ECONOMIC VALUE ADDED (EVA) – MAIN INDICATOR IN MEASURING THE VALUE CREATION OF THE TARGET CORPORATION INC.

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ABSTRACT
Value Based Management (VBM) is a business philosophy that focuses on maximizing long-term shareholder wealth by increasing a company’s value … VBM cultivates ownership accountability across all levels of an organization, motivating managers and employees to think, act, and get paid like owners. Employees are required to meet or exceed shareholders’ expectations by improving the company’s Economic Profit or Economic Value Added VBM propose the instruments who measuring the performance at different levels of organization: both the level and enterprise level project and contributing to good communication within the enterprise. This article present an analysis of the principal indicator: EVA, the based methods of calculation, shaping their advantages and disadvantages and exemplifying comparing a series of measurements of the enterprise value created on the basis of financial data at the bigger American company in retail sales - Target Corporation Inc.

1. INTRODUCTION
The Value Based Management (VBM) is a management concept referring to the improvement of the strategic and operational decisions from the quality point of view at all of the organizational levels, focusing the efforts of all the decision makers regarding all of the key-factors of the value. Out of the total alternative target-functions from the VBM concept, the maximization of the company value is chosen. Company value is determined by means of the future cash flows, and the new value is created only when the income obtained from capital investments cover the attracted capital expenses. However, within the management process, it is necessary to have the estimation capacity. As far as VBM is concerned, an instrument is necessary which allows the calculation of the value obtained following capital investment in the company. Thus, we can identify the main factors influencing the company value, as it is necessary to include these factors in the calculation of the indicator reflecting value creation – expenses for own and attracted capital and income generated by the existing assets. In the ‘80s and ‘90s several indicators appeared which reflected the value creation process. Some of the most known indicators are: TSR, EVA, MVA, SVA, CVA and CFROI. VBM assumes performance measuring instruments at different organizational levels: both at the level of the whole business and at project level; also contributing to a good internal communication within the company. In this article I shall present an analysis of the EVA indicator, the calculation method, the outlining of its advantages and disadvantages, exemplifying and comparing a series of measurements of the created value of the enterprise, based on the financial data of the company called Target Corporation Inc.

Keywords: Business Investment, Capital Accumulation, Capital Budgeting, Cost of Capital, Firm Investment, Firm Valuation, Fixed Asset, Investment, Investment Policy, Marginal Efficiency of Capital, Shareholder, Shareholding, Shares

2. ECONOMIC VALUE ADDED (EVA). INDICATOR PRESENTATION
EVA is a company performance measurement introduced in the corportive environment by General Motors in 1920 and then forgotten, until Stern Stewart Company; a consulting company from New York reintroduced it in the ‘80s, as a replacement for the traditional value measurements. [2]. It was found that Economic Value Added was the most known instrument for measuring the managerial performance by means of the value created for the shareholders. In a INSEAD[8] research, it was ascertained that over 47% of the companies applying the principles of the value-based management use EVA as the main performance indicator. EVA is an indicator measuring the corporate performance in a different manner from that of the other indicators, used until it was introduced on the market, because it suggests profit adjustment by the capital cost. [2]
EVA = NOPAT adjusted - CMPC * CT adjusted
or
EVA = CT adjusted * (adjusted return of the capital - CMPC)

NOPAT is the net operating profit after taxes and it’s calculated as follows:
CMPC - Weighted average cost of capital
CT = Total capital
NOPAT = sales – operational expenses (depreciation included) – corporate income tax

Capital represents the operational capital of the company and it is calculated as the sum between the need of operational working capital (operational NFR = operational current assets – current liabilities without interest) and the net value of the tangible assets (tangible assets value – depreciation).

To properly express the firm’s situation and to make easier the comparison between the EVA of different companies, Stern Stewart suggests a series of adjustments of the accounting data, presented within the exemplification of the calculation manner.

It is considered that EVA offers a multilateral perspective on the company performance. Managers are guided to focus their attention not only on the profit and loss account, but also on the balance sheet. EVA is considered better than TSR because it offers a basis for comparison between companies, as it also uses in the calculation the capital cost, which also takes into account the risk degree of the company[3].

The results obtained by means of the economic value added method answer the question regarding the capital use efficiency and company value increase.

We shall analyse three variants of the relationship between the value of the EVA indicator and investors’ behaviour[4]:

1) If EVA>0, the relevant company or its departments gain more than the weighted average value of the capital, therefore value creation occurs. The positive value of the EVA value shows an efficient use of the capital and represents an index of company value increase.

2) If EVA=0, the analysed company or its departments gain exactly as the capital cost level, meaning that the relevant company has the same value as in the moment investments were made in it. This is a notable feat, because the company capital owners recovered their investment and compensated the assumed risk.

3) If EVA<0, the analysed company or some of its departments do not recover the capital cost. Investors could have obtained a higher profit elsewhere, with the same risk. The negative value of the EVA indicator shows an inefficient use of the capital and a decrease of the company value.

Moreover, the formula suggested by Stern Stewart contains a multitude of adjustments, to eliminate the influence of the accounting policies. In this case, calculations become more complicated, but, at the same time, the obtained results are closer to the real value of company performance. Therefore, the first step in applying EVA is to decide the necessary adjustments to the accounting data. The main adjustment could be: recognizing research-development expenses as capital investments, recognizing other expenses as investments, adding depreciation to the profit, tax adjustment, and balance sheet adjustments. To decide what adjustments to make, first it should be decided that they are material, namely that they influence the value for the shareholders.

3. EXEMPLIFICATION FOR THE TARGET CORPORATION[6]

To exemplify, the first formula mentioned above was chosen.

EVA calculation started from the operational profit from the profit and loss account of the company, to which the current depreciation and the advertising expenses were added, and the taxes owed to the state were deducted. To calculate the invested capital, it was started from the total liabilities from the balance sheet (table 2) of the company, adding the sure debts for operation leasing contract, not recorded in the balance sheet, and the advertising costs, and deducting the advance expenses. Below, we shall make a detailed presentation of the adjustments made to NOPAT and to the total capital, as well as the reason for making such adjustments.

EVA represents the earning in excess of the operational activities [1] and, in this regard, to calculate EVA, we should take into account only the balance sheet values which are related to the operational activity.

In the calculation of the adjusted NOPAT for the Target Corporation, we did not take into account the expenses related to interest for loans or leasing, because NOPAT must be a figure before the financing expenses are charged. They will be taken into consideration in the whole cost of the capital. If they had been deducted from the income, it would have meant to take two times into consideration the borrowed capital cost in EVA calculation.

Also, exceptional incomes (such as those from share transactions, asset selling or asset evaluation method change) were not taken into account in NOPAT calculation. The reason would be that the company management should...
focus on the long-term influence activities, and not on the short-term advantages from transactions which will not be repeated. The expenses related to depreciation or provisions were neither taken into account (namely they were added to neutralize those expenses already deducted from the profit), as it is desired to remove the influence of the various accounting practices on the company results. The expenses related to research-development, advertising or employees’ training were not taken into consideration too. Stern & Stewart suggest they are considered as capital investments. The EVA model suggests that goodwill amortization should not be taken into consideration either (namely it should not be added to NOPAT). However, Target Corporation does not make a goodwill amortization, and, therefore, it was not necessary to adjust the profit for that reason. The company evaluates the goodwill annually or whenever it is considered that an event occurred which could influence the market value of the goodwill, to establish its market value. The assets purchased by financial leasing are shown in the company assets, and, therefore, they are not adjusted. NOPAT should be adjusted by adding the adequate depreciation corresponding to the assets purchased by financial leasing. The assets purchased by operational leasing have not been recorded in the company’s assets yet, even if the company uses them. Practically, they represent used but not recorded capital. Financial leasing is recorded as a long term debt, but operational leasing not even if it represents funds owed by the company for sure. Thus, financial instalments are influenced, because the recorded used capital is smaller than the one actually used. For them are considered annual expenses as leasing instalments, which are deducted from the income. Therefore, the amounts representing the rest of the payment for the operational leasing contracts, not recorded in the balance sheet, updated, will be included in the capital used by the company, for EVA calculation. Advertising expenses were also added, as it is considered that they have effects during several years and they contribute to activity development. This adjustment is mainly useful for the companies which do not use many investments in assets, but they base their activity on research or development, employees’ training and advertising. The calculation of the used capital uses information both from the assets and from the liabilities parts of the balance sheet, because this way it is possible to make a better difference between the capital necessary for operational activities and the one necessary for non-operational activities. The calculation starts from the balance sheet liabilities. From them, the non-operational assets are deducted but also the operation assets not yet introduced in activity (such as the advance expenses). Also, securities are not taken into consideration. They are differentiated from the interest in other companies by the fact that they are held for short periods of time and they can be sold anytime without influencing the operational activity. [2] CMPC was obtained from Professor A. Damodaran’s estimations.[7]

### Table No.2: EVA calculation for Target Corporation

<table>
<thead>
<tr>
<th>Amounts in mil. $ as of January 31</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted NOPAT</td>
<td>14149</td>
<td>14304</td>
<td>16720</td>
<td>18566</td>
<td>20848</td>
</tr>
<tr>
<td>Net operational profit (= sales – operational expenses)</td>
<td>11579</td>
<td>13295</td>
<td>15025</td>
<td>17091</td>
<td>18530</td>
</tr>
<tr>
<td>+ Current depreciation</td>
<td>4660</td>
<td>4974</td>
<td>5615</td>
<td>6102</td>
<td>6880</td>
</tr>
<tr>
<td>+ Advertising costs</td>
<td>574</td>
<td>618</td>
<td>966</td>
<td>1400</td>
<td>1600</td>
</tr>
<tr>
<td>- Corporate income tax</td>
<td>2613</td>
<td>4539</td>
<td>4538</td>
<td>5593</td>
<td>5962</td>
</tr>
<tr>
<td>Adjusted TC</td>
<td>91052</td>
<td>102730</td>
<td>113187</td>
<td>128737</td>
<td>146913</td>
</tr>
<tr>
<td>Balance sheet liabilities</td>
<td>83527</td>
<td>94850</td>
<td>104912</td>
<td>120154</td>
<td>138187</td>
</tr>
<tr>
<td>+ Advertising costs</td>
<td>1600</td>
<td>1400</td>
<td>966</td>
<td>618</td>
<td>574</td>
</tr>
<tr>
<td>- Advance expenses</td>
<td>1303</td>
<td>726</td>
<td>1356</td>
<td>1889</td>
<td>2557</td>
</tr>
<tr>
<td>+ Sure debts for operational leasing contracts not recorded in the balance sheet</td>
<td>8054</td>
<td>7988</td>
<td>8665</td>
<td>9072</td>
<td>9683</td>
</tr>
<tr>
<td>CMPC</td>
<td>9.21%</td>
<td>7.54%</td>
<td>7.72%</td>
<td>8.16%</td>
<td>8.53%</td>
</tr>
<tr>
<td>Capital cost</td>
<td>12532</td>
<td>10505</td>
<td>8738</td>
<td>7746</td>
<td>8386</td>
</tr>
<tr>
<td>EVA</td>
<td>5763.11</td>
<td>6558.15</td>
<td>7981.96</td>
<td>8061.06</td>
<td>8316.32</td>
</tr>
<tr>
<td>EVA/Capital</td>
<td>5.66%</td>
<td>6.26%</td>
<td>7.05%</td>
<td>6.38%</td>
<td>6.33%</td>
</tr>
</tbody>
</table>

Source: Own calculations
For a better exemplification, let us calculate the EVA for the year 2008. For the adjusted NOPAT calculation, it was started from the net operational profit of USD 15025 mil., to which the current depreciation of USD 5615 mil. and the advertising costs of USD 966 mil. were added, and the corporate income tax was deducted. Thus, an adjusted NOPAT of USD 15720 mil. was obtained. The calculation of the total adjusted capital started from the balance sheet liabilities, to which the advertising expenses (now considered as capital investments) in amount of USD 966 mil. and the sure debts for the operational leasing, in amount of USD 8665 mil. were added, and the advance expenses in amount of USD 1356 mil. were deducted. Thus, a total adjusted capital of USD 113187 mil. was obtained. The total adjusted capital was multiplied with CMPC, thus obtaining the used capital cost in amount of USD 8738 mil. $. Thus capital cost was deducted from the adjusted NOPAT, obtaining EVA in amount of USD 7981.96 mil.

From the EVA calculations shown above it results that Target Corporation creates value for the shareholders. Even if more pessimistic figures are used for the capital cost, EVA shows that Target Corporation created value each year, and even incrementally[6]. This is in opposition with the results obtained by calculating TSR.

A problem related to EVA is that it cannot be used as a comparison basis between the companies, as EVA depends on the company size and on the used capital. For example, a smaller but more efficient company can have a lower EVA than a bigger but less efficient company. However, this shortcoming is removed if we use the EVA/Capital indicator. In this case, the company with a higher EVA/Capital is more efficient. But EVA is a very good indicator for guiding managers’ decisions. It is considered that the firm creates value as long as EVA is positive. Even if investments are made in a project which has a lower ROI than the other projects of the company, as long as EVA is positive, the firm creates value. At the same time, it is a good instrument for finding the factors which influence the value for the shareholders. By means of a sensitivity analysis, the managers can find those factors the company value is the most sensitive at, namely the material factors, and they can concentrate on the improvement of those factors.

The rate of return set by the investor (shareholder, capital owner) represents a minimum level of the profit that must be obtained from the invested capital, taking into account the investment risk of the company. Therefore, this minimum level of profitability could be obtained by an investor if he used the relevant capital in an alternate field of business, but with the same risk level. The purpose of managing the company value based on the EVA indicator is to create for the investor a company value level at which the operational profit is higher than the average cost of the used capital, in money equivalent. In other words, the added value appears in case the company asset profitableness is higher than the average expenses, adjusted (weighted) with the capital. Thus, the meaning of using EVA is the fact that the investors should be remunerated for the undertaken risks. If this thing does not happen, then the shareholders or investors do not receive their real profit, and they do not consider any more that the investment activity of the company is profitable.

Economic value added reflects the level of the used capital and the absolute gain of shareholders’ profit. Therefore, EVA equals the difference between capital profitableness and capital expenses, multiplied with the amount of the invested capital.

Economic value added has some obvious advantages compared to the accounting profit, which is derived from activity result evaluation. The companies which create a high economic value added must bring significant incomes to their managers. EVA is an important indicator for the managers: invest just in case the level of the profit obtained following capital investment is sufficient to recover capital related expenses. EVA encourages the managers to take safe and sure investment decisions. The use of EVA gives power and responsibility to the mangers to increase the level of this indicator, which is possible in two ways: increasing the profit or diminishing the invested capital[3].

A big disadvantage of the economic value added indicator is the fact that it does not reflect a forecast of the future cash flows. EVA indicator is calculated on the basis of the profit for the previous year, which makes the managers achieve investments with fast effects and does not bring a benefit to the projects in which the investment is recovered during a longer period of time.

### 4. OVERALL CONCLUSIONS

The conclusion is that the EVA indicator is not an infallible and generally valid indicator and, before choosing this indicator for the measurements to be used, the companies and the investors should identify first of all which measurement best represents their interests towards the exterior. And the passing of a company from an income-based management to a value-based management will have significant effects on the aspects of the organization’s life.

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