TALLINN UNIVERSITY OF TECHNOLOGY
School of Business and Governance
Department of Business Administration

Noman Faried

A STUDY ON THE FINANCIAL PERFORMANCE OF CEMENT COMPANIES IN PAKISTAN

Bachelor's thesis

Programme: International Business Administration, Specialization: Finance and Accounting

Supervisor: Yassine Bakhar, Phd

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I hereby declare that I have compiled the thesis independently
and all works, important standpoints and data by other authors
have been properly referenced and the same paper
has not been previously presented for grading.
The document length is 10,238 words from the introduction to the end of conclusion.

Noman Faried ……………………………
(signature, date)
Student code: 156054
Student e-mail address: noman.faried@gmail.com

Supervisor: Yassine Bakhar : Phd
The paper conforms to requirements in force

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TABLE OF CONTENTS

ABSTRACT

In today's world, companies in the cement industry face more and more competition due to the new technologies and the increase of construction at a national level. To stay competitive, companies must have enough material of cement all the time and companies need to provide a high quality of cement for their local or international clients. The businesses in this highly controlled industry continuously need their prices, costs, inventory rates, and asset productivity to be complied with. The financial ratio analysis provides information on performances and helps in analyzing the future of the companies. This analysis is essential for detailed decision-making and execution of the strategy.

This thesis aims to present financial ratios, their analysis and analyze the relationship with the company's assets and liabilities with the working capital. An analysis of the four biggest companies in the cement industry of Pakistan, Attock cement limited, Maple leaf cement limited, Kohat cement limited, Lucky cement limited.

The findings suggest that the study of the financial ratio is a valuable tool in recognizing selected companies' strengths and weaker sectors. Based on the research results, recommendations for selected companies can be given to optimize their performance and boost their productivity further based on this study.

Keywords: working capital, financial ratio analysis, cement industry, performance, efficiency

INTRODUCTION

The development of corporate sector is too much vital for the growth and bosting up of an economy. Most of the businesses in the emerging countries does not flourish or grow due to the increasing problems regarding the financing of businesses. So, I will try to provide details analysis about financial statements of selected companies in the cement industry. It will be helpful for them in order to take timely decisions. Because of these factors, the industry is increasingly competitive. So, for companies in this field, financial results and management are now essential. It is imperative that we must pay attention to factors affecting their success because businesses in their fast-growing industries must remain competitive. Companies will concentrate on efficient decision-making and policy execution based on reliable data and track their cost and inventory levels continuously. The Financial Ratio Analysis provides the information needed regarding the strengths and weaknesses of companies, their competitiveness, liquidity, solvency and performance. Knowing the factors that influence their efficiency, the management will make the right decisions and budgets for the next periods.

This thesis focuses on financial statement analysis which is used to evaluate the financial strength of a companies. It contains examining trends in key financial data, comparing financial data across companies, and analysing financial ratios.

This study would expose the financial performance of cements sector in terms of their financing patterns. Cements sector is one of the most gainful and reliable sectors of Pakistan. When it comes to business, we cannot disregard the risk involved in business processes. The business risk can be handled by understanding financial performance of a company. Cement is one of the main and unique stuff that commonly used in construction. Cement help to build homes, businesses mega projects and foundations. The usage of cement is increasing day by day because of the construction. Which is helping the cement industry to grow further and cement industry is expanding every year.

Financial performance of these companies will be discussed thoroughly. These companies are from the same industry of cement in Pakistan (Attock Cement Limited, Maple leaf Cement Limited, Kohat Cement Limited and Lucky Cement Limited). For getting result about the top company ratio analysis of these companies will be calculated based on data analysis using a quantitative method. The financial statements used for this analysis are the balance sheet and income statement of all companies from 2015 to 2018. They were obtained from the company's official websites and stock exchange. As the ratios itself provide little information they have to be compared to industry averages, therefore the all calculations of the company's ratios done by own.

The scope of this research will deliver new line of action on work which will boost up the cement industries through understanding financial statements. This thesis aims primarily to compare, using financial ratios, the achievements of the four big cement companies. The study also involves an estimation of the general efficiency of all companies through the integration of various elements in one measurement; the general indicator of performance quality. Through this study, the information given can be supplied to allow companies to optimize their output in different sectors. When relying on such data, decision-making and strategies become more accurate.

Research questions

a) Which company is financially stronger overall?
b) Which company has a higher overall efficiency?

Limitations of the study

This study based on secondary data, certain limitations can apply to the research part. This thesis may also be influenced by the limitations which are listed in chapter 3 that are the analysis of the financial ratios.

This thesis contains five chapters excluding the introduction and conclusion. The first chapter focuses on the brief history of Pakistan cement industry and its manufacturing process, types of high quality of cement which are available in the market, cost procedure of cement, and what project are in the process currently under the government. In the next chapter have more details about the working capital's concept, types of working capital and approaches, In the meanwhile described the more detail according to the study about different categories of financial ratios and their most common ratios and formulas form a theoretical basis for future research.The third chapter explains the study of financial ratios and their importance and drawbacks and offers information about users and their purposes. Knowing the advantages and disadvantages of extremely critical ratio analysis, it allows the parties involved to carry out a more thorough analysis and to achieve reliable results. The fourth chapter offers a comparative financial ratio analysis, including the estimation of the overall profitability, efficiency, liquidity performance level, of the four main companies in the cement industry of Pakistan, Attock cement limited, Maple leaf cement limited, Kohat cement limited, Lucky cement limited.

1. CEMENT INDUSTRY OF PAKISTAN

1.1 Historical background

The cement business of Pakistan has made some amazing progress since 1947 overall construction in the country was 300,000 per tons every year and after that regulatory bodies introduced the limit for of making of cement which was around 4.7million tons each year. Pakistan's first cement company built-in 1921 at are an area of Wah, Punjab. In 1953 the usage of cement was increased, and the new limit introduced (Ali et al., 2015).

The main development of the cement industry was due to the increase in the usage of the cement. The first four plant's limit was 0.6million tons after that the expansion occurred. The cement industry firstly privatized in 1990, which helped people to invest in the cement industry and borrow new plants. There is a total of 29 firms that are listed in the cement industry, 19 companies are working in the north side of the country and 10 are on the south. Four investors are an outsider, and private investors own other 16 companies, and three are in hold of the military. The cement industry is divided into two main parts north and south. Through which country gets 20% of the production from the south and other 80 from the north (Ali et al., 2015).

The cement industry is no doubt one of the most profitable and expanding industry of the world who is expending day by day and Also taking part in financial improvement. Because cement is that kind of material used in construction, the maker of the cement should check the quality and material of the cement after making and improve the materials. Know cement industry is on their peek they are at their amazing limit because of the CPEC and other construction on Pakistan. The cement industry is contributing the nation wise arranging the employment to the people about 150,000 per year. Cement industry exported around 7.716 million tons during 2015-2016 and earned around 560miilon dollar. Furthermore, around 700 million dollars earn in 2017-2019 (Independent News Pakistan, 2019)

Cement mainly used for construction materials in the present day. It found in office buildings, roads, residences and utilities. Every year, the volume of cement used in Pakistan is a measure of its success in the growth of socio-economics.

Pakistan is the 14th biggest cement maker in the world. Regardless, on the lower side, the Pakistan cement per capita cement production at 140kg in its prompt area. Much lower is 400kg against worldwide utilization. Its shows that the cement industry has remarkable prospective to see an extension with the development and growth of the country. The main reason presence of this industry in Pakistan is the accessibility of the raw material. Our country has reserve clay, chalk and limestone that can keep up for further 50-60 years. The production was increased by 660000 tones every year; at that time the demand was 1000000. In 1947 at the season of independence, there were four cement industries/factories are introduced and installed, and the limit was 470000 tonnes every year. These plants have installed at Wah, Rohari, Karachi, and Dandot. In 1956 many plants were installed in Daudkel, Hyderabad and also on the private sector (DIGITAL MAGAZINE, 2018; Independent News Pakistan, 2019).

At present, there are 24 units of manufacturing operation in Pakistan and the production capacity of installed units is 79.4 million tons annually.

The cement industry operates in two separate zones:

1. North
2. South

In northern zone shows around 80% of the total manufacturing production and sales of units. In southern zone there is more chances of increase the revenue because there are several export markets (Christensen, 2017).

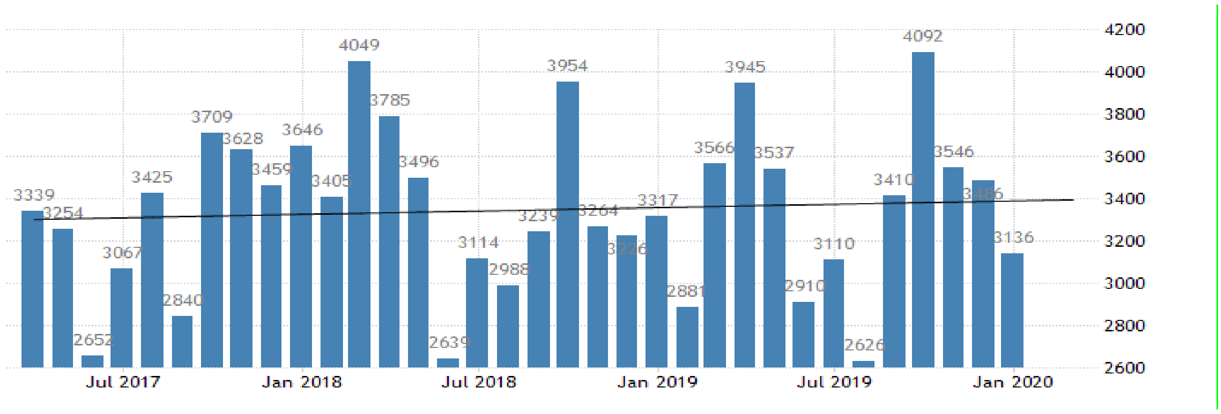

Figure 1. Manufacturing production and sales in the past five years ((RADING ECONOMICS, 2020)

Table 1. Expansion plans of listed companies according to government regulation

Company	Expansion in mln tons	US $ in mln	Completion
Lucky cement limited	2.3	200	FY18-FY21
Attock cement limited	1.1	120	FY18-FY19
Cherat cement company limited	4.6	315	FY17-FY19
D G khan cement company limited	2.6	200	FY18-FY21
Fecto cement limited	1.0	100	FY18-FY20
Gharibwal cement limited	2.4	200	FY18-FY21
Pioneer cement limited	2.3	225	FY19
Bestway cement Pakistan limited	1.7	190	FY18-FY20
Power cement limited	2.1	235	FY18-FY19
Maple leaf cement limited	2.3	225	FY19
Kohat cement limited	1.0	110	FY19-FY21
Total	23.4	2120	

Source: Composed by author from (PSX Corporate, 2018)

The numbers of companies have announced their expansion plans that will execute in future that also help to increase the GPD of the country. Some of them were already started their expansion plans under following the government regulation.

1.2 Manufacturing process

1.2.1 Constitution of cement

Pakistan is very rich and lucky country because the main ingredients of the cement for production are easily available. The cement is very "value added" product.

Chemical composition: CaO 70% , Al_2O_3 04% , SiO_2 23% , FE_2O_4 03% (Dunuweera & Rajapakse, 2018)

There are three types of the cement manufacturing process.

Wet process: It's an outdated procedure for manufacturing the cement because of water requirement and poor heat warming.

Semi-wet: That method is not popular because use of high level of consumption of fuel and energy.

Dry process: This method is suitable those materials that has low moistures materials and also has less usage of fuel. The maintenance requirement is also low.

Types of cement are manufactured in Pakistan.

1. Slag cement
2. Ordinary Portland (OPC)
3. Sulphate resistant
4. Super sulphate resistant
5. White cement

1.2.2 Top cement companies in Pakistan

Cement companies have much important part in developing the socio-economic sector in Pakistan. In total, nineteen companies in the cement industry which are they registered in the stock exchange of Pakistan in which top value and worth able selected below.

1. Maple leaf cement limit
2. Attock cement limit
3. Lucky cement limit
4. Kohat cement limit

1.3 CPEC projects

The possibility of growing the demand of cement may be caused by CPEC related project that involved construction of roads, infrastructure, and development in Gwadar city, airports, and seaport. CPEC will imperatively affect a nation's economy, and it would change our country into venture heaven. It will profit all the distant of Pakistan, and it will likewise give broad work chances to the neighbourhood inhabitants. Gilgit Baltistan alone with around 50,000 MW limits can assist the nation with overcoming the vitality emergencies. It will be the least expensive and contamination-free wellspring of power. Bhasha Dam is the fundamental undertakings in the offing. Which is the ideal opportunity for the administration just as a private segment to abuse the enormous power generation potential in Pakistan (DIGITAL MAGAZINE, 2018).

1.4 Government projects

The demand for cement is also remaining high because the government has planned many projects. For example, the projects related water and power sector that includes Dasu, Diamer Bhasha, Dam. The major expansion and changes of Tarbela and Mangla power station. That also includes motorways project and highways projects. The construction project of Diamer Bhasha was expected to increase the demand for cement of about 10 million tons, and even ten nuclear projects that planned to start in 2030 (DIGITAL MAGAZINE, 2018).

1.5 Construction activates and high profit margin

The demand for cement was increasing due to housing shortages. To overcome this gap, we would require a considerable quantity of cement and also construction material The gross profit to sales ratio has shown the averages 33%(last five years) that are double the production sectors (Analysis & At, 2018).

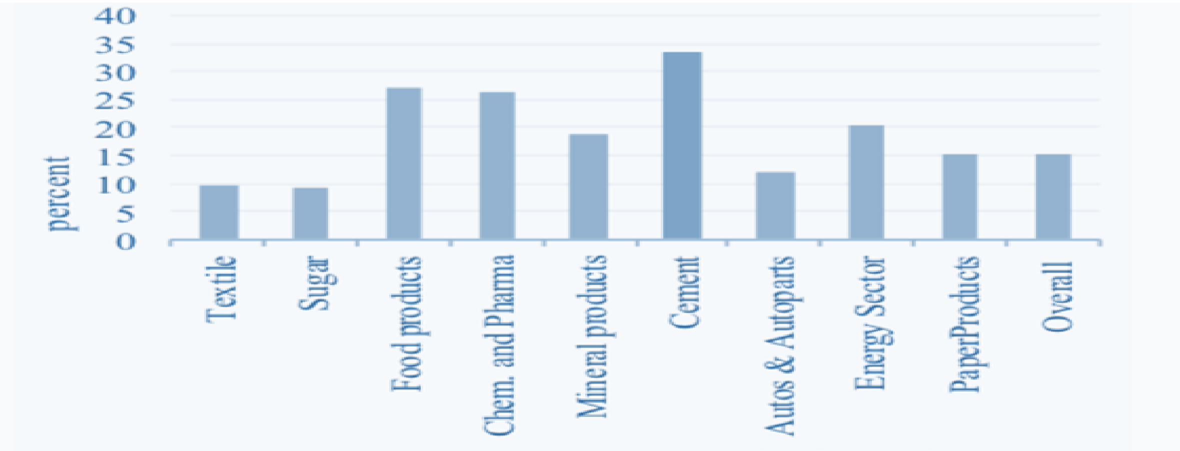

Figure 2. Overall high profit margin in the past five years of cement industry (Analysis & At, 2018)

1.6 Cement projects underway

Pakistan has eight brownfield Cement ventures in progress. China-based Sinoma is as of now constructing a 1.9Mta plant for Bestway Cement at the expense of PKR18.9billion, and around 55 per cent of the work has been completed according to the schedule. The eight brownfield Cement ventures with an all-out limit of 18.8Mta are at different phases of fulfilment and planned to be dispatched between June 2019 and June 2020 at an expected expense of over Rs159 billion (US$1.37 billion) in Pakistan. At this point, every one of the undertakings has been finished, by small and large, at any rate, 46 per cent of their development (DIGITAL MAGAZINE, 2018; Limited, 2018).

China-based Sinoma is right now constructing a 1.9Mta plant for Bestway Cement at the expense of Rs18.9 billion and around 55 per cent of the work has been done to date. Sinoma is likewise developing Pioneer Cement's 2.5Mta plant at the expense of PKR19.89bn. Around 42 per cent of this task has been finished. A 2.5Mta plant for Gharibwal Cement is being worked by another Chinese organization, CTIC, at the expense of Rs19.89 billion. Somewhere in the range of 12 per cent of the work has been completed. Denmark-based FLSmidth is adding 2.3Mta of ability to Maple Leaf Cement. The Rs23 billion activities have been finished for around 51 per cent. FLSmidth is additionally building Power Cement's 2.4Mta plant at the expense of Rs24.26 billion with the finish at the 34 per cent imprint. Lucky Cement's 2.6Mta task is being present and evaluated to cost Rs17.5 billion. Cherat Cement's 2.1Mta plant is being worked at the expense of Rs16.81 billion. Around 48 per cent of work has been finished."(DIGITAL MAGAZINE, 2018; Independent News Pakistan, 2019; Limited, 2018; Miranville, 2018).

Kohat Cement is putting Rs18.47bn in a 2.3Mta plant, for which seven percent of the work has been completed. Starting at 2018, Pakistan has an all-out generation limit of 49.44Mta of Cement. (Cavenett, 2018).

1.7 Significance of cement industry

Infrastructure is one of the main things to build the economy in the country. The cement industry is very important for economic growth, development and to reduce the unemployment rate. The industry is not only important for the country's development but also to meet the international market. The cement industry is expanding very fast in Pakistan. After the separation of Ind-Pak, there were only four cement factories in the country with the capacity of 300.000 tons, but now the industry has grown, and now the annual capacity is 4500.000 tons.

Pakistan's Cement industry current limit is at 97% that is providing the residential Cement makers to use an expected $2.27 billion. "The China-Pakistan Economic Corridor (CPEC), is relied upon to have the gigantic effect on Cement generation levels, with a Joint Cooperation Committee having been set up to advance the development of CPEC between 2013-30," as indicated by Cement. System of roads will interlink with various parts of Pakistan with one another and the docks of Gwadar with Xinjiang area in China. It is the greatest project in Pakistan's whole record and will ensure increase interest of Cement. As indicated "strong development movement has prompted nearby Cement makers expanding limit at a break-neck speed."(RADING ECONOMICS, 2020).

1.8 Effect of the procedure in the cost of the cement

Using the old and outdated method for manufacturing the cement can affect the price of the cement as well as the quality of the cement. If we used the outdated method that would be increased the maintenance cost and that affects the prices of the both domestic and international market In 2017 India sold their cement at low prices because they reduced the cost of production through using the latest technology and methods.(Christensen, 2017)

2. WORKING CAPTIAL AND FINANCIAL RATIOS

2.1 Working capital

Working capital management is a connection between organizations short-term assets and short-term liabilities. The main purpose of the Working Capital Management (WCM) is to guarantee and ensure that a company can do their day-to-day activities and operations, and it has the capacity to achieve and satisfy both upcoming expenses. WCM involves accounts payable, receivables, inventories and cash. WCM is the most important tool of finance because it straight affected the profitability of any industry (Ashok Kumar Panigrahi, 2013).

Concept of WCM tells about the financial strength of the business and firm. Every firm require the finance for its establishment of the business which is known as fixed capital and also require finance to operate its daily activities like purchase of raw material, payment of wages etc. which is known as working capital (Boopathi & Leeson, 2016)

2.1.1 Types of working capital

Balance sheet view divided into further two types:

1. Gross working capital
2. Net working capital

Operating working capital are two types:

1. Permanent (working capital)
2. Temporary (working capital)

Gross working capital

Gross working capital tells about the total value, total amount of the short-term assets. (Those assets that are easily turn into cash within a year) for example, that includes short-term investment, account receivables, inventory, and cash.(Ashok Kumar Panigrahi, 2013; Ismail, 2017)

Net working capital

Net working capital shows the total amount of all the current assets and current liabilities of the firm. It measures the short-term liquidity of the firm. Moreover, it used to check the ability of the management to use the assets in a productive manner and efficient manner.(Ashok Kumar Panigrahi, 2013; Ismail, 2017)

To calculate Net Working Capital (NWC) we can use this following formula:

NWC = marketable investments + trade accounts payable + inventory +cash and cash equivalents – accounts payable

If the NWC show the positive figure that indicate that firm have sufficient payment, assets to pay its liabilities. In the other hand if the NWC shows the negative figure that, indicate that firm have not sufficient assets to pay its short-term liabilities that may be in the condition of bankruptcy.

Permanent working capital

This is the minimum fund required by the firm to operate and handle the fluctuations of the firm's activities. That is also known as fixed working capital without this firm is not able to perform its operation. This term help in decisions that related in financing mix and saved the interest expense of the organization (Ismail, 2017).

Temporary working capital

Temporary working capital (TWC) is part of the total capital of the firm. It is an additional requirement of working capital that is rising out of any special event and seasonal demand. Business profits and earnings are not like employee salary natures that were fixed throughout the year, but business is not like such nature. In business, all businesspersons try to grab those opportunities. This opportunity requires additional capital to get this profit. This requirement is known as TWC (Ismail, 2017; Mcinnes, 2000).

2.1.2 Approaches to working capital

Three main approaches and strategies help to choose the Funds of long and short term for financing the firm working capital. That is the Conservative approach, Aggressive approach, and Hedging approach. These approaches are different because of the tradeoff between profitability and risk.
These approaches of working capital explained through the equation and graph that help to understand easily. First, we need to understand this diagram. The red three horizontal lines show the approaches. The simple line shows the conservative approach; dotted line shows the aggressive approach. These lines show the level of usage of long term recourses (Ismail, 2017; Mcinnes, 2000).

The conservative approach

It is a risk-free approach to working capital. A firm performs this strategy to maintain higher working capital and a higher level of currents assets. The main and major part of the capital to finance in long-term sources like term loans, debentures, equity etc. Then the remaining part of capital financed by short term financing sources. Thus, the primary and major objective of WCM is ensured (Ismail, 2017; Mcinnes, 2000).

The aggressive approach

This approach is the riskiest and most aggressive strategy. It is completely focused on the profitability of the firm. It is a high profitability and a high-risk strategy. In this strategy, long-term finance of the company is only using to finance the long term and fixed assets. It is a part of a fixed (permanent) working capital. Short-term funds are financed the both permanent and temporary working capital (Ismail, 2017; Mcinnes, 2000).

Moderate or hedging approach

The Moderate or Hedging Approach is an arrangement of working capital financing wherein the short-term requirements are financed with short-term debt and long-term requirements with long-term debts (Boopathi & Leeson, 2016; Ismail, 2017; Mcinnes, 2000).

2.2 FINANCIAL RATIOS

Companies used the financial ratio to evaluate their performance. And they obtain the initial data about these ratios (profitability, liquidity or efficiency) by analyzing them. They show a connection between at least two financial annual reports and possible to give in the result of percentages, proportions or number of times (NCERT, 2013).

Almost all types of companies, groups, investors, creditors and shareholders, they use financial ratios to have the company's performance and financial or market position. When the company's managers need to decide for the company's benefits, they use financial ratio in decision making, for instance, the solvency for work. Even, the investors, creditors and shareholders also use them to ensure the safety of their money, shares, and growth value (Ross et al., 2003).

2.2.1 Profitability ratios

The most important objective is the improvement in the company's probability. Every company has a prime goal and concern to enhance its probability which is not quite easy to gain it for every company. In the book of (Ross et al., 2003) he says also, the profitability is the main difficult phase for every company to conceptualize. Generally, the profit of any company is characterized by the capacity of its cost of sales and its satisfactory profits. In this way, by using these ratios companies able measure their efficiency of a company's profit (Harsha Vardhan et al., 2014).

According to (Brigham & Houston, 2012; Jr et al., 2009) for better understanding should be analyse the company's past performances and compare the industry averages too. Otherwise these ratios only give the less information when done it separately. Therefore, every industry follows the same practice (pervious financial reports or industry averages) to have the company's a better understanding and present financial position.

As mentioned above, this ratio-category will be divided into two subcategories, the margin ratios and also the return ratios. The profitability ratios indicate the potential of the firm to translate revenue to income, while the return ratios assess the overall capacity of the firm to deliver returns to its investors (Adjirackor et al., 2017).

Gross profit margin

This ratio tells us the percentage of gross profit that earned on the sale. Basically, this ratio shows the financial health of the company and the leftover amount after subtracting the cost of the product. If the figure is higher and positive, that indicates that the company managed and controlled their cost of sale efficiently. The negative figure shows that the company not manages the cost of a product efficiently (Wood & Sangster, 2008).

$$\text{Gross profit margin} = (\text{Total Sales Revenue} - \text{COGS}) \div \text{Total Revenue}$$

Net sales

Net sales or net profit margin helps to measure the profitability and efficiency of the firm capital and this ratio mostly used by the investor. According to the (Robins, 2000) net profit margin is the fundamental key of the company or industry's decision making since decides the company's financial position.

$$\text{Net profit margin} = \text{Net Profit} \div \text{Total Sale Revenue}$$

Return of assets

Return on assets (ROA) tells us the company's profit from its assets, which is calculated by using the equation of ROA. This ratio measures the company's ability to convert their assets into profits when the companies using their previous financial reports and compare them within the same industry. Because ROA is the best key when comparing similar companies. In the meanwhile, if the company's ROA goes at level high could be demonstrated that the company is not reestablishing its assets, which can because of the company's damages (Gallo, 2016).

$$\text{Return of Assets} = \text{Net Profit} \div \text{Total Assets}$$

Return of equity

It shows the percentage of returned profit earned by the equity holders. If the figure is higher than indicate positive impact, this ratio may be a comparative same return ratio than the return on asset, besides that it seems at equity rather than assets. Hence, the net profit is separated by the entire shareholders' value (Wood & Sangster, 2008).

$$\text{Return of equity} = \text{Net profit} \div \text{Equity}$$

2.2.2 Efficiency ratios

Lan says (Lan, 2012) in his journal, the company's efficiency or performance can be increase by evaluating its internal use of resources (assets and liabilities). Turnover ratios are also named with efficiency ratios are measures of a company's ability to use its assets effectively as they measure how many times a business hands its assets or liabilities over. The larger the amount generally, the quicker the company turns its assets or liabilities into the cash.

The inventory turnover ratio is one of the most important operation ratios. It estimates the number of times the company's inventory has been sold out during the financial year. This is determined by dividing the COGS by the total inventory, which can be measured by adding the beginning and finishing inventories together and dividing the result by two. Balances of inventories quarterly or monthly (Ross et al., 2003).

The ratios summarizing all other operation ratios and calculating the capacity of a business to use its assets to produce revenue are the overall asset turnover ratio (Nuhu, 2014). Since this ratio represents the relationship between sales and total assets, it is determined by dividing net sales revenues by total assets, including current and non-current assets. When comparing the outcome with the market average or the results of rivals, a lower ratio can suggest an inefficient use of assets that can be overcome either by-sales or by selling surplus assets. On the other hand, a higher outcome is typically a symbol of the productive use of properties (Ross et al., 2003).

Stock turnover

This ratio tells us how many times in a year we sold our stock. If this ratio shows the higher figure that, indicate the positive impact. And helps to the companies to make better decisions to buying a new inventories, marketing and prices of manufacturing.

$$\text{Stock turnover} = \text{Sales} \div \text{Stocks}$$

Debtor days

This ratio tells us how many days are taken by the customer to pay money to the firm. This ratio is using for the overall calculation of customers' actual payments against given invoices, the formula is used to measure the division of trade receivable by annual credit sales and the subsequent subtract by a total number of days.

$$\text{Debtor days} = (\text{Debotor balance} \div \text{Creditor balance}) * 360$$

Stock days

Stock days ratio show the time taken by the stock kept in warehouse before being sold.

$$\text{Stock days} = (\text{Stock} \div \text{Cost of sales}) * 360$$

Creditor days

Creditor days ratio shows the number of days' firm take to pay their creditors. This ratio indicates the amount of credit that its suppliers offer to the product.

$$\text{Creditor days} = (\text{Creditor balance} \div \text{Credit purchase}) * 360$$

2.2.3 Liquidity ratios

The primary source of debt payments is the existing assets of the company. This is incredibly necessary for a corporation to have ample quantities of liquid assets to pay off its debts. Liquidity ratio analysis is required to understand whether a corporation has enough liquid capital or not, thus, whether it has the capacity to meet its debt obligations on time (Wood & Sangster, 2008).

Most affected as a liquidity ratio are the current ratio and quick ratio.

Current ratio

Its helps to measure the current firm assets that the firm has against its current liabilities. This measures existing assets to current liabilities, so dividing current assets by current liabilities are measured. This ratio is a measure of the performance and willingness of a company to meet its short-term liability obligations through the utilization of its properties (Wood & Sangster, 2008).

$$\text{Current Ratio} = \text{Current assets} \div \text{Current liabilities}$$

Quick ratio

This ratio shows that how much firm has current assets against its current liabilities if the firm wants to pay off their current liabilities immediately. Acid test ratio is also named of quick ratio, which measure total assets to current liabilities is close to the current ratio. The biggest distinction between these two factors is that the fast calculation eliminates inventory, because it is typically a company's least valuable asset and losses generally result until those goods are sold. Those are also exempt from this measure if the organization has short-term prepayments (Brigham & Houston, 2012).

$$\text{Quick ratio} = (\text{Current assets} - \text{Stocks}) \div \text{Current liabilities}$$

2.2.4 Gearing ratios

Financial gearing ratios

Gearing ratio is also known as the financial leverage ratio, which described the use of debt to fund company activities, rather than equity (Law, 2014). Many businesses have large sums of leverage to buy properties or expand the business. Debt is not inherently a bad aspect, because it has tax benefits, for example, because interest costs are tax-deductible.

Gallo (Gallo, 2016) Says, the debt-to-equity ratio is one of the most significant gearing ratios, and is a measure of the amount of funding a business requires to fund its activities. Total debt is measured by total equity of the owners, and the result is an indicator of how much debt a corporation has per each dollar.

Financial gearing ratio = debts ÷ (debt + equity) * 100

Interest cover ratio

This ratio shows how many times the company covers its interest from profit before tax and interest. According to (Gallo, 2016) compared with usual or past manufacturing times, this ratio is much more important. When this figure is above the industry average, it can be an indicator of a fast-growth funded by leverage that will add strain to the sector and, in the long term, to a potential financial crisis. Any performance that is not exclusively favorable below the market average, as the company may be many on inefficient equity.

An important issue for investors is whether or not a company has the capital it needs to cover its interest payments on schedule. This will be calculated by the debt compensation ratio, which is derived by measuring debt-cost savings from interest and income, and the number of times the interest payments will be offset by the corporation's savings (Moles & Terry, 2010).

Interest coverage ratio = Profit before interest and income ÷ Interest expenses

2.2.5 Investor ratios

An important issue for investors is whether or not a company has the capital it needs to cover its interest payments on schedule. This will be calculated by the debt compensation ratio, which is derived by measuring debt-cost savings from interest and income, and the number of times the interest payments will be offset by the corporation's savings (Moles & Terry, 2010).

The three ratios affected the most by investor ratios are the earning per share, dividend yield ratio and price-earnings ratio.

Earnings per share

It used by the investors and shareholders calculate these ratios. This ratio shows the profit earned by the shareholder on their one share.

Earnings per share = Profit after tax ÷ No. of ordinary shares

Dividend yield ratio

Dividend yield ratios show the percentage of dividend earned on a share by the firm. Which pay by the company to owing a share by the shareholders.

Dividend yield ratio = Dividend amount ÷ Market value of the shares * 100

Price earnings ratio

Price earnings ratio shows that how much an investor ready to pay to earn 1$ in a company. Usually this ratio used by the investors and analysts to investigate the what actual current value of the company's shares.

Price earnings ratio = Market value of shares ÷ Earning per share

3. FINANCIAL RATIOS ANALYSIS

Quality and value maximization are the key aim of any organization. Financial statements are the summary performance reports of a company that are compiled in accordance with the International Financial Reporting Standards (IFRS) or the Generally Accepted Accounting Principles (GAAP). Financial statements alone offer no detail on the financial situation or valuation of a company. Furthermore, a review of the financial statements has to be carried out in order to properly appreciate the various factors that that influence the efficiency of the business (NCERT, 2013).

The study of the financial ratio is one method for the review of the financial statements. As stated in subchapter 2.2, the ratios convey correlations between the two balances of the same year (NCERT, 2013). Financial ratio analysis is a valuable method for measuring the overall financial efficiency of a business by its competitiveness, equity or debt status. This research allows the review of historical results, poor points and weaknesses to be strengthened and thus, therefore, facilitates the estimation of potential financial conditions and the identification of financial needs.

Mostly companies are involved in the study of financial factors which may be split into internal users which external users. External users are administrators, owners and lenders, while internal users are business executives and staff.

All of them are both involved in the study of the financial ratio, but with specific reasons, depending on the goals that they wish to accomplish in this study. The management of the company conducts a ratio review to obtain an appreciation of the business performance and the financial status of the organization as well as its future prospects. Shareholders rely heavily on ratio analysis when it comes to their finances and their future returns. Creditors evaluate the willingness of the firm to repay its debt commitments and interest payments, thus determining the financial status of the firm. Investors, on the other hand, look at the financial performance of the firm and its effect on share prices so that they can determine whether or not to invest in the firm (Ross et al., 2003). This can also be inferred that certain stakeholders, even those not interested in the company's activities, depend strongly on the interpretation of the financial ratio and play a significant role in their decision-making processes.

3.1 Importance of ratios analysis

Taking the right choice is the secret to optimizing efficiency and profitability. However, careful market analysis, which can be done by the study of the financial ratio, is required to make the right decisions. The study of the ratio is an important method for decision-making and for understanding the success of a business. The several benefits and importance that can be attributed to it will be discussed in this chapter.

As described before, only ratio and for one year does not have any detail, which is why it needs to be compared to previous years or the industry average. Comparing it together is useful in recognizing patterns in a company's activities, which also makes it easier to foresee potential roles. Predicting future roles allows managers to make the right decisions, which will lead to an improvement in income and hence to maximization of capital (NCERT, 2013). When the figures are expressed when percentages or as a number of instances, businesses are put at a fairly similar point, regardless of their scale or market value, which allows them to be measured.

Performance is closely related to management efficiency, and thus financial ratio measurement is often used as a method for determining the success of management decisions. Weaker and stronger financial fields will be established, making it possible for management to fix challenges and develop weaknesses in order to produce even more outcomes in the future (Harsha Vardhan et al., 2014; Ross et al., 2003).

What categories of ratios are using in this thesis already have described in sub chapter 2.2, which are all of them have their own benefits and importance. Profit is known to be the key predictor of a good business, but looking just at earnings is not enough. Profitability ratios provide useful statistics on the quality of a company's output as well as on the ability to produce profits which, in practice, are the key characteristics of an estimation of the degree of performance of a firm or industry. And in the liquidity and activity ratio give an indication of the company's business process. Through evaluating how easily goods are delivered and how rapidly investments are transformed into cash, managers can maximize their productivity and handle their inventories in a more effective manner. And the leverage ratios are important for investors in particular because they can determine the risk of lending capital to a company by assessing the company's ability to satisfy its debt commitments and interest payments.

3.2 Analytical ratio limitations

While the study of the financial ratio is very helpful and offers important insight on business results and finances, it also has some drawbacks that need attention. Users of this study must be mindful of these drawbacks in order to achieve more reliable results.

One of the main drawbacks of the ratio analysis is the fact that it is taken from the different financial statements, and the issue in such accounts should be expressed in the ratios. If certain firms, for example, use window dressing tactics to make their financial statements look better, their figures will also be influenced, making the reports deceptive (Brigham & Houston, 2012).

According to (NCERT, 2013) the financial accounting is based on the concept of non-changeable numerical calculation, it means that market changes are small or non-existent. Therefore, the measurement of the financial ratio often lacks the impact of shifts in market prices and the measurements or performance evaluations are not as reliable, particularly for the productivity ratios that are more affected by this constraint.

While this method of research has certain drawbacks, it is one of the better methods for measuring efficiency and offers valuable knowledge on the different organizational dimensions when carried out cautiously. Both consumers of this study should be aware of these limits, making adjustments possible for more reliable results.

4. FINANCIAL RATIOS ANALYSIS OF PAKISTAN'S CEMENT COMPANIES

Pakistan is the fourteenth position on how to produce cement. Because of the consumption of the cement, their contribution of the economy is also increasing they contribute 254 billion through 49.4 million ton to 72.8 million ton of cement every year. Nowadays, Pakistan and China are investing in CPEC because of that the usage of cement is increasing, and the cement industry is improving. Cement is adopting the changes and innovating their products day by day. There is 24 regulatory body who are controlling and making the demand for cement usage. They give nearly 49.9 million tons' limits to the cement industry. In 2018 the limit was increased by nearly 3 million tons. It is estimated that around 50% of the limit will increase every year. Because of the increase in limit, Pakistan has to import machines about RS 178 billion. The overall expenses of the cement industry are about 70% of the profit. The main benefit which helped the cement industry of expending was government contracts and construction. On the other hand, the materials which are used in the making of the cement are low and can find easily worldwide. And they are improving their materials day by day (DIGITAL MAGAZINE, 2018).

The Attock, Maple leaf, Kohat and Lucky cement limited are all big companies in the cement industry of Pakistan which all have very good market value internally or externally. Even, these all companies are biggest competitors of each other by manufacturing and their investors. To explaining financial ratios and their analysis, Attock Cement Limited, Maple leaf Cement Limited, Kohat Cement Limited and Lucky Cement Limited's performance are analysed for four years based on the ratios described in Chapter 2.1. All calculations are based on the financial statements of the companies as set out in the Appendices. The data was obtained through the website or the stock exchange of the company and from all selected companies' annual financial reports.

4.1 Profitability ratios analysis

Profitability ratios show in the table 2 following in the appendix that in 2018 the Attock cement limited company earned 30.72% which is quite lower comparatively last three years. The operating margin is reduced by 10% as compared to previous years and the return of capital is also reduced in 2018 by 9% to 10%. Basically, these ratios tell about the profit percentage that company earned. In 2018 the company earned 4400 million as compared to last year. Net profit shows a 20% average balance in the last three years, but in 2018 it increased by 6% due to the decrease in the operating expense. Return on capital was decreased by 5 to 6% that shows the company was not efficiently using their assets.

In the meanwhile, that the ratio of profitability of maple leaf was decline during the period of 2015-2018 in the table 2 following in appendix because of the increase in the prices of fuel, retention price, and finance cost also increase. The company managed their operation to increase the sales volume. Cost of the product increase due to increase in the price of power and fuel because of this pet coke and coal also increase in other country markets. Due to this EBITD margin also reduced by 30% to 40%. In the table 6, profitability ratios tell that Maple earned is decreasing very quickly. In 2018 company earned was 10% less from last year. The operating margin is reduced by 22% as compared to previous years and the return of capital is also reduced in 2018 by 9%. Net profit is also so good in 2018 but it shows a 1-2% average balance in the last three years.

The probability of third company shows in the table 2 that the Kohat cement limited company earned 32.39% in 2018 but gross profit was decreased by 10% as compared to previous three years because of the increase in cost of sale. Due to the change the price of fuel and power net profit was also decrease as compared with previous year. Return of capital was also affect because of the cost of products. Which is not very good impact for worthful company in the market. Company must have alternative strategies while facing the different level of price or cost level of hurdle. Otherwise the survival of the companies in the market with their competitors quite difficult.

In the meanwhile, Lucky cement annual report shows that the company achieved 16,952 billion in 2018 as compared to 2017. But the table 2 in the appendix show that the gross margin was 46.62 in 2017 which higher than 2018. It was decreased by 14% because of the increase in fuel and gas prices. Equity holders get 14.5% on their investment. Net profit shows averagely almost balanced in previous years but a bit decreases in 2018 due to increasing of operating expenses. In the meanwhile, if we examine the same table 2 in the appendix, Kohat company have same results of impact thoroughly. Return of capital was also affect for the Lucky cement company as well because of the cost of products that’s not very good impact for worthful company in the market.

4.2 Liquidity ratios analysis

This liquidity ratio analysis shows in the table 3 following in the appendix that the current situation of the all selected companies of the cement industry. The Attock cement limited company has fewer current assets against the current liabilities. But in 2016 and 2015 the liquidity ratio of the Attock company was better than 2018. These ratios also give the satisfaction to their investors that company has enough assets in case of any bankruptcy company has ability to pay their liabilities in emergency. But if the company could not stable their assets situation in the future, can be lost their investors. But if we examine the same table 3 for the next company Maple leaf limited that the current situation of the company by analysing the company's liquidity. These ratios show very excellent growth. Which is absolutely better then Attock limited in the last two years 2018 to 2017. Because the company manage their working capital very efficiently and profitability also increased. Decrease in the liquidity ratio due to the growth of coal power plant and also the growth in the grey cement line but if we analyse the complete table thoroughly, Maple leaf company has also very and valuable market for their investors because the results of all years are comparatively same. But the situation of the third Kohat limited company what I have select for the comparison shows that more efficient. The table 3 shows that the current situation of the company by analysing the company's liquidity which is more favourable and efficient. These ratios show very excellent growth. Because the company manage their working capital very efficiently and profitability also increased. Decrease in the liquidity ratio due to the growth of coal power plant and also the growth in the grey cement line but if we analyse the complete table thoroughly, Maple leaf company has also very and valuable market for their investors because the results of all years are comparatively same. In the meanwhile, if we examine the same table 3 following in the appendix, which shows not good result for the current year 2018 of Lucky cement limited. It is not so favourable result following the others competitors' companies. Lucky have only 2.82-time ability to pay their liabilities which is twice time lower than the previous years. The liquidity of the Lucky cement is quite good. But Result shows that company managing their working capital very efficiently. The company has more currents assets to pay its current liabilities. But when we compared with fiscal year there is huge difference almost 50%. Because of deferred tax liability current liabilities of the company was increase

4.3 Efficiency ratios analysis

Efficiency ratio analysis gave the results in the table 4, that how is the efficiency of the all companies and tell about efficiency of assets, operation and firm activities in 2018 and the following years 2017 to 2015. In the table 4 of efficiency of the Attock cement limited company's stock is decreased by 5 to 7 days as compared to the 2016 and 2015, is indicate that company sales are being quickly. Receivables days are also increased by 5 days this is also good for the company. But the fixed assets turnover was decreased by 2% in 2018. Company should need to use their assets efficiently. Other than that, through their policies and management of the assets company

makes a significant development in their operation cycle. The efficiency analysis table 4 in the appendix tells about the Maple leaf cement company that stocks in the warehouses are not kept more than 25 days and company converted their stocks into cash profit very quickly. The company's stock is increasing by 4 to 6 days as compared to the 2016 and 2015 but the number of inventories is decreasing firmly quickly as compare to last three years which is absolutely indicate that company sales are being quickly. Receivables days are also increased by 4 to 5 days this is also good for the company. But the fixed assets turnover was decreased by .18% in 2018. Company should need to use their assets efficiently. Which company already using them very efficiently.
Efficiency analysis of the Kohat cement company show in table 4 following in the appendix that the company stock is decreasing by 2 to 3 days as compared to last three years and in the meanwhile, receivable days are showing to increase in the table 12 in 2018, by 50% as compare average of last three years. which is very good for company growth and its market value. But the assets turnover of the company is decreasing from the last three years averagely. But Lucky's efficiency for last three years which is showing overall very good. If we compare with other's companies' efficiency level than Lucky have more growth able and worth company in the Pakistan' cement company. In the table 16 the inventory level is not changing so much in consecutively in three years. But total turnover asset is decreasing by 6% to 7 % continuously by following years. In the meanwhile, the days of receivable are same in all years. But there is only one drawback that the company payables days are 133.70 days if we compared with the 2015 there is huge difference. Otherwise the overall efficiency ratios of lucky company are good.

4.4 Investor/market value ratio

While have Investor analysis of all four companies in table 5 for last four years which shows that the companies earning per share and the market of their shares. Appendix table 5 shows that Attock cement limited company, in 2018 company's earnings per share increased by 12 to 13 rupees that give positive impact to the investors and earning price ratio also increased by more than 50% increased price of earning share which is indicate in table 5. Company could know their price of shares in current value of rupees and even in percentage by calculating these ratios. Company has very good worth in the market for the investors because of its share price is increasing by 13 rupees comparatively previous years. That shows company running their activities in efficient way and company get good return. But the situation the table 5 shows that Maple leaf don't have favourable impact for the current year even their investor has bac impact of that in this way, Maple's competitors has got benefit from the investor for the current year 2018. In 2018 table 5 shows that the company’s earnings per share decreased by 2 to 2.50 rupees that give negative impact to the investors of the Maple leaf, in the mean while price earnings ratio of this company also decreased by more than 40%, but was increasing constantly last three years. That shows company running their activities is not fare enough in efficient way in 2018. Other than that, the third company, Kohat cement limited has also same results by decreasing 19.29 to 22.94 following years. In 2018 table 5 in appendix shows that the company’s earnings per share decreased by 3 rupees that give negative impact to the investors for the company, in the mean while price earnings ratio of this company also decreased by more than 25%, but price earnings ratio was constant in last three years which show that how much company has worth in the market . but according to results of 2018 shows that company running their activities is not fare enough in efficient way**.** The investor analysis of the Lucky cement limited in same table 5 in the appendix show that the Lucky company earnings per share in 2018 is 37.72 as compared with 2017 company has 42.34 rupees which is negative impact for the company even gave bad impact to the company’ investors. Other than that, the company earnings per share was also decreased by 5 to 6 times in 2018 when we compared with last years. According to results of 2018 for Lucky shows that company running their activities is not fare enough in efficient way.

4.5 Comparatively cement industry analysis

Four companies that I have listed for review are the biggest, most profitable companies in Pakistan (Lucky cement limited, Kohat cement limited, Attock cement limited and Maple leaf cement limited). The ratios of these companies suggest that they all control their operations and that their day-to-day activities are very effective, that they also have not worth only in local markets even also in the international sector. The profits per share of all the businesses are very high, and all the shareholders get a decent return.

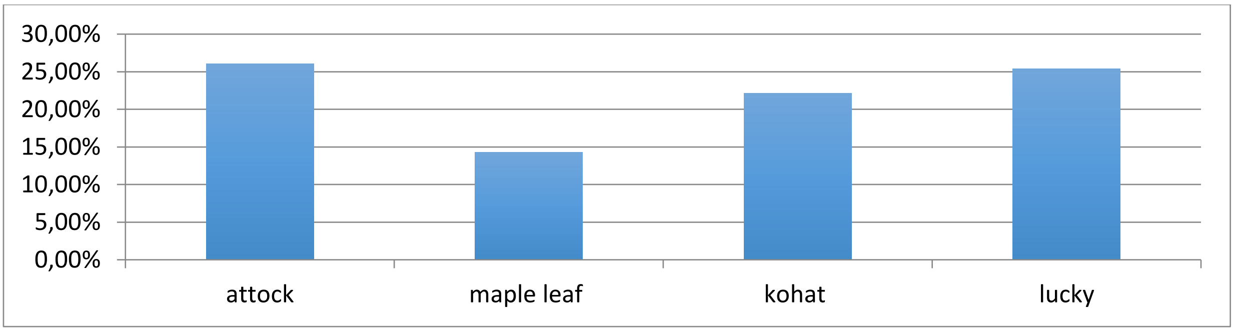

Figure 3. Graphically comparison of net profit of selected companies based on own calculations

By comparatively industry analysis gave result in figure 3 that the Lucky cement and Attock cement has the same net profit, which is comparatively high from the Maple leaf and Kohat cement. Because they have managed its cost of sale efficiently and the other reason might be its investment in lots of business and receive huge profits. Maple leaf that is comparatively low to other companies might be the reason that the significant portion of the benefit is dividing to pay the interest and expense is not managed efficiently. But Kohat cement limited also doesn’t have very bad net profit as compared to Maple leaf cement limit and others too. Kohat could be a good competitor for Lucky and Attock cement limited in the future.

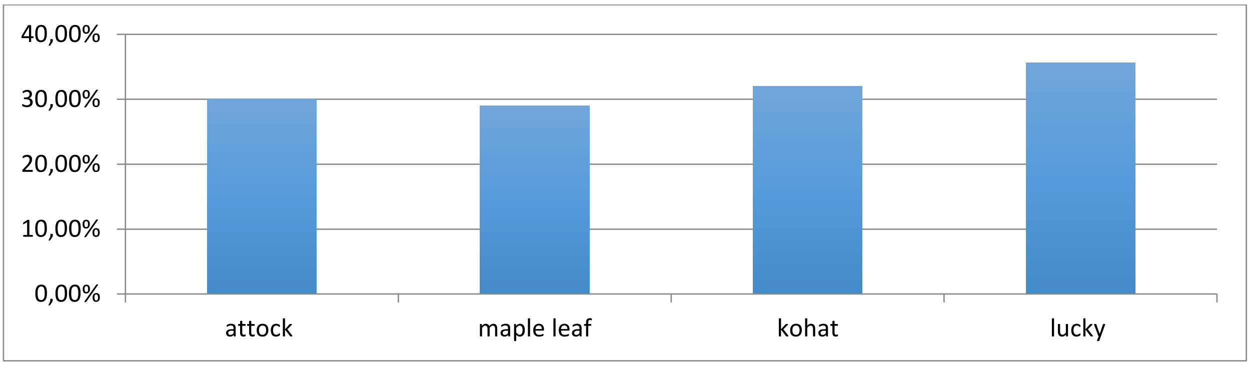

Figure 4. Graphically comparison of gross profit of selected companies based on own calculations of profitability ratios

This graph 4 shows that Lucky cement managed the cost of sale supper efficiently instead of Attock cement limited and other companies too. Lucky cement limited also managed their other expenses as well; it might be the cost of the raw material was reasonable. Kohat, Attock and Maple leaf cement limited have almost the same gross profit. But the Maple leaf is little bit using high cost of sale that affects its gross profit comparatively Maple leaf gets less gross profit. Other than that, these four selected companies for the analyses of their efficiency are the best out 22 companies of the cement industry of Pakistan. These are best competitor to each other’s but the Lucky cement has not the net profit efficiently rather than that Lucky is managing its cost of sales in the market and compete the its competitors by following years.

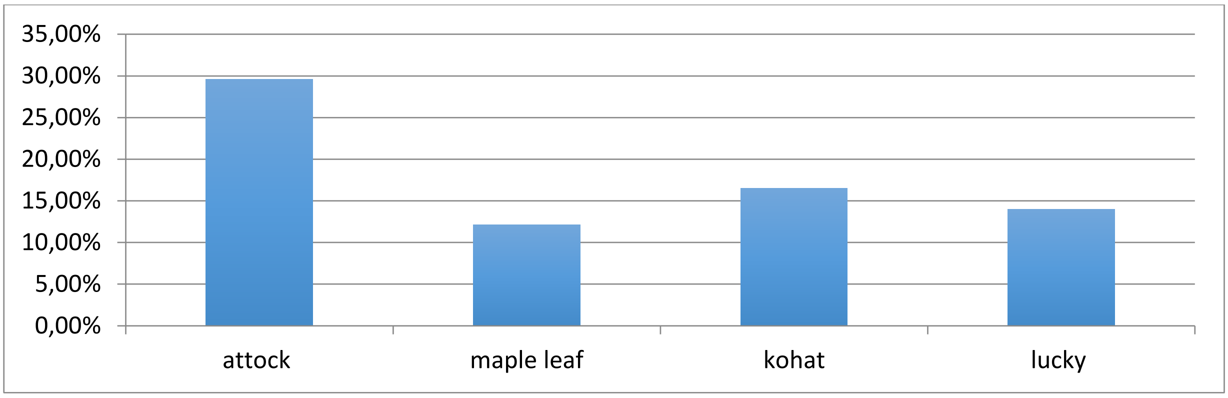

Figure 5. Graphically comparison of return on equity of selected companies based on own calculations

The return of equity shows in this graph 5 that how much equity holders gets the return. Attock equity holders gets high return 29% of its investment. And Attock earning is more than other companies. Maple leaf equity holders get comparatively less return on its investment that show that company operations are not operating efficiently and company is unable to make profits. The Lucky and Kohat companies are giving almost same return to its equity holders.

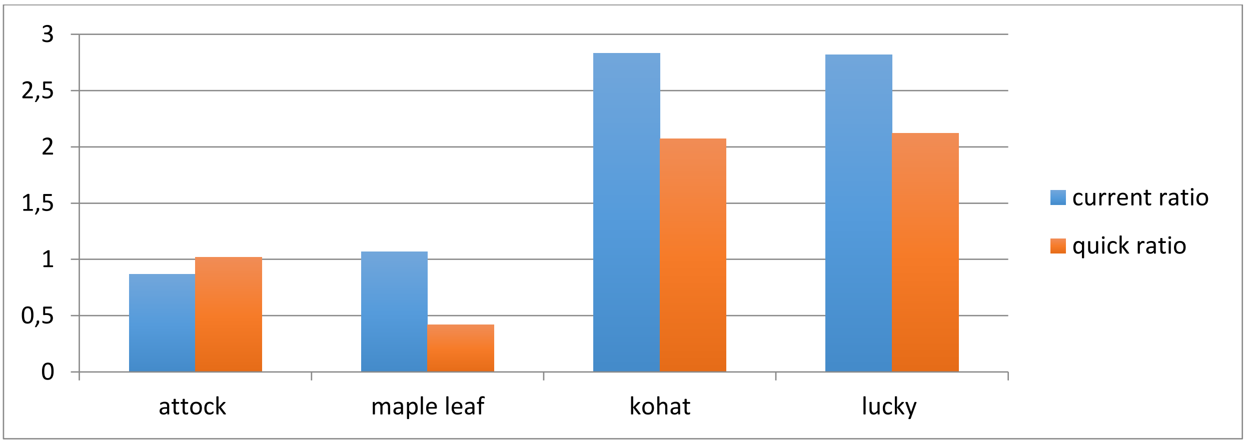

Figure 6. Graphically comparison of liquidity ratios of selected companies based on own calculations

Liquidity graph 6 shows that how much company has liquid assets to pay its liabilities. Lucky cement and Kohat cement both have top ranked in this ratio to pay its current liabilities. But if we see the bench mark of liquidity ratio is 1:1. Then according to average of cement industry ratio, Attock does not have much bad ability to pay their liabilities, it has 0.87 of current year which is close to average of industry liquidity which 1.9. But by analysing these ratios, we observed that Kohat and Lucky, if they don't have much return of equity following years. Might they have more loans or liabilities on the head. And in the meanwhile, these both companies have very less return of equity. But according to industry liquidity average Maple leaf and Attock has also ability to pay off its liabilities. Even Attock has enough assets to convert into the quick cash if they though.

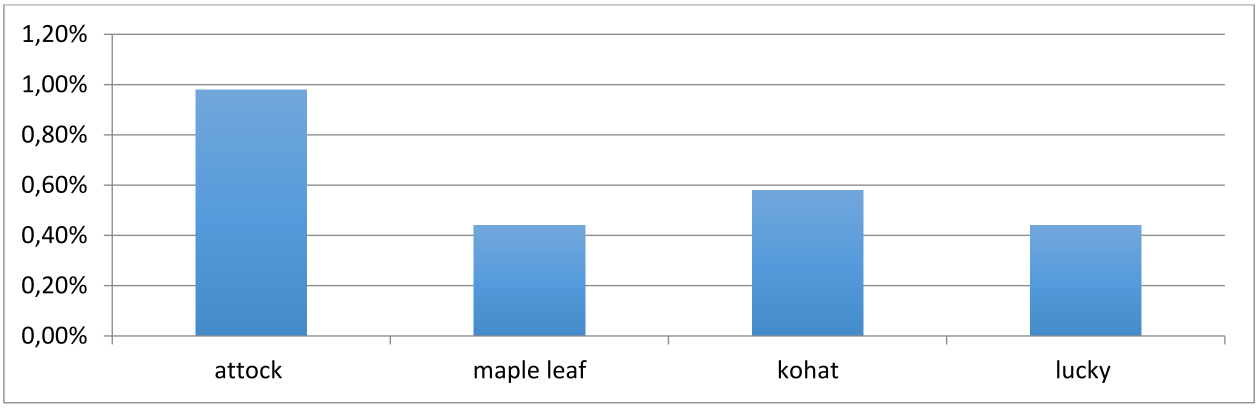

Figure 7. Graphically comparison of total assets turnover of selected companies bases on own calculations

The total turnover ratio graph 7 show that company generate its profit through using its total assets. Attock cement using its assets efficiently and generate more products. This is the main reason that Attock generating more profit as compare to other companies. But Maple was not using efficiency its assets. Attock had generate its sales 0.382% of its total assets. Maple had just 0.40%.

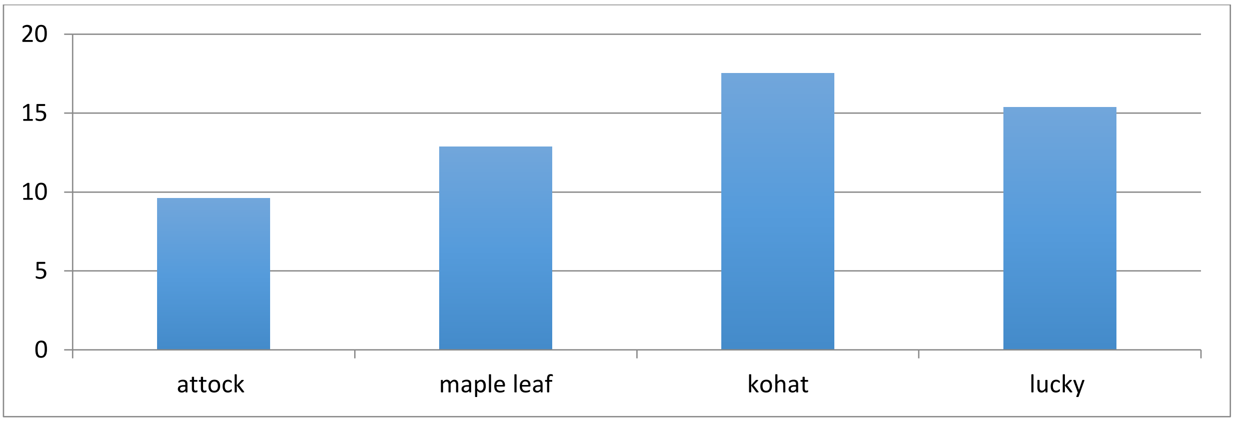

Figure 8. Graphically comparison of number of days in receivables of selected companies bases on own calculations

In the graph 8 of receivable days shows that how many times company gets payment against its credit sales. The Attock company credit policy was 8 to 10 times, it receives its payment 10 times in a year. Which is one of the best policies that Attock is received their credits very quickly as compare to other companies. In this way Attock can reinvest their profit and generate profit quickly as it can possible Even it has excellent market for their investor. In the meanwhile, Kohat company credit policy is 15 to 17 times in a year that is not better from all these companies.

5. DISCUSSTION AND SUGGESTIONS

5.1 Discussion

China is also helping Pakistan to progress through the CPEC. They decided to spend their sum in Pakistan in the growth of the infrastructure.

Any business has set its targets to increase profits. For this reason, the organization should conduct its activities and processes in an effective way that lets the organization minimize the expense of the product, increase its gross income, increase its net profit, improve its productivity ratios, and boost its return on equity holders.

The organization will pay the balance to the vendors in due time. A business that spends its sum on time, without losing its money, is likely to be more profitable and competitive in terms of costs.

The business handled the expense of the goods in an effective way and prevents over-purchasing raw materials and products that are not in service. But still bear in mind to prevent supply shortages.

The organization will also look after its workers, offer benefits, promotions and even provide job opportunities.

Training courses and lectures, conferences will be held in order for staff to be educated and also to develop their abilities, expertise, behaviour and social behaviour, so as to help the business enhance its performance.

5.2 Suggestions

Each enterprise sets its objectives to maximize profit. To this end, businesses should manage their tasks and operations efficiently, helping them minimize the cost of the product, boost gross profits increase net profit, improve their productivity ratios and increase equity profits.

1. The organization is supposed to pay the vendors in due course. The business paying on time would definitely be more relevant and flexible in terms of pricing without wasting time.
2. Company has effectively managed its cost of a product and avoids excessive purchases of raw materials and products not used. But also need to avoid material shortages

3. Company should also take care of its staff, offer incentives, bonuses and offer employment opportunities
4. Training courses and seminars, conferences, training and development of the skills, knowledge, attitude and social actions of employees so that they can support the organization to improve its results.

CONCLUSION

This study aims to find out and analyse the relationship with the company's assets and liabilities with the working capital. The working capital organization is exceedingly critical for firms since it accepts a central occupation to create further returns for the accomplices; regardless, it has pulled in less thought of researchers and masters.

Financial statements and analysis of these have considerably improved in recent decades and managers, investors, shareholders and creditors were provided with additional tools to easily obtain the required information. Financial ratios are one of the main methods of assessing the company performance. The understanding and analysis of these issues is of extreme importance for many parties, although they may be subject to certain limitations.

Through ratio analysis, we analyse how many assets companies have against their liabilities, profitability, market value, operation cycle and efficiency of the assets with the example of cement industries of Pakistan. The probability of the cement companies is comparatively good because the companies manage their cost of production efficiently. In 2017 the cost of the sale was affected due to the increase in the cost of fuel and oil. Equity holders also get good return form the companies because of the operations of the industry are managed by teamwork liquidity of the companies of cement are good all of the companies are more assets against its liabilities. I have selected four biggest companies in the cement industry of Pakistan. Those are all strong competitor of each other in the internal market and international market, even these all most profitable companies of Pakistan. The ratios of all companies indicate that they all have managing power to manage their daily activities and the operational task of the companies are very efficient. Although they all not only have good net profit by following years, they also have excellent space in all markets, locally and internationally. The earning per share of all the companies are very impressive, and all the shareholders get a handsome amount of return. But according to my findings and study of analyses that the Attock cement limited company is one of them who has excellent profitability because they managed their assets and stock of sales very efficiently. So, research prove that the Attock cement limited company is financially stronger overall and has a higher overall efficiency

Cement factories are now the most productive sector of the day, as infrastructure is very important to the country's growth, we can even assume that it is the backbone of the business. Such sectors also offer jobs to thousands of individuals. At the time of Pakistan’s independence, there were just four cement plants, but now the cement industry has expanded 29 units. The size of these tons is more than 4000 tonnes.

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APPENDICES

Appendix 1. Profitability ratios analysis (Table 1)

Ratios		Gross profit margin	Net Profit after tax	Return of capital employed	Return on equity	Operation profit margin
ATTOCK CEMENT	2018	= 30.72%	= 26.06%	= 22.73%	= 29.58 %	= 20.02%
	2017	= 39.99%	= 20.59%	= 37.43%	= 25.39%	= 30.35%
	2016	= 40.14%	=20.76%	= 40.75%	= 27.66%	= 30.59%
	2015	= 33.59%	=16.86%	= 36.38%	= 24.69%	= 24.24%
MAPLE LEAF CEMENT	2018	= 29.25 %	= 14.13 %	= 10.42 %	= 12.14 %	= 28.81 %
	2017	= 39.52 %	= 19.91 %	= 19.26 %	= 20.15 %	= 40.00 %
	2016	= 42.77 %	= 20.85 %	= 22.72 %	= 22.89 %	= 42.45 %
	2015	= 36.18 %	= 16.67 %	= 16.16%	= 19.56 %	= 37.91 %
KOHAT CEMENT	2018	= 32.39 %	= 22.17 %	= 20.76 %	= 16.58 %	= 34.25 %
	2017	= 43.04 %	= 26.18 %	= 31.71 %	= 23.16 %	= 44.44 %
	2016	= 46.34 %	= 31.44 %	= 38.87 %	= 32.01 %	= 47.73 %
	2015	= 38.61 %	= 26.64 %	= 36.57 %	= 30.77 %	= 38.41 %
LUCKY CEMENT	2018	= 35.66 %	= 25.66 %	= 14.5 %	= 13.99 %	= 35.52 %
	2017	= 46.62 %	= 29.97 %	= 18.37 %	= 17.17 %	= 46.41%
	2016	= 48.18 %	= 28.68 %	= 20.18 %	= 18.72 %	= 46.95 %
	2015	= 45.95 %	= 27.77 %	= 22.17 %	= 20.89 %	= 41.17%

Source: Calculations by the author based on Appendices data 5 to 12

Appendix 2. Liquidity ratios analysis (Table 2)

Ratios		Current ratio	Quick ratio
ATTOCK CEMENT	2018	= 0.87 times	= 26.06 times
	2017	= 0.53 times	= 20.59 times
	2016	= 2.63 times	=20.76 times
	2015	= 2.75 times	=16.86 times
MAPLE LEAF CEMENT	2018	= 1.07 times	= 0.42 times
	2017	= 1.34 times	= 0.30 times
	2016	= 1.69 times	= 0.44 times
	2015	= 0.91 times	= 0.25 times
KOHAT CEMENT	2018	= 2.83 times	= 2.07 times
	2017	= 3.21 times	= 2.39 times
	2016	= 2.83 times	= 2.19 times
	2015	= 2.03 times	= 1.69 times
LUCKY CEMENT	2018	= 2.82 times	= 2.12 times
	2017	= 4.48 times	= 3.67 times
	2016	= 4.10 times	= 3.31 times
	2015	= 3.64 times	= 2.17 times

Source: Calculations by the author based on Appendices data 5 to 12

Appendix 3. Efficiency ratios analysis (Table 3)

Ratios		Inventory turnover ratio	No. of days in inventory	No. of days in receivables	Fixed assets turnover
ATTOCK CEMENT	2018	= 4.63 times	=22.39 days	= 9.62 days	= 0.98 %
	2017	= 32.27 times	= 21.80 days	= 4.85 days	= 2.76 %
	2016	= 23.21times	= 29.86 days	= 4.39 days	= 2.60%
	2015	= 17.13 times	= 27.03 days	= 5.39 days	= 24.69%
MAPLE LEAF CEMENT	2018	= 14.97 times	= 24.38 days	= 12.88 days	= 0.44 %
	2017	= 13.35 times	= 27.34 days	= 9.58 days	= 0.62 %
	2016	= 12.90 times	= 28.30 days	= 8.94 days	= 0.73 %
	2015	= 11.22 times	= 32.54 days	= 12.42 days	= 0.66 %
KOHAT CEMENT	2018	= 4.48 times	= 75.46 days	= 17.53 days	= 0.58 %
	2017	= 5.93 times	= 61.52 days	= 9.27 days	= 0.69 %
	2016	= 6.74 times	= 54.34 days	= 6.67 days	= 0.72 %
	2015	= 8.99 times	= 40.60 days	= 6.46 days	= 0.73%
LUCKY CEMENT	2018	= 3.22 times	= 113.35 days	= 15.38 days	= 0.44 %
	2017	= 3.05 times	= 119.67 days	= 15.04 days	= 0.47 %
	2016	= 3.30 times	= 110.61 days	= 17.08 days	= 0.53 %
	2015	= 3.44 times	= 16.10 days	= 16.80 days	= 0.61%

Source: Calculations by the author based on Appendices data 5 to 12

Appendix 4. Investor ratios analysis (Table 4)

Ratios		Earnings per share (in Pkr)	Price earnings ratio
ATTOCK CEMENT	2018	= 38.42	= 30.50 time
	2017	= 26.49	= 11.43 time
	2016	= 25.24	= 9.46 times
	2015	= 19.26	= 9.90 times
MAPLE LEAF CEMENT	2018	= 6.29	= 8.07 time
	2017	= 8.81	= 12.65 time
	2016	= 9.00	= 11.72 times
	2015	= 6.37	= 12.34 times
KOHAT CEMENT	2018	= 19.29	= 6.38 times
	2017	= 22.94	= 9.99 times
	2016	= 28.53	= 9.18 times
	2015	= 21.50	= 9.29 times
LUCKY CEMENT	2018	= 37.72	= 13.47 times
	2017	= 42.34	19.75 times
	2016	= 40.03	= 16.20 times
	2015	= 38.44	= 13.52 times

Source: Calculations by the author based on Appendices data 5 to 12

Appendix 5. Attock Cement Limited. Balance sheet for 2018 - 2015

Balance Sheet (PKR in Million)	Years			
	2018	2017	2016	2015
Fixed Assets				
Property, plant & equipment	17,962.93	16,660.34	7,140.51	5,999.67
Long term investment	1,435.38	786.11	4.5	4.5
Long term loans and advances	47.31	48.59	41.54	55.75
Long term deposits	99.94	42.98	42.98	42.98
Deferred tax assets	131.54	-	-	-
Total fixed assets	19,677.10	17,538.02	7,229.53	6,102.90
Current assets				
Inventories	3,649.07	1,929.78	1,916.76	1,749.87
Trade receivables	709.92	180.49	211.11	124.41
Loans and advances	78.5	76.38	81.94	61.12
Short-term deposits and prepayments	22.59	23.66	17.52	16.94
Investments	-	-	4273.36	3104.91
Other receivables	201.37	105.79	114.86	68.12
Taxation	1,453.30	236.66	-	-
Tax refunds	289.27	496.76	-	147.59
cash and bank balances	324.94	121.85	581.32	858.7
Total current assets	6,728.96	3,171.37	7,196.87	6,131.66
TOTAL ASSETS	26,406.06	20,709.38	14,426.40	12,234.54
Equity				
Share capital and reserves	1,145.23	1,145.23	1,145.23	1,145.23
Share capital, issued, subscribed & paid up	13,727.41	10,802.41	9,301.62	7,789.91
Unappropriated profit	14,872.64	11,947.64	10,446.85	8,935.13
Non-current liabilities				
Long term loans	3,437.50	1,500.00	-	-
Liabilities against assets	10.79	1.03	4.03	7.96
Deferred tax liabilities	-	817.75	809.51	813.38
Employee benefit obligations	387.09	489.45	425.33	252.34
Total Non-Current liabilities	3,835.38	2,808.23	1,238.87	1,073.68
Current liabilities				
Trade and other payables	4,983.84	3,816.09	2,673.95	1,766.80
Unclaimed dividend	9	7.59	6.44	5.3
Accrued mark-up	88.77	45.99	-	-
Short term borrows	2,612.51	5,953.51	-	-
Current maturity of liability	3.91	2.99	3.93	3.93
Taxation provision less payments	-	-	56.7	449.71
Total current liabilities	7,698.03	5,953.51	2,740.69	2,225.74
TOTAL LIABILITIES	11,533.41	8,761.74	3,979.56	3,299.42
TOTAL EQUITY AND LIABILITIES	**26,406.05**	**20,709.38**	**14,426.41**	**12,234.55**

(Cement, 2019)

Appendix 6. Attock Cement Limited. Income Statement for 2018 - 2015

Income Statement (PKR in Million)	Years			
	2018	2017	2016	2015
Revenue	16,495.66	14,735.17	13,918.34	13,086.12
Cost of sales	(1,697.58)	(8,842.96)	(8,331.84)	(8,689.94)
Gross profit	**4,798.08**	**5,892.21**	**5,586.50**	**4,396.18**
Distribution costs	782.22	903.53	954.75	986.67
Administrative expenses	533.11	419.38	401.79	346.95
Other expenses	163	333.65	314.055	238.82
Other income	60.8	236.63	341.1	422.91
Profit from Operations	**3,380.55**	**4,475.29**	**4,257.01**	**3,246.65**
Finance cost	(251.17)	(28.37)	(21.31)	(26)
Profit before income tax	**3,129.38**	**4,443.92**	**4,235.70**	**3,220.65**
Income tax (expenses)	1,270.41	(1,409.86)	(1,345.68)	(1,015.00)
Profit for the year	**4,399.78**	**3,034.06**	**2,890.02**	**2,205.65**

(Cement, 2019)

Appendix 7. Maple Leaf Cement limited. Balance Sheet for 2018 - 2015

Balance Sheet (PKR in Million)	Years			
	2018	**2017**	**2016**	**2015**
Fixed Assets				
Property, plant & equipment	40,894,010	23,647,663	22,822,494	1,397,751
Prepaid lease payments	-	-	-	170,454
Investment properties	-	-	-	16,996
Goodwill	-	-	-	12,399
Intangible assets	16,811	25,206	-	700
Long term investment	5,020,000	4,670,000	660,000	-
Long term loans and advances	9,472	5,799	5,628	-
Long term deposits	56,554	56,474	55,867	1,037 58,134
Available-for-sale investments	-	-	-	2,893
Books for lease	-	-	-	-
Pledged bank deposits	-	-	-	
Total fixed assets	45,996,847	28,405,142	23,543,989	1,660,364
Current assets				
Inventories	6,505,283	6,750,586	5383,750	1,395
Stock-in-trade	1,193,506	1,301,235	872,820	-
Trade debts	1,131,753	682,526	576,861	-
Loans and advances	2,303,402	834,913	821,964	-
Short term investment	32,062	77,659	12,000	-
Short-term deposits & prepayments	114,208	75,867	74,594	-
Accrued mark-up	1,179	1,356	1,582	-
Other receivables	43,534	237,531	342,662	32,102
Tax refunds	774,092	-	-	
Cash and bank balances	632,662	413,958	394,474	1,022,141
Refunds from the Government	-	-	-	-
Available-for-sale investments	-	-	-	100,000
Total current assets	12,731,681	10,411,631	8,477,707	1,155,639
TOTAL ASSETS	**58,728,528**	**38,816,773**	**82,021,696**	**2,816,003**
Equity				
Share capital	5,937,007	5,277,340	5,277,340	8,411
Reserves	5,640,300	2,058,137	2,058,137	1,803,883
Accumulated profits	14,069,289	12,048,675	9,414,408	-
Surplus on revolution	4,264,543	4,323,909	4,587,135	-
Unappropriated profit	29,911,139	23,708,061	21,337,135	1,812,294
Non-current liabilities				
Long term loans	12,942,080	2,890,226	927,298	-
Redeemable capital	-	-	-	-
Syndicated term finance	-	-	-	-
Liabilities against assets	-	270,615	479,243	-
Long term deposits	8,714	8,699	6,499	-
Deferred tax liabilities	3,418,172	4,024,363	4,124,673	21,588
Retention money payable	310,735	-	-	-
Retirement benefits	183,764	150,778	119,783	-
Total Non-Current liabilities	16,863,465	7,344,681	5,657,496	21,588

Current liabilities				
Current portion of long-term finance	810,616	213,534	-	-
Redeemable capital				
Syndicated term finance	-	-	-	-
Liabilities against assets subject to finance lease	-	210,000	167,519	-
Trade and other payables	5,388,729	3,579,127	3,151,379	295,116
Unpaid dividend	-	-	1,013	-
Unclaimed dividend	110,743	101,219	41,191	-
Accrued mark-up	283,415	101,465	36,807	-
Taxation - net	-	420,527	204,245	26,867
Short term borrowings	5,360,421	3,138,159	1,424,911	-
Deferred revenue				660,138
Total current liabilities	11,953,924	7,764,031	5,027,065	982,121
TOTAL LIABILITIES	28,817,389	15,108,712	11,684,561	1,003,709
TOTAL EQUITY AND LIABILITIES	58,728,528	38,816,773	32,021,696	2,816,003

(Miranville, 2018)

Appendix 8. Maple Leaf Cement limited. Income Statement for 2018 - 2015

Income Statement (PKR in Million)	Years			
	2018	2017	2016	2015
Net sales	25,699,113	23,992,079	23,432,696	20,720,054
Cost of sales	(18,676,562)	(14,509,777)	(13,410,564)	(13,224,431)
Gross profit	**7,022,551**	**9,482,302**	**10,022,132**	**7,495,623**
Distribution costs	(736,142)	(1,275,182)	(1,359,896)	(1,313,696)
Administrative expenses	(730,551)	(621,076)	(485,959)	(381,363)
Other expenses	(572,436)	536,369	(659,631)	(263,187)
Other income	55,935	139,030	36,396	46,173
Profit from Operations	**5,039,357**	**7,188,705**	**7,553,042**	**5,588,550**
Finance cost	(644,121)	(318,349)	(435,504)	(1,082,639)
Profit	**4,395,236**	**6,870,356)**	**7,117,538**	**4,500,911**
Income tax (expenses)	(763,035)	(2,093,275)	(2,232,953)	(1,046,616)
Profit for the year	**3,632,201**	**4,777,081**	**4,884,585**	**2,205.65**

(Miranville, 2018)

Appendix 9. Kohat Cement limited. Balance Sheet for 2018 - 2015

Balance Sheet (PKR in Million)	**Years**			
	2018	**2017**	**2016**	**2015**
<u>Fixed Assets</u>				
Property, plant & equipment	9,113,062,0	8,060,484,7	7,871,755,9	8,164,179,9
Intangible assets	15,259,39	14,741,58	593,775	445,181
Long term loans to employees	446	39,827	137,937	5,189,757
Long term deposits	12,326,64	12,326,6	98,266,640	41,266,64
Investment property	3,655,622,6	3,062,824,0	2,156,011,8	76,749,61
Total fixed assets	12,909,271,2	11,263,416,7	10,126,766,2	8,687,831,2
<u>Current assets</u>				
Inventories	2,119,531,1	1,333,176,5	1,452,649,2	1,032,333,1
Stock-in-trade	658,728,5	949,142,2	628,906,3	355,137,62
Trade debts	645,524,1	343,775,9	258,810,5	220,618,9
Short term investment	5,159,792,0	5,219,113,3	5,563,776,4	3,354,540,0
Advances, deposits & other-receivable	887,836,7	587,907,3	679,052,4	486,561,6
Tax refunds	111,221,6	-	161,546,2	-
Cash and bank balances	824,427,6	495,658,5	473,634,9	2,924,445,8
Total current assets	10,407,061,8	8,928,774,0	9,218,376,2	8,373,637,3
TOTAL ASSETS	**23,316,333,1**	**20,192,190,7**	**19,345,142,4**	**17,061,468,5**
<u>Equity</u>				
Share capital	1,545,086,9	1,545,086,9	1,545,086,9	1,545,086,9
Reserves	120,034,06	120,531,46	120,565,6	165,227,1
Accumulated profits	16,311,616,6	13,640,639,2	12,104,437,3	9,086,940,1
Unappropriated profit	17,976,737,6	15,306,257,6	13,770,089,9	10,797,254,1
<u>Non-current liabilities</u>				
Long term financing	142,105,2	426,315,78	710,526,3	994,736,8
Long term deposits	2,036,100	2,036,100	2,036,100	2,036,100
Deferred taxation	1,499,928,3	1,660,261,3	1,589,847,4	1,135,154,1
Compensated absences	16,495,508	13,616,89	10,859,15	9,416,950
Total Non-Current liabilities	1,660,565,1	2,102,230,0	2,313,269,0	2,141,344,0
<u>Current liabilities</u>				
Current portion of long-term	284,210,5	284,210,528	284,210,528	430,710,52
finance	3,351,466,2	2,177,574,48	2,366,178,39	1,917,428,13
Trade and other payables	9,919,087	8,027,340	-	-
Unclaimed dividend	29,603,8	29,082,559	598,000,00	-
Dividend payable	-	200,000,000	-	598,000,000
Short term borrowing	-	78,470,775	-	438,388,476
Provision for taxation	3,830,57	6,337,389	13,394,584	738,343,179
Mark up accrued borrowing				
Total current liabilities	3,679,030,2	2,783,703,0	3,261,783,4	4,122,870,3
TOTAL LIABILITIES	**5,339,595,4**	**4,885,933,1**	**5,575,052,48**	**6,264,214,42**
TOTAL EQUITY AND LIABILITIES	**23,316,333,1**	**20,192,190,7**	**19,345,142,4**	**17,061,468,5**

(Cavenett, 2018)

Appendix 10. Kohat Cement limited. Income Statement for 2018 - 2015

Income Statement (PKR in Million)	**Years**			
	2018	**2017**	**2016**	**2015**
Net sales	13,438,843	13,540,305	14,019,843	12,472,197
Cost of sales	(9,085,616)	(7,712,937)	(7,523,278)	(7,657,276)
Gross profit	**4,353,227**	**5,827,368**	**6,496,565**	**4,814,921**
Distribution costs	(124,745)	(129,666)	(154,584)	(4,814,921)
Administrative expenses	(203,150)	(129,666)	(133,92)	(94,163)
Other expenses	((310,146	(407,911)	(436,010)	(113,725)
Other income	(572,436)	393,104	479,305	462,035
Profit from Operations	**4,076,883**	**5,519,886**	**6,252,183**	**4,731,182**
Finance cost	(106,531)	(84,962)	(78,117)	(93,741)
Profit before tax	**3,970,352**	**5,434,924**	**6,174,067**	**4,637,441**
Income tax (expenses)	(990,357)	(1,890,109)	(1,765,991)	(1,315,173)
Profit for the year	**2,979,995**	**3,544,815**	**4,408,076**	**3,322,268**

(Cavenett, 2018)

Appendix 11. Lucky Cement limited. Balance Sheet for 2018 - 2015

Balance Sheet (PKR in Million)	**Years**			
	2018	2017	2016	2015
Fixit Assets				
Property, plant & equipment	40,913,168	37,488,137	33,887,375	35,08,819
Intangible assets	55,023	79,657	126,549	41,921
Long term investment	24,981,078	13,313,520	12,422,020	10,925,020
Long term loans and advances	90,996	84,951	75,570	78,981
Long term deposits	3,175	3,175	3,175	3,175
Total fixed assets	66,043,440	50,969,440	46,514,689	46,067,916
Current assets				
Inventories	7,783,111	5,894,079	5,993,969	4,995,423
Stock-in-trade	2,796,658	2,509,273	1,588,469	1,580,745
Trade debts	2,424,470	1,582,689	2,181,788	2,042,199
Loans and advances	420,671	619,161	447,049	253,350
Short-term deposits and prepayments	67,577	39,774	38,948	50,688
Accrued mark-up	142,881	165,289	125,984	79,257
Other receivables	1,311,180	1,235,019	1,274,026	1,032,853
Tax refunds	538,812	538,812	538,812	538,812
Cash and bank balances	27,435,361	45,452	400,000	16,444,622
Short term investment	34,956			
Total current assets	42,955,677	46,367,9	39,394,627	27,017,949
TOTAL ASSETS	108,999,117	97,337,36	14,426.40	73,085,865
Equity				
Share capital	3,233,750	3,233,750	3,233,750	3,233,750
Reserves	83,133,072	76,551,231	66,089,08	56,025,020
Unappropriated profit	86,366,822	79,784,981	69,322,838	59,258,770
Non-current liabilities				
Long term deposits	94,394	84,630	70,666	69,246
Deferred tax liabilities	7,300,639	7,124,127	6,898,078	6,327,146
Total Non-Current liabilities	7,395,033	7,208,757	6,968,744	6,396,392
Current liabilities				
Trade and other payables	13,121,005	9,269,882	8,550,760	6,382,372
Taxation - net	1,985,352	1,073,745	1,066,974	1,048,331
Accrued mark-up	-	-	-	-
Current portion of long-term finance	-	-	-	-
Unclaimed dividend	47,945	-	-	-
Unpaid dividend	82,960	-	-	-
Total current liabilities	15,237,262	10,343,627	9,617,734	7,430,703
TOTAL LIABILITIES	22,632,295	17,552,384	16,586,478	13,827,095
TOTAL EQUITY AND LIABILITIES	108,999,117	97,337,365	85,909,316	73,085,865

(Limited, 2018)

Appendix 12. Lucky Cement limited. Income Statement for 2018 - 2015

Income Statement (PKR in Million)	**Years**			
	2018	2017	2016	2015
Turnover Cost of sales	47,541,724 (30,589,363)	45,687,043 (24,388,760)	45,135,037 (23,389,268)	44,761,307 (24,578,219)
Gross profit	**16,952,361**	**21,298,283**	**21,745,769**	**20,183,088**
Distribution costs Administrative	1,992,454 1,089,446	1,703,785 1,021,694	2,018,376 1,107,527	1,703,785 1,021,694
Profit from Operations Finance cost Other income	**13,870,460** - 1,248,194	**18,572,804** - 205,449	**18,619,866** - 219,644	**16,112,685** - 200,891
Profit before income tax Income tax (expenses)	**15,118,655** (3,111,962)	**18,778,523** (3,480,196)	**18,400,222** (5,456,037)	**15,911,794** (5,086,004)
Profit for the year Other comprehensive income	**12,197,090** (117,874)	**13,692,249** 3,664	**12,944,185** 30,258	**12,431,598** (-54,636)
Total Income	**12,079,21**	**13,695,893**	**12,974,443**	**12,376,962**

(Limited, 2018)

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