An Empirical Research on FMCG Sector

Chanchal Chauhan, Hem Shweta Rathore, Satish Kumar Matta

Abstract—Equity analysis is simply the research or study of stocks for the purpose of investment. Every investor wants more and more profit on their investment. For this share of profit he always tries to select right security and portfolio for investment. In general term, more profit is directly related to more risk. FMCG sector played a vital role in economic development of country. The relationship between risk and return can easily be measured by some statistical tools like standard deviation, beta, correlation and variance.

Keywords—Equity Analysis, Portfolio, Economic Development, Risk and Return.

I. INTRODUCTION

Fast-moving consumer goods sector is the 4th largest sector in the Indian economy. FMCG sector revenues graph reached Rs.3.4 lakh crore in FY18 and are estimated to reach US$103.7 billion in 2020.

II. REVIEW OF LITERATURE

S.NAGARAJAN AND K.PRBHAKARAN (2013) [1] In this study they conclude that Equity Analysis is the most vital practice to measure movement of the stock market, which become helpful for investor to take decision about buy or sell. From this analysis it is concluded that Dabur share investment is less perilous as compared with other FMCG companies selected for the study.

S.SRINIVAS, N.B.C.SIDHU AND S.SATYANARAYANA (2015) [2] In this study of Equity Analysis of Banking Stocks, various analysis done to find conclusion like company analysis, industry analysis and economic analysis. From this analysis it is concluded that Dabur share investment is less perilous as compared with other FMCG companies selected for the study.

SHAINI NAVEEN AND T.MALLIKARJUNAPPA (2016) [3] In this study they compare the performance of 12 banks listed in NSE. In this paper they analysis risk and return in banking sector by taking Nifty Bank Index as benchmark. This study is totally depend on these terms like risk, return, benchmark, Nifty and performance. This study conclude that beta is helpful for comparing systematic risk.

III. OBJECTIVES

- To understand the concept of Equity Analysis.
- To analyze the risk and return involved in FMCG sector.
- To analyze the fluctuation in the stock prices of the companies selected for study.
- To understand the present scenarios of FMCG sector.
- To give appropriate suggestion based on study and calculations.

IV. RESEARCH METHODOLOGY

Secondary data

The study is entirely grounded on secondary data only. The data for study has been collected from journals, books like C.R.Kothari, V.A. Avadhani and from various official websites like BSE, NSE, YAHOO FINANCE, Money control & integrated websites of FMCG Sector.

Beta is used by investor to judge stocks riskiness. It is also concluded that at given level of return, each security has different degree of risk.

M.MUTHU GOPALAKRISHNAN AND AKARSH PK (2017) [4] This study is totally depend on risk and return analysis, to take investment decision. Various tools used for this study are Mean, S.D. Variance, Correlation, Beta. This study conclude that investor need to keep in mind both terms risk factor and return potential of companies. It will be differ from company to company. It is also conclude that equity analysis is an important technique to measure risk and return factors of companies equity.

P.SUBRAMANYAM AND NALLA BALA KALYAN (2018) [5] In this study they gave basic idea to investor about investment in mutual funds, with the motive of maximum return. Basic terms which are cover in this study are awareness about mutual fund, risk taking ability of investor and investment options preferred. This study conclude that both fundamental analysis & technical analysis are important to select securities for investment to minimize risk and maximize return.

A.NAVYA AND B.KIRAN KUMAR REDDY (2018) [6] In this study they prove that Equity Analysis is the best method to measure the relationship between market returns and telecom sector returns. This study also conclude that there are various internal forces of companies which affect positively or negatively share prices while making investment decision.
Period of study
To analyze the equity share prices, yearly closing prices of FMCG sector and selected FMCG companies are taken for the period 2013-14 to 2017-18 [7-12].

Method of sampling
For this study, five FMCG sector companies are selected whose market capitalization is more than 5000 crores [13]. The selection is based on the companies which trade in BSE or NSE & availability of data.

V. UNIT PROFILE

HUL
Hindustan Unilever limited (HUL) is largest FMCG Company with heritage of over 80 years in India economy. The company employed about 18000 peoples. HUL is the subsidiary of Unilever, largest supplier of food. HUL sales their products in more than 190 countries. Unilever has about 67% shareholding in HUL [14].

P & G
Procter and Gamble (P&G) is fastest growing consumer goods companies in India economy. P&G recorded $83.1 billion sales in year 2014 [15]. Company announced the earnings of US$9.750 billion in fiscal year 2018, with an annual returns of US$66.832 billion. In term of total revenue, P&G ranked 42 in the 2018 Fortune 500, list of the largest united corporation [16].

Britannia
Britannia industries Limited is a food-product corporation of India. During 2008-18 market capitalization of company moved from Rs. 3,200 crore to nearly Rs. 76,000 crore. In year 2017-18 company posted net sales of RS. 9,905.60 crore. Net profit of the company also jumped to Rs. 1777.40 crore from Rs 1,004.20 crore [17].

Dabur
Dabur India Limited is a FMCG company. Dabur launches India’s First Ayurvedic Medical Journal, in year 2014. In 2015, company come in agreement with StarcomMediaVest Group (SMG). Dabur India announced its alliance with Amazon to take its products global, on 26 September 2017. In year 2018, company acquired D&A Cosmetics Proprietary Ltd and Atlanta Body & Health Products Proprietary Ltd through its subsidiary [18].

Nestle
Nestle India is a consumer goods company. In year 2016, company launched NESCAFE SUNRISE INSTA-FILTER. Nestle India food brand MAGGI complete 35 years in India, on 8 March 2018 [19].

VI. TOOLS OF ANALYSIS

Mean
To calculate midpoint of values mean is most common and best general purpose tool. Mean is the average of numbers. Mean is calculated by using following formula [20]:

\[ \bar{x} = \frac{\sum x}{N} \]

Where

\[ \bar{x} = \text{mean} \]
\[ \sum x = \text{symbol of summation scores} \]
\[ N = \text{number of scores} \]

Standard deviation
To calculate the historical volatility of an investment standard deviation is used. the greater standard deviation of a security, greater variance between each price & mean. Standard deviation can be calculated by using the following formula [21]:

\[ \sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{n}} \]

\[ \sigma = \text{standard deviation} \]
\[ X = \text{each value in population} \]
\[ \bar{x} = \text{mean} \]
\[ n = \text{number of scores} \]

Beta
Tool used to measure systematic risk of a security is called beta, which is result of returns of particular security with returns of stock market indices based on historical data [22].

\[ \beta_a = \frac{\text{Cov}(r_a, r_b)}{\text{var}(r_b)} \]

HYPOTHESIS
HO: Market return does not affect return of FMCG sector.

H1: Market return positively affect return of FMCG sector.

MARKET RETURN

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>17154.25</td>
<td>259775.1</td>
<td>509.6813844</td>
</tr>
<tr>
<td>2014-15</td>
<td>19374.83</td>
<td>1585528</td>
<td>1259.127497</td>
</tr>
<tr>
<td>2015-16</td>
<td>19881.83</td>
<td>426069.2</td>
<td>652.7397969</td>
</tr>
<tr>
<td>2016-17</td>
<td>21557.08</td>
<td>1123696</td>
<td>1060.045321</td>
</tr>
<tr>
<td>2017-18</td>
<td>25871.42</td>
<td>963992.1</td>
<td>981.8309851</td>
</tr>
</tbody>
</table>
Above table show that highest mean value is 25871.42 in year 2017-18, lowest mean is 17154.25 in year 2013-14. The highest standard deviation is 1259.177 in year 2014-15 & lowest is 509.681 in year 2013-14 & the highest variance is 1585528 in year 2014-15 & lowest variance is 259775.1 in 2013-14.

**HUL**

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>594.4208</td>
<td>595.6525</td>
<td>24.40599273</td>
</tr>
<tr>
<td>2014-15</td>
<td>745.3375</td>
<td>13126.68</td>
<td>114.5717166</td>
</tr>
<tr>
<td>2015-16</td>
<td>851.3417</td>
<td>1537.792</td>
<td>39.21469364</td>
</tr>
<tr>
<td>2016-17</td>
<td>871.8333</td>
<td>1082.805</td>
<td>32.90599789</td>
</tr>
<tr>
<td>2017-18</td>
<td>1210.763</td>
<td>18111.62</td>
<td>134.579431</td>
</tr>
</tbody>
</table>

**INTERPRETATION**

Above table show that highest mean value is 1210.763 in year 2017-18, lowest mean is 594.4208 in year 2013-14. The highest standard deviation is 134.579431 in year 2017-18 & lowest is 24.40599 in year 2013-14 & the highest variance is 18111.62 in year 2017-18 & lowest variance is 595.6525 in 2013-14.

**P&G**

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>78.88</td>
<td>6.624273</td>
<td>2.573766</td>
</tr>
<tr>
<td>2014-15</td>
<td>83.85417</td>
<td>17.71019</td>
<td>4.208348</td>
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<tr>
<td>2015-16</td>
<td>77.53083</td>
<td>13.09321</td>
<td>3.618454</td>
</tr>
<tr>
<td>2016-17</td>
<td>85.86167</td>
<td>12.41885</td>
<td>3.524039</td>
</tr>
<tr>
<td>2017-18</td>
<td>87.16583</td>
<td>25.4227</td>
<td>5.042093</td>
</tr>
</tbody>
</table>

**INTERPRETATION**

Above table show that highest mean value is 87.16583 in year 2017-18, lowest mean is 77.53083 in year 2015-16. The highest standard deviation is 5.042093 in year 2017-18 & lowest is 2.573766 in year 2013-14 & the highest variance is 25.4227 in year 2017-18 & lowest variance is 6.624273 in 2013-14.

**BRITANNIA**

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>398.0342</td>
<td>3327.287</td>
<td>57.68264</td>
</tr>
<tr>
<td>2014-15</td>
<td>736.9475</td>
<td>51960.83</td>
<td>227.9492</td>
</tr>
<tr>
<td>2015-16</td>
<td>1413.522</td>
<td>20413.08</td>
<td>142.8743</td>
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<tr>
<td>2016-17</td>
<td>1543.795</td>
<td>16842.47</td>
<td>129.7785</td>
</tr>
<tr>
<td>2017-18</td>
<td>2173.224</td>
<td>72021.05</td>
<td>268.3674</td>
</tr>
</tbody>
</table>

**INTERPRETATION**

Above table show that highest mean value is 2173.224 in year 2017-18, lowest mean is 398.0342 in year 2013-14. The highest standard deviation is 268.3674 in year 2017-18 & lowest is 57.68264 in year 2013-14 & the highest variance is 72021.05 in year 2017-18 & lowest variance is 3327.287 in 2013-14.

**DABUR**

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>166.1083</td>
<td>94.11765</td>
<td>9.701425</td>
</tr>
<tr>
<td>2014-15</td>
<td>226.1917</td>
<td>946.1027</td>
<td>30.75878</td>
</tr>
<tr>
<td>2015-16</td>
<td>266.7625</td>
<td>254.9528</td>
<td>15.96724</td>
</tr>
<tr>
<td>2016-17</td>
<td>293.5875</td>
<td>1069.63</td>
<td>32.7052</td>
</tr>
<tr>
<td>2017-18</td>
<td>318.7333</td>
<td>619.8961</td>
<td>24.89771</td>
</tr>
</tbody>
</table>
INTERPRETATION

Above table show that highest mean value is 318.7333 in year 2017-18, lowest mean is 166.1083 in year 2013-14. The highest standard deviation is 32.7052 in year 2016-17 & lowest is 9.701425 in year 2013-14 & the highest variance is 1069.63 in year 2016-17 & lowest variance is 94.11765 in 2013-14.

NESTLE INDIA

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>5126.583</td>
<td>49838.041</td>
<td>223.244352</td>
</tr>
<tr>
<td>2014-15</td>
<td>5976.042</td>
<td>849.062586</td>
<td></td>
</tr>
<tr>
<td>2015-16</td>
<td>6040.175</td>
<td>490.451676</td>
<td></td>
</tr>
<tr>
<td>2016-17</td>
<td>6379.371</td>
<td>435.080236</td>
<td></td>
</tr>
<tr>
<td>2017-18</td>
<td>7282.708</td>
<td>517.663674</td>
<td></td>
</tr>
</tbody>
</table>

CORRELATION

<table>
<thead>
<tr>
<th>Marke t Retur n</th>
<th>Market Return</th>
<th>HUL</th>
<th>P&amp;G</th>
<th>Britannia</th>
<th>Dabur</th>
<th>Nestle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Return</td>
<td>1</td>
<td>0.9877</td>
<td>0.75</td>
<td>0.57</td>
<td>0.96</td>
<td>0.985</td>
</tr>
<tr>
<td>HUL</td>
<td>34924</td>
<td>0.35</td>
<td>0.65</td>
<td>0.57</td>
<td>0.57</td>
<td>0.96</td>
</tr>
<tr>
<td>P&amp;G</td>
<td>94344</td>
<td></td>
<td>0.29</td>
<td>0.57</td>
<td>0.68</td>
<td>0.63</td>
</tr>
<tr>
<td>Britannia</td>
<td>69602</td>
<td>0.12</td>
<td>1</td>
<td>0.57</td>
<td>1</td>
<td>0.63</td>
</tr>
<tr>
<td>Dabur</td>
<td>18974</td>
<td>0.08</td>
<td>0.63</td>
<td>0.96</td>
<td>2.482</td>
<td>0.998</td>
</tr>
<tr>
<td>Nestle</td>
<td>02561</td>
<td>0.9</td>
<td>0.75</td>
<td>0.94</td>
<td>0.94</td>
<td>0.978</td>
</tr>
</tbody>
</table>

INTERPRETATION

P&G is giving less return and there is no significance difference in the ability to provide return by the remaining companies. Return of the remaining companies are strongly correlated with the return of the market under the period of the study.

VII. FINDINGS

- From the above study it was found that the return of the selected companies reducing in the year 2016-17, and start raising in year 2017-18.
- Performance of P&G is very good as compared to other companies selected for study.

VIII. CONCLUSION

From the above study we can conclude that equity analysis is the best method to find the relationship between market return and FMCG sector return. This study become helpful for investor to measure the risk involved with the market return and selected FMCG companies.
This study also show the relationship between FMCG companies. It will become helpful in decision making related to investment.

REFERENCES


AUTHORS PROFILE

Chanchal Chauhan, Pursuing Ph.D. program from NOIDA INTERNATIONAL UNIVERSITY. My topic for research is “Developing mutual fund plan by equity analysis of FMCG, IT, and PHARMA SECTOR.” I completed post-graduation in finance and marketing from N.I.E.T (Noida Institute of Engineering and Technology) in 2016. I have 1 year of experience as Finance Manager Assistant in GURDASMESH CYCLE PVT LTD. And also completed 1 month training from SASSD (SUMMIT AUTO SEATS INDUSTRY, GREATER NOIDA) as Finance Manager Assistant for the project “Financial Statement Analysis of SASSD” I completed my graduation in B.B.A from I.I.M.T, Greater Noida in 2014.

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She is working as Assistant Professor (Finance) at School of Business Management in Noida International University. She has received her Ph. D., MFC and B Com (H) from Jai Narain Vyas University, Jodhpur (Raj.). Her doctoral research was emphasized on “Treasury Management in Banking Industry”.

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He is life member of Indian Economic Association and Indian Commerce Association.

Presently two scholars had been awarded Ph.D. under his supervision and two scholars are pursuing Ph.D. under his guidance.

He has published 9 National, 7 International papers and presented 5 papers in conferences. He has 6 books in his credits of various titles namely: Management of Financial Institutions and Services, E-Business and Accounting, Business Regulations, Tax Planning, Business Law and Corporate Law. Presently working on book: Financial Accounting for West African Countries...