Effect of Capital Structure on the Financial Performance of Nifty 50 Companies

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Abstract: Capital structure is a significant factor which affects the financial performance of the company. The aim of this study is to understand how capital structure affects the financial performance of the companies included in Nifty index. Data of Nifty 50 companies have been studied for a period of five years from 2017-18 to 2021-22. The independent variable Debt-Equity ratio has been considered to measure the capital structure. While return on assets (ROA), return on equity (ROE), return on capital employed (ROCE) and earnings per share (EPS) have are the dependent variables hypothesized to measure the financial performance. Correlation and Regression have been used to examine the effect of Debt Equity Ratio. The study also examines the return on assets, return on capital employed, return on equity as well as earnings per share with a view to infer the financial performance of the company's.

1 INTRODUCTION

Capital Structure decision is one of the key decisions that the management has to take. The companies use equity shares, debentures, retained earnings, short term loans to finance its capital requirements. These funds are invested in assets – long term and short term. The companies aim to maintain an optimum capital structure. An optimum capital structure will help to maximize the value of the firm and minimize the cost of capital. The capital structure decisions affect the financial performance of the company. Various researchers in the past have reported combined effect of leverage-capital structure on the financial performance of the companies. The current study aims to observe the relationship between the leverage–capital structure and financial performance of the Nifty 50 companies for a period of five years from 2017-18 to 2021-22. Debt-Equity (D/E) ratio has been applied to measure leverage and the ratios - Return on Assets (ROA), Return on Capital Employed (ROCE), Return on Equity (ROE) and Earnings Per Share (EPS) has been applied to measure financial performance.

2 LITERATURE REVIEW

A number of theoretical and empirical studies have been done to examine the effect of capital structure on the company's performance. Modigliani and Miller hypothesis points out that the capital structure is irrelevant to value of company's and cost of capital. Under the assumptions of perfect capital markets, value of the company's is independent to capital structure. Further, the M-M hypothesis propounded that the return generated by debt financing is exactly offset by the risk incurred regardless of the capital structure mix. "According to the trade-off theory, optimum capital structure is a trade-off between the interest tax shield and the cost of financial distress." Agency cost theory explains the conflicts among shareholders, debt holders and management. This creates the agency problem which results into agency costs. Agency costs have significant influence on the company's capital structure.

A number of empirical studies have been conducted to examine the effect of capital structure on the company's performance. *Ebrati, Emadi, Balasang, & Safari (2013)* concluded that "Return on Capital Employed, Market value of equity/ Book value of equity and Tobin's Q are positively related to capital structure and Return on Assets and EPS are negatively related to capital structure. "*Goyal (2013)*

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investigated the influence of capital structure on the financial performance of banking companies listed on the National Stock Exchange. The research summarized that short term debt to capital ratio has a positive effect on return on equity, return on assets and earnings per share while the long-term debt to capital ratio has a negative effect on Return on Equity, Return on Assets and Earnings per Share.

Javed & Yoanus (2014) analyzed the influence of capital structure on firm's performance. The results indicated a mixed relationship between the capital structure and firm performance. The studies by *Vatavu (2015)* indicated that performance of the Romanian companies is higher when they do not use the debt in their capital structure. Use of equity capital in the capital structure results into favourable effect on financial performance indicators while the use of debt shows negative relationships with Return on Equity and Return on Assets. *Emin (2016)* concluded that both short term debt and long-term debt have a significantly negative effect on Return on equity and Return on Assets. *Abubakar (2016)* concluded that there is a significant positive effect of short-term debt ratio and long-term debt ratio on the return on equity while total debt ratio has a significant negative effect on return on equity. According the research done by *Sinha (2017)*, leverage has significantly negative effect on Tobin's Q ratio while it does not have significant effect on ratio of Enterprise Value to Profit before Interest, Depreciation and tax. C*handra &Udhayakumar (2018)* research indicated that ratio of interest-bearing debt to fixed assets do not significantly affect the EBIT margin and return on assets The results of panel data model concluded that leverage significantly does not affect the company's performance. *Sudharika, De Silva, Madhusankha &Siriwardhana* (2018) examined the effect of capital structure on the company's financial structure on the financial performance of 39 Hotels and Travel sectors companies listed on the Columbo Stock Exchange The company's structure has been measured through Debt-Equity Ratio and the company's performance is measured through Return on Capital Employed, Earnings per share and Tobin's Q. The debt equity has significant negative effect on the company's performance. *Pal (2022)* studied that effect of leverage on the company's performance. The results indicated that short term debt and long-term debt has negative effect on the company's performance across all sectors. While the other independent variables had a mixed effect on the company's performance.

To summarize, some of the previous empirical studies show the positive effect of leverage on financial performance of the company's whereas some shows the negative effect of leverage on the financial performance of the companies. The effect of capital structure or leverage on the financial performance of the company's has always been debatable. This has been the reason for which the present study has been undertaken.

2.1 Objectives of the Study

To investigate how the capital structure of a company affects the financial performance of company

2.2 Research Methodology

Sample Selection: The sample of the study consists of the Nifty 50 companies. Since the financial performance analysis of the banking and financial services sector is different from the other companies, these companies have been excluded. The study covers the data of 39 companies for a period of five years from the year 2017-18 to 2021-22. The relevant financial data have been collected from the annual reports and websites of companies and various websites.

Variables for the Study: The measurement of company's performance is debatable as there are various dimensions of performance measurements, both financial and non-financial. The present study considers the financial performance. The financial performance measures the performance in terms of profitability, return on investment and return on assets.

Dependent Variables: Return on Assets (ROA), Return on Equity (ROE), Return on Capital Employed (ROCE) and Earnings per Share (EPS)

Independent variable: Debt Equity (D/E) ratio

2.3 Research Hypothesis

Following hypothesis has been developed to study the effect of capital structure on company's performance.

1. H_0 – D/E Ratio does not significantly affect ROA
2. H_0 – D/E Ratio does not significantly affect ROE
3. H_0 – D/E Ratio does not significantly affect ROCE
4. H_0 – D/E Ratio does not significantly affect EPS

2.4 Methodology

In order to study the relationship between capital structure and company's performance, Correlation

analysis has been employed. Further, to study the effect of D/E ratio on the ROA, ROE, ROCE and EPS, Regression Analysis has been employed.

2.5 Analysis and Discussion

Correlation Analysis: The results in Table-1 show the results of the Correlation Analysis. The results indicate that there is a negative relationship between the D/E ratio and all the financial performance parameters – EPS, ROE, ROCE and ROA.

Table 1: Correlation Matrix.

	Total D/E (X)	EPS	ROE	ROCE	ROA
Total D/E (X)	1				
EPS	-0.290730893	1			
ROE	-0.341513031	0.267032692	1		
ROCE	-0.436361331	0.268791632	0.905769	1	
ROA	-0.515362046	0.244134577	0.870973	0.89004	1

Table 2: Regression of ROA on D/E.

Independent Variable	Dependent Variable: Return on Assets		
	Co-efficient	P-Value	R-Square
D/E Ratio	-11.1120011	*0.000929062	0.265598038

Table 3: Regression of ROE on D/E.

Independent Variable	Dependent Variable: Return on Equity		
	Coefficient	P-Value	R-Square
D/E Ratio	-13.1995055	*0.035864863	0.11663115

Table 4: Regression of ROCE on D/E.

Independent Variable		Dependent Variable: Return on Capital Employed	
	Coefficient	P-Value	R-Square
D/E Ratio	-13.96707688	*0.006165708	0.190411211

Table 5: Regression of EPS on D/E.

Independent Variable		Dependent Variable: Earnings Per Share	
	Coefficient	P-Value	R-Square
D/E Ratio	- 52.68350626	0.076595581	0.084524452

The above correlation matrix indicates that there is a moderate negative relationship between D/E ratio and EPS and ROE whereas there is a strong negative relationship between D/E ratio and ROCE and ROA.

Regression Analysis

The regression analysis is run to find the effect of the independent variable - D/E ratio on the dependent variables – ROA, ROE, ROCE and EPS. According to the regression results in Table II, we fail to accept the null hypothesis and conclude that D/Eratio significantly affects ROA. R-square of 0.2655 explains that around 26.55% changes in ROA are explained by D/Eratio. When D/Eratio decreases by I unit, ROA will increase by 11.11. According to the regression results in Table III, we fail to accept the null hypothesis and conclude that D/E ratio significantly affects ROE. R-square of 0.1166 explains that around 11.66% changes in ROE are explained by D/E ratio.

When D/Equity ratio decreases by I unit, ROA will increase by 13.20

According to the regression results in table IV, we fail to accept the null hypothesis and conclude that D/E equity ratio significantly affects ROCE. R-square of 0.1904 explains that around 19.04% changes in ROCE are explained by D/E ratio. When D/E ratio decreases by 1 unit, ROCE will increase by 13.96. According to the regression results in Table V, we accept the null hypothesis and conclude that D/E Ratio does not significantly affect the EPS.

3 DISCUSSIONS

The study examined the relationship between the (D/E ratio and the various dependent variables – ROA, ROE, ROCE and EPS. The results of correlation analysis suggest a negative relationship between the capital structure and the financial indicators measured by ROA, ROE, ROCE and EPS. The regression analysis results point out a significant effect of D/E ratio on ROA, ROE and ROCE.These results are in line with the previous studies conducted by Ebrati, Emadi, Balsang and Safari (2013), Vatavu (2015), Emin (2016), Sudhrika, De Silva, Madhu Sankha and Siriwardhana (2018). The results of the study are in contradiction to the study done by Chandra and Udaykumar (2018) which concluded that leverage significantly do not affect the company's performance.

4 CONCLUSIONS

The study has been conducted to study the effect of capital structure on the financial performance of the Nifty 50 companies. Out of Nifty 50companies, the data of 39 companies have been analysed for a period of 5 years from 2017-18 to 2021-22. The banking and financial services companies have been excluded from the study. The results of correlation show negative relationship between capital structure and financial performance. The regression results suggest significant effect of capital structure on the financial performance of the Nifty 50 companies.

REFERENCES

Avcı, E. (2016). Capital Structure and Company's Performance: An Application On Manufacturing Industry. Marmara Universitesi İktisadi ve İdari Bilimler Dergisi , 38 (1) , 15-30 . DOI: 10.14780/iibd.81334

Abubakar, A. (2016). Financial Leverage and Financial Performance: Evidence from the Health Care Sector of the Nigerian Stock Exchange from 2005-2014 Financial Management View project Corporate Social Responsibility and Profitability of Listed Oil and Gas Company's in Nigeria View project. https://www.researchgate.net/publication/321797869

Chandra, K. S., & Udhayakumar, C. S. (2018). *Effect of Capital Structure on Company's Performance: Evidence From India*. http://acadpubl.eu/hub

Ebrati, M. R., Emadi, F., Balasang, R. S., & Safari, G. (2013). The Effect of

Capital Structure on Company's Performance: Evidence from Tehran Stock Exchange. *Australian Journal of Basic and Applied Sciences*, *7*(4), 1–8.

Goyal, A. M. (2013). Effect of Capital Structure on Performance of Listed Public Sector Banks in India. In *International Journal of Business and Management Invention ISSN* (Vol. 2). www.ijbmi.org

Javed, T., Younas, W., & Imran, M. (2014). Effect of Capital Structure on Company's Performance: Evidence from Pakistani Company's. *International Journal of Academic Research in Economics and Management Sciences*, *3*(5). https://doi.org/10.6007/ijarems/v3-i5/1141

Pal, S. (2022). Influence of Capital structure on Company's Performance: Empirical Evidence from Indian Manufacturing Industry. *International Journal of Business Management and Finance Research*, *5*(2), 100–110. https://doi.org/10.53935/26415313.v5i2.244

Sinha, A. (2017). An Enquiry into Effect of Capital Structure on Company's Value:A Study of Power Sector Companies in India. *Parikalpana: KIIT Journal of Management*, *13*(2), 107. https://doi.org/10.23862/kiit-parikalpana/2017/v13/i2/164525

Sudharika, W. A. K. L., de Silva, R. M., Madhusankha, G. T., Madhushanka, Y. v, & Siriwardhana, L. L. (2018). *The effect of capital structure on company'ss' performance: Evidence from companies listed in the Hotels and Travels Sector of Colombo Stock Exchange*.