HDFC Bank (premerger scenario) v/s SBI: Assessing the Financial Performance of two leading Banks in India using the CAMEL approach

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Abstract

Voluminous literature has been dedicated to the finance-growth nexus. The banking industry in India is indeed on a high growth trajectory because of rising disposable incomes, increasing consumerism, easier access to credit and boost in investor confidence due to the recent structural reforms. It is the recent performance of the State Bank of India (SBI) bank and the reverse merger of Housing Development Finance corporation (HDFC) Ltd. with its subsidiary, i.e., HDFC Bank, which motivated us to carry out an analysis of the robustness of the leading two banks in India in the public and private sectors, viz. SBI and HDFC Bank (premerger scenario) using the CAMEL framework and that too for a longer period of time, i.e., ten years (2013-2022). The study shows that despite being the largest public sector bank of India, the State Bank of India continued to underperform in terms of various CAMEL ratios when compared to HDFC Bank. The key policy lesson for SBI is that it has to focus more on its performance/profitability by diversifying its borrowers and improving its asset quality by regulating its NPAs efficiently vis-à-vis that of HDFC Bank, as this has wider implications for the financial and economic stability of the country.

Keywords: Finance-growth nexus, The banking industry in India, public sector bank of India CAMEL framework

JEL Classification: G0, G2

I. Introduction

The banking and financial sector of a country is considered to be the backbone of an economy. Voluminous literature has been dedicated to the finance-growth nexus (Itaman,2022; Barajas et al. (2012) and Apergis et al.;2007) since the seminal work of Schumpeter (1911). It is widely agreed that financial sector development, which is often reflected in well-functioning banks and capital markets in a country, aids economic growth by facilitating a more efficient allocation of resources, promotion of innovation, better monitoring of profitable investments and diversification of risks (Benecivenga and Smith 1991; Greenwood and Jovanone,1990 and Levine, 1997).

A sound banking system makes the financial system of a country efficient, profitable and stable. Financial stability means "a persistent state of robust functioning of various financial system components – markets, institutions, market infrastructure – endowing the system to face any endogenous or exogenous financial shock with minimal disruptive impact" (RBI,2015). It is stability of the financial system that protects an economy from external shocks and assures that internal systems are well in place, sound and sensible at the same time. The robustness of the financial institutions, markets and infrastructures is a must for the financial stability of the financial system, and these operate in conjunction with each other. Financial stability is one of the prerequisites for the economic stability of a country. Undeniability, economic stability is imminent for putting the economy on a high growth trajectory (Joshi, 2017).

India, the fifth largest economy in the world, witnessed an increase in economic activity (real GDP grew 6.3 percent year-on-year (y-o-y) in Q2 FY22/23) despite challenging the external environment[1] (The Government of India, 2023). With 7% growth, the financial services sector[2] is currently one of the growth drivers of India's economy. The firm growth in bank credit[3] to the private sector, growth of neo banks, substantially higher fintech adoption rate[4] (of 87% v/s the world average of 64%), clocking of Rs 50000 crores annual profit by the top public sector bank, i.e., SBI in India[5] for the first time and the emergence of HDFC bank as the fourth most valuable bank[6] in the world in terms of market capitalization[7] in the wake of the collapse of 16th and 29 largest banks in the USA (Giang,2023) are signs of healthy growth of India's banking industry. The banking industry is indeed on a high growth trajectory because of rising disposable incomes, increasing consumerism, easier access to credit and boosted investor confidence due to recent

[1] following the Russia-Ukraine war with elevated crude oil and commodity prices, persistent global supply disruptions and tighter financing conditions (GOI,2023).
[2] https://www.ibef.org/industry/financial-services-india
[3] Due to the enhanced financial soundness of banks and corporates, has bolstered the expansion of nonfood bank credit since June 2021 says the economic Survey (GOI, 2022-2023,p.88)
[4] https://pib.gov.in/pressreleaseiframepage.aspx?prid=1894897
[5] https://economictimes.indiatimes.com/markets/stocks/earnings/sbis-annual-profit-tops-rs-50000-crore/articleshow/100341269.cms
[6] postmerger of the parent company HDFC Ltd. with its subsidiary, i.e., HDFC Bank
[7] https://www.ibtimes.com/indias-hdfc-bank-becomes-4th-largest-world-following-massive-merger-37

structural reforms such as the Insolvency and Bankruptcy Code[8] (IBRC) 2016 and the new avatar of RBI as a strict regulator that takes direct action (away from its old method of persuading financial institutions through moral suasion) to mitigate and manage different kinds of risks[9]. With these growth drivers of India's banking sector in place and financial stability boosters present in India's banking sector amidst global uncertainty, India is likely to have the third largest domestic banking assets in the world next only to China and the USA by 2050 as the estimate of PWC (PWC, undated). It is important to mention that India has a vast network of financial institutions with 12 public sector banks, 21 private sector banks, 46 foreign banks, 43 regional rural banks (RRBs), 1534 urban cooperative banks and 96,508 rural cooperative banks (IBEF). State Bank of India is the top bank in the country at present in terms of its assets, followed by HDFC Bank. However, in terms of market capitalization, HDFC Bank is ahead of SBI and is the top bank in India (The Mint,2023).

It is the performance of SBI bank and the recent reverse merger of HDFC Ltd. with its subsidiary, which motivated us to carry out an analysis of the robustness of SBI v/s HDFC Bank (premerger scenario) using the CAMEL framework and that too for a longer period of time, i.e., ten years (2013-2022).

The reason for choosing the CAMEL framework is that it is now well recognized that "financial soundness is important for financial stability, and monitoring the soundness of financial institutions will help detect any possible buildup of systemic risk that could lead to a crisis. For this purpose, financial soundness indicators (FSIs) were developed with the specific guidelines provided in the International Monetary Fund's (IMF's) Financial Soundness Indicators (FSI) Compilation Guide and its 2009 amendment" (ADB, 2015). The two components of FSI are core indicators and

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[8] The code has facilitated the exit of distressed firms and led to allocation of scarce economic resources towards more productive use. Out of 5,893 Corporate Insolvency Resolution Processes (CIRPs) which had commenced by end-September 2022 (. Since its inception in December 2016), 67 percent have been closed (see, GOI, 2022-23,p.91)

[9] The RBI has been taking stringent steps like cancellation of licences by NBFCs and co-operative banks and imposing penalties etc. (see : https://www.moneycontrol.com/news/business/rbi-cancels-4-nbfcs-registration-11-surrender-permit-1095149 and Crisis-ridden cooperative banks continue to face RBI's ire, 8 lose license in FY23 (moneycontrol.com)).are sending a strong message that the watchdog of money market wants to mitigate risk in the banking system and thereby helping build the confidence of investors in the financial system of the country and at the same time trying to promote financial stability.

encouraged indicators. The former indicators, i.e., core indicators, are based on the CAMELS[10] framework.

II. **Objective:**

The objective of the research is to evaluate the performance and efficiency of India's largest public sector bank, the State Bank of India (SBI), and India's largest private sector bank, the HDFC Bank, through the lens of the CAMEL model:

1. Capital adequacy
2. Asset Quality
3. Management Quality
4. Earning Quality
5. Liquidity Quality

It is important to mention that the CAMEL mode[11]was proposed in 1988 by the Basel Committee on Banking Supervision of the bank of International Settlements. This model is frequently used by analysts and regulatory bodies to measure the risk and performance of financial institutions or, in other words, to assess the robustness of the bank/s under scrutiny.

III. Research Methodology:

The present study makes use of financial statements and secondary data for the last ten years, i.e., 2013 to 2022. We have excluded the factor S, i.e., sensitivity to market risk, from this analysis due to the nonavailability of accurate data. We have considered average ratios for the past ten years for the research. We allocated ranks to both banks based on their performance. Ranking is based on highest to lowest, with Rank 1 denoting the best performing bank when compared to other banks and Rank 2 denoting the second-best performing bank. The average for Group Rank is calculated using the average rank scores for each of the parameter ratios. The overall group rank is calculated based on the average score for the group rank. Rank 1 has been the best performing bank for the overall parameter.

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[10] CAMELS an acronym for six key performance parameters or the parameters used to assess the current and future potential risks the bank may face - (C)apital adequacy; (A)ssets; (M)anagement Capability; (E)arnings; (L)iquidity (also called asset liability management); (S)ensitivity (sensitivity to market risk, especially interest rate risk).

[11] https://analystprep.com/study-notes/cfa-level-2/the-camels-approach/

IV. Data Analysis:

The following ratios are calculated for SBI and HDFC Bank for the purpose of this research:

Ratios	Formula	Interpretation
Capital Adequacy		
Capital Adequacy Ratio	Tier 1 capital ratio (%) + Tier 2 capital ratio (%)	• Capital Adequacy Ratio, also known as CAR measures the efficiency of a bank's capital with respect to its risk weighted assets and current liabilities[12] • Central banks and bank regulators determine the level of the ratio in order to avert excessive leverage position of commercial banks and minimize possibility of insolovency[12]
Debt Equity Ratio	Debt/Equity	• The debt-to-equity (D/E) ratio measure the leverage capacity and determines the source of financing (debt or equity)[13] • Banks in general possess higher debt-to-equity ratio as banks needs to borrow capital in order to further lend them to their customers[13]
Provisioning Coverage Ratio	Total provisions/Gross NPA	• Provisioning Coverage Ratio (PCR) indicates the proportion of funds set aside by the bank as a provision to cover for losses that can be caused due to bad debts[14] • A higher PCR is recommended for banks to provide safety cushion against the losses in case nonperforming assets (NPAs) surges at an accelerated rate[14]
Advances to Total Assets	Advances/Total Assets	• Advances-to-Total assets measures bank's efficiency in lending[15] • Higher ratio is usually considered better as more advances would potentially lead to increased profitability for the bank
Govt Securities to Total Investments	Govt Securities/Total Investments	• This ratio measures the bank's investment in government securities as a percentage of total investments[15] • It measures the banks' risk-taking ability as Government Securities are considered risk free assets, however generates lower returns[15]
Asset Quality		

Net NPA to Advances (%)	(Net NPA/Advances) *100	• Net NPA determines the bank’s actual financial loss against nonperforming assets/loans after considering the provisions[16] • A lower Net NPA ratio specifies that appropriate provisions were created by bank against the nonperforming assets/loans, thus minimizing the bank’s actual loss[16] • On the other hand, a higher Net NPA ratio determines under provisioning which increases bank’s exposure to losses. This could further create negative impact on profitability and financial solvency of the bank[16]
Net NPA to Total Assets (%)	(Net NPA/Total Assets) *100	
Total Investments to Total Assets	Total Investments/Total Assets	• Total Investments-to-Total Assets ratio indicates total investments made in proportion to total assets
Management Quality		
Net Interest Margin (%)	(Investment Income - Interest Expenses)/Earning Assets	• Net interest margin (NIM) indicates the income generated through interest received from loans after deducting the interest to be paid on deposits[17] • Higher net interest margin indicates increased profitability
Credit Deposit (CD) Ratio	Total Advances/Total Deposits	• Credit-Deposit ratio indicates the total advances/loans that are lend out from the deposits[18] • High CD ratio indicates strong credit demand whereas low CD ratio indicates slow credit growth compared to growth in deposits[18]
Return on Net Worth (%)	Net Income/Shareholders Equity	• Return on Net Worth (RoNW) determines the profit generated using shareholder's funds • Higher returns indicate efficient use of shareholders fund to generate income
Earnings Quality		
Return on Assets	Net Income/Total Assets	• The Return on Assets ratio denotes profit generated using bank’s assets • For banks, ROA of 1 – 2% can indicate significant revenues and profit as most of the banks are highly leveraged owing to their business nature to borrow funds and further lend them to customers[19]
Cost to Income Ratio	Operating Expenses/Operating Income	• Cost-to-Income ratio denotes operational efficiency of a bank

		• Lower ratio suggests low operating expenses compared to operating income, thus more profit[20]
Operating Profit to Total Assets	Operating Profit/Total Assets	• Operating profit-to-Total Assets measures the operating profit generated from total assets • Higher ratio is considered better as it indicates efficient use of assets to generate operating profits
NIM to Total Assets (%)	Net Interest Income/Total Asset	• NIM-to-Total Assets measures that net interest income generated from total assets • Higher ratio is considered better as it indicates efficient use of assets to generate net interest income
Liquidity Quality		
Liquid Assets to Total Assets (%)	Liquid Assets/Total Assets	• Liquid Assets-to-Total Assets ratio assesses the short-term liquidity of banks compared to total assets • Higher ratio is considered better as it indicates that the bank's efficiency in managing its short-term solvency
Liquid Assets to Total Deposits (%)	Liquid Assets/Total Deposits	• Liquid Assets-to-Total Deposits ratio assesses the short-term liquidity of banks compared to total deposits • Higher ratio is considered better as it indicates that the bank's capability to serve the deposits request

Note: Based on the definitions taken from various websites given below:

[12] https://economictimes.indiatimes.com/definition/capital-adequacy-ratio
[13] https://www.investopedia.com/ask/answers/052515/what-debt-equity-ratio-common-bank.asp#:~:text=Overall%2C%20however%2C%20a%20D%2F,2%20is%20considered%20less%20favorable.
[14] https://groww.in/blog/how-to-check-financial-health-of-bank
[15] https://journals.indexcopernicus.com/api/file/viewByFileId/154077.pdf
[16] https://blog.stockedge.com/difference-between-gross-npa-and-net-npa/
[17] https://www.investopedia.com/ask/answers/061715/what-net-interest-margin-typical-bank.asp#:~:text=Net%20interest%20margin%20(NIM)%20reveals,a%20bank's%20profitability%20and%20growth
[18] https://www.moneycontrol.com/news/mcminis/business/what-is-credit-deposit-ratio-for-banks-7131711.html
[19] https://www.investopedia.com/articles/active-trading/082615/key-financial-ratios-analyse-retail-banks.asp#:~:text=The%20Return%2Don%2DAssets%20Ratio,
The%20return%2Don&text=The%20ROA%20ratio%20is%20a,and%20profit%20for%20a%20bank.
[20] https://www.sptulsian.com/f/p/how-to-calculate-cost-to-income-ratio-of-a-bank

V. Key Findings of the Study

The key findings of the study have been summarized as follows:

1. **Capital Adequacy**: This parameter captures the capital position of the financial institution. Adequate capital ensures protection to stakeholders by minimizing the risk of high leverage and bankruptcy. It depicts the overall stability and long-term efficiency of banks.
   In terms of capital adequacy, HDFC Bank has performed better than the State Bank of India (Table 1).
   Retail loans comprising 39% of the total loan portfolio have been a major success factor for HDFC Bank. During the initial years of the bank, corporate loans were a major focus area for almost all the banks, and retail loans were introduced lately in the 2000s. HDFC Bank, however, chose a different path and decided to focus on retail loan segments in place of corporate and infrastructure loans. This strategy helped the bank build a strong loan portfolio by capturing emerging salaried customers and providing them diversified loan segments, including personal loans, auto loans and credit cards. The strategic move to focus on the retail segment paid off well in the coming years, as the infrastructure loan portfolio suffered a large number of bad loans/defaults, while HDFC Bank's portfolio stayed intact. (Fortune India, 2022).
   HDFC Bank opened 8.7 million new deposit accounts in FY 2022, and it continues to focus on working capital loans along with the loan syndication process undertaken through the investment banking segment (Fortune India, 2022).

Table 1: Capital Adequacy: SBI v/s HDFC Bank

Banks	**Capital Adequacy Ratio**		**Debt Equity Ratio**		**Coverage Ratio**		**Advances to Assets**		**Govt Securities to Total Investments**		**Group Rank**	
	Avg.	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**
SBI	13.01%	2	1.61	2	0.35	2	0.60	2	78.77%	1	1.8	2
HDFC Bank	16.79%	1	0.83	1	1.87	1	0.64	1	78.30%	2	1.2	1

Source: Authors' calculations based on Income Statement and Balance Sheet of SBI and HDFC Bank accessed through MoneyControl.

2 Asset Quality: This parameter assesses the quality of a bank's assets, specifically nonperforming assets. HDFC Bank performed better in terms of overall asset quality when compared to the State Bank of India over the 10 years (Table 2).

HDFC Bank continued to maintain great asset quality, as reflected in net nonperforming assets or NPAs, which is among the lowest when compared to peers. Its strong credit appraisal process includes scaling down portfolios that show signs of negligence or delayed payments, taking early exit from small-size personal loans and keeping distance from infrastructure loans (Anand Adhikari, undated).

The bank has a highly effective mechanism to maintain asset quality, which includes a reporting process for staff to aggregate and report risk-related information directly at the CEO level (Anand Adhikari, undated).

Table 2: Asset Quality: SBI vs. HDFC Bank

Banks	Net NPA to Advances (%)		Net NPA to Total Assets (%)		Total Investments to Total Assets		Group Rank	
	Avg.	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**
SBI	5.49%	2	3.29%	2	26.06%	1	1.67	2
HDFC Bank	0.32%	1	0.20%	1	24.78%	2	1.33	1

Source: Authors' calculations based on Income Statement and Balance Sheet of SBI and HDFC Bank accessed through MoneyControl.

3. **Management Quality**: This measures the capability of a financial institution's management team to identify and respond to financial headwinds. This factor also takes into account the quality of a bank's business strategy, financial performance, and internal controls.
   HDFC Bank ranked the highest in the management quality aspect (see Table 3). Bank's judicious credit evaluation of selected customers and distinct loan portfolio across products, sectors and customer segments has helped to build better net interest margins compared to peers (HDFC Bank, Annual Report).

Table 3: Management Quality: SBI vs. HDFC Bank

Banks	Net Interest Margin		Credit Deposit Ratio		Return on Net Worth (%)		Group Rank	
	Avg.	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**
SBI	3.05%	2	76.99%	2	6.8%	2	2	2
HDFC Bank	4.54%	1	84.71%	1	16.4%	1	1	1

Source: Authors' calculations based on Income Statement and Balance Sheet of SBI and HDFC Bank accessed through MoneyControl.

4. **Earnings Quality:** This parameter helps to evaluate an institution's ability to generate sustainable earnings and maintain business continuity.
   HDFC Bank continued to perform better than SBI on the earnings quality aspect (Table 4). The bank's strategy to concentrate on the MSME segment worked very well and was a significant factor for growth along with commercial and rural banking segments evolving as a new driver of growth. The bank with time diversified its portfolio and even tapped the Corporate Banking opportunity without jeopardizing the ROA (HDFC Bank CEO Sashidharan Jagdish, The Economic Times, 2022).

Table 4: Earnings Quality SBI v/s HDFC Bank

Banks	Return on Assets		Cost to Income Ratio		Operating Profit to Total Assets		NIM to Total Assets (%)		Group Rank	
	Avg.	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**
SBI	0.42%	1	47.19%	2	2.09%	2	2.86%	2	1.75	2
HDFC Bank	1.72%	2	37.97%	1	3.61%	1	4.33%	1	1.25	1

Source: Authors' calculations based on Income Statement and Balance Sheet of SBI and HDFC Bank accessed through MoneyControl.

5. **Liquidity Quality**: This parameter examines the liquidity risk of a financial institution. Liquidity risk is defined as the risk of not being able to meet present or future cash flow needs without affecting day-to-day operations. For banks, liquidity is extremely important, as the lack of liquid capital can lead to a bank run, similar to one recently faced by Silicon Valley Bank.
   HDFC Bank stands stronger than its peers in terms of liquidity (Table 5). Even in the current situation of the ongoing merger of HDFC into HDFC Bank, both institutions are well capitalized and have maintained surplus liquidity to overcome any headwind (HDFC Bank CEO Sashidharan Jagdish, The Economic Times, 2022). There is a vigorous procedure to track and monitor mismatches in cash flow under different conditions, including stressed conditions. The bank also has a robust liquidity risk management framework to track and monitor intraday liquidity/cash positions during the day (HDFC Bank, Annual Report).

Table 5: Liquidity Quality SBI v/s HDFC Bank

Banks	**Liquid Assets to Total Assets (%)**		**Liquid Assets to Total Deposits (%)**		**Group Rank**	
	Avg.	**Rank**	**Avg.**	**Rank**	**Avg.**	**Rank**
SBI	6.95%	2	8.85%	2	2	2
HDFC Bank	7.01%	1	9.34%	1	1	1

Source: Authors' calculations based on Income Statement and Balance Sheet of SBI and HDFC Bank accessed through MoneyControl.

VI. Conclusion and policy concerns

From the foregoing, it is clear that despite being the largest public sector bank of India, the State Bank of India continued to underperform in terms of various CAMEL ratios when compared to HDFC Bank during the ten-year period under consideration for study. This research report concurs with the same message. HDFC Bank has relentlessly, over the years, tried to contain the formation of bad loans and has consistently maintained net nonperforming asset (NNPA)% between 0.36-0.40%, which is best in terms of asset quality in the entire banking industry. The same goes with their margins. The net interest margins (NIMs) have been between 3.90-4.30% over the years, and there has been consistency of double-digit growth in deposits as well as on advances. On comparing this to a behemoth such as the State Bank of India, we see that even though it has a balance sheet almost four times bigger and ten times more customers than HDFC Bank (prior to merger), this bank's performance is not consistent.

As a public sector bank, SBI has had more challenges in tackling NPA relative to HDFC Bank. There has been a continuous risk of a decrease in asset quality in this unpredictable business environment mainly because of large exposure to different sectors (Business Today, 2020). The high collateral/low productivity projects seem to have benefitted in a disproportionate fashion to high collateral/low productivity projects (such as infrastructure, metal, construction, etc.) and it seems to be one of the major reasons for the mess in Indian banks, including that of SBI. The key policy lesson for SBI is that it has to focus more on its performance/profitability by diversifying its borrowers and improving its asset quality by regulating its NPAs efficiently vis-à-vis that of HDFC Bank. It becomes even more important for HDFC Bank too post-merger when its balance sheet has increased and the bank is planning to expand its exposure to larger infrastructure projects[12].

As a public sector bank, SBI was tasked with sharing the burden of various government policies, including Jan Dhan Yojana, concessional loans to priority sectors and several loan waivers. These factors have all led to higher nonperforming assets (NPAs), impacting banks' profitability and financial soundness. It was reported in 2022 that employees suffered from severe stress due to management's arbitrary decisions. Additionally, the discontent/dissatisfaction among employees due to disturbances in work-life balance was brought to attention (The Hindu, 2022). However, things are trying to take turn. On 19 May 2023, India's largest public sector bank reported a net profit of Rs.50,000 crore in FY2023. SBI became the first bank to report such a massive profit (The Economic Times, 2023). This tremendous income was primarily driven by robust loan growth and greater interest margins along with the decline in provisions, although operating expenses have also been increased over the year (MoneyControl, 2023). Analysts remained optimistic, as earnings and growth remained reasonably strong, led by large corporations, retail and agriculture (The Economic Times, 2023). This brings us to the main policy lesson that lending with prudence following risk management practices can bring in profits and make banking operations more efficient for all banks, including the one considered for this study.

[12] See https://www.newindianexpress.com/business/2023/jul/20/hdfc-bank-to-raise-exposure-in-infra-projects-post-merger-2596675

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Appendix

CAMEL ratio calculation for SBI (2013 – 2022)

Ratio	Mar-22	Mar-21	Mar-20	Mar-19	Mar-18	Mar-17	Mar-16	Mar-15	Mar-14	Mar-13	Average
Capital Adequacy											
Capital Adequacy Ratio	13.83%	13.74%	13.06%	12.72%	12.60%	13.11%	13.12%	12.00%	13.00%	12.92%	**13.01%**
Debt Equity Ratio	1.52	1.64	1.36	1.82	1.65	1.69	1.55	1.60	1.55	1.71	**1.61**
Provisioning Coverage Ratio	32.31%	40.47%	35.98%	31.59%	29.57%	35.93%	33.93%	45.50%	34.44%	33.16%	**35.29%**
Advances to Assets	0.55	0.54	0.59	0.59	0.56	0.58	0.65	0.63	0.68	0.67	**0.60**
Govt Securities to Total Investments	0.80	0.79	0.78	0.80	0.81	0.76	0.78	0.80	0.78	0.78	**0.79**
Asset Quality											
Net NPA to Net Advance	1.02%	1.50%	2.23%	30.15%	5.73%	3.71%	3.81%	2.12%	2.57%	2.10%	**5.49%**
Net NPA to Total Assets	0.56%	0.81%	1.31%	17.90%	3.21%	2.15%	2.47%	1.35%	1.74%	1.40%	**3.29%**
Total Investments to Total Assets	29.70%	29.81%	26.50%	26.27%	30.71%	28.31%	21.12%	23.52%	22.22%	22.40%	**26.06%**
Management Quality											
Net Interest Margin	2.91%	2.96%	3.03%	3.04%	2.66%	2.79%	3.07%	3.27%	3.36%	3.45%	**3.05%**
Credit Deposit Ratio	67.48%	66.54%	71.73%	75.08%	71.49%	76.83%	84.57%	82.45%	86.76%	86.94%	**76.99%**
Return on Net Worth	11.31%	8.04%	6.24%	-0.32%	-2.99%	5.57%	6.90%	10.20%	9.21%	14.26%	**6.84%**
Earnings Quality											
Return on Assets	0.64%	0.45%	0.37%	-0.02%	-0.19%	0.39%	0.44%	0.64%	0.61%	0.90%	**0.42%**
Cost to Income Ratio	0.53	0.50	0.48	0.51	0.46	0.44	0.45	0.45	0.46	0.43	**0.47**
Operating Profit to Total Assets	1.63%	1.84%	2.02%	1.85%	2.01%	2.18%	2.27%	2.30%	2.30%	2.49%	**2.09%**
NIM to Total Assets	2.69%	2.71%	2.78%	2.79%	2.45%	2.58%	2.87%	3.09%	3.26%	3.33%	**2.86%**
Liquidity Quality											
Liquid Assets to Total Assets	7.91%	7.57%	6.35%	6.04%	5.55%	6.36%	7.41%	7.56%	7.40%	7.33%	**6.95%**
Liquid Assets to Total Deposits	9.74%	9.32%	7.75%	7.64%	7.09%	8.41%	9.68%	9.81%	9.51%	9.55%	**8.85%**

Source: Income Statements and Balance Sheet of SBI, MoneyControl, last accessed on 13th May 2023 16:46

CAMEL ratio calculation for HDFC Bank (2013 – 2022)

Ratio	Mar-22	Mar-21	Mar-20	Mar-19	Mar-18	Mar-17	Mar-16	Mar-15	Mar-14	Mar-13	Average
Capital Adequacy											
Capital Adequacy Ratio	18.90%	18.79%	18.52%	17.11%	14.82%	14.55%	15.53%	16.79%	16.07%	16.80%	**16.79%**
Debt Equity Ratio	0.77	0.67	0.85	0.78	1.16	0.83	0.73	0.73	0.91	0.91	**0.83**
Provisioning Coverage Ratio	168%	174%	178%	166%	176%	190%	206%	209%	197%	201%	**1.87**
Advances to Assets	0.66	0.65	0.65	0.66	0.62	0.64	0.66	0.62	0.62	0.60	**0.64**
Govt Securities to Total Investments	0.81	0.79	0.83	0.84	0.78	0.76	0.77	0.72	0.78	0.76	**0.78**
Asset Quality											
Net NPA to Net Advance	0.32%	0.40%	0.36%	0.39%	0.40%	0.33%	0.28%	0.25%	0.27%	0.20%	**0.32%**
Net NPA to Total Assets	0.21%	0.26%	0.23%	0.26%	0.24%	0.21%	0.19%	0.15%	0.17%	0.12%	**0.20%**
Total Investments to Total Assets	22.02%	25.40%	25.60%	23.35%	22.76%	24.83%	23.12%	28.19%	24.60%	27.88%	**24.78%**
Management Quality											
Net Interest Margin	3.99%	4.17%	4.35%	4.86%	4.64%	4.64%	4.65%	4.39%	4.76%	4.95%	**4.54%**
Credit Deposit Ratio	87.79%	84.85%	86.60%	88.76%	83.46%	86.16%	85.02%	81.08%	82.49%	80.92%	**84.71%**
Return on Net Worth	15.39%	15.27%	15.36%	14.13%	16.45%	16.26%	16.92%	16.47%	19.50%	18.57%	**16.43%**
Earnings Quality											
Return on Assets	1.79%	1.78%	1.72%	1.69%	1.64%	1.68%	1.73%	1.73%	1.72%	1.68%	**1.72%**
Cost to Income Ratio	34.6%	34.1%	35.2%	34.6%	36.2%	39.2%	40.6%	41.2%	40.1%	43.9%	**38.0%**
Operating Profit to Total Assets	3.43%	3.62%	3.70%	3.97%	3.76%	3.54%	3.50%	3.38%	3.65%	3.59%	**3.61%**
NIM to Total Assets	3.81%	4.05%	4.18%	4.65%	4.46%	4.40%	4.38%	4.23%	4.49%	4.68%	**4.33%**
Liquidity Quality											
Liquid Assets to Total Assets	7.36%	6.84%	5.66%	6.54%	11.55%	5.67%	5.49%	6.15%	8.05%	6.81%	**7.01%**
Liquid Assets to Total Deposits	9.77%	8.95%	7.55%	8.81%	15.58%	7.61%	7.12%	8.06%	10.78%	9.21%	**9.34%**

Source: Income Statements and Balance Sheet of HDFC Bank, MoneyControl, last accessed on 13th May 2023 16:46