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Comparative analysis of Capital Structure and its Performance of Profitability with reference to SBI and HDFC Banks

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Abstract: The banking system is key part of financial sector and it plays a significant role in the growth of the economy. The purpose of this research study is to compare performance of SBI and HDFC banks which are operating in India during the period of 2013-2017. As a variable various important ratios are taken for meeting the research purpose. As a result of the study, it indicated that return on equity, return on asset, spread ratio and capital adequacy ratio of HDFC is higher than SBI. On the other hand, Earning per share and total debt to equity of SBI is higher than HDFC.

Keywords: Bank Performance, Indian banks, economy, banking system

INTRODUCTION

Banks were considered as a spine to the financial system and perform a significant role in economic development of a nation. They perform as mediators in channelizing funds from surplus units to deficit units to the fully utilization of the funds. An efficient banking system of nations has significant encouraging externalities which increase the efficiency of economic transaction in general. There is a key shift in banking system in the policy ambience after the introduction of financial sector reform in 1992; these reforms impact the working of commercial banks. As one of the Aims of financial sector transformation was to improve the efficiency of banking system in Indian economy.

As per the Reserve Bank of India (RBI), India's banking sector is satisfactorily capitalized and well-regulated. The financial and economic conditions within the country are far superior to the other country within the world. Credit, market and liquidity risk studies suggest that Indian banks are generally resilient and have withstood the worldwide downturn well.

Indian banking industry has recently observed the roll out of innovative banking models like payments and tiny finance banks. RBI's new measures may go an extended way in helping the restructuring of the domestic banking industry. The digital payments system in India has evolved the foremost among 25 countries with India's cash Service (IMPS) being the sole system at level 5 within the Faster Payments Innovation Index (FPII).

1.1 REVIEW OF LITERATURE

The review of literature guides the researchers for getting good understanding of methodology used, limitation of different available estimation procedures and database and logical interpretation and understanding of the contradictory outcome. These reviews strengthen the existing knowledge of the researcher. In addition, the review of empirical studies, explores the scope for future and present research efforts related to the subject matter. Many empirical studies have been conducted by the researchers, economists and academicians in India and abroad on various aspects of capital structure. Most of the studies have concentrated on the theories of capital structure mostly on the validity of **Modigliani-Millar (MM)** hypothesis. Other studies focused on the factors affecting the capital structures like impact of cost of capital, earning per share, market price per share, dividend policy, tax policy etc., on the capital structure of companies.

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The current part briefly thrashes out the research carried out so for by the scholars actively occupied in the field. As a result, a short review of some key studies relevant to capital structure and profitability is summarized below.

CAPITAL STRUCTURE AND PROFITABILITY:

Martin Hovey (2007) [1] made an attempt to determine the capital structure of listed firms in China. He examined liquidity, profitability and ownership structure. To find the correlation between the variables such as liquidity, profitability and ownership structure regression analysis was used during the periods of 1997 to 2005. The study accomplished that leverage has a significant correlation with profitability.

Salehi Mahdi (2009) [2] made an attempt to explain the correlation between capital structure instrument and performances of firms which are listed in TSE (Tehran Stock Exchanges) in Iran. The variables that is to be investigate capital structure, return on investment and return on equity. The outcomes of relationship concluded that firm's profitability is negatively correlated with financial leverage.

Sanjay Bhayani (2010) [3] made an attempt to explain the determination of variables of capital structure of Indian pharmaceutical firms. The investigation has tried to recognize the role of knowledge capital and other intangible assets in capital structure decision of pharmaceutical firms of India. The empirical outcomes showed that the regression was a good fit and independent variables mutually determine the capital structure of firms. In additional, the outcome indicates that the leverage was negatively connected to tangibility of assets, non-debt tax shields and intangible assets. R & D expenses and profitability are positively linked to leverage. Intangible assets are important variable among the determinants of capital structure of pharmaceutical firms of India.

Chowdhury and Chowdhury (2010) [4] investigate the relationship of firm value with capital structure selection. For the investigation purpose they used fact & figures of just over a period of 1994 to 2003 of non-financial firms and ignored banking sector performance.

Seng & Heng (2011) [5] have determined the correlation between capital structure and performance of Malaysian construction companies. Return on capital, ROA, and ROE, EPS, Operating margin and Net margin are taken as dependent variables and Capital structure was taken as independent variable in this study.

A. M Goyal (2012) [6] this research focuses on the correlation between capital structure & profitability of listed Indian public sector banks. A research was conducted to determine the effect of capital structure on profitability of Indian public sector banks over a period of 2008- 2012. The study found that strong positive dependence of short term debt to capital (STDTC) on all profitability measures (ROA, ROE and EPS). Long term debt to capital (LTDTC) is having a negative correlation with ROA (return on assets), ROE (return on equity) and EPS (earnings per share).

Dr. Anurag B. Singh & Priyanka Tandon (2012) [7] the core objective of this study was to relatively analyze the capital structure of the banking industry with special reference to ICICI bank and SBI. The research has been conducted to understand the capital adequacy of ICICI and SBI. It was based on the analysis of 5 years annual reports of ICICI and SBI bank from 2005-06 to 2009-10. To analyze the data Ratio analysis has been used. The study discovered that both banks have the policy using trading on equity. Hence, ICICI bank has more dependence on owners fund and SBI depends on debt fund.

Dr. V.N. Sailaja and Dr. N. Bindu Madhavi (2015) [8] the key objective of this research was analyze the relationship between capital structure and profitability of the public and private sector banks. To examine the relationship various ratios are used which include debt equity ratio, cost of equity, cost of debt, overall cost of capital, ROA, ROE and EPS and multivariate regression analysis. They found that the overall performance of private sector banks is fine during the study period reason was to determine the debt to equity of public sector banks is high as compared to the private sector banks which can be overloaded with the banks to pay high amount of interest out of the profits. Furthermore too much interest on debt reduces the EPS. In context to the low profitability, the banks are exposed to high amount of risk. They also observed that in public sector banks capital structure affects the EPS as per the outcome showed in regression analysis.

Muhammad Raghib Zafar, Farrukh Zeeshan, Rais Ahmed (2016) [9] examined the effect of capital structure on execution of Pakistani banks. 25 banks are taken as a sample size, all are listed at (KSE) or schedule banks in (SBP) state bank of Pakistan. Multiple regression models are used to estimate the link between capital structure and banking performance. Earnings per Share (EPS), Return on Asset (ROA), Return on Equity (ROE), Total Liability to total Asset (TDTA), Total Liability to total Equity (TDTQ), Short Term Liability to Asset (SDTA), and Long Term Liability to Asset (LDTA) are used for Performance measurement. Result of the research validated a positive correlation between determinants of capital structure and performance of banking industry.

Y. Vijayalakshmi, N.Chandan Babu, Depally Pranay Kumar Goud (2017) [10] studied the Impact of Capital structure on profitability of public and private sector banks in India listed in NSE (National Stock Exchange) during a period of 2013 to 2017. To establish a relationship between Return on Equity (ROE), Return on Assets (ROA) and Earnings per Share (EPS) Regression analysis and Correlation has been used through R-programming. The outcome of the study shows that Public Banks having on an average more capital than Private Banks. In addition, there was a negative relation found between Capital Structure and profitability. Therefore, study indicates that if 1% increases in capital then the profit decreases by 8%.

1.2 Research Methodology

Considering the research problem and objective along with the philosophy of the different research approaches, the quantitative nature of the data will be collected, quantitative research approach was found to be appropriate for this study. In the analysis of the data various ratios and for the descriptive statistics, the

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mean, standard deviation, maximum and minimum values of the data has been used to analyze the trends of the data by t-test. Sample of this study include 1 Private Bank and 1 Public bank, which are registered with RBI. The 5 years (2013-14 to 2017-18) data for the study was proposed to be collected from audited financial statements of respective bank's website and Reserve Bank of India website. In order to avoid the risk of distortion in the quality of data, the data will be the audited financial statements particularly balance sheet and income statement.

1.3 t-test data Analysis and Results

1.3.1 Return on Equity:

Table 01						
ROE	**Mar 2017**	**Mar 2016**	**Mar 2015**	**Mar 2014**	**Mar 2013**	**Average**
SBI	6.97	7.3	10.62	10.03	15.43	10.07
HDFC	17.95	18.26	19.37	21.28	20.34	19.44

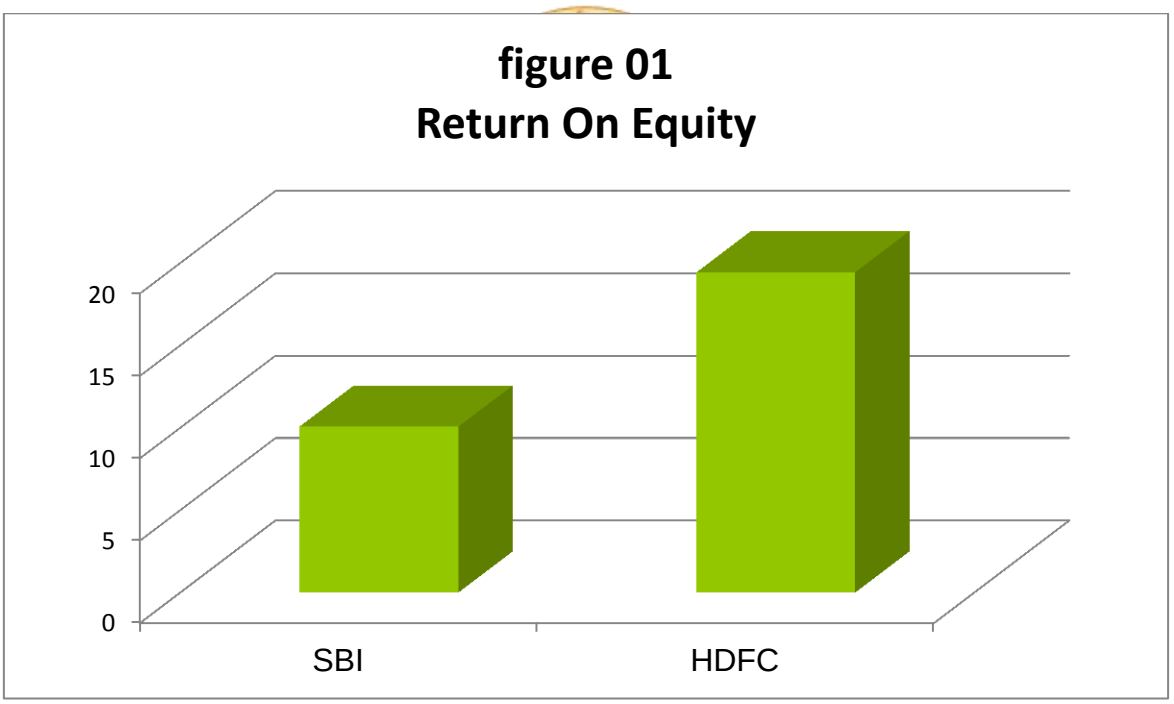

Table 01 and figure 01 are representing the Return on Equity (ROE) of SBI and HDFC bank for the period of 2013-2017. ROE is used to measure the return to owners. ROE is calculated by dividing net income by shareholder's equity. SBI bank ROE is less than HDFC bank, its mean HDFC bank paying higher returns to owners than SBI bank.

Null hypotheses: there is no significance difference between return on equity of SBI and HDFC

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Alternative Hypothesis: there is significance difference between return on equity of SBI and HDFC

Level of significance: 5 percent

t-Test: Two-Sample Assuming Equal Variances	*Variable 1*	*Variable 2*
Mean	10.07	19.44
Variance	11.57915	1.95325
Observations	5	5
Pooled Variance	6.7662	
Hypothesized Mean Difference	0	
df	8	
t Stat	-5.69557	
P(T<=t) one-tail	0.000228	
t Critical one-tail	1.859548	
P(T<=t) two-tail	0.000457	
t Critical two-tail	2.306004	

Calculated value of t test is -5.69 and critical value is - 2.30 .Therefore null hypotheses are rejected and alternative hypothesis is accepted. The difference is significant.

1.3.2 Return on Assets:

Table 02

ROA	Mar 2017	Mar 2016	Mar 2015	Mar 2014	Mar 2013	Average
SBI	0.41	0.45	0.68	0.65	0.97	0.632
HDFC	1.81	1.85	1.89	1.9	1.82	1.854

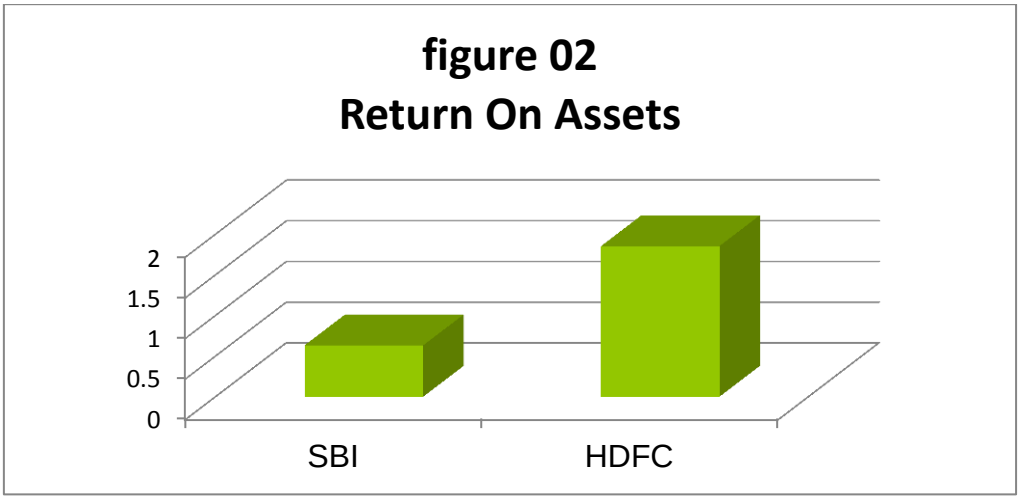

Table 02 and figure 02 displays the Return on Assets (ROA) of SBI and HDFC bank for the period of 2013-2017. ROA is used to determine the efficiency and profitability of bank by using its assets. ROA is calculated as the profit after tax percentage to total assets. A HDFC bank's ROA is higher than SBI banks;

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its mean HDFC bank is using their assets more efficiently.

Null hypotheses: there is no significance difference between return on assets of SBI and HDFC

Alternative Hypothesis: there is significance difference between return on assets of SBI and HDFC

Level of significance: 5 percent

t-Test: Two-Sample Assuming Equal Variances	***Variable 1***	***Variable 2***
Mean	0.632	1.854
Variance	0.04982	0.00163
Observations	5	5
Pooled Variance	0.025725	
Hypothesized Mean Difference	0	
df	8	
t Stat	-12.0466	
P(T<=t) one-tail	1.04E-06	
t Critical one-tail	1.859548	
P(T<=t) two-tail	2.08E-06	
t Critical two-tail	2.306004	

Calculated value of t test is -12.04 and critical value is - 2.30 .Therefore null hypotheses are rejected and alternative hypothesis is accepted. The difference is significant.

1.3.3 Earning Per Share:

Table 03

ROA	**Mar 2017**	**Mar 2016**	**Mar 2015**	**Mar 2014**	**Mar 2013**	**Average**
SBI	13.15	12.82	17.55	145.88	206.2	79.12
HDFC	56.78	48.64	40.76	35.34	28.27	41.958

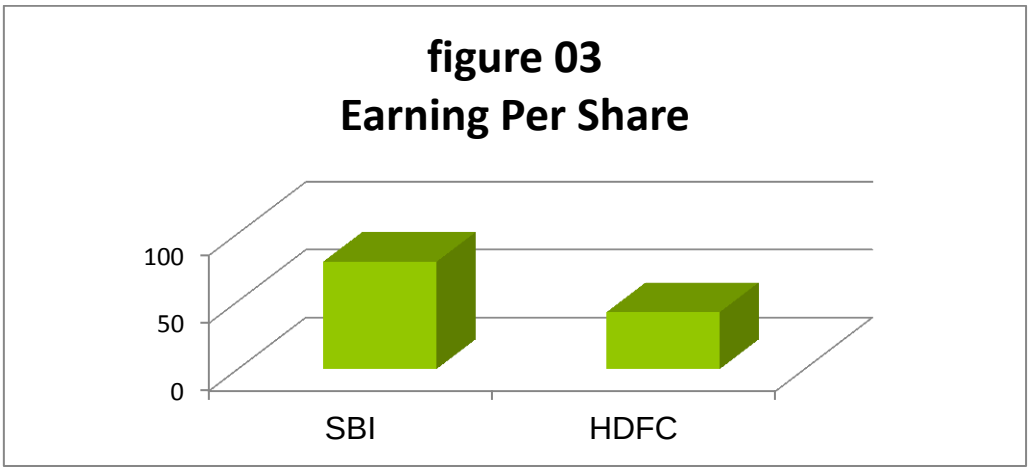

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Table 03 and figure 03 are demonstrating the Earnings per Share (EPS) of SBI and HDFC bank for the period of 2013-2017. EPS is used measure the profitability is on a shareholder basis. EPS is figured by subtracting preferred dividends from net income and dividing by the average common shares outstanding. SBI bank's EPS is higher than HDFC bank which means SBI bank is giving better return on investment to investors.

Null hypotheses: there is no significance difference between earning per share of SBI and HDFC

Alternative Hypothesis: there is significance difference between earning per share of SBI and HDFC

Level of significance: 5 percent

t-Test: Two-Sample Assuming Equal Variances	***Variable 1***	***Variable 2***
Mean	79.12	41.958
Variance	8286.205	124.2338
Observations	5	5
Pooled Variance	4205.219	
Hypothesized Mean Difference	0	
df	8	
t Stat	0.906097	
P(T<=t) one-tail	0.195679	
t Critical one-tail	1.859548	
P(T<=t) two-tail	0.391358	
t Critical two-tail	2.306004	

Calculated value of t test is 0.90 and critical value is - 2.30 .Therefore null hypotheses are accepted and alternative hypothesis is rejected. The difference is insignificant.

1.3.4 Spread Ratio:

Table 04						
Spread Ratio	**Mar 2017**	**Mar 2016**	**Mar 2015**	**Mar 2014**	**Mar 2013**	**Average**
SBI	6.36	6	6.26	5.75	5.95	6.064
HDFC	7.46	7.79	8	8.01	8.78	8.008

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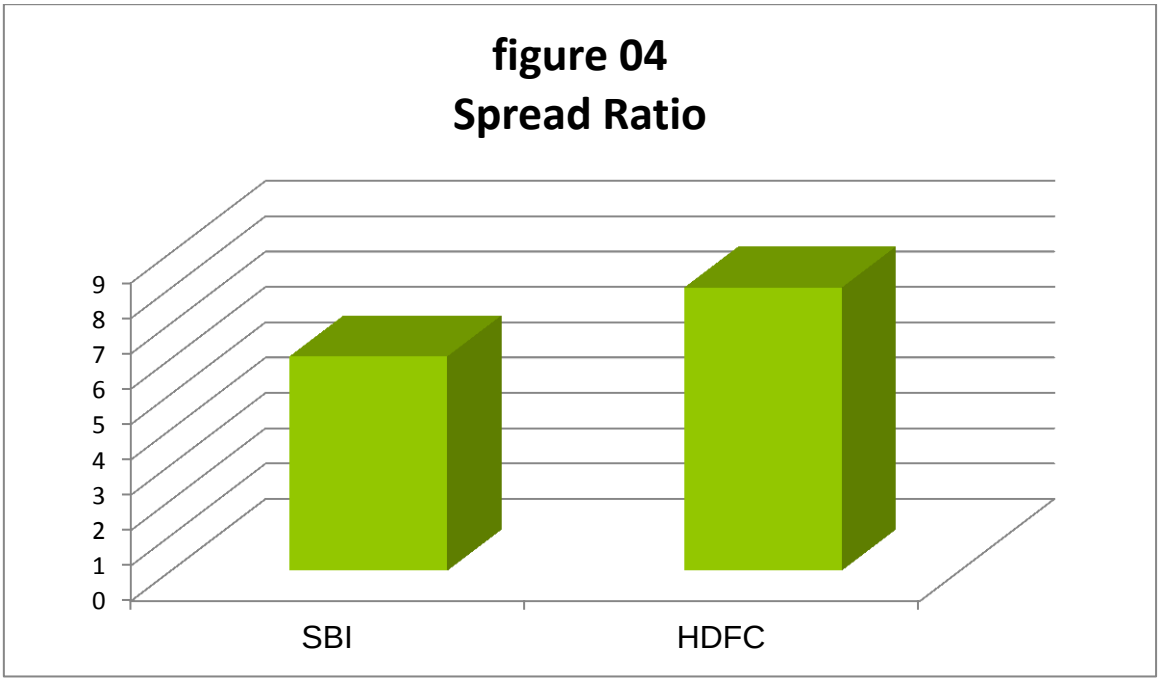

Table 04 and figure 04 are containing the data which is describing the spread ratio of SBI and HDFC bank for the period of 2013-2017. Spread ratio can be calculated by dividing interest earned by interest paid. Spread is generally a Bread & Butter ratio for banks. Here, HDFC bank's Spread is higher than SBI bank which means HDFC bank is giving better return on investment to investors.

Null hypotheses: there is no significance difference between spread ratio of SBI and HDFC

Alternative Hypothesis: there is significance difference between spread ratio of SBI and HDFC

Level of significance: 5 percent

t-Test: Two-Sample Assuming Equal Variances	***Variable 1***	***Variable 2***
Mean	6.064	8.008
Variance	0.06043	0.23597
Observations	5	5
Pooled Variance	0.1482	
Hypothesized Mean Difference	0	
df	8	
t Stat	-7.9844	
P(T<=t) one-tail	2.21E-05	
t Critical one-tail	1.859548	
P(T<=t) two-tail	4.43E-05	
t Critical two-tail	2.306004	

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Calculated value of t test is -7.98 and critical value is - 2.30 .Therefore null hypotheses are rejected and alternative hypothesis is accepted. The difference is significant.

1.3.5 Debt to Equity Ratio:

Table 05						
DEBT TO EQUITY	**Mar 2017**	**Mar 2016**	**Mar 2015**	**Mar 2014**	**Mar 2013**	**Average**
SBI	15.08	13.55	13.87	13.34	13.87	13.942
HDFC	8.02	8.25	8	9.36	9.09	8.544

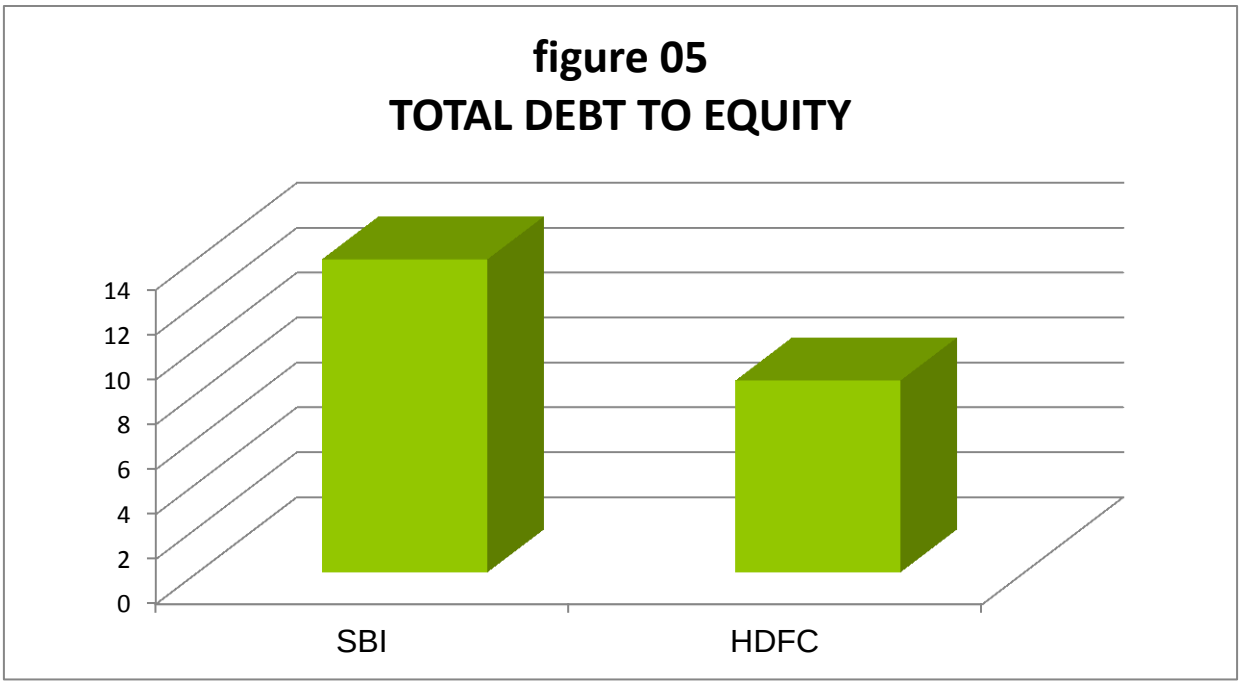

Table 05 and figure 05 are expressing the Debt to Equity Ratio of SBI and HDFC bank for the period of 2013-2017. This ratio is used to count the percentage of total assets are financed through debt. Debt to Equity Ratio is determined by dividing total assets by equity. SBI Bank's Debt to equity ratio is higher than HDFC bank. Its mean SBI Bank financed through debts than HDFC bank.

Null hypotheses: there is no significance difference between total debt equity ratio of SBI and HDFC

Alternative Hypothesis: there is significance difference between total debt equity ratio of SBI and HDFC

Level of significance: 5 percent

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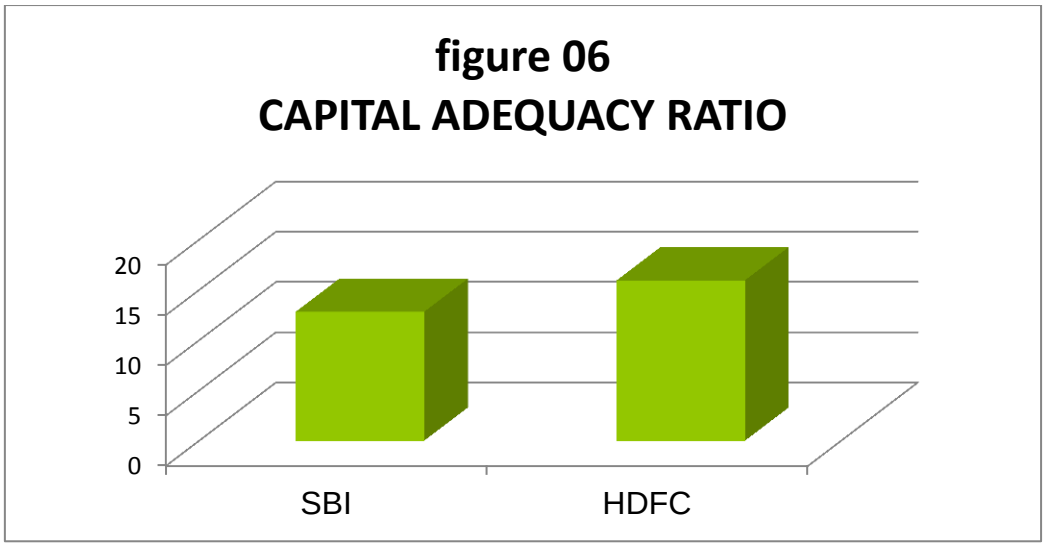
t-Test: Two-Sample Assuming Equal Variances	*Variable 1*	*Variable 2*
Mean	13.942	8.544
Variance	0.45537	0.40523
Observations	5	5
Pooled Variance	0.4303	
Hypothesized Mean Difference	0	
df	8	
t Stat	13.0112	
P(T<=t) one-tail	5.77E-07	
t Critical one-tail	1.859548	
P(T<=t) two-tail	1.15E-06	
t Critical two-tail	2.306004	

Calculated value of t test is 13.01 and critical value is 2.30 .Therefore null hypotheses are rejected and alternative hypothesis is accepted. The difference is significant.

1.3.6 Capital Adequacy Ratio:

Table 06

CAP.ADEQ.	Mar 2017	Mar 2016	Mar 2015	Mar 2014	Mar 2013	Average
SBI	13.11	13.12	12	12.96	12.92	12.822
HDFC	14.6	15.53	16.79	16.07	16.8	15.958



The minimum CAR as per RBI norms is 9% at Present. In fact, SBI Bank has shown a healthy and improved margin of over 9% which is stipulated by RBI, This is due to steady rise in the Risk Weighted Assets. But

both the banks are having over limit risk against capital.

Null hypotheses: there is no significance difference between capital adequacy of SBI and HDFC

Alternative Hypothesis: there is significance difference between capital adequacy of SBI and HDFC

Level of significance: 5 percent

t-Test: Two-Sample Assuming Equal Variances	***Variable 1***	***Variable 2***
Mean	12.822	15.958
Variance	0.21902	0.86027
Observations	5	5
Pooled Variance	0.539645	
Hypothesized Mean Difference	0	
Df	8	
t Stat	-6.74982	
P(T<=t) one-tail	7.25E-05	
t Critical one-tail	1.859548	
P(T<=t) two-tail	0.000145	
t Critical two-tail	2.306004	

Calculated value of t test is -6.75 and critical value is - 2.30 .Therefore null hypotheses are rejected and alternative hypothesis is accepted. The difference is significant.

1.4 Recommendations

Based on the findings obtained from the results, the following recommendations were made.

✓ In line with the results of this study banks management should pay greater attention to those significant variables in determining their optimal capital structure and optimize level of profitability of their core business operations and hence, wealth of shareholders.

✓ SBI bank needs to enhance the equity capital along with the debt capital which can reduce the cost of equity and overall cost of capital.

✓ HDFC bank needs to stabilize the debt equity proportion in their capital structure. It reduces the major variations in the weighted average cost of capital.

✓ SBI bank should reduce the portion of debt capital to overcome the risk.
✓ HDFC bank needs to increase the EPS to attract the investors.

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1.5.1 Website:

1. https://www.rbi.org.in/
2. https://www.onlinesbi.com/
3. https://www.sbi.co.in/
4. https://www.hdfcbank.com/