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RESEARCH ARTICLE

A STUDY ON DETERMINATION OF CAPITAL STRUCTURE & IT'S IMPACT ON PROFITABILITY

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ABSTRACT

To study has been undertaken to determine the impact of various factors on the firm and its relationship and impact of the dependent and independent variables on capital structure. Dependent variables of Short Term Debt-Equity Ratio, Long Term Debt-Equity Ratio, Total Debt Equity Ratio and Independent variables profitability, Tangibility, Growth, Liquidity and Tax Rate. The hypothesis was formulated and tested on 5 variables viz profitability, tangibility, growth, liquidity and tax rate and five years (2011-2012 to 2015-2016) audited annual financial statements of 5 selected Indian Chemical Industries Company was consider. In future, before taking the financial decision the company should mainly focus on asset tangibility and liquidity. As it has a significant relationship with debt or borrowing of the company. The study also reveals that there was a more significant impact of short term debt-equity ratio and total debt equity ratio.

INTRODUCTION

"Determinants of capital structure – a study of selected pharma companies" – Bodla B.S. & Kaur Ravneet

Capital structure is fundamentally permanent long term financing of a firm. To study are identify a significant determinant of capital structure of the listed Pharmaceutical companies in NSE-BSE during the period from 1999 to 2013. In the relation to study determinants are considered on profitability, tangibility, growth, size, debt service capacity, tax rate, non-debt tax shields, financial leverage cost of debt and cost of equity. The study use correlations and multiple-regression analysis to find relationship between Debt-equity ratio (ex, Dependent variable) and determinants of capital structure (independent variables), The policy implication is that financial managers should consider this determinants as yard-sticks before taking the leverage decisions in order to choose the most favourable capital structure for the company so that it maximizes the share holders value.

"Determinants of capital structure: empirical evidence from chemical industry in india" - Jacob John and Jothi Jayakrishnan

The Financial literature stated that capital structure impacts the economic system of the company, myer & majulf. The study made the relationship between capital structure practices and its effects of 50th chemical companies in India for a period of six years from 2000 to 2013 was studied. It is found that the profitability, uniqueness and manufacturing resource are positive determine the capital stature. But, tax and retain earning are negative determine the capital stature. The chemical companies 67% of money spend their manufacturing related expenses.

"The determinants of capital structure: evidence from commercial banks in ethiopia" - Kibrom Mehari Fisseha and Aregawi Gebremichael

To study fill the gap by analysing the capital structure for commercial banks in Ethiopia. This paper approached the issues of capital structure by evidencing commercial banks in Ethiopia to uncover the firm levels determinant factors of capital structure. To discover what determines capital structure, 6 firm level explanatory variables (Profitability, Tangibility, Growth, and Tax Shield) were selected and regressed against the appropriate capital structure measure. A sample of seven commercial banks was taken and

secondary data were collected. Consequently, multivariate regression analysis was made based on financial statement data of the selected commercial banks over the study period of 2000 to 2009. The major finding of the study indicated that profitability, size, age and tax-shield variables are significant firm level determinants of capital structure in Ethiopian commercial banks case. In addition to this, the two variables (profitability & growth) established a negative relationship and the remaining four variables (tangibility and tax-shield) showed a positive relationship with capital structure. It is also revealed that there is consistency between profitability and Pecking order theory, tangibility and Static Trade-off theory, Pecking order theory and agency cost theory; both variables size and growth and Static Trade-off theory and Agency cost theory; and variables age and tax-shield and Static Trade-off Theory in Ethiopian commercial banking case.

“A study on determinants of capital structure and company performance” - M Rakesh & B Nalina

The capital structure is a manly important aspect. Capital structure is determined by many factors and consists of a particular mixture of debt and equity which are using by the firm in financial investments. The study is being carried out to know more about the determinants of capital structure and analyse the effect of determinants on company profitability. 13 years of data from 2000 to 2013 year have been considered for the study. The required study has using secondary data available in the company financial statement.

“Determinants of capital structure of indian textile industry– an empirical analysis” - N Suresh Babu & Chalam G.V.

To study investigates the factors determining the capital structure of the textile industry in the Indian context. Data collection was taken from secondary data source named as "Industry; financial aggregates and ratios" of a centre for monitoring Indian economy covering the period from 1997-1998 to 2010-2011 (14 years). The empirical results shows that the variables of size, growth, risk, non-debt tax shield and liquidity is a negative related with leverage and profitability and tangibility are a positive related with leverage. Profitability, tangibility and liquidity are statistically significant determinants of capital structure. While size, growth, risk, and non-debt tax shield are statistically insignificant determinants of capital structure. This results generally consisting of pecking order theory predictions as well as previous research papers.

Objective

- a. To analyze the determinants of capital structure.
- b. To analyze the determinants of profitability.
- c. To find out the relationship between capital structure and profitability.
- d. To find out the impact between capital structure and profitability.

Data Size

- a. Considering the 5 year data of particular 5 Firms for particular Chemical industries in India.
- b. Considering the particular 5firms for Chemical industries in India and its use for 5 year continuously data of 2011-2012 to 2015-2016.

Research Variable: There are many factors which impact the financial structure. But by examining the literature, the researcher has tackled the following main variables:

Dependent variables:

- A. Short Term Debt Equity Ratio:** Denotes leverage as a measure of Short Term Debt Equity Ratio and it is computed as short term debt divided by equity.
- B. Long Term Debt Equity Ratio:** Denotes leverage as a measure of Long Term Debt Equity Ratio and it is computed as long term debt divided by equity.
- C. Total Debt Equity Ratio:** Denotes leverage as a measure of Total Debt Equity Ratio and it is computed as total debt divided by total equity.

Independent Variables

- A. Profitability:** Denotes profitability which is measured by using the ratio of EBIT over total assets.
- B. Tangibility:** Denotes tangibility of assets which is measured by the ratio of net fixed assets to total assets.
- C. Growth:** Denotes Growth which is measured by the percentage change of total assets.
- D. Liquidity:** Denotes liquidity which is measured by the total current assets over current liability.
- E. Tax Rate:** Denotes Tax rate that is measured by tax provisional over profit before tax.

HYPOTHESIS

For Correlation

Model 1. Short Term Debt Equity Ratio

Null Hypothesis (H ₀)	Alternative Hypothesis (H ₁)
There is no significant relationship of Profitability, Liquidity, Tangibility, Growth and Tax Rate on short term debt-equity ratio.	There is a significant relationship of Profitability, Liquidity, Tangibility, Growth and Tax Rate on short-term debt-equity ratio.

Model 2: Long Term Debt Equity Ratio

Null Hypothesis (H0)	Alternative Hypothesis (H1)
There is no significant relationship of Profitability, Liquidity, Tangibility, Growth and Tax Rate on Long term debt equity ratio.	There is a significant relationship of Profitability, Liquidity, Tangibility, Growth, and Tax Rate on Long term debt equity ratio.

Model 3: Total Term Debt Equity Ratio

Null Hypothesis (H0)	Alternative Hypothesis (H1)
There is no significant relationship of Profitability, Liquidity, Tangibility, Growth, and Tax Rate on Total debt-equity ratio.	There is a significant relationship of Profitability, Liquidity, Tangibility, Growth, and Tax Rate on Total debt-equity ratio.

For regression**Model 1: Short Term Debt Equity Ratio**

Null Hypothesis (H0)	Alternative Hypothesis (H1)
There is no significant impact of investigating the impact of Profitability, Growth, Liquidity Tangibility and Tax Rate short term debt equity ratio.	There is a significant impact of investigating the impact of Profitability, Growth, Liquidity Tangibility and Tax Rate on short term debt equity ratio.

Model 2: Long Term Debt Equity Ratio

Null Hypothesis (H0)	Alternative Hypothesis (H1)
There is no significant impact of investigating the impact of Profitability, Growth, Liquidity Tangibility and Tax Rate on Long term debt-equity ratio.	There is a significant impact of investigating the impact of Profitability, Growth, Liquidity Tangibility and Tax Rate on Long term debt-equity ratio.

Model 3: Total Term Debt Equity Ratio

Null Hypothesis (H0)	Alternative Hypothesis (H1)
There is no significant impact of investigating the impact of Profitability, Growth, Liquidity Tangibility and Tax Rate on Total term debt equity ratio.	There is a significant impact of investigating the impact of Profitability, Growth, Liquidity Tangibility and Tax Rate on Total term debt equity ratio.

Features of Capital Structure

As stated by I.M. Pandey (2005), an appropriate capital structure should have the following Features:

- **Return:** The capital structure of the company should be most advantageous. Subject to other considerations, it should generate maximum returns to the shareholders without additional cost.
- **Risk:** The use of excessive debt threatens the solvency or liquidity of the company. To the point debt does not add significant risk it should be used as a source of capital, or its use should be avoided.
- **Flexibility:** The capital structure should be flexible. It should be possible for a company to adapter its capital structure with a minimum cost and delay if warranted by a changed situation. It should also be possible for the company to provide funds whenever needed to finance its profitable activities.
- **Capacity:** The capital structure should be determined within the debt capacity of the company, and this capacity should not be exceeded. The debt capacity of a company depends on its ability to generate future cash flows.
- **Control:** The capital structure should involve minimum risk of loss to control of the company. The owners of closely held companies are particularly concerned about dilution of control.

Data Analysis Techniques

The following models were used in data analysis techniques:

Correlation: In statistics, dependence or association is any statistical relationship, whether causal or not, between two random variables or two sets of data. Correlation is any of a broad class of statistical relationships involving dependence, though in common usage it most often refers to the extent to which 2 variables have a linear relationship with each other. Familiar examples of dependent phenomena include the correlation between the physical statures of parents and their offspring and the correlation between the demand for a product and its price. The main result of a correlation is called the correlation coefficient (or "r"). It ranges from -1.0 to +1.0. The closer r is to +1 or 1, the more closely the two variables are related. If r is close to 0, it means there is no relationship between the variables. If r is positive, it means that as one variable gets larger the other gets larger. If r is negative it means that as one gets larger, the other gets smaller often called an "inverse" correlation.

Regression

Regression is a statistical measure that attempts to determine the strength of the relationship between one dependent variable and a series of other changing variables known as independent variables.

Correlation Analysis

Aarti Industrial

		Profitability	Liquidity	GROWTH	Tax Rate	Tangibility
Short_Term_Debt_Equity_Ratio	Pearson-Correlation	-.388	-.971**	.940**	.288	-.490
	Sig. (1-tailed)	.260	.003	.009	.320	.201
	N	5	5	5	5	5
Long_Term_Debt_Equity_Ratio	Pearson-Correlation	.346	.929*	-.957**	-.397	.496
	Sig. (1-tailed)	.284	.011	.005	.254	.197
	N	5	5	5	5	5
Total_Debt_Equity_Ratio	Pearson-Correlation	-.464	-.895*	.628	-.250	-.335
	Sig. (1-tailed)	.216	.020	.128	.342	.291
	N	5	5	5	5	5

Deepak Nitrite Ltd

		Profitability	Liquidity	GROWTH	Tax Rate	Tangibility
Short_Term_Debt_Equity_Ratio	Pearson-Correlation	-.061	-.425	-.514	-.122	.665
	Sig. (1-tailed)	.461	.238	.188	.422	.111
	N	5	5	5	5	5
Long_Term_Debt_Equity_Ratio	Pearson-Correlation	-.817*	.575	.499	.314	-.175
	Sig. (1-tailed)	.046	.155	.196	.304	.389
	N	5	5	5	5	5
Total_Debt_Equity_Ratio	Pearson-Correlation	-.192	-.260	-.348	.077	.547
	Sig. (1-tailed)	.379	.336	.283	.451	.170
	N	5	5	5	5	5

GHCL

		Profitability	Liquidity	GROWTH	Tax Rate	Tangibility
Short_Term_Debt_Equity_Ratio	Pearson-Correlation	.403	-.221	.357	.916*	-.158
	Sig. (1-tailed)	.251	.360	.277	.015	.400
	N	5	5	5	5	5
Long_Term_Debt_Equity_Ratio	Pearson-Correlation	.275	.115	-.598	.020	-.042
	Sig. (1-tailed)	.327	.427	.144	.487	.473
	N	5	5	5	5	5
Total_Debt_Equity_Ratio	Pearson-Correlation	.260	.117	-.539	.030	-.105
	Sig. (1-tailed)	.337	.426	.174	.481	.434
	N	5	5	5	5	5

TATA CHEMICALS

		Profitability	Liquidity	GROWTH	Tax Rate	Tangibility
Short_Term_Debt_Equity_Ratio	Pearson-Correlation	-.326	.075	-.917*	-.398	-.501
	Sig. (1-tailed)	.296	.452	.014	.254	.195
	N	5	5	5	5	5
Long_Term_Debt_Equity_Ratio	Pearson-Correlation	-.045	-.112	.907*	.321	.705
	Sig. (1-tailed)	.471	.429	.017	.299	.092
	N	5	5	5	5	5
Total_Debt_Equity_Ratio	Pearson-Correlation	-.775	-.121	.339	-.030	.696
	Sig. (1-tailed)	.062	.423	.288	.481	.096
	N	5	5	5	5	5

UPL

		Profitability	Liquidity	GROWTH	Tax Rate	Tangibility
Short_Term_Debt_Equity_Ratio	Pearson-Correlation	-.335	.190	.950**	.696	.038
	Sig. (1-tailed)	.291	.380	.007	.096	.476
	N	5	5	5	5	5
Long_Term_Debt_Equity_Ratio	Pearson-Correlation	-.881*	.659	.161	.742	-.955**
	Sig. (1-tailed)	.024	.113	.398	.075	.006
	N	5	5	5	5	5
Total_Debt_Equity_Ratio	Pearson-Correlation	-.832*	.590	.627	.922*	-.688
	Sig. (1-tailed)	.040	.148	.129	.013	.100
	N	5	5	5	5	5

Above all table indicate the correlation between three variables. This table indicates the different correlation for between different variable. The correlation rang is -1 to +1. The -1 is said to fully negative relationship among this variable and +1 is said to fully positive, a relationship between among the variable and 0 is said to that no relationship between among the variable.

Regression Line

Identifying the strong relationship between the independents & dependent variables and that indicating the regressions line.

Strong Relationship

		Profitability	Liquidity	GROWTH	Tax Rate	Tangibility
Aarti	Short	No	Yes	Yes	No	No
	Long	No	Yes	Yes	No	No
	Total	No	Yes	No	No	No
Deepak	Short	No	No	No	No	No
	Long	Yes	No	No	No	No
	Total	No	No	No	No	No
GHCL	Short	No	No	No	Yes	No
	Long	No	No	No	No	No
	Total	No	No	No	No	No
TATA	Short	No	No	Yes	No	No
	Long	No	No	Yes	No	No
	Total	No	No	No	No	No
UPL	Short	No	No	Yes	No	No
	Long	Yes	No	No	No	Yes
	Total	Yes	No	No	Yes	No

Yes Negative

Yes Positive

NO HO ACCEPTED

Yes HI ACCEPTED

Regression analysis

Aarti Industrial: Here, through correlation analysis, Short Term Debt Equity Ratio has a significant relationship with Growth & Liquidity.

Model Summary

Model	R	R-Square	Adjusted-R Square	Std. -Error of-the Estimate
1	.996 ^a	.993	.985	.01849

a. Predictors: (Constant), GROWTH, Liquidity

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.093	2	.046	135.413	.007 ^b
Residual	.001	2	.000		
Total	.093	4			

a. Dependent Variable: Short_Term_Debt_Equity_Ratio

b. Predictors: (Constant), GROWTH, Liquidity

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.977	.563		3.512	.072
Liquidity	-1.827	.336	-.618	-5.439	.032
GROWTH	.676	.184	.417	3.674	.067

a. Dependent Variable: Short_Term_Debt_Equity_Ratio

Aarti Industrial: Here, through correlation analysis, Long Term Debt Equity Ratio has a significant relationship with Growth & Liquidity.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.983 ^a	.966	.932	.03397

a. Predictors: (Constant), GROWTH, Liquidity

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.065	2	.033	28.248	.034 ^b
Residual	.002	2	.001		
Total	.068	4			

a. Dependent Variable: Long_Term_Debt_Equity_Ratio

b. Predictors: (Constant), GROWTH, Liquidity

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.201	1.034		.195	.864
Liquidity	1.063	.617	.423	1.722	.227
GROWTH	-.825	.338	-.599	-2.441	.135

a. Dependent Variable: Long_Term_Debt_Equity_Ratio

Aarti Industrial: Here, through correlation analysis, Total Debt Equity Ratio has a significant relationship with Growth & Liquidity.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.927 ^a	.860	.719	.01633

a. Predictors: (Constant), GROWTH, Liquidity

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.003	2	.002	6.124	.140 ^b
	Residual	.001	2	.000		
	Total	.004	4			

a. Dependent Variable: Total_Debt_Equity_Ratio

b. Predictors: (Constant), GROWTH, Liquidity

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.178	.497		4.382	.048
	Liquidity	-.764	.297	-1.281	-2.576	.123
	GROWTH	-.149	.162	-.456	-.917	.456

a. Dependent Variable: Total_Debt_Equity_Ratio

Deepak Nitrite Ltd

Here, through correlation analysis, **Short Term Debt Equity Ratio** has a significant relationship with **Profitability**.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.817 ^a	.667	.557	.15848

a. Predictors: (Constant), Profitability

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.151	1	.151	6.022	.091 ^b
	Residual	.075	3	.025		
	Total	.227	4			

a. Dependent Variable: Long_Term_Debt_Equity_Ratio

b. Predictors: (Constant), Profitability

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.380	.676		3.520	.039
	Profitability	-27.500	11.206	-.817	-2.454	.091

a. Dependent Variable: Long_Term_Debt_Equity_Ratio

GHCL: Here, through correlation analysis, **Short Term Debt Equity Ratio** has a significant relationship with **Tax_Rate**.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.916 ^a	.838	.784	.10288

a. Predictors: (Constant), Tax_Rate

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.164	1	.164	15.536	.029 ^b
	Residual	.032	3	.011		
	Total	.196	4			

a. Dependent Variable: Short_Term_Debt_Equity_Ratio

b. Predictors: (Constant), Tax_Rate

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.014	.115		.118	.913
	Tax Rate	1.910	.485	.916	3.942	.029

a. Dependent Variable: Short_Term_Debt_Equity_Ratio

TATA CHEMICALS: Here, through correlation analysis, **Short Term Debt Equity Ratio** has a significant relationship with **Growth**.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.917 ^a	.841	.789	.03784

a. Predictors: (Constant), GROWTH

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.023	1	.023	15.916	.028 ^b
	Residual	.004	3	.001		
	Total	.027	4			

a. Dependent Variable: Short_Term_Debt_Equity_Ratio

b. Predictors: (Constant), GROWTH

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.677	.125		5.407	.012
	GROWTH	-.454	.114	-.917	-3.989	.028

a. Dependent Variable: Short_Term_Debt_Equity_Ratio

Tata Chemicals: Here, through correlation analysis, **Long Term Debt Equity Ratio** has a significant relationship with **Growth**.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.907 ^a	.822	.763	.04791

a. Predictors: (Constant), GROWTH

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.032	1	.032	13.853	.034 ^b
	Residual	.007	3	.002		
	Total	.039	4			

a. Dependent Variable: Long_Term_Debt_Equity_Ratio

b. Predictors: (Constant), GROWTH

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.292	.158		-1.845	.162
	GROWTH	.536	.144	.907	3.722	.034

a. Dependent Variable: Long_Term_Debt_Equity_Ratio

UPL: Here, through correlation analysis, **Short Term Debt Equity Ratio** has a significant relationship with **Growth**.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.950 ^a	.903	.871	.02193

a. Predictors: (Constant), GROWTH

Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.013	1	.013	27.937	.013 ^b
	Residual	.001	3	.000		
	Total	.015	4			

a. Dependent Variable: Short_Term_Debt_Equity_Ratio

b. Predictors: (Constant), GROWTH

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.430	.292		-4.899	.016
	GROWTH	1.436	.272	.950	5.286	.013

a. Dependent Variable: Short_Term_Debt_Equity_Ratio

UPL: Here, through correlation analysis, **Long Term Debt Equity Ratio** has a significant relationship with **Tangibility & Profitability**.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.960 ^a	.921	.843	.03355

a. Predictors: (Constant), Tangibility, Profitability

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.026	2	.013	11.706	.079 ^b
	Residual	.002	2	.001		
	Total	.029	4			

a. Dependent Variable: Long_Term_Debt_Equity_Ratio

b. Predictors: (Constant), Tangibility, Profitability

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.425	.478		2.982	.096
	Profitability	-.668	1.414	-.193	-.472	.683
	Tangibility	-4.382	2.284	-.786	-1.919	.195

a. Dependent Variable: Long_Term_Debt_Equity_Ratio

UPL: Here, through correlation analysis, **Total Debt Equity Ratio** has a significant relationship with **Tax_Rate & Profitability**.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.992 ^a	.984	.969	.02016

a. Predictors: (Constant), Tax_Rate, Profitability

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.051	2	.026	63.074	.016 ^b
	Residual	.001	2	.000		
	Total	.052	4			

a. Dependent Variable: Total_Debt_Equity_Ratio

b. Predictors: (Constant), Tax_Rate, Profitability

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.029	.120		-.243	.830
	Profitability	-2.094	.504	-.449	-4.154	.053
	Tax_Rate	2.672	.436	.662	6.122	.026

a. Dependent Variable: Total_Debt_Equity_Ratio

For Correlation

Aarti Industrial

- There is Negative relationship with Liquidity which is (- 0.971).
- There is a significant relationship with Liquidity on Short Term Debt Equity Ratio.
- There is a Positive relationship with Growth which is (0.940).
- There is a significant relationship of Growth on Short Term Debt Equity Ratio.
- There is a Positive relationship with Liquidity which is (0.929).
- There is a significant relationship of Liquidity on Long Term Debt Equity Ratio.
- There is Negative relationship with Growth which is (- 0.957).
- There is a significant relationship of with Growth on Long Term Debt Equity Ratio.
- There is Negative relationship with Liquidity which is (-0.895).
- There is a significant relationship of Liquidity on Total Debt Equity Ratio.

Deepak

- There is Negative relationship with Profitability which is (- 0.817).
- There is a significant relationship of Profitability on Long Term Debt Equity Ratio.

GHCL

- There is a Positive relationship with Tax_Rate which is (0.916).
- There is a significant relationship of with Tax_Rate on Short Term Debt Equity Ratio.

TATA CHEMICALS

- There is Negative relationship with Growth which is (-0.917).
- There is a significant relationship of Growth on Short Term Debt Equity Ratio.
- There is a Positive relationship with Growth which is (0.907).
- There is a significant relationship of Growth on Long Term Debt Equity Ratio.

UPL

- There is a Positive relationship with Growth which is (0.950).
- There is a significant relationship of with Growth on Short Term Debt Equity Ratio.
- There is Negative relationship with Profitability which is (-0.881).
- There is a significant relationship of Profitability on Long Term Debt Equity Ratio.
- There is Negative relationship with Tangibility which is (- 0.955).
- There is a significant relationship of Tangibility on Long Term Debt Equity Ratio.
- There is Negative relationship with Profitability which is (-0.832).

- There is a significant relationship of Profitability on Total Debt Equity Ratio.
- There is a Positive relationship with Tax_Rate which is (0.922).
- There is a significant relationship of Tax_Rate on Total Debt equity Ratio.

For Regression

Company	Type of Variables	MODEL SUMMARY			Interpretation	ANOVA Significant Value	Interpretation	REGRESSION MODEL
		Correlation Coefficient R	Coefficient of Determination R Square	Regression Coefficient R Square				(Where, y = dependent variable, α = constant, β = value in regression analysis, x = independent variable) y = α+βx1+ βx2
Aarti Industrial	Short Term Debt Equity Ratio To Growth	0.996	0.993	0.985	There is 98.50% variability in Short Term Debt Equity Ratio due to Growth and Liquidity.	0.007	Model is showing accurate prediction.	1.977 + (-1.827) + 0.676
Aarti Industrial	Long Term Debt Equity Ratio To Growth and Liquidity	0.983	0.966	0.932	There is 93.20% variability in Long Term Debt Equity Ratio due to Growth and Liquidity.	0.034	Model is showing accurate prediction.	0.201+ 1.063+ (-0.825)
Aarti Industrial	Total Debt Equity Ratio To Growth and Liquidity	0.927	0.86	0.719	There is 71.90% variability in Total Debt Equity Ratio due to Growth and Liquidity.	0.14	Model is showing not accurate prediction	2.178 + (-0.764) + (-1.149)
Deepak Nitrite Ltd	Long-term Debt Equity-Ratio To Profitability	0.817	0.667	0.557	There is 55.70% variability in Long term Debt Equity Ratio due to Profitability.	0.091	Model is showing not accurate prediction	2.380 + (-27.500)
GHCL	Short Term Debt Equity Ratio To Tax Rate	0.916	0.838	0.784	There is 78.40% variability in Short Term Debt Equity Ratio due to Tax Rate	0.029	Model is showing accurate prediction	0.014 + 1.910
Tata Chemical	Short Term Debt Equity Ratio To Growth	0.917	0.841	0.789	There is 78.90% variability in Short Term Debt Equity Ratio due to Growth	0.028	Model is showing accurate prediction	0.677 + (-0.454)
Tata Chemical	Long-Term Debt Equity-Ratio To Growth	0.907	0.822	0.763	There is 76.30% variability in Long Term Debt Equity Ratio due to Growth	0.034	Model is showing accurate prediction	0.244
UPL	Short Term Debt Equity Ratio To size and liquidity	0.95	0.903	0.871	There is 87.10% variability in Short Term Debt Equity Ratio due to size and liquidity	0.013	Model is showing accurate prediction	0.006
UPL	Long-Term Debt-Equity Ratio To Tangibility-and Profitability	0.96	0.921	0.843	There is 84.30% variability in Long Term Debt Equity Ratio due to Tangibility and Profitability	0.079	Model is showing accurate prediction	1.425 + (-0.668) + (-4.382)
UPL	Long Term Debt Equity Ratio To Tax Rate and Profitability	0.992	0.984	0.969	There is 84.30% variability in Long Term Debt Equity Ratio due to Tax Rate and Profitability	0.016	Model is showing accurate prediction	(-0.029) + (-2.094) + 2.672

Conclusion & Suggestion

- In this analysis, we found that total 75 correlate variables, in this only 14 variables are strongly correlated and major correlation is growth and liquidity between Short term debt equity and Long term debt equity. This indicates that selected 5 company's short term debt equity, long term debt equity and Total debt equity impacts on Growth, liquidity, profitability. It means any change in short term debt equity, long term debt equity and Total debt equity that will affect on Growth, liquidity, profitability.
- If above selected chemical company wants to focus on growth, liquidity, profitability then they must maintain their short term debt equity, long term debt equity and Total debt equity.

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