ECONOMIC VALUE ADDED AND MARKET VALUE ADDED OF PRIVATE STEEL COMPANIES

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ABSTRACT

Financial status is the backbone of company’s economy system. The economy of the company is greatly influenced by the operation of finance. It is an essential for proper allocation of resources, which in turn helps sustain a healthy climate for analyzing the profit as well as performance. There are different financial tools like Ratios, Fund flow and Cash flow, Common size, Comparative statements etc., to assess the financial performance. This study takes an effort to use the Economic Value Added (EVA) and Market Value Added (MVA) i.e. to find out the economic profit and to measure the difference between equity and debts respectively in addition to the usual financial tools.

Keywords: Economic value added, Market value added

ECONOMIC VALUE ADDED:

Economic Value Added is a tool widely used as a corporate performance measurement in the current scenario and there has been a paradigm shift in setting corporate objectives and performance measurement. This shift happened with the changes in corporate mindset and the advent of professional management. It is now well-recognized fact that the aim of every business entity should be to maximize shareholders wealth and the activities of firm to achieve the objectives.

EVA is a term developed and used by a US based consulting firm named Stern Stewart & Co. This measure is its registered trademark. It has done much to popularize and implement this measure of residual income. But the concept of residual income has been around for some time and many companies that are not Stern-Stewart clients use this concept to measure and reward manager’s performance (Brealey and Myers 2000).

Economic Value Added is a measure of economic profit. It is calculated as the difference between the Net Operating Profit after Tax and the opportunity cost of invested Capital. This opportunity cost is determined by the weighted average cost of Debt and Equity Capital ("WACC") and the amount of Capital employed.
CALCULATION OF EVA

Net sales
(-) Operating expenses
  Operating profit (EBIT)
(-) Taxes
  Net Operating Profit after Tax (NOPAT)
(-) Capital Charges (invested capital* cost of capital)
  Economic Value Added

WEIGHTED AVERAGE COST OF CAPITAL:
The Weighted Average Cost of Capital (WACC) represents the rate a company and is expected to pay in financing its assets. The WACC calculates the company’s cost of capital by proportionately weighing the categories of capital, each of which would be in the form or debt or equity. The WACC for a company is the minimum that the company must earn on its assets to satisfy its owners and creditors.

Calculating the WACC:

\[
WACC = \frac{\text{Market Value of Equity}}{\text{Market Value of Equity Plus Debt}} + \frac{\text{Cost of Debt} \times (1 - \text{Corporate Tax Rate})}{\text{Market Value of Equity Plus Debt}}
\]

Or

\[
WACC = W_dK_d(1 - T) + W_{ps}K_{ps} + W_sK_s + W_eK_e
\]

Where,

- \(W_d\) = Weight of debt (Proportion)
- \(K_d\) = Cost of debt
- \(T\) = Tax
- \(W_{ps}\) = Weight of preference capital
- \(K_{ps}\) = Cost of preference capital
- \(W_s\) = Weight of common share capital
- \(K_s\) = Cost of common share capital
- \(W_e\) = Weight of retained earnings
- \(K_e\) = Cost of retained earnings
COST OF CAPITAL CALCULATION:

Dividend Price Method or Dividend Yield Method:

According to this method, cost of equity capital is the discount rate at which present value of expected future dividends per share is equal to the net proceeds(or current market price) per share. The cost of equity capital ($K_e$) is calculated as follows.

\[ K_e = \frac{D_1}{NP} \text{ or } \frac{D_1}{MP} \]

Where,
- $K_e$ = Cost of equity capital
- $D_1$ = Expected dividend per share
- NP = Net proceeds per share (in case of new issue)
- MP = Market price per share (in case of existing shares)

MARKET VALUE ADDED:

Market Value Added measures the difference between the market value of the firm (Debt and Equity) and the amount of capital invested. If MVA is positive, the firm has added value. If it is negative, the firm has decreased value. The amount of value added needs to be greater than the firm's investors could have achieved investing in the market portfolio, adjusted for the leverage (beta coefficient) of the firm relative to the market (Stan Stewart).

\[ \text{Market Value Added (MVA) = Market Value - Invested Capital.} \]

REVIEW OF LITERATURE

This article attempts to review some of the important studies on EVA & MVA performance of Private Sector Steel companies. The methods adopted for these studies are highly relevant. The ordering is done chronologically by year.

- **You Lee (1995)**, in his article he stated that the use of EVA as a corporate performance measurement tool. His main research finding was that, within the context of the JSE (Johannesburg Stock Exchange), EVA is at best marginally better than measures such as ROA and ROE.

- **Grant (1996)** conducted a survey to examine the relationship between EVA and Firm Value. Results suggest that EVA significantly impacts the firm value.

- **Chen and Dodd (1997)** reported that EVA measure provides relatively more information than the traditional measures of accounting profits. They also found that EVA and RI (Residual Income) variables are highly correlated and identical in terms of association with stock returns.

- **Lehn & Makhija (1997)** investigated the degree of correlation between different performance measures and stock market returns. The results indicate that EVA is the most highly correlated measure with stock returns. Various Studies are also conducted on Incremental information content tests of EVA and provide evidences that it adds significant explanatory power to EPS in explaining stock returns.

- **Bao and Bao (1998)** studied the usefulness of EVA and abnormal economic earnings of US firms and results indicate that EVA is a significant factor in market returns and its explanatory power is higher than that of accounting earnings.
Lefkowitz (1999) analyzed the US companies and results of the study supported Stern-Stewart hypothesis, i.e., EVA is better correlated with stock returns as compared to traditional performance measures. They found that EVA is reasonably reliable guide to understand the firm’s value.

Machuga et al. (2002) in their study highlighted that EVA can be used to enhance future earnings predictions.

Mohammad Saleh Jahur and Al Nahian Riyadh (2002), the paper aims at analyzing banks' performance through EVA. For this purpose, EVA has been calculated taking certain assumptions as to the cost of equity and operational profit adjustments. A rank correlation coefficient between EVA and different criteria indicates that ranking under “Return on Asset”, “Net Profit”, "Profit per Employee” and “Deposit per Employee” have close resemblances to the ranking under EVA, whereas the ranking under “Interest Income” and “Spread” does not match with the ranking under EVA.

Worthington and West (2004) provided Australian evidences regarding the information content of EVA and concluded that stock returns to be more closely associated with EVA than residual income, earnings and net cash flow.

Narcyz Roztocki and Kim LaScola Needy (University of Pittsburgh, 2005), the study concludes with a discussion of possible changes to corporate strategies and business performance when the proposed ABC-and-EVA system is implemented in a manufacturing company.

Wet (2005) conducted a study on EVA–MVA relationship of 89 Industrial firms of South Africa and found that EVA did not show the strongest correlation with MVA.

Dimitrios, I., Zelijko, S. & Theriou, G. N. (2009) conducted research on the perceptions of EVA™ among Fortune 1000 firms and found that 90% of respondents agreed that EVA™ is more appropriate in capital-intensive organizations such as manufacturing rather than in an environment where organisations rely on intellectual capital.

Chen (2009) This study indicated that of the total of 165 adjustments, only five to six accounting adjustments contribute to a discernible difference in EVA the others are immaterial. Only six of the ten studies reviewed concluded that EVA as a measure of performance was superior to others.

Deo and Mukherjee (2009) conducted research on how Fortune 1000 organisations view EVA. They received only 21 out of 1 000 usable responses despite sending multiple reminders. This may be an indication that many organisations are not committed to EVA™, as one would expect that an organisation using EVA would also show an interest in completing a research questionnaire on EVA.

Fernandez (2011) examined the correlation between EVA and MVA of 582 American companies for the period 1983-97. It was shown that for 296 firms in the sample the changes in the NOPAT had higher correlation with changes in MVA than the EVA, while for 210 sample firms the correlation between EVA and MVA was negative.

OBJECTIVES OF THE STUDY:
The principal objective of this study is to evaluate the performance of private steel companies in India through the performance measure of EVA and MVA. The study covers the following specific objectives:

1. To evaluate the performance of the Private Steel Companies from BSE-SENSEX through EVA and MVA.
2. To study the EVA of Private Steel Companies to analyse the performance.
3. To correlate the company’s performance on the basis of EVA and MVA.
METHODOLOGY OF THE STUDY:

The Study is both theoretical and empirical one. In order to prepare theoretical framework of the Study, existing available textbooks, research articles, journals, and magazines had been consulted. The study is primarily based on secondary data. Secondary data used in the study include Chairman’s Report, Income Statement, and Balance Sheet of the private sector steel companies from BSE-SENSEX covering the period from 2006-07 to 2010-11. The Secondary data have been tabulated and analyzed manually.

THE COMPANIES SELECTED FOR ANALYSIS:

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the companies</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TATA Steel Ltd.</td>
<td>Steel – Large</td>
</tr>
<tr>
<td>2.</td>
<td>JINDAL Steel &amp; Power Ltd.</td>
<td>Steel – Large</td>
</tr>
<tr>
<td>3.</td>
<td>Essar Steel Limited</td>
<td>Steel – Large</td>
</tr>
<tr>
<td>4.</td>
<td>Bhushan Steel Limited</td>
<td>Steel - Large</td>
</tr>
</tbody>
</table>

Sources: BSE - 2006-2011.

DATA ANALYSIS AND INTERPRETATION:

The present study has measured the performance of four steel companies from BSE-SENSEX in India through EVA, MVA and other parameters such as Net Profit, ROA. The computation of Cost of Capital and others measures have been exhibited in the Appendix.


<table>
<thead>
<tr>
<th>Particulars</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVA:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TATA Steel Ltd.</td>
<td>4155.67</td>
<td>4338.05</td>
<td>4448.28</td>
<td>3223.6</td>
<td>5645.43</td>
<td>4362.21</td>
<td>865.12</td>
</tr>
<tr>
<td>JINDAL Steel Ltd.</td>
<td>3637.73</td>
<td>3741.67</td>
<td>5419.53</td>
<td>1818.23</td>
<td>4636.25</td>
<td>3850.68</td>
<td>1347.82</td>
</tr>
<tr>
<td>Essar Steel Tubes Ltd.</td>
<td>1,474.1</td>
<td>2,653.4</td>
<td>5,600.9</td>
<td>4,495.0</td>
<td>3,771.08</td>
<td>-</td>
<td>3,598.93</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bushan Steel Ltd.</td>
<td>2686.27</td>
<td>3248.42</td>
<td>1409.03</td>
<td>1023.27</td>
<td>1305.37</td>
<td>1934.47</td>
<td>1600.72</td>
</tr>
</tbody>
</table>

Sources: BSE - 2006-2011.

Table - 1 revealed that the true profit of the organizations. During the study period TATA Steel Ltd. earned profit (4155.67) in 2007, (4338.05) in 2008. On the other hand JINDAL Steel Ltd. earned profit in the above mentioned years and it was lower than TATA Steel. But the profit size of JINDAL is (5419.53) higher in 2009. Again TATA Steel occupied the first place in 2010 and 2011 respectively. The other two organisations are earned profit but not like the above two. The reason is business strategies applied by TATA Steel is better than JINDAL, TST, JSW and earned profit during the study period.
TABLE – 2: SHOWING THE MVA AND CORRELATION BETWEEN THE EVA AND MVA OF THE COMPANIES (Rs. In Cr.)

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>Mean</th>
<th>SD</th>
<th>Correlation Between EVA and MVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVA:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TATA Steel Ltd.</td>
<td>37,138.65</td>
<td>58,128.94</td>
<td>34,261.13</td>
<td>24,695.61</td>
<td>27,308.84</td>
<td>36306.63</td>
<td>13199.11</td>
<td>0.02</td>
</tr>
<tr>
<td>JINDAL Steel Ltd.</td>
<td>16,547.95</td>
<td>16,207.50</td>
<td>27,149.28</td>
<td>45,943.31</td>
<td>37,021.29</td>
<td>28573.87</td>
<td>12967.61</td>
<td>-</td>
</tr>
<tr>
<td>Essar Steel Tubes Ltd.</td>
<td>28,713.13</td>
<td>35,974.94</td>
<td>44,750.41</td>
<td>43,851.81</td>
<td>99,418.73</td>
<td>50541.88</td>
<td>28088.85</td>
<td>-</td>
</tr>
<tr>
<td>Bushan Steel Ltd.</td>
<td>134,085.92</td>
<td>172,949.23</td>
<td>138,876.99</td>
<td>99,382.71</td>
<td>913,341.35</td>
<td>291727.29</td>
<td>34846.91</td>
<td>-0.89</td>
</tr>
</tbody>
</table>

Sources: BSE - 2006-2011.

The above table shows that the amount of capital value increased compared with its investment value due to the change in market value. Among the four companies TATA Steel Ltd. topped on the basis of average market value added. The table shows the correlation between EVA and MVA of the four companies. TATA Steel Ltd. MVA values were positively correlated and other three steel companies’ values were not positively correlated that emphasis the Market growth is not similar to the profit growth of the firm.

CONCLUSION:

The above analysis had led to conclude that EVA is an important measure to judge a Companies’ performance in view of the current scenario. It has been found in the study that EVA does have reflected a true profit measure though the company showing the profit in their financial statements. Among the four companies TATA Steel Ltd. was topped and also positively correlated with MVA. Further the three Steel Ltd. companies in the position to overcome the negative EVA in future to create the value of their shareholders. It can be concluded in view of the current scenario and intense competition anticipated in the coming years that companies will replace other performance measures with EVA and eventually, will get to be judged by the extent of value generated for shareholders over and above the weighted average cost of capital.

REFERENCES: