THE ECONOMIC VALUE ADDED (EVA) - A MEASUREMENT INDICATOR OF THE VALUE CREATION WITHIN A COMPANY FROM THE ROMANIAN SEASIDE HOTEL INDUSTRY

RALUCA-ANDREEA TRANDAFIR
LECTURER PhD, OVIDIUS UNIVERSITY OF CONSTANTA, ROMANIA, FACULTY OF LAW, ADMINISTRATIVE SCIENCES AND SOCIOLOGY

ABSTRACT
The purpose of this research is to highlight the role of EVA – an indicator measuring the financial performance of a hotel company from the Romanian seaside. EVA is one of the most appreciated indicators in terms of achieving performance that involve all used resources; this indicator can be adopted for the decentralization of management decisions. In order to highlight the importance of the EVA assessment method, we performed a case study on a representative hotel company that gets positive financial results pursuant to conventional methods, aiming to outline the correlation between EVA and the traditional methods for performance assessment.

KEY WORDS: value creation indicator; the economic value added; net operating profit.

JEL classification: M41

The necessity of research

The success of a company is measured not only by its ability to raise revenue, but also by its ability to generate profits and cash flow. Tourism company is considered an autonomous entity that has a manufacturing heritage and whose future depends on the sale of travel products and services for better management of internal and external resources. Tourism company aims to maximize profits, a goal which involves combinations of factors of production the least expensive and most convenient production scale. [1]

A company is viable when there is created enough value for its shareholders, because the return on equity must be achieved at an attractive rate, so as to justify taking the risk for shareholders compared to other investments. The shareholder is always interested in its return on capital, focusing on companies that create value. This value creation for shareholders tends to be a key criterion for the performance analysis of a company.

The value creation management is a relatively new approach whose fundamental objective is to measure the financial performance of the company without omitting the connection that should exist between its proportions and the profitability level obtained by the capital investors in that company. The management of any company is faced with the dilemma of reconciling both the shareholders and the stakeholders’ interests, in the conditions of increasing the company’s welfare. The relevance of the value of these accounting and financial indicators depends on their impact on the market profitability of the company’s capital.

The financial market is increasingly influenced by globalization, increased competition, the cost of production factors, which led managers to focus their efforts in order to increase the company’s value. The analysis made on the basis of classical accounting indicators reveals that a company is efficient when it records profit. But the result should not only be positive; it must also compensate the cost of the resources brought by shareholders. Although the traditional practice assessing the performance of companies is based on the rate of return and stock market capitalization value (items which are often used nowadays), these items are considered obsolete in highlighting the company’s economic or fair value. Even the assessment of the economic performance based on the cash flow is represented by the indicators used in this assessment and it is not sufficiently reliable and relevant in the light of an economic assessment.

The concept of value creation complies with the definition of performance, according to which: performance means meeting the proposed objectives. [6]

Due to the large number of approaches to measuring value creation, there can be distinguished: A first approach is that of Rappaport [8], based on the updated cash flow or output. The second approach developed by Stewart [9], in 1991, is based on two concepts: the Economic Value Added and the Market Value Added, which are indisputable standards for the company’s quality management quantification (appreciation).

In order to achieve this analysis, there is used the information from the summarized situations in the balance sheet and in the profit and loss account, but the stock market information should also be taken into consideration.
The economic value added - A measurement indicator of the value creation at SC ALFA SA

The economic value added is a model developed by the American economist G. Benett Stewart, who, in his 1982 book, The Quest for Value: The EVA-Management Guide [10], designed the highest-rated performance measurement indicator used both by companies and financial advisers. The basic role of the Economic Value Added (EVA) indicator is the measurement of the financial performance achieved by a company and it is determined as the difference between the net operating profit after taxes and the total cost of the invested capital. EVA is one of the most appreciated indicators regarding the achievement of the performance that involves all used resources, indicator that can be adopted for the decentralization of the management decision [7].

According to the calculation proposed by Stern Stewart & Co., EVA is the difference between the net operating profit after taxes and the cost of the invested capital. It can be said that the actions of managers bring economic value only if the operating profits exceed the cost of the invested capital.

\[ EVA = \text{Net operating profit after taxes} - (\text{Invested capital} \times \text{Cost of the invested capital}) \] (1)

The net operating profit after taxes (NOPAT) is determined by deducting the income tax from the operating profit. These, in turn, are obtained as the difference between the net turnover and the operating costs involved. Both the net operating profit after taxes and the used capital have many accounting adjustments made in order to eliminate the errors that may occur in the EVA value, under the used accounting treatments.

In other words, the EVA is actually the operating profit wherefrom the opportunity cost of all the invested capital is derived, representing virtually the measure of the real economic profit obtained by the company [9].

The economic value added is the surplus value created by an investment or a portfolio investment. It is determined by the difference between the return on investment and the cost of the capital raised to finance it, obtained by exploiting an investment in relation to the amount of the cost of the capital raised to finance that investment.

Another way of representing the EVA is:

\[ EVA = (\text{The return on invested capital} - \text{Weighted average cost of capital}) \times \text{Invested capital} \] (2)

1. The invested capital (IC)

   The invested capital consists of the equity (E) and the financial debt wheewith the economic asset is financed, according to the relation:

   \[ IC = \text{Equity} + \text{Financial debt} \] (3)

   Regarding its assessment, a solution is to use the company’s market value, its amount being influenced both by the amount of assets and the investors’ expectations regarding the company’s future development opportunities. Given that, by means of the EVA indicator, one attempts to quantify the surplus of the value created by the company, in order to estimate it, there should be taken into account the market value of the invested capital, excluding that portion of the value that is supported by the investors’ expectations of the company’s future performance. Since this separation can be difficult to achieve, in most cases, the book value of the invested capital will be taken into account. Instead, the book value underates the amount of capital, the assets being highlighted at their historical cost.

   Aswath Damodaran identifies these limits specific to the book value, as a measurement of the level of the invested capital, which led to some adjustments made by the analysts concerned with estimating the economic value added. Some of these are: The capitalization of any operating expenses which do not create profit in the current period but which are made in order to get profit in the future financial years; a clear example would be the research and development expenditures made by the company. The capitalization of the operating expenses. One of the most illustrative model is the rent payment for the equipment owned by the company in an operating lease system. From a financial standpoint, there is an insignificant content difference between finance and operating leases. Therefore, they make sense in order to calculate the present value of operating lease commitments and to treat them as debt, leading to the increase of the invested capital. The removal of those operations reduces the book value of the capital, but does not change the actual amount of the invested capital, such as goodwill amortization. [4]

2. The return on invested capital (ROIC)

   In what concerns the return on capital, it is taken into account the operating result (net of tax) and the level of the invested capital. The return on the invested capital takes into account the operating profit after tax and the invested capital according to the relation:

   \[ \text{ROIC} = \frac{\text{Operating profit after tax}}{\text{The invested capital}} \times 100 \] (4)

3. The cost of the invested capital
It is represented by the weighted average cost of capital (WACC). Given that the return on and the amount of the invested capital is expressed in the book value, the cost of capital should be estimated using weights expressed in book values. This reasoning is impaired by the fact that the amount of the invested capital should not be given by the book value of the capital but by the market value of the assets financed by it. There is, however, a difference between the market value of assets and the market value of the capital invested in these assets, the latter including the present value of the company’s development opportunities. In addition, the use of market value weights shall take into account the impact of the companies’ different financing structures on the market value of their equity. The use of weights in accounting formulae is an alternative to estimating the cost of capital. Determining the weighted average cost of capital is a complex operation that takes into account both the cost of equity and the cost of debt. [2], [3]

\[
\text{WACC} = i(1-\text{Ptr} / 100) \times \text{Debt} / \text{IC} + \text{COE} \times \text{Equity} / \text{IC}
\]

where:
- \(\text{WACC}\) = weighted average cost of capital
- \(i\) = financial debt remuneration rate; \(i = \frac{\text{Interest expenses}}{\text{Financial debt}}\)
- \(\text{Debt} / \text{IC}\) = weight of financial debt in invested capital
- \(\text{COE}\) = cost of equity (rate of return on equity); \(\text{COE} = \text{Rf} + \beta \times \text{Smrp}\)
- \(\text{Ptr}\) = profit tax rate

where:
- \(\text{Rf}\) = risk-free interest rate that expresses the efficiency of an investment in an asset with zero risk; it is usually used in the case of government securities
- \(\beta\) = the volatility coefficient that multiplies the risk premium for investment risk measurement in the shares of the analyzed company
- \(\text{Smrp}\) = the stock market risk premium, the additional yield of an investment in a global portfolio of the entire market

Equity / IC = the weight of equity in the invested capital

The EVA, as any aggregate indicator, is calculated at the end of a financial year. In implementing such a method, like EVA, the most important and the most difficult thing is the involvement of top managers, thus achieving a better understanding of the concept of EVA and the implications it has in each department. The EVA with positive values over time will increase the company’s value and the value created for shareholders, while the negative EVA indicates the destruction of value both for the company and the shareholders.

In order to highlight the importance of the EVA assessment method, we performed a case study on SC ALFA SA. In order to illustrate how to measure the value created/destroyed for shareholders, we used a number of indicators found in most of the reports published by a company listed on the stock exchange.

The classic indicators provide information on the historical performance of the company, without taking into account the cost of the invested capital but only the results of its use. Therefore, there are companies which operate and report outstanding performance as in the example of the company referred to in the case study, company which, however, does not create value; in fact, it destroys the existing one. Regarding ALFA SA, it is a representative company which, according to BSE Bucharest reports, has registered positive financial results in accordance with the classical methods assessing company performance.

The calculation of the EVA was made for the timeframe \(n - (n+4)\), according to data contained in Table 1 and 2. Tables include information on the basic indicators adjusted for the calculation of the EVA indicator. The exemplification of the calculation was based on the data from the company’s annual financial statements, adjusted according to the calculation method.

**Table 1. EVA calculation model at SC ALFA SA, for the timeframe \(n - (n+4)\)**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>measure</th>
<th>(n)</th>
<th>(n+1)</th>
<th>(n+2)</th>
<th>(n+3)</th>
<th>(n+4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit on turnover</td>
<td>thou. euros</td>
<td>1238</td>
<td>1461</td>
<td>797</td>
<td>-300</td>
<td>-905</td>
</tr>
<tr>
<td>Tax rate</td>
<td>%</td>
<td>17.60</td>
<td>16.29</td>
<td>13.65</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Net operating profit</td>
<td>thou. euros</td>
<td>1020</td>
<td>1223</td>
<td>688</td>
<td>-300</td>
<td>-905</td>
</tr>
<tr>
<td>Invested capital (IC)</td>
<td>thou. euros</td>
<td>66456</td>
<td>93582</td>
<td>86322</td>
<td>79033</td>
<td>77887</td>
</tr>
<tr>
<td>Return on Invested Capital (Ri)</td>
<td>%</td>
<td>1.53</td>
<td>1.31</td>
<td>0.80</td>
<td>-0.38</td>
<td>-1.16</td>
</tr>
<tr>
<td>WACC (= i(1-\text{Ptr} / 100) \times \text{Debt} / \text{IC} + \text{COE} \times \text{Equity} / \text{IC})</td>
<td>%</td>
<td>19.82</td>
<td>17.52</td>
<td>17.93</td>
<td>23.29</td>
<td>18.22</td>
</tr>
<tr>
<td>(i) = financial debt remuneration rate</td>
<td>%</td>
<td>3.02</td>
<td>6.77</td>
<td>8.77</td>
<td>21.60</td>
<td>22.61</td>
</tr>
</tbody>
</table>
COE = Rf + β * Smrp

<table>
<thead>
<tr>
<th>Indicator</th>
<th>n+4/n+3</th>
<th>n+3/n+2</th>
<th>n+2/n+1</th>
<th>n+1/n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit on turnover</td>
<td>301.74</td>
<td>-37.61</td>
<td>54.57</td>
<td>118.03</td>
</tr>
<tr>
<td>Tax rate</td>
<td>-</td>
<td>-</td>
<td>83.75</td>
<td>92.60</td>
</tr>
<tr>
<td>Net operating profit</td>
<td>301.74</td>
<td>-43.55</td>
<td>56.30</td>
<td>119.89</td>
</tr>
<tr>
<td>Invested capital</td>
<td>98.55</td>
<td>91.56</td>
<td>92.24</td>
<td>140.82</td>
</tr>
<tr>
<td>Return on invested capital (Ri)</td>
<td>306.18</td>
<td>-47.56</td>
<td>61.03</td>
<td>85.14</td>
</tr>
<tr>
<td>WACC = i(1-Ptr/100) *Debt/IC + COE *Equity/IC</td>
<td>78.23</td>
<td>129.85</td>
<td>102.39</td>
<td>88.37</td>
</tr>
<tr>
<td>i = Interest expenses / Financial debt remuneration rate</td>
<td>104.70</td>
<td>246.43</td>
<td>129.43</td>
<td>224.26</td>
</tr>
<tr>
<td>COE = Rf + β * Mrp</td>
<td>78.05</td>
<td>129.68</td>
<td>102.27</td>
<td>87.86</td>
</tr>
<tr>
<td>Risk-free interest rate (Rf)</td>
<td>69.74</td>
<td>128.61</td>
<td>108.08</td>
<td>92.65</td>
</tr>
<tr>
<td>Volatility coefficient (β)</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Market risk premium (Mrp)</td>
<td>84.27</td>
<td>130.50</td>
<td>98.27</td>
<td>84.84</td>
</tr>
<tr>
<td>Weight of financial debt in the invested capital</td>
<td>122.30</td>
<td>157.22</td>
<td>84.30</td>
<td>55.16</td>
</tr>
<tr>
<td>Weight of equity in the invested capital</td>
<td>99.81</td>
<td>99.69</td>
<td>100.10</td>
<td>100.52</td>
</tr>
<tr>
<td>EVA = (Ri - WACC) * IC</td>
<td>-thou. euros</td>
<td>-12152</td>
<td>-15168</td>
<td>-14792</td>
</tr>
</tbody>
</table>

*** This is the country risk premium, based on the data provided by http://pages.stern.nyu.edu/~adamodar/.

The analysis of this indicator can not be achieved without taking into account the use of the country risk premium. According to Aswath Damodaran [5], one calculation method is based on a developed market risk premium (which is between 4% - 5%) adding the country risk. Therefore, the net operating profit achieved for this hotel company is 1019871 euros in n; 1222770 euros in n+1; 688370 euros in n+2; in n+3 and n+4, there have been registered negative values: -299776 euros (n+3) and, respectively, -904542 euros (n+4). After calculating the rate of return on the invested capital and the weighted average cost of capital, there are obtained the EVA values for ALFA SA. These values are surprisingly negative, i.e. -12152119 euros in n; -15168278 euros in n+1; -14792268 euros in n+2; -18704011 euros in n+3 and -15094093 euros in n+4. Indeed, in terms of progress, during the five years, we notice the destruction of value for shareholders; instead of being created, this value decreases every year. This is caused by the decrease in the net operating profit. Although in n+1, compared to n, it increased by 19.89%, this could not positively influence value creation. In n+2, compared to n+1, there is a decrease of 43.70% in the net operating profit. In n+3, compared to n+2, the turnover related result decreased dramatically; this result takes the form of loss, leading to the negative entry of a net operating result which deepens the destruction of value, reaching -18704011 euros. In n+4, the destruction of value is also registered, reaching -15094093 euros.

Conclusions

In hotel companies, due to their specificity of having a massive investment in frozen assets, but also due to seasonality, it is noticed that their turnover does not lead to a profit high enough to determine value creation for shareholders. We note that, although in n+3 and n+4 the company recorded a net profit, it was not from its current activity, while the result of the turnover is in the form of loss. The company recorded a net profit at the end of the financial year from the sale of assets. The registration of the EVA negative values in the analysed timeframe does not...
mean that the activity, as a whole, is not profitable or that the company does not have the potential to make profitable investments. The EVA indicator provides an assessment of capital allocation efficiency, emphasizing the relationship between return and risk. If investors would consider the values of this modern indicator for measuring performance and the risk that it highlights, they would redirect their capital investment policy.

Within the above analysis, in the case of ALFA SA hotel, it is noticed that the EVA indicator has a negative value during the entire analysed timeframe. This destruction of value is determined by the fact that the efforts made to return the invested capital are much higher than the net operating result. In other words, it is noticed that the shareholders from the hotel industry lose money even if they register a a positive sheet record.

The EVA is a strategic planning tool and its purpose is to guide managers to use the assets more responsibly and to weight the real cost of the stock, of tourists and of frozen assets. The use of this indicator in order to assess company performance has a number of limitations, primarily because it favors one particular user, i.e. the investor.

BIBLIOGRAPHY