

THE IMPACT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF DIFFERENT SECTORS IN INDIA**Kavita Rani****Doctoral Scholar****Chaudhary Devi Lal University, Sirsa (Haryana)****ABSTRACT**

The capital structure is a very important subject in the field of financial management because it partly affects its financial performance. The main aim of conducting this study was to investigate the impact of capital structure (Debt, Equity ratio) on financial performance measured by EPS, Return on Investment, Capital Turnover, Debt to Net Worth, Net Profit Ratio, Return on Capital Employed and Return on Equity. On the basis of objectives the data from mainly three sectors were taken from 2003-2012 of 60 listed companies taken from automobile, electronic and metal industries. The analysis was done by applying correlation and regression statistics. The findings indicated that the capital structure has a no significant impact on financial performance in the automobile sector on the other hand electronic and metal sector had shown that financial performance was significantly affected by capital structure. An insignificant either negative or positive relationship was observed between dependent and independent variables.

KEYWORDS- Capital Structure, Financial Performance, Automobile Sector, Electronic Sector and Metal Sector.

INTRODUCTION

Capital structure plays a vital role in financial decision making process, maximizing the firm's performance and its value. The term capital structure is the mix of different securities issued by firms for raising funds. Funds used for firms' operations generated through internally as well as externally. When raising funds externally, firms choose between equity and debt. The overall objective of the companies is to reduce the cost of capital when capital structure decision taken into account, so that value maximizations of the companies. Determinants of capital structure are mainly short term debt to capital ratio, long term debt to capital ratio and total debt to capital ratio (Muhammad, Ammar and Muhammad, 2013). Usually, capital structure policy depends upon the company's size, ownership, profitability, various costs, earning growth and liquidity of a company's assets (Faruk and Ayub, 2012). In developing countries optimum benefits of the debt and equity depending upon the managers that are engaged in the management of the financial issues of the company. Most of the effort of financial decision making process is centered on the determination of the optimal capital structure of a firm. Kochhar (2006) defines capital structure as a mixture of financial liabilities (debt and equity) that is used to finance the operations of a firm. Different theories have been proposed to explain the optimal mix of debt and equity. The theories suggested that firms select their capital structure depending on attributes that determine the various costs and benefits associated with debt and equity financing.

The origin of capital structure theory begins with Modigliani & Miller (1958), capital structure theories operates under perfect market. They argue that under various assumptions of perfect capital market, such as investors, homogeneous expectations, no taxes, no transaction costs, and efficient market, the capital structure is irrelevant in determining firm's value. Therefore, Modigliani & Miller (MM) theorem is famous for "Theory of irrelevance" of capital structure and reveals that capital structure is independent of firm performance. They conclude that firms are encouraged to use debt in their capital

structure, because tax regulation allows firms to deduct debt interest payments as an expense. The main focus of this study is that three main industries are taken of Indian market to analyze the impact of capital structure decisions on firm performance in the automobile, electronic and metal industry, which is considered capital intensive industry where optimal capital structure decisions are primarily to the firm performance. The current study uses debt/ equity to measures capital structure.

REVIEW OF LITERATURE

Based on literature review there is a great number of research which intends to enlighten the relationship between capital structure and firm performance, empirical evidence yields contradictory and inconsistent findings. Empirical results and arguments have gone both ways. Some researchers document that there is positive relationship between capital structure and firm performance, whereas others are in opposition by arguing that there is a negative effect on firm performance. For instance, Modigliani and Miller (1963) modified an earlier capital structure irrelevance theory in which they argued that capital structure really does matter in determining the value of a firm. The theory was based on the argument that the use of debt offers a tax shield. Based on this assertion, firms could opt for an all-debt capital structure. Brigham and Gapenski (1996), however, contend that the Miller-Modigliani (MM) model is true only in theory, because in practice, bankruptcy costs exist and will even increase when equity is traded off for debt. Jaisawal, B., Srivastava, N. And Sushma (2013) studied the relationship of the capital structure and financial performance of companies in the cement industry in India. The study indicated that there is a weak positive correlation between capital structure and two determinants of performance GPR and ROE. A linear regression model had been developed to estimate the effect of variation in the capital structure to the variability in the firms' financial performance. The result showed that there was negative and low degree of relationship between firms' capital structure and its financial performance. Kondongo, O., Mokoteli, T. and Leonard N. (2014) investigated the relationship between leverage and the financial performance of listed firm in Kenya by using annual data for the period 2002 – 2011. Using various panel procedures the study found reasonably strong evidence that leverage significantly, and negatively, affects the profitability of listed firms in Kenya. The findings suggested that asset tangibility, sales growth and firm size are important determinants of profitability and asset tangibility consistently had a negative relationship with profitability.

Khalifa, M. (2014), aimed to analyze the effect of capital structure on financial performance. Secondary data were collected from financial statements of 30 Energy American firms for a period of nine years from 2005 – 2013 was considered. Which were taken from online. For profitability, return on assets (ROA) as the ratio of net income to total assets, and return on equity (ROE) as the ratio of net income to total shareholders' equity were adopted as a proxy for financial performance; and to indicate capital structure, short-term debt, long-term debt, total debt, debt to equity ratio, and the firm's size were used. The data were analyzed by using Smart Partial Least Square. Multiple regressions indicated that 10% of ROE and 34% of ROA were predicted by the independent variables. Findings presented that the total debt has a significant negative impact on ROE and ROA, while size in terms of sales has significantly negative effect only on ROE of the American firms. Khanam, F., Nasreen, S. and Pirzada, S. (2014) found the impact of capital structure on firm's financial performance in the food sector. Firm's performance was measured by using the five dependent variables which were returned on assets, earnings per share, net profit margin, return on equity, and return on capital employed. Quantitative data was gathered from annual reports of 49 firms in food sector listed on the Karachi stock exchange in Pakistan over the six years from 2007-2012. Descriptive statistical analysis was applied to find the level of capital structure used in the food sector of Pakistan and to find the performance of firms. Linear Regression analysis was used to discover the impact of capital structure on the financial performance of firms. The results of correlation analysis found that significant negative relationship exists between capital structure and financial performance of firms in the food sector of Pakistan. Therefore, it is concluded that capital structure had a significant negative impact on financial performance of firm in the food sector of Pakistan.

Younus et.al (2014) attempted to identify the impact between capital structure and performance in which core area is the financial performance of sugar companies listed on Karachi Stock Exchange, Pakistan (KSE Pakistan). The data were utilized from company's financial reports, annual reports and state bank of Pakistan (SBP) Financial review for the period of six years (2006-2011). There was weak positive correlations in gross profit and capital structure (. 059) and also had a weak positive correlation in net profit and capital structure variables (. 033) and also showed the low financial cost in the companies. The results showed that there was a weak positive correlation between capital structure and financial performance in 0.354. Coefficient of determination was.125. F and T values were 28.060 and -5.297 respectively, which showed insignificant levels of the sugar companies listed in KSE Pakistan.

Muhammad, H., Shah, B and Islam, Z. (2014) investigated the impact of capital structure on firm performance of cement companies listed on the Karachi Stock Exchange during the period 2009-2013. The authors hypothesized that there was a negative relationship between capital structure and firm performance. Pearson correlation and multiple regression analysis were used to analysis the data. Results revealed a strong negative relationship between debt to asset and firm performance variables (GPM, NPM, ROA, and ROE), a positive relationship between debt to equity and firm performance variables (GPM and NPM), and a negative relationship between debt to equity and firm performance variables (ROA and ROE). Moreover, capital structure variables significantly impact firm performance. This study concluded that financial analysts and managers should emphasize on the optimal level of capital structure and efficient utilization and allocation of resources to achieve the targeted level of productive efficiency in business. Sekar, M., Gowri, M. and Ramya, G. (2014), examined the influence of capital structure on the performance of the company measured by using EBIT-EPS analysis. The study attempted to analyze the capital structure of Tata Motors Limited during the period 2003-04 to 2012-2013, so as to understand the factors that influenced the capital structure decisions of the company and to know the impact of capital structure decisions on profitability and performance of the company. It is also found that ROE and the value of the firm is positively correlated. And there is also a positive correlation between the value of equity and value of the firm. & Value of debt and the firm is also positively correlated. Mwangi, M. and Birundu, E. (2015) studied the effect of capital structure on the financial performance of SMEs in Thika sub-county, Kenya. The study was conducted on 40 SMEs which were in operation for the five years 2009 to 2013, using multiple linear regression. The study was found that there was no significant effect of capital structure, asset turnover and asset tangibility on the financial performance of SMEs in Thika sub-county, Kenya, especially the non-existence of a significant relationship between ROA and capital structure would tend to support the pecking order theory of capital structure which argues that there does not exist an optimum leverage for firms. Githire, C. and Muturi, W. (2015) examined the effect of capital structure on the performance of firms listed on the Nairobi Securities Exchange. The study used the data of firms listed on the Nairobi Securities Exchange and a census of all firms listed on the Nairobi Securities Exchange from year 2008-2013 was the sample. Secondary data were obtained from the published annual reports and financial statements of the listed companies at the NSE covering the years 2008 to 2013. Multiple regression analysis method was used to analyze and test the hypotheses. The findings showed that equity and long term debt had a positive and significant effect on financial performance, while short term debt had a negative and significant effect on financial performance. Julius et.al. (2015) aimed to determine the impact of post consolidation capital structure on the financial performance of Nigeria quoted banks. The study used profit before tax as a dependent variable and two capital structure variables (equity and debt) as independent variables. The required data and information for the study were gathered from published annual reports. The sample for the study consists of ten (10) Nigerian banks quoted on the Nigerian Stock exchange (NSE) and period of eight (8) years from 2005 to 2012. Least square regression analysis of secondary data shows that capital structure had a significant positive relationship with the financial performance of Nigeria quoted banks. This suggested that the management of quoted banks in Nigeria consistently uses debt and equity capital in financing to improve earnings. The findings of the study showed that the correlation between bank financial performance and

equity is strong and positive at 0.894 (89.4%) and the correlation between bank financial performance and debt is strong and positive at 0.638 (63.8%). The overall result showed that 87.5% of the variation in bank financial performance was explained by capital structure (equity and debt).

OBJECTIVES OF THE STUDY

1. To study the determinants of a capital structure.
2. To evaluate the relationship between capital structure and financial performance.
3. To study the impact of capital structure on financial performance.

HYPOTHESIS

The following are the hypothesis of the study:

H_{01} = There is no significant relationship between capital structure and financial performance.

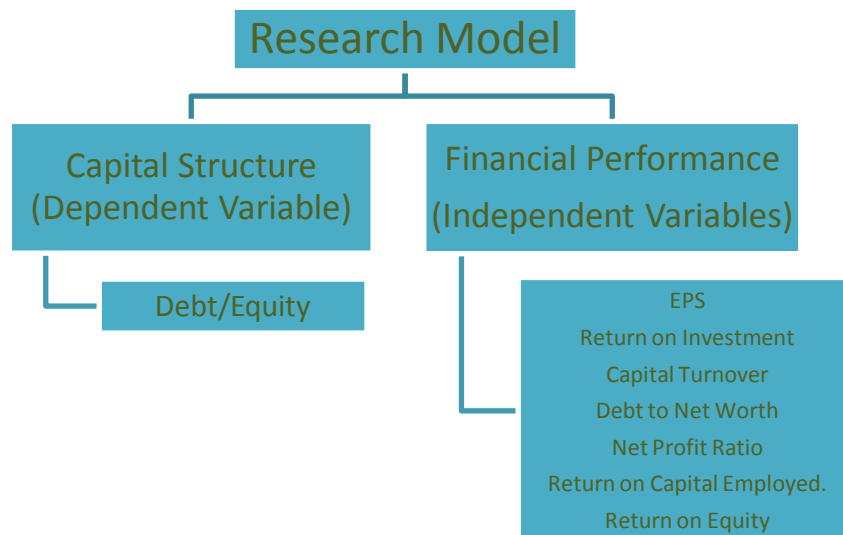
H_{02} = There is no significant impact of capital structure on financial performance.

RESEARCH METHODOLOGY

The methodology of this study will include research design, nature and sources of data and also the techniques used in the analysis were also outlined. The effect of capital structure on firms' performance using the model specification with some specific variables.

Research Design and Conceptual framework:

The impact and relationship of capital structure and financial performance has been evaluated by taking debt/equity as dependent variable and independent variables as EPS, Return on Investment, Capital Turnover, Debt to Net Worth, Net Profit Ratio, Return on Capital Employed.



Data Collection:

The research is conducted by using the data gathered of financial statements of selected companies using PROWESS. In addition, another source of data was through reference to the review of different journals, papers, articles and relevant previous studies of listed companies on Bombay Stock Exchange. The target

population for the study consists of the total companies listed on the Bombay stock exchange which totals up to 60 companies of 3 sectors such as Automobile, Electronic and Metal. The sample period is ten years from 2003 to 2012. All firms are taken for the study representing the period of 2003-2012, and the average values of each item were considered for the purpose of ratio computation and analysis. Hence our study is a cross-sectional time series analysis as it enabled us to study the behaviors of these firms across each other over a long period of time.

Methods of Data Analysis:

The method of data analysis used in this research work is the descriptive, correlation and regression technique. In order to test the hypotheses concerning the relationship between the dependent and independent variables MS – Excel and IBM SPSS Statistics 19 has been used. Multiple regression and correlation analysis were used to determine the nature and significance of the relationship between changes in the response variable and change in the predictor variables (determinants) identified in the study. The regression equation model was as below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \epsilon$$

Where:

Y= Dependent Variable (Debt Equity Ratio)

X1= EPS (Earning per Share)

X2= Return on Investment (PAT/ Shareholder Funds*100)

X3= Capital Turnover (Sales/Capital Employed*100)

X4= Debt to Net Worth (Debt/Net Worth*100)

X5= Net Profit Ratio (PAT / Sales*100)

X6= Return on Capital Employed (PBT/Capital Employed*100)

X7= Return on Equity (PAT/Net Worth*100)

β_0 = Constant

ϵ = error term

ANALYSIS AND INTERPRETATIONS

The analysis of the specific model is done through correlation and regression analysis of different sectors which are given below:

AUTOMOBILE SECTOR:

Table No. 1.1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Debt Equity Ratio	20	.0950	5.0333	.917067	1.0663336
EPS	20	3.2060	450.9780	58.469683	108.0655589
Return on Investment	20	4.6040	50.5366	20.736867	11.6089960
Capital Turnover	20	.2744	4.3891	2.180818	.9440991
Debt to Net Worth	20	5.8175	123.7110	59.477829	39.4957443
Net Profit Ratio	20	1.4448	14.7185	7.054023	3.5111824
Return on Capital Employed	20	2.9027	58.8915	21.797838	15.1218089
Return on Equity	20	4.6260	50.5370	20.745550	11.6040182
Valid N (list wise)	20				

As indicated in table no.1.1, the mean value of EPS and Debt to Net Worth is highest for the observations of 20 companies was 58.469683, 59.477829 with a standard deviation of 108.0655589, 39.4957443 and minimum and maximum values of 3.2060, 5.8175 and 450.9780, 123.7110 respectively. This indicates that some of companies of automobile sector were able to earn profits by using debt with equity. The mean value of Debt equity ratio and capital turnover were .917067, 2.180818 with a standard deviation of 1.0663336, .9440991 and minimum and maximum values of .0950, .2744 and 5.0333, 4.3891 respectively, for observations of 20 companies of automobile sector this indicates that some companies are not having enough knowledge of how to use debt with equity, but the overall capital structure has shown a significant effect on the financial performance of automobile sector.

Table No. 1.2, Correlation Matrix (Automobile)

	<i>Debt Equity Ratio</i>	<i>Return on Invest ment EPS</i>	<i>Capital Turnove r</i>	<i>Debt to Net Worth</i>	<i>Net Profit Ratio</i>	<i>Return on Capital Employed</i>	<i>Return on Equity</i>
<i>Debt Equity Ratio</i>	1.000						
<i>EPS</i>	-.161	1.000					
<i>Return on Investment</i>	.006	-.004	1.000				
<i>Capital Turnover</i>	-.078	.184	.591	1.000			
<i>Debt to Net Worth</i>	.073	-.225	-.429	-.592	1.000		
<i>Net Profit Ratio</i>	.092	-.070	.483	-.245	-.227	1.000	
<i>Return on Capital Employed</i>	.041	.135	.927	.658	-.697	.475	1.000
<i>Return on Equity</i>	.006	-.004	1.000	.590	-.429	.484	.927

Sample Size = 20

± .444 critical value .05 (two-tail)

± .561 critical value .01 (two-tail)

Table 1.2 indicates that in automobile sector companies having return on investment is most significantly correlated with return on equity and return on capital employed is highly correlated with return on equity and return on investment with the highest value of .927. The values with negative sign shows that they are negatively correlated.

Table No. 1.3

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.464 ^a	.216	-.147	1.1417784	1.246

a. Predictors: (Constant), Return on Equity, EPS, Debt to Net Worth, Net Profit Ratio, Capital Turnover, Return on Capital Employed

b. Dependent Variable: Debt Equity Ratio

Table no. 1.3 The model summary reveals that correlation coefficient R, using all the predictors simultaneously is 0.464, R Square = 0.216 and the adjusted R Square is -.147 that indicate -14.7% of the variance in debt to equity (Dependent Variable) can be predicted from Independent Variables (EPS, Return on Investment, Capital Turnover, Debt to Net Worth, Net Profit Ratio, Return on Capital Employed, Return on Equity), whereas the remaining 85.3% influenced by others which are not considered for this study. The table further uses Durbin Watson statistic to find out the existence of autocorrelation in the residuals. Durbin Watson values are between 1 and 3, then there is no autocorrelation problem. As shown in the table, Durbin Watson value is 1.246, which represents no autocorrelation problem in the regression models.

Table No. 1.4

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.657	6	.776	.595	.729 ^a
	Residual	16.948	13	1.304		
	Total	21.604	19			

a. Predictors: (Constant), Return on Equity, EPS, Debt to Net Worth, Net Profit Ratio, Capital Turnover, Return on Capital Employed

b. Dependent Variable: Debt Equity Ratio

In table 1.4 it shows that overall F statistics is .595 with a sig. value of .729 >.05 which accept the null hypothesis that there is no impact of capital structure on financial performance.

Table No. 1.5

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF

1	(Constant)	-1.248	2.530		-.493	.630	-6.714	4.218		
	EPS	-.003	.003		-.307	-.281	-.009	.003	.810	1.234
	Capital Turnover	.210	.766		.186	.274	-.789	1.865	.131	7.626
	Debt to Net Worth	.028	.018		1.023	1.541	.147	-.066	.137	7.299
	Net Profit Ratio	.047	.168		.155	.280	.784	-.315	.409	5.050
	Return on Capital Employed	.179	.105		2.545	1.711	.111	-.047	.406	.027
	Return on Equity	-.193	.119		-2.099	-.129	-.450	.064	.036	27.729

a. Dependent Variable: Debt Equity Ratio

Table 1.5 indicates the regression analysis between dependent variable (debt to equity) and independent variables (Return on Equity, EPS, Debt to Net Worth, Net Profit Ratio, Capital Turnover, Return on Capital Employed) in automobile sector. In this t- value is not greater than 2 and sig. value is not less than .05 that's why null hypothesis is accepted, there is no relationship between capital structure and financial performance. The beta coefficient shows that Debt to net worth and return on capital employed are significantly predicting debt to equity when all variables included. It also indicates collinearity statistics where tolerance and VIF give the same information (Tolerance = 1/VIF). If the tolerance value is low (< 1-R²), then there is probably a problem with multicollinearity. The tolerance value is 0.784 (1-R²) which shows no problem with multicollinearity except EPS.

ELECTRONIC SECTOR:

Table No. 2.1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Debt Equity Ratio	20	.0080	3.7640	.656825	.8204053
EPS	20	-1275.9843	79.9160	-48.872739	289.8442703
Return on Investment	20	-45.6730	24.0970	9.157000	18.4809905
Capital Turnover	20	-8.0960	47.8760	36.339500	11.6456222
Debt to Net Worth	20	.3390	315.2180	68.360050	88.2482676
Net Profit Ratio	20	-52.3360	175.2460	30.913700	40.8485419
Return on Capital Employed	20	-12.9610	37.5380	14.422000	12.6580537
Return on Equity	20	-58.0000	24.0970	8.005250	21.9079909
Valid N (list wise)	20				

As indicated in table no. 2.1, the mean value of Capital Turnover and Debt to Net Worth is highest for the observations of 20 companies was 36.339500 and 68.360050 with a standard deviation of 11.6456222 and 88.2482676 and minimum and maximum values of -8.0960, .3390 and 47.8760, 315.2180 respectively. This indicates that some of companies of Electronic sector were able to earning profits. The mean value for EPS was -48.872739 with a standard deviation of 289.8442703 and minimum and maximum values of -1275.9843 , and 79.9160 respectively for observations of 20 companies of Electronic sector this

indicates that some companies are not having enough knowledge of how to use debt with equity the negative minimum value observation for EPS signifies that some companies were operating at a loss. On an average in electronic sector companies are operating losses this indicates that financial performance of electronic is not showing sound position.

Table No. 2.2

Correlation Matrix (Electronic)

	<i>Debt Equity Ratio</i>	<i>EPS</i>	<i>Retur n on Invest ment</i>	<i>Capital Turnov er</i>	<i>Debt to Net Worth</i>	<i>Net Profit Ratio</i>	<i>Return on Capital Employed</i>	<i>Return on Equity</i>
<i>Debt Equity Ratio</i>	1.000							
<i>EPS</i>	-.268	1.000						
<i>Return on Investment</i>	-.759	.728	1.000					
<i>Capital Turnover</i>	-.529	.919	.869	1.000				
<i>Debt to Net Worth</i>	.883	-.679	-.923	-.850	1.000			
<i>Net Profit Ratio</i>	-.275	-.800	-.187	-.552	.171	1.000		
<i>Return on Capital Employed</i>	-.768	.550	.792	.802	-.861	-.073	1.000	
<i>Return on Equity</i>	-.858	.610	.979	.781	-.939	-.040	.783	1.000

Sample Size = 20

± .444 critical value .05 (two-tail)

± .561 critical value .01 (two-tail)

Table 2.2 indicates that in electronic sector companies having return on equity is most highly positively correlated with return on investment (.979) and negatively correlated with debt to net worth (-.939). Net profit ratio has shows least negative relationship with return on capital employed (-.073) and Return on equity (-.040).

Table No. 2.3

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.994 ^a	.988	.981	.1119689	1.887

a. Predictors: (Constant), Return on Equity, Net Profit Ratio, Return on Capital Employed, Debt to Net Worth, Capital Turnover, EPS, Return on Investment

b. Dependent Variable: Debt Equity Ratio

Table no. 2.3 The model summary reveals that correlation coefficient R, using all the predictors simultaneously is 0.994, R Square = 0.988 and the adjusted R Square is .981 that indicate 98.1% of the variance in debt to equity (Dependent Variable) can be predicted from Independent Variables (EPS, Return on Investment, Capital Turnover, Debt to Net Worth, Net Profit Ratio, Return on Capital Employed, Return on Equity) in electronic sector, whereas the remaining 1.9% influenced by others which are not considered for this study. This shows a large effect. The table further uses Durbin Watson statistic to find out the existence of autocorrelation in the residuals. Durbin Watson values are between 1 and 3, then there is no autocorrelation problem. As shown in table, Durbin Watson value is 1.887, which represents no autocorrelation problem in the regression models.

Table No. 2.4

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.638	7	1.805	144.005	.000 ^a
	Residual	.150	12	.013		
	Total	12.788	19			

a. Predictors: (Constant), Return on Equity, Net Profit Ratio, Return on Capital Employed, Debt to Net Worth, Capital Turnover, EPS, Return on Investment

b. Dependent Variable: Debt Equity Ratio

In table 2.4 shows that overall F statistics is 144.005 with .000 sig. value so the analysis reject the null hypothesis, there is a significant impact of capital structure on financial performance. which indicates the combination of independent variables (Return on Equity, EPS, Debt to Net Worth, Net Profit Ratio, Capital Turnover, Return on Capital Employed) significantly predict debt to equity.

Table No. 2.5

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	-.402	.651		-.617	.549	-1.821	1.017		
EPS	.001	.001	.230	.638	.536	-.002	.003	.008	132.695
Return on Investment	.018	.026	.415	.706	.493	-.038	.075	.003	352.322

Capital Turnover	.012	.017	.174	.705	.494	-.026	.050	.016	62.389
Debt to Net Worth	.011	.002	1.149	5.346	.000	.006	.015	.021	47.141
Net Profit Ratio	-.003	.004	-.134	-.609	.554	-.012	.007	.020	49.571
Return on Capital Employed	-.003	.006	-.046	-.475	.643	-.017	.011	.106	9.393
Return on Equity	-.016	.020	-.431	-.795	.442	-.060	.028	.003	300.188

a. Dependent Variable: Debt Equity Ratio

Table 2.5 indicates the regression analysis between dependent variable (debt to equity) and independent variables (Return on Equity, EPS, Debt to Net Worth, Net Profit Ratio, Capital Turnover, Return on Capital Employed). The t- value of debt to net worth is 5.346 which is greater than 2 and sig. value is .000, this shows there is a significant relationship between debt to equity and debt to net worth, so null hypothesis is rejected on the other hand the other variables are insignificant so null hypothesis is accepted, there is no relationship between capital structure and financial performance except debt to net worth. The beta coefficient shows that return to investment and debt to net worth significantly predict debt to equity when all variables included. It also indicates collinearity statistics where tolerance and VIF give the same information (Tolerance = 1/VIF). If the tolerance value is low ($< 1-R^2$), then there is probably a problem with multicollinearity. The tolerance value is 0.012 ($1-R^2$) which shows there is multicollinearity problem with Capital Turnover, Debt to Net Worth, Net Profit Ratio, Return on Capital Employed.

METAL SECTOR:

Table No. 3.1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Debt Equity Ratio	20	.0000	10.3400	1.400350	2.2782984
EPS	20	-1.9770	105.3760	32.385800	25.7808546
Return on Investment	20	-43.8920	30.0890	14.389600	14.7845011
Capital Turnover	20	41.2870	288.0910	106.717250	61.0590930
Debt to Net Worth	20	.1720	1438.5110	138.104500	313.4505982
Net Profit Ratio	20	-7.3510	43.0830	12.136600	9.5585335
Return on Capital Employed	20	-5.5350	34.0690	16.134450	10.1066811
Return on Equity	20	-106.1340	30.0890	11.544500	28.2436689
Valid N (list wise)	20				

As indicated in table no. 3.1, the mean value of Capital Turnover and Debt to Net Worth is highest for the observations of 20 companies was 106.717250 and 138.104500 with a standard deviation of 61.0590930 and 313.4505982 and minimum and maximum values of 41.2870, .1720 and 288.0910, 1438.5110 respectively. This indicates Metal sector were using large amount of assets to debts and efficient in earning profits. The mean value for debt to equity was 1.400350 with a standard deviation of 2.2782984 and minimum and maximum values of .0000 and 10.3400 respectively for observations of 20 companies of Metal sector this indicates that most of the companies in metal sector are using equity instead of using

debt. The negative minimum value observation shows that some companies were operating at a loss. On an average in metal sector financial performance of the companies were affected by capital structure.

Table No. 3.2

Correlation Matrix (Metal)

	<i>Debt Equity Ratio</i>	<i>EPS</i>	<i>Retur n on Invest ment</i>	<i>Capital Turnov er</i>	<i>Debt to Net Worth</i>	<i>Net Profit Ratio</i>	<i>Return on Capital Employed</i>	<i>Return on Equity</i>
<i>Debt Equity Ratio</i>	1.000							
<i>EPS</i>	-0.135	1.000						
<i>Return on Investment</i>	-0.871	.396	1.000					
<i>Capital Turnover</i>	-0.122	-0.353	.211	1.000				
<i>Debt to Net Worth</i>	0.966	-0.213	-0.912	-0.117	1.000			
<i>Net Profit Ratio</i>	-0.558	.374	0.568	-0.351	-0.521	1.000		
<i>Return on Capital Employed</i>	-0.649	.040	0.689	.441	-0.614	0.605	1.000	
<i>Return on Equity</i>	-0.912	.361	0.982	.135	-0.960	0.532	0.609	1.000

Sample Size = 20

± .444 critical value .05 (two-tail)

± .561 critical value .01 (two-tail)

Table 3.2 indicates that in Metal sector return on equity is most highly positively correlated with return on investment (.982) and negatively correlated with debt to net worth (-.960) and with Debt to equity (-.912). Capital turnover has shows least negative relationship with debt to equity (-.122) and debt to net worth (-.040).

Table No. 3.3

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.973 ^a	.947	.917	.6583039	1.913

a. Predictors: (Constant), Return on Equity, Capital Turnover, EPS, Net Profit Ratio, Return on Capital Employed, Debt to Net Worth, Return on Investment

b. Dependent Variable: Debt Equity Ratio

Table no. 3.3 The model summary reveals that correlation coefficient R, using all the predictors simultaneously is 0.973, R Square = 0.947 and the adjusted R Square is .917 that indicate 91.7% of the

variance in debt to equity (Dependent Variable) can be predicted from Independent Variables (EPS, Return on Investment, Capital Turnover, Debt to Net Worth, Net Profit Ratio, Return on Capital Employed, Return on Equity) in metal sector, whereas the remaining 8.3% influenced by others which are not considered for this study. This also shows a large effect. The table further uses Durbin Watson statistic to find out the existence of autocorrelation in the residuals. Durbin Watson values are between 1 and 3, then there is no autocorrelation problem. As shown in table, Durbin Watson value is 1.913, which represents no autocorrelation problem in the regression models.

Table No. 3.4

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.422	7	13.346	30.796	.000 ^a
	Residual	5.200	12	.433		
	Total	98.622	19			

a. Predictors: (Constant), Return on Equity, Capital Turnover, EPS, Net Profit Ratio, Return on Capital Employed, Debt to Net Worth, Return on Investment

b. Dependent Variable: Debt Equity Ratio

In table 3.4 shows that overall F statistics is 144.005 with .000 sig. value so the analysis reject the null hypothesis, there is a significant impact of capital structure on financial performance. which indicates the combination of independent variables (Return on Equity, EPS, Debt to Net Worth, Net Profit Ratio, Capital Turnover, Return on Capital Employed) significantly predict debt to equity.

Table No. 3.5

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	.515	.761		.676	.512	-1.144	2.174		
EPS	.008	.009	.089	.839	.418	-.013	.028	.389	2.573
Return on Investment	-.026	.178	-.167	-.145	.887	-.414	.363	.003	304.738
Capital Turnover	.000	.007	-.005	-.027	.979	-.016	.016	.114	8.769
Debt to Net Worth	.008	.004	1.051	2.028	.065	-.001	.016	.016	61.086
Net Profit Ratio	-.024	.048	-.101	-.506	.622	-.128	.080	.110	9.116
Return on Capital Employed	.000	.046	-.001	-.006	.995	-.101	.100	.105	9.530
Return on Equity	.023	.116	.284	.197	.847	-.230	.276	.002	470.837

Coefficients^a

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Return on Equity	.023	.116	.284	.197	.847	-.230	.276	.002	470.837

a. Dependent Variable: Debt Equity Ratio

Table 3.5 indicates the regression analysis between dependent variable (debt to equity) and independent variables (Return on Equity, EPS, Debt to Net Worth, Net Profit Ratio, Capital Turnover, Return on Capital Employed). The t- value and sig. value shows there is a no significant relationship between capital structure and financial performance, so null hypothesis is accepted, there is no relationship between capital structure and financial performance. The beta coefficient shows that return on equity and debt to net worth significantly predicts debt to equity when all variables included. It also indicates collinearity statistics where tolerance and VIF give the same information ($Tolerance = 1/VIF$). If the tolerance value is low ($< 1-R^2$), then there is probably a problem with multicollinearity. The tolerance value is 0.053 ($1-R^2$) which shows multicollinearity in EPS, return on capital employed, net profit ratio and capital turnover.

FINDINGS AND CONCLUSIONS

The capital structure is a very sensitive subject in the field of financial management because it partly affects its financial performance. Thus, the intended aim of conducting this study was to investigate the impact of capital structure on financial performance. It was hypothesized that these factors are not significantly related with financial performance. The main result indicated that the capital structure has an insignificant impact on financial performance in the automobile sector on the other hand electronic and metal sector had shown that financial performance was significantly affected by capital structure. A significant either negative or positive relationship was observed between dependent and independent variables (Debt, Equity Ratio, EPS, Return on Investment, Capital Turnover, Debt to Net Worth, Net Profit Ratio, Return on Capital Employed and Return on Equity).

Limitation of the study: These results cannot be generalized because of a small size of the sample. So, it might be instructive to conduct the same or a similar study by analyzing other capital structure factors, such as taxation, and concentration.

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