

**FUNDAMENTAL ANALYSIS ON SELECT CEMENT COMPANIES****J.MOUNIKA REDDY<sup>1</sup>,**

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**ABSTRACT:**

An investment is a commitment of the funds made in the expectation of some positive rate of return. It is the employment of funds on assets with the aim of earning income or capital appreciation. An investment in knowledge pays the best interest. Fundamental analysis is an approach to identify the under priced and over priced securities in the market. An investor or the speculator while doing the investment he need not to take into consideration of information from technical analysis itself but also he need to evaluate it by using E-I-C analysis also which helps him not to come across losses and also to gain in-depth information about his investment companies and also greater returns. Fundamental analysis tries to predict a stock's intrinsic or 'fundamental' value, and looks for opportunities where the current price deviates from the calculated intrinsic price. Efficient investment involves the use of both fundamental analysis and technical analysis. The present study aims at carrying out the Fundamental analyses of two leading companies of Cement sector and estimating their intrinsic value to assist investment decisions. The cement industry is one of the core industries in India and is optimistic of posting good sales in the coming years. So, the investment in the shares and securities of KCP cements and Birla cements companies seems to be profitable. The study is done using secondary data collected from Reserve Bank of India website, BSE website and Company Annual Reports for the period of last five years from year 2010 to 2015. This study develops a decision support system for a fundamental analysis-based stock market forecasting to select optimal stocks from the stock market and predict their future price trends to provide a reference for investor decisions. This paper seeks to clarify the need to make a proper fundamental analysis when investing in various securities in Cement sectors.

**KEYWORDS:** Fundamental analysis, E-I-C analysis, intrinsic value, investor, speculator.

**INTRODUCTION:**

The unique nature of capital market instruments forces investors to depend strongly on fundamental factors in their investment decisions. These fundamental factors relate to the overall economy or a specific industry or a company. However, as companies are a part of industrial and business sector, which in turn are a part of overall economy, so even the economic and industry factors can affect the investment decision. The selection of an investment will start with fundamental analysis. Fundamental analysis examines the economic environment, industry performance and company performance before making an investment decision.

To forecast future stock prices, fundamental analysis combines economic, industry, and company analysis to derive a stock's fair value called intrinsic value. If fair value is not equal to the current stock price, fundamental analysts believe that the stock price is either over priced or under priced. As the current market price will ultimately gravitate towards fair value, the fair value should be estimated to decide whether to buy the security or not. By believing that prices do not accurately reflect all available information, fundamental analysts look to capitalize on perceived price discrepancies. Fundamental Analysis is a method of evaluating a security by attempting to measure its intrinsic value by examining related economic, financial and other qualitative and quantitative factors. Fundamental analysis is used to examine the intrinsic value of an company in order to reduce the risk of loss from buying an overpriced stock and selling an under priced stock.

**REVIEW OF LITERATURE:**

**Richard C. Grimm (2012)** explains that fundamental analysis is to determine its application as an Austrian approach to common stock selection. The Fundamental analysis supports the conclusion that fundamental security analysis can be practiced in a manner consistent with traditional Austrian views and is suitable as a common stock selection method by those who wish to select the stocks.

**Rajiv Kumar Bhatt (2011)** has analysed the impact of recent global financial crisis on Indian Economy. The paper is divided into three sections. In this paper each and every concept has been explained in a in-depth manner in the form of section for economy, industry and company analysis.

**Jenni L., Bettman, Stephen. J. Sault, Emma.JSchultz (2008)**, proposes an equity valuation model integrating Fundamental and Technical analysis, they tend to recognize their potential as complements rather than as substitutes. Testing confirms the complementary nature of Fundamental and Technical analysis by showing that in spite of each performing in isolation models integrating both have superior explanatory power.

**Sanjay Seghal and Meenkashi gupta (2005)** examines the survey which aims at providing insights about the way technical traders operate in the financial market and the trading strategies that they adopt. The survey covered institutional and individual technical traders with a long and active trading record for the Indian market. In this study also it is observed that the sample respondents tend to use Technical analysis along with Fundamental analysis for security selection.

**OBJECTIVES OF THE STUDY:**

The major objectives of the study are:

- To analyse the performance of selected companies of Indian cement industry.

- To assist the investors in making investment decisions in cement industry
- To suggest whether to buy the scrip or not based on the intrinsic valuation of select companies.

### RESEARCH METHODOLOGY:

The study has been done based on secondary data itself and the sources used are various books, journals, Securities and Exchange Board of India circulars, annual report of organizations. Statistics of Reserve Bank of India, Indian union budget web sites like, [www.moneycontrol.com](http://www.moneycontrol.com), [www.rbi.gov.in](http://www.rbi.gov.in), [www.ibef.org](http://www.ibef.org), [www.ficci.in](http://www.ficci.in), [www.tradingeconomics.com](http://www.tradingeconomics.com). The study is conducted from the period 2010 to 2015. The following financial techniques are used Earnings per share, Dividend per share, Dividend payout ratio, Return on equity, Price earnings ratio, Intrinsic value in order to evaluate the fundamental factors of select cement companies. The data so collected were classified and tabulated for analysis and interpretation. The tools and techniques used in this project are all computerized programming.

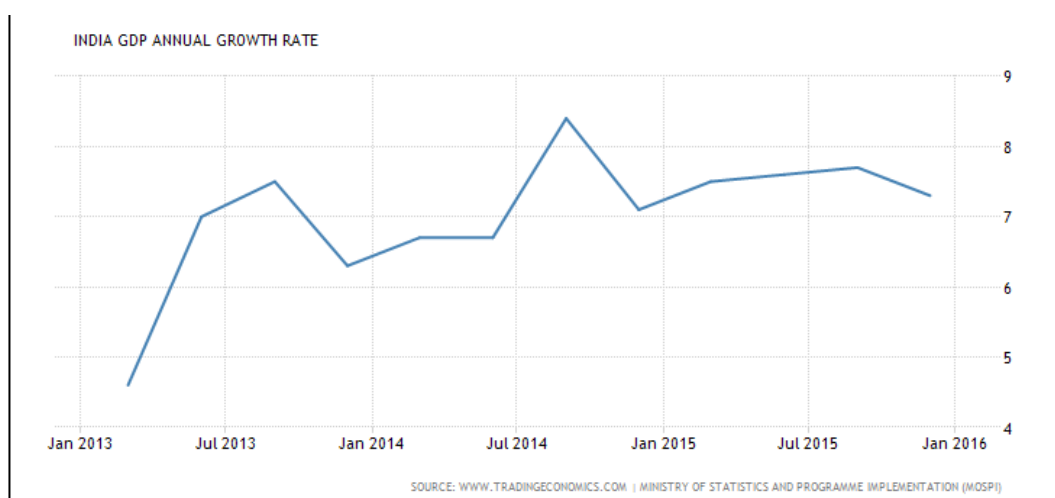
### DATA ANALYSIS:

#### Economic Analysis – Performance of the Indian Economy

India had undergone structural changes in policies from import substitution regime to free market regime in the early 1990s. It has been two decades since India liberalized its policies. The stabilization-cum-structural adjustment reforms have become one of the landmarks for the recent spate of India's economic development. Following are the macro economic factors which describe the performance of the Indian economy Gross domestic product:

The Gross Domestic Product (GDP) in India was worth 2066.90 billion US dollars in 2014. The GDP value of India represents 3.33 percent of the world economy. GDP in India averaged 550.27 USD Billion from 1970 until 2014, reaching an all time high of 2066.90 USD Billion in 2014 and a record low of 63.50 USD Billion in 1970. GDP in India is reported by the World Bank Group.

chart :1 Gross domestic product



From the above analysis it is observed that the gross domestic product growth rate in India is high in the late 2014 and has a steady decline in 2015. As India is a fast

developing country the GDP of India may increase over a period of time and produce high returns to investor

Savings and investment:

India's savings and investment peaked at 36.8% and 38.1% of GDP, respectively, in FY08 & 30.1% and 34.8% of GDP in FY13. Corporate savings, which account for 23% of total savings, fell marginally to 7.1% of GDP in FY13 from 7.3% in FY12. Public sector savings remained constant at 1.3% of GDP in FY13.

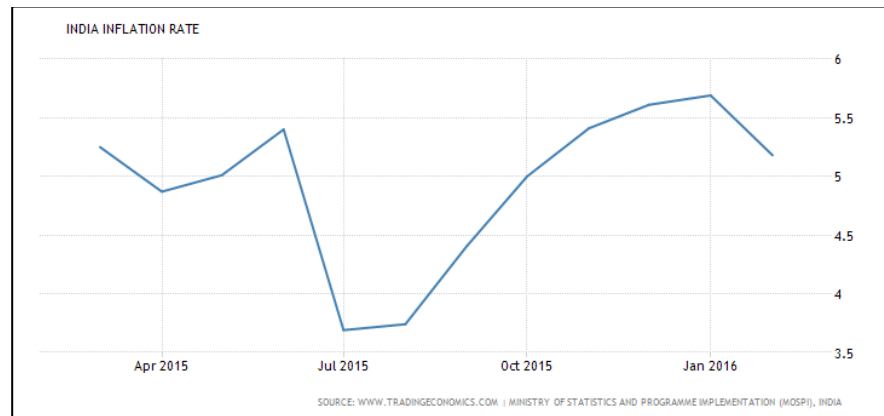
**Table:1 savings and investments**

Scenario I (Real GDP growth of 8.5 per cent; Inflation of 5.0 percent)									
(per cent of GDP at current market prices)									
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	12th Plan Average
Household	25.4	22.8	23.2	23.6	24.0	24.4	24.8	25.2	24.4
Private Corporate	8.2	7.9	8.3	8.4	8.5	8.6	8.6	8.7	8.6
Public	0.2	1.7	1.8	2.0	2.8	3.5	4.2	5.0	3.5
Gross Domestic Savings	33.8	32.3	33.3	34.0	35.3	36.5	37.6	38.9	36.5

From the above table, it is observed that there is a steady increase in the savings made both by the individuals and the corporate sectors of the country which indicates a high investment made in capital and other assets in turn producing a high rate of return.

Inflation:

Consumer prices in India increased 5.18 percent year-on-year in February of 2016, lower than 5.69 percent in January and below market expectations of 5.6 percent. Consumer inflation eased for the first time in seven months, reaching the lowest since October due a slowdown in food cost. Inflation Rate in India averaged 7.85 percent from 2012 until 2016, reaching an all time high of 11.16 percent in November of 2013 and a record low of 3.69 percent in July of 2015.

**Chart:2 inflation rate**

From the above analysis it is clear that the inflation rate in the country was huge and reached its peak in late 2015 and then there is steady decline in the rate of inflation in 2016 which is a positive sign to an investor to invest in stock market.

**Budget and fiscal deficit:**

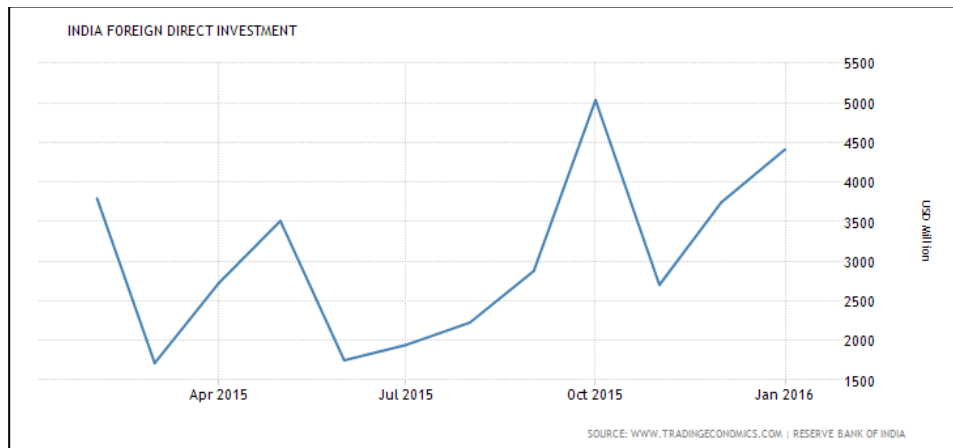
India recorded a Government Budget deficit equal to 3.90 percent of the country's Gross Domestic Product in 2015. Government Budget in India averaged -3.87 percent of GDP from 1991 until 2015, reaching an all time high of -2.04 percent of GDP in 1997 and a record low of -7.80 percent of GDP in 2009. Government Budget in India is reported by the Ministry of Finance, Government of India.

**Chart:3 Budget and Fiscal deficit**

From the above analysis it is shown that the country's budget is in deficit, but still it a sign of favorable investment opportunity as 2015 and 2016 budgets are balanced budgets to the investor as there are number of amendments made by the Indian government which helps the investors in earning high returns.

**Foreign direct investment:**

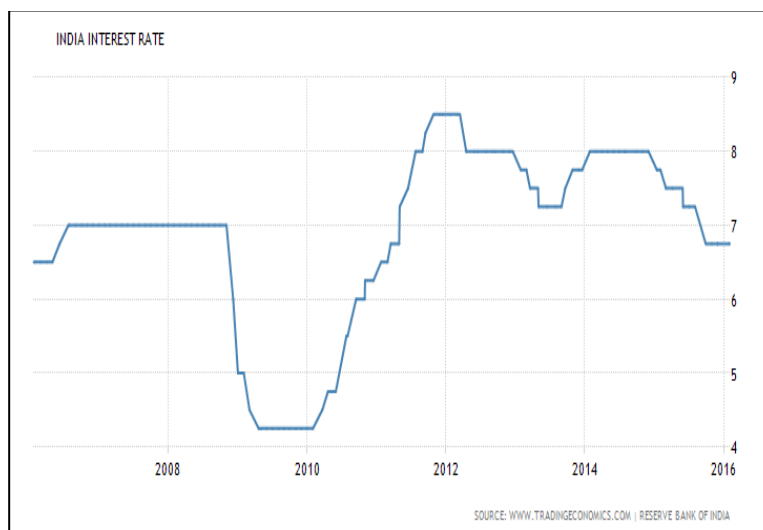
Foreign Direct Investment in India increased by 4413 USD Million in January of 2016. Foreign Direct Investment in India averaged 1140.51 USD Million from 1995 until 2016, reaching an all time high of 5670 USD Million in February of 2008 and a low of -60 USD Million in February of 2014.

**Chart:4 Foreign direct investment**

From the above analysis it is clearly visible that there is a huge foreign direct investment inflow in the Indian economy which has a positive impact on the stock market and a better opportunity for an investor to enhance his returns.

Interest rates:

The Reserve Bank of India left its benchmark repo rate at 6.75 percent on February 2<sup>nd</sup>. The central bank also decided to keep the cash reserve at 4.0 percent, to provide liquidity under overnight repos at 0.25 percent and to maintain daily variable rate repos and reverse repos to smooth liquidity. Interest Rate in India averaged 6.71 percent from 2000 until 2015, reaching an all time high of 14.50 percent in August of 2000 and a record low of 4.25 percent in April of 2009.

**Chart:5 Interest rates**

From the above analysis the graph clearly shows that there is a decrease in the interest rates in India which is a positive sign for the growth of economy, as the interest rates are decreased the investor can borrow the fund for a low rate of interest and earn appropriate returns by investing the borrowed fund.

Balance of payment:

India recorded a USD 6542 million trade deficit in February of 2016, lower than a USD 6742 million gap a year earlier and below market expectations of a USD 6750 million shortfall. It is the lowest deficit since September of 2013.

**Chart:6 Balance of payments**



From the above analysis it can be said that though the balance of payments of the economy is in deficit, the Indian economy with its growth rate is overcoming its deficit balance slowly which is a positive sign of increasing the exports and decreasing the imports.

Tax Structure:

The Corporate Tax Rate in India stands at 34.61 percent. Corporate Tax Rate in India averaged 35.02 percent from 1997 until 2015, reaching an all time high of 38.95 percent in 2001 and a record low of 32.44 percent in 2011.

**Chart:7 Tax structure**

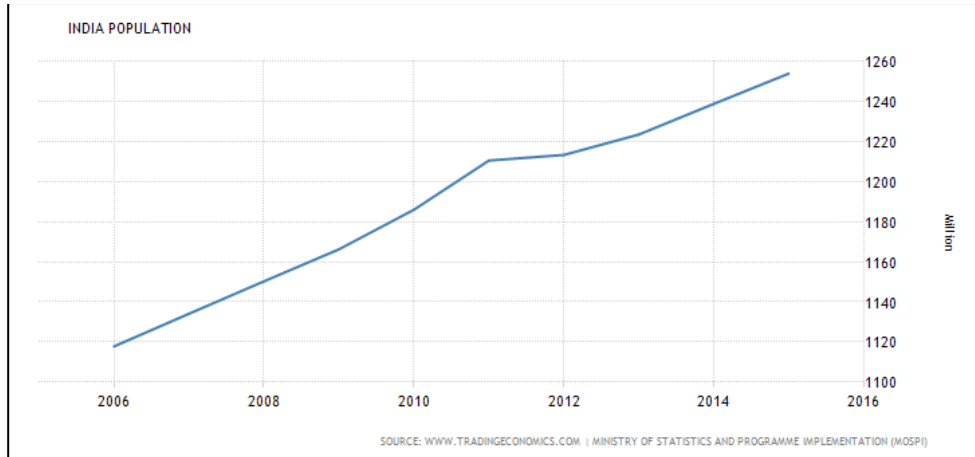


From the above analysis, it can be stated that there is a high taxation rate on the corporate which do not encourage the investors for the investments. If the government of takes initiatives for tax holidays and tax subsidies then the investors may come forward for making the investments.

Demographic profile:

The total population in India was last recorded at 1254.0 million people in 2015 from 359.0 million in 1950, changing 249 percent during the last 50 years. Population in India averaged 751.90 Million from 1950 until 2015, reaching an all time high of 1254.02 Million in 2015 and a record low of 359 Million in 1950.

**Chart:8 Demographic profile**



From the above analysis the graph clearly states that there is a high growth rate of population which results in skill full work force and huge human capital availability in the Indian economy, the demand for the product can be forecasted and the investor if invests in that product sector can earn a huge returns.

Foreign Institutional Investors:

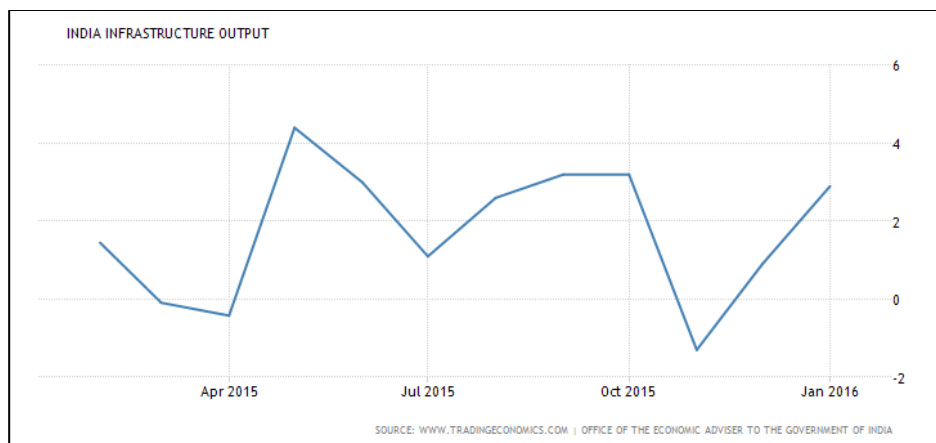
FII's have invested a net of US\$ 89.5 billion in 2014-15— expected to be their highest investment in any fiscal year. Of this, a huge amount—US\$ 57.2 billion—was invested in debt and it is their record investment in the asset class, while equities absorbed US\$ 32.3 billion. The stated statistics clearly shows the amount of investments made by foreign institutions in the Indian markets, implies the rapid growth of Indian economy in the competitive global markets.

Infrastructure facilities:

Infrastructure output in India went up 2.9 percent year-on-year in January of 2016, following a 0.9 percent growth rate in December. Infrastructure accounts for nearly 38 percent of India's industrial output. Considering the April to January, infrastructure output rose 2 percent. Construction Output in India averaged 5.01 percent from 2005 until 2016, reaching an all time high of 11.66 percent in January of 2010 and a record low of -1.30 percent in November of 2015.



Chart:9 infrastructure facilities



From that above analysis it can be said that the growth of infrastructure plays a major role in the economic development of the country and contributes to both industrial sector and agricultural sector.

### INDUSTRY ANALYSIS:

India is the second largest producer of cement in the world. No wonder, India's cement industry is a vital part of its economy, providing employment to more than a million people, directly or indirectly. Ever since it was deregulated in 1982, the Indian cement industry has attracted huge investments, both from Indian as well as foreign investors. India has a lot of potential for development in the infrastructure and construction sector and the cement sector is expected to largely benefit from it. Some of the recent major government initiatives such as development of 98 smart cities are expected to provide a major boost to the sector. Expecting such developments in the country and aided by suitable government foreign policies, several foreign players such as Lafarge-Holcim, Heidelberg Cement, and Vicat have invested in the country in the recent past. A significant factor which aids the growth of this sector is the ready availability of the raw materials for making cement, such as limestone and coal. Cement demand in India is expected to increase due to government's push for large infrastructure projects, leading to 45 million tones of cement needed in the next three to four years. India's cement demand is expected to reach 550-600 million tones per annum (MTPA) by 2025. The housing sector is the biggest demand driver of cement, accounting for about 67 per cent of the total consumption in India. The other major consumers of cement include infrastructure at 13 per cent, commercial construction at 11 per cent and industrial construction at nine per cent. To meet the rise in demand, cement companies are expected to add 56 million tones (MT) capacity over the next three years. The cement capacity in India may register a growth of eight per cent by next year end to 395 MT from the current level of 366 MT. It may increase further to 421 MT by the end of 2017. The country's per capita consumption stands at around 190 kg. The Indian cement industry is dominated by a few companies. The top 20 cement companies account for almost 70 per cent of the total cement production of the country. A total of 188 large cement plants together account for 97 per cent of the total installed capacity in the country, with 365 small plants account for the rest. Of these large cement plants, 77 are located in the states of Andhra Pradesh, Rajasthan and Tamil Nadu.

### Investments in Cement Sector:

On the back of growing demand, due to increased construction and infrastructural activities, the cement sector in India has seen many investments and developments in recent times. According to data released by the Department of Industrial Policy and Promotion (DIPP), cement and gypsum products attracted Foreign Direct Investment (FDI) worth US\$ 3.1 billion between April 2000 and September 2015.

Some of the major investments in Indian cement industry are as follows:

- Birla Corporation Ltd, a part of the MP Birla Group, has agreed to acquire two cement assets of Lafarge India for an enterprise value of Rs 5,000 crore (US\$ 750 million).
- Dalmia Cement (Bharat) Ltd has invested around Rs 2,000 crore (US\$ 300 million) in expanding its business in North East over the past two years. The company currently has three manufacturing plants in the region — one in Meghalaya and two in Assam.
- JSW Group plans to expand its cement production capacity to 30 MTPA from 5 MTPA by setting up grinding units closer to its steel plants.
- UltraTech Cement Ltd has charted out its next phase of Greenfield expansion after a period of aggressive acquisitions over the last two years. UltraTech has plans to set up two Greenfield grinding units in Bihar and West Bengal.
- UltraTech Cement Ltd bought two cement plants and related power assets of Jaiprakash Associates Ltd in Madhya Pradesh for Rs 5,400 crore (US\$ 810 million).
- JSW Cement Ltd has planned to set up a 3 MTPA clinkerisation plant at Chittapur in Karnataka at an estimated cost of Rs 2,500 crore (US\$ 375 million).
- Andhra Cements Ltd has commenced the commercial production in the company's cement plants – Durga Cement Works at Dachepalli, Guntur and Visakha Cement Works at Visakhapatnam.

### Government Initiatives

- In the 12<sup>th</sup> Five Year Plan, the Government of India plans to increase investment in infrastructure to the tune of US\$ 1 trillion and increase the industry's capacity to 150 MT.
- The Cement Corporation of India (CCI) was incorporated by the Government of India in 1965 to achieve self-sufficiency in cement production in the country. Currently, CCI has 10 units spread over eight states in India.
- In order to help the private sector companies thrive in the industry, the government has been approving their investment schemes. Some such initiatives by the government in the recent past are as follows:
- The Government of Tamil Nadu has launched low priced cement branded 'Amma' Cement. The sale of the cement started in Tiruchi at Rs 190 crore (US\$ 2.85) a bag through the Tamil Nadu Civil Supplies Corporation (TNCSC). Sales commenced in five godowns of the TNCSC and will be rolled out in stages with the low priced cement available across the state from 470 outlets.
- The Government of Kerala has accorded sanction to Malabar Cements Ltd to set up a bulk cement handling unit at Kochi Port at an investment of Rs 160 crore (US\$ 24 million).
- The Andhra Pradesh State Investment Promotion Board (SIPB) has approved proposals worth Rs 9,200 crore (US\$ 1.38 billion) including three cement plants and concessions to Hero MotoCorp project. The total capacity of these three cement plants is likely to be about 12

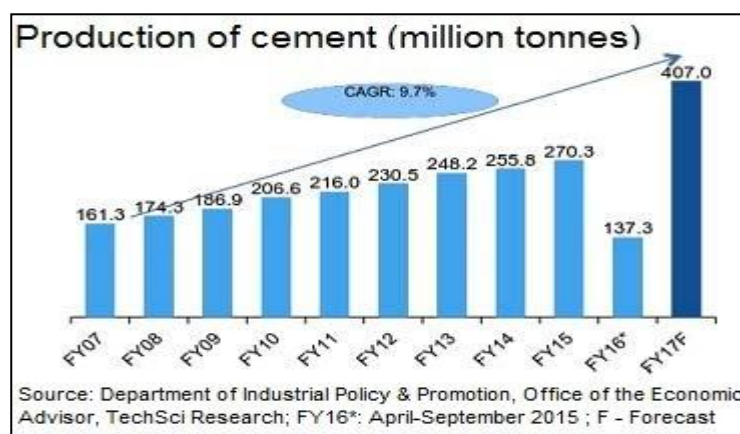
MTPA and the plants are expected to generate employment for nearly 4,000 people directly and a few thousands more indirectly.

- India has joined hands with Switzerland to reduce energy consumption and develop newer methods in the country for more efficient cement production, which will help India meet its rising demand for cement in the infrastructure sector.
- The Government of India has decided to adopt cement instead of bitumen for the construction of all new road projects on the grounds that cement is more durable and cheaper to maintain than bitumen in the long run.

Cement production in India growing at a fast pace

- Cement production increased at a CAGR of 6.7 per cent to 270.32 million tons over FY07-15.
- As per the 12<sup>th</sup> Five Year Plan, production is expected to reach 407 million tons by FY17.
- Availability of fly-ash (from thermal power plants) and use of advance technology has increased production of blended cement. Availability of fly-ash (from thermal power plants) and use of advance technology has increased production of blended cement.
- The environment-friendly blended cement is more cost-efficient to produce, as it requires lesser input of clinker and energy.

Chart :10 Production of cement



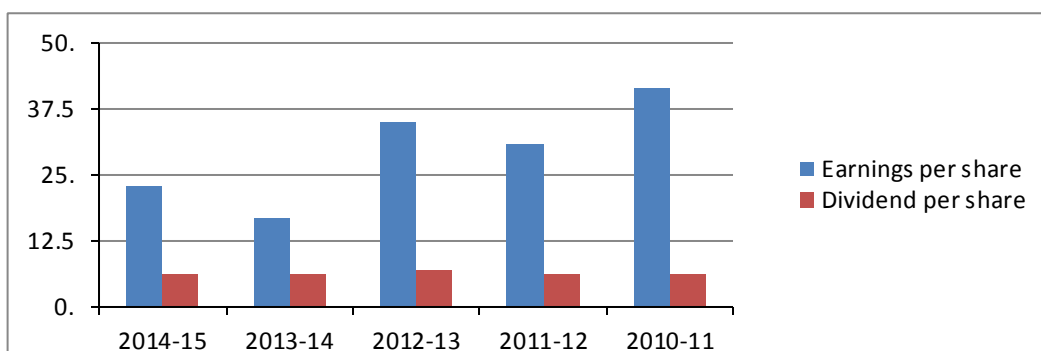
## COMPANY ANALYSIS:

Calculation of intrinsic value of Birla Corporation:

Table: 2, showing EPS and DPS

Particulars	2014-15	2013-14	2012-13	2011-12	2010-11
Earnings per share	22.78	16.85	35.04	31.06	41.54
Dividend per share	6	6	7	6	6
Book Value	339.84	327.09	317.21	290.34	266.23

Chart:10 EPS and DPS



The above graph shows that there are huge fluctuations in the earnings and dividend per share values which has finally ended up with a slight growth compared to the previous year.

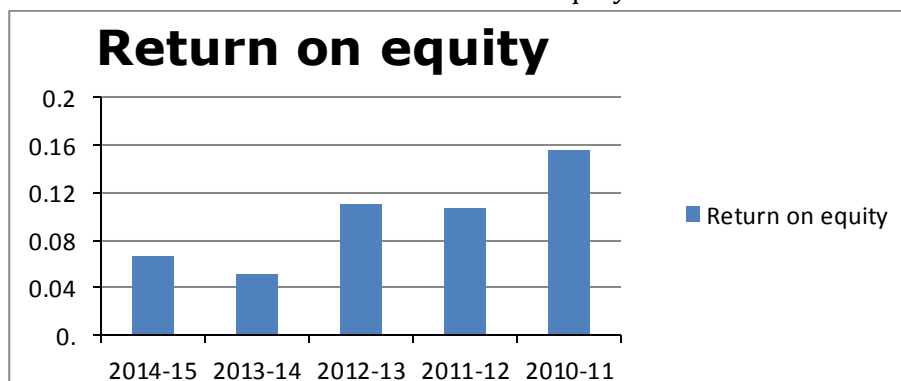
Table: 3, Calculation of Dividend payout ratio and price earnings ratio

Particulars	2014-15	2013-14	2012-13	2011-12	2010-11
Earnings per share	22.78	16.85	35.04	31.06	41.54
Dividend per share	6	6	7	6	6
Dividend payout ratio	0.263389	0.356083	0.199772	0.193175	0.144439
Price/ earning	17.85	17.19	6.97	9.1	8.17

Table: 4, Calculation of return on equity

Particulars	2014-15	2013-14	2012-13	2011-12	2010-11
share Capital	77.01	77.01	77.01	77.01	77.01
Reserves & Surplus	2,539.90	2,441.73	2,365.70	2,158.80	1,973.12
Net worth	2,616.91	2,518.74	2,442.71	2,235.81	2,050.13
Profit after tax(PAT)	175.44	129.76	269.82	239.21	319.88
Return on equity (PAT/Net worth)	0.067041	0.051518	0.110459	0.10699	0.156029

Chart 11: Return on Equity



The return on the investment made on the equity do not have much variation in 2014-2015 compared to the previous year return.

Table: 5, Calculation of intrinsic value of Birla Corporation

Average Dividend payout ratio (DPOR)	0.231371
Average retention ratio (1-Average DPOR)	0.768629
Average Return on equity (ROE)	0.098407
growth in equity (average retention ratio * average ROE)	0.075639
Normalized average PE ratio	11.856
Long term growth in dividend and equity (average PE ratio * average retention ratio)	9.11286
Projected EPS (EPS*(1+Growth in equity))	24.50305
intrinsic value (Average PE ratio * Projected EPS)	290.5082
Projected DPS (DPS*(1+Growth in equity))	6.453833

Calculation of intrinsic value of KCP cements:

Table: 6, showing EPS and DPS

Particulars	2014-15	2013-14	2012-13	2011-12	2010-11
Earnings per share	1.18	-0.02	2.19	4.59	3.02
Dividend per share	0.75	0.1	1	1.5	1
Book Value	27.83	27.57	27.73	26.73	23.91

Chart :12 EPS and DPS

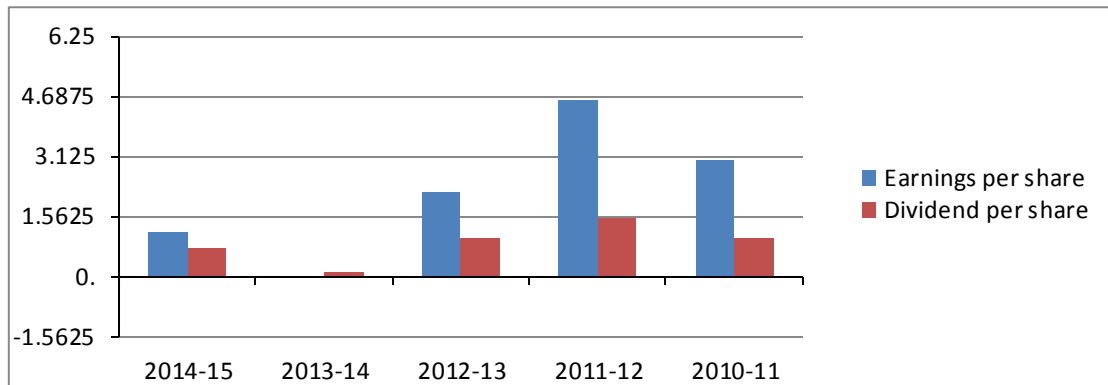


Fig: 26

The above graph shows that in 2014, the earnings per share was totally negative, there was a huge decline in the dividend per share value, subsequent year there is a rise in both the earnings per share and the dividend per share value.

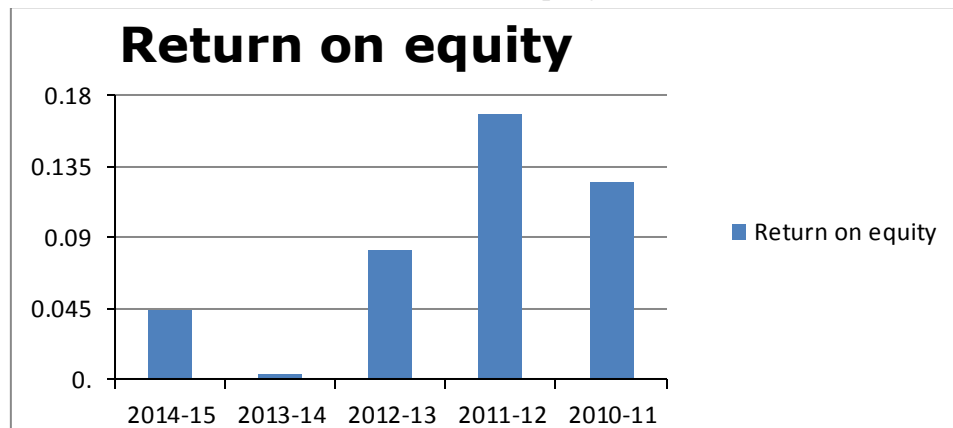
Table: 7, Calculation of Dividend payout ratio and price earnings ratio

Particulars	2014-15	2013-14	2012-13	2011-12	2010-11
Earnings per share	1.18	-0.02	2.19	4.59	3.02
Dividend per share	0.75	0.1	1	1.5	1
Dividend payout ratio	0.635593	-5	0.456621	0.326797	0.331126
Price/ earning	48.12	0	13.01	7.09	8.47

Table: 8, Calculation of return on equity

Particulars	2014-15	2013-14	2012-13	2011-12	2010-11
share Capital	12.89	20.89	27.89	32.89	32.89
Reserves & Surplus	345.92	342.5	344.58	331.68	295.42
Net worth	358.81	363.39	372.47	364.57	328.31
Profit after tax(PAT)	15.87	1.28	30.46	61.53	41.35
Return on equity (PAT/Net worth)	0.04423	0.003522	0.081778	0.168774	0.125948

Chart :13 Return on equity



The return on the investment made on the equity is higher in 2014-2015 compared to the previous year return.

Table: 9, Calculation of intrinsic value of KCP cements

Average Dividend payout ratio (DPOR)	-0.64997
Average retention ratio (1-Average DPOR)	1.649973
Average Return on equity (ROE)	0.084851
growth in equity (average retention ratio * average ROE)	0.140001
Normalized average PE ratio	15.338
Long term growth in dividend and equity (average PE ratio * average retention ratio)	25.30728
Projected EPS (EPS*(1+Growth in equity))	1.345201
intrinsic value (Average PE ratio * Projected EPS)	20.6327
Projected DPS (DPS*(1+Growth in equity))	0.855001

## CONCLUSION:

From the analysis of Indian economy, we have found that Indian economy is one of the growing economies of the World. In India inflation rate has declined in last two years. Due to this up to some extent control on cost of raw-materials and other expenses is possible. Under cement industry all the companies intrinsic values are lesser than the market price which is not suitable for long term investments but can go for speculations to get margin of profit. Birla Corporation cements from Cement sector can be considered for investment activities by the investor. KCP cements performance has to be improved to a higher extent to stand in the market.

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