



IMPACT OF LEVERAGE & COVERAGE RATIOS ON P/E: A STUDY ON INDIAN CEMENT SECTOR

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Abstract

In financial management, Leverage is referred to as the ability of a firm to manage its Fixed Operating & Financial Costs in such a way which in turn maximizes shareholders the assets and funds towards magnifying the economic welfare of its owners. Firms with a high ratio of book value of equity to market value of equity (value firms) earn higher expected stock returns than firms that have low book-to-market equity ratio. Leverage relates to the employment of an asset or source of funds for which the company has to pay a fixed cost or fixed return, and consequently the earnings available to its shareholders and also the risk being affected. The term risk refers to the degree of uncertainty associated with the company's ability to meet its fixed payment obligations. Higher the degree of leverage, the higher the risk, but higher the expected return.

Keywords: *Leverage, Profitability, Degree of financial leverage, Degree of operating leverage, combined leverage, Correlation, Net Worth, ANOVA.*

I. Indian Cement Sector & its Top Players

Indian Cement Industry plays an important role in the development of economy because of its strong linkages to other sectors including construction, transportation, power and coal. India is the second largest cement producer in the world after China with a current production capacity of around 370 MT which is expected to grow to 550 MT by FY 2020, according to Ministry of External Affairs, Govt. of India. Housing industry is the biggest consumer of cement, accounting for about 64% of the total consumption, followed by infrastructure (17%), commercial construction (13%) and industrial construction (6%).

Ultratech Cement

Headquartered in Mumbai, Ultra-Tech Cement Ltd was founded in 1983. It has a production capacity of 93 million tonnes per annum (MTPA) of grey cement. It operates across India, Bangladesh, Bahrain, UAE, and Sri Lanka. For white cement segment, it adopts the brand name of Birla White.

ACC

Headquartered in Mumbai, Associated Cement Companies Limited was founded in 1936. It is the second largest Indian cement company with annual production capacity of 33.42 million tonnes. It operates with more than 40 ready mix concrete plants, 21 sales offices, and several zonal offices.

Ambuja Cement

Headquartered in Mumbai, Ambuja Cements Ltd was founded in 1983 and started its production in 1986. It is the third largest Indian cement company with annual production capacity of 29.65 million tonnes. It has 5 integrated cement manufacturing plants and 8 cement grinding units.

Shree Cements

Headquartered in Kolkata, Shree Cements was founded in 1979 in Bewar in Ajmer district of Rajasthan. It is the fourth largest Indian cement company with annual production capacity of 13.5 million tonnes. It has 6 cement manufacturing plants located at Bewar, Ras, Khushkhera, Jaipur, Rajasthan and Uttarakhand.

Ramco Cement

Headquartered in Chennai Ramco was founded in 1984. It is the fifth largest Indian cement company with annual production capacity of 16.45 million tonnes. It has 8 manufacturing plants including grinding unit. It also produces Ready Mix Concrete and Dry Mortar products.

India Cements

Headquartered in Tirunelveli, The India Cements Limited was founded in 1946. It is the sixth largest Indian cement company with annual production capacity of 15.5 million tonnes. It manufactures cement for various applications, including, precast concrete items, concrete components, and multi-storey buildings, as well as runways, concrete roads, bridges and for general-purpose use.

Prism Cement

Prism Cement Limited is India's 8th leading integrated Building Materials Company, with a wide range of products from cement, ready-mixed concrete, tiles, and bath products to kitchens. The company has three Divisions Prism Cement, H & R Johnson (India), and RMC Readymix (India).

Binani Cement

Headquartered in Mumbai, Binani was founded in the year 1872. It is the seventh largest Indian cement company with annual production capacity of 11.25 million tonnes. It has 2 integrated plants, one in India and another in China, and grinding units in Dubai.

Birla Corp

M.P Birla is one of the top Industrial groups in India. It offers wide range of products including auto interiors, cables, jute, cement etc. The group include companies like Vindhya Telelinks Ltd, Universal-ABB Power Cables Ltd, Universal Cables Ltd, Hindustan Gum & Chemicals Ltd etc.

Jk Cement

Headquartered in Mumbai, J.K Cement Ltd was founded by Lala Kamlapat Singhania. It is one of the top manufacturers of white cement in India. It has 3 cement production plants located in Karnataka, Andhra Pradesh, and Maharashtra. It produces 2 types of cements namely Portland Slag Cement, Ordinary Portland Cement and Ground Granulated Blast Furnace Slag.

II. Objective of the Study

1. To analysis the Financial, Operating & Combined Leverage of leading Cement Companies like Ultratech Cement, ACC, Ambuja Cement, Shree Cement, India Cement, Prism Cement, Binani Cement, Ramco Cement, Birla Corp, JK Cement and the
2. To highlight the impact of Leverage on Shareholders wealth ie, EPS and P/E ratio.

Review of Literature

A number of researchers in finance and accounting have extensively researched on Leverage and its impact on profitability. These have motivated the corporate to identify and improvise upon their financial performance. A brief review of some of these studies has been presented.

Bindiya Soni and Jigna Trivedi, analysed the impact impact of both financial leverage as well as operating leverage on the profitability (measured through EPS) of the selected paint companies of India. Five listed paint companies of India were selected based upon the market capitalization for the research purpose. The study investigates the impact of degree of financial leverage and degree of operating leverage on EPS with the help of correlation analysis. Along with this analysis, the paper also investigates the impact of debt-equity ratio on the EPS of the said firms to see the impact of debt on the wealth of the firms. The findings suggest that financial leverage had no significant relationship on profitability while operating leverage had significant relationship on profitability with the exceptions of few.

Kumar Ramana, focussed on the relationship between profitability & leverage of Bata India Limited. The financial statements of Bata have been collected over a period of 7 years. The data collected is analysed by the percentages, averages, ratios and Correlation analysis tools reveals that the research evidence of the study indicates that, that degree of operating leverage is statistically significant positive correlation with the ROI. It is observed that DFL is positively correlated with the ROI. It means that DFL of Bata India was not at optimum level. It is suggested to Bata to revise its capital structure which should include the optimum blend of equity and borrowed funds so that it has positive impact on ROI. More over DCL is positively correlated with ROI of Bata India. The financial performance of the Bata is satisfactory. Bata India is employing less debt funds so it can't get the financial leverage benefits. Therefore Bata India has to revise its capital structure so that FL will help to maximize the shareholders wealth.

Sanjay J. Bhayani and Butalal Ajmera studied the theoretical approaches and practical application of financial leverage, EPS and DPS of Maruti Udyog Ltd. with data for the period of 2001-02 to 2008-09. For the purpose of analysis, researcher has used ratio techniques and to test hypothesis for correlation-co-efficient has been used. The result of the study indicates that there is a correlation between DFL and EPS and the difference is insignificant where as result of correlation coefficient at 5% level of significance showed that the diffidence is significant between DFL and DPS and EPS and DPS.

Khushbakht Tayyaba, studied the effect of leverage on the profitability of the oil and gas sector. The study shows the relationship between leverage (Financial, operating and combined) and EPS. It analyses how earning capacity of this sector is affected by operating costs and fixed financial charges. It also shows the relationship between the DE & EPS and how this sector does debt financing efficiently. In this paper, oil and gas companies are selected for analysis and hypotheses are examined with the balanced panel using descriptive statistics, correlation and estimate equation.

V. Kalpana, analysed the impact of leverage on profitability of the select firms and the relationship among financial leverage, operating leverage and Composite leverage with earning per share of the firms. In addition to this it focuses on how profitability is influenced by fixed financial charges and fixed operating cost. In this study, select steel companies which were taken for analysis and the study is based on the secondary data. Hypotheses are examined with the help of correlation and test of significance and also analysis of variance (ANOVA). The study depicted a negative correlation between DOL and EPS, DFL and EPS, and DCL and EPS. The result shows that the use of debt and fixed cost expenses would reduce the profitability of the firms. It implies that in order to increase the earnings the firms need to reduce the use of debt in capital structure and fixed cost in operation of the firm.

III. Scope of Study

The financial statement is a mirror, which reflects the financial position and operational strength and weakness of concern. But a mere look at the financial statement will not reveal some crucial information. To bring out the hidden information, financial statements over a period are analysed.

This study is concerned with the analysis of Operating, Financial, Combined Leverage of 10 Leading Indian Cement Companies and impact of DOL, DFL, EPS, ROCE, ROE on P/E ratio.

Period of Study: The study covers a period of 6 years from 2011-12 to 2016-17.

Methodology

Sources of Data

The study is based on secondary data. Information required for the study has been collected from the Annual Reports of 10 Leading Indian Cement Companies and different books, journal, magazines, research papers and data collected from various websites.

Tools Applied

In this study various tools: Financial Tools – Ratio Analysis and Statistical Tools (i.e.) Mean and ANOVA, t-test has been used for data analysis.

MEAN = Sum of variable/N

Standard Deviation is used to see how measurements for a group are spread out from Mean. A low Standard Deviation means that most of the numbers are very close to the average and vice-versa.

$$(SD) = \sqrt{\sum X^2/N - (\sum X/N)^2}$$

Coefficient of Variation is a standardized measure of dispersion of a probability distribution or frequency distribution. It is the ratio of standard deviation to mean. Higher the coefficient of variation, the greater the level of dispersion around mean and vice-versa. **Coefficient of Variation (COV) = SD/MEAN* 100**

t-Test (Two-Sample Assuming Unequal Variances): t-test assesses whether the means of two groups are statistically different from each other.

Hypothesis

An ANOVA is statistical hypothesis in which the sampling distribution of test statistic when null hypotheses is true. Null hypotheses have been set and adopted for the analysis of data. The null hypotheses are represented by H_0 . It is a negative statement which avoids personal bias of investigator during data collection as well as the time of drawing conclusion.

IV. Limitation of the Study

1. The study is related to a period of 6 years.
2. Data is secondary i.e. they are collected from the published Annual Reports
3. Leverage, Structural, Coverage and Valuation ratios have been taken for the study.

Preface

All Financial Decisions taken by a company have impact on the function of the organization and affects its various departments. Financial Management is the process of managing the financial functions, making decision on the financial matters, implementation of the decisions and review of the implementation. The foremost objective of financial management is to maximise shareholders wealth.

Capital Structure Decision, ie, Debt- Equity Mix has an impact on the profitability of the firm. With the increase in proportion of Debt, Capital Employed increases, then the Equity Earnings falls as well the risk of insolvency (Bankruptcy cost) increase. The risk of shareholders increases because the borrowed funds carry a fixed interest, which has to be paid whether the company earns profits or not. Thus, earnings and risk of the shareholders increase when there is a high proportion of borrowed funds as compared to owned funds in the capital structure of a company.

Profitability & Growth

Profit is the prime motive of every business. It plays a pivotal role behind the success and growth of an enterprise. Profitability is the main base for liquidity as well as solvency. Analysing a company's profitability is an important part of financial statement analysis. Profitability of a company measures the ability to generate earnings.

Exhibit – 1: Ultratech Cement

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	190,775	211,561	214,433	240,558	251,532	253,749	
Revenue (Growth %)		10.9%	1.4%	12.2%	4.6%	0.9%	5.87%
PBIT	32,826	38,407	34,148	35,362	38,233	39,691	
PBIT (Growth %)		17.0%	-11.1%	3.6%	8.1%	3.8%	3.87%
Earnings Per Share (Rs)	87.49	98.10	80.76	76.72	90.50	99.03	
EPS (Growth %)		12.1%	-17.7%	-5.0%	18.0%	9.4%	2.51%

The above Exhibit depicts that Ultratech's Revenue has grown at a CAGR of 5.87% while CAGR for PBIT and EPS has been 3.87% and 2.51% respectively.

Exhibit – 2: ACC

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	102,372	113,582	111,501	117,388	117,972	111,676	
Revenue (Growth %)		11.0%	-1.8%	5.3%	0.5%	-5.3%	1.75%
PBIT	16,022	15,556	13,272	12,023	8,302	8,742	
PBIT (Growth %)		-2.9%	-14.7%	-9.4%	-31.0%	5.3%	-11.41%
Earnings Per Share (Rs)	69.12	56.28	58.17	61.72	31.22	32.11	
EPS (Growth %)		-18.6%	3.4%	6.1%	-49.4%	2.9%	-14.22%

The above Exhibit depicts that ACC's Revenue has grown at a CAGR of 1.75% while there has been a negative CAGR of 11.41%, 14.22% for PBIT and EPS.

Exhibit – 3: Ambuja Cement

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	85,210	97,395	91,099	99,305	93,880	200,940	
Revenue (Growth %)		14.3%	-6.5%	9.0%	-5.5%	114.0%	18.72%
PBIT	17,547	19,741	15,651	18,396	12,657	21,356	
PBIT (Growth %)		12.5%	-20.7%	17.5%	-31.2%	68.7%	4.01%
Earnings Per Share (Rs)	7.95	8.37	8.27	9.62	5.23	7.15	
EPS (Growth %)		5.3%	-1.1%	16.3%	-45.7%	36.7%	-2.09%

The above Exhibit depicts that Ambuja's Revenue has grown at a CAGR of 18.72% while CAGR for PBIT has been 4.01%. Fall in Operating Profit have a direct impact on EPS which has been exhibited over the years.

Exhibit – 4: Shree Cement

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	58,981	55,903	58,873	64,536	55,136	84,292	
Revenue (Growth %)		-5.2%	5.3%	9.6%	-14.6%	52.9%	7.40%
PBIT	9,231	13,125	9,443	5,214	12,520	16,602	
PBIT (Growth %)		42.2%	-28.1%	-44.8%	140.1%	32.6%	12.46%
Earnings Per Share (Rs)	177.54	288.18	225.97	122.37	328.13	384.38	
EPS (Growth %)		62.3%	-21.6%	-45.8%	168.1%	17.1%	16.71%

The above Exhibit depicts that Shree Cement's Revenue has grown at a CAGR of 7.4% while CAGR for PBIT and EPS has been 12.46% and 16.71% respectively.

Exhibit – 5: India Cements

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	46,310	51,595	50,848	50,604	55,348	58,609	
Revenue (Growth %)		11.4%	-1.4%	-0.5%	9.4%	5.9%	4.82%
PBIT	6,819	6,361	1,695	4,824	6,033	6,315	
PBIT (Growth %)		-6.7%	-73.4%	184.6%	25.1%	4.7%	-1.52%
Earnings Per Share (Rs)	8.46	5.82	-7.90	-0.04	3.79	5.13	
EPS (Growth %)		-31.3%	-235.7%	-99.5%	-9877.1%	35.5%	-9.52%

The above Exhibit depicts that India Cement's Revenue has grown at a CAGR of 4.82% while there has been a negative CAGR of 1.52%, 9.52% for PBIT and EPS.

Exhibit – 6: Prism Cements

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	45,498	47,723	49,616	55,840	52,231	50,113	
Revenue (Growth %)		4.9%	4.0%	12.5%	-6.5%	-4.1%	1.95%
PBIT	1,557	1,433	1,606	2,847	3,051	2,583	
PBIT (Growth %)		-8.0%	12.1%	77.3%	7.2%	-15.3%	10.65%
Earnings Per Share (Rs)	-0.33	-1.20	-1.69	0.10	0.49	0.30	
EPS (Growth %)		259.2%	40.4%	-105.7%	408.1%	-38.4%	-197.82%

The above Exhibit depicts that Prism's Revenue has grown at a CAGR of 1.95% while CAGR for PBIT has been 10.65%. Fall in Operating Profit have a direct impact on EPS which has been exhibited over the years.

Exhibit – 7: Binani Cements

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	30,694	44,811	47,356	43,312	37,844	36,660	
Revenue (Growth %)		46.0%	5.7%	-8.5%	-12.6%	-3.1%	3.62%
PBIT	1,700	2,884	222	-771	860	1,434	
PBIT (Growth %)		69.7%	-92.3%	-447.9%	-211.6%	66.7%	-3.34%
Earnings Per Share (Rs)	-56.04	-70.40	-220.52	-204.07	-137.59	-149.56	
EPS (Growth %)		25.6%	213.3%	-7.5%	-32.6%	8.7%	21.69%

The above Exhibit depicts that Prism's Revenue has grown at a CAGR of 3.62% while CAGR for PBIT has been -3.34% due to fall in Operating Profit over years. Moreover, PBIT has been negative in 2015. Fall in Operating Profit have a direct impact on EPS which has been exhibited over the years, which has been negative.

Exhibit – 8: Ramco Cements

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	32,236	38,308	36,835	36,554	35,818	39,673	
Revenue (Growth %)		18.8%	-3.8%	-0.8%	-2.0%	10.8%	4.24%
PBITDA	9,698	10,473	6,256	8,048	11,519	12,287	
Depreciation	2,539	2,806	3,064	2,512	3,053	2,669	
PBIT	7,159	7,667	3,191	5,536	8,467	9,618	
PBIT (Growth %)		7.1%	-58.4%	73.5%	52.9%	13.6%	6.08%
Earnings Per Share (Rs)	16.17	16.95	4.81	10.34	22.90	27.89	
EPS (Growth %)		4.8%	-71.6%	114.9%	121.6%	21.8%	11.51%

The above Exhibit depicts that Ramco Cement's Revenue has grown at a CAGR of 4.24% while CAGR for PBIT and EPS has been 6.08% and 11.51% respectively.

Exhibit – 9: Birla Corp

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	22,869	26,030	30,164	32,099	32,682	43,477	
Revenue (Growth %)		13.8%	15.9%	6.4%	1.8%	33.0%	13.71%
PBIT	3,991	4,162	2,380	2,910	2,832	5,071	
PBIT (Growth %)		4.3%	-42.8%	22.3%	-2.7%	79.0%	4.91%
Earnings Per Share (Rs)	31.10	35.10	16.86	22.76	21.78	28.50	
EPS (Growth %)		12.9%	-52.0%	35.0%	-4.3%	30.8%	-1.73%

The above Exhibit depicts that Birla Corp's Revenue has grown at a CAGR of 13.71% while CAGR for PBIT and EPS has been 4.91% and -1.73% respectively.

Exhibit – 10: Jk Cement

(INR Millions)	2012	2013	2014	2015	2016	2017	CAGR
Revenue	25,378	29,040	27,815	33,874	37,855	40,623	
Revenue (Growth %)		14.4%	-4.2%	21.8%	11.8%	7.3%	9.87%
PBIT	4,273	4,774	2,668	3,733	3,986	5,810	
PBIT (Growth %)		11.7%	-44.1%	39.9%	6.8%	45.8%	6.34%
Earnings Per Share (Rs)	2.50	3.30	1.07	2.03	0.78	3.16	
EPS (Growth %)		32.0%	-67.5%	89.4%	-61.4%	302.6%	4.81%

The above Exhibit depicts that Birla Corp's Revenue has grown at a CAGR of 9.87% while CAGR for PBIT and EPS has been 6.34% and 4.81% respectively.

Leverage, as a business term, refers to debt or to the borrowing of funds to finance the purchase of a company's assets. Business owners can use either Debt or Equity to finance or buy the company's assets. Using debt, or Leverage, increases the company's risk of bankruptcy. It also increases the company's returns; specifically its return on equity. Leverage can be viewed from both Income Statement and Balance Sheet angle. From Income Statement angle Leverage Analysis considers Operating, Financial and Combined Leverage.

Operating Leverage

Operating Leverage refers to the use of fixed cost in the operations of the firm. A firm has to bear the fixed cost expenses irrespective of output. Operating Leverage refers to a company's division between Fixed Operating Cost and Variable Cost. Fixed Costs remains constant or unchanged with the change in the level of production or sales while Variable Cost varies.

$$\text{DOL} = \% \text{ Change in PBIT} / \% \text{ Change in Sales}$$

Exhibit – 11: Degree of Operating Leverage

Year	Ultratech	ACC	Ambuja	Shree	India	Prism	Binani	Ramco	Birla Corp	JK Cement
2011-12	1.45	-0.14	0.65	-0.65	-0.45	-1.43	1.31	0.21	0.21	0.75
2012-13	1.561	-0.27	0.87	-8.08	-0.59	-1.63	1.51	0.38	0.31	0.81
2013-14	-8.171	8.02	3.21	-5.28	50.66	3.04	-16.26	15.18	-2.7	10.46
2014-15	0.292	-1.78	1.95	-4.66	-385.53	6.16	52.45	-96.06	3.47	1.83
2015-16	1.779	-62.25	5.71	-9.62	2.67	-1.11	16.76	-26.30	-1.48	0.58
2016-17	4.326	-0.99	0.60	0.62	0.79	3.78	-21.33	1.26	2.39	6.26
Mean	0.21	-9.6	2.2	-4.61	-55.4	1.5	5.7	-17.6	0.4	3.4
SD	4.3	26.1	2.0	4.0	163.0	3.3	26.7	40.7	2.3	4.1
COV	20.92	-2.72	0.93	-0.87	-2.94	2.25	4.65	-2.32	6.24	1.18
CAGR (%)	24.4	48.01	-1.6	-199	-212	-221.5	-274.6	42.6	62	52.8

Exhibit-11 depicts that Binani reported the highest mean and COV in terms of DOL followed by JK and Ambuja Cement. Birla Corp reported the highest CAGR of 62%. Shree, India, Prism and Binani Cement reported negative CAGR.

Hypothesis

$H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6 = \mu_7 = \mu_8 = \mu_9 = \mu_{10}$ (DOL of Cement Companies doesn't differ over years).

$H_1: \mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5 \neq \mu_6 \neq \mu_7 \neq \mu_8 \neq \mu_9 \neq \mu_{10}$ (DOL of Cement Companies differ over years).

Exhibit – 12: Degree of Operating Leverage: Anova
Anova: Single Factor

Groups	Count	Sum	Average	Variance
ULTRATECH CEMENT	6	1.24	0.21	18.60
ACC	6	-57.41	-9.57	678.75
AMBUJA CEMENT	6	12.99	2.17	4.02
SHREE CEMENT	6	-27.67	-4.61	16.12
INDIA CEMENT	6	-332.44	-55.41	26,557.57
PRISM CEMENT	6	8.82	1.47	10.90
BINANI CEMENT	6	34.45	5.74	711.42
RAMCO CEMENT	6	-105.32	-17.55	1,660.44
BIRLA CORP	6	2.21	0.37	5.31
JK CEMENT	6	20.69	3.45	16.43

Anova: Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	17,994.2	9	1,999.35	0.673646908	0.728620632	2.073351
Within Groups	148,397.8	50	2,967.96			
Total	166,392.0	59				

Above analysis shows that the F value (0.673646908) is less than the table value (2.073351) so, null hypothesis is accepted. Therefore it is concluded that DOL of the Cement Companies does not differ over the years

Financial Leverage

Employment of fixed interest bearing securities like, debt and preference share in capital structure along with owner's equity is called financial Leverage or trading on equity. FL is concerned with the extent to which firms rely on debt, and is therefore directly concerned with the Capital Structure of a firm. A firm with debt must make interest payments regardless of the sales, which leads to an increased risk. The debt payments - in contrast to Equity dividends - have to be paid and debt-holders are thus prioritized over equity-holders in terms of cash-flow. A benefit of FL is that it can contribute to increased profits if the ROI exceeds the interest rate on the debt, hence, companies may have incentives to use debt-financing.

DFL = % Change in EPS / % Change in PBIT

Exhibit – 13: Degree of Financial Leverage

Year	Ultratech	ACC	Ambuja	Shree	India	Prism	Binani	Ramco	Birla Corp	JK Cement
2011-12	0.92	4.32	0.41	1.35	4.15	-24.35	0.24	0.46	2.43	2.10
2012-13	0.713	6.39	0.43	1.48	4.66	-32.54	0.37	0.68	2.99	2.73
2013-14	1.594	-0.23	0.06	0.77	3.21	3.35	-2.31	1.23	1.21	1.53
2014-15	-1.406	-0.65	0.93	1.02	-0.54	-1.37	0.02	1.56	1.57	2.24
2015-16	2.212	1.60	1.46	1.20	-394.06	57.04	0.15	2.30	1.60	-9.05
2016-17	2.474	0.54	0.53	0.53	7.59	2.50	0.13	1.60	0.39	6.61
Mean	1.08	2.0	0.64	1.06	-62.5	0.8	-0.2	1.3	1.7	1.03
SD	1.4	2.8	0.5	0.4	162.5	31.4	1.0	0.7	0.9	5.3
COV	1.29	1.40	0.77	0.34	-2.6	40.59	-4.39	0.51	0.54	5.12
CAGR (%)	21.9	-34.09	5.4	-17.2	12.85	-163.4	-11.6	28.4	-30.6	25.8

Exhibit-13 depicts that ACC reported the highest mean in terms of DFL followed by Birla Corp, Ramco etc. Ramco Cements reported the highest CAGR of 28.4%. Birla Corp, Shree, Prism, ACC and Binani Cement reported negative CAGR.

Hypothesis

$H_0: \mu_1=\mu_2=\mu_3=\mu_4=\mu_5=\mu_6=\mu_7=\mu_8=\mu_9=\mu_{10}$ (DFL of Cement Companies doesn't differ over years)

$H_1: \mu_1\neq\mu_2\neq\mu_3\neq\mu_4\neq\mu_5\neq\mu_6\neq\mu_7\neq\mu_8\neq\mu_9\neq\mu_{10}$ (DFL of Cement Companies differ over years)

Exhibit – 14: Degree Of Financial Leverage: Anova
ANOVA: Single Factor

Groups	Count	Sum	Average	Variance
ULTRATECH CEMENT	6	6.51	1.08	1.97
ACC	6	11.97	1.99	7.79
AMBUJA CEMENT	6	3.82	0.64	0.24
SHREE CEMENT	6	6.35	1.06	0.13
INDIA CEMENT	6	-375	-62.5	26,390.63
PRISM CEMENT	6	4.64	0.77	984.36
BINANI CEMENT	6	-1.4	-0.23	1.05
RAMCO CEMENT	6	7.82	1.3	0.45
BIRLA CORP	6	10.2	1.7	0.84
JK CEMENT	6	6.16	1.03	27.7

Anova: Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	21,819.7	9	2,424.41	0.884330839	0.545533768	2.073351
Within Groups	137,075.8	50	2,741.52			
Total	158,895.4	59				

Above analysis shows that the F value (0.884330839) is less than the table value (2.073351) so, null hypothesis is accepted. Therefore it is concluded that DFL of the Cement Companies does not differ over the years

Combined Leverage

Combined Leverage is a use of OL & FL in an appropriate proportion in the business. Operating Leverage affects the firm's operating profit and financial Leverage affects the earnings of the shareholder or EPS. Firm has to use a correct mixture of both the Leverages to take the fullest possible advantage of growing business opportunities.

DCL = % Change in EPS / % Change in Sales

Exhibit – 15: Degree of Combined Leverage

Year	Ultratech	ACC	Ambuja	Shree	India	Prism	Binani	Ramco	Birla Corp	JK Cement
2011-12	1.33	-0.60	0.27	-0.87	-1.87	34.87	0.32	0.10	0.52	1.58
2012-13	1.11	-1.70	0.37	-11.94	-2.74	53.00	0.56	0.26	0.93	2.22
2013-14	-13.03	-1.83	0.18	-4.06	162.80	10.19	37.55	18.63	-3.27	15.998
2014-15	-0.41	1.16	1.81	-4.77	207.80	-8.42	0.87	-150.20	5.45	4.10
2015-16	3.94	-99.38	8.36	-11.54	-1053.7	-63.14	2.58	-60.38	-2.36	-5.22
2016-17	10.70	-0.53	0.32	0.32	6.02	9.47	-2.78	2.02	0.93	41.39
Mean	0.61	-17.1	1.9	-5.48	-113.6	6.0	6.5	-31.6	0.4	10.0
SD	7.8	40.3	3.2	5.2	469.6	40.1	15.3	64.1	3.1	16.8
COV	12.75	-2.35	1.71	-0.95	-4.13	6.70	2.35	-2.03	8.35	1.68
CAGR (%)	51.7	-2.45	3.7	-182.0	-226.40	-23.0	-254.4	83.0	12.3	92.17

Exhibit-15 depicts that JK Cements reported the highest mean in terms of DCL followed by Prism, Binani Cements. JK Cements reported the highest CAGR of 92.17%. India, Shree, Prism, ACC and Binani Cement reported negative CAGR.

Hypothesis

H₀: $\mu_1=\mu_2=\mu_3=\mu_4=\mu_5=\mu_6=\mu_7=\mu_8=\mu_9=\mu_{10}$ (DCL of Cement Companies doesn't differ over years)

H₁: $\mu_1\neq\mu_2\neq\mu_3\neq\mu_4\neq\mu_5\neq\mu_6\neq\mu_7\neq\mu_8\neq\mu_9\neq\mu_{10}$ (DCL of Cement Companies differ over years)

Exhibit – 16: Degree of Combined Leverage: Anova

Anova: Single Factor

Groups	Count	Sum	Average	Variance
ULTRATECH CEMENT	6	3.65	0.61	60.14
ACC	6	-102.89	-17.15	1,624.09
AMBUJA CEMENT	6	11.30	1.88	10.43
SHREE CEMENT	6	-32.86	-5.48	27.19
INDIA CEMENT	6	-681.69	-113.61	220,512.4
PRISM CEMENT	6	35.96	5.99	1,611.86
BINANI CEMENT	6	39.10	6.52	234.21
RAMCO CEMENT	6	-189.58	-31.60	4,113.45
BIRLA CORP	6	2.21	0.37	9.44
JK CEMENT	6	60.07	10.01	283.83

Anova: Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	74,303.9	9	8,255.99	0.361333112	0.947991854	2.073351
Within Groups	1,142,435.2	50	22,848.70			
Total	1,216,739.1	59				

Above analysis shows that the F value (0.361333112) is less than the table value (2.073351) so, null hypothesis is accepted. Therefore it is concluded that DCL of the Cement Companies does not differ over the years

Capital Structure refers the total amount of Capital Employed by a firm to finance its operations and assets. Leverage from Balance Sheet angle relates to Structural ie, Debt Equity or Debt-to-Capital Ratio.

Debt Equity Ratio

It measures the total Debt of a company as a percentage of Equity share holders fund. A high Debt Equity ratio indicates high amount of Interest expenses which has to be paid irrespective of the profit volume.

Debt Equity Ratio = Total Debt / Equity Share Holders Fund

Exhibit – 17: Debt Equity Ratio (D/E)

Year	Ultratech	ACC	Ambuja	Shree	India	Prism	Binani	Ramco	Birla Corp	JK Cement
2011-12	0.38	0.07	0.01	0.30	0.44	0.84	8.66	0.73	0.33	0.65
2012-13	0.34	0.01	0.0045	0.12	0.53	1.04	18.39	0.59	0.37	0.62
2013-14	0.35	0	0.0035	0.09	0.66	1.30	-13.20	0.62	0.36	1.39
2014-15	0.27	0	0.0031	0.07	0.51	1.41	-27.79	0.63	0.39	1.71
2015-16	0.22	0	0.0023	0.08	0.42	1.18	-7.74	0.34	0.27	1.80
2016-17	0.26	0	0.0012	0.07	0.47	0.94	-3.57	0.13	1.23	1.65
Mean	0.30	0.014	0.0035	0.12	0.51	1.12	-4.21	0.51	0.49	1.30
SD	0.06	0.03	0.0018	0.09	0.09	0.22	16.29	0.22	0.36	0.53
COV	0.20	2.07	0.51	0.74	0.17	0.19	-3.87	0.44	0.74	0.41
CAGR (%)	-7.1	-100	-28.1	-25.8	1.1	2.2	-183.8	-28.7	29.6	20.3

Exhibit-17 depicts that in terms of Mean Value, both Ramco & India Cement have the maximum Debt Equity ratio of 0.51, followed by Birla Corp (0.49). Binani have negative D/E ratio since FY 2013-14. Birla Corp reported the highest CAGR of 29.6%. Ultratech, ACC, Ambuja, Shree Binani & Ramco Cement reported a negative CAGR.

Hypothesis

H₀: $\mu_1=\mu_2=\mu_3=\mu_4=\mu_5=\mu_6=\mu_7=\mu_8=\mu_9=\mu_{10}$ (D/E Ratio of Cement Companies doesn't differ over years)

H₁: $\mu_1\neq\mu_2\neq\mu_3\neq\mu_4\neq\mu_5\neq\mu_6\neq\mu_7\neq\mu_8\neq\mu_9\neq\mu_{10}$ (D/E Ratio of Cement Companies differ over years)

Exhibit – 18: Debt Equity Ratio: Anova
Anova: Single Factor

Groups	Count	Sum	Average	Variance
ULTRATECH CEMENT	6	1.82	0.3041	0.00364
ACC	6	0.08	0.0140	0.00084
AMBUJA CEMENT	6	0.021	0.0035	0.000003
SHREE CEMENT	6	0.72	0.1206	0.00797
INDIA CEMENT	6	3.03	0.5052	0.00728
PRISM CEMENT	6	6.72	1.1197	0.04745
BINANI CEMENT	6	-25.25	-4.2080	265.21
RAMCO CEMENT	6	3.04	0.5075	0.0506
BIRLA CORP	6	2.94	0.4906	0.1311
JK CEMENT	6	7.82	1.3034	0.2830

Anova: Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	129	9	14	0.53981	0.838385461	2.073351
Within Groups	1,329	50	27			
Total	1,458	59				

Above analysis shows that the F value (0.53981) is less than the table value (2.073351) therefore null hypothesis is accepted. Therefore it is concluded that Debt Equity Ratio (D/E) of the Cement Companies doesn't differ over the years

Coverage Ratio is a measure about a company's ability to service its debt, ie, meeting its financial obligations as well as paying of Dividend. Higher the ratio it is better for the company.

Interest Coverage Ratio is expressed as the number of times Operating Profit is more than Interest.

Interest Coverage Ratio = PBIT / Interest Expenses

Exhibit – 19: Interest Coverage Ratio

Year	Ultratech	ACC	Ambuja	Shree	India	Prism	Binani	Ramco	Birla Corp	JK Cement
2011-12	12.80	16.53	32.83	3.92	2.05	24.76	0.52	4.52	7.58	2.96
2012-13	15.22	13.57	25.16	6.80	1.72	20.93	0.62	4.30	6.42	3.41
2013-14	9.46	12	23.45	7.31	0.41	17.13	0.04	1.70	2.78	1.75
2014-15	6.03	15	28.06	4.32	1.01	19.13	-0.129	2.84	3.71	1.63
2015-16	6.75	13	13.69	16.52	1.37	18.56	0.134	4.61	3.44	1.31
2016-17	6.20	13	15.20	12.83	1.66	23.14	0.211	9.17	1.83	1.97
Mean	9.41	13.64	23.06	8.62	1.37	20.61	0.23	4.52	4.29	2.17
SD	3.85	1.70	7.41	5.02	0.59	2.90	0.29	2.55	2.22	0.83
COV	0.41	0.12	0.32	0.58	0.43	0.14	1.24	0.56	0.52	0.38
CAGR (%)	-13.5	-5	-14.3	26.7	-4.1	-1.3	-16.6	15.2	-24.7	-7.9

Exhibit-19 depicts that of Ambuja Cement is maximum in terms of Mean value followed by Prism, India, Ultratech Cements etc. SD of Ambuja is highest indicating the maximum deviation from the mean value. Shree Cements reported the highest CAGR of 26.7%

Hypothesis

H₀: $\mu_1=\mu_2=\mu_3=\mu_4=\mu_5=\mu_6=\mu_7=\mu_8=\mu_9=\mu_{10}$ (Interest Coverage ratio of Cement Companies doesn't differ over years)

H₁: $\mu_1\neq\mu_2\neq\mu_3\neq\mu_4\neq\mu_5\neq\mu_6\neq\mu_7\neq\mu_8\neq\mu_9\neq\mu_{10}$ (Interest Coverage ratio of Cement Companies differ over years)

Exhibit – 20: Interest Coverage Ratio: Anova
Anova: Single Factor

Groups	Count	Sum	Average	Variance
ULTRATECH CEMENT	6	56.46	9.4106	14.81266
ACC	6	81.85	13.6411	2.90310
AMBUJA CEMENT	6	138.389	23.0649	54.966408
SHREE CEMENT	6	51.70	8.6169	25.15139
INDIA CEMENT	6	8.23	1.3710	0.34284
PRISM CEMENT	6	123.65	20.6075	8.43667
BINANI CEMENT	6	1.40	0.2333	0.08
RAMCO CEMENT	6	27.12	4.5207	6.4980
BIRLA CORP	6	25.77	4.2946	4.9453
JK CEMENT	6	13.03	2.1711	0.6860

Anova: Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3,467	9	385	32.42152	7.19417E-18	2.073351
Within Groups	594	50	12			
Total	4,061	59				

Above analysis shows that the F value (32.42152) is less than the table value (2.073351) therefore null hypothesis is rejected. Therefore it is concluded that the Interest Coverage ratio of the Cement Companies differ over the years.

Dividend Coverage Ratio essentially calculates the capacity of the firm to pay the dividend. It is the relation between EPS and Dividend Declared. Higher the coverage ratio better for the firm and vice-versa. The amount that is not paid out as dividend is held by the company for growth. It is termed as Retained Earnings.

Dividend Coverage Ratio = Earnings per Share / Dividend per Share

Exhibit – 21: Dividend Coverage Ratio

Year	Ultratech	ACC	Ambuja	Shree	India	Prism	Binani	Ramco	Birla Corp	JK Cement
2011-12	10.96	2.88	2.51	9.15	4.06	-0.7	-14.77	6.47	5.18	0.50
2012-13	10.90	1.89	2.34	14.39	2.89	0	-23.47	5.65	5.01	0.51
2013-14	8.97	1.72	2.31	10.26	0.00	0	-73.51	4.85	2.81	0.36
2014-15	8.51	3.65	1.93	5.09	0.00	0	-72.16	6.94	3.79	0.51
2015-16	9.51	1.85	1.87	13.66	3.79	0	-48.65	7.69	3.63	0.20
2016-17	8.73	1.90	2.92	3.31	4.50	0	0	9.39	4.75	0.39

Mean	9.59	2.32	2.31	9.31	2.54	-0.11	-38.76	6.83	4.20	0.41
SD	1.09	0.78	0.39	4.46	2.04	0.27	30.76	1.60	0.93	0.12
COV	0.11	0.34	0.17	0.48	0.80	-2.45	-0.79	0.23	0.22	0.30
CAGR (%)	-4.4	-8	3.1	-18.4	2.1	-100	-100	7.7	-1.7	-4.6

Exhibit-21 depicts that of Ultratech Cement has the highest Mean value followed by Shree, Ramco Cements etc. SD of Binani Cement is highest indicating the maximum deviation from the mean. CAGR of all the cement companies are negative except Ambuja, Ramco, India Cements.

Hypothesis

H₀: $\mu_1=\mu_2=\mu_3=\mu_4=\mu_5=\mu_6=\mu_7=\mu_8=\mu_9=\mu_{10}$ (Dividend Coverage ratio of Cement Companies doesn't differ over years)

H₁: $\mu_1\neq\mu_2\neq\mu_3\neq\mu_4\neq\mu_5\neq\mu_6\neq\mu_7\neq\mu_8\neq\mu_9\neq\mu_{10}$ (Dividend Coverage ratio of Cement Companies differ over years)

Exhibit – 22: Dividend Coverage Ratio: Anova

ANOVA: Single Factor

Groups	Count	Sum	Average	Variance
ULTRATECH CEMENT	6	57.56	9.5934	1.17725
ACC	6	13.89	2.3158	0.60734
AMBUJA CEMENT	6	13.868	2.3114	0.152660
SHREE CEMENT	6	55.87	9.3109	19.88702
INDIA CEMENT	6	15.24	2.5403	4.14984
PRISM CEMENT	6	-0.67	-0.1115	0.07459
BINANI CEMENT	6	-232.56	-38.7593	946.48
RAMCO CEMENT	6	40.98	6.8307	2.5518
BIRLA CORP	6	25.18	4.1966	0.8710
JK CEMENT	6	2.46	0.4102	0.0151

Anova: Variation

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	10,575	9	1,175	12.03886	7.78957E-10	2.073351
Within Groups	4,880	50	98			
Total	15,454	59				

Above analysis shows that the F value (12.03886) is more than the table value (2.073351) therefore null hypothesis is rejected. Therefore it is concluded that the Dividend Coverage ratio of the Cement Companies differ over the years.

T-Test: It is used to determine the difference between two sample means from two normally distributed populations with unknown variances. It uses small sample size in order to test the difference between the samples when two normal distributions are unknown. If t Stat value lies between - t Critical two tail and + t Critical two test we don't reject Null Hypothesis.

Exhibit – 23: T-Test: Two-Sample Assuming Unequal Variances: Ultratech Cement

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	-0.042615	1.1174768	89.022555	0.1495599	0.1272253	32.0802513
Variance	22.789346	2.449562	101.13475	0.0005132	0.0008285	78.4410993
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	6	4	8	4	4	
t Stat	-7.139104	-7.697961	9.5015851	-8.061578	-8.067201	
P(T<=t) one-tail	0.0001903	0.0007661	6.208E-06	0.0006429	0.0006412	
t Critical one-tail	1.9431803	2.1318468	1.859548	2.1318468	2.1318468	
P(T<=t) two-tail	0.0003805	0.0015322	1.242E-05	0.0012858	0.0012824	
t Critical two-tail	2.4469118	2.7764451	2.3060041	2.7764451	2.7764451	

Dol & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.4469118 & + 2.4469118. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Eps & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal)

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal)

Here the t Stat value do not lie between - 2.3060041 & + 2.3060041. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & & P/E, Variance is not Equal)

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & & P/E, Variance is Equal)

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & & P/E, Variance is not Equal)

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & & P/E, Variance is Equal)

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Exhibit –24: T-Test: Two-Sample Assuming Unequal Variances: Acc

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	-11.45468	1.5297832	47.9	0.1449035	0.1116325	14.0866449
Variance	821.76708	8.1180724	223.55905	0.0021852	0.0015422	120.121059
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	5	5	7	4	4	
t Stat	-1.86092	-2.47945	4.078459	-2.84439	-2.85118	
P(T<=t) one-tail	0.060913	0.0279393	0.0023494	0.02333	0.0231702	
t Critical one-tail	2.0150484	2.0150484	1.8945786	2.1318468	2.1318468	
P(T<=t) two-tail	0.1218259	0.0558786	0.0046988	0.04666	0.0463404	
t Critical two-tail	2.570582	2.570582	2.364624	2.7764451	2.7764451	

Dol & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.570582 & + 2.570582. Therefore, we reject Null Hypothesis stating that the variances are equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.570582 & + 2.570582. Therefore, we reject Null Hypothesis stating that the variances are equal.

EPS & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.364624 & + 2.364624. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Exhibit –25: T-Test: Two-Sample Assuming Unequal Variances: Ambuja

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	2.4678753	0.6814113	7.7288139	0.160481588	0.11619712	29.9093024
Variance	4.335722	0.2878334	2.719277	0.00212287	0.00140103	86.2994402
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	4	4	4	4	4	
t Stat	-6.4453	-7.02353	-5.25673	-7.160534263	-7.171224	
P(T<=t) one-tail	0.001491	0.001082	0.003134	0.001006655	0.0010010	
t Critical one-tail	2.131846	2.131846	2.131846	2.131846782	2.1318467	
P(T<=t) two-tail	0.002982	0.002165	0.006268	0.00201331	0.0020021	
t Critical two-tail	2.7764451	2.7764451	2.7764451	2.7764451	2.7764451	

Dol & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Eps & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & P/E, Variance is not Equal)

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & P/E, Variance is Equal)

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Exhibit –26: T-Test: Two-Sample Assuming Unequal Variances: Shree Cement

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	-5.4040645	0.99929482	269.80507	0.188844248	0.168391533	41.8583528
Variance	15.441599	0.13658382	10131.472	0.006378065	0.004450332	798.75209
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	4	4	5	4	4	
t Stat	-3.703711	-3.232438	4.875328	-3.296823085	-3.298445251	
P(T<=t) one-tail	0.01038395	0.01595085	0.0022858	0.015011349	0.014988536	
t Critical one-tail	2.13184678	2.13184678	2.0150484	2.131846782	2.131846782	
P(T<=t) two-tail	0.0207679	0.0319017	0.0045716	0.030022698	0.029977073	
t Critical two-tail	2.7764451	2.7764451	2.570582	2.7764451	2.7764451	

Dol & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Eps & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.570582 & + 2.570582. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Exhibit –27: T-Test: Two-Sample Assuming Unequal Variances: India Cements

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	-66.398483	-75.828424	1.36044951	0.0729336	0.0052993	-448.1779
Variance	32290.879	31655.8429	31.913703	0.0007694	0.0020915	1074149.75
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	4	4	4	4	4	
t Stat	0.811584	0.7917651	0.969869	0.967105	0.966959	
P(T<=t) one-tail	0.23128115	0.23640194	0.1935164	0.1941284	0.1941608	
t Critical one-tail	2.13184678	2.13184678	2.13184678	2.1318468	2.1318468	
P(T<=t) two-tail	0.46256229	0.47280388	0.3870328	0.3882568	0.3883215	
t Critical two-tail	2.7764451	2.7764451	2.7764451	2.7764451	2.7764451	

Dol & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Eps & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Exhibit –28: T-Test: Two-Sample Assuming Unequal Variances: Prism Cements

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	2.050555133	5.797538	-0.401740305	0.088086253	-0.018190864	294.158077
Variance	11.09957222	1041.0995	0.956306523	0.000644997	0.001813442	194353.64
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	4	4	4	4	4	
t Stat	-1.4815592	-1.458695	-1.49403611	-1.49155533	-1.49209438	
P(T<=t) one-tail	0.106291237	0.1092031	0.10473547	0.105042953	0.104976063	

t Critical one-tail	2.131846782	2.1318468	2.131846782	2.131846782	2.131846782	
P(T<=t) two-tail	0.212582474	0.2184063	0.209470939	0.210085906	0.209952125	
t Critical two-tail	2.7764451	2.7764451	2.7764451	2.7764451	2.7764451	

Dol & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Eps & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the Variances Are Equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Exhibit –29: T-Test: Two-Sample Assuming Unequal Variances: Binani Cements

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	6.62748734	-0.32829189	-156.4268829	0.025255141	1.14825536	-0.6267148
Variance	883.3935309	1.243320578	3545.171979	0.001330791	3.413327483	0.19133176
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	4	5	4	4	4	
t Stat	0.545695688	0.557113688	-5.850898323	3.321344494	2.090470058	
P(T<=t) one-tail	0.307140326	0.3007333	0.002128418	0.014670834	0.05238752	
t Critical one-tail	2.131846782	2.015048372	2.131846782	2.131846782	2.131846782	
P(T<=t) two-tail	0.614280652	0.6014666	0.004256837	0.029341668	0.10477504	
t Critical two-tail	2.7764451	2.5705818	2.7764451	2.7764451	2.7764451	

Dol & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.5705818 & + 2.5705818. Therefore, we reject Null Hypothesis stating that the variances are equal.

Eps & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & P/E, Variance is Equal).

Here the t Stat value lies between - 2.5705818 & + 2.5705818. Therefore, we reject Null Hypothesis stating that the variances are equal.

Exhibit –30: T-Test: Two-Sample Assuming Unequal Variances: Ramco Cements

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	-21.10640363	1.47293941	16.57816044	0.16671056	0.1312356	25.94797
Variance	1980.846821	0.34864611	86.35989934	0.003767197	0.0035206	138.841731
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	5	4	8	4	4	
t Stat	-2.285330266	-4.638779	-1.396143309	-4.89241432	-4.899151	
P(T<=t) one-tail	0.035531442	0.00487146	0.100097367	0.004043992	0.0040245	
t Critical one-tail	2.015048372	2.13184678	1.859548033	2.131846782	2.1318468	
P(T<=t) two-tail	0.071062884	0.00974291	0.200194735	0.008087983	0.0080489	
t Critical two-tail	2.5705818	2.7764451	2.3060041	2.7764451	2.7764451	

Dol & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.5705818 & + 2.5705818. Therefore, we reject Null Hypothesis stating that the variances are equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Eps & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal).

Here the t Stat value lies between - 2.3060041 & + 2.3060041. Therefore, we reject Null Hypothesis stating that the variances are equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Exhibit –31: T-Test: Two-Sample Assuming Unequal Variances: Birla Corp

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	0.400011896	1.553434522	24.99911933	0.082510984	0.069405506	16.9693192
Variance	6.627102983	0.886284587	48.99429858	0.000554057	0.00055064	45.3627179
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	5	4	8	4	4	
t Stat	- 5.138427029	- 5.068766311	1.848428428	-5.60635232	- 5.610703497	
P(T<=t) one-tail	0.001825075	0.00356829	0.050860836	0.002485845	0.002478869	
t Critical one-tail	2.015048372	2.131846782	1.859548033	2.131846782	2.131846782	
P(T<=t) two-tail	0.003650151	0.007136579	0.101721672	0.004971689	0.004957738	
t Critical two-tail	2.5705818	2.7764451	2.3060041	2.7764451	2.7764451	

DOL & PRICE-EARNINGS (P/E) RATIO

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.5705818 & + 2.5705818. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Eps & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal).

Here the t Stat value lies between - 2.3060041 & + 2.3060041. Therefore, we reject Null Hypothesis stating that the variances are equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451. Therefore, we accept Null Hypothesis stating that the variances are not equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & P/E, Variance is Equal).

Here the t Stat value do not lie between - 2.7764451 & + 2.7764451 Therefore, we accept Null Hypothesis stating that the variances are not equal.

Exhibit –32: T-Test: Two-Sample Assuming Unequal Variances: J K Cements

	DOL	DFL	EPS	ROCE	ROE	P/E
Mean	3.98802995	0.812727121	2.067628333	0.107369044	0.085404948	35.6820331
Variance	18.3499784	34.27410644	1.333824749	0.001832325	0.0021479	884.990022
Observations	5	5	5	5	5	5
Hypothesized Mean Difference	0	0	0	0	0	
df	4	4	4	4	4	
t Stat	-2.35796	-2.571628019	-2.524725755	-2.673967799	-2.675618252	
P(T<=t) one-tail	0.03891797	0.030936102	0.032514323	0.027788029	0.027740368	
t Critical one-tail	2.13184678	2.131846782	2.131846782	2.131846782	2.131846782	
P(T<=t) two-tail	0.07783594	0.061872204	0.065028645	0.055576057	0.055480737	
t Critical two-tail	2.7764451	2.7764451	2.7764451	2.7764451	2.7764451	

Dol & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DOL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DOL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Dfl & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between DFL & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between DFL & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Eps & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between EPS & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between EPS & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Roce & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROCE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROCE & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Roe & Price-Earnings (P/E) Ratio

H₀: $\mu_1^2 = \mu_2^2$ (There is significant relationship between ROE & P/E, Variance is not Equal).

H₁: $\mu_1^2 \neq \mu_2^2$ (There is significant no relationship between ROE & P/E, Variance is Equal).

Here the t Stat value lies between - 2.7764451 & + 2.7764451. Therefore, we reject Null Hypothesis stating that the variances are equal.

Conclusion

Liquidity management is essential for every organization. Leverage refers to debt or the borrowing of funds to finance the purchase of a company's assets. The purpose of leverage is to raise profits; a high degree of leverage gives a big push upward to profits. Both Operating and Financial Leverage have significant effect on EPS as well as MPS. Leverage affects volatility of Stock market which is negatively related to stock return. When volatility rises, expected returns tend to increase,

leading to a drop in the stock price. As a consequence, volatility and stock returns are negatively correlated. The second explanation is based on financial leverage. When stock prices fall, financial leverage increases, leading to an increase in stock return volatility.

Anova Findings

The study reveals that:

1. Ambuja reported the maximum CAGR in terms of Revenue of 18.72%, followed by Birla Corp of 13.71%.
2. Binani reported the maximum CAGR in terms of EPS of 21.69%, followed by Shree Cements of 16.71%.
3. Shree Cements reported the maximum CAGR in terms of PBIT of 12.46%, followed by Prism of 10.65%.
4. Binani Cements reported the highest mean value in terms of DOL .
5. ACC reported maximum mean value in terms of DFL.
6. JK Cements reported maximum mean value in terms of DCL.
7. Ramco and India Cement reported maximum mean value in terms of Debt Equity ratio.
8. Ambuja reported the maximum mean value in terms of Interest Coverage ratio.
9. Ultratech Cement reported the maximum mean value in terms of Dividend Coverage ratio.

T-Test Conducted With Selected Cement Firms Revealed That

1. There is significant relationship between DOL & P/E Ratio.
2. There is significant relationship between DFL & P/E Ratio.
3. There is significant relationship between EPS & P/E Ratio.
4. There is significant relationship between ROCE & P/E Ratio.
5. There is significant relationship between ROE & P/E Ratio.

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