Fundamental Analysis of Select Companies in Cement Industry using Various Models

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Abstract

The study focuses on suggesting the investors to invest in a particular company in cement industry by analyzing the underneath facts affecting it. The investors often find it difficult to select a company which has capital growth in long run. Even though they have invested by analyzing the market, they end up losing money. Thus the study has developed four interrelated models to give investors a clear idea of how to analyze and in which companies should we invest.

Initially, top five companies based on market are chosen and the study is carried on those companies (Ultratech Cements, Shree Cements, Ambuja Cements, ACC cements, Dalmia Bharat). The study starts with developing a relative valuation model for the companies based on the current data. But for investment to be done, it is necessary to analyze the past performance of the data. Each company has different values for the ratios and there is sudden and lowering of the values. This was due to the external market conditions affecting the company. So to study the effect of these factors i.e., Earnings Per Share, Dividend Per Share, Gross Domestic Factor, Inflation, on the companies, multiple regression model was used with stock price being the dependent variable and all else independent. There are some companies which show stable performance despite of the external forces. Though these companies are stable, not all ratios correspond well. Analyzing the performance of select companies in cement industries using fundamental tools to suggest the investors to invest in appropriate companies to make profit.

Introduction

Fundamental analysis is a method of evaluating a security in an attempt to measure its intrinsic value, by examining related economic, financial and other qualitative and quantitative factors. It is the study related to find anything that can affect the security's value, including macroeconomic factors such as the overall economy and industry conditions, and microeconomic factors such as financial conditions and company management. The end goal of fundamental analysis is to produce a quantitative value that an investor can compare with a security's current price, thus indicating whether the security is undervalued or overvalued.

Need for the study

To list out the top performing companies in the cement sector based on various models and certain parameters. Creating an awareness about investing in stock market

Objectives of the Study

- To identify the top companies to invest based on market capitalization

- To evaluate the performance of the companies in relative to certain parameters

- To find and suggest the best company to invest based on evaluation

Scope

- The study is to analyze the company's performance based on the financial statements

- It is confined only with cement industry

Limitations

- Only top 10 companies based on market capitalization

- The data are subject to fluctuation and hence the results are not suitable always

Literature Survey

1. **Monica, Sowmiya (2016)**, aims at carrying out the Fundamental analyses of two leading companies of Cement sector and estimating their intrinsic value to assist investment decisions. 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. 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.

2. **Pankaj Soni (2015)**, studies the fundamental analysis of cement sector. The Fundamental analysis is based on Economic, Industry and Company (EIC) Analysis. The paper also develops a Multi-Regression Model for finding values of Cement Company's share prices (Dependent Variable) through 4 parameters that is SENSEX, IIP, CPI and Realty Index (Independent Variable). For this regression analysis was done on monthly share prices and other variables from last 5 years and was tested. The model worked.

3. **Sayed Mohammad (2011)**, states that India is the world's second largest producer of cement behind China with ever growing industry capacity of over 200 plus million tonnes (MT) and has left behind developed markets such as the US and Japan. It is a highly capital-intensive industry and operates with a high level of fixed cost. For smooth running of cement industry it is important to have overall balanced projection. The current scenario of Cement industry in India is more concerned of solving the consumer complaints, resolve disputes with special attention given to public interface.

4. **Dharmendra S Mistry (2011),** states that Dividend decision is one of the most important functions of finance managers. It depends on the trend of the turnover and control of the management over the expenditure. It also affects the decision of potential investors regarding investment in company's equity and overall market value of the company's share. In this paper, an attempt has been made to ascertain influence of the factors i.e. Total Assets, Liquidity, Inventory Turnover Ratio, Profitability and Retained Earnings on the dividend decision of Indian cement industry for a period of 2004-05 to 2008-09 based on the secondary data of 28 out of 36 listed public companies in the industry.

Data Analysis Tools

Investors find difficulty in investing in equity market. Thus the project develops various models based on various parameters to help investors invest in best companies in Cement industry so that they earn profits at steady growth. Though the past performance alone can be indicative of future performance, it is frankly, the only quantitative way to judge how good a fund is at present. The methods used for analyzing the data are:

- **Relative Valuation Model**

- **Multiple regression**

1. Relative Valuation Model

- The model has been built for finding the best companies in cement industry based on the benchmark value and multiples.

Steps in Relative Valuation Model

- **Step 1:** Choose the top 10 companies in cement industry based on market capitalization. Note down the share price, market capitalization, EPS, P/E ratio of the corresponding companies

Table 1.a Choosing the companies

Company Name	Stock Price	Market Cap (Rs. Cr)	P/E Ratio	EPS	Previous year EPS
Ultra Tech Cement	4,030.00	1,10,617.26	42.21	96.48	83.33
Shree Cements	17,723.00	61,744.00	49.08	361.09	130.58
Ambuja Cements	248.15	49,273.79	42.64	5.82	5.65
ACC	1,485.55	27,896.74	46.31	32.08	32.19
Dalmia Bharat	2,135.05	18,994.64	231.57	9.22	23.36
Ramco Cements	668.25	16,036.45	22.30	29.97	23.00
J.K. Cement	935.00	6,538.20	27.39	34.14	9.06
OLC India	1,009.50	5,744.08	14.17	71.22	41.12
Birla Corp	744.00	5,729.20	21.18	35.13	20.44
JK Lakshmi Cem	462.90	5,446.95	49.67	9.32	1.27

Inference:

Only one of the top 10 companies is Overvalued rest are Undervalued. Undervalued companies have the probability of going high in future i.e., in long term, while the overvalued companies tend to fall as they have reached their highest point.

Step 2: Valuation of Stocks

Identify the industry P/E of cement industry and compare the individual company's P/E to determine if the stock is Undervalued (UV) or Overvalued (OV).

P/E industry> P/E company ➔ UV

P/E industry<P/E company ➔ OV

Table 1.b Valuation of stocks

Company Name	Stock Price	Market Cap (Rs. Cr)	P/E Ratio	EPS	Previous year EPS	(OV/UV)
Ultra Tech Cement	4,030.00	1,10,617.26	42.21	96.48	83.33	UV
Shree Cements	17,723.00	61,744.00	49.08	361.09	130.58	UV
Ambuja Cements	248.15	49,273.79	42.64	5.82	5.65	UV
ACC	1,485.55	27,896.74	46.31	32.08	32.19	UV
Dalmia Bharat	2,135.05	18,994.64	231.57	9.22	23.36	OV
Ramco Cements	668.25	16,036.45	22.30	29.97	23.00	UV
J.K. Cement	935.00	6,538.20	27.39	34.14	9.06	UV
OLC India	1,009.50	5,744.08	14.17	71.22	41.12	UV
Birla Corp	744.00	5,729.20	21.18	35.13	20.44	UV
JK Lakshmi Cem	462.90	5,446.95	49.67	9.32	1.27	UV

Inference:

Eight companies of the top 10 companies have a value pick i.e., their current EPS is greater than the previous year EPS.

Industry P/E = 53.86

Only Dalmia Bharat is Overvalued as it has a P/E ratio of 231.57 which is greater than industry P/E. All other companies are Undervalued

Step 3: Value Pick

Consider the undervalued companies from the previous and calculate EPS change i.e., if the current EPS is greater than previous year EPS

$$\% \text{ Change} = \text{Current year EPS} - 1$$

$$\text{Previous year EPS}$$

If % change is positive, the stock has a value pick, else no value pick.

Table 1.c Value Pick

Company Name	EPS	Previous year EPS	(OV/UV)	% Changes	Value Pack
Ultra Tech Cement	95.48	83.33	UV	1.5%	Yes
Shree Cements	361.09	130.58	UV	17.7%	Yes
Ambuja Cements	5.82	5.65	UV	3%	Yes
ACC	32.08	32.19	UV	0%	-
Dalmia Bharat	9.22	23.36	OV	-61%	-
Ramco Cements	29.97	23.00	UV	30%	Yes
J.K. Cement	34.14	9.06	UV	27.7%	Yes
OLC India	71.22	41.12	UV	73%	Yes
Birla Corp	35.13	20.44	UV	72%	Yes
JK Lakshmi Cem	9.32	1.27	UV	63.4%	Yes

Inference:

The companies which were found undervalued in the previous step are further calculated for value pick. All companies except of ACC have a value pick among UV companies

Step 4: Calculate LTPT

LTPT (Long Term Price Target) is the projected price level of a financial security stated by an investment analyst or advisor. This is the price at which the trader or investor wants to exit his existing position so he can realize the most reward.

LTPT= Sector P/E*Current Year EPS

Table 1.d LTPT

Company Name	P/E Ratio	EPS	(OV/UV)	LTPT
Ultra Tech Cement	42.21	95.48	UV	5142.55
Shree Cements	49.08	361.09	UV	19448.31
Ambuja Cements	42.64	5.82	UV	313.47
ACC	46.31	32.08	UV	1727.83
Dalmia Bharat	231.57	9.22	OV	496.59
Ramco Cements	22.30	29.97	UV	1614.18
J.K. Cement	27.39	34.14	UV	1838.78
OLC India	14.17	71.22	UV	3835.91
Birla Corp	21.18	35.13	UV	1892.10
JK Lakshmi Cem	49.67	9.32	UV	501.98

Inference:

LTPT is the value until which the stock can be held and after that could be sold. Shree Cements, JK, Birla Corp and OCL have the highest scope for increment in future.

Step 5: Growth Picks

Consider the Overvalued companies and compute the growth pick

Growth Rate = Current year EPS

Previous year EPS

Table 1.e Growth Pick

Company Name	P/E Ratio	EPS	Previous year EPS	(OV/UV)	EPS Growth
Ultra Tech Cement	42.21	95.48	83.33	UV	1.15
Shree Cements	49.08	361.09	130.58	UV	2.77
Ambuja Cements	42.64	5.82	5.65	UV	1.03
ACC	46.31	32.08	32.19	UV	1.00
Dalmia Bharat	231.57	9.22	23.36	OV	0.39
Ramco Cements	22.30	29.97	23.00	UV	1.30
J.K. Cement	27.39	34.14	9.06	UV	3.77
OLC India	14.17	71.22	41.12	UV	1.73
Birla Corp	21.18	35.13	20.44	UV	1.72
JK Lakshmi Cem	49.67	9.32	1.27	UV	7.34

Step 6: PEG Ratio

PEG ratio is computed for the overvalued companies. The value of PEG should lie between 0 to 1 so that it is considered good to invest.

PEG Ratio = P/E Ratio

Growth Rate

Table 1.f PEG Ratio

Company Name	P/E Ratio	EPS	Previous year EPS	(OV/UV)	EPS Growth	PEG
Ultra Tech Cement	42.21	95.48	83.33	UV	1.15	0.37
Shree Cements	49.08	361.09	130.58	UV	2.77	0.18
Ambuja Cements	42.64	5.82	5.65	UV	1.03	0.41
ACC	46.31	32.08	32.19	UV	1.00	0.46
Dalmia Bharat	231.57	9.22	23.36	OV	0.39	5.87
Ramco Cements	22.30	29.97	23.00	UV	1.30	0.17
J.K. Cement	27.39	34.14	9.06	UV	3.77	0.07
OLC India	14.17	71.22	41.12	UV	1.73	0.08
Birla Corp	21.18	35.13	20.44	UV	1.72	0.12
JK Lakshmi Cem	49.67	9.32	1.27	UV	7.34	0.07

Inference:

PEG ratio should lie between 0 to 1 for investing. PEG ratio is found for OV companies. Dalmia Bharat has 5.38 PEG ratio. Hence it could not be selected as it has already reached the highest level of growth.

2. Multiple Regression

Dependent Variable: Share Price of Cement sector companies.

Independent Variable: Earnings Per Share, Dividend Per Share, Inflation Rate, Gross Domestic Product Rate.

2.1 Regression Statistics for Ultratech Cements

Table 2.1.a Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.982*	.965	.859	271.91828	1.402

a. Predictors : (Constant), GDP Rate, EPS, DPS, Inflation
b. Dependent Variable : Stock Price

Table 2.1.b ANOVA

Model		Sum of Squares	Df	Mean Sqaure	F	Sig.
1	Regression	2026986.043	3	675662.014	9.138	.237*
	Residual	73939.549	1	73939.549		
	Total	2100925.592	4			

a. Predictors : (Constant), GDP Rate, EPS, DPS, Inflation
b. Dependent Variable : Stock Price

Table 2.1.c Coefficients

Model		Unstandardized Coefficient		Standardized Coefficient	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	8016.648	4323.914		1.854	0.315
	EPS	249.116	93.602	3.257	2.661	0.229
	DPS	-8904.68	3143.915	-6.73	-2.832	0.216
	GDP Rate	7526.639	2458.168	9.327	3.062	0.201
	Inflation	-418.505	3013.558	-1.363	-0.139	0.912

a. Dependent Variable : Stock Price

Inference:

The significance value is greater than 0.05 hence accept the alternate hypothesis. The independent factors(EPS, DPS, Inflation and GDP rate) affect the stock price(dependent variable).

2.2 Regression Statistics for Shree Cements

Hypothesis Testing

Ho: There is no significant relationship between Stock Price and EPS, DPS, GDP Rate, Inflation Rate

Ha: There is no significant relationship between Stock Price and EPS, DPS, GDP Rate, Inflation Rate

Table 2.2.a Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.945*	.892	.569	2246.06683	3.598

a. Predictors : (Constant), GDP Rate, EPS, DPS, Inflation
b. Dependent Variable : Stock Price

Table 2.2.b ANOVA

Model		Sum of Squares	Df	Mean Sqaure	F	Sig.
1	Regression	4.182E7	3	1.394E7	2.763	.410*
	Residual	5044816.209	1	5044816.209		
	Total	4.687E7	4			

a. Predictors : (Constant), GDP Rate, EPS, DPS, Inflation
b. Dependent Variable : Stock Price

Table 2.2.c Coefficients

Model		Unstandardized Coefficient		Standardized Coefficient	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	9704.79	97141.5		0.1	0.937
	EPS	-38.077	99.283	-0.77	-0.384	0.767
	DPS	-1398.29	6991.035	-0.817	-0.2	0.874
	GDP Rate	4929.925	10922.63	1.293	0.451	0.73
	Inflation	1925.454	1004.631	1.328	1.917	0.306

a. Dependent Variable : Stock Price

Inference:

The significance value is greater than 0.05 hence accept the alternate hypothesis. The independent factors(EPS, DPS, Inflation and GDP rate) affect the stock price(dependent variable).

2.2 Regression Statistics for Shree Cements

Hypothesis Testing

Ho: There is no significant relationship between Stock Price and EPS, DPS, GDP Rate, Inflation Rate
Ha: There is no significant relationship between Stock Price and EPS, DPS, GDP Rate, Inflation Rate
Table 2.2.a Model Summary
Table 2.2.b ANOVA

Findings

Relative Valuation Model

i.   9 out of 10 companies were found undervalued and 1 overvalued

   Undervalued   Overvalued

- Ultratech Cements   Dalmia Bharat Cements
- Shree Cements
- Ambuja Cements
- ACC Cements
- Ramco Cements
- JK Cements
- Birla Corp Cements
- OCL Cements
- JK Lakshmi Cements

ii.   Among the undervalued companies all had a value pick i.e., they had a growth in their current EPS then of their previous EPS, except ACC cements. Thus ACC cements is neglected.

iii. LTPT is the value until which the stock of an undervalued company can be held and after which it should be sold. Shree cements, JK cements, OCL and Birla Corp have the highest range for price increment.

iv.   For overvalued companies PEG (Price Earnings Growth) ratio is used to determine its further growth value. The ratio should lie between 0 to 1. But for Dalmia Cements (the only overvalued company) the ratio is 5.38, which indicates that it has reached the highest point and has more probability of falling down anytime.

Multiple Regression Model:

Factors affecting the different companies are tabulated below

Ultratech Cements

Table 5.1.a

Dependent variables	Independent variables	Rate (%)
Stock Price	EPS	20.7
	DPS	29.5
	Inflation	46.5
	GDP Rate	56.5
Overall		85.92

Shree Cements

Table 5.1.b

Dependent variables	Independent variables	Rate (%)
Stock Price	EPS	26.7
	DPS	82.1
	Inflation	56.6
	GDP Rate	69.4
Overall		56.9

Based on the above tabulations it is found that Ambuja Cements is least affected by the external factors with 47.4% followed by Shree Cements. It is also found that Ultratech is more prone to external factors with an affecting rate of 85.92%.

Suggestions

- Based on relative valuation model, For long term investors it is better to invest in undervalued companies which a scope of growth and based on the LTPT value Shree and Ambuja cements are best companies to invest

- For short term investors, overvalued is best to invest but Dalmia Bharath as already reached the highest point of PEG (5.38). Hence it is better not to invest

- Based on multiple regression Ambuja Cements is least affected by external factors

- Shree Cements dominates the industry by having most of the ratios having its positivity, but based on ANOVA, Ambuja and Shree are significantly related to each other.

Conclusions

Fundamental analysis is analysing the basic financials of the company from the balance sheet and income statement to consider it for further investment. The study initially has considered the stock price and then based on the data, has successfully applied fundamental tools like ratio analysis and statistical tools to determine the health of a company based on the past data.

The project has determined that the investment is surely dependent on the past performance of the company, the external factors (economic) and obviously the price of the stock. The results vary for different models and on different perspectives of people i.e., for high and quick growth, steady growth, high profits, less affected by external factors and so on.

But the study has analysed all the factors and applied all the tools and determined **Ambuja Cements** in cement industry as the best company for investment and to earn better in future.

References

1. Monica, Sowmiya (2016) "Fundamental Analysis on Select Cement Companies" International Journal of Research in IT and Management (Impact Factor-5.96) vol.6, issue 6, ISSN2231-4334

2. Pankaj Soni (2015) "Fundamental Analysis of Cement sector" International Conference of Technology and Business Management, PP522-532

3. Sayed Mohammad (2011) "A Study of Fundamental Analysis of Cement Sector" International Journal of Business Swot (IJOBS) vol. IV-No.1 ISSN:0975-8836

4. Dharmendra S Mistry (2011) "Factors Affecting Dividend Decision of Indian Cement Industry" International Journal of Business Swot (IJOBS) vol. VII, No.1 ISSN:023-033

5. https://www.equitymaster.com/.../detailed-financial-information.asp

6. www.moneycontrol.com › MARKETS › Cement – Major

8. http://www.indianmirror.com/indian-industries/2015/cement-2015.html

9. https://www.irdai.gov.in/ADMINCMS/cms/NormalData_Layout.aspx?page=PageNo4&mid=2

10. https://www.ibef.org/industry/cement-india.aspx

11. https://www.ibef.org/industry/insurance-sector-india.aspx