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Trends in FMCG sector and building up of investment strategies in FMCG sector

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Abstract
The paper is an attempt to understand the nature of movements in share prices of FMCG companies in India and to find out the relationship between FMCG companies share prices and the FMCG index. Share prices of the FMCG companies during the period of 2012-17 (5 years) has been taken for the purpose of study.The correlation between the FMCG companies and the FMCG index has been tested with the and prediction strength of the share price movement, explained by FMCG index, has been measure by FMCG index with the help of co-efficient of determination and by fitting linear regression equation. A sample of total 38 companies representing FMCG index has been made for the purpose of study. Log returns for the securities and the FMCG index has been computed by taking the closing prices of the shares and the index.

Keywords: market adjusted abnormal return, return on security, return on FMCG index, price behaviour, coefficient of determination, coefficient of correlation, active return, monthly average return

Introduction

There are total 14 sectoral indices as classified by Bombay Stock Exchange. Every sector has its own prominent role in growth of the economy and provides an important opportunity for the purpose of the investment in the primary as well as secondary capital market. FMCG is one of the most important sector out of the 14 sectors, as classified by BSE, to invest in the stocks. As per the reports of Indian Brand Equity Foundation and World Bankthe size of FMCG Indian market in the year 2016 stood at USD49 billion and during the period of 2016–2020, the market in India is expected to grow at a CAGR of 20.6 per cent. The market size is expected to reach at USD103.7 billion by the year 2020. Total consumption expenditure of the FMCG market is to grow, expected, at a CAGR of 19.62% from USD1469 billion to UDS3600 billion during 2015-2020. Rural consumtptin of the FMCG market is USD29.4 billion in 2016 and expected to reach at USD100 billion with a CAGR of 14.6% and modern retail market is to grow at a CAGR of 10.8% respectively from USD160 billion to USD267 billion. As per the reports of SEBI, in National Stock Exchange of India, among the different sectoral indices highest growth has been registered in CNX-IT with a growth rate of 28.8% which is followed by CNX MNC with a growth rate of 26.1%, CNX Pharma Index with a growth rate of 25.4% and CNX FMCG Index at a growth rate of 18%. FMCG index is the index with the fourth highest index growth rate index in NSE. The present study is based on the data collected from the BSE so let us study the trends in BSE FMCG Index.

FMCG index has shown a significant and remarkable growth in its values during the period of past 8 years (2008-2016). The trends in the FMCG index have been demonstrated with the help of table no. 1 and figure no. 1 which are shown below:

Table 1: Trends in BSE FMCG Index

Year	S&P BSE FMCG (Values)	Variation (%)
2008-09	2,036	17.1
2009-10	2,831	39.1
2010-11	3,596	27
2011-12	4,493	24.9
2012-13	5,919	3
2013-14	6,971	17.8
2014-15	7,773	11.5
2015-16	7,541	-3

***Source*:** Various annual reports of SEBI

Table 1 depicts the date related to the trends in the BSE FMCG Index during the past 8 years (2008-2016). As per the table the value of the index in the year 2008-09 is 2,039 and it has shown a variation of 17.1% from the value of the past year 2007-08. Year 2009-10 has shown a very significant and the highest positive variation of 39.1% that signifies happening of the few of the major events in the FMCG markets of India. Year 2010-11 and 2011-12 shows the second and the third highest growths and variations at a rate of 27% and 24.9% with their respective values of 3,596 and 4,493. Year 2012-13 has depicted a lowest positive variation of 3% and 2013-14 seems to cover up the market again with a positive growth rate of 17.8%. Year 2014-15 and 2015-16 again signifies a slum in the market with reduction in the growth rate to 11.5% in the year 2014-15 and a negative annual growth of 3%. Such variations in the FMCG index signifies the happening of major events in the FMCG market and opens the door for the speculative transactions in the market. Therefore it is very important to know that how these variations are exactly related to prices of the share of major constitutesnts of the FMCG index. The subject will be discussed in the next portions of the paper.

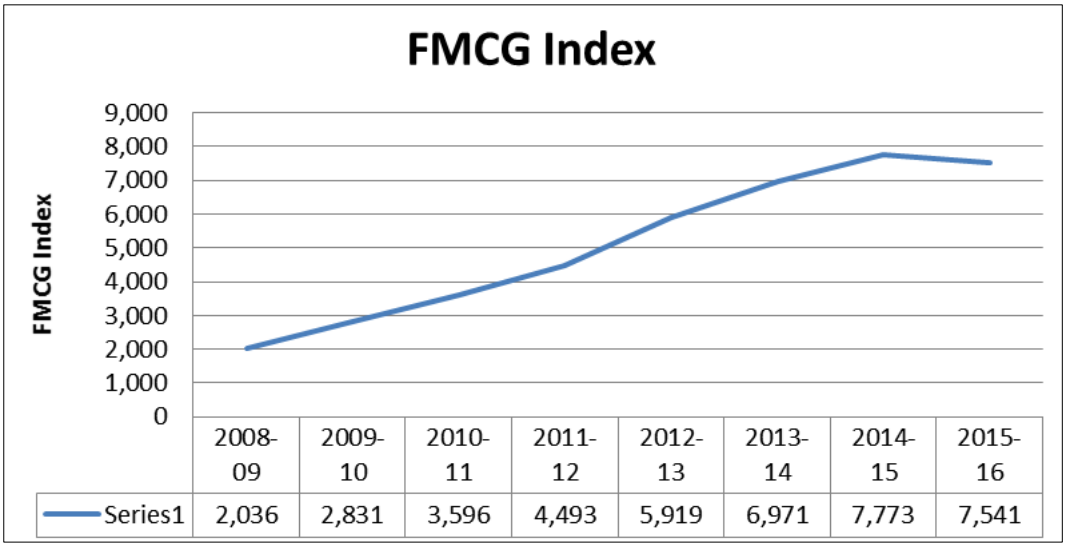

Fig 1: Trends in FMCG Index

Figure: 1 shows the changes in the FMCG Index during the period of 8 years from 2008-16. It shows an overall straight line growth in the values of index. In the year 2008-09 the value of the index was 2,036 and in the year 2015-16 it reached to the level of 7,541. Value in the year 2015-16 is 370.38% if the initial value of the period or the value in the year 2008-09. It shows a very significant growth in the FMCG index of BSE.

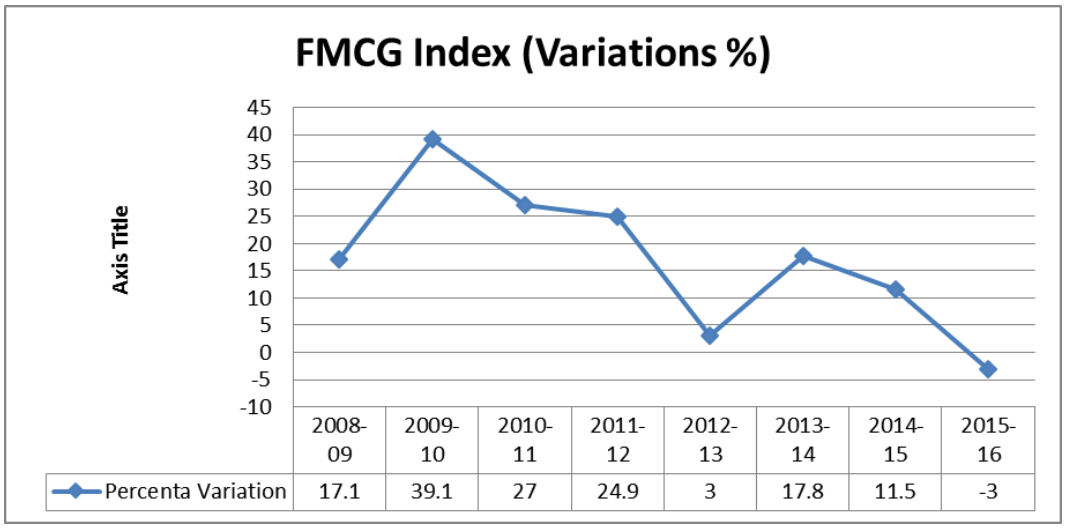

Fig 2: Variations (in percentage)

Figure: 2 shows the variations in the FMCG Index during the period of 8 years from 2008-16. It shows an upward and downward variation in the values of index. In the year 2008-09 the variation of the index was 17.1 and in the year 2015-16 it reached to the level of -3.

Literature Review

Provide an empirical analysis to the risk factors across the sectoral indices and CNX Nifty index. The inter-relationship among sectoral index received a substantial attention that One-way ANOVA within the groups has used to identify is there any differences in risk by taking various time intervals and the results show that there is a significant difference of risk. Patjoshi (2016) [4] examine the correlation four major Banking stock market indexes & returns. The Sensex returns and Banking stock returns have been used to find out the comparative risk return analysis between Sensex returns with that of sample banking stock returns. Nagarajan & Prabhakaran (2013) [3] examined the effect of selected FMCG companies share price movement on Nifty Index selected FMCG companies share recorded moderate risk and a moderate gain / loss to the investors during the study period. Analyze the changing risk profile and stability of beta for different sectors of the Indian economy over last one decade. The study suggested that the beta values are not stable over a period of time so one must be very careful while measuring risk with the help of beta and in order to minimize the error one should keep on updating the beta for the purpose of doing analysis and estimating cost of equity and capital. The results of this study strongly suggest that there exists the evidence of short term contrarian effect in sectors like Auto, Banking, Energy, Media and Metals sectors. Presence of contrarian effect can bring volatility in stock prices and an uptrend can become a down-trend within a short span of time. Discussed about the higher

and lower volatility of sectors than the Nifty and also found the realty sector has witnessed higher volatility than any sector and the reasons for taht have been discussed.

Objectives of the study

The research has been conducted for the following objectives:

1. To observe the trends in the FMCG sector in India;
2. To check out significane of correlation between the FMCG companies share price performance and FMCG index performance;
3. To build up the investment strategies in the FMCG index;
4. To predict FMCG company returns on the basis of FMCG index.

Sample plan of the study

The study is based on the equity shares of 38 companies of the FMCG sector. All 38 companies are the constitutents of FMCG index of BSE. The closing prices of equity shares, at the end of every month, have been used for the purpose of study for a period of five years (20012-17).

Data Collection

Secondary data has been used for the purpose of study. The data has been collected from various sources such as: official website of BSE (www.bseindia.com), official website of SEBI (www.sebi.gov.in) through various annual reports of SEBI working papers of SEBI and the Handbook of statistics of SEBI, official website of Brand Equity Foundation of India (www.ibef.org) through various periodic and annual reports.

The study is mainly based on the secondary data. The share price and index value data is collected from the official website of Bombay Stock Exchange (BSE). The data consist of closing price of the shares of selected 38 FMCG companies and FMCG Index on the last of date of every month during the period of study. The study covers 38 FMCG companies' share price movement and BSE FMCG Sectoral Index for the period of 5 years from January 2012 to December 2016.

Research Methodology

Pattern of Analysis

The present study is an analytical in nature. Following tools and their respective equations has been used to compute the security Raw return, Average monthly return on security (During the period of five years), Active return on security, Market adjusted abnormal return, Co-efficient of Determination and Beta:

Raw Return on Security

Ri= (Pi/Po)-1

Ri is the raw return on the security, Pi is the closing price of the share at the end of the period (month) and P0 is the closing price of the security in the beginning of the period.

- Use of log return has been made to sort out the problem of normality of distribution;

Return on Market Index

Rm= (Pm1-P0)-1

Rm denotes the return on market indes, Pm1 denotes the closing price of the FMCG index at the end of period and P0 indicates the closing price of the FMCG index in the beginning of the period.

Active return on Security

Active Return = Average Raw return on security – Beta Coefficient * Average raw return on FMCG index;

Market Adjusted Abnornal Return (MAAR)

MAAR= Rm-Ri

Market adjusted abnormal return in calculated as return on the stock minus the return on the market index.

Analysis and Discussion

The study has used various tools for analysis of the FCMG sector companies and for the purpose of decision making such as Pearson's coefficccient of correlation to measure the relationship of FMCG index with the constituent companies, coefficient of determination to explain thevalue of the constituesnt companies with respect to the FMCG index, use of the active returns has been made to know about the level of consistency in the returns of the FMCG companies, use of market adjusted abnormal return has been made to find out the companies earning returns more than that of FMCG index and monthly average return has been used as the simplest tool to compare the constituent companies on the basis of raw average return. Use of log return has been made to sort out the problem of normality in the return and the price date of the respective companies and the market index. The first tool is co-efficient of correlation that's been used to find out the two way responsiveness and the relationship between the every constituent of the FMCG index with that of FMCG index. The detailed explanation of correlation between the FMCG index and the constituent companies has been in the table 2.

Table 2: Coefficient of Correlation: FMCG Index and Constituent Companies

Company	Highest	Company	Lowest
Triveni	0.422237397	Dabur	0.016416439
BBTC	0.391133423	Nestleind	0.015064463
Ruchi Soya	0.386131133	Hinto dunilvr	0.01219559
Radico	0.341129325	ITC	0.012020413
PGHH	0.326671484	Tata Global	0.011874062

As we discussed above that the analysis is based on the data of the closing price of the various FMCG companies and their relationship with the corresponding Index (FMCG Index). Table 2 given the relationship between FMCG index and FMCG companies share in the stock market by computing Karl Pearson's correlation coefficients. It is an attempt to find out wheather there is a significant correlation among the FMCG companies and the respective index or not. FMCG monthly closing share price and index closing value were used as the two variables. The table shows the top 5 companies with the highest correlation coefficient and companies with the lowest coefficient. Triveni Company has the highest and the Tata Global has the lowest correlation coefficient.

Active Returns on Constituesnt Companies: Active return on the constituesnt companies has been computed with respect to the FMCG index. Active returns have been considered as the measure of the consistency in the return of the companies and the measure of the reliability upon the investnment in the respective company. If active returns on any companies are good one must invest in the companies and if active returns are not even positive, the companies should not be chosen to invest

in such case. The explanation of the active returns of the companies has been given in the table 3.

Table 3: Companies with Active Return (Ln alpha)

Company	Highest	Company	Lowest
Eveready	0.025	Essdee	-0.033
Brittania	0.024	Ruchi Soya	-0.030
PGHH	0.021	TI	-0.029
Avanti	0.015	Bajaj Hind	-0.024
Lincpen	0.015	Vimal Oil Food	-0.021

Multiply by hundred to compute returns in percentage.

Table 3 show the intercept related to the FMCG setor companies which measures the active return of the companies. This table clearly explains the intercept or the active return of the companies that the active return of Brittania is 2.41 and Eveready is 2.50, which were much higher than other companies. It indicates return of these five companies were more than the other companies with change in the index of FMCG taken for the study time period. Essdee, Ruchi Soya, TI, Bajaj Hind, Vimal Oil Food has the lowest % value (active return) in tha above table. Therefore the companies must not be chosen where active returns of the companies are negative.

Monthly Average Returns: Monthly average returns on the companies have been used as the simplest tool for the purpose of comparison between the returns of the companies without any involvement of the FMCG index. Higher the average monthly returns of the companies during the total period of the study Means Company is good enough and gives more consideration to the investor. The details of the five highest return and the five lowest return companies has been given in the table 4.

Table 4: Monthly Average Return (Ln MAR)

Company	Highest	Company	Lowest
Eveready	0.03509	Vimal Oil Food	-0.006325496
Brittania	0.031419	Bajaj Hind	-0.015299912
Water Base	0.02921	TI	-0.019051085
Avanti	0.026935	Essdee	-0.019881119
Lincpen	0.026734	Ruchi Soya	-0.027296441

Market Adjusted Abnormal Return: market adjusted abnormal return is a tool which signifies that how much return a company has earned greater than the market Index or the FMCG index during the perod of study. If the any company is earning more than that of the market index then it is suggested to invest in the company and if company is earning a negative MAAR means company is not earning even equal to the market index. The details of the companies with their respective returns have been given in the table 5.

Table 5: Market Adjusted Abnormal Return (MAAR) of the Securities

Securities with the positive MAAR	19
Securities with negative MAAR	19
Total	38

Table 4 given the positive and the negative values that show the monthly average return of the various FMCG companies within the time period of more than the 5 years. Eveready has the highest value (0.03509) in the comparision of the other companies and Ruchi Soya has the negative value (-0.02729) in the given value. Table 5 shows the market adjusted abnormal return of the securities.

Conclusion and Findings

Investor must consider all the factor related to the the study while making their investment strategy and to drive for the investment in the FMCG sector, FMCG is the fourth largest sector in the Indian capital market and the Indian retail sector as well the companies like Britania with the high coefficient of correlation and the coefficient of determination should be considered for the prupose of investment and the companies like Ruchi Soya with the positive correlation and determination but the negative active return and MAAR should be avoided. Investment must be made in the capital markets witb due care

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