A Study on Capital Structure and Financial Performance of Listed Banks in India

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Abstract: A firm's capital structure is the combination equity and debt capital. Apart from these capitals, there are other ways to finance a company like vendor financing at the time credit purchase, which helps the firm to increase the return on equity as the firms sells the asset before it pays to vendor. The paper aims to study the relationship and the impact of capital structure namely Debt to Equity, Long term debt to Total asset and short term debt to Total asset on the financial performance of selected banks in India. Earnings per Share, Return on Assets and Return on Equity are taken as financial performance variables. The study utilizes the secondary data obtained from annual reports and other web sources for the period of three financial years (2014 to 2018). The generated data were analyzed using Pearson's correlation coefficient and ordinary least square regression using Excel. From the analysis, the study results that there is a significant relationship and dependence on ROE and Long and Short term debt to Total Assets, whereas there is no significant relationship between ROE and Debt upon Equity, ROA and EPS on capital structure in the selected banks. As the scope of study is limited to selected banks, a further research could be measured by analyzing the reports of more banks for a period of time.

Keywords: Capital structure, Financial Performance and Debt to equity.

Introduction

The aim any business or a firm is to increase its market price of shares and securities, which leads to increase the firm's value. A good capital structure is needed for a firm to increase its market price of a share. To maximize the firm's return, capital structure helps the firm to increase its profit in the form higher return on equity and to increase the earnings per share. Capital structure is the indicator of financial structure which is used to the firm namely debt and equity. In financial literature, attention is given more to the research based on capital structure and financial performance. Different countries have different arrangement on the institution, with regards to tax and bankruptcy codes, corporate control and the banks role and securities market (Puwanenthiren Pratheepkanth, 2011). The optimum capital structure can maximize the share price in the market and leads to increase the value the firm and this is based on major corporate decision (Sorana Vatavu, 2015). This paper tries to know the relationship and influences of capital structure on financial performance of selected banks in India. Debt-Equity; Long term debt-total asset and Short-term debt-total asset are the variables of capital structure, whereas the Return on Equity and Earnings per share are the variables of financial performance.

Review of Literature

In analyzing the paper, the researcher has gone through many literatures given by various researchers to know more about the significance of capital structure and financial performance. Gurpreet Kaur, (2014), examined the comparative analysis of capital structure and its impact on the profitability of PNB and HDFC and determined the effective mix and analyzed the effect of changes in the structure. A.M Goyal, (2013), studied the" capital structure and profitability of public sector banks in India", listed in the stock exchange and found that there is a positive relationship between short term debt with profitability, measured by ROE, ROA and EPS. Logavathani Sivalingam & Lingesiya Kengatharam, (2018),"examines the relationship between capital structure and financial performance of listed licensed banks in Srilanka and suggested to get finance from internal sources rather than relying debt capital."Puwanenthiren pratheepkanth,(2011),"

analyzed the capital structure and its impact on financial performance and found that capital structure and financial performance are negatively associated."

Objectives of Study

• To know the relationship between capital structure and financial performance of selected banks in India.
• To know the effect of capital structure on financial performance of selected banks in India.

Statement of Hypothesis

H_{01}: There is no significant relation between Capital structure and ROE in selected banks in India.

H_{03}: There is no significant relation between Capital structure and EPS in selected banks in India.

Research Methodology

Data Collection

The study uses the secondary data from annual report of the banks and financial website. The study selected five banks based on market capitalization and the annual reports of the banks were taken for a period of 2014-2018.

The financial indicators, Earnings per share and Return on Equity are used as a variable of financial performance and the same is obtained from www.moneycontrol.com.

The capital structure ratios are   obtained from annual report of concerned bank.

Scope and Limitation

The study is limited to banks in India, listed in exchanges. The samples are selected on market capitalization.

Data Analysis and Interpretations

The data of Debt to Equity, Long term debt to Total Asset, Short term debt to Total Asset , Earnings per share and Return on Equity are obtained from the sources were analyzed using Pearson's correlation coefficient and ordinary least square to know whether there is a significant relationship and dependence of financial performance and capital structure.

 Earnings per share are calculated using the formula Net profit upon outstanding share.

 Return on Equity is taken as a percentage. Earnings per share and Return on Equity are taken from www.moneycontrol.com.

Debts to Equity are calculated using total debt upon Equity.

Long term debts are calculated using long term debt upon total asset.

Short term debts are calculated using short term debt upon total assets.

Ordinary least Square regression is used to analyze the significance and impact of capital structure on financial performance. The study uses Excel to analyze the data.

Results of Correlation

Earnings per Share on Debt to Equity; Long Term Debt To Total Assets And Short Term Debt To Total Assets:

Table 1 show the result of Pearson's correlation of Earnings per share (EPS) with independent variable namely Debt/Equity (D/E), Long term debt /Total Asset (LTD) and Short term debt/ Total Asset (STD). EPS is positively correlated with D/E at 0.179 and STD at 0.729, whereas negatively correlated   with LTD at   -0.693 and all are insignificant and null hypothesis is accepted

Table: 1

	EPS	D/E	LTD	STD
EPS	1			
D/E	0.179	1.000		
LTD	-0.693	0.480	1.000	
STD	0.729	-0.443	-0.994	1.000

Return on Equity on Debt to Equity; Long Term Debt to Total Assets and Short Term Debt to Total Assets:

Table 2 show the result of Pearson's correlation of Return on Equity (ROE) with independent variable namely Debt/Equity (D/E), Long term debt /Total Asset (LTD) and Short term debt/ Total Asset (STD). ROE is negatively correlated with D/E at -0.236 and LTD at -0.918, whereas positively correlated with STD at 0.910 and LTD and STD are significant, whereas D/E is insignificant.

Table: 2

	ROE	TD	LTD	STD
ROE	1			
D/E	-0.236	1		
LTD	-0.918	0.479	1	
STD	0.910	-0.443	-0.994	1

Results of Regression Analysis

Earnings per Share on Long Term Debt to Total Asset:

Table 3 shows the result of analysis of variance and coefficient of the variable, EPS and LTD. The value of F is 2.776 at significance of 0.194 which result that there is no significance between ROA and LTD. The coefficient of LTD shows a negative relationship between EPS and LTD. Multiple r square is 0.481. 48.1% of variance of EPS is accurate by the Long term debt to Total Assets. Therefore the remaining 51.9 % is by the other factors.

Table 3

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.693					
R Square	0.481					
Adjusted R Square	0.307					
Standard Error	12.825					

Observations	5					
ANOVA						
	df	SS	MS	F	Sig F	
Regression	1	456.554	456.554	2.776	0.194	
Residual	3	493.417	164.472			
Total	4	949.971				
	Coeff	Std Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	1546.38	909.98	1.70	0.19	-1349.59	4442.34
LTD	-1792.70	1075.99	-1.67	0.19	-5216.99	1631.58

Earnings per Share on Short Term Debt to Total Assets:

Table 4 shows the result of analysis of variance and coefficient of the variable, EPS and STD. The value of F is 3.394 at significance of 0.163 which result that there is no significance between EPS and STD. The coefficient of STD shows a positive relationship between EPS and STD. Multiple r square is 0.531%. 53.1% of variance of EPS is accurate by the short term debt to Total Assets. Therefore the remaining 46.9 % is by the other factors.

Table 4

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.729					
R Square	0.531					
Adjusted R Square	0.374					
Standard Error	12.189					
Observations	5					
ANOVA						
	df	SS	MS	F	Sig F	
Regression	1	504.237	504.237	3.394	0.163	
Residual	3	445.734	148.578			
Total	4	949.971				
	Coeff	Std Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-74.651	57.226	-1.305	0.283	-256.770	107.467
Std	2158.103	1171.472	1.842	0.163	-1570.042	5886.248

Earnings per Share on Debt To Equity:

Table 5 shows the result of analysis of variance and coefficient of the variable, EPS and D/E. The value of F is 0.099 at significance of 0.774 which result that there is no significance between EPS and D/E. The coefficient of D/E shows a positive relationship between EPS and D/E. Multiple r square is 0.032 only. 3.2% of variance of EPS is accurate by the Debt to Equity. Therefore the remaining 96.8% is by the other factors.

Table 5

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.1788					
R Square	0.0320					
Adjusted R Square	-0.2907					
Standard Error	17.5080					
Observations	5					
ANOVA						
	df	SS	MS	F	Sig F	
Regression	1	30.380	30.380	0.099	0.774	
Residual	3	919.590	306.530			
Total	4	949.971				
	Coeff	Std Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-159.557	603.0931	-0.26457	0.80848	-2078.8687	1759.75405
D/E	20.5022	65.12384	0.314819	0.773525	-186.75092	227.755318

Return on Equity on Long Term Debt to Total Assets:

Table 6 shows the result of analysis of variance and coefficient of the variable, ROE and LTD. The value of F is 16.152 at significance of 0.02766 which result that there is significance between ROE and LTD. The coefficient of LTD shows a negative relationship between ROA and LTD. Multiple r square is 0.8433.
84.33% of variance of ROE is accurate by the Long term debt to Total Assets. Therefore the remaining 15.67 % is by the other factors.

Table 6

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.918346					
R Square	0.843359					
Adjusted R Square	0.791145					
Standard Error	1.489491					
Observations	5					
ANOVA						
	df	SS	MS	F	Sig F	
Regression	1	35.83474	35.83474	16.15209	0.0276636	
Residual	3	6.655749	2.218583			
Total	4	42.49049				
	Coeff	Std Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	436.066	105.6876	4.12599	0.025817	99.720905	772.41113
LTD	-502.244	124.9684	-4.01897	0.027664	-899.94863	-104.53847

Return on Equity on Short Term Debt to Total Assets:

Table 7 shows the result of analysis of variance and coefficient of the variable, ROE and STD. The value of F is 14.6167 at significance of 0.0315 which result that there is significance between ROE and STD. The coefficient of STD shows a positively relationship between ROE and STD. Multiple r square is 0.8297. 82.97% of variance of ROE is accurate by the short term debt to Total Assets. Therefore the remaining 17.03% is by the other factors.

Table 7

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.9109					
R Square	0.8297					
Adjusted R Square	0.7729					
Standard Error	1.5530					
Observations	5					
ANOVA						
	df	SS	MS	F	Sig F	
Regression	1	35.2547	35.2547	14.6167	0.0315	
Residual	3	7.2358	2.4119			
Total	4	42.4905				
	Coeff	Std Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-16.429	7.291	-2.253	0.109	-39.633	6.774
STD	570.641	149.258	3.823	0.031	95.635	1045.647

Return on Equity on Debt to Equity:

Table 8 shows the result of analysis of variance and coefficient of the variable, ROE and D/E. The value of F is 0.18 at significance of 0.70 which result that there is no significance between ROE and D/E. The coefficient of D/E shows a negative relationship between ROE and D/E. Multiple r square is 0.06 only 6% of variance of ROE is accurate by the Debt to Equity. Therefore the remaining 94% is by the other factors.

Table 8

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.24					
R Square	0.06					
Adjusted R Square	-0.26					
Standard Error	3.66					
Observations	5					
ANOVA						
	df	SS	MS	F	Sig F	
Regression	1	2.37	2.37	0.18	0.70	
Residual	3	40.12	13.37			
Total	4	42.49				
	Coeffi	Std Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	64.37	125.97	0.51	0.64	-336.51	465.26
D/E	-5.73	13.60	-0.42	0.70	-49.02	37.56

Conclusion

The paper studied the relationship and the impact of capital structure namely Debt to Equity, Long term debt to Total asset and short term debt to Total asset on the financial performance of selected banks in India. Earnings per Share and Return on Equity are taken as financial performance variables. The study utilizes the secondary data obtained from annual reports and other web sources for the period of three

financial years (2014 to 2018). The generated data were analyzed using Pearson's correlation coefficient and ordinary least square regression using Excel. From the analysis, the study results that there is a significant relationship and dependence on ROE and Long and Short term debt to Total Assets, whereas there is no significant relationship between ROE and Debt upon Equity, EPS on capital structure in the selected banks. As the scope of study is limited to selected banks, a further research could be measured by analyzing the reports of more banks for a period of time.

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Sources of Data:

For the purpose of study the data were obtained from annual report of concerned banks, www.moneycontol.com . Axis Bank, HDFC Bank, SBI bank, ICICI bank& Kotak Mahindra Bank are the sample banks.