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A Comparative Study on the Financial Performance of SBI and HDFC Bank based on CAMEL Model.

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Abstract - The contribution of the Indian Banking sector in the economic development of the country is significant. The banking industry fuels the growth of various sectors by providing the financial assistance. But over the past few years, the banking sector is also facing various challenges in the form of deteriorating asset quality, corporate governance issues and economic slowdown, in addition to the pandemic over the last year. The performance of the banks is directly impacted due to these factors. An attempt has been made to study the performance of the banks on the basis of various parameters like capital adequacy, asset quality, management efficiency, earnings and liquidity – CAMEL model. A comparative study of State Bank of India and HDFC Bank has been done by applying the CAMEL model. The results point out that HDFC Bank has outperformed State Bank of India on the parameters of Capital Adequacy, Asset Quality and Management whereas State Bank of India has outperformed HDFC Bank on the parameter of Liquidity. Both the banks have performed equal in terms of Earnings quality.

***Key Words*:** Capital Adequacy, Asset Quality, Management, Earnings, Liquidity.

1.INTRODUCTION

The development of any economy depends on the development of the financial sector of the economy. The banking industry forms an important part of the financial system by providing financial assistance to various sectors of the economy. This includes not only the corporate sector but also the agriculture and the household sectors. In fact, the banking industry's performance is seen as a replica of the economic activities of the nation as healthy banking system acts as the bedrock of solid economic growth of the nation.

Indian Banking Industry has contributed significantly to the economic development of the country. Banks in India are segregated into different groups such as Scheduled Banks, Unscheduled Banks, Commercial Banks, Public Sector Banks, Private Banks, Foreign Banks and Co-operative Banks. All these banks are regulated by the Reserve Bank of India (RBI). The Banking industry is a valuable contributor to the GDP, works under a regulated environment and has government support.

The Indian Banking Industry has also gone through various developments in the recent past. While the problems of deteriorating asset quality (on both corporate as well as retail fronts), capping of the tenures of the CEOs of banks to 15 years loom over the banking industry, the governance issues, slowdown in the economic activities due to the outbreak of the Covid – 19 pandemic, slower acceleration of the vaccination drive, global trade concerns and a lackluster earnings cycle pick up etc. has added to the concerns of the Indian Banking Industry. For long, the competition in the banking industry has been limited largely due to the fact that the competition largely came from a small number of similar entities with the Reserve Bank of India ensuring that only the institutions meeting stringent requirements are provided with the licenses ensuring the least number of banks entered the market to compete with them.

But as it happens in any business, technological innovation and the regulator's delay in waking up to developments have allowed a new set of companies to play the role of financial intermediaries with a different name (The Economic Times).

Despite of all these challenges there are various growth triggers ahead that present huge opportunities for the banking sector. This includes, internet and mobile banking supported by the increased internet penetration, lower penetration level of banking services among Indians, increased savings and investments along with financialization of savings etc.

Analysis of the financial performance of the public and private sector banks will help us in identifying those pockets in the banking industry that have strong financials and are well placed to grow once the difficult times are behind us and make a good investment bet in the current environment.

2.1 LITERATURE REVIEW

Gupta (2014) analyzed the performance of public sector banks in India with the help of CAMEL Model for the period of five years from 2009 to 2013. For the purpose of the study the financial data of 26 Public sector banks was taken. For determining whether there is any significant difference between the means of CAMEL ratios ANNOVA had been applied. The study concluded that Andhra bank performed the best (secured the highest position i.e. First on majority of the CAMEL parameters followed by Bank of Baroda while United Bank performed the worst and secured the least position i.e. 26th

Kumar and Sharma (2014) analyzed the banking sector on the basis of the CAMEL Model (Capital Adequacy, Asset Quality, Management, Earnings and Liquidity). Eight banks (HDFC, ICICI, SBI, Kotak Mahindra Bank, AXIS, BOB, BOI, PNB) with the highest market capitalization have been taken for a period of 6 years from 2007-08 to 2012-13. The study concluded that Kotak Mahindra Bank is on the top position in terms of Capital Adequacy. SBI has the highest Non – Performing Assets followed by ICICI bank. Earnings quality of Punjab National Bank and State Bank of India are in top. Kotak Mahindra Bank and ICICI are most efficient in managing the liquidity.

Karri, Meghani and Mishra (2015) studied the financial performance and position of Bank of Baroda and Punjab National Bank for a period of five years from 2010-2014. The results of t-test suggest that there is no significant difference in the financial performance of Bank of Baroda and Punjab National Bank during the period of study.

Sodhi, Simran and Waraich (2016) conducted fundamental analysis of three public and two private sector banks in India. The objective was to analyze the profitability position of the selected banks with respect to various financial economic and industrial parameters that influence the risk return of securities. They examined and compared the various aspects of performance of selected public and private sector banks in India for five years starting from 2010-11 to 2014-15. The results of the study showed that the private sector banks have performed better than public sector banks in terms of growth and profitability.

Gajera (2016) analyzed the financial performance of banks on the basis of selected financial performance parameters which are divided into seven heads such as Capital Adequacy ratios, Debt Coverage parameters, Balance Sheet parameters, Management Efficiency parameters, Profitability parameters, Employee 's Efficiency parameters and Non-Performing Assets parameters. For analysis CAMEL Model has been used. Four public 29 parameters 10 parameters showed significant financial difference at all level of data analysis. Among 10 parameters private sector bank proved superiority over public sector bank 4 parameters while public sector banks prove superiority over private sector banks in remaining 6 parameters.

Susmitha & Mouneswari (2017) examined the financial performance of Syndicate Bank by applying the CAMEL Model. They analyzed the performance of the bank for a period of five year from 2013-17. The results suggested that the performance of Syndicate bank on the parameters of Capital Adequacy, Asset Quality, Management Efficiency and Earnings is satisfactory. But the performance on the parameter of Liquidity is not satisfactory.

Subalakshmi, Grahlakshmi and Manikandan (2018) examined the asset liability portfolio of SBI and also analyzed the various aspects like deposit mobilization, investment position, earnings, profitability and efficiency, loans and advances and non-performing assets by applying the technique of ratio analysis. The study covered the period from 2009-2016.The findings suggested that there has been sufficient improvement in the performance of the bank in terms of credit deposit ratio, Deposits to Total Assets ratio, Return on Equity, Profit Margin.

Chaudhuri (2018) conducted a comparative study on the performance of SBI and ICICI for a period of five years from 2011-12 to 2015-16 using the CAMEL model. The results concluded that both the banks are complying the required standards and are profitable. However, the performance of ICICI is better than SBI on the parameter of earnings and management efficiency.

2.2 RESEARCH METHODOLOGY

Objectives of the Study

To study the financial performance of the State Bank of India and HDFC Bank with respect to various parameters like Capital Adequacy, Asset Quality, Management, Earnings Quality and Liquidity

To examine whether there is significant difference in the performance of State Bank of India and HDFC bank

Hypothesis Testing

H_0 - There is no significant difference in the performance of State Bank of India and HDFC Bank

H_1 - There is significant difference in the performance of State Bank of India and HDFC Bank

Data Sources

Secondary Data: The present study is based on the secondary data. The secondary data is collected from Websites, Annual Reports of the banks, Newspaper Articles and Magazines.

Sample Selection

The banks selected for the study have been on the basis of their market capitalization. One bank each from public sector and private sector have been selected on the basis of market capitalization. Accordingly, State Bank of India has been selected from the public sector and HDFC bank has been selected from the private sector.

Data Analysis

The performance of the banks has been evaluated on the basis of CAMEL Model. The various ratios under the model have been computed for a period of seven years from 2013-14 to 2019-20 for both the banks. In order to test whether there is significant difference in the performance of both the banks, ANOVA has been applied.

2.3 CONCEPTUAL FRAMEWORK

The CAMEL Approach is used to analyze the financial performance and the efficiency of banks. The approach was developed in US. It helps to evaluate banks with complete coverage of factors affecting bank creditworthiness. In 1995, a rating system for domestic as well as foreign banks based on international CAMEL Model was introduced by RBI. CAMEL Model as a tool is very effective, efficient and accurate to be used as a performance evaluation in banking industries and to anticipate the future and relative risk. There are five factors which are represented by the acronym "CAMEL":

C – Capital Adequacy

A – Asset Quality

M – Management Quality

E – Earnings Quality

L – Liquidity

Capital Adequacy

Capital adequacy is regarded as one of the key elements of the CAMEL model to assess the financial health of a bank. It indicates the bank's capacity to meet unexpected losses. Under capital adequacy, the banks are assessed under four different sub-parameters namely capital adequacy ratio, debt-equity ratio, Advances/Asset ratio, and government securities/investments. Capital adequacy ratio refers to the amount of a bank's capital expressed as a percentage of its risk weighted assets exposure. It also helps to reduce risk of defaults.

Following are the ratios categorized under Capital Adequacy:

- Capital Adequacy Ratio
- Debt Equity Ratio
- Total Advances to Total Assets
- Government Securities Investments

Asset Quality

The capability and strength of a bank lies on the quality of its assets. A comprehensive analysis of asset quality is vital to assess the current state of affairs and future viability of the bank. The efficiency of bank in assessing credit risk and recovering debts in in indicated by Net Non- Performing Assets (NNPA) to Total Asset (TA) ratio. The lower the ratio the better will be the performance of bank. NNPA as a percentage of Net-Advances is the most standard measure of asset quality. Following are the ratios categorized under Asset Quality:

- Net NPA's to Total Assets Ratio
- Net NPA's to Total Advances
- Total Investments to Total Assets Ratio
- Percentage Change in NPA

Management

The development and endurance of a bank is ensured by its management. The management of a bank plays a very crucial role in making decisions depending on their risk perception. It sets the vision and goals for the bank and sees that they are achieved within the given time period. Following are the ratios categorized under Management Capacity:

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

Earnings

Profitability of the bank and also its ability to earn consistently can be easily determined by its earning quality measure. The earning of a bank reflects its growth capacity and financial health. Strong earnings and profitability profile of banks reflects the ability to support present and future operations.

Following are the ratios categorized under Earnings Quality:

- Operating Profit to Average Working Funds
- Net Profit to Average Assets
- Spread Ratio
- Percentage Change in Net Profit
- Non-Interest Income to Total Income
- Interest to Total Income

Liquidity

Liquidity is very crucial for any organization which deals with money. It is all the more important for banks. Poor liquidity management not only leads to dwindling bank earnings but can also jeopardize its continued operations. The parameter assesses the ability of a bank to meet the demand from the deposit holders in a particular time. The higher the ratio, the better off will be the banks.

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Following are the ratios categorized under Liquidity:

- Government Securities to Total Assets
- Liquid Assets to Total Assets
- Liquid Assets to Total Deposits
- Approved Securities to Total Assets
- Liquid Assets to Demand Deposits

2.4 DATA ANALYSIS

Capital Adequacy Ratios

Table – 1 Capital Adequacy Ratio

Year	HDFC	SBI
2013-14	16.10	12.44
2014-15	16.80	12.00
2015-16	15.50	13.12
2016-17	14.60	13.11
2017-18	14.80	12.60
2018-19	17.10	12.72
2019-20	18.50	13.06
Averages	**16.20**	**12.72**
Ranks	**1.00**	**2.00**

Capital Adequacy reveals the overall financial condition of the bank and also how effectively the bank can manage its need for additional capital requirements. RBI has prescribed a threshold of 12%. The average capital adequacy ratio of both SBI and HDFC bank is higher than the threshold limit. However, the capital adequacy ratio of HDFC Bank is well above the stipulated level. Thus, this implies that HDFC bank has a higher capacity to absorb losses in the event of winding up and thus promises better protection to the depositors.

Table -2 Debt Equity Ratio

Year	HDFC	SBI
2013-14	935.58	1333.71
2014-15	799.89	1387.39
2015-16	824.75	1354.99
2016-17	802.2	1254.71
2017-18	857.87	1400.31
2018-19	734.1	1500.32
2019-20	795.11	1532.83
Average	**821.36**	**1394.89**
Rank	**1**	**2**

The Debt Equity ratio signifies the proportion of borrowed capital to owned capital. The average Debt-Equity Ratio of HDFC stands at 821.636 which is relatively lower when compared to SBI which has a Debt Equity Ratio of 1394.89%. Thus, from this it can be said that HDFC Bank provides its depositors and creditors with higher protection as against SBI.

Table -3 Total advances to Total Assets

Year	HDFC	SBI
2013-14	61.63	67.5
2014-15	61.89	63.4
2015-16	65.6	64.8
2016-17	64.2	58.06
2017-18	61.88	56.01
2018-19	65.84	59.38
2019-20	64.93	58.85
Average	**63.71**	**61.14**
Rank	**1**	**2**

The average Total Advances to Total Assets Ratio of HDFC Bank stands at 63.71% which is higher than that of SBI which stands at 61.14%. This implies that HDFC Bank is more aggressive in the lending activities as compared to SBI, which may lead to higher profitability for HDFC Bank compared to SBI.

Table -4 Government Securities Investment

Year	HDFC	SBI
2013-14	78.25	78.25
2014-15	72.32	77.45
2015-16	76.7	77.2
2016-17	75.73	76.25
2017-18	77.95	80.95
2018-19	82.85	79.99
2019-20	82.66	78.35
Average	**78.07**	**78.35**
Rank	**2**	**1**

This ratio indicates the risk involved in bank's investments. The government securities are assumed to be risk free. Therefore, a higher ratio indicates lesser risk involved in bank's investment. The investments of SBI are relatively more secure than HDFC Bank as the average Government securities Investment ratio of SBI stands at 78.35% as compared to HDFC bank whose Average Government Securities Investment Ratio stands at 78.07%.

Asset Quality Ratios

Table -5 Net NPA to Total Assets

Year	HDFC	SBI
2013-14	0.17	1.73
2014-15	0.15	1.35

2015-16	0.19	3.09
2016-17	0.21	2.00
2017-18	0.24	3.21
2018-19	0.26	1.79
2019-20	0.23	1.31
Average	**0.21**	**2.07**
Rank	**1**	**2**

This ratio measures the quality of assets. The lower the ratio, the better the quality of advances. The average Net NPAs to Total Assets Ratio of HDFC Bank stands at about 0.21%, while that of SBI stands at about 2.07%. This shows that the quality of advances of HDFC Bank is far better than that of SBI.

Table -6 Net NPAs to Net Advances

Year	**HDFC**	**SBI**
2013-14	0.27	2.57
2014-15	0.25	2.12
2015-16	0.28	3.81
2016-17	0.33	3.71
2017-18	0.4	5.73
2018-19	0.39	3.01
2019-20	0.36	2.23
Average	**0.33**	**3.31**
Rank	**1**	**2**

It is used as a measure of overall quality of bank's loan book. The average Net NPAs to Net Advances of HDFC bank stands at 0.33% while that of SBI stands at about 3.31%. This points out that HDFC bank has better quality loans in its loan book as compared to SBI.

Table -7 Total Investments to Total Assets

Year	**HDFC**	**SBI**
2013-14	24.6	22.22
2014-15	28.19	24.17
2015-16	23.1	21.1
2016-17	24.83	28.31
2017-18	22.76	30.71
2018-19	23.55	26.27
2019-20	25.6	26.5
Average	**24.66**	**25.61**
Rank	**1**	**2**

This ratio is an important tool for measuring the percentage of total assets locked up in investments, which conventionally doesn't form the part of the core income of the bank. The average Total Investment to Total Assets ratio of HDFC bank stands at about 24.66% which is slightly lower as compared to SBI whose average Total Investment to Total Assets ratio stands at 25.61%. It can be said that HDFC bank is better placed in terms of Total Investment to Total Assets ratio when compared to SBI.

Table -8 Percentage Change in NPA

Year	**HDFC**	**SBI**
2013-14	-35	22.38
2014-15	7.4	17.51
2015-16	10.71	-79.72
2016-17	17.86	2.62
2017-18	-21.21	-54.45
2018-19	2.5	47.39
2019-20	7.69	26
Average	**-1.44**	**-2.61**
Rank	**2**	**1**

It measures the movement in net NPA in realtion to previous year.The lower the percentage change the better the quality of assets. The average percentage decrease in the Net NPAs of SBI ws about 2.61%, which is higher than that of HDFC Bank whose percentage decrease in Net NPAs is 1.44%. Thus it can be concluded that SBI stands at a better position than HDFC Bank in terms of Percentage Change in NPAs.

Management Efficiency Ratios

Table -9 Total Advances to Total Deposits

Year	**HDFC**	**SBI**
2013-14	82.5	86.76
2014-15	81.08	82.44
2015-16	85.02	84.6
2016-17	86.16	76.83
2017-18	83.46	71.49
2018-19	88.76	75.08
2019-20	86.6	71.73
Average	**84.8**	**78.42**
Rank	**1**	**2**

This ratio measures the efficiency of management in converting the deposits available with the bank into advances. Both HDFC bank and SBI are in the range of 78-85% but as HDFC Bank has a higher Total Advances to Total Deposits ratio of 84.8% as compared to SBI who has a Total Advances to Total Deposits ratio of

78.42%, it (HDFC Bank) is relatively more efficient in converting the deposits into high interest earning advances or loans.

Table -10 Profit per Employee (in Crores)

Year	HDFC	SBI
2013-14	0.12	0.05
2014-15	0.13	0.06
2015-16	0.14	0.05
2016-17	0.17	0.05
2017-18	0.2	-0.02
2018-19	0.22	0
2019-20	0.22	0.06
Average	**0.17**	**0.03**
Rank	**1**	**2**

This ratio measures the efficiency of the employee at the branch level. The average Profit per Employee ratio of HDFC Bank stands at appx. 17 lakhs which is significantly higher than that of SBI which stands at appx. 3 lakhs. Thus, it can be concluded that HDFC Bank is more efficient as compared to SBI. Considering the fact that SBI has more employees than HDFC bank, still the profit per employee of HDFC bank is far more than SBI.

Table -11 Business Per Employee (in Crores)

Year	HDFC	SBI
2013-14	9.83	10.64
2014-15	10.7	12.34
2015-16	11.55	14.11
2016-17	14.21	16.24
2017-18	16.4	16.7
2018-19	16.87	19.81
2019-20	17.49	22.32
Average	13.86	16.02
Rank	2	1

This ratio measures the efficiency of all employees of the bank in generating business for the bank. Business implies total advances and total deposits. SBI has a higher business per employee ratio which stands at about 16.02 Crores as compared to HDFC Bank whose Business per employee ratio stands at 13.86 crores. Thus, it can be concluded that employees of SBI are more efficient in generating business for the bank as compared to that of HDFC Bank.

Table -12 Return on Net Worth

Year	HDFC	SBI
2013-14	20.9	10.49
2014-15	20.36	11.17
2015-16	17.97	7.74
2016-17	18.04	7.25
2017-18	18.22	-3.78
2018-19	15.2	0.48
2019-20	16.4	7.74
Average	**18.16**	**5.87**
Rank	**1**	**2**

It measures the profitability of the company. The average Return on Net Worth of HDFC Bank stands at about 18.16% which is significantly higher than that of SBI which stands at about 5.87%. Thus, this indicates that HDFC Bank is more efficient in generating higher returns on the shareholders equity than SBI.

Earnings

Table -13 Operating Profit to Average Working Funds Ratio

Year	HDFC Bank	SBI
2013-14	3.39	1.78
2014-15	3.44	1.94
2015-16	9.4	1.92
2016-17	3.32	1.99
2017-18	3.6	1.72
2018-19	3.58	1.71
2019-20	3.73	1.49
Average	**4.35**	**1.79**
Rank	**1**	**2**

The operating profit to average working funds ratio of HDFC Bank is about 4.35% which is 83% higher than the operating profits to average working funds ratio of SBI, which stands at 1.79%. It can be concluded that HDFC Bank is in better position than SBI in terms of Operating Profits to Average Working Funds.

Table -14 Net Profit to Average Assets

Year	HDFC	SBI
2013-14	2	0.65
2014-15	2.02	0.68
2015-16	1.92	0.46
2016-17	1.88	0.41
2017-18	1.93	-0.19

2018-19	1.83	0.02
2019-20	1.89	0.38
Average	**1.92**	**0.34**
Rank	**1**	**2**

This ratio measures return on assets employed or the efficiency in utilisation of the assets. The average of net Profit to Average Asstes ratio of the last 7 years of HDFC Bank stands at 1.92% which is nearly 5 times that of SBI. Thus it can be said that HDFC Bank has higher ability to earn profits on its average assets as compared to SBI.

Table -15 Spread Ratio

Year	**HDFC**	**SBI**
2013-14	4.4	2.75
2014-15	3.79	2.67
2015-16	3.89	2.52
2016-17	3.84	2.29
2017-18	3.77	2.17
2018-19	3.88	2.4
2019-20	3.67	2.48
Average	3.89	2.47
Rank	1	2

It is an important measure of a bank's core income-namely the lending operations. It is the difference between the interest income and interest expended as percentage of total assets. The average Spread ratio of HDFC Bank stands at about 3.89% as compared to SBI whose average spread ratio stands at about 2.47%. It can be concluded that HDFC bank has an ability to generate higher gross profitability on the total assets as compared to SBI.

Table -16 Percentage Change In Net Profit

Year	**HDFC**	**SBI**
2013-14	26.05	-22.79
2014-15	20.49	20.3
2015-16	20.36	-24.05
2016-17	18.37	5.36
2017-18	20.2	-162.45
2018-19	20.54	113.17
2019-20	24.57	1580.74
Average	**21.51**	**215.75**
Rank	**2**	**1**

It shows the percentage change in net profit from last year. The average Percentage change in net profit of HDFC Bank Stands at 21.51%, while that of SBI stands at 215.75%. The profitability of SBI has seen a significant improvement in 2019-20 as compared to 2018-19 on account of the multiple factors including better asset quality, higher NIMs on account of better yields on advances and lower cost of funds and recoveries on some of the large written off accounts.

Table -17 Non-Interest Income to Total Income

Year	**HDFC**	**SBI**
2013-14	16.14	11.98
2014-15	15.66	12.9
2015-16	15.15	14.68
2016-17	15.07	16.81
2017-18	15.94	16.83
2018-19	15.12	13.15
2019-20	16.85	14.95
Average	**15.7**	**14.47**
Rank	**2**	**1**

This ratio measures the income from operations other than lending as percentage of total income. The Non-Interest income to total income ratio of HDFC bank which stands at about 15.7% is higher that of SBI which stands at about 14.47%, which indicates that SBI is at a better position in comparison with HDFC Bank in terms of non-Interest income to total income ratio.

Table -18 Interest Income to Total Income

Year	**HDFC**	**SBI**
2013-14	83.86	88.02
2014-15	84.34	87.1
2015-16	84.85	85.32
2016-17	84.93	83.19
2017-18	84.06	83.17
2018-19	84.88	86.85
2019-20	83.15	85.05
Average	**84.3**	**85.53**
Rank	**2**	**1**

This ratio measures the income from lending operations as percentage of total income. The Interest income to total income ratio of HDFC Bank stands at 84.30% which is lower as compared to SBI whose Interest income to total income ratio stands at about 85.53% which indicates that SBI is at a better position in comparison with HDFC Bank in terms of Interest income to total income ratio.

Liquidity Ratios

Table -19 Liquid Assets to Total Assets

Year	HDFC	SBI
2013-14	8.05	7.4
2014-15	6.15	8.54
2015-16	5.49	7.41
2016-17	5.67	6.35
2017-18	11.55	5.55
2018-19	6.54	6.04
2019-20	5.66	6.35
Average	**7.02**	**6.81**
Rank	**1**	**2**

The Liquid assets to total assets ratio of HDFC Bank stands at 7.02% which is higher when compared to SBI who's Liquid assets to total assets stands at 6.81% indicating that HDFC Bank has a better liquidity position when compared to SBI. This implies that HDFC Bank stands ahead of SBI in terms of Liquid assets to total assets Ratio.

Table -20 Government Securities to Total Assets

Year	HDFC	SBI
2013-14	19.25	17.39
2014-15	20.39	18.72
2015-16	17.73	16.4
2016-17	18.8	21.58
2017-18	17.74	25.21
2018-19	19.51	21.01
2019-20	21.16	20.76
Average	**19.23**	**20.15**
Rank	**2**	**1**

This ratio measures the proportion of risk-free liquid assets invested in government securities as a percentage of total assets. The average Government Securities to Total Assets ratio of HDFC Bank Stands at 19.23% which is lower when compared to SBI whose Government Securities to Total Assets ratio stands at 20.15%. This clearly points out that SBI is at a better position as compared to SBI in terms of Government Securities to Total Assets ratio.

Table -21 Liquid Assets to Demand Deposits

Year	HDFC	SBI
2013-14	64.38	117.06
2014-15	49.39	140.36
2015-16	44.01	119.78
2016-17	42.35	112.83
2017-18	103.04	100.91
2018-19	57.09	108.07
2019-20	49.71	110.45
Average	**58.57**	**115.64**
Rank	**2**	**1**

This ratio measures the ability of a bank to meet the demand from demand deposits in a particular year. The average Liquid Assets to Demand Deposits ratio of HDFC Bank stands at 58.57% which is lower when compared to SBI whose Liquid Assets to demand deposits ratio stands at 115.64%, which indicates that SBI is better placed as compared to HDFC Bank in terms of Liquid Assets to Demand Deposits ratio

Table -22 Approved Securities to Total Assets

Year	HDFC	SBI
2013-14	19.25	17.39
2014-15	20.39	18.72
2015-16	17.73	16.4
2016-17	18.8	21.58
2017-18	17.74	25.21
2018-19	19.51	21.01
2019-20	21.16	20.76
Average	**19.23**	**20.15**
Rank	**2**	**1**

Approved Securities are investments made in state associated bodies like electricity boards, housing boards, corporation bonds, shares of regional rural banks. The Approved Securities to Total Assets of HDFC Bank stands at 19.23% which is lower when compared to SBI whose Approved Securities to Total Assets ratio stands at 20.15%. Thus, it can be concluded that SBI is at a better position as compared to SBI in terms of Approved Securities to Total Assets ratio.

Table -23 Liquid Assets to Total Deposits

Year	HDFC	SBI
2013-14	11.85	9.5
2014-15	8.06	11.09
2015-16	7.12	9.68
2016-17	7.61	10.9

2017-18	15.58	7.09
2018-19	8.81	7.64
2019-20	7.55	7.75
Average	**9.51**	**9.09**
Rank	1	2

This ratio measures the liquidity available to the deposits of a bank. The Liquid Assets to Total Deposits ratio of HDFC Bank stands at 9.51% which is slightly higher as compared to SBI who's higher the Liquid Assets to Total Deposits ratio stands at 9.09%, representing that the depositors of HDFC Bank enjoy a higher liquidity when compared to SBI. HDFC Bank is better placed as compared to SBI in terms of higher the Liquid Assets to Total Deposits ratio.

2.5 HYPOTHESIS TESTING

In order to test whether there is any significant difference in the various ratios of State Bank of India and HDFC, ANOVA was applied. The following table displays the p-value at 5% level of significance.

Table 24- Findings of Hypothesis Testing

Sr. No.	Null Hypothesis	P Value	Remarks
1	There is no significant difference between in the capital adequacy ratio of SBI and HDFC bank	0.000814	Rejected
2	There is no significant difference between in the debt equity ratio of SBI and HDFC bank	3.2182E-05	Rejected
3	There is no significant difference between in the total advances to total assets ratio of SBI and HDFC bank	0.212346	Accepted
4	There is no significant difference between in the government securities investments of SBI and HDFC bank	0.823334	Accepted
5	There is no significant difference between in the net NPA's to total assets ratio of SBI and HDFC bank	0.00069	Rejected
6	There is no significant difference between in the net NPA's to total advances ratio of SBI and HDFC bank.	0.000664	Rejected
7	There is no significant difference between in the total investments to total assets ratio of SBI and HDFC bank	0.566715	Accepted
8	There is no significant difference between in the percentage change in NPA ratio of SBI and HDFC bank	0.952854	Accepted
9	There is no significant difference between in the total advances to deposits ratio of SBI and HDFC Bank.	0.076397	Accepted
10	There is no significant difference between in the profit per employee ratio of SBI and HDFC bank	0.001233	Rejected
11	There is no significant difference between in the business per employee ratio of SBI and HDFC bank	0.008843	Rejected
12	There is no significant difference between in the return on net worth ratio of SBI and HDFC bank	0.000456	Rejected
13	There is no significant difference between in the operating profit to average working funds ratio of SBI and HDFC bank	0.021374	Rejected
14	There is no significant difference between in the net profit to average assets ratio of SBI and HDFC bank.	6.14E-06	Rejected

15	There is no significant difference between in the percentage change in net profit ratio of SBI and HDFC bank	0.428998	Accepted
16	There is no significant difference between in the spread ratio of SBI and HDFC bank	1.67E-06	Rejected
17	There is no significant difference between in the non-interest income to total income ratio of SBI and HDFC bank	0.167019	Accepted
18	There is no significant difference between in the interest income to total income ratio of SBI and HDFC Bank.	0.437627	Accepted
19	There is no significant difference between in the government securities to total assets ratio of SBI and HDFC bank	0.502306	Accepted
20	There is no significant difference between in the liquid assets to total assets ratio of SBI and HDFC bank	0.850072	Accepted
21	There is no significant difference between in the liquid assets to total deposits ratio of SBI and HDFC bank	0.799438	Accepted
22	There is no significant difference between in the approved securities to total assets ratio of SBI and HDFC bank	0.595789	Accepted
23	There is no significant difference between in the liquid assets to demand deposits ratio of SBI and HDFC bank	0.023402	Rejected

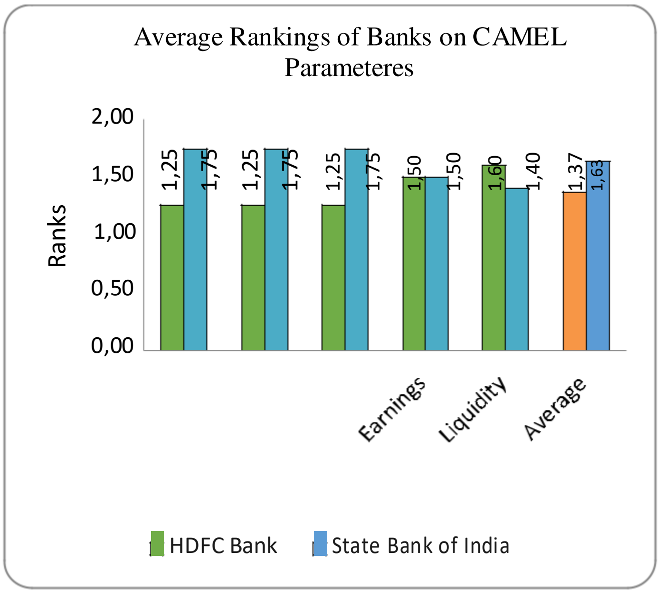
3.1. CONCLUSIONS

On the basis of the various ratios calculated for both the banks, overall ranks are given. The overall ranking is done for each parameter namely- Capital Adequacy, Asset Quality, Management, Earnings and Liquidity. The following table presents the ranking of both banks on the CAMEL parameters.

Table – 25 – Average Ranking of Banks

Parameters	HDFC	SBI
Capital Adequacy	1.25	1.75
Asset Quality	1.25	1.75
Management	1.25	1.75
Earnings	1.50	1.50
Liquidity	1.60	1.40
Average	**1.37**	**1.63**

Figure – 1 – Average Rankings of Banks



HDFC bank has performed better than the State Bank of India on three parameters of out of five parameters, namely Capital Adequacy, Asset Quality and Management. The in terms of Earnings parameter. The overall ranking of HDFC bank is 1.37 while that of State Bank of India is 1.63. Hence it can be concluded that HDFC has outperformed State Bank of India on 'CAMEL 'parameters.

3.2. LIMITATIONS

a. The present research is limited to only two banks and the data of only seven years is considered, which may or may not give correct trend of the results.

b. Financial analysis is mainly done to compare the growth, profitability and financial soundness of respective banks by recognizing the information available from the secondary sources. Hence the results of the study may be affected by the reliability and accuracy of data sources

c. The research consists of only the quantitative performance and not the qualitative performance of selected banks such as corporate governance, exposure to various high-risk projects, competitive advantage etc.

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