a negative impression of the company because it is not using shareholders' funds efficiently.

D. Earnings Capacity Ratios

Table-4: Return on assets ratio

YEAR/BANK	SBI	ICICI	HDFC	AXIS	KOTAK
2017-18	-0.12	0.68	1.67	0.06	1.83
2018-19	0.05	0.34	1.72	0.61	1.82
2019-20	0.47	0.69	1.72	0.19	1.93
2020-21	0.46	1.16	1.76	0.71	2.08
2021-22	0.65	1.43	1.79	1.18	2.21
AVERAGE	0.302	0.86	1.732	0.55	1.974
RANK	5	3	2	4	1

Source: https://www.moneycontrol.com/

The bank's profitability is expressed as a percentage of the assets' value, or return on assets. It reveals the effectiveness of an organization's asset management. It is one of the RBI's recommendations for analyzing a bank's balance sheet. Low value implies poorer productivity of banks, while higher value shows stronger financial productivity and profitability of banks. According to the data, KOTAK bank has the highest average Return on Assets ratio, followed by HDFC bank with a little difference, while SBI bank has the lowest average Return on Assets ratio of all the banks. Thus, when compared to the other chosen banks, the KOTAK BANK exhibits higher financial productivity and profitability.

E. Liquidity Ratios

Table 5: Current ratios for selected banks

YEAR/BANK	SBI	ICICI	HDFC	AXIS	KOTAK
2017-18	0.08	0.11	0.05	0.11	0.07
2018-19	0.09	0.13	0.05	0.10	0.06
2019-20	0.08	0.10	0.03	0.13	0.06
2020-21	0.09	0.08	0.06	0.11	0.06
2021-22	0.08	0.06	0.08	0.09	0.06
AVERAGE	0.084	0.096	0.054	0.108	0.062
RANK	3	2	5	1	4

Source: https://www.moneycontrol.com/

The current ratio is a liquidity ratio that assesses a company's ability to pay short-term or annual debt. A higher ratio indicates that the company's assets are greater than its liabilities. Higher values of this ratio indicate higher bank liquidity, while lower values indicate lower bank liquidity. It can be seen from the table that Axis bank has the highest average current ratio compared to other selected banks followed by ICICI bank. On the other hand, Kotak bank and HDFC bank have the lowest current ratio compared to other selected banks.

According to the results of the study, here are some policy implications and recommendations to improve the financial health and stability of banks:

1) Strengthen regulations: According to the report, banks' risks can be reduced by enforcing stronger rules regarding capital requirements, liquidity ratios, and loan-loss provisioning. Therefore, to ensure the stability of the banking sector, policymakers may think about introducing stricter regulations and ensuring their proper implementation.

2) Encourage diversification: According to the study, banks with diversified loan portfolios were less likely to face financial difficulties. By offering incentives for banks to invest in a wider variety of asset classes, policymakers could persuade banks to diversify their lending activities.
3) Promote risk management procedures: According to the report, banks that implement strong risk management procedures, such stress testing, are better prepared to face unforeseen shocks. Therefore, by offering direction and incentives, policymakers could persuade banks to enhance their risk management procedures.
4) Increased transparency is one way to lower uncertainty and mitigate risk in the banking industry, according to the study. To increase openness, policymakers should think about requiring banks to provide additional details about their operations, financial performance, and risk management procedures.
5) Encourage cooperation and information sharing: The study indicated that information sharing and cooperation between banks can aid in lowering systemic risks. As a result, governments may encourage increased cooperation between banks by taking steps like creating sector-wide risk management forums or requiring banks to join information-sharing networks.

In general, authorities should try to balance supporting growth with guaranteeing banking sector stability. The above-mentioned suggestions could support achieving this balance and enhancing banks' long-term financial stability.

V. CONCLUSION

By concentrating on five key areas and avoiding reviewing items that are extraneous or compromise the integrity of the financial position, the CAMELS methodology helps to reduce the inspection time.Radical reforms have enhanced the quality and methods of supervision used by central banks worldwide. Numerous developed nations now use the CAMEL RATING uniform financial rating system in addition to other established methods and techniques when assessing the performance of banks.In this survey related to solvency ratios, Kotak Mahindra Bank performs better than other banks. In terms of asset, HDFC Bank is performing well. If you look at management quality ratios, HDFC banks perform better than other banks. In terms of income ratios, HDFC and KOTAK are doing better than other banks. In terms of liquidity, Axis is the top five banks and HDFC and KOTAK banks are at the bottom. All the selected banks do not show continuous growth in any parameter.

Table-5: consolidated ranking for top 5 Idnian banks based on CAMEL Rating

RATIO/BANK	State Bank Of India	ICICI Bank	HDFC Bank	AXIS Bank	Kotak Mahindra Bank
Capital Adequacy	5	3	2	4	1
Assets Quality	5	4	1	3	2
Management Efficiency	5	3	1	4	2
Earnings capacity ratios	5	3	2	4	1
Liquidity ratios	3	2	5	1	4
FINAL RANKS OF BANKS	5	3	2	4	1

By averaging the positions of the selected banks, there are positions related to all the calculated indicators i).KOTAK MAHINDRA BANK ii) HDFC BANK iii) ICICI BANK iv) AXIS BANK v) STATE BANK OF INDIA

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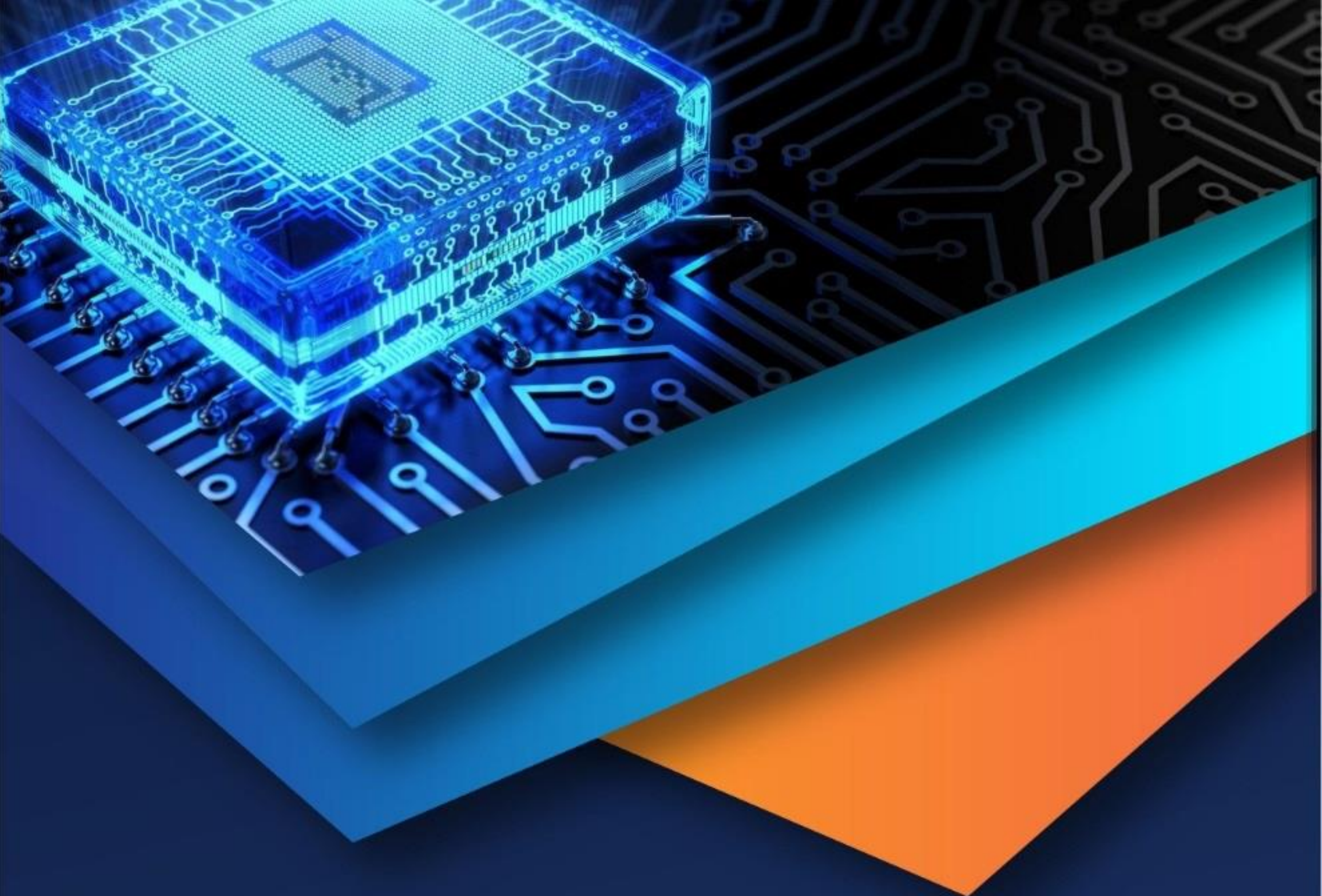

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