



## A study to analyze impact of selected tools of fundamental analysis on market price of selected listed sugar stocks in India

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### ABSTRACT

*Fundamental analysis seems to be known to all class of investors, but there is long list of tools for making investment decision using fundamental analysis. In case it happen that different tools give contradicting signal, this paper endeavors to find out which tools of fundamental analysis have highest impact on pricing and performance of stocks belong to particular sector. For the purpose of study and research this paper has taken listed sugar sector stocks as sample to test the relevance for tools of fundamental analysis*

### KEYWORDS : Fundamental Analysis, Sugar sector, Market share price determination

#### 1.0 Introduction:

The capital stock of a corporation comprises the equity stake of its owners. Stocks are the residual assets of the company that shall be due to stockholders after discharge of all other liabilities due such as secured and unsecured debt.

Fundamental analysis of a business as per Wikipedia involves analyzing its financial statements and health, its management and competitive advantages, and its competitors and markets. When applied to futures and foreign exchange, it focuses on the overall state of the economy, interest rates, production, earnings, and management. When analyzing a stock, futures contract, or currency using fundamental analysis there are two basic approaches one can use; bottom up analysis and top down analysis. The term is used to distinguish such analysis from other types of investment analysis such as quantitative analysis and technical analysis.

Fundamental analysis is done for predicting financial performance of a company based on past and present data. In addition to this there are several possible objectives:

- Calculate fair value of stock, so as to compare the same with market value and investment decision
- Forecasting business growth trajectory
- To evaluate working efficiency of management
- To study calculate risk factors associated with the company or the sector.

The investor, while investing in stocks, has the primary purpose of gain. If he invests for a short period of time, it is speculative but when he holds it for a fairly long period of time, the anticipation is that he would receive some return on his investment. The fundamental analysis is a method of finding out the future price of a stock, which an investor wishes to buy.

If fair value is not equal to the current stock price, fundamental analysts believe that the stock is either over or under valued and the market price will ultimately gravitate towards fair value. Fundamentalists do not heed the advice of the random walkers and believe that markets are weak-form efficient. By believing that prices do not accurately reflect all available information, fundamental analysts look to capitalize on perceived price discrepancies.

The method for forecasting the future behavior of investment and the rate of return on them is clearly through an analysis of the broad economic forces, environmental conditions, demand and supply and political factor.

#### 2.0 Background Of Study

Moube and Jannach (2003) tried to find out which of the concepts of fundamental analysis were the most important factors and indicators for the asset managers basically for everyone questioned the

first factor of look at the financial state of the company, which was usually determined by such ratios as return easy returns, sales development, future earnings, stability of balance sheets dept easily, equity ratio). Besides, majority of respondents mentioned such key valuation concepts as price to earnings and price to book value.

David E. Rapach & Guofu Zhou (2012) in the handbook of economic forecasting volume II said, Forecasting stock returns is a fascinating endeavor with a long history. From the standpoint of practitioners in finance, asset allocation requires real-time forecasts of stock returns, and improved stock return forecasts hold the promise of enhancing investment performance. It is thus not surprising that finance practitioners employ a plethora of variables in an attempt to forecast stock returns. Academics in finance are also keenly interested in stock return forecasts, since the ability to forecast returns has important implications for tests of market efficiency; more generally, understanding the nature of stock return forecast ability helps researchers to produce more realistic asset pricing models that better explain the data.

While stock return forecasting is fascinating, it can also be frustrating. Stock returns inherently contain a sizable unpredictable component, so that the best forecasting models can explain only a relatively small part of stock returns. Furthermore, competition among traders implies that once successful forecasting models are discovered, they will be readily adopted by others; the widespread adoption of successful forecasting models can then cause stock prices to move in a manner that eliminates the models' forecasting ability (e.g., Lo, 2004; Timmermann and Granger, 2004). However, rational asset pricing theory posits that stock return predictability can result from exposure to time-varying aggregate risk, and to the extent that successful forecasting models consistently capture this time-varying aggregate risk premium, they will likely remain successful over time

#### 2.1 Economic Background:

The Economic Survey 2012-13 has pegged the country's economic growth forecast at 6.1-6.7% in the coming financial year. The survey has painted an optimistic picture for the economy, stating that the downturn is 'more or less over'. Stating that the medium term fiscal consolidation plan is credible, the Survey has emphasized the need to step up reforms. "Economic slowdown is a wakeup call for stepping up reforms," The survey predicts that the global economy is also likely to recover in 2013 and various government measures will help in improving the Indian economy's outlook for 2013-14.<sup>(1)</sup>

The Survey also added "Following the slowdown induced by the global financial crisis in 2008-09, the Indian economy responded strongly to fiscal and monetary stimulus and achieved a growth rate of 8.6 per cent and 9.3 per cent respectively in 2009-10 and 2010-11, but due to a combination of both external and domestic factors, the economy decelerated growing at 6.2% and an estimated 5% in 2011-12

and 2012-13 respectively, "The survey has highlighted the domestic causes that have caused the economic slowdown." The slowdown in the rate of growth of services in 2011-12 at 8.2%, and particularly in 2012-13 to 6.6 percent from the double-digit growth of the previous six years, contributed significantly to slowdown in the overall growth of the economy, while some slowdown could also be attributed to the lower growth in agriculture and industrial activities," the survey said. However, despite the slowdown, the services sector has shown more resilience to worsening external conditions than agriculture and industry.<sup>(2)</sup>

**3.0 Research Methodology:**

**3.1 Data Collection:**

The historic stock pricing data was collected from the official website of Bombay Stock Exchange, for the purpose of research monthly closing data has been used, while the ratio are been taken from money control's official portal.

**3.2 Period of Analysis**

Period of analysis for data collected is 5 years i.e. from 31<sup>st</sup> March, 2008 to 31<sup>st</sup> March, 2012 compiled on monthly closing basis.

**3.3 Tools Used for Study:**

For analyzing the data following statistical tools are being used

- Karl Pearson's coefficient of correlation (r)
- Coefficient of determination (COD)

**3.4 Objectives of Study:**

- To analysis sugar sector stock using the tools of fundamental analysis.
- To find out which tools of fundamental analysis has highest impact on the stock price & performance of sugar company stock
- To predict the most prudent investment opportunity in listed sugar sector stock in India.

**3.5 Limitation of study:**

- The study is based on the data belonging to 2008-2012 period, while these companies are in existing for quite a long period as compared to time period of study.
- To sort the top companies market capitalization has been used as the parameter, whereas there would other parameters as profit or revenue that can be use as a scale to classify the companies.
- We have used selected performance variable from various categories, this leaves scope to try and tested other tools not tested by me

**4.0 Processing & Analysis Of Data:**

As of 1<sup>st</sup> of March 2013 there are 29 listed sugar companies in India (BSE/NSE) namely

Bajaj Hind	Kesar Enterpris	Bannariamman	Balrampur Chini	Mawana Sugars
KCP Sugar	Sri Chamundes	Ponni Sugars(E)	Dhampur Sugar	Empee Sugars
Uttam Sugar	Shree Renuka	EID Parry	Upper Ganges Su	Kothari Sugars
Triveni Engg	Simbhaoli Sugar	Andhra Sugar	Rajshree Sugars	Rana Sugars
Dalmia Sugar	Sakthi Sugars	Jeypore Sugar	Dwarikesh Sugar	KM Sugar Mills
Ugar Sugar Work	Oudh Sugar Mill	Thiru Arooran	Dharani Sugars	

**4.1 Market Capitalization**

Out of these 29 companies for study purpose we have sorted top 5

companies based on the market capitalization. They are as follows

	Company (Acronym)	Market Cap. (Rs. In Crores)
1	EID Parry (EP)	2,648.93
2	Shree Renuka (SR)	1,698.44
3	Bajaj Hindustan (BH)	1,365.12
4	Balrampur Chini (BC)	1,193.47
5	Bannari Amman (BA)	1,031.86

**Table No 01: Market Capitalization**

Parameters selected for Fundamental Analysis	
Market Price	Financial Charges Coverage Ratio
Net Profit Margin (%)	Investments Turnover Ratio
Dividend Per Share	Earnings Per Share
Debt Equity Ratio	Book Value

**4.2 Study of Karl Pearson's coefficient of correlation (r) with market price over past 5 year (2008-12)**

Parameter \ Company	EP	SR	BH	BC	BA
Net Profit Margin (%)	-0.43	0.4	0.18	0.88	0.39
Dividend Per Share	-0.2	0.79	0.8	0.85	-0.33
Debt Equity Ratio	-0.39	0.23	0.87	-0.78	-0.26
Financial Charges Coverage Ratio	0.38	0.31	0.64	0.86	0.84
Investments Turnover Ratio	0.5	0.49	-0.64	0.81	0.87
Earnings Per Share	-0.36	0.98	0.06	0.8	0.31
Book Value	0.32	0.98	0.41	-0.11	0.41

**Table No 02: Correlation of market price with other parameters**

Based on the average of correlation of about parameters against the market price for sugar stock we can draw following inference for sugar sector stock

Parameter	Average	Inference
Net Profit Margin (%)	0.284	Weak positive correlation
Dividend Per Share	0.382	Moderate positive correlation
Debt Equity Ratio	-0.066	Weak negative correlation
Financial Charges Coverage Ratio	0.606	Strong positive relationship
Investments Turnover Ratio	0.406	Moderate positive relationship
Earnings Per Share	0.358	Moderate positive relationship
Book Value	0.402	Moderate positive relationship

**Table No 03: Inference from study of correlation analysis**

Thus in process of selecting as sugar stock for investment investor should select company that has higher financial charges coverage ratio, Investments turnover ratio, earning per share, book value, Net profit Margin & Dividend per share, While a lower Debt equity ratio. *The parameters having moderate to strong relation should be give priority in consideration.*

As there are multiple parameter with similar strength we will try to find the one which I most consistence by using the statistical tool as CV (coefficient of variance)

**4.3 Coefficient of variance in coefficient of correlation (r)**

**with market price**

Parameter	CV of r	Ranking
Financial Charges Coverage Ratio	0.42	1
Book Value	0.966	2
Investments Turnover Ratio	1.503	3
Earnings Per Share	1.523	4
Dividend Per Share	1.552	5
Net Profit Margin (%)	1.671	6
Debt Equity Ratio	9.631	7

**Table No 04: Ranking of CV in correlation.**

As Financial charges coverage ratio has strong positive correlation with market price of share plus has lowest coefficient of variance, Thus we can say that it is most important parameter to be taken care of while analyzing / investing in sugar stock.

	EP	SR	BH	BC	BA
Financial Charges Coverage Ratio	5.256	4.17	1.51	2.978	15.59

**Table No 05: Comparison of Financial Charges Coverage Ratio**

Considering the Financial charges coverage ratio Bannari Amman (BA) has outperformed its peer was big margin hence Bannari amman would be the most preferred investment option.

To take this analysis to next will by calculating the coefficient of determination to understand not just the direction of correlation amongst the variances and the market price but also the magnitude to which it might affects the market price

**4.4 Study of Coefficient of determination (COD) with market price with other parameters over past 5 year (2008-12)**

	EP	SRS	BH	BC	BA	Avg.	COD %
Net Profit Margin(%)	0.25	0.24	0.41	0.66	0.76	0.46	46.25
Investments Turnover Ratio	0.04	0.62	0.64	0.72	0.11	0.43	42.71
Book Value	0.14	0.10	0.41	0.74	0.71	0.42	41.91
Earnings Per Share	0.13	0.96	0.00	0.64	0.10	0.37	36.59
Financial Charges Coverage Ratio	0.15	0.05	0.76	0.61	0.07	0.33	32.76
Dividend Per Share	0.10	0.96	0.17	0.01	0.17	0.28	28.22
Debt Equity Ratio	0.18	0.16	0.03	0.77	0.15	0.26	26.08

**Table No 06: Coefficient of Determination of Market Price**

Thus if consider Financial charges coverage ratio as the key parameter, we can say from the COD table that 0.706 or 70.60% change in price of Bannari Amman is due to change in Financial charges coverage ratio. Based on COD table the other parameter that is highly affecting bannari Amman's price is the Investment turnover ratio.

**5.0 Conclusion:**

Thus based on above study we can come up with generalized connotation to use financial charges coverage ratio & Investment turnover ratio as key parameters to analyze listed (in India) sugar sector stock to decide which stock is better for investment. Further using both this ratio's with tools of regression analysis we can predict future price of the stock.

**6.0 Recommended**

Thus based on above working I recommend Bannari Amman is the best company from listed sugar manufacturing sector for Investment.

**7.0 Further scope of study:**

There is good scope of further study on this line

Within the sugar sector: Other tools of stock analysis can also be studied using similar statistical tools and their level of intensity on market price would found.

Outside sugar sector: All major sectors can be brought under the purview of research using similar tools and working just by shifting from listed sugar stock to stocks from other sector

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