

Security Analysis of Cement Industry

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ABSTRACT

The main purpose of this project is to perform Security Analysis of Cement Sector and find out the possibilities and opportunities in this sector which can maximize the return.

Indian economy being the one of the developing economies in the world, companies in India are growing at a faster rate as compared to the growth rate decade back. Many Indian companies are expanding their business globally with merger and acquisition. As companies grow their investors get benefitted with good dividend and capital appreciation.

Valuations can be done by two ways approach .One is top down approach and second is bottom up approach. It begins with analysis of sector in which one wants to invest, if the sector looks positive then analyse various companies in the sector. A company is analysed fundamentally to check its performance and financial strength. Technical analysis is used to decide right price to buy stock and to study various chart patterns of selected companies. The observed patterns are tested with various indicators and oscillators and decision about particular stock is made. Based on price movement trend of a particular stock is observed.

This report starts with the sector analysis of cement industry followed by fundamental analysis of the companies. Analysis of the sector has been done. Cement industry is analysed on the basis of various factors and indicators and ratios. After analysing these companies, stock price is estimated by Relative Valuation Method and the shares have been bought by means of creating a portfolio. Ratios are calculated and then the growth and value of the stock were determined.

This report means to narrow down the gap between retail investor and equity market by simplifying basic investment strategies and give basic knowledge about fundamental and technical analysis. This report will help the investors to recognise about the current growth potential of Indian Economy in relation with Cement sector. They will get to know various factors affecting this sector and their impact on the growth of the sector. It will help them in comparing the stocks and their predicted future share prices, to invest in better options and get maximum returns.

KEYWORDS: Fundamental and technical analysis, Sector analysis, top down and bottom up approach, good dividend, capital appreciation

1. INTRODUCTION



Source: Cement Info-graphic May-19

India is the second largest manufacturer of cement in the world followed by China. India's cement industry plays an important role in economic development by providing employment to more than a million people also by contributing infrastructure development directly or indirectly. Cement is the main building material used in construction. Ever since it was deregulated in 1982, the Indian cement industry has attracted massive investments, both from Indian as well as from overseas investors.

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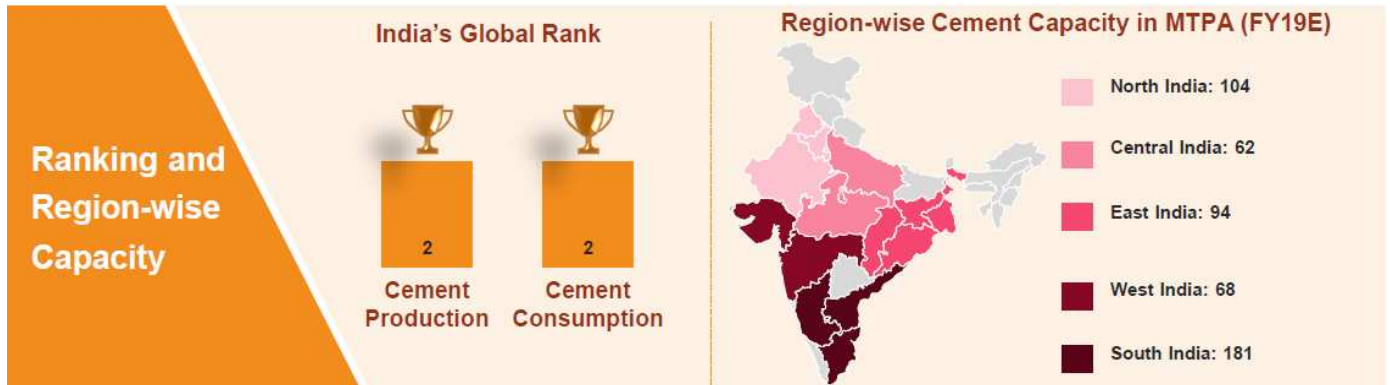
India is well equipped with all necessary input such as raw material, skilled manpower, technology, equipment and has a lot of potential for development in the infrastructure and construction sector. Infrastructure consist of four segments namely 1) Public Utilities, Power, Telecommunication, Piped water supply, Sanitation and Sewerage. 2) Public works-roads, dams, canal, works for irrigation and drainage 3) Transport -railways, road transport corporation, ports, water ways, airports 4) Energy- private electric facilities, oil and coal.

Some of the recent major initiatives taken for development of 98 smart cities will give a major boost to cement sector. Because of such developments in the country, initiatives taken by government and having suitable government foreign policies, some of the foreign investors like Lafarge-Holcim, Heidelberg Cement, and Vicat have invested in the

country. An important factor which helps in the growth of this sector is the ready availability of the raw materials for making cement, such as limestone and coal.

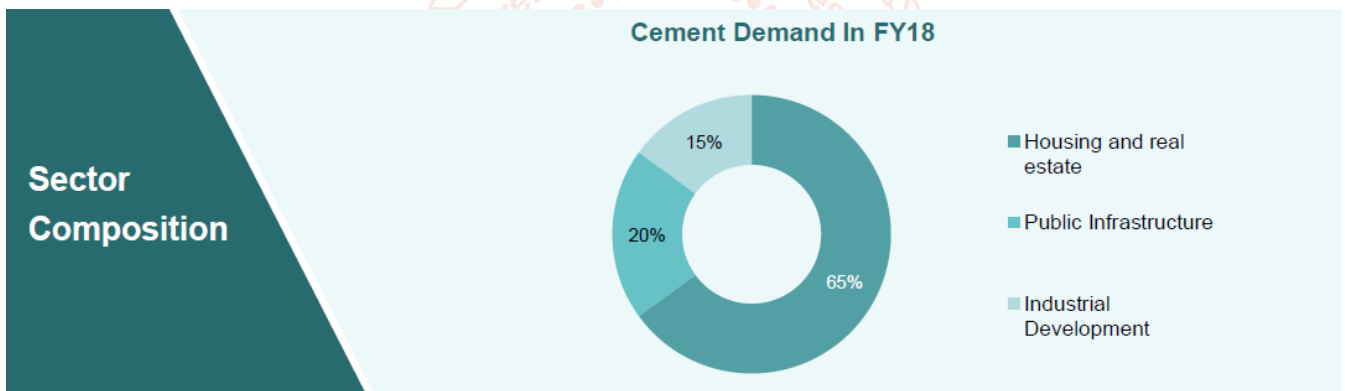
There are number of players prevailing in the cement industry in India however Indian cement industry is dominated by a few companies. There are around 20 big

names of Cement Company's account for almost 70 per cent of the total cement production of the country. Out of total 520 million tonnes cement production 410 million tonnes is produced by 210 large cement plants whereas remaining 350 small plants accounting for the rest. Out of these 210 large cement plants, 77 are located in the states of Andhra Pradesh, Rajasthan and Tamil Nadu.



Source: Cement Info-graphic May-19

The reason for choosing cement sector for analysis is scope of immense growth in this sector. Investment in infrastructure and construction is the main growth driver for the cement industry as cement is basic input. And with new government and new promises it seems that the infrastructure development will be government's first priority. Housing sector is the major driver which contributes to 66% of cement consumption. With governments promise of investing Rs2250 crores in Rural Infrastructure Development and Rs. 8000 crores in smart cities, cement will be the most impacted sector in the economy.



Source: Cement Info-graphic May-19

2. Objectives

2.1. Objectives

- To study and apply the two parallel and co-existing investment philosophies of Fundamental analysis and Technical analysis for selected context companies.
- To provide an overview of Indian Cement Industry.
- To identify the growth drivers and various factors affecting the sector.
- To carry out Ratio Analysis for selected context companies.

2.2. Scope

The scope of the project is limited to only one country, one sector and 4 companies. Only India has been taken into consideration for Economic analysis due to political changes in the country which affects the growth aspects. With focus of new government on Industrialisation ultimately investment in infrastructure and promises for good days ahead something good is expected. The sector analysis is limited to the extent of cement sector which is again selected on the basis of growth opportunities in it. Previous 5 years were not good for this sector but with government's new initiatives and investment in infrastructure such as Make in India, PMAY the sector is expected to grow at pace.



Source: Cement Info-graphic May-19

COMPANY INFORMATION



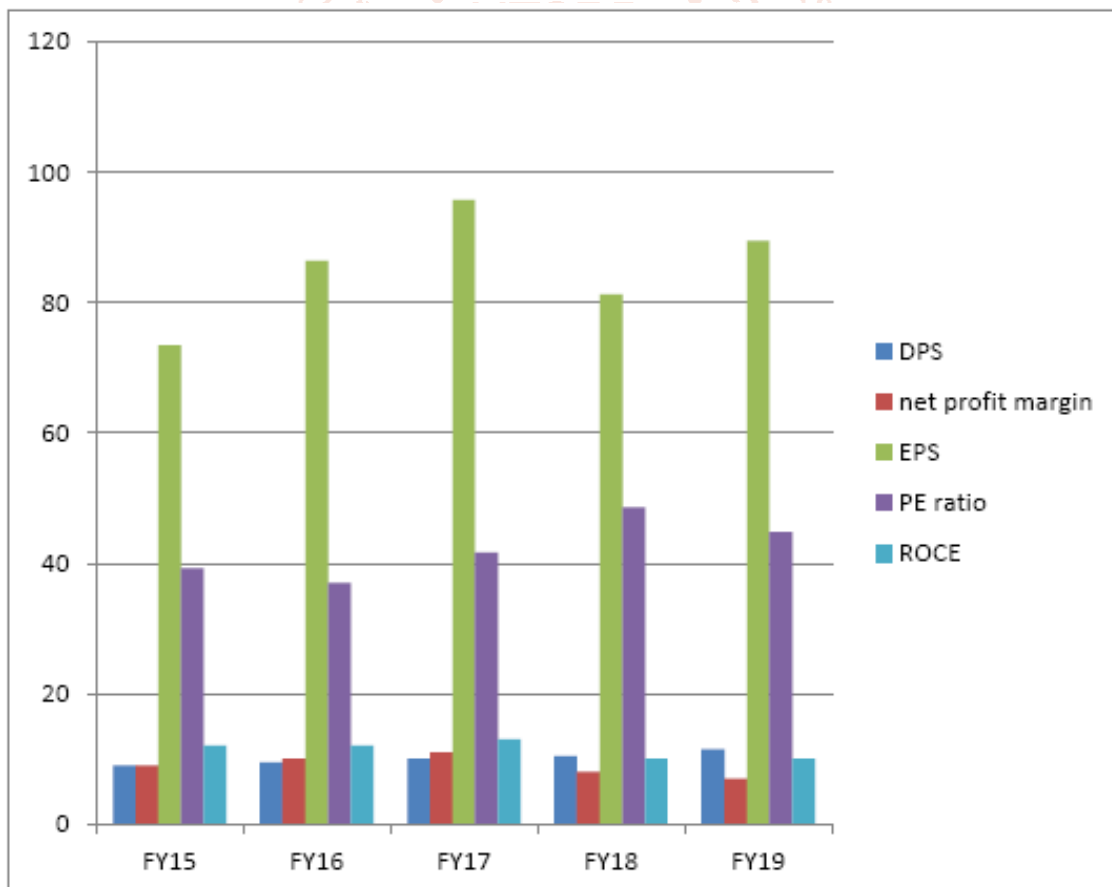
Source: ultratechcement.com

RECENT IMOROVEMENT:

Ultra-tech cement has successfully acquired Binani Cement ltd. This has installed capacity of 6.25 MTPA which provides large access to high quality limestone. Company has developed fully automated technology in-house technology to use all waste generated from rejected concrete in the form of waste.

FINANCIAL HIGHLIGHTS:

Earnings Per share of the company was highest during year FY 2016- 2017.Return on capital employed has decreased over two years whereas price to earnings ratio was highest in 2018.Dividend paid by company is constant all over the years. Net profit Margin also has decreased over the two years.



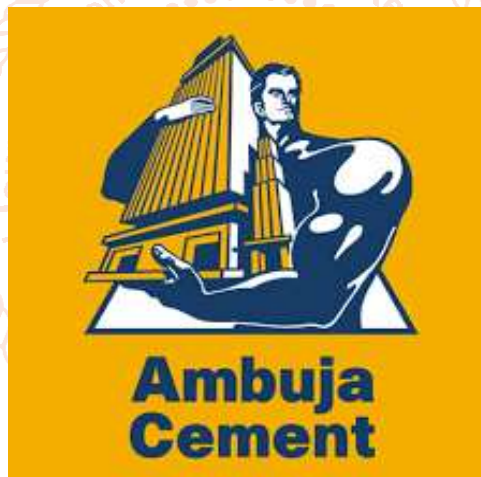
Source: www.ultratechcement.com

TECHNICAL ANALYSIS:

Candlestick Chart Patterns shows the opening and closing price of the stock for that respective month. price is on Y axis and respective years are on X axis. Stock is in Bullish trend forming higher highs and higher lows. It has broken the resistance level 3200 and retraced above it which turned resistance in support. Market is above the trend line and forming new higher highs and higher lows. Market price of Ultra-tech Cement has risen from 400 to 5000 all over the 10 years. Chart also shows the traded volume for the month. Relative Strength Indicators indicates the Oversold and Overbought zones.



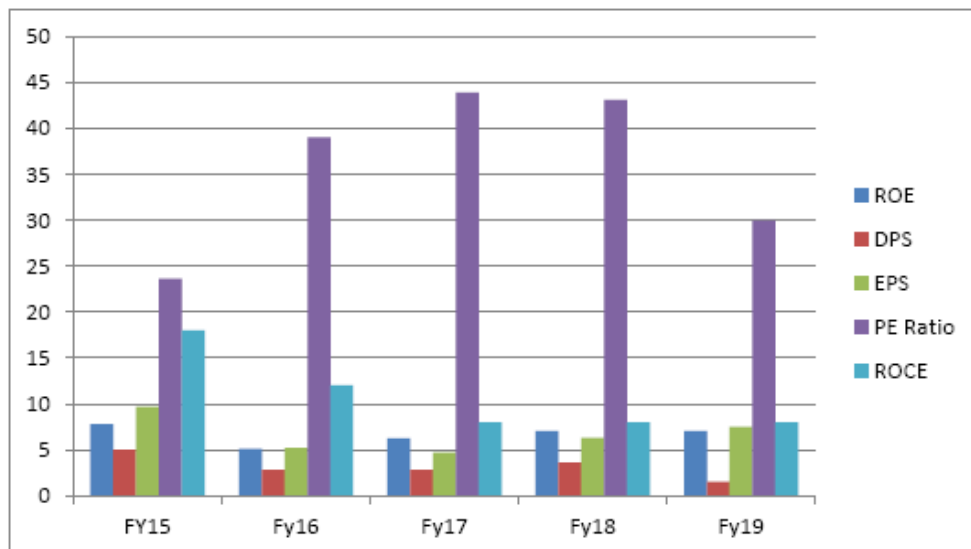
Source: www.investing.com



Source: logotagline.com

FINANCIAL HIGHLIGHTS:

Price to Earnings Ratio of the company was highest during year FY 2016- 2017. Return on capital employed has decreased over two years whereas EPS ratio was highest in 2015. Dividend paid by company is decreasing over the years.



TECHNICAL ANALYSIS:

Candlestick Chart Patterns shows the opening and closing price of the stock for that respective month. price is on Y axis and respective years are on X axis. Stock is in Bullish trend forming higher highs and higher lows. It has broken the resistance level 210 and retraced above it which turned resistance in support. Market has broken the trend line and consolidating in a range forming rectangle. Market is unable to break next resistance 275 and which shows the struggle between buyers and sellers. There is less confidence between buyers and those who have bought already at the start of uptrend are now set to sell the stock and book the profit. There are chances that stock will go down instead of breaking resistance. Chart also shows the traded volume for the month is very less. Relative Strength Indicators indicates the Oversold and Overbought zones.

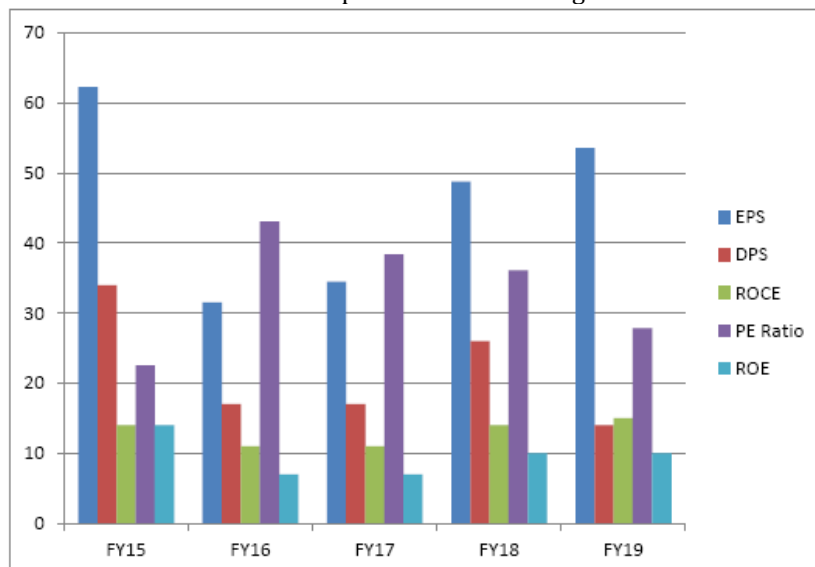


Source: www.investing.com



FINANCIAL HIGHLIGHTS:

Earnings Per share of the company was highest during year FY 2014- 2015 which then reduced to half due general slowdown in the cement industry has impacted the performance of the company which led to lower profits and reduced EPS consequently lower dividend is paid but after that EPS has increasing graph .Return on capital employed and Return on Equity is very less which shows that business inefficient to allocate the capital. Price to earnings ratio also has decreasing graph.



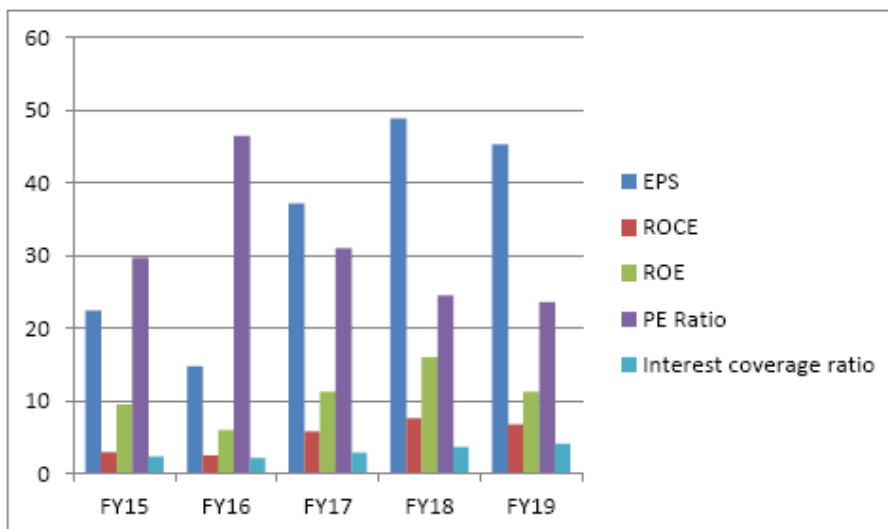
TECHNICAL ANALYSIS:

Candlestick Chart Patterns shows the opening and closing, high and low price of the stock for that respective month. price is on Y axis and respective years are on X axis. Stock is in Bullish trend forming higher highs and higher lows. It broke the resistance level 1402 but couldn't hold above it shows the less confidence and strenght of buyers. There is a struggle between buyers and sellers at present scenario. If it hold above the support 1402 it can go up or it may form rounded bottom and come down. Market is revolving around the support and resistance zone. Market price of ACC Cement has tested 1800 all over the 10 years starting from 400. Chart also shows the traded volume for the month which is very low. Relative Strength Indicators indicates the Oversold and Overbought zones.



FINANCIAL HIGHLIGHTS:

Earnings Per share of the company are increasing and highest during year FY 2017-2018 .Price to earnings ratio also has decreasing graph and highest in year 2015-16. Interest coverage ratio is very low. ROCE is increasing and constant for last two year.



TECHNICAL ANALYSIS:

The chart shows an uptrend but it has broken the up trendline and revolving between the range 750-950. But market holds above the support line 705. So market is consolidating between support 705 to resistance 900. It needs major positive news to break in up direction.



Source: www.investing.com

3. Literature Review

A FUNDAMENTAL ANALYSIS OF CEMENT INDUSTRY IN INDIA Sunil M Rashinkar, International Journal of Commerce and Management Research September 2016

The main reason behind studying this paper is that what all tools researcher have used to carry out fundamental analysis. Significance of those tools and what all other factors have considered by researcher.

CONTRIBUTION OF CEMENT INDUSTRY IN THE OF INDIAN ECONOMY, Anand Mishra, ISSN 2320-2750 Jamshedpur Research Review, November 2018- December 2018

Mr. Anand Mishra has made an attempt to find out the role of cement industry in economy of the country. Research paper also tells about the different varieties of cement produced in India. Paper also tells about the various advantages of cement industry in relation with the Economy as well as to individual. Researcher thinks that cost analysis is also important factor to consider and manage. He also tells about the problem associated with the cement industry such as scarcity of coal, extra consumption of power, taxation policy, and improper technology.

GROWTH AND DISTRIBUTION OF CEMENT INDUSTRY IN INDIA Article shared by Smriti Chand

This Article tells about the History and Evolution happened in cement industry over the years. It also discusses about the major plants of cement all over the India. As cement requires raw material in large amount this raw material is majorly found in south and east India. Because of high transportation cost manufacturing plants are located near the area where raw material is easily available.

AN ANALYSIS OF PROFITABILITY TRENDED IN INDIAN CEMENT INDUSTRY by Sima Banerjee, Department of Economics, 6 February 2015

Sima Banerjee has made an attempt to identify fluctuation in the profitability trend of cement industry. Researcher have identified various factor responsible for fluctuation of cement price. Along with the factors she has also given suggestions for smooth growth of the cement industry. Also according to researcher there are many ways to overcome the issues in relation with cement industry such as Using R & D programme it can be tested that instead of electricity and coal whether no ash fuel such as natural gas can be used in its production. An intervention from financial institutions of both government and non-government organizations is needed to increase the demand of the product for domestic consumption by development of rural areas. Global funding sources should be allowed to enter in to meet the capital requirement of the industry.

AN OVERVIEW OF CEMENT PRODUCTION: HOW “GREEN” AND SUSTAINABLE IS THE INDUSTRY? Johannes H. Potgieter, Environmental Management and Sustainable Development ISSN 2164-7682, June 11, 2012

The main objective behind studying this paper is that every industry has its different phases starting from Introduction growth boom to decline phases. Similarly it is important to understand that whether the industry is sustainable or not from investment point of view. This research paper very well discusses about the sustainability and ways to sustain the cement industry from every context. It starts by considering the current status and potential alternatives for the production process, right from the raw meal composition stage through to the final application of cement in concrete.

DIVIDEND POLICY AND ITS IMPACT ON SHAREHOLDERS WEALTH AND FIRMS PERFORMANCE: A Study of Listed Cement Companies by Agila M, Dr. Mrs. Jerinabi.U, October 08, 2018. ISSN: 2319-7668.

This research paper focuses on the impact of dividend policy on shareholders wealth and relationship with the firm performance. Hypothesis is performed to check the positive or negative relationship between them. Descriptive statistics and multiple regression models are used to analyse the study. Dividend policy is used as independent variable and shareholders wealth and firm performance as dependant variable. The result shows the positive relation between them.

SYNTHETIC REVIEW PAPER ON IMPACT OF DIVIDEND POLICY ON SHAREHOLDERS WEALTH IN CEMENT INDUSTRY: Priyanka Ranawat Ph.D. Research Scholar, Rajasthan Vidhyapeeth

This paper attempts to concentrate on the components deciding the corporate dividend theories and the congruity of these variables with the forecast drawn by the dividend theories utilizing some known profit models in view of the multiple regression technique.

LEVERAGE ANALYSIS IN SELECT CEMENT COMPANIES:

A STUDY, Dr. K Bhagyalakshmi, ISSN - 2250-1991

The researcher discussed principles and types of financial leverage also degree of financial and operating risk for that purpose she has taken three companies for analysis namely, ACC Ltd., J.K and Madras Cements Ltd. The leverage analysis is useful to assess the business risk, financial risk as well as the total risk of the firm. Hence the need is felt to undertake a study on the leverage analysis in terms of Degree of Operating Leverage, Financial Leverage and Combined Leverage. The researcher concludes that, operating risk is highest in ACC, financial risk is highest in Madras and ultimately total risk is slightly higher in J.K Cement Ltd than the other two companies.

4. Research Methodology

4.1. Statement of Problem:

Check whether cement industry is sustainable or not? And calculating the performance of cement companies for investment.

4.2. Research Design

A research design is the scientific approach used by the researcher to conduct his study. It is an overall integration of identified and relevant components and data resulting in an appropriate outcome. To come up with accurate results, researcher must use strategic methodology which is in line with type of research chosen.

In this study Descriptive Analytical research design is used in order to carry out the research. As it describes and understands the Company's information and then analyse its performance.

4.3. Sampling

Sample:

Data of four Cement Companies have been used for study. These four companies have been selected based on majorly consumed by the customer in India

- Ultra-tech cement
- Ambuja Cement
- ACC Cement
- J K Cement

Sample Size: 4

4.4. Data

Data Collection Tool: Secondary Data - Company Annual Reports,
Company Website
Magazines
Articles

Data Analysis Tool:

Data is quantitative in nature. Ratio Analysis, Financial Analysis are the tools used for fundamental analysis and various chart patterns used for technical analysis. Most of the data is in historical form. Past five years data has been collected for this project and based on that calculation and interpretation has been done.

5. Data Analysis and Interpretation

Data have been analysed through various financial statement and ratios have been computed out of it. Based on the ratios data interpretation has done.

➤ **FUNDAMENTAL ANALYSIS**

Fundamental analysis of a business attempts to study that can affect securities value like its financials, its management and competitive advantages, its competitors and markets. It also involves macroeconomic factors. For analysing a stock, futures contract, or currency using fundamental analysis mainly two basic approaches are used; bottom up approach and top down approach. The main aim of performing fundamental analysis is to produce a value for comparison with the security's current price to understand whether the security under-priced = buy or overpriced = sell or short.

There are several possible objectives:

- To conduct a company stock valuation and predict its probable price evolution,
- To make a projection on its business performance,
- To evaluate its management and make projected decisions,

Fundamental analysis includes:

- Economic analysis
- Industry analysis
- Company analysis

On the basis of these three analyses the intrinsic value of the shares are determined. This is considered as the true value of the share. If the intrinsic value is higher than the market price it is recommended to buy the share. If it is equal to market price then hold the share and if it is less than the market price then sell the shares.



Source: theirviewstories.com

➤ TECHNICAL ANALYSIS

Technical Analysis is as an art and science of predicting future prices based on the past price movements. Technical analysis is based on analysing current demand supply of commodities, stocks, indices, future or any tradable instrument. Technical analysis involves plotting information about the stocks like prices, volumes and open interest on a chart and applying various patterns and indicators to it in order to understand if there is adequate buying interest that may take price up or vice versa. The time frame in which technical analysis is applied may range from intraday 1-min, 5 min, 10 min, 15 min, 30 min, or hourly, daily, weekly or monthly price data to many years. Technical analysis converts the price and volume data into charts that represent the stock price movements over a period of time. Technical analysis is not concerned if the stock is trading at a fair price relative to its intrinsic value. Technical Analysis is a specialised stream in itself and involves study of various trends-upwards, downwards or sideways, so that traders can benefit by trading in line with the trend. Identifying support and resistance levels, which represent points at which there is lot of buying and selling interest respectively, and the implications on the price if support and resistance level is broken, are important conclusions that are drawn from past price movements.

➤ Concepts

- Resistance — a price level at which supply overcomes the demand.
- Support — a price level at which demand overcomes the supply.
- Breakout — Price movement where it breaks the support or resistance in one direction due to high volume or high volatility
- Trending — for specific period of time price tends to continue in same direction.
- Chart patterns — working tools of technical analysts.
- Momentum — the rate of price change

➤ Chart Types:

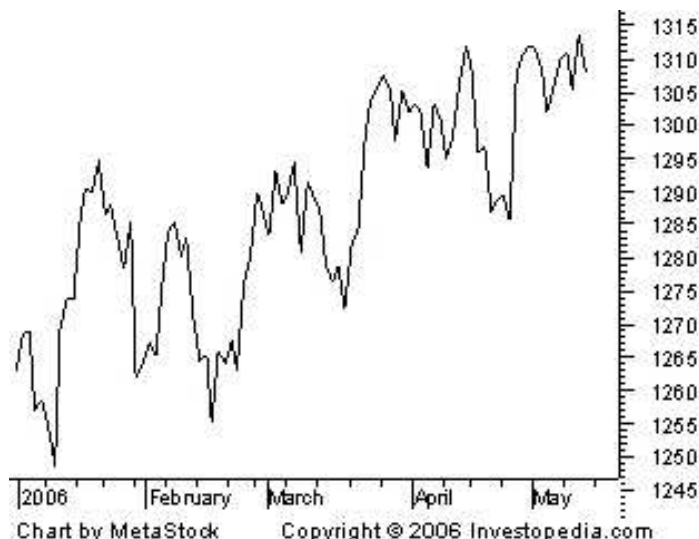
There are three main types of charts that are used by investors and traders.

The chart types are:

- The line chart
- The bar chart
- The candlestick chart.

Line Chart

The most basic of the three charts is the line charts. The line is formed by connecting the closing prices of a specific stock or market over a given period of time. Line chart is useful for providing visual illustration of the trend of a stock's price or market's movement. But it does not provide range for the individual points such as the high, low and opening prices. However, it is extremely valuable analytical tool which has been used by traders for past many years. Also the closing price is most important data as compared to the high and low for the day.



Bar Chart

The bar is the most popular method traders use to see price action in a stock over a given period of time. Bar chart is expansion of line chart which is adding key pieces of information to each data point. Such visual illustration of price activity helps in identifying trends and patterns. A bar shows the high price for the period at the top and lowest price at the bottom of bar. The opening price on a bar chart is marked by a small tick to the left of the bar; the closing price is shown by similar tick to the right of the bar. Generally, the bar will be shaded black if the left dash (open) is lower than the right dash (close), showing an uptrend for the stock. Conversely a bar that is coloured red in this is the case, the dash on the right (close) is lower than the dash on the left (open) indicating market is down.



Source: investarindia.com

Candlestick Charts

The candlestick charts provide visual insight to current market psychology. Similar to the bar chart, the candlestick also has a thin vertical line showing the period's trading range. Like bar charts, candlesticks also use of colours to explain whether up or down trend with green and red colour respectively. If stock closes higher than its opening price, then candlestick will usually be green or hollow and vice versa for red or clear candle. More than just pattern recognising candlestick shows the interaction between buyers and sellers.

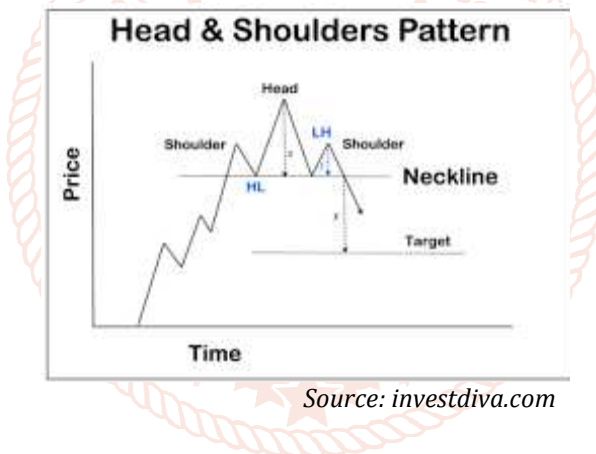


Source: chartformation.com

➤ **Chart Patterns**

Head and Shoulder:

Head and shoulders is a top reversal pattern which occurs following an uptrend. The pattern contains three successive peaks with the middle peak (head) being the highest and the two outside peaks (shoulders) being low and roughly low. Low of each peak can be connected to form neckline or support. To reverse the trend there should be prior uptrend. Volume during the advance of the left shoulder should be higher than during the advance of the head also volume increases on decline from the peak of the head and decline of right shoulder.

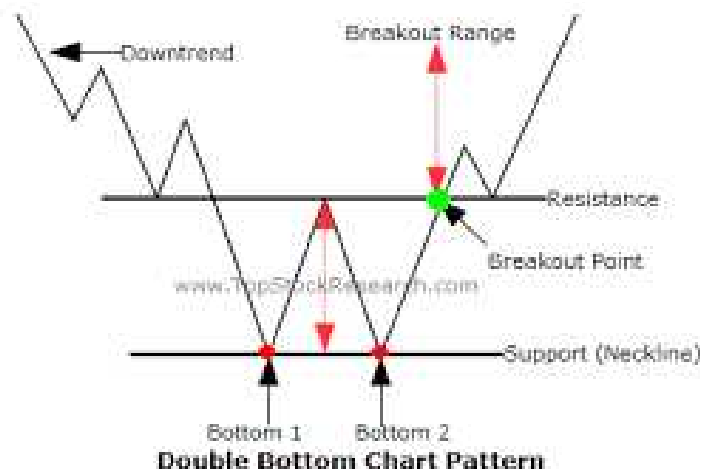


Double Tops and Bottoms:

A double top is a reversal pattern which occurs following an extended uptrend. The pattern is created when a price is unable to reach high. Price movement tests support or resistance levels twice forming two peaks and is unable to break through forming a Reaction low between them. This pattern signals intermediate and long-term trend reversals i.e. from up to down trend. Exactly opposite pattern of double top is double bottom. A double bottom is also reversal pattern which occurs following an extended downtrend.



Source: pinterest.com



Source: www.investar.com

Flag and Pennant

Flag and Pennant are two short-term continuation chart patterns that are formed when there is a sharp price movement. This pattern is then completed upon another sharp price rallies in the same direction covers the same distance or more than that of flagpole. The patterns can last from one to three weeks.

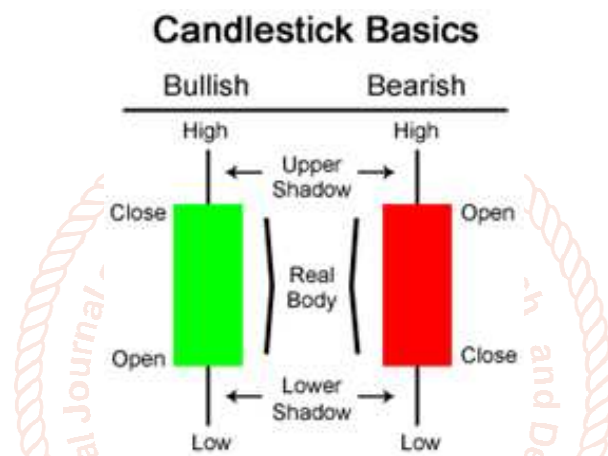


Source: [pinterest.com](https://www.pinterest.com)

Wedge

The wedge chart pattern is formed by contracting range in prices. It can be uptrend called as rising wedge or downtrend known as falling wedge. It can either continue or reverse trend. It is similar to a symmetrical triangle except that the rising wedge, both boundary lines slant up from left to right and in falling wedge, both boundary lines slant down from left to right.

Doji



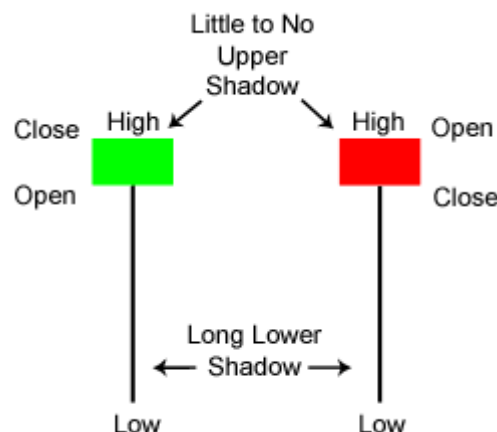
Source: commodity.com

Doji represents an important type of candlestick, providing information both on their own and as components of a number of important patterns. Doji forms when stocks open and close is same or virtually equal. The length of the upper and lower shadow may vary, with the resulting candlestick looking like a cross, inverted cross or plus sign. Any bullish or bearish bias is based on the preceding price action and future confirmation as the Doji alone is neutral.

Hammer and Hanging man:-

The hammer candlestick formation is viewed as a bullish reversal candlestick pattern which occurs mainly at the bottom of the downturn. There is a long lower shadow, which can be twice the length of the body. The hammer is formed when the close and high of the day is same or there is not much difference in the close and high of that day in case of bullish candlestick.

In case of bearish candlestick the hammer or also called as the hanging man is formed when the open and high of that day is same. The hanging man candlestick is formed at the top of uptrends and can act as a warning of a potential reversal downtrend. It is as named suggest a bearish sign.



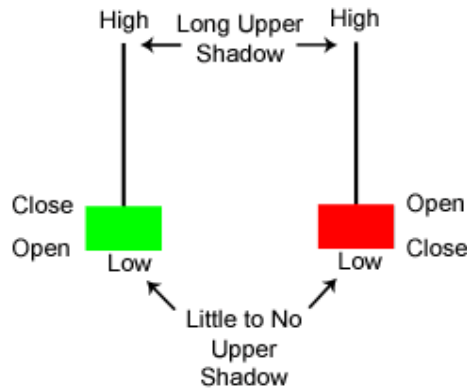
Source: commodity.com

Inverted Hammer and Shooting Star:-

The inverted hammer has the same close and the low point or there is not much difference in the closing price and low price of that day and there is a very long upper shadow. We can also say that the inverted hammer is a bullish reversal.

Whereas the shooting star candlestick is also called as the bearish reversal candlestick pattern which is usually formed as the top of the uptrend. The opening price and low price of that day of the stock will be the same and there will be a long upper shadow.

Inverted Hammer



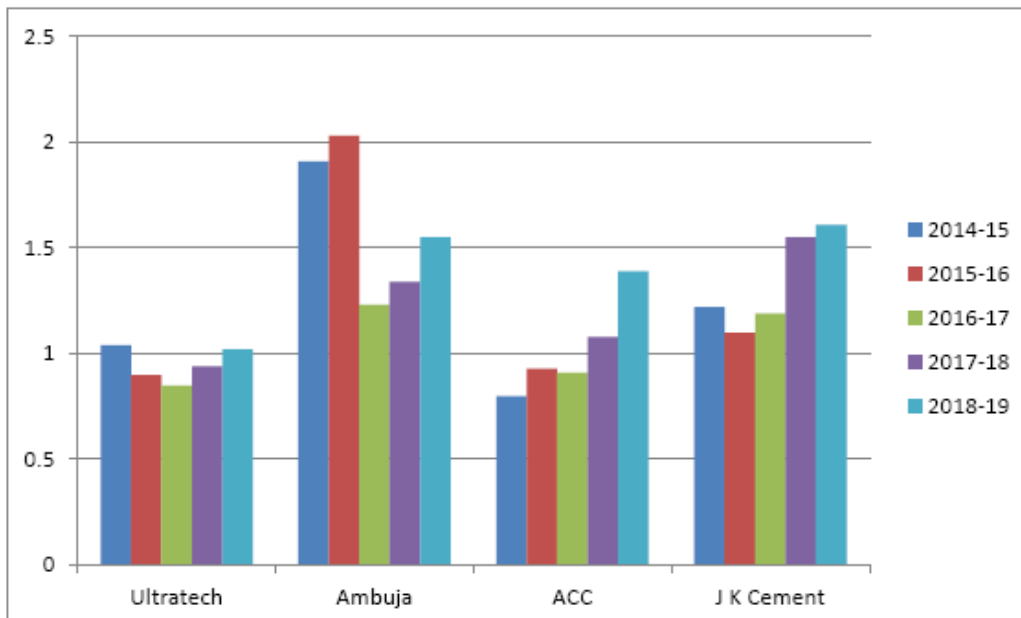
Source: commodity.com

Ratio Analysis

A. Current Ratio:

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultratech	1.04	0.90	0.85	0.94	1.02
Ambuja	1.91	2.03	1.23	1.34	1.55
ACC	0.80	0.93	0.91	1.08	1.39
J K Cement	1.22	1.10	1.19	1.55	1.61

Source: Annual Reports



Interpretation:

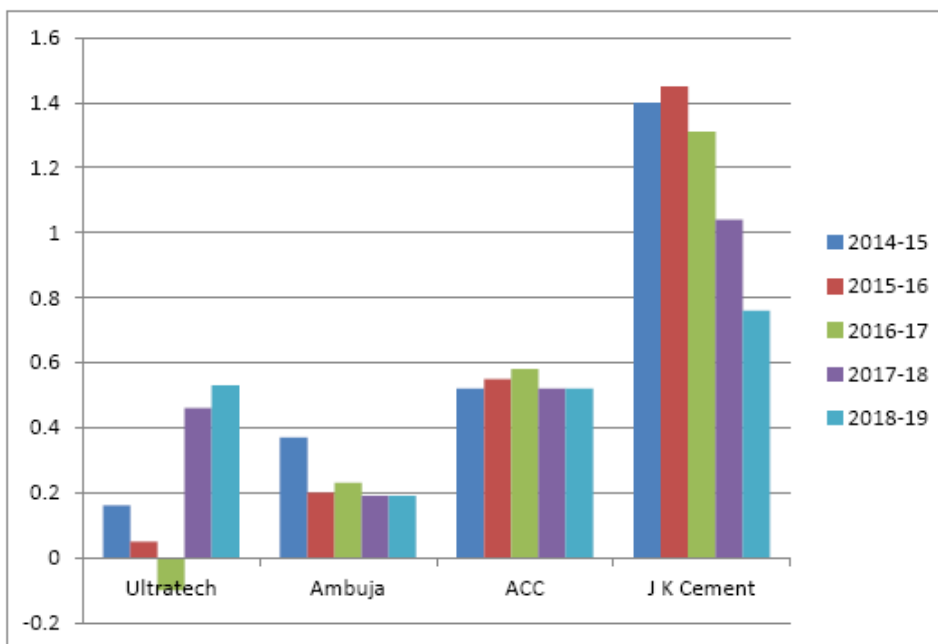
The current ratio is a liquidity and efficiency ratio that measures a company’s ability to pay of its short-term liabilities with its current assets. The current ratio is help to investors and analysts, how company can maximize the current assets on its balance sheet to satisfy its current debt and other payable. The current ratio signifies ability of the firm to pay its short term debts. Ambuja Cement has highest current ratio as compared to other competitors.

Also current ratio of J k cement is increasing by 20-30% which is good sign. ACC cement has also improving consistently over the years. So in overall scenario Ambuja cement is dominates other players.

B. Debt Equity Ratios:

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultratech	0.16	0.05	(0.10)	0.46	0.53
Ambuja	0.37	0.20	0.23	0.19	0.19
ACC	0.52	0.55	0.58	0.52	0.52
J K Cement	1.40	1.45	1.31	1.04	0.76

Source: Annual Reports



Source: Annual Reports

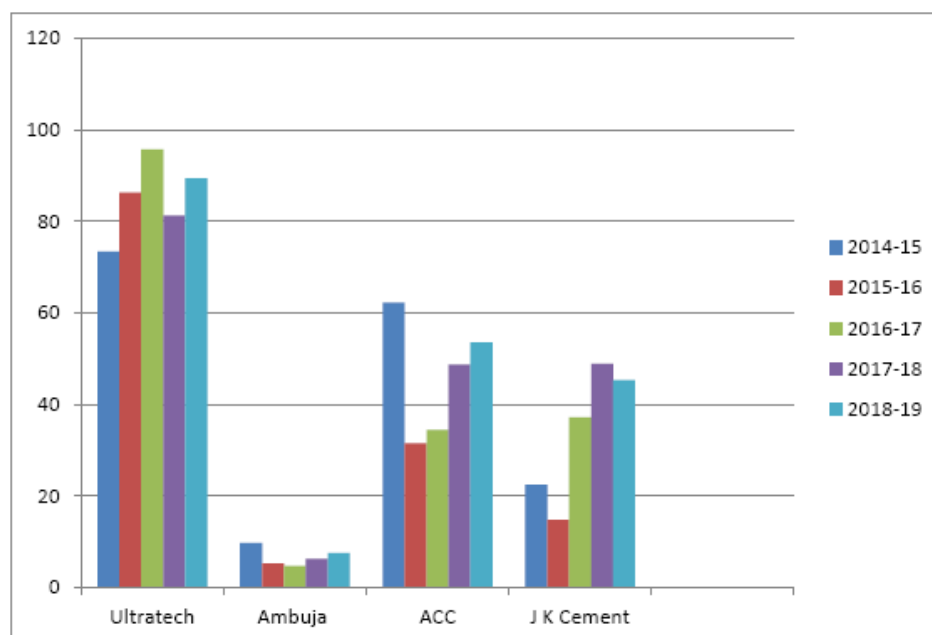
Interpretation:

Company should have less debt than equity. D/E of 1 or less should be considered as benchmark. J K cement every year has more than 1, D/E ratio but it is gradually decreasing. D/E ratio of ACC cement is constant every year and Ambuja cement has less debt/equity ratio than other competitor. It is better to have some debt which helps in taxation so in this case Ambuja cement is dominating others. Ultratech Cement also has very less debt to equity ratio but over the two years it has increased.

C. Earnings per Share

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultratech	73.44	86.37	95.74	81.27	89.48
Ambuja	9.67	5.21	4.69	6.29	7.49
ACC	62.23	31.51	34.46	48.75	53.57
J K Cement	22.44	14.78	37.2	48.89	45.28

Source: Annual Reports



Source: Annual Reports

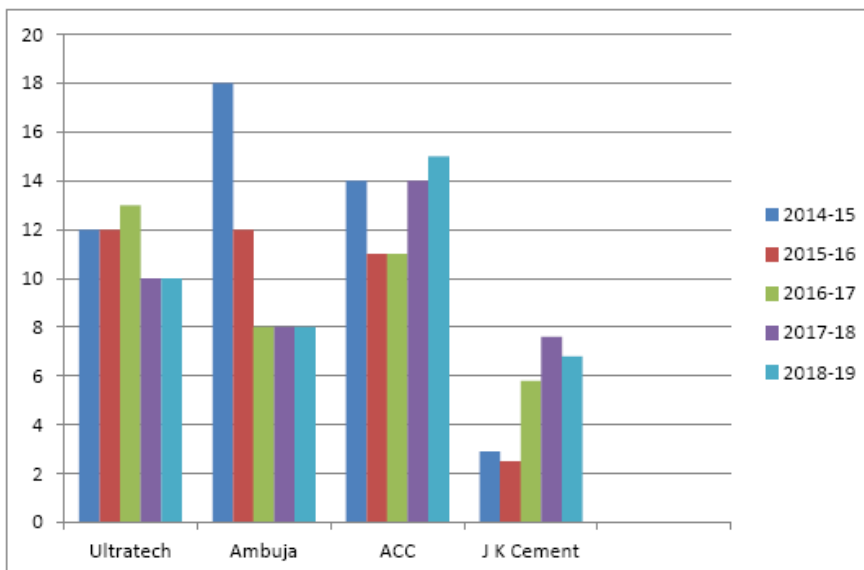
Interpretation:

Earnings per share are the profit distributed to the shareholders (on per share basis) of the firm after paying all the liabilities. Higher the EPS better it is for shareholders. Higher EPS also good from investor’s perspective. From the above table Ultra-tech cement has higher EPS as compared to other and it is increasing every year. Also Ambuja cement has very less EPS and EPS of ACC cement is increasing every year.

D. Return on Capital Employed (in %)

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultratech	12	12	13	10	10
Ambuja	18	12	8	8	8
ACC	14	11	11	14	15
J K Cement	2.9	2.5	5.8	7.6	6.8

Source: Annual Reports



Source: Annual Reports

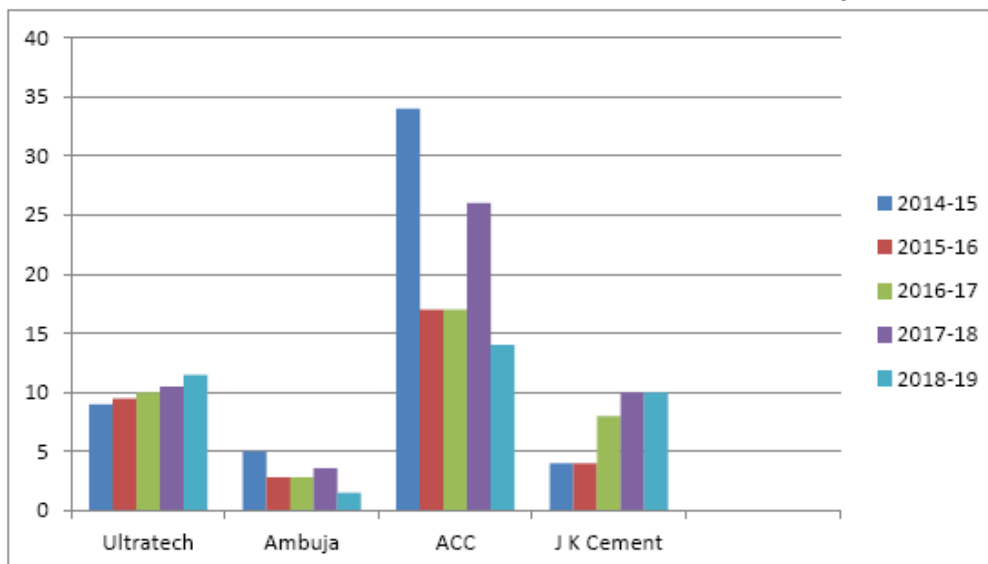
Interpretation:

Higher the ratio, better the firm since it is generating higher returns for every rupee of capital employed. Investor can use this to analyse the returns of companies with different sizes in same industry. From above table we can see that for every year the graph of ACC cement is increasing and average of 5 year is also high as compared to other so this ratio is in favour of ACC cement.

E. Dividend Per share

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultra-tech	9	9.5	10	10.50	11.50
Ambuja	5	2.80	2.80	3.60	1.5
ACC	34	17	17	26	14
J K Cement	4	4	8	10	10

Source: Annual Reports



Source: Annual Reports

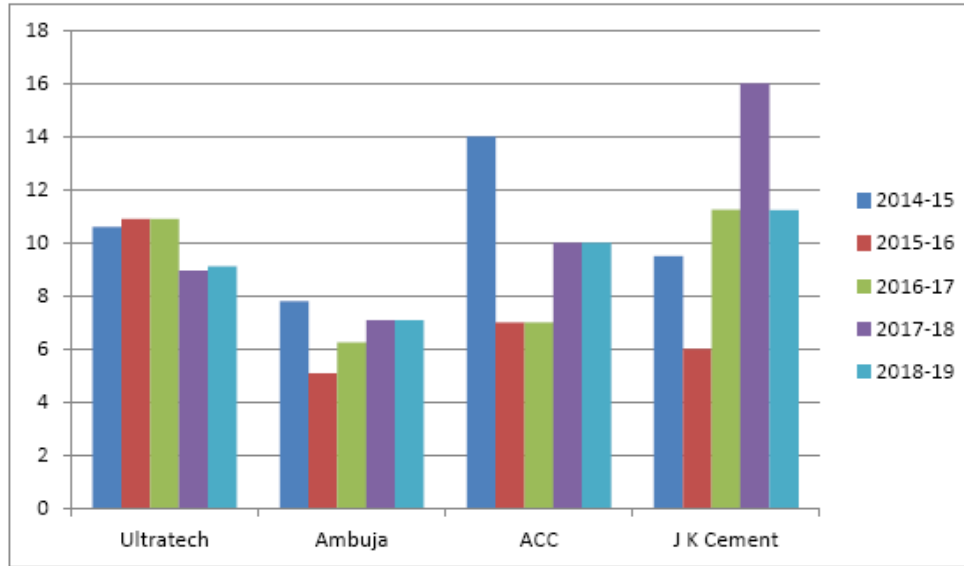
Interpretation:

Out of Net profit some profit is kept or reinvested for company's growth and portion of profit which company distributes among its shareholders known as Dividend per share. From the chart we can see that Dividend of Ultra-tech Cement is increasing at a constant rate. And there are so many variations in case of ACC cement regarding dividend paid to investors. Also the dividend paid by J K Cement is increasing and constant for two years.

F. Return on Equity:

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultra-tech	10.6	10.9	10.9	8.95	9.12
Ambuja	7.8	5.08	6.25	7.07	7.07
ACC	14	7	7	10	10
J K Cement	9.5	6.0	11.26	16	11.23

Source: Annual Reports



Source: Annual Reports

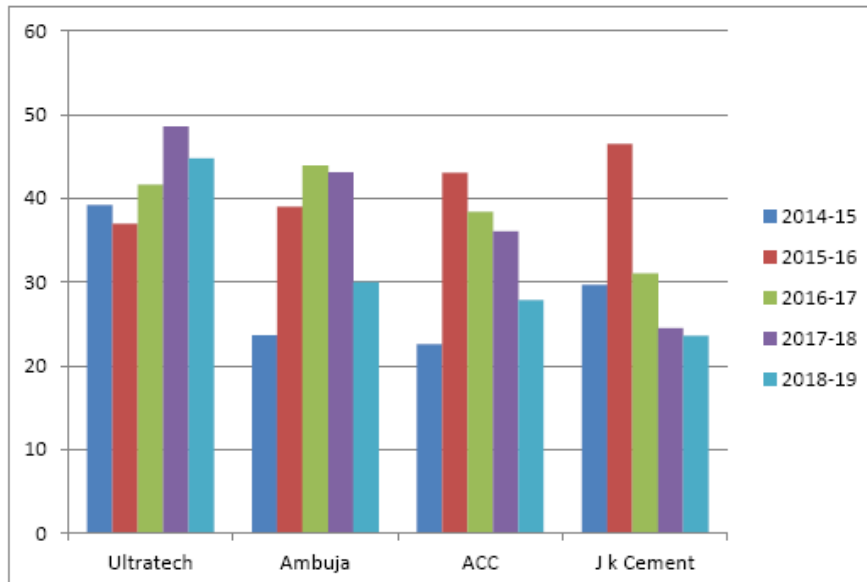
Interpretation:

ROE communicates how business allocates its capital and generates return. An efficient allocator of capital would have high ROE and poor quality of business would have low ROE. J K cement has higher ROE every year except year 15-16. In overall scenario J K cement has given higher returns that means J K cement has better ability to allocate its capital and get maximum returns followed by Ultra-tech Cement which is giving almost constant returns over 5 year.

G. Price to Earnings ratio

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultratech	39.20	37.01	41.64	48.59	44.79
Ambuja	23.65	39.02	43.93	43.10	29.96
ACC	22.56	43.07	38.39	36.08	27.84
J K Cement	29.68	46.52	31.02	24.51	23.59

Source: Annual Reports



Source: Annual Reports

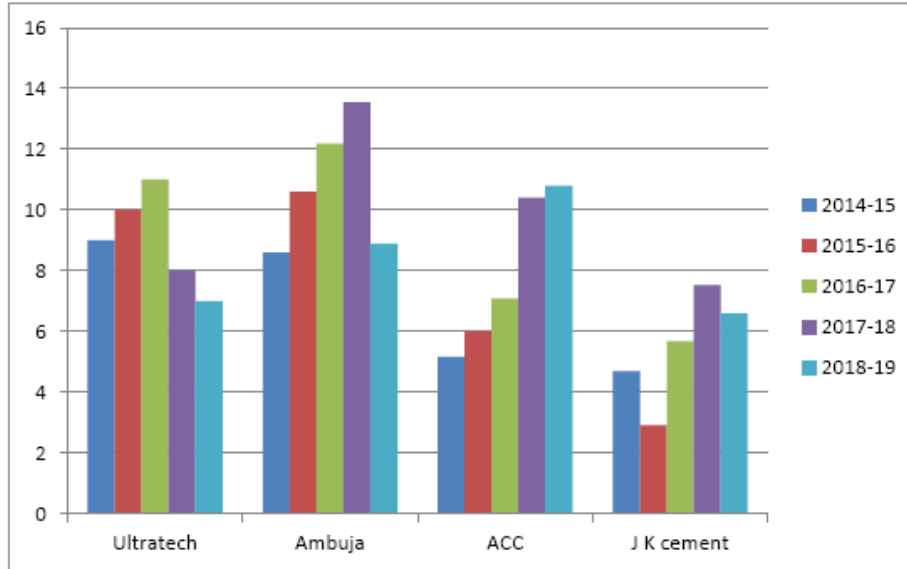
Interpretation:

PE ratio measures the price that market is willing to pay for the earnings of the company. The PE multiple moves high when prices run ahead of the earnings numbers and the market is willing to pay more and more rupee of earnings. PE ratio of Ultra-tech cement is highest of all followed by Ambuja, Acc and J K Cement respectively. That means market is willing to pay higher amount for Ultra-tech cement when it is expected that earnings of a firm will grow.

H. Net Profit Margin:

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultra-tech	9	10	11	8	7
Ambuja	8.6	10.59	12.19	13.54	8.9
ACC	5.17	6	7.08	10.4	10.8
J KCement	4.7	2.92	5.68	7.53	6.60

Source: Annual Reports



Source: Annual Reports

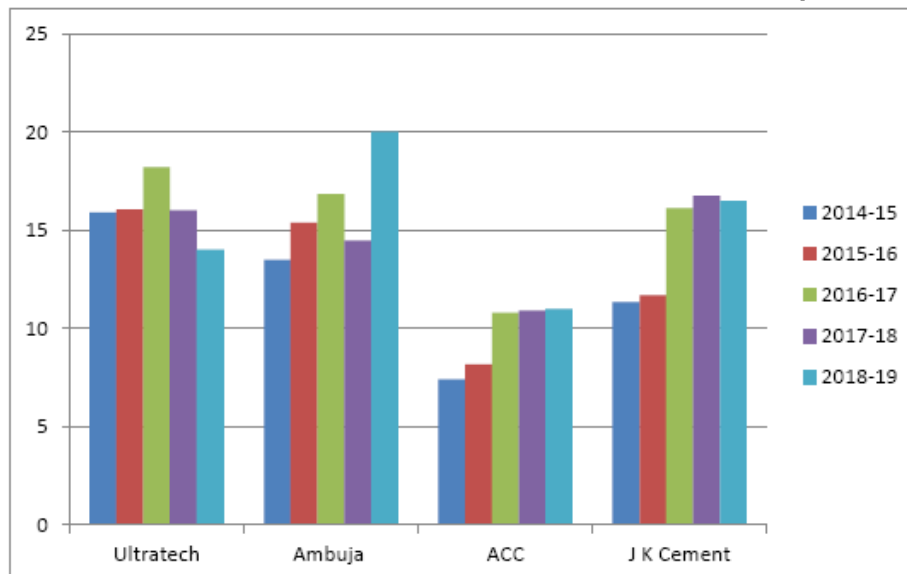
Interpretation:

It measures overall profitability or efficiency of the firm in terms of production, procurement, managing resources etc. The ratio indicates, the portion of net sales is left for the owners after all the expenses have been covered or met. Ambuja Cement has high Net profit Margin ACC. Ultratech also has comparably good net Profit Margin but it is showing decreasing graph. J K Cement has very less Net Profit margin.

I. Operating profit Ratio (in %)

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultratech	15.9	16.06	18.2	16	14
Ambuja	13.49	15.37	16.84	14.47	20
ACC	7.4	8.18	10.8	10.9	11
J K Cement	11.34	11.68	16.11	16.75	16.47

Source: Annual Reports



Source: Annual Reports

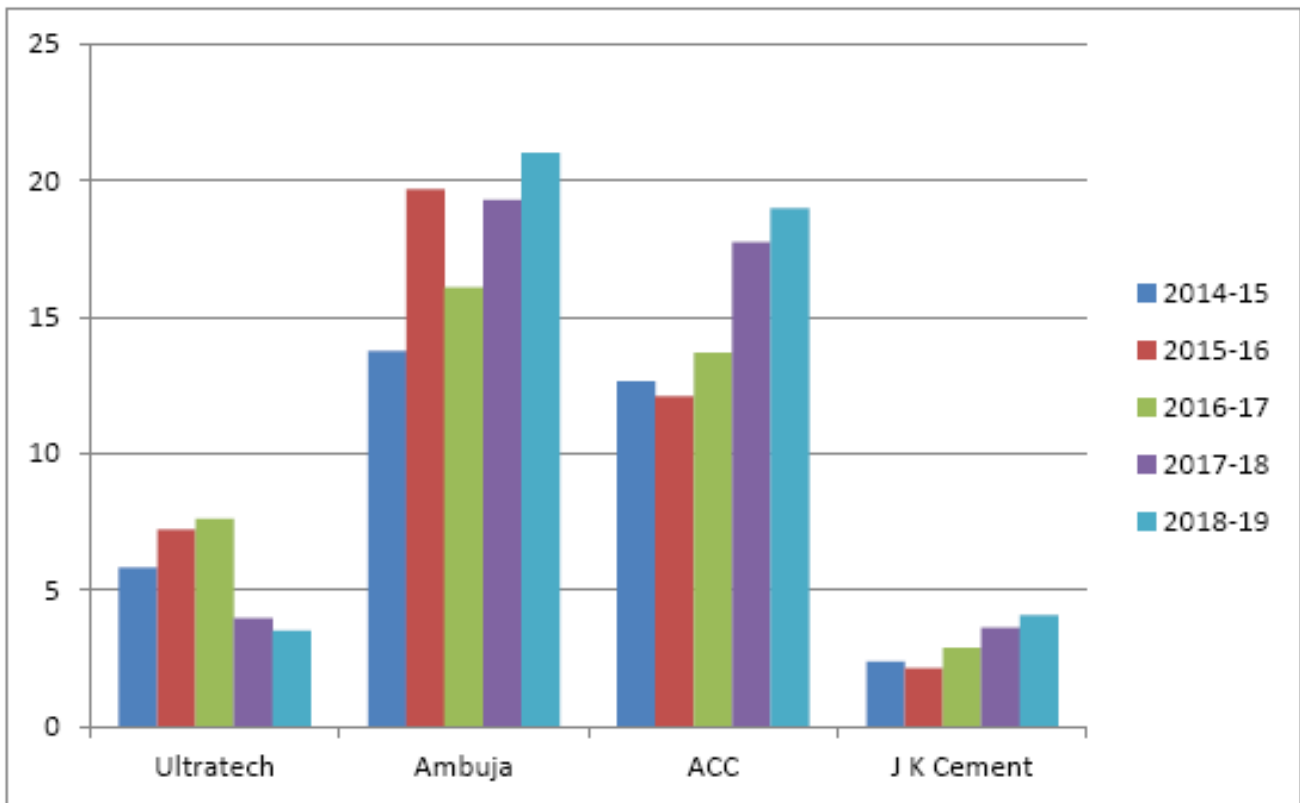
Interpretation:

It refers to profit generated from operations of the firm and hence calculated before considering any financial charge, non-operating income or losses and taxable liability. It measures the efficiency with which firm not only manufactures or purchase it but also sells the goods. J K Cement and ACC Cement have stable graph and Ultratech Cement shows decreasing graph.

J. Interest Coverage Ratio

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultratech	5.83	7.23	7.61	3.98	3.52
Ambuja	13.77	19.70	16.10	19.29	21
ACC	12.64	12.10	13.69	17.75	19
J K Cement	2.37	2.15	2.87	3.62	4.09

Source: Annual Reports



Source: Annual Reports

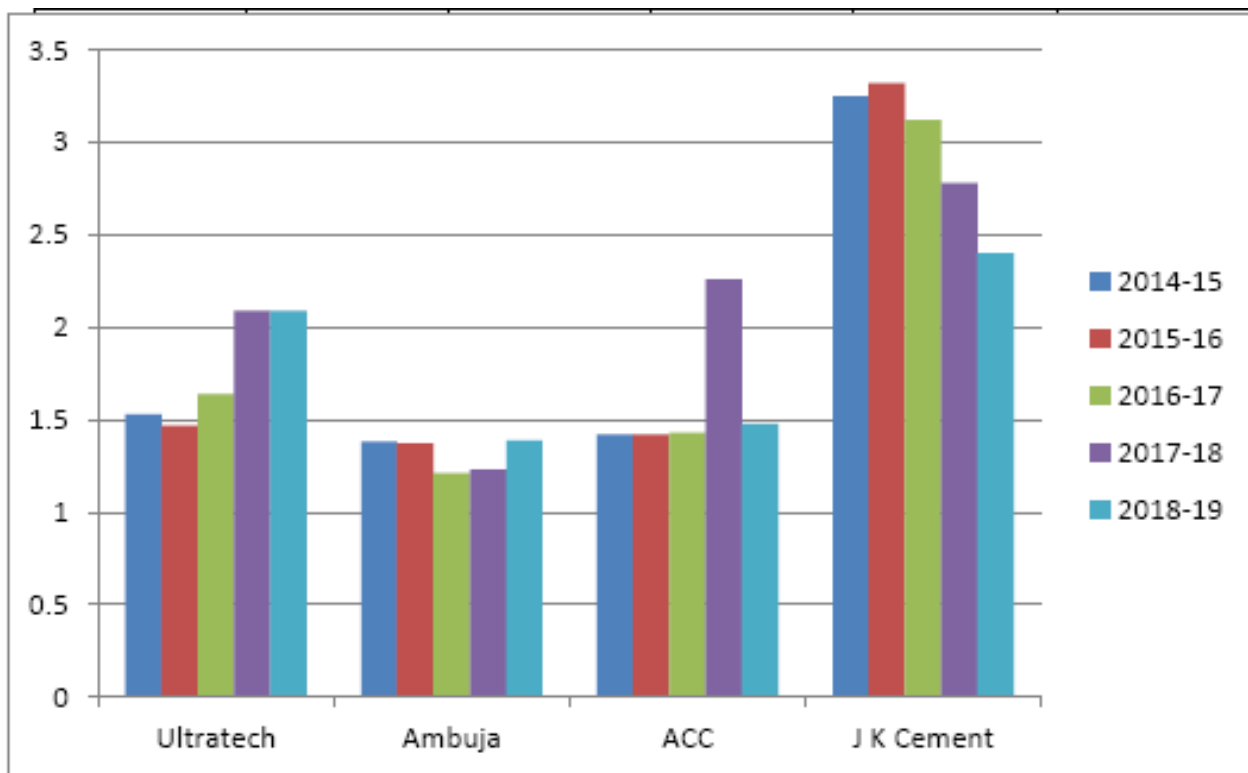
Interpretation:

Interest coverage ratio is also called times interest earned ratio and it measures the ability of the firm to pay fixed interest ability. This ratio measures as how many times the interest liability of the firm is covered with the operating profits of the firm. Higher the IC ratio better it is for both firm and lenders. In this graph Ambuja Cement has very good Interest Coverage Ratio followed by ACC Cement. However J K Cement has very less Interest Coverage ratio.

K. Financial Leverage Index

	2014-15	2015-16	2016-17	2017-18	2018-19
Ultratech	1.53	1.47	1.64	2.09	2.09
Ambuja	1.38	1.37	1.21	1.23	1.39
ACC	1.42	1.42	1.43	2.26	1.48
J K Cement	3.25	3.32	3.12	2.78	2.40

Source: Annual Reports



Source: Annual Reports

3. Interpretation:

Financial leverage can be defined as the degree to which a company uses fixed-income securities, such as debt and preferred equity. With a high degree of financial leverage come high interest payments. Financial Leverage Index is a measure which shows the usefulness of debt financing. Since it is more than 1 for all years or the value increases from 2014 to 2018, means that ROE exceeds ROA. This shows a favourable use of debt financing. As for J K Cement has highest ratio of financial leverage index shows it has favourably used debt financing. In case of ACC Cement it is observed that the return on Equity is reducing. This is not a good sign for the company as the higher return for shareholders is the main motive of any company. Company should leverage more and use debt financing for its future plans to increase the shareholders’ returns to an optimum amount

6. Findings

This research was done to find the performance of the Cement Sector on the basis of profitability, returns investors are getting for the value they pay as well as ability of companies to pay its debts and give maximum return with minimum risk.

From the ratios it can be seen that Ultratech Cement has highest market capitalisation than other three companies. Ultratech Cement has constant growth whereas ACC cement shows high volatility or sudden increase in financials.

It depends on each investor’s perception and his risk and return factor. According to technical analysis market

Ambuja Cement can be a tough competitor to Ultratech Cement as it already owns a subsidiary ACC Cement, Which increases their customer base. J K Cement also trying hard to be in competition. As it has variety of product and Wall Putty as a competitive advantage.

7. Conclusion

In order to achieve the objective of maximizing the returns, the investors need to consider both risk factor and return potential of various companies under consideration. That will be differing from companies to companies. The fundamental and technical analysis is most important techniques analysing the risk and return of companies. From

this fundamental and technical analysis, it is concluded that Cement industry has a very high growth potential and investors as well as government is also looking forward to invest in cement sector. But this sector also depends and gets affected by many micro and macro-economic factors such as GDP of India, Inflation rate, Environmental factors. It depends on each and individuals investors perception. Different investors have different risk taking ability as well as different investment goals. Investors use fundamental and technical analysis for investment. Fundamental Analysis is used when investor wants to invest for long term and for short term investment Technical analysis is used.

The most preferred ratio by investors is PE ratio and EPS. In this case if we observe financials of the four companies Ultra-tech cement has good financials as compared to others. Ultra-tech Cement is having high EPS as well as PE ratio also it has high market capitalisation. Dividend paid by Ultratech cement is low because of further growth prospective as it has acquired Binani Cement. So for investment purpose Ultra-tech Cement can be good option to invest.

According to technical Analysis chart Ultratech cement has uptrend and high market price compared to others and it is holding above support so there are chances that market price of Ultratech cement may rise supported by economic conditions of the country.

8. Limitations

- The study conducted was for a short period, leaving little time for getting into the details of the subject.
- Analysis requires a lot of experience in this field and fundamental analysis require a deep study of the subject which was not possible in such a short duration.
- Stocks are analysed through the analysis of the company's ratios and different companies can apply different accounting policies. Thus, it was difficult to compare the growth over the year.
- The study is based on the past trends and performance of the share price of the company.
- Other factors that would affect the share price are not considered. The research is based on the figures that are available.
- Different experts have different opinions regarding the analysis of equity Shares, therefore, the view used in this study can't be treated as the absolute and perfect.

REFERENCE**1. Reference Books**

- NCFM Technical Analysis Module(NSE Certification In Financial Markets)
- NISM-Series- XV: Research Analyst Certification Workbook
- Fundamentals of financial management, Dr. R P Rustagi, TAXMANS

2. Annual Reports: (FY 2014-2019)

- Ultratech Cement
- Ambuja Cement
- ACC Cement
- J K Cement

3. Websites

- www.investing.com
- www.nse.in
- www.iosjournals.org

Appendices**Specimen of Annual Reports:****Ultratech Cement****FINANCIAL HIGHLIGHTS**

Particulars	Units	2018-19*	2017-18*	2016-17*	2015-16*	2014-15
PRODUCTION (Quantity)						
- Clinker	Mn.T	52.96	45.41	37.10	37.07	35.69
- Cement	Mn.T	67.20	57.23	47.91	47.56	43.88
SALES (Quantity)	Mn.T	71.12	59.33	48.87	47.96	44.85
PROFIT & LOSS ACCOUNT						
Revenue Net of Excise Duty (Including Operating Income)	₹ Crs	35,704	29,358	23,891	23,709	22,927
Operating Expenses	₹ Crs	29,183	23,475	18,922	19,082	18,732
Operating Profit	₹ Crs	6,521	5,883	4,969	4,627	4,195
Other Income	₹ Crs	471	600	660	481	372
EBITDA	₹ Crs	6,992	6,483	5,629	5,107	4,567
Depreciation / Amortisation	₹ Crs	2,010	1,764	1,268	1,297	1,133
EBIT	₹ Crs	4,982	4,719	4,361	3,810	3,434
Interest	₹ Crs	1,419	1,191	571	512	547
Profit Before Tax	₹ Crs	3,562	3,528	3,790	3,299	2,887
Exceptional items Gain / (Loss)	₹ Crs		(226)	(14)	-	-
Profit after Exceptional items	₹ Crs	3,562	3,302	3,776	3,299	2,887
Tax Expenses	₹ Crs	1,107	1,071	1,148	928	872
Net Profit	₹ Crs	2,456	2,231	2,628	2,370	2,015
Cash Profit	₹ Crs	4,836	4,580	4,251	3,972	3,523
Proposed Dividend (incl. Dividend distribution tax)	₹ Crs	381	348	330	314	297
BALANCE SHEET						
Net Fixed Assets including CWIP & Capital Advances	₹ Crs	40,193	40,782	24,387	24,499	23,632
Investments (Non - Current & Current)	₹ Crs	9,212	6,163	9,409	7,793	5,209
Net Working Capital	₹ Crs	185	(438)	(956)	(574)	223
Derivative Assets (Net)	₹ Crs	20	10	115	595	
Capital Employed	₹ Crs	49,610	46,517	32,955	32,313	29,064
Net Worth represented by:-						
Equity Share Capital	₹ Crs	275	275	275	274	274
Reserves & Surplus	₹ Crs	27,673	25,648	23,667	21,357	18,583
Net Worth	₹ Crs	27,948	25,923	23,941	21,632	18,858
Loan Funds*	₹ Crs	18,118	17,420	6,240	8,250	7,414
Deferred Tax Liabilities	₹ Crs	3,544	3,174	2,774	2,432	2,792
Capital Employed	₹ Crs	49,610	46,517	32,955	32,313	29,064
RATIOS & STATISTICS						
EBITDA Margin	%	20%	22%	24%	22%	20%
Net Margin	%	7%	8%	11%	10%	9%
Interest Cover (EBIT/Gross Interest)	Times	3.52	3.98	7.61	7.23	5.83
ROCE (EBIT/Average Capital Employed)	%	10%	10%	13%	12%	12%
Current Ratio	Times	1.02	0.94	0.85	0.90	1.04
Debt Equity Ratio (Net)	Times	0.53	0.46	(0.10)	0.05	0.16
Net Debt/ EBITDA	Times	2.13	1.85	(0.43)	0.23	0.64
Dividend per share	₹ / Share	11.50	10.50	10.00	9.50	9.00
Dividend Payout on Net Profit	%	16%	16%	13%	13%	15%
EPS	₹ / Share	89.48	81.27	95.74	86.37	73.44
Cash EPS	₹ / Share	176.24	166.81	154.88	144.74	128.41
Book Value per share	₹ / Share	1018	944	872	788	687
No. of Equity Shares	Nos. Crs	27.46	27.46	27.45	27.44	27.44

Ambuja:

	2018 (1)	2017 (1)	2016 (1)	2015 (2)	2014 (2)
Income Statement					
Net Sales	10,977	10,250	9,117	8,368	8,911
Operating EBITDA	1,891	1,940	1,692	1,531	1,928
Profit before tax and exceptional items	1,639	1,619	1,279	1,172	1,783
Profit After Tax	1,487	1,250	932	808	1,495
Balance Sheet					
Net Worth	21,013	19,973	19,356	10,307	10,103
Borrowings	40	24	10	23	29
Capital Employed	21,471	20,499	18,920	10,846	10,763
Fixed Assets - Net Book	5,563	5,093	5,923	6,092	6,227
Current Assets	5,755	5,510	4,214	6,549	5,995
Current Liabilities	3,715	4,127	3,431	3,226	3,138
Cash Flow Statement					
Net Cash Generated from Operations	598	1,836	1,416	1,553	1,675
Cash and Cash Equivalents	3,150	3,311	2,396	5,032	4,459
Significant Ratios					
Operating EBITDA / Net Sales	17%	19%	19%	18%	19%
Return on Capital Employed (EBIT/Avg. CE)	8%	8%	8%	12%	18%
Price Earning Ratio ¹	29.98	43.10	43.93	39.02	23.85
Book Value Per Share (₹)	105.92	100.05	87.52	66.48	65.29
Basic Earning Per Share (₹)	7.49	6.29	4.69	5.21	9.67
Dividend Per Share (₹)	1.50	3.00	2.80	2.80	5.00
Dividend Payout Ratio	31%	65%	76%	65%	62%
Current Ratio	1.55	1.34	1.23	2.03	1.91
Operations					
Cement Capacity - Million Tonnes	29.65	29.65	29.65	29.65	28.75
Cement Production - Million Tonnes	24.34	22.98	21.19	21.54	21.43

ACC Cement:

STANDALONE FINANCIAL HIGHLIGHTS

Particulars	2018	2017	2016	2015
Cement Production (Million Tonnes)	28.36	26.56	23.18	23.84
Cement Sales (Million Tonnes)	28.37	26.21	22.99	23.62
Capacity utilisation	86%	79%	73%	77%
INCOME STATEMENT - ₹ Crore				
Net Sales	14,477	12,909	10,772	11,433
Operating EBITDA	2,045	1,909	1,474	1,537
Profit before exceptional item and tax	1,494	1,298	914	937
Profit before Tax	1,494	1,298	871	784
Profit after Tax	1,307 ¹	915	697	592
BALANCE SHEET - ₹ Crore				
Net Worth	10,528	9,365	8,832	8,443
Long-term borrowings	-	-	-	-
Net Fixed Assets (Including CWIP)	7,442	7,503	7,786	7,656
Cash and cash equivalents	2,837	2,527	1,778	1,389
Current Assets	6,726	5,339	3,726	3,609
Current Liabilities	4,834	4,923	4,110	3,893
Capital Employed	10,528	9,365	8,832	8,443
SIGNIFICANT RATIOS				
Operating EBITDA margin	14%	15%	14%	13%
Average Return on Capital Employed	15%	14%	11%	11%
Return on Net Worth	10% ¹	10%	7%	7%
Current Ratio (Times)	1.39	1.08	0.91	0.93
Debt Equity Ratio (Times)	-	-	-	-
Price Earning Ratio (Times)	27.84 ¹	36.08	38.39	43.07
Net worth per Share (₹)	561	499	470	450
Dividend per share (₹)	14	26	17	17
Basic Earnings per Share (₹)	53.57 ¹	48.75	34.46	31.51
Cash Earnings per Share (₹)	85.51 ¹	82.84	66.69	74.40
CASH FLOWS - ₹ Crore				
Net cash provided by / (used in)				
Operating activities	1,118	1,555	1,381	1,461
Investing activities	(368)	(385)	(539)	(948)
Financing activities	(441)	(422)	(420)	(681)

	Notes	As at 31 March 2019	As at 31 March 2018
ASSETS			
Non-current assets			
Property, plant and equipment	2	3,62,496.54	3,59,051.91
Capital work-in-progress	2	54,377.68	8,780.53
Other intangible assets	3	1,049.89	617.28
Financial assets			
(i) Investments	4	61,039.40	55,694.47
(ii) Other financial assets	5	9,532.79	5,013.21
Other non-current assets	6	15,442.06	13,610.12
Total non-current assets		5,03,938.36	4,42,767.52
Current assets			
Inventories	7	57,053.36	53,161.07
Financial assets			
(i) Investments	8	39,431.14	7,757.62
(ii) Trade receivables	9	20,562.74	18,797.37
(iii) Cash and cash equivalents	10	28,967.99	18,235.03
(iv) Bank balances other than (iii) above	11	19,607.57	36,117.04
(v) Other financial assets	12	9,605.95	7,321.09
Current tax assets (net)	13	180.98	752.57
Other current assets	14	15,875.48	12,568.63
Assets held for sale	45	18.09	902.61
Total current assets		1,91,293.30	1,55,613.03
Total assets		6,95,231.66	5,98,380.55
EQUITY AND LIABILITIES			
Equity			
Equity share capital	15	7,726.83	6,992.72
Other equity	16	2,81,553.67	2,07,741.79
Total equity		2,89,280.50	2,14,734.51
Liabilities			
Non-current liabilities			
Financial liabilities			
(i) Borrowings	17	1,95,648.35	2,06,970.78
(ii) Other financial liabilities	18	23,891.31	20,678.88
Long-term provisions	19	3,468.20	2,507.55
Deferred tax liabilities (net)	20	31,249.53	26,718.99
Other liabilities	21	8,668.22	9,232.02
Total non-current liabilities		2,62,925.61	2,66,108.22
Current liabilities			
Financial liabilities			
(i) Borrowings	22	15,981.68	11,351.76
(ii) Trade payables	23		
(a) Total outstanding dues of micro enterprises and small enterprises		1,051.10	1,227.33
(b) Total outstanding dues of creditors other than micro enterprises and small enterprises		68,774.99	63,078.44
(iii) Other financial liabilities	24	41,606.41	22,344.82
Other current liabilities	25	14,593.74	17,651.04
Short-term provisions	26	1,017.63	1,884.43
Total current liabilities		1,43,025.55	1,17,537.82
Total liabilities		4,05,951.16	3,83,646.04
Total equity and liabilities		6,95,231.66	5,98,380.55
Significant Accounting Policies	1		
	Notes	For the year ended 31 March 2019	For the year ended 31 March 2018
Revenue from operations	27	4,98,129.88	4,75,817.73
Other income	28	7,990.66	12,764.65
Total Income		5,06,120.54	4,88,582.38
Expenses			
Cost of materials consumed	29	82,121.80	73,038.01
Purchase of stock in trade		2,153.61	84.75
Changes in inventories of finished goods, stock-in-Trade and work-in-progress	30	(472.40)	4,201.02
Employee benefit expense	31	35,350.27	32,545.61
Finance costs	32	22,206.77	24,535.38
Depreciation and amortization expense	33	19,436.50	18,626.77
Excise Duty		-	16,696.43
Power and fuel		1,05,231.62	88,968.72
Freight and forwarding		1,08,177.71	1,07,244.19
Other expenses	34	84,555.32	76,972.59
Total Expenses		4,58,763.20	4,42,913.47
Profit before Exceptional Items & tax		47,357.34	45,668.91
Exceptional Items	46	-	1,696.15
Profit before tax		47,357.34	43,972.76
Tax expense			
Current tax		10,370.24	9,413.62
Deferred tax charged/(credit)	20	4,497.56	371.78
Profit for the year		32,489.54	34,187.36
Other comprehensive Income			
Items that will not be reclassified to profit			
Remeasurement gains on defined benefit plans		94.37	195.55
Income tax relating to remeasurement of defined benefit plans		(32.98)	(67.67)
		61.39	127.88
Total comprehensive Income for the year		32,550.93	34,315.24
Earnings per equity share (₹)			
Basic	35	45.28	48.89
Diluted		45.28	48.89
Significant Accounting Policies	1		