



A Study on Relationship between FMCG Sector and Nifty Fifty

Dhruvi Patel¹, Dr. Manisha Surti²

¹ Student, ² Assistant Professor

B.V. Patel Institute of Management,

Uka Tarsadia University, Mahuva, Bardoli, Gujarat, India

ABSTRACT

In the volatile market, the investors are searching for effective investment options with safety, lower risk and high return. The study of FMCG sector performance gives the insight for the investing avenues with the future directional movement in the market. The prime objective of the study was to measure the relationship between the performance of FMCG sector and NSE Index and secondary objectives are to correlate the directional movement of FMCG sector index and NSE Index and to study the impact of NSE Index on FMCG sector. The study used secondary source of data for Correlation and Causal Research Design. The data i.e. indices and closing share prices of selected four companies would be collected during the time frame of 10 years from 1st April, 2008 to 31st March, 2018 on monthly basis. Correlation, Regression and Anova has been used for the data analysis. The study concludes that there exists a positive strong relationship between FMCG sector and Nifty 50. Also, the market performance is improving over the period of time. The Nifty 50 index is indulged to up rise with increase in Nifty FMCG as well as peak reaching performance of selected FMCG companies. The comparative analysis concludes that P&G has outperformed up to a large extent in the market follower by HUL. This stretches the market indices to come up over the period of time.

KEYWORDS

NSE Index, FMCG sector and Nifty Fifty

INTRODUCTION

Investment in the equity is a very volatile and investors feel it is a very risky market to invest as there are ups and downs in the equity market the study analysis of FMCG sector performance gives the insight for the investing avenues with the future directional movement in the market. The NIFTY FMCG Index is designed to reflect the behaviour and performance of FMCGs (Fast Moving Consumer Goods) which are non-durable, mass consumption products and available off the shelf. The NIFTY FMCG Index comprises of 15 stocks from FMCG sector listed on the National Stock Exchange (NSE). NIFTY FMCG Index is computed using free float market

capitalization method, wherein the level of the index reflects the total free float market value of all the stocks in the index relative to particular base market capitalization value. NIFTY FMCG Index can be used for a variety of purposes such as benchmarking of fund portfolios, launching of index funds, ETFs and structured products.

Literature Review

Dr. Robin Thomas and Dr. Shailesh Singh Thakur (2019) accomplished “A Study of S&P CNX Nifty Fifty and Its Performance Comparison with Selected NSE Sectoral Indices.” The purpose of the research was to study the correlation between NIFTY and Sectoral indices and to study the correlation among the Sectoral Indices. The indexes used to study are NIFTY the benchmark index of NSE and 9 other selected sectoral indexes during 1st January 2018 to 31st December 2018. Correlation Analysis has been applied to analyze the correlation among the selected indices. It can be concluded that the returns of the Nifty are positively correlated with other sectoral indices the correlation ranges between 7% on the lower side and up to 88% on the higher side. On the other hand sectoral indices returns are also positively correlated and ranges from 7% to 95%.

Shubhangi Anil Patil and Viraj Vijay Jadhav (2019) prepared a research report on “A Study on Equity Research of Selected FMCG Companies Listed on NSE.” The objectives of the study were to study the share price fluctuations of Selected FMCG companies in NSE (National Stock Exchange), to analyze the risk involved in the share prices of selected FMCG companies and to suggest a suitable company from selected FMCG companies in NSE to add in the portfolio of investors. The study covers the five year period of study starting from 2013 to 2018. Various tools like correlation, standard deviation, beta, and kurtosis have been used. The study concluded that Marico Ltd. Company is very well preferred in selected FMCG’s companies for the study. Marico Ltd. return is overall high and the risk involved is also moderate in comparison to the other companies.

Sahil Narang and Parminder Singh (2017) prepared a research paper on “Trends in FMCG sector and building up of investment strategies in FMCG sector.” The purpose of the study were to observe the trends in the FMCG sector in India, to check out significance of correlation between the FMCG companies share price performance and FMCG index performance, to build up the investment strategies in the FMCG index and to predict FMCG company returns on the basis of FMCG index. Share prices of the FMCG companies during the period of 2012-17 (5 years) have been taken for the purpose of study. Coefficient of Determination and Beta has been used for the data analysis. The analysis draws the conclusion that the Indian retail sector as well the companies like Britannia with the high coefficient of correlation and the coefficient of determination should be considered for the purpose of investment and the companies like Ruchi Soya with the positive correlation and determination but the negative active return and MAAR should be avoided.

Shubham Bansal, Gagandeep Singh (2017) studied on “Fundamental Analysis of Selected FMCG Companies in India”. The main objective of the study was to examine the fundamental analysis of selected FMCG companies in India. The study was based on the secondary data, which was collected from annual reports of selected FMCG Companies from the period of 2011-12 to 2015-16. The Descriptive Statistics and One-way ANOVA analysis have been used for analyzing the collected data. It was concluded that there is a significant difference between NPM, EPS, ROCE, DPS and DPO of Dabur, Emami, P&G, Colgate, and HUL because they all have significant value is less than 0.05 thus rejected the null hypothesis in all cases.

Dr. G. Sudarsana Reddy (2013) has done a research on “Analysis of Selected FMCG Companies Stock Performance with Market.” The objectives of the study were to evaluate the performance of three selected FMCG stocks, to comparatively analyse the three FMCG stocks with Nifty, to find the correlation between the three FMCG stock Market indexes and to study the impact of external factors on FMCG stocks. The researcher used analytical research method. Secondary data of market returns over the period of one year from 1st January, 2010 to 31st December, 2010 were used. The data was analysed with the help of mean, beta, alpha, standard deviation and variance and co-variance. The study found that the shares of Britannia, HUL and ITC companies

are favourable during the study period while NSE stock index is performing better compared to the company stock index.

RESEARCH METHODOLOGY

The prime objective of the study was to measure the relationship between the performance of FMCG sector and NSE Index drawing secondary objectives to correlate the directional movement of FMCG sector index and NSE Index, to study the impact of NSE Index on FMCG sector and to analyze the relation of selected FMCG companies with the NSE Index. The secondary source of data was used to collect the data from several sources for the time frame of 10 years from 1st April, 2008 to 31st March, 2018 on monthly basis. The companies selected for the study were Procter & Gamble Healthcare and Hygiene, Hindustan Unilever Limited, India Tobacco Company Ltd. and Godrej Consumer Products with the indices of NIFTY FMCG and NIFTY FIFTY. Correlation, Regression and Anova were the tools for data analysis.

DATA ANALYSIS

CORRELATION ANALYSIS:

Indices Correlation

Table No. 1.1: Indices Correlation

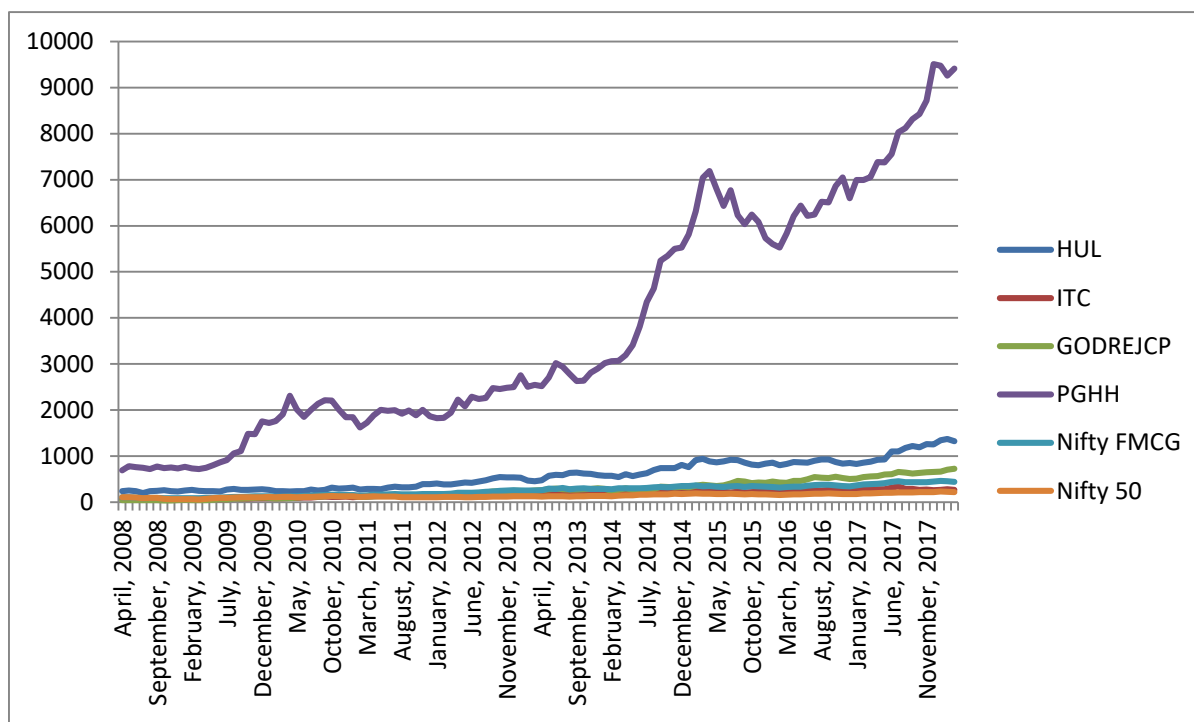
	Nifty FMCG
<i>Nifty 50</i>	0.944647203

Interpretation:

Nifty FMCG index and Nifty 50 index has a strong positive correlation indicating that when one relationship increases, other one would increase and vice versa.

Company Price Correlation with Nifty 50 and Nifty FMCG

Table No. 1.2: Company Price Correlation with Nifty50 and Nifty FMCG



Interpretation:

Over here, the closing prices of Hindustan Unilever Limited, Godrej Consumer Products and Procter and Gamble Consumer Products have a strong positive correlation with the Nifty 50 index, while that of India Tobacco Company Ltd. Comparatively has a slightly weak, but a positive correlation with Nifty 50. This would vary the proportionate changes of prices with the NSE index Nifty 50 accordingly. Also, the closing prices of the selected companies have almost a strong positive correlation with the Nifty FMCG index over the decided period of ten years. It means that the directional movements would be the same for the share prices as well as the Nifty FMCG index with a strong proportionate.

REGRESSION ANALYSIS:**Regression Analysis of Nifty FMCG with Nifty 50****Table No.: 1.4 Regression Analysis of Nifty FMCG with Nifty 50**

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.944647203	0.892358339	0.891446122	37.04670603	120

ANOVA**Table No.: 1.5 Anova analyses of Nifty FMCG and Nifty 50**

	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1.00	1342579.78	1342579.78	978.23	0.00
Residual	118.00	161950.09	1372.46		
Total	119.00	1504529.87			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-106.24	11.85	-8.96	0.00	-129.71	-82.76	-129.71	-82.76
Nifty 50	2.58	0.08	31.28	0.00	2.42	2.75	2.42	2.75

Interpretation:

The Nifty FMCG index has almost a strong positive correlation with the NSE index of Nifty 50.

R Square is 0.89 (rounded to 2 digits), which is near to good one. It means that 89% of our values fit the regression analysis model. In other words, 89% of the Nifty FMCG index is explained by the NSE index Nifty 50. R Square of 89% can be considered a fit to an extent.

Table No. 1.6: Company wise Regression Analysis Summary Table

Sr. No.	Independent Variable	Dependent Variable	R – Square	Intercept	T – stat	P - value	Inference
1.	Nifty 50	P&G	0.937277567	-4534.44	41.99	8.45	Impact
2.	Nifty 50	HUL	0.886088972	-401.49	30.30	0.00	Impact
3.	Nifty 50	ITC	0.791108506	-42.58	21.14	0.00	Impact
4.	Nifty 50	Godrej	0.887043334	-325.55	30.44	0.00	Impact
5.	Nifty FMCG	P&G	0.88464734	-1579.69	30.08	0.00	Impact
6.	Nifty FMCG	HUL	0.932167393	-86.49	40.27	0.00	Impact
7.	Nifty FMCG	ITC	0.956924915	16.79	51.20	0.00	Impact
8.	Nifty FMCG	Godrej	0.928939401	-132.26	39.28	0.00	Impact

*The above analysis summary is based on the same analysis as done for Nifty FMCG and Nifty 50

Interpretations:

Company wise Regression Analysis with Nifty 50:

➤ Procter & Gamble Healthcare and Hygiene

The closing price value of P&G Healthcare and Hygiene has a strong positive correlation with the NSE index of Nifty 50. R Square is 0.94 (rounded to 2 digits), which is fairly good. It means that 94% of our values fit the regression analysis model. In other words, 94% of the P&G Healthcare and Hygiene closing stock prices are explained by the NSE index Nifty 50. R Square of 94% can be considered near to a good fit.

➤ Hindustan Unilever Limited

The closing price value of Hindustan Unilever Ltd. has a strong positive correlation with the NSE index of Nifty 50. R Square is 0.89 (rounded to 2 digits), which is an average one. It means that 89% of our values fit the regression analysis model. In other words, 89% of the HUL closing stock prices are explained by the NSE index Nifty 50. R Square of 89% can be considered to an average fit.

➤ **India Tobacco Company Ltd.**

The closing price value of India Tobacco Company Ltd. has a positive correlation with the NSE index of Nifty 50. R Square is 0.79 (rounded to 2 digits), which is an average one. It means that 79% of our values fit the regression analysis model. In other words, 79% of the ITC closing stock prices are explained by the NSE index Nifty 50. R Square of 79% can be considered as an average fit.

➤ **Godrej Consumer Products**

The closing price value of Godrej Consumer Products has near to strong positive correlation with the NSE index of Nifty 50. R Square is 0.89 (rounded to 2 digits), which is near to good one. It means that 89% of our values fit the regression analysis model. In other words, 89% of the Godrej Consumer Products closing stock prices are explained by the NSE index Nifty 50. R Square of 89% can be considered a fit to an extent.

Company wise Regression Analysis with Nifty FMCG:

➤ **Procter & Gamble Healthcare and Hygiene**

The closing price value of P&G Healthcare and Hygiene has a strong positive correlation with the Nifty FMCG Index. R Square is 0.88 (rounded to 2 digits), which is an average one. It means that 88% of our values fit the regression analysis model. In other words, 88% of the P&G Healthcare and Hygiene closing stock prices are explained by the Nifty FMCG Index. R Square of 88% can be considered as an average fit.

➤ **Hindustan Unilever Limited**

The closing price value of Hindustan Unilever Ltd. has a strong positive correlation with the Nifty FMCG index. R Square is 0.93 (rounded to 2 digits), which is an average one. It means that 93% of our values fit the regression analysis model. In other words, 93% of the HUL closing stock prices are explained by the Nifty FMCG index. R Square of 93% can be considered a good fit.

➤ **India Tobacco Company Ltd.**

The closing price value of India Tobacco Company Ltd. has a positive correlation with the NSE index of Nifty FMCG. R Square is 0.96 (rounded to 2 digits), which is a good one. It means that 96% of our values fit the regression analysis model. In other words, 96% of the ITC closing stock prices are explained by the Nifty FMCG index. R Square of 96% can be considered a good fit.

➤ **Godrej Consumer Products**

The closing price value of Godrej Consumer Products has near to strong positive correlation with the NSE index of Nifty FMCG index. R Square is 0.93 (rounded to 2 digits), which is a good one. It means that 93% of our values fit the regression analysis model. In other words, 93% of the Godrej Consumer Products closing stock prices are explained by the NSE index Nifty 50. R Square of 93% can be considered a good fit.

FINDINGS

From the study it can be found that the dependent variables have a strong positive correlation with the independent variable. It means that the change in Nifty 50 index would give the similar directional proportionate change for the Nifty FMCG index and the price values of the selected FMCG companies. As per the anova analysis, the Significance F value is less than 0.05 for all study analysis output, so the applied model is feasible for the study.

It can be observed that after July 2009, the Nifty FMCG has outperformed NSE index Nifty 50. Comparing the companies with NSE indices, it could be found that the share prices of P&G has outperformed to a large extent compared to other peer FMCG companies as well as compared to Nifty 50 and Nifty FMCG indices. Altogether, there is an upward movement in the stock market performance over the period of time. The individual companies outperform the selected NSE indices going with the same trend in upward direction where P&G performs at the top followed by HUL.

CONCLUSION

The study concludes that a strong positive relationship exist between FMCG sector and Nifty 50. Also, the market performance is improving over the period of time. The Nifty 50 index is indulged to uprise with increase in Nifty FMCG as well as peak reaching performance of selected FMCG companies. The comparative analysis concludes that P&G has outperformed up to a large extent in the market follower by HUL. This stretches the market indices to come up over the period of time. Overall, the purpose of the study to check the relationship between the FMCG sector performance and Nifty 50 has been fulfilled with a positive outcome.

REFERENCES

Referred Books

- (Kothari, 2016) *Research Methodology*, KB Center
- Pandian P. (2007) *Security Analysis and Portfolio Management*, Vikas Publishing house private limited, pp. 257 – 276
- Benjamin Graham(1949) *the intelligent investor*.pp116-117SSS

Referred Articles

- Thomas R. & Singh S. (2019). A Study of S&P CNX Nifty Fifty and Its Performance Comparison with Selected NSE Sectoral Indices.
- Patil, S. A., & Jadhav, V. V. (2019). A Study on Equity Research of Selected FMCG Companies Listed on NSE. *Management*.
- Narang S. & Singh P. (2017). Trends in FMCG sector and building up of investment strategies in FMCG sector.
- Bansal S. & Singh G. (2017). Fundamental Analysis of Selected FMCG Companies in India.
- Reddy G. S. (2013). Analysis of Selected FMCG Companies Stock Performance with Market.

Referred Websites

- www.niftyindices.com
- www.ablebits.com
- www.statisticshowto.datasciencecentral.com
- www.researchgate.net
- www.real-statistics.com
- www.excel-easy.com
- www.academia.edu
- www.ratestar.in
- www.scholar.google.co.in
- www.triumphcapital.in
- www.analyticsvidhya.com
- www.screener.in
- www.moneycontrol.com
- www.economicstimes.indiatimes.com
- www.traderscockpit.com

