COMPARATIVE FINANCIAL ANALYSIS OF DOMESTIC-SYSTEMICALLY IMPORTANT BANK: EVIDENCE FROM INDIA

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ABSTRACT

The banking system of India plays a significant role in the growth and development of the Indian economy. There are some banks in India that are described as Domestic- Systemically Important Banks (DSIBs) by the Reserve Bank of India. As of now, there are three banks namely State Bank of India, HDFC Bank, and ICICI Bank which are designated as DSIBs. The objective of this study is to perform a comparative analysis of all these banks with the help of Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM). The time period of the study is 2014 to 2023. The findings of the study showed that HDFC Bank is performing better than the ICICI Bank and SBI Bank.

Keywords: DSIBs, ROA, ROE, NIM.

INTRODUCTION

A Systemically Important Bank (SIB) is a financial institution whose failure or distress has the potential to create significant disruptions in the broader financial system and economy. These banks are deemed "too big to fail" due to their size, interconnectedness, complexity, and importance to the overall financial stability. When a systemically important bank is in trouble, its potential failure can have a cascading effect on other financial institutions, markets, and even the broader economy.

Regulators and central banks often designate certain banks as systemically important to subject them to enhanced regulatory oversight and higher capital requirements. This is done to ensure that these banks are better equipped to withstand financial shocks and to prevent their failure from causing widespread financial turmoil.

The specific criteria used to determine a bank's systemic importance can vary between countries and regulatory authorities. These criteria usually include factors such as the bank's size, global interconnectedness, substitutability (the ease with which the bank's functions can be replaced), complexity, and cross-jurisdictional activity.

It's important to note that the list of systemically important banks can change over time based on the evolving financial landscape and regulatory assessments.

Systemically Important Banks are typically categorized into two main types: Global Systemically Important Banks (G-SIBs) and Domestic Systemically Important Banks (D-SIBs). These categories are used to identify and regulate banks that are considered too big to fail due to their significance to the global or domestic financial system.

1. **Global Systemically Important Banks (G-SIBs)**: G-SIBs are banks that have been designated by international regulatory authorities, such as the Financial Stability Board (FSB) and the Basel Committee on Banking Supervision (BCBS), as globally important and have the potential to impact the stability of the global financial system if they were to fail. These banks are subject to stricter regulatory requirements and higher capital buffers to mitigate their systemic risk.
2. **Domestic Systemically Important Banks (D-SIBs)**: D-SIBs are considered systemically important within a specific country's financial system. These banks are designated by national regulatory authorities, such as central banks or financial regulatory agencies. D-SIBs are crucial to their domestic economies and financial systems, and their failure could have significant repercussions for the overall stability of the country's financial system.

The criteria for categorizing banks as G-SIBs or D-SIBs may vary, but they generally include factors such as size, interconnectedness, complexity, substitutability, and cross-border activities. Banks that meet these criteria are subject to additional regulatory oversight, capital requirements, and other measures to ensure their stability and mitigate potential systemic risks.

It's important to note that the specific list of G-SIBs and D-SIBs can change over time as regulatory authorities reassess the systemic importance of banks based on changing financial conditions and risk assessments.

In India, the Reserve Bank of India (RBI) identifies and designates certain banks as D-SIBs based on their Systemic Importance Scores. These designations are reviewed periodically.

As of Jan 2023, the list of D-SIBs included the following banks:

Bucket	**Banks**	**Additional Common Equity Tier 1 requirement as a percentage of Risk Weighted Assets (RWAs)**
5	-	1%
4	-	0.80%
3	State Bank of India	0.60%
2	-	0.40%
1	ICICI Bank, HDFC Bank	0.20%

LITERATURE REVIEW

Brogi *et al.* (2021) compare the bucketing system used for categorizing a bank into systemically important banks. In this study 26 global- systemically important banks are studied. The study found that there are many differences along with the complementarities among all GSIBs. It is found that there is a difference in the additional capital requirement of all GSIBs due to differences in their bucketing and ranking approaches.

Goel *et al.*(2019) analyze the systematic risk of global-systemically important banks after the financial crisis. The results indicate that GSIBs are required to hold additional capital buffer which helps them improve their resilience. The stable source of funding also helps GSIBs in improving their resilience. The lower profitability of GSIBs createsproblems in more improvement in the resilience of banks.

Glasserman and Loudis (2015) compared the U.S. and international global systemically important banks. The findings revealed that U.S. banks are ranked high on measures of systemic importance as compared to other international GSIBs. U. S. banks dominate in two categories of systemic importance substitutability and complexity. The study also found that some of the banks havethe highest systemic score but do not have the highest capital ratios.

Violon *et al.* (2020)investigated the impact of international regulation for global systemically important banks on their business model. In this study, 97 banks were analyzed by taking 12 years of data. The study found that GSIBs improved their leverage ratio with the help of the contraction of their balance sheet. The Return on Equity (ROE) of GSIBs showing decline trend but there is no adverse impact on lending. The GSIBs also benefited from lower cost of deposits.

Passmore and Hafften (2019)analyze theBasel surcharge for Global Systemic Important Banks. It was found that the capital surcharge imposed by Basel underestimated the chances of bank failure mainly those banks that are providing short-term funding which excluded many banks from its framework. The authors suggest that the capital surcharge should increase from 3% to 8.25% and a higher surcharge should apply to banks relying on short-term funding.

OBJECTIVES

The main objective of this study is to **perform a comparative analysis of the financial performance of the Domestic-Systemically Important Bank of India**. The main objective encompasses the following sub-objective:

- To analyze the Return on Assets of all Indian DSIBs.
- To examine the Return on Equity of all Indian DSIBs.
- To analyze the Net Interest Margin of all Indian DSIBs.

METHODOLOGY

This study used a descriptive and quantitative research approach. The data used in this study is secondary which has been taken from the annual report of all selected banks. The financial performance of DSIBs has been evaluated from 2014 to 2023. The statistical methods used in this study are mean, standard deviation, and ANOVA with the help of MS Excel and SPSS software. The variables used in this study are:

Return on Assets (ROA)

This ratio defines a bank's ability to generate profit from its total assets.It is calculated as:

ROA= Net Profit/Total Assets

Return on Equity (ROE)

This ratio indicates how efficiently a bank uses its investment for profit earning. It is calculated as:

ROE= Net Profit/Total Equity

Net Interest Margin (NIM)

It defines the income generated by a bank from its lending operations. Its calculation is as follows:

NIM= Interest Earned-Interest Paid/Total Earning Assets

The following hypotheses have been used to compare the financial performance of DSIBs.

H1: There is no significant difference in Return on Assets of all Domestic-Systemically Important Banks.

H2: There is no significant difference in Return on Assets of all Domestic-Systemically Important Banks.

H3: There is no significant difference in the Net Interest Margin of all Domestic-Systemically Important Banks.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

Table 1 demonstrates the ROA of all DSIBs for the period of the last ten years with the mean, standard deviation, and maximum and minimum value of ROA. Figure 1 graphically represents the ROA of all DSIBs under the period of study.

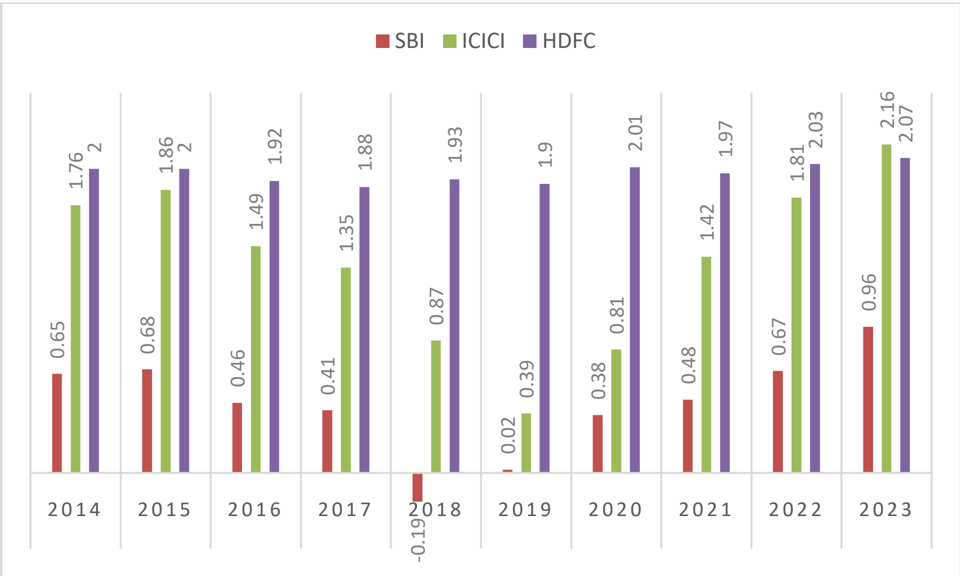
Table 1: Return on Assets of DSIBs (2014-2023)

ROA			
YEAR	**SBI**	**ICICI**	**HDFC**
2014	0.65	1.76	2
2015	0.68	1.86	2
2016	0.46	1.49	1.92
2017	0.41	1.35	1.88
2018	-0.19	0.87	1.93
2019	0.02	0.39	1.9
2020	0.38	0.81	2.01
2021	0.48	1.42	1.97
2022	0.67	1.81	2.03

2023	0.96	2.16	2.07
Mean	0.45	1.39	1.97
S. D.	0.33	0.55	0.06
Max.	0.96	2.16	2.07
Min.	-0.19	0.39	1.88

Source: Annual Report of Banks and Author's Calculation

Figure 1: ROA of DSIBs (2014-2023)



Source: Author's Compilation

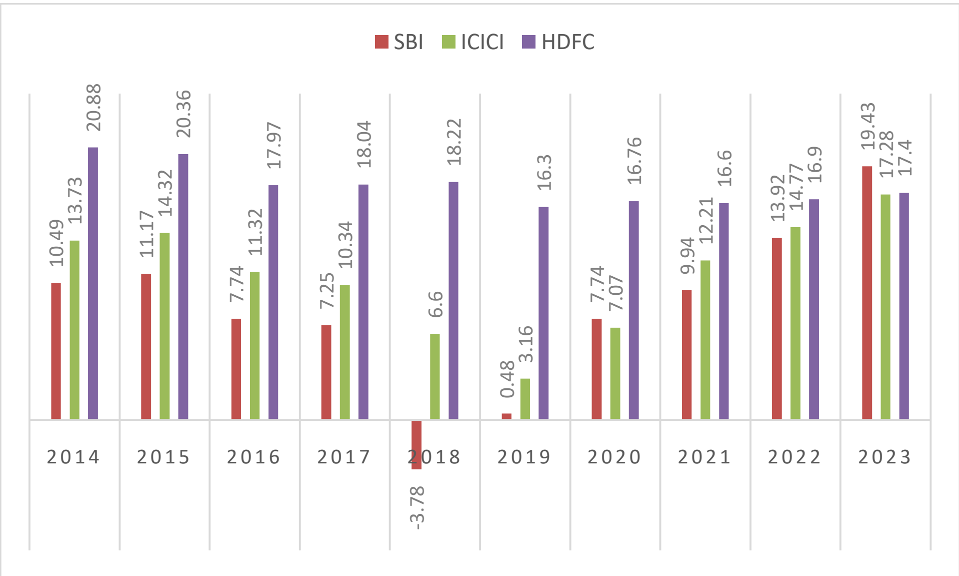
It is evident from the above table and graph that HDFC Bank recorded the highestROA with a mean value of 1.97% which is followed by ICICI Bank (1.39%) and SBI (0.45%). It denotes that HDFC Bank is more profitable and earns higher profit by using its total assets as compared to ICICI and SBI. It is also examined that HDFC Bank has a lower risk on ROA as its S.D. is 0.06 as compared to ICICI Bank (0.55) and SBI (0.33). The highest ROA (2.16%) during the ten years was recorded by ICICI Bank in 2023 while the lowest ROA (-0.19%) was recorded by SBI in 2018.

Table 2: Return on Equity of DSIBs (2014-2023)

ROE			
YEAR	**SBI**	**ICICI**	**HDFC**
2014	10.49	13.73	20.88
2015	11.17	14.32	20.36
2016	7.74	11.32	17.97
2017	7.25	10.34	18.04
2018	-3.78	6.6	18.22
2019	0.48	3.16	16.3
2020	7.74	7.07	16.76
2021	9.94	12.21	16.6
2022	13.92	14.77	16.9
2023	19.43	17.28	17.4
Mean	8.44	11.08	17.94
S. D.	6.50	4.35	1.56
Max.	19.43	17.28	20.88
Min.	-3.78	3.16	16.3

Source: Annual Report on Banks and Author's Computation

Figure 2: ROE of DSIBs (2014-2023)



Source: Author's Compilation

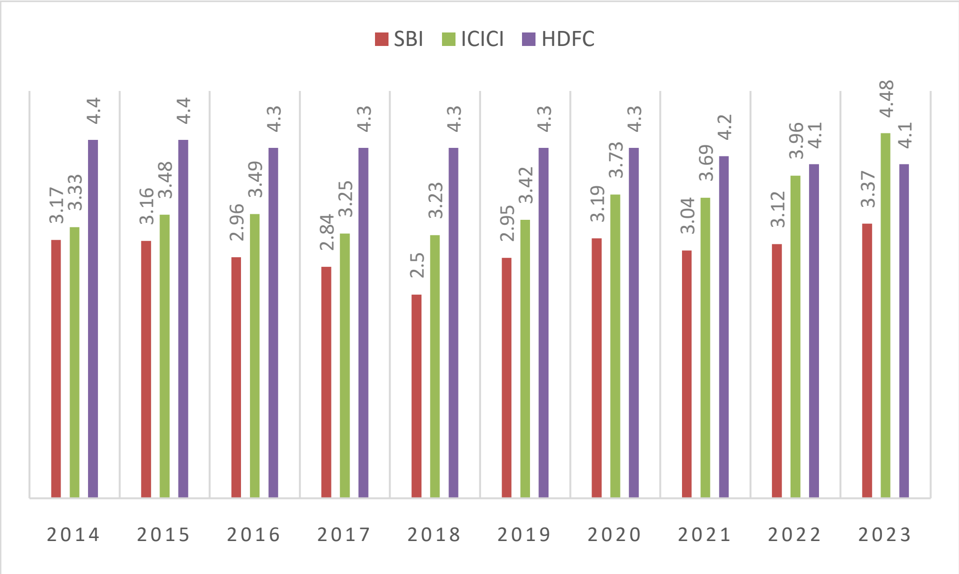
Table 2 and graph 2 depict the Return on Equity of Indian DISBs from 2014 to 2023. The highest average Return on Equity is attained by HDFC Bank (17.94%), followed by ICICI Bank (11.08%) and SBI (8.44%). It means HDFC Bank is using its investment more efficiently than the other two DSIBs. The lowest S.D. is attained by HDFC Bank (1.56) among all DSIBs which denotes low risk on ROE. The highest risk on ROE is recorded for SBI with an S.D. value of 6.50. The highest ROE (20.88%) was attained by HDFC in 2014 and the lowest ROE (-3.78%) was recorded by SBI in 2018.

Table 3: Net Interest Margin of DSIBs (2014-2023)

NIM			
YEAR	**SBI**	**ICICI**	**HDFC**
2014	3.17	3.33	4.4
2015	3.16	3.48	4.4
2016	2.96	3.49	4.3
2017	2.84	3.25	4.3
2018	2.5	3.23	4.3
2019	2.95	3.42	4.3
2020	3.19	3.73	4.3
2021	3.04	3.69	4.2
2022	3.12	3.96	4.1
2023	3.37	4.48	4.1
Mean	3.03	3.61	4.27
S. D.	0.24	0.38	0.11
Max.	3.37	4.48	4.4
Min.	2.5	3.23	4.1

Source: Annual Report of Banks and Author's Computation

Figure 3: NIM of DSIBs (2014-2023)



Source: Author's Compilation

The above table 3 and Graph 3 represent the Net Interest Margin of the Indian Domestic-Systemically Important Bank during the period of the study. Among all DSIBs HDFC Bank (4.27%) recorded the highest mean NIM which is followed by ICICI Bank (3.61%) and SBI (3.03%). It shows the more income of HDFC Bank from lending operations as compared to other DSIBs. The lowest S.D. for HDFC Bank (0.11) denotes low risk while the highest risk is recorded for ICICI Bank (0.38). The maximum NIM (4.48) was recorded by ICICI Bank in 2023 and the lowest NIM (2.5) was recorded by SBI in 2018.

CONCLUSION

The findings of this study revealed that among all DSIBs, the financial performance of HDFC Bank is more than the ICICI and SBI Bank. The return on assets of HDFC Bank indicates that it is earning more return on its assets as compared to other DSIBs. The minimum value of the standard deviation of ROA for HDFC Bank denotes the lowest risk for this bank. The higher return on assets and lowest risk on ROE is observed for HDFC Bank, which means this bank earning more on its investment as compared to other counterparts. The net interest margin value is also high for HDFC Bank and low standard deviation denotes that this bank is earning more interest with low risk. Therefore, it is concluded that HDFC Bank performing better in terms of ROA, ROE, and NIM among all DSIBs

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