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FINANCIAL PERFORMANCE OF FIRMS: EVIDENCE FROM PAKISTAN CEMENT INDUSTRY

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Financial performance principally reflects business sector outcomes and results that shows overall financial health of the sector over a specific period of time. It indicates that how well an entity is utilizing its resources to maximize the shareholders wealth and profitability. Although a complete evaluation of a firm's financial performance take into account many other different kind of measures but most common performance measurement used in the field of finance and statistical inference is financial ratios. This paper provides a comprehensive study of the financial performance literature with respect to the cement industry of Pakistan. The literature cover studies from the Iran, India and Pakistan but some international evidences are also presented. The financial ratios used for the measurement of financial performance of the cement sector are profitability ratios, asset utilization ratios, leverage ratios, liquidity ratios and cash conversion cycle from the period 2006-2014. Return on Investment (ROI) is taken as predicted variable and five ratio parameters are taken as predictor variables. The research study found that all parameters have positive relationship with the dependent variable except the leverage ratios which has insignificant relationship. This result is also supported by Selvam et al. (2004), whereas Chandrasekaran (1989) and Dhanalakshmi (1994) identified that the external finances is the key significant factor in determining investment in cement industry. To overcome the limitations of the future study, the considered numbers of years need to be increased and other models like MVA, CAPM, and EVA required being tested for the research to analysis other factors that may affect the financial performance.

Keywords: Financial performance, Financial ratios, ROI, Profitability, Regression analysis.

Introduction

Many firms with in the sphere are re-structuring their business performance and operational methods in an essential and fundamental way. These firms are exploring to integrate their search for cost-effective development with the promise of environmental protection and social responsibility for present and future generations with the sustainable business development concept. Based on this new phenomenon, many firms are trying to do changes that are significantly important in their policies, business structure, commitments, short and long term strategically framework.

The "Performance" is a word originates from the old French word 'Parfournir'; whose meaning is to bring through, to carry out, to do or to bring forth. Performance is an act of performing, implementing, achieving, and fulfilling of the given tasks that needs to be measured against defined sets of precision, money, fullness and timing. In finance, it refers to the measurements of the company's policies, activities and operational results in financial terms. It is used to check a company's success, compliance and financial position. These results are reflected in the firm's return on investment, assets, equity, capital employed and profitability.

Financial performance is an extent to which a company financial health over a period of time is measured. In other words, it is a financial action used in order to generate higher sales, profitability and worth of a business entity for its shareholders through managing its current and non-current assets, financing, equity, revenues and expenses. Its main purpose is to provide complete to the point information to shareholders and stakeholders to encourage them in making decisions. It can be used to evaluate similar companies from the same industry or to compare industries in aggregation.

Managing risk and increasing profitability of a firm within the corporate governance compliance is an essence of making good decisions. In order to take timely decision, accurate information and proper analysis of the sector is necessary. The non financial business region is a vital part of a country's financial system. For that purpose, a stable and sound work base is necessary for country economy well being. One of the best ways of evaluating a sector financial performance is by the use of financial or ratio analysis. It shows the relation between one quantity or performance indicators over another, expressed mathematically and tries to summarize huge database for one eye view regarding the financial performance of a firm. According to Max Weber, the relationship between two or more things expressed mathematically is known as financial ratios.

Cement Industry in Pakistan

The cement industry progress in Pakistan is an indicator of economic development. When Pakistan came into existence, she had inherited 4 cement plants having 5 lakh tons of capacity. The major expansion in the cement sector took place in the period of 1956-66 but still it couldn't keep pace with the economic development. In 1990, the cement industry was privatized which help in the setting up of new plants. The industry shows tremendous growth and expansion in the last decade due to higher GDP growth and earthquake rehabilitation era of the year 2005. In Pakistan, the cement production not only meets the local demand of the consumers but it is also exported to foreign countries, such as India, South Africa, Sri Lanka, and UAE. Pakistan ranks 5th in the worlds cement export (Source: Daily Times). Over the last six years, the industry contributes around Rs 30 billion to the national income and about $1.5 billion in capacity expansion.

Pakistan cement industry is classified into the two regions (North and South), comprised of 29 companies having a 44.09 million tons of installed production capacity. The north region covers the 80% of cement production, comprises of 19 companies having capacity of 35.18 million tons whereas the south region covers the remaining 20%. The south region has a capacity of 8.89 million tons with total of 10 companies (Business Recorder, 2009). The domestic market is of more than 19 million tons in the year 2010-11, which is increasing at the rate of 7% per annum. The sector also providing employment to about approximately 7% of the employed labor forces (Economic Survey of Pakistan, 2013).

Cement industry is the most heavily taxed division in the Pakistan financial economy. Excise duty, sales taxes levied by the state governments, duties on power tariffs, restriction on level of capacity utilization are the major factors that are important in the increment in price of the cement. The federal government has risen GST by 1% and FED by Rs 150 per tonne on cement in the FY 2008 budget. The FED on cement has surged from Rs 750 per ton to Rs 900 per ton and GST from 15% to 16% in the budget (Aaj News, 2008). The cement sector acts a central role in the development of infrastructural system of Pakistan as well as of other countries if exported. Higher population growth rates in the world, more housing projects, government development expenditures, construction of dams, urbanization, increase in per capita income and lifestyle are the various factors that ascertain the growth of the industry.

Research Problem

This research paper gives an idea about the most frequently used financial performance measures and indicators by the owners, lenders, creditors, controlled risk takers and investors to evaluate the financial strength of the sector and make their decisions accordingly. The main objective of this paper is to study the financial performance of Pakistan cement sector. In order to find out the financial position of the cement sector and to make a judgment about its efficiency, operations and how well the sector has been able to utilize its assets, we used financial ratio analysis to analytically measure working capital, asset utilization position (overall efficiency and performance), leverage position (debt equity analysis), liquidity position (current assets coverage with respect to current liabilities) and profitability position (in terms of sales and net profit margins) of the cement company of Pakistan. The study also tries to present past performance measurement indicators and to establish the futuristic trend to its current financial position. This study represents an effort to investigate how cement industry can progress to meet the needs and challenges of the international environment while increasing the stakeholder's value from time to time.

Literature Review

Cement industry represents as one of the critical segment which plays huge role in the social and economic development of the country. The most vital ingredient in any kind of building and construction work is the cement. Pakistan cement market has a long history when there was production capacity of nearly less than 0.5 million tons yearly, which are now extended to almost 44.3 million tons (Cement Sustainability Initiative, 2007). Since Pakistan independence, several structural and construction activities were commerce by the government of the Pakistan in the development of schools, colleges, hospitals, housing programs and roads; private and public sector organizations; central governments and in the last but not the least the very first and primary requirement of every individual is that of provision of housing. According to WBCSD 2002, cement is the second most consumed material in the universe after water. The yearly sales for the last couple of years in the cement industry are average at 22 million tons per year.

Over the most recent three decades, many researches had been conducted by the researchers in order to evaluate the financial position by the help of several financial ratios or by applying the statistical analysis techniques. The methods used to evaluate a company potential and limitations with the help of relationship between the heads of the income statement and balance sheet is called financial performance analysis (Panday, 1992). Hingorani and Ramanathan (1973) defined financial analysis as an in-depth study of causal relationship between financial position and profitability. Financial analysis involves three steps: selection, relation and evaluation of financial statements. Proper and appropriate evaluation of industry or more specifically of any company performance is not only important for lenders, investors and shareholders but also for the competing companies working in the same sector. Prasad et al. (2011) financial health of a company is a matter of concern for every investor and stakeholder of the business.

The main purpose of financial analysis is to find out the financial performance and position of the company's management, as reflected in the financial data and reports (Hampton, 1986). Besides financial analysis, the location selection also plays as a major factor in the effective asset utilization and cost reduction money matters of cement manufacturing entity (Schumacher and Sathaye, 1999). Previous researchers use different techniques to measure the financial performance of cement industry in the different countries. This includes in terms of profitability, working capital, asset utilization, liquidity and growth analysis, but not any research completely focus on all the determinants of financial performance measurement in the Pakistan.

Hall and Weiss (1967), Shepherd (1972), Dalton and Penn (1976), Bothwell et al. (1984), Amato and Wilder (1990) studied the financial performance with respect to profitability and discussed the components of return on assets and relates them with the firm size. Gangadhar (1982) studied the possible reasons of fluctuations in the profitability of large scale public limited cement firms of India. The findings

were that during the low rate period, the profitability fluctuations were high. The asset turnover shows an upward positive trend, while profit margins declines.

Chandrasekaran (1994) have also made a study on the performance of cement companies in India measuring the profitability, efficiency and growth aspects. The cement companies were found to be financially sound. Further, they identified that the cash flow and external finances are the key determining factors of investment in cement industry. McEvoy et al. (1999) also studied the scenarios for better power efficiency in the UK residential sector. Goel and Nair (1978) have studied the productivity aspect of Indian Cement industry. This study emphasized that cement being a construction material occupied a strategic place in the Indian economy. Gokarn and Vaidya (1993) evaluate the cement sector performance after decontrol and found that the performance of cement industry was characterized in terms of profit and price performance.

The firm's had installed new plants and machinery, operating well in the industry and generating higher productivity and profits. Bhanu (1995) has assess the performance of the cement industry in India empirically during assorted phases of control and decontrol. Samuels and Smyth (1968), Nagarajan and Burthwal (1990), Amit et al. (1998), Vijayakumar (2002) used return on sales as a measures of profitability in the cement sector. In the cement industry, various things are accountable for rapid changes and these are the causes for mergers, acquisitions and fallout of low capacity plants (Ajay Acharaya, 1999). Mansur (1996) studied textile industry with special emphasis of z-score model for evaluating the financial health with the support of five weighted financial ratios which further followed by Selvam et al. (2004) had revealed about Cement industry's financial health with the reference to India Cements Limited. Kimiagari and Amini (2007) examine the profitability of a wide range of stock selection strategies in Tehran Stock Exchange over the period of 1991-2004. Capital Budgeting is another measure of calculating the sector financial environment (Maxwell and Gitman, 1987).

Another measure of financial performance is liquidity (Eljelly, 2004), which ensures the ability of a company management to meet its short term financing obligations. Raheman and Nasr (2007) and Zariyawati et al. (2009) states that the maximize profit is the main idea of doing business, but liquidity protection is an important objective too. According to Lamberson (1995), this is because of high volatility and changing nature of the current assets, current liabilities and short term markets. The more the cash or current assets or the lower company liabilities the companies have, the higher the working capital associated with it to expand business. On the other hand, an entity may lose profit maximization opportunities if working capital is too low (Chiou et al., 2006). Moss and Stine (1993) figured out that Cash Conversion Cycle is a broad measure of working capital as it shows the duration of the collection of cash from the sales from the purchasing of raw material from the suppliers. China Rao N. and Rao. K.V. (1995), in their study, revealed that the working capital problems faced by executives were huge in the areas of collection of debts, accumulation of finished goods, availability of working funds and uncertain cash flows. Cash Conversion Cycle requires good management of inventory, receivables and payables period (Thachappilly, 2009). It is a good indicator of the overall health of a company.

Research Objectives

- To study major indicators of financial performance of cement industry of Pakistan.
- To analyze the financial statements of the company by using financial tools.
- To assess the financial ratios (profitability, asset utilization, leverage, and liquidity) and cash conversion cycle of the Pakistan cement industry.
- To create a model for financial performance of the companies by applying multiple regression analysis.

Research Hypotheses

Following are the five hypothesis formulated to study the financial performance of cement sector of Pakistan.

Table 1. Research Hypothesis

Sr. #	
1	Ho: When return on investment increases, Profitability ratio doesn't increases (or remains same).
2	H_o: When return on investment increases, Asset utilization ratio doesn't increases (or remains same).
3	H_o: When return on investment decreases, Cash Conversion Cycle doesn't increases (or remains same).
4	H_o: When return on investment increases, Leverage ratio doesn't increases (or remains same).
5	H_o: When return on investment increases, Liquidity ratio doesn't increases (or remains same).

Research Methodology

In this study, secondary quantitative data was employed. The quantitative data in the shape of financial figures was taken from the annual reports of the cement companies as well as from the report "Financial Statement Analysis for the years 2005-14" published on the official website of State Bank of Pakistan (SBP). Apart from this, wherever required, Karachi Stock Exchange (KSE) published information was also used. The financial data duration is expanded over the 9 years period from 2006 to 2014 for the population size of 18 cement companies listed at Karachi Stock Exchange. In order to analyze financial performance in terms of liquidity, leverage, profitability and asset utilization financial ratios were used. The data analysis was done with the Microsoft Excel (MS Excel 2007) and Statistical Package for Social Sciences (SPSS v16). Descriptive statistics, autocorrelation, normality, heteroskedasticity, one sample t-test analysis and regression analysis were carried out to get the desired results of research objectives.

Data and Variables

The variables used in this study are comprised of two groups, dependent (predicted) and independent (predictor) variables. Return on Investment taken as a predicted variable, while independent variables are shown in the Table 2. Most of the present study variables are planned according to the variables that had used in an earlier research work done by Sheela and Karthikeyan (2012) on the "Financial Performance of Pharmaceutical Industry in India".

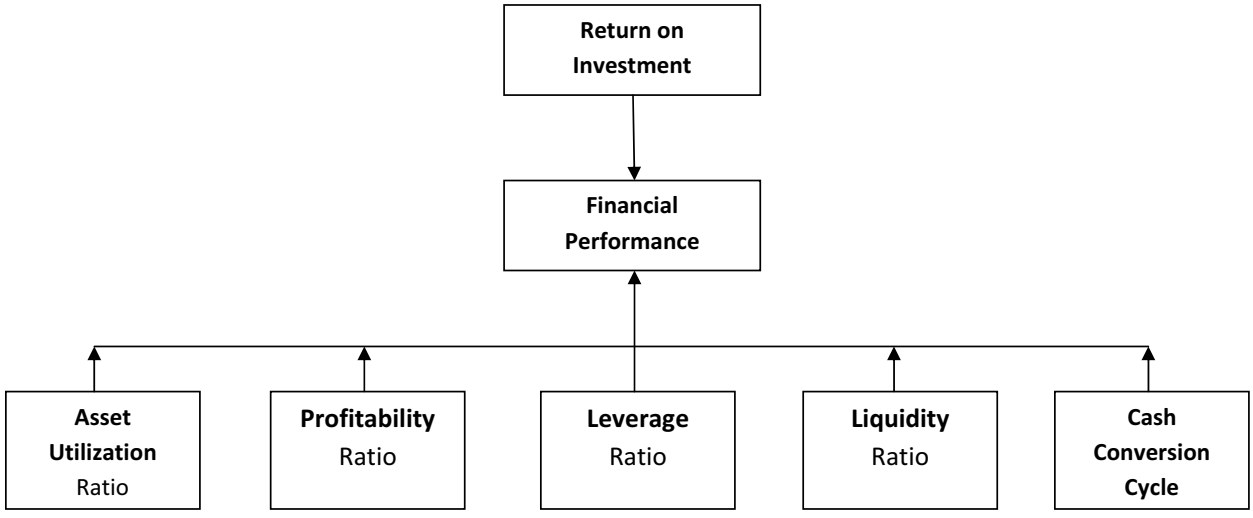
Table 2. Independent Variables

Sr. #	Ratio Type	Ratio	Abbreviation
1	Liquidity Ratio	Current Ratio	CuR
2		Quick Ratio	QR
3		Cash Ratio	CR
4	Leverage Ratio	Total Debt to Equity Ratio	TDTE
5		Total Debt to Assets Ratio	TDTA
6		Interest Coverage Ratio	ICR
7	Asset Utilization	Total Asset Turnover	TATR
8		Fixed Assets Turnover	FATR
9		Working Capital Turnover	WCTR
10	Profitability Ratio	Gross Profit Ratio	GPR
11		Net Profit Ratio	NPR
12		Operating Profit Ratio	OPR
13	Cash Conversion Cycle	Cash Collection Period	CCC

Variables Description

- Return on Investment: Shows the amount produced on a company's total wealth and is expressed as percentage to measure financial efficiency and performance of an entity.
- Current Ratio: Shows either a firm has the resources to pay its debt within 1 year. It is basically the ability of a business entity to meet its short term liabilities.
- Quick Ratio: Shows how quickly an entity meets its short term obligations with its most liquid assets.
- Cash Ratio: Shows the extent to which on hand money can pay off current liabilities. It is total value of cash and marketable securities to current liabilities.
- Total Debt to Equity Ratio: Shows the investment structure of an entity. It is a measure of leverage, obtained by dividing total debt by shareholders/owners equity.
- Total Debt to Assets Ratio: Shows the fraction of an entity asset which are financed with advances and loans over 1 year of time period.
- Interest Coverage Ratio: Shows the ability of an entity that how easily it can pay interest amount on its outstanding debt.
- Total Assets Turnover Ratio: Shows how efficiently an entity management using its resources (assets) to promote sales and revenues.
- Fixed Assets Turnover Ratio: Shows how efficiently an entity generates sales from its fixed assets. It measures the productivity of the business.
- Working Capital Turnover: Shows results after deducting current assets from current liabilities in terms of percentage.
- Gross Profit Ratio: Shows the fraction of net sales minus cost of goods sold over the financial year.
- Net Profit Margin: Shows net profit divided by net sales, expressed as a percentage. It is a most common measure of profitability.
- Operating Profit Margin: Shows the amount left after deducting operational costs and is calculated by dividing operating profit to net sales.
- Cash Conversion Cycle: Shows that how long it takes an entity to convert its cash from the raw material product.

Research Framework



Data Analysis & Discussion

In order to measure the financial performance of the cement sector of Pakistan for the time duration of FY 2006-2014, first it is important to study the descriptive statistics of the financial ratios which are used as an explanatory variables to measure the major impact on the ROI (exploratory variable) taken in the study.

Table 3. Descriptive Statistics

Ratios	Mean	Standard Error	Median	Standard Deviation	Kurtosis	Skewness
ROI	5.05	1.83	1.81	5.19	(1.72)	0.73
GPR	21.99	3.10	23.51	8.77	(1.81)	(0.25)
NPR	9.68	3.08	4.83	8.71	(2.08)	0.55
OPR	31.49	3.42	33.68	9.68	(0.73)	(0.88)
TAR	0.46	0.03	0.44	0.10	0.14	1.10
FATR	0.71	0.07	0.65	0.20	0.72	1.24
WCTR	43.46	39.44	5.35	111.55	7.90	2.80
CCC	34.66	3.39	33.94	9.59	0.38	0.01
TDER	1.16	0.10	1.24	0.29	(0.07)	(1.09)
TDTA	0.53	0.03	0.55	0.07	0.59	(1.34)
ICR	3.20	1.82	0.64	5.14	0.19	1.04
CuR	1.00	0.12	1.04	0.34	(0.54)	0.41
QR	0.45	0.08	0.49	0.22	(1.94)	(0.17)
CR	0.09	0.03	0.08	0.07	1.10	1.10

Gross profit margin (GPR), Net profit margin (NPR) and Operating profit ratio (NPR) are the measure of profitability of the company and is come under the profitability ratios. These ratios focuses on how well a company is performing in terms of its ability to generate profits. From the above table, we can see that GPR has a mean value of 21.99 with a standard deviation of 8.71. Also, OPR has a mean value of 31.49 with deviation of 9.68. Both these values have lower kurtosis and skewness when compared with NPR, which is on high side with a value of -2.08 and 0.55 respectively. This means that NPR is a weak indicator of performance with respect to other two as their may be issue of skeness in the data. Asset utilization ratios comprised of Total assets turnover (TATR), Fixed assets turnover (FATR) and Working capital turnover ratio (WCTR). They are used to find out how well and efficiently a company is utilizing its assets. From the above three ratios, FATR mean value is 0.71 followed by 0.46 for TATR and 43.46 for WCTR. The higher value of WCTR standard deviation, kurtosis and skewness indicates that this measure of financial ratio not well measuring the financial performance due to non normality in the data.

Cash conversion cycle (CCC) is basically a final ingredient of three components: Days sales outstanding (DSO), Days payables outstanding (DPO) and Days invesntory outstanding (DIO) respectively. Cash conversion cycle shows the effectiveness of the management and it means the time taken by entity to convert its resources into the monetary terms. The average value of CCC is 34.66 indicating the sector is managing to sell its raw input with in 35 days. Solvency ratios are measured with the help of Total debt to equity ratio (TDER), Total debt to assets ratio (TDAR) and Interest coverage ratio (ICR). The solvency ratio indicates that how well a company is operating in meeting its long term obligations. All these ratios shows low kurtosis and skewness value with a mean of 1.16, 0.53 and 3.20 each. Liquidity ratio explains the ability to meet obligations of the company within the span of 1 year. It

is comprise of Current ratio (CuR), Acid ratio (QR) and Cash ratio (CR) with the mean value of 1.00, 0.45 and 0.09 respectively. The standard deviation and skewness of liquidity ratios is low which indicates it's a good overall performance measure with the normal data formulation..

From the overall discriptive statistics, we conclude that only two ratios (Net profit margin and Working capital turnover ratio) are showing the sign of large deviation, skewness and kurtosis. Our further analysis by normality test and hypothesis testing would indicate either the observations shows a real effect or they are combined with a component of chance variation.

Hypothesis Testing

In statistical inference, the main part is to build up and test of a hypothesis. Its main purpose is to select between the two hypothesis (null or alternative) about the value of a population parameter. It is used to determine the possibility of that is the given hypothesis or assumption is either true or false. Hypothesis testing technique is widely used in the marketing, operations, financial business and industry for making strategic decisions. Mostly the hypothesis are tested using a level of significance of 5% (or 0.05) and a confidence level of 95%. A one sample t-test is a kind of hypothesis test about the mean for answering questions where the data figures are a random sample of predictor observations from an underlying normal distribution. For one sample test, normality assumption need to be follwed. To check the normality (bell shaped) assumption, we use the tests of normality by using the SPSS.

Table 4. Tests of Normality

Financial Indicators	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ROI	.241	7	.200	.916	7	.469
GPR	.273	7	.121	.889	7	.112
NPR	.258	7	.200	.895	7	.342
OPR	.211	7	.200	.878	7	.253
TAR	.136	7	.200	.963	7	.822
FATR	.478	7	.000	.551	7	.003
WCTR	.300	7	.073	.833	7	.021
CCC	.198	7	.200	.906	7	.417
TDER	.211	7	.200	.918	7	.504
TDTA	.277	7	.134	.782	7	.058
ICR	.236	7	.200	.839	7	.131
CuR	.299	7	.104	.810	7	.072
QR	.211	7	.200	.920	7	.508

The normality test results in the following table shows that the finincial indicators that have significance value of Shapiro-Wilk test of normality greater than 0.05 (level of significance) are assumed to be follow the normal (bell shaped) pattren. Only net profit ratio and working capital turnover ratio are not bell shaped from the above analysis. In order to make them normal, we take the natural log of both the financial indicators, and than run the one sample test and regression analysis.

Autocorrelation, Heteroskedasticity and Collinearity Test

These tests used to check the issue of correlation, heteroskedasticity and multi collinearity from the data set. As a rule of thumb, if the significance value of auto correlation and heteroskedasticity tests is below 0.05, than there is issue among the data set and vice versa. Durbin Watson value indicates the collinearity of the data. The close the value to 2, the less the data has multi collinearity.

Table 5. Autocorrelation, Heteroskedasticity and Collinearity Test

Regression Models	Autocorrelation (P-value)	Heteroskedasticity (P-value)	Durbin Watson Value
Model – A (Profitability)	0.586	0.324	1.76
Model – B (Asset Utilization)	0.055	0.211	1.87
Model – C (Cash Conversion Cycle)	1.000	0.032	2.31
Model – D (Leverage)	0.595	0.142	1.73
Model – E (Liquidity)	0.152	0.401	1.95

As p-value of all five models is greater than 0.05, there is no issue of both autocorrelation and heteroskedasticity. Also the value of Durbin Watson test near 2 indicates no issue of multi collinearity.

One Sample t-Test

The t-value column in the one sample test at the level of confidence 95% (or z-value = 2.32) indicates that except working capital turnover and interest coverage ratio value all the indicators have value greater than 2.32, which means that we have to reject null hypothesis (H_o) in the favour of the alternative hypothesis (H_1). Also, the p-value, which is the possibility that the test statistic is significant as the one observed would be obtained assuming the null hypothesis were true. The smaller the p values than the significance value, the stronger the indication favoring the alternative hypothesis. As the p values are less than the alpha value ($\alpha = 0.05$) for all the financial indicators of performance measurement except the one variable, that means the observed effect is statistically significant, the null hypothesis are rejected, and the alternative hypothesis are accepted.

Table 6. One-Sample t-Test

Financial Indicators	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
GPR	7.092	7	.000	21.99	14.660	29.325
NPR	3.144	7	.016	9.68	2.400	16.967
OPR	9.206	7	.000	31.48	23.401	39.578

TAR	13.436	7	.000	0.46	0.382	0.545
LnFATR	10.061	7	.000	0.70	0.539	0.871
LnWCTR	1.102	7	.307	43.46	-49.800	136.723
CCC	10.222	7	.000	34.65	26.641	42.676
TDER	11.296	7	.000	1.16	0.920	1.408
TDTA	20.463	7	.000	0.52	0.467	0.590
ICR	4.000	4	.016	0.80	0.244	1.355
CuR	8.187	7	.000	0.99	0.710	1.286
QR	5.737	7	.001	0.44	0.263	0.633
CR	3.697	7	.008	0.09	0.034	0.154

Multiple regression anlysis is a most widely and commonly used technique in the area of research work to measure the impact of predictor variables on the predicted variable. It allows to predict one variable on the basis of several other variables. The F statistics in the regression model shows the overall fitness of the model. The coefficients values indicates that 1% (or 1 unit) increase in the value of predictor variables results in increase/decrease in predicted variable by 1% (1 unit). From the regression model, one can see that the **Hypothesis 1** where the F statistics value of profitability ratio is significant at the 5% level of significance, which means that we will accept the alternative hypothesis and reject the null hypothesis. That is, when Return on Investment (ROI) increases, profitability ratios also increases. **Hypothesis 2** also signifies, as the F value is less than 0.05. So we ruled out the null hypothesis, and accept the alternative hypothesis. I.e; When Return on Investment increases, asset utilization ratios also increases. Similarly, **Hypothesis 3** F statistics value is significant at 5% level of significance for the cash conversion cycle. Therefore the alternative hypothesis is accepted. i.e; When ROI decreases, the cash conversion cycle time also increses. Thus, null hypothesis is rejected in the favor of alternative hypothesis. **Hypothesis 4** regression analysis suggest that the F statistics value of leverage ratios is high with the alpha value of 0.05, resulting in the acceptance of null hypothesis and concludes that when ROI increase, leverage ratio doesn't increases. Finally, **Hypothesis 5** indicates a significant value at 0.05 level of significance. Therefore alternative hypothesis is accepted. When ROI increases, the liquidity ratios also increases. Thus, ROI increment also increases the liquidity position of the company. The overall value of R^2 indicates that 83.2% of the variation in ROI is explained by the regressors.

Table 7. Multiple Regression Analysis

				Overall R^2 Value = 83.2 %	
	Coefficients	**Sig Value**	**St. Error**	**R^2**	**Sig. F**
Profitability Ratios				99.64%	0.00
Gross Profit Ratio - GPR	0.055	0.05	0.05		
Net Profit Ratio - NPR	0.420	0.00	0.02		
Operating Profit Ratio - OPR	-0.033	0.02	0.02		
Asset Utilization Ratios				98.19%	0.00
Total Assets Turnover Ratio -TATR	29.83	0.03	14.52		
Fixed Assets Turnover Ratio - LnFATR	-17.72	0.01	9.63		

Working Capital Turnover Ratio - LnWCTR	0.019	0.00	0.00		
Cash Conversion Cycle				13.56%	0.04
Cash Conversion Cycle - CCC	0.06	0.02	0.04		
Leverage Ratios				34.89%	0.49
Total Debt Equity Ratio - TDER	21.94	0.48	27.49		
Total Debt to Total Assets Ratio - TDTA	-43.27	0.03	62.49		
Interest Coverage Ratio - ICR	-3.58	0.30	2.87		
Liquidity Ratios				89.51%	0.00
Current Ratio - CuR	-1.14	0.00	2.43		
Quick ratio - QR	-10.70	0.03	7.54		
Cash Ratio - CR	118.00	0.02	29.95		

Conclusion

This research paper examines the importance of ratio analysis in predicting the financial performance and constructing a model of analyzing the overall financial performance of Pakistan cement industry. This study serves the fundamental objective of how financial indicators can be useful in predicting the financial performance of the industry. The study concludes that there is a positive relation among the five under observed ratios with the financial performance except the leverage shows which are not significant to the ROI at the 5% level of significance. The financial indicator gives an output of $R^2 = 0.832$ in structural model of regression analysis. This shows that the ratios taken for calculations in creating the model explains variation of 83.2% in the ROI. Asset utilization and profitability ratios are highly correlated with financial performance. The company should focus on them to improve its performance and position over the time period. Companies should also manage the liquidity position because high liquidity will make loss in capital and low liquidity will make the returns lower. The study also reveals that no positive strong relation exists between the liquidity and leverage structure. Leverage and Liquidity has a negative impact because it is understood the in these position the capital is used to get more profitability and growth. Also, leverage is not a strong predictor for measuring the financial performance. One can say that, the overall financial performance of the company depends upon the profitability position, liquidity position, and cash conversion cycle and asset utilization ratios which have high correlation with one another.

Future Implications

The research is limited in scope because of the small sample size and time period. The sample taken was only cement companies of Pakistan for creating model. The time duration of study was from the year 2006 to 2014. These nine years illustrate a lot of variability with respect to data. Beside these two constraints, one can also study the other factors like MVA, EVA, IRR, etc in order to measure the financial performance with in the sector. To remove the study limitations, the size of sample on which population or industry is generalized for the research and the number of years of consideration to be analyzed should be increased, which ultimately results in the low variation of data with respect to variables being observed. The researchers can also do comparative analysis of different countries cement sector.

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Appendix

Cement Companies Listed at Karachi Stock Exchange (FY 2014)

1. Al-Abbas Cement Industries Ltd.
2. Attock Cement Pakistan Ltd
3. Bestway Cement Ltd.
4. Cherat Cement Co. Ltd.
5. D.G. Khan Cement Co. Ltd
6. Dadabhoy Cement Industries Ltd.
7. Dandot Cement Co. Ltd.
8. Dewan Cement Ltd. (Pakland Cement Ltd.)
9. Fauji Cement Co. Ltd.
10. Fecto Cement Ltd.
11. Flying Cement Ltd.
12. Gharibwal Cement Ltd.
13. Kohat Cement Co. Ltd.
14. Lafarge Pak. Cement Ltd. (Pakistan Cement Ltd.)
15. Lucky Cement Ltd.
16. Maple Leaf Cement Factory Ltd.
17. Pioneer Cement Ltd.
18. Zeal Pak Cement Factory Ltd.

(Source: www.kse.com.pk)