COMPARISON OF CAPITAL STRUCTURE OF PUBLIC SECTOR BANKS AND PRIVATE SECTOR BANKS AND ITS EFFECT ON BANK'S PROFITABILITY

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Abstract
In recent years, the capital structure and profitability was analyzed by too many researchers in academic level. However, most of them excluded banking industry due to different market structure and regulatory frameworks. The differential point of banking industry with other financial industries is minimum capital requirement that is 8% of equity capital. This requirement is for coverage of the bank's risk associated assets. These risk associated assets are subjected to other financial industries as well. But the banks are giant firms in the country economies. The bankruptcy of one can easily affect entire economy. That's why they described as 'too big to fail'. Therefore this capital hold is mandatory for them by law. This research is aiming to analyze the relationship between capital structure of the public and private sector banks and its profitability.

INTRODUCTION
One of the main objectives of a firm management is to maximise the wealth of the owners or shareholders of the firm. Shareholder wealth in turn is defined as the current price of the firm's outstanding ordinary shares. This objective could be achieved by taking rational financing decisions regarding optimal capital structure which would minimize its cost of capital. The capital structure of a firm is the mix of debt including preference stock and equity; this is referred to as the firms'' long term financing mix, Watson and Head (2007). Capital structure decision is critical for any firm for maximizing return to the various stake holders and also to enhance firms'' ability to operate in a competitive environment. Therefore the vital issue confronting managers today is how to choose the mix of debt and equity to achieve optimum capital structure that would minimise the firm's cost of capital and improves return to owners of the business. Financial, managers make efforts to ascertain a particular combination that will maximize profitability and the firm's market value. According to Gitman (2003) it is generally believed that the value of a firm is maximised when its cost of capital is minimized. The kind of combination of debt and equity that will minimize the firms cost of capital and hence maximizes the firm's profitability and market value is the optimal capital structure. Unfortunately, financial managers do not have a well-defined formula that for taking decision on optimal capital structure. The idea of modern theory of capital structure is the path breaking contribution of Modigliani and miller (1958) under the perfect capital market assumption. Modigliani and Miller''s capital structure irrelevance theory was first published in 1958. According to the theory the way in which a firm finances its assets (through the mix of debt and equity) can have no impact on the value of the firm. The value of a firm is derived by the productivity and the quality of the assets in which the firm has invested. Several such studies were conducted; they found contradictory results when Gleason (2000) supported a negative impact of leverage on the profitability of the firm while Roden and Lewellen (1995) found a significant positive association between profitability and total debt as a percentage of the total buyout-financing package in their study on leveraged buyouts. Thus, there is no universal theory about debt-equity choices and there are different views regarding the financing option. The relationship between capital structure and profitability is one that received considerable attention in the finance literature. Nonetheless, in the context of the banking industry, the subject has received a limited research attention. The banking sector in most economies is so critical that it attracts much attention from the domestic financial institutions, governmental regulatory authorities and international institutions. The study regarding the effects of capital structure on profitability will help us to know the potential problems in performance and capital structure. The modern banks must conduct their business in a highly complex and competitive business environment (Niresh & Velnampy 2012). Therefore; these types of research findings will be benefited in selecting the capital structure to achieve the optimum level of banks' profitability. The purpose of conducting this study is to assess the influence of capital structure on banking performance using profitability as measurement to provide empirical evidence regarding Indian banking sector over a period of five years from 2008 to 2012.

REVIEW OF LITERATURE
Meenakshi phor (2014) has analyzed the capital structure of SBI and ICICI and made the comparison of their debt and equity and made a conclusion that ICICI is better than SBI because it continues to focus on decreasing the cost of capital as compared to SBI.

Patel Dilipkumar Chunilal (2014) made an attempt to understand the capital structure of banks viz. Pindaval in DharampurTaluka and Karchond in Kaprada Taluka Cooperative society in Gujarat. The research study is descriptive and analytical which is conducted on the basis of secondary data. It can be concluded from the study that the maximum Financial Indicators of cooperative society are not in good position but at average position. From the analysis is clear that Debt-Equity Ratio, Capital Gearing Ratio, Preparatory Ratio and Fixed asset- capital Ratio etc are showing that selected sample banks have the Good capital structure.

Khalaf(2014) Taani examined the impact of capital structure on performance of Jordanian banks. The annual financial statements of 12 commercial banks listed on Amman Stock Exchange were used for this study which covers a period of five (5) years from 2007-2011. Multiple regression models are applied to estimate the relationship between capital structure and banking performance. The results show that bank performance, which is measured by net profit, return on capital employed and net interest margin are positively associated with total debt; while total debt is found to be insignificant in determining return on equity in the banking industry of Jordan.

A.M Goyal(2012) has studied the impact of capital structure on profitability of public sector banks in India over a period from 2008 to 2012.This study focuses on the relationship between capital structure & profitability of listed public sector banks in India. He 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 is having a negative relationship with return on assets (ROA), return on equity (ROE) and earnings per share (EPS).

Dr. ANURAG B. SINGH and PRIYANKA TANDON(2012) have made a research to understand the capital adequacy of SBI and ICICI. The main aim of present study is to comparatively analyze the capital structure of the banking industry with special reference to SBI and ICICI bank. It is based on the analysis of five years annual reports of SBI and ICICI bank from 2005-06 to 2009-10. Ratio analysis has been used to analyze the data. The study revealed that both company has the policy using trading on equity. So ICICI bank has more dependence on owned fund and SBI on debt fund.

OBJECTIVES OF THE STUDY
- To know the portion of debt and equity in capital structure of selected banks.
- To find out the Weighted Average Cost of Capital (WACC) of selected banks.
- To conduct comparative study regarding capital structure of selected banks.
- To examine the effect of capital structure on bank's profitability.

RESEARCH FRAME WORK
The frame work designed for this study is to compare the capital structure of public sector and private sector banks and to understand the relationship between the capital structure and bank's profitability.

HYPOTHESIS
For public Sector Banks
H0a- There is no relationship between debt to equity and return on assets in public sector banks.
H0b- There is no relationship between debt to equity and return on equity in public sector banks.
H0c- There is no relationship between debt to equity and earnings per share in public sector banks.
For Private Sector Banks
H0d- There is no relationship between debt to equity and return on assets in private sector banks.
H0e- There is no relationship between debt to equity and return on equity in private sector banks.
H0f- There is no relationship between debt to equity and earnings per share in private sector banks.

Sample size: sample size is 3 private banks and 3 public banks based on the convenience sampling technique which is one of the methods in non-probability sampling methods.

Tools and Techniques: The hypothesis is tested with the help of various ratios which include debt equity ratio, cost of equity, cost of debt, overall cost of capital, return on assets, return on equity, and earnings per share and multivariate regression analysis.

Data Collection
The data used for this study is secondary in nature and has been collected from the money control.com & BSE site.

Table - 1Debt to Equity

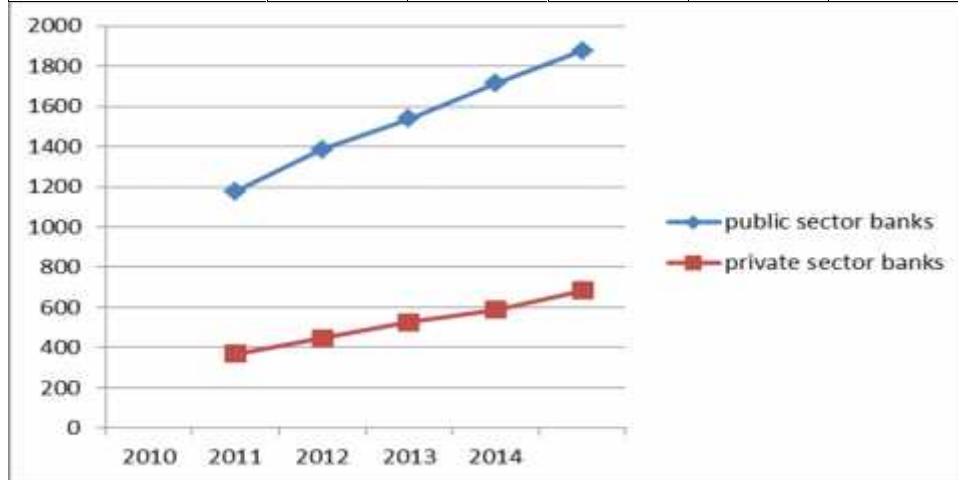| debt to equity	2010	2011	2012	2013	2014
public sector banks	1176.687	1386.46	1537.337	1714.707	1877.393
private sector banks	368.59	446.0433	526.9167	588.3333	682.6433

Figure 1 (a)

Debt to equity ratio of public sector banks and private sector banks gradually increased year by year. Debt to equity ratio of public sector banks is high compared to the private sector banks.

Table -2 WACC of Public sector Banks

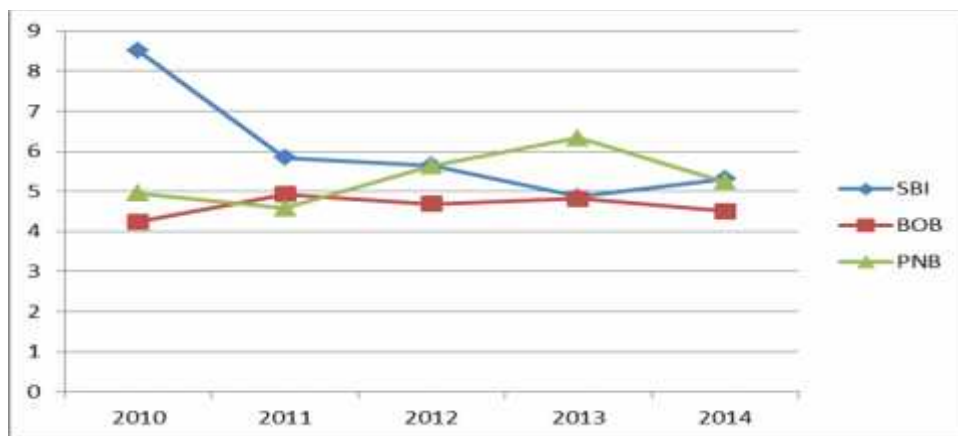| Bank name	2010	2011	2012	2013	2014
SBI	8.51	5.84	5.65	4.86	5.31
BOB	4.24	4.93	4.69	4.82	4.5
PNB	4.95	5	5.63	6.33	5.24

Figure 2 (a)

Weighted average cost of capital of SBI is 8.51 in the year 2010, in the next year it suddenly decreased to 5.84.Then it fluctuated from 2011 to 2014. WACC of SBI in 2012 is 5.6; it is 4.86 in 2013 in the next year it increased to 5.31. Initially WACC of Bank of Baroda is 4.24 in 2010; in 2011 it increased to 4.93, in 2012 it decreased to 4.69, in 2013 it is 4.82 and in

2014 it is 4.5. WACC of PNB is gradually increased year by year except in the year 2014. WACC of PNB is 4.95 in 2010, 5 in 2011, 5.63 in 2012, and 6.33 in 2013 and in 2014 it suddenly decreased to 5.24.

WACC of Private Sector Banks

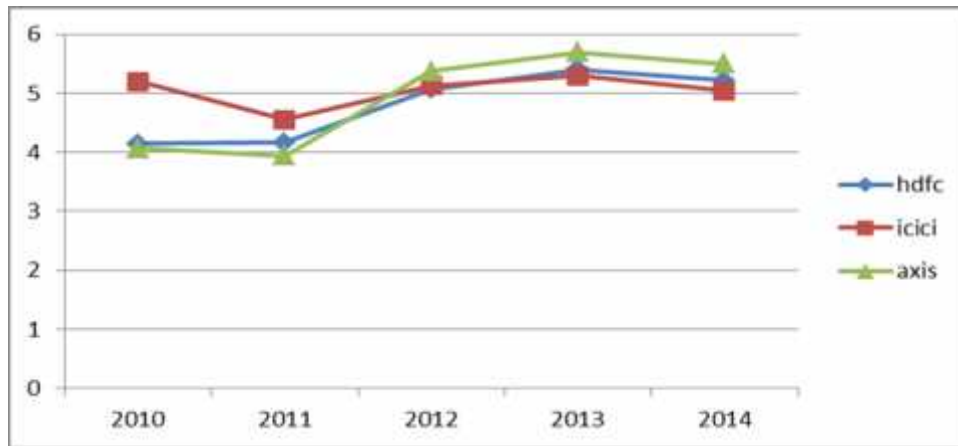| BANK NAME	2010	2011	2012	2013	2014
HDFC	4.14	4.16	5.07	5.4	5.22
ICICI	5.2	4.55	5.13	5.3	5.04
AXIS	4.07	3.94	5.37	5.7	5.5

Table - 3

Figure 3 (a)

WACC of HDFC fluctuated from the past five years. The WACC of HDFC from the last five years is as follows: 4.14 in 2010, 4.16 in 2011, 5.07 in 2012, 5.4 in 2013 and 5.22 in 2014. WACC of ICICI also fluctuated from the last five years. WACC of ICICI is 5.2 in 2010, 4.55 in 2011, 5.13 in 2012, 5.3 in 2013 and 5.04 on 2014. WACC of AXIS bank also followed the same trend. WACC of AXIS is 4.07 in 2010, 3.94 in 2011, 5.37 in 2012, 5.7 in 2013 and 5.7 in 2014.

Comparison of WACC of public sector and private sector banks

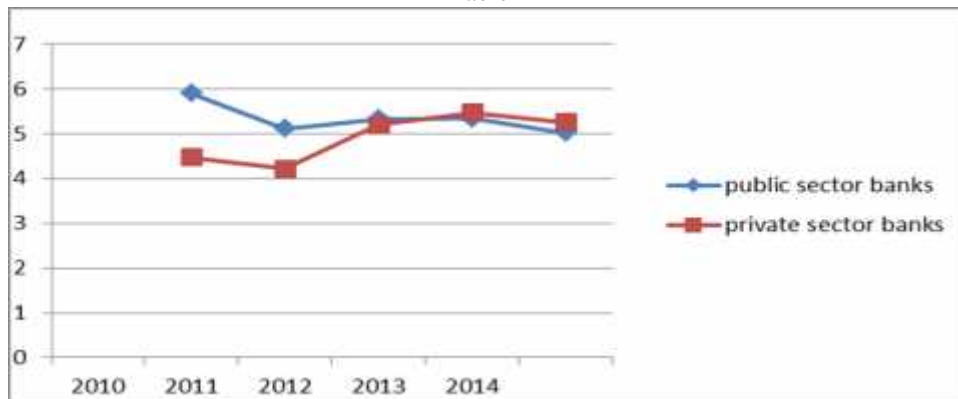| WACC		2010	2011	2012	2013	2014
public sector banks		5.9	5	5.32	5.33	5.01
private sector banks		4.47	4.21	5.19	5.46	5.25

Table 4

Figure.4 (a)

Weighted average cost of capital of public sector banks and private sector banks fluctuated and there is a difference in these two sectors in the initial years of study period. From 2012 onwards the overall cost of capital is similar in both the sectors.

REGRESSION ANALYSIS

H0a- There is no relationship between debt to equity and return on assets in public sector banks.

		Unstandardized Coefficients		Standardized Coefficients		
	Table- 5 Debt to equity and return on assets					
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.088	.141		7.728	.000
	Debt to Equity	-9.919E-5	.000	-.311	-1.178	.260

In this table performance between return on assets and debt to equity is measured and the significance value is greater than 0.005 shows that there is no relationship between debt to equity and return on assets. At 95% level of confidence the significance value is greater than 0.05 so the null hypothesis is accepted.

Table – 6 H0b- There is no relationship between debt to equity and return on equity in public sector banks Debt to equity and return on equity						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	17.032	2.632		6.470	.000
	Debt to Equity	.000	.002	-.145	-.530	.605

In this table performance between return on equity ROE and debt to equity is measured and the significance value is greater than 0.005 shows that there is no relationship between debt to equity and return on equity. At 95% level of confidence the significance value greater than 0.05 so the null hypothesis is accepted.

H0c- There is no relationship between debt to equity and earnings per share in public sector banks.

Table 7 Debt to equity and earnings per share						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta		Sig.
1	(Constant)	61.227	22.962		2.667	.019
	Debt to Equity	.058	.014	.763	4.253	.001

In this table relationship between earnings per share and debt to equity is measured and the significance value is less than 0.005 shows that there is a relationship between debt to equity and earnings per share. At 95% level of confidence the significance value is less than 0.05 so the alternate hypothesis is accepted.

Private Sector Banks

H0d- There is no relationship between debt to equity and return on assets in private sector banks.

		Unstandardized Coefficients		Standardized Coefficients		
	Table - 8 Debt to equity and return on assets					
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.562	.181		8.615	.000
	Debt to equity	.000	.000	-.178	-.652	.526

In this table performance between return on assets and debt to equity is measured and the significance value is greater than 0.005 shows that there is no relationship between debt to equity and return on assets. At 95% level of confidence the significance value is greater than 0.05 so the null hypothesis is accepted.

H0e- There is no relationship between debt to equity and return on equity in private sector banks.

Table – 9,Debt to equity and return on equity					
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	14.680	2.659		5.520	.000
	Debt to equity	.002	.005	.097	.352	.730

In this table performance between return on equity ROE and debt to equity is measured and the significance value is greater than 0.005 shows that there is no relationship between debt to equity and return on equity. At 95% level of confidence the significance value is greater than 0.05 so the null hypothesis is accepted.

H0f- There is no relationship between debt to equity and earnings per share in private sector banks.

Table - 10 ,Debt to equity and earnings per share					
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	83.221	30.379		2.739	.017
	Debt to equity	-.021	.056	-.101	-.368	.719

In this table relationship between earnings per share and debt to equity is measured and the significant value is greater than 0.005 shows that there is no relationship between debt to equity and earnings per share. At 95% level of confidence the significance value is greater than 0.05 so the null hypothesis is accepted.

FINDINGS
I. Capital Structure of Public Sector Banks
- SBI has high debt to equity ratio compared to BOB and PNB.
- Cost of equity of the three banks was gradually increased but in 2014 it is decreased compared to previous years particularly in PNB.
- Cost of debt of SBI is high as compared to PNB and BOB but in 2013 cost of debt of PNB is suddenly increased than SBI.
- Weighted average cost of capital of SBI is gradually decreased as compared to PNB and BOB except in 2014, it is increased.

II. Capital structure of private sector banks:
　　Debt to equity ratio of HDFC is high and gradually increased as compared to ICICI and AXIS.
- Cost of equity of ICICI and AXIS is gradually increasing from the last five years but HDFC's cost of equity is suddenly decreased.
- Cost of debt of the three banks is fluctuated from the last five years.
- Weighted average cost of capital of the three banks is fluctuated from the last five years.

III. Overall comparison of capital structure of public sector and private sector banks:
- Debt to equity ratio of public sector banks is high as compared to private sector banks.
- Cost of debt of both public and private sector banks is approximately same.
- Cost of equity of public sector banks is high as compared to private sector banks.

- Weighted average cost of capital of public sector banks is high as compared to private sector banks; for 2013 and 2014 it is approximately same.

IV. Effect of capital structure on bank's profitability
From the regression analysis the following results have been founded;

- In public sector banks there is no relationship between the debt to equity and ROA, ROE except EPS. It shows that there is no impact of capital structure on bank's profitability but affects the EPS.
- In private sector banks also there is no relationship between the debt to equity and ROA, ROE, EPS. It shows that there is no impact of capital structure on bank's profitability.

SUGGESTIONS
- Public sector banks should reduce the portion of debt capital to overcome the risk.
- Public sector banks need to enhance the equity capital along with the debt capital which can reduce the cost of equity and overall cost of capital.
- Private sector banks need to stabilize the debt equity proportion in their capital structure. It reduces the major variations in the weighted average cost of capital.
- Both public and private sector banks have to emphasize on minimizing the weighted average cost of capital which maximizes the value of banks.

From the study, it can be said that in private sector banks the capital structure decision influences the earnings per share. So the public sector banks should be cautious while deciding the proportion of debt and equity as it effects the EPS which in turn influences the value of the banks.

CONCLUSION
The research paper on "comparison of capital structure of public sector banks and private sector banks and its effect on bank's profitability" found that the overall performance of private sector banks is good during the study period because debt to equity of public sector banks is high as compared to the private sector banks which can be overburden to the banks to pay high amount of interest out of the profits. Moreover too much interest on debt reduces the earnings per share. In addition to the low profitability, the banks are exposed to high degree of risk. It is also observed that in public sector banks capital structure affects the earnings per share as per the results showed in regression analysis.

FUTURE IMPLICATIONS
This study can be extended by adding more banks or by conducting a study on global level with inclusion of all banks around the world. Future research could include more variables such as taxation, GDP, Market factors etc There is also an opportunity to conduct a comparative study to check the relationship among capital structure and profitability of Foreign and Domestic Banks in India.

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