International Journal of Commerce and Management Research
ISSN: 2455-1627
Impact Factor: RJIF 5.22
www.managejournal.com
Volume 4; Issue 6; November 2018; Page No. 103-105

Study on stock volatility of rural fast moving consumer goods market with reference to NSE, India

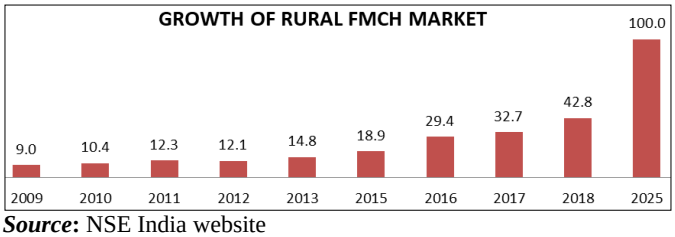
G Dinesh Babu[1], Dr. P Jeyabharathy[2]
[1] Research Scholar, Department of Management, Madurai Kamaraj University, Madurai, Tamil Nadu, India
[2] Assistant Professor, Department of Youth Welfare Studies, Madurai Kamaraj University, Madurai, Tamil Nadu, India

Abstract
The Investment in rural network companies is a volatile market in the present situation. The companies with rural focus have set up a superior earnings growth for the past two years. The estimated growth of Fast Moving Consumer Goods sector is US $100 billion by the year 2025. The fast moving consumer goods is considered to be the safe set of investment. But there are few instances which influence the stock price to fall down even though the financial performance is in good position. The study tries to know the movement of stock price and the prediction for the short period. The scope of the study has been limited to the select two Fast Moving Consumer Goods stocks – Hindustan Unilever Limited (HUL), Indian Tobacco Company (ITC). The study covers the period of one year from 1Novemebr 2017 to 31 October 2018. The study uses analytical research method. The data collected was analyzed with various tools, Log Return, Standard Deviation, Augmented Dickey Fuller Test, VAR test, and correlation. The Study found that there is positive relationship between the selected companies with the market index. As per the study period the selected companies return is less volatile. The present study can be used for taking investment decision. But there are few other factors to be considered like Fundamental analysis, Technical analysis are very important for taking better investment decision.

Keywords: index, return, unit root

1. Introduction
The companies with rural focus have set up a superior earnings growth. The fast moving consumer goods sector in rural and semi urban is estimated to cross US$100 billion by the year 2025, In future the rural consumers will strive to purchase the branded products with good quality. The Businesses in India are optimistic about the growth of country's rural consumers market. It is expected to grow faster than urban consumer markets. As per the National Stock Exchange report the rural based fast moving consumer goods have touched new 52 days week high.

Growth of rural FMCG market



***Source*:** NSE India website

Fig 1

2. Review of Literature
William and Vimala (2015) examined the volatility of equity share price of five select private banks listed in the National Stock Exchange. Considering that banks play an important role in the economy of India, an attempt was made to analyze the market volatility of the selected banks by using mean, standard deviation and beta values using the opening and closing prices. As per the analysis the volatility of the closing prices was similar for all the five banks selected for the study. Ayodele A. Adebiyi, Adermi O. Adewumi, Charles K. Ayo (2014) [4] Volume 15, Nov 4, 16th International Conference on Computer Modeling & Simulation, Stock Price prediction using ARIMA model. The authors have done a research on stock price prediction for Nokia stock index using ARIMA model. The author have examined with different models and revealed that ARIMA model is the best for short term prediction and can compete with various techniques used for stock price prediction. Rakesh HM (2014) examined the Volatility of FMCG and Auto indices of National Stock Exchange using the Mean difference in FMCG and Auto index and to see the relationship. The period for the study is 2012-2014. The CNX Auto index has standard deviation and nifty standard deviation is 611, there is a wide range of risk deviation in sectors. The result revealed out of T- Test is there is a difference in mean value of these indices. K. Hemalatha & Dr. V. R. Nedunchezian (2014) tested weak form of efficiency and volatility of FMCG sector of Indian stock market for the period of 2008-2013. To test the market efficiency the study used both parametric and non-parametric test like Run test, Augmented Dickey Fuller test, E- Garch. The study revealed that the Godrej, Britannia, and GlaxoSmithKline have random distribution in earning return. E-Garch analyses shows the there is no effect in stock price if new stocks are been introduced because the coefficient value of the Garch is lesser then zero. Barndorff – Nielsen (2003), Study on financial volatility using Econometric time series, stated that financial volatility is a latent factor and hence cannot be directly observable, making it more difficult to predict stock prices

3. Need of the study

Investment in rural network companies plays a vital role in the present market situation because the shares of companies are dependent on the rural economy, which focused on good rise in this present monsoon forecast. The study focused on the concept of volatility wherein the investors can have an idea before making an investment.

4. Statement of the problem

Investment in rural focused market is more volatile and investor feels it is a very risky market to invest as there are ups and down in the market. The Fast moving consumer goods companies are expecting an improvement in the sentiment and a positive impact on the demand growth in rural areas. This research study is mainly focused on the stock price volatility. This would be useful for the investors to anticipate the market move to find out the best portfolio for their investment.

5. Objectives

- To evaluate the performance of select FMCG stocks
- To evaluate the correlation of select FMCG stocks with Nifty FMCG Index

6. Hypothesis

- Augmented Dickey- Fuller test: Ho: The selected companies are not stationery.
- Correlation: Ho: There is no significant relationship between NIFTY FMCG and selected shares.
- VAR test: The selected companies are normally distributed.

7. Research methodology

The following methodology has been framed and followed in conducting the research.

Table 1

Research Design	Sampling Technique	Sample Selection	Tools and Techniques
Descriptive Research	Purposive sampling	Secondary Data	Software: Gretel
The descriptive method was used to study the stock price movement of two Rural focused FMCG companies listed in National Stock Exchange	The sampling method used in this research is purposive sampling.	The One year data from 1Novemebr 2017 to 31 October 2018. The companies selected for the study is listed in National Stock Exchange List of companies were selected from Rural Focused companies	Techniques: Return Augmented ickey-Fuller Test Correlation VAR Test

8. Results and Discussion

8.1 Descriptive Statistics

Table 1: Descriptive Statistics of Daily Return of ITC Company Limited and HUL Company Limited

Mean	-0.00067	-0.000179	Probability	0.00000	0.03846
Standard Deviation	0.002293	0.001789	Kurtosis	4.334343	3.751713
Skewness	-0.52477	0.132895	N	246	246

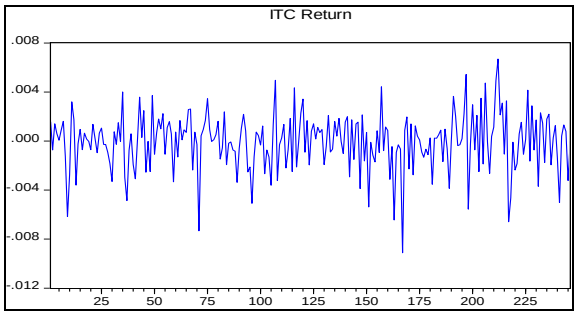


Fig 2

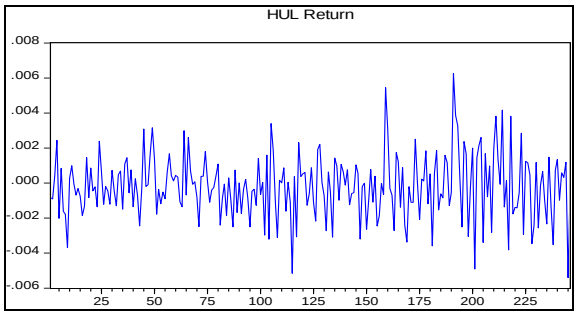


Fig 3

8.2 Augmented Dickey Fuller Test

Table 2: Augmented Dickey Fuller Test

S. No	Company Name	T- Statistic	P- Value
1	Indian Tobacco Company	-16.32503	0.0000
2	Hindustan Unilever Limited	-16.60201	0.0000

The critical value at 1%, 5%, and 10% for Augmented Dickey Fuller Test are -3.43, -2.86, -2.57 respectively. Table – 2 has given the test critical value for t- statistics by Augmented Dickey Fuller test for the volatility series. The P-value is less than 5% levels of significance therefore reject the null hypothesis. It is found that the selected companies are stationery at all the three level of significance.

8.3 Correlation

The correlation is the most static term used in finance industry to measure the degree of two securities. These correlation techniques are used in advanced portfolio management. The correlation can be positive or negative, whereas positive correlation is one security moves up or down the other security also moves in the same direction.

Table 3: Correlation of Selected Companies

List of Companies	R-Value	Sig- Two Tailed	Result
Indian Tobacco Company	0.8608	0.00	Significant at 0.05 level
Hindustan Unilever Limited	0.6993	0.00	Significant at 0.05 level

***Source*:** There is a positive correlation and significant relationship between NIFTY FMCG and ITC and HUL for the period of one year.

8.4 VAR Test

VAR (Value at Risk) it is called as "new science of risk management" VAR statistics has three components: a time period, confidence level, and loss percentage. There are three methods of evaluating the VAR

- Historical Method
- The Variance-Covariance method
- The Monte Carlo Simulation

The present study was analyzed using the Historical method for calculating the risk of daily return. Histogram is that which compares the frequency of return.

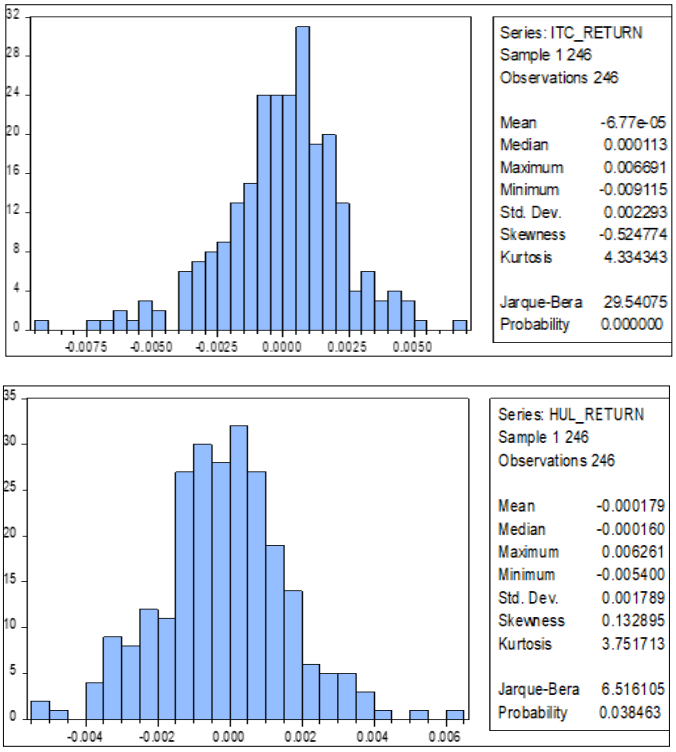


Fig 4: Histogram of ITC and HUL

This view displays a histogram of the residual, including the Jarque Bera statistics for testing normality. The Jarque Bera test is goodness of fit where the sample data hve the skewness and kurtosis matching a normal distribution. The present study found that the probability value is 0.0000 and 0.038 using the Histogram Normality test. The results reveal that as the P-value is less than 5% level of significance, the null hypothesis is rejected. Hence it can be concluded that the data selected for the study relating to the return of ITC and HUL is normally distributed. This also fulfils the assumptions of normality of CLRM Model.

9. Findings

1. The Augmented Dickey- Fuller test has given to test the stationery of selected companies. The companies are stationery at 1%, 5%, 10%.
2. Correlation: There is a positive correlation and significant relationship between NIFTY FMCG and ITC and HUL for the period of one year.
3. VAR Test: The results reveal that as the P-value is less than 5% level of significance, the null hypothesis is rejected. Hence it can be concluded that the data selected for the study relating to the return of ITC and HUL is normally distributed.

10. Suggestions

In early days the participation of retail investors in rural market was very low in Indian Equity Market. The hedgers and arbitragers play a vital role in the market. The SEBI should take the effective steps with the hands of government to improve the effectiveness of National Stock Exchange. The study is conducted to identify the move of selected companies with the market index. The volatility is more important for policy implications. The SEBI can improve their reforms of National Stock Exchange to educate the investor in terms of risk involved, return and fluctuation in the market.

11. Conclusion

The study conducted by the researcher has taken only the rural focused Fast moving consumer goods companies. The present scenario of demand for rural market is expected to continue clocking double –digit growth in sales. Among the Indian FMCG majors, Hindustan Unilever Limited and Indian Tobacco Company have highest contribution of 45% over the rural segment. The study revealed that the companies have moved along with the FMCG index. These techniques can be used by investors for identifying the relationship and risk prevailing in the market.

12. References

1. Abdalla S, Suliman Z. Modelling Stock Returns Volatility: Empirical Evidence from Saudi Stock Exchange, International Research Journal of Finance and Economics. 2012; 85:166-179.
2. Alberg D, Shalit H, Yosel R. Estimating stock market volatility using asymmetric GARCH models, Applied Financial Economics. 2008; 18:1201-1208.
3. Al-Zeaud Ali H. Modeling and forecasting volatility using ARIMA Model, European Journal of Economics, Finance and Administrative Sciences. 2011; 35:109-126.
4. Charles A, Simon K, Daniel A. Study on Effect of Exchange Rate Volatility with reference to Ghana Stock Exchange,' African Journal of Accounting, Economic, Finance and Banking Research. 2008; 3(3):28-47.
5. Chris Brooks. Introductory Econometrics for Finance, 3rd edition, Cambridge University Press, United Kingdom, 2008.
6. NSE Nifty 50 and Selected Companies Daily data. Available from <https://www.nseindia.com/ products/ content/equities/equities/eq_security.html>