Comparative Beta Analysis of MRF Ltd and APOLLO Tyres

Dr. Vani Kamath¹, Dr. R.Gopal²

¹Associate Professor, D.Y.Patil University School of Management Sector 4, CBD Belapur, Navi Mumbai, India
²Director, D.Y.Patil University School of Management, Sector 4, CBD Belapur, Navi Mumbai, India

Abstract: An investor interested in staying invested in stock market would always keep an eye on the beta of the stock. Beta is the critical factor which influences the decisions of the investor. Beta calculates the risk of a particular equity. The paper makes an attempt to measure the risk in two stocks in the tyre industry in India. It also takes into consideration R Square for its analysis.

Keywords: Beta, R Square, Volatility, Portfolio, Coefficients

1. Introduction

In finance beta acts as an important tool for the selection of stocks. The risk appetite of an investor can be gauged by this tool. Generally speaking the market portfolio of all investable assets should have a beta of 1. A beta below 1 indicates less volatility with market ups and downs. The beta more than 1 indicates more returns for the stock and also high risk.

2. Literature Survey

Beta Estimation The other main criticism of Fama and French (1992) put forth by Kothari, Shanken and Sloan (1995) is related to the estimation of beta. Levhari and Levy (1977) show that beta coefficients estimated with monthly returns are not the same as betas estimated with annual returns. Since they are different, the results of empirical studies will depend upon which beta estimation convention is used. Kothari, Shanken and Sloan argue that annual betas are more appropriate than monthly betas, since the investment horizon for a typical investor is probably closer to a year than a month. They show that the relation between beta and return is stronger when betas are estimated using annual returns.

3. Problem Definition

In tyre industry MRF Ltd is considered as the market leader in terms of returns to the investor. MRF has been consistent and good in its returns over the years. APOLLO Tyres on the other hand has given good returns over the years to its investors. The paper makes an attempt to study the factors responsible for this difference. The study compares both the firms on the basis of beta and R square and finds the reasons for the difference.

4. Objectives of the study

1) To study the closing price movements of the companies for the period of seven years.
2) To compare the change in prices and the differences over the period.
3) To analyse the risk and return relationship between stocks.
4) To establish the benchmark for stock price movements.

5. Research Methodology

For the purpose of research, the closing share prices of MRF and Apollo Tyres are taken into consideration for a period of seven years starting from 2007 to 2014. The prices are then compared with the S&P BSE 500 index and the percentage changes are found out. The results of this analysis were then substituted in the following formula:

\[ \text{Beta} = \text{COVAR (Today's Price- Price of Yesterday/Price of Yesterday)}/\text{VAR(today's index-Index of yesterday/Index of yesterday)} \]

\[ \text{R-Squared} = \text{RSQ (change in the values of index in percentages, the change in closing price of shares in percentages).} \]

<table>
<thead>
<tr>
<th>Date</th>
<th>S&amp;P BSE 500 Index</th>
<th>Closing price of apollo tyres</th>
<th>S&amp;P BSE 500 Index%</th>
<th>Closing price of apollo tyres%</th>
<th>Closing BSE-500 Index</th>
<th>Closing price of MRF</th>
<th>BSE-500(%)</th>
<th>MRF(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-12-2014</td>
<td>10927.82</td>
<td>232.65</td>
<td>-0.25866727</td>
<td>1.972387</td>
<td>10927.82</td>
<td>3782.9</td>
<td>-0.2586673</td>
<td>13.05966</td>
</tr>
<tr>
<td>03-11-2014</td>
<td>10956.16</td>
<td>228.15</td>
<td>3.40985135</td>
<td>4.344843</td>
<td>10956.16</td>
<td>3350.7</td>
<td>3.40985135</td>
<td>6.984808</td>
</tr>
<tr>
<td>01-10-2014</td>
<td>10594.89</td>
<td>218.65</td>
<td>4.14449252</td>
<td>7.682837</td>
<td>10594.89</td>
<td>3131.9</td>
<td>4.14449252</td>
<td>-0.01478</td>
</tr>
<tr>
<td>01-09-2014</td>
<td>10173.26</td>
<td>203.05</td>
<td>0.76445512</td>
<td>22.91162</td>
<td>10173.26</td>
<td>3262.9</td>
<td>0.76445512</td>
<td>35.87205</td>
</tr>
<tr>
<td>01-08-2014</td>
<td>10096.08</td>
<td>165.2</td>
<td>2.69104136</td>
<td>-5.38373</td>
<td>10096.08</td>
<td>2401.8</td>
<td>2.69104136</td>
<td>2.964405</td>
</tr>
<tr>
<td>01-07-2014</td>
<td>9831.51</td>
<td>174.6</td>
<td>0.4102605</td>
<td>-12.2613</td>
<td>9831.51</td>
<td>2332.3</td>
<td>0.4102605</td>
<td>-1.31797</td>
</tr>
<tr>
<td>02-06-2014</td>
<td>9791.34</td>
<td>199</td>
<td>6.35812909</td>
<td>12.68403</td>
<td>9791.34</td>
<td>2363.4</td>
<td>6.35812909</td>
<td>4.00213</td>
</tr>
<tr>
<td>01-05-2014</td>
<td>9206.01</td>
<td>176.6</td>
<td>10.355364</td>
<td>11.71406</td>
<td>9206.01</td>
<td>2272.5</td>
<td>10.355364</td>
<td>10.83452</td>
</tr>
<tr>
<td>01-04-2014</td>
<td>8342.15</td>
<td>158.85</td>
<td>0.56526257</td>
<td>-0.28249</td>
<td>8342.15</td>
<td>2030.3</td>
<td>0.56526257</td>
<td>-5.68149</td>
</tr>
<tr>
<td>03-03-2014</td>
<td>8295.26</td>
<td>159.3</td>
<td>7.59440968</td>
<td>20.86495</td>
<td>8295.26</td>
<td>2173.9</td>
<td>7.59440968</td>
<td>13.96294</td>
</tr>
</tbody>
</table>

Volume 4 Issue 1, January 2015
6. Results and Discussion

The beta of MRF Ltd was 1.48 and Apollo tyres were 1.18 respectively. The R Square of MRF Ltd and Apollo Tyres were 0.45 and 0.43 respectively. From the values of beta and R square, it can be analysed that MRF is in a better position as it shows higher values compared to Apollo tyres. The investor would have higher Earnings Per Share by staying invested in this share for a long term.

7. Conclusion

It can be concluded that beta and R square are used as a measure of volatility or a systematic risk of a security in comparison with the market as a whole. It can be used as a major tool by the investor in comparison of various stocks. In some cases it might not be the true indicator of returns as the sensex is driven by other macro factors too. The study limits its scope as only two tools are applied. The time period for the study is also for seven years which when extended for more years might give varied analysis.

8. Future Scope

The study would help the investors to take informed decisions on investment. The future investments could be done based on beta and r-square analysis.

References

[1] www.bseindia.com