VALUE BASED MANAGEMENT WITH A PRACTICAL EXAMPLE

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Abstract:
Nowadays firms perform their activities in a business environment which requires them to implement such a system of indicators that will better illustrate value and profitability. Financial indicators that are now used by firms to follow their profitability and value creation are inconsistent with the mechanism of capital markets and with what market considers to be crucial for determining value. Constantly bigger efficiency in the capital markets requires a more efficient allocation of capital within firms. Therefore a new system of indicators, as for example VBM (Value Based Management) which better reflects opportunities and threats, is urgent and needed. Within the VBM (Value Based Management) framework the author especially focuses in this paper on the economic value added (EVA) and on the cash value added (CVA). In the theoretical part, he analyses and estimates advantages and disadvantages of both indicators, at first by comparing them with standardized financial indicators and then by comparing them between each other. In the empirical part, the two indicators are applied on a selected firm (a manufacturer in the automotive industry). At the end of this paper, the author emphasizes and advocates the thesis that a simultaneous choice of both indicators, i.e. EVA and CVA, has an important effect on managerial resources and on the selection of a strategy as well as on the question of how investors (owners) estimate an individual firm as their potential investment.

Keywords: management, value based management, economic value added, cash value added
1. VALUE BASED MANAGEMENT

Nowadays firms perform their activities in a business environment which requires them to implement such a system of indicators that illustrates value and profitability in a better way. Accounting systems, as we have known them so far, are inadequate and do not respond to a growing demand for efficient capital markets and the demand of owners. Constantly increasing efficiency in capital markets requires a more efficient allocation of capital within firms. Therefore, a new system of indicators, such as Value Based Management (VBM) - management on the basis of value, and management to increase (market) value (Dimc, 2005, p. 6), which reflects the opportunities and threats much better is urgent and necessary. Value based management includes the following indicators: Economic Value Added (EVA)

Indicators currently used by firms to follow their profitability and value creation are not consistent with the mechanism of capital markets and with what market considers being key in determining value. Therefore, we must build on management that is based on value (VBM). For internal financial management firms should use VBM instead of an accounting system. Accounting is, of course, required for fiscal reasons and to control business in terms of legislation, but it does not contribute to improving the quality of management structures and all those involved in value creation. For the sake of understanding and managing business operations it is therefore necessary to rely on VBM within firms.

According to Weissenrieder (1998, p. 3) a firm may be illustrated by two most important areas: the first is directed at the owners (capital market) and the other at the buyers (customers). The latter represents a business reality; these are activities that take place in a real business world. Firms have to manage these activities as effectively as possible to maximize value for shareholders. At the same time firms have to be able to complete these activities in such a way that they satisfy market expectations. This may only be achieved on the part of a firm’s management by simulating the reality with the mechanism of the capital market. By making a financial exemplification of a business reality they acquire the necessary management skills. This gives them a relevant feedback which they need to improve their business activities.

Weissenrieder (1998, p. 4) says that the boundary between a business reality and the mechanisms of capital markets can be quite rapidly abused, similarly as it can be abused with financial statements. With this every opportunity to prepare for effective corporate management is lost. They become completely misinformed unless they perceive and comprehend a business reality on the basis of VBM. A firm must operate on a strategic feedback loop which means a constant evaluation of strategies in which doing management carry out the evaluation by using information from the strategies in order to make necessary adjustments in their firms later. There are a lot of cases in firms where the scope of a business reality does not work as it should, but there are very rare cases where it functions efficiently. Financial simulation of a business reality, of course, has to take into account a discounted cash flow. According to Morin and Jarell (2001, p. 220) value derives from three broad areas of decision-making: strategic, financial and corporate. Strategic determinants include production and marketing strategies and portfolio planning. Financial determinants include the optimization of capital structure and risk management. Corporate determinants include governance, mainly rewarding executive managers and business evaluation.

VBM is a relatively simple framework for setting objectives of those business decisions that add an economic value to a firm in both short and long term. Several approaches to quantifying a corporate value exist and they all have roots in a discounted cash flow model, since this is also the method and manner used by investors and capital markets to actually value their firms and securities. The value of every firm is a function of expected future cash flows correspondingly discounted with relation to risk. This is nothing new, as the discounting method has been used for decades. However, VBM puts this discounting to good use and as an approach extends it to business operations as a whole, thus contributing to strategic decisions about the value and according to Morin and Jarrell (2001, p. 220) it establishes an increase in these values as a basis for determining a corporate responsibility.

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1 EVA is a term coined by the consultancy firm Stern Stewart, which has done much to develop and promote the concept (Brealey, Myers and Marcus, 2001, p.503).
According to these authors, the main factors that determine or influence a corporate value are: range and ability of a firm to generate a return that is greater than its cost of capital, growth reflecting both the volume of invested capital and its positive trend of expansion and cost of capital which among other things also reflects a risk of a firm. These factors and their interactions have a tremendous impact on a successful business strategy, management remuneration and evaluation of business operations. Last but not least management is thus helped to detect hidden leadership opportunities for further value creation.

A corporate value which is measured by a free cash flow, discounted at a time and subject to risks, has become popular and widespread as an excellent measure of value creation. Traditional accounting-based criteria such as earnings per share (EPS) and return on equity (ROE) are more focused on past performance than on future cash flows and therefore may not reflect value factors pursued by investors. While these two criteria are in no dependence with the actual value creation, according to Morin and Jarrell (2001) VBM on the other hand provides management with such a link between their actions and strategies that are in the best interest of shareholders.

1.1. Economic value added

Economic value added (EVA) is a model that relies on a firm’s accounting. Its mechanism is therefore related to accounting:

\[
\text{Net sales revenue} - \text{Operating Expenses (= costs)} - \text{Taxes} = \frac{3}{=} \text{Operating profit}
\]

\[
\text{Operating profit} - \text{Financial requirements (= costs of financial resources)} = \text{EVA}
\]

The capital base of EVA is formed by a balance sheet:

\[
\text{Balance sheet} \times \text{WACC} = \text{Financial requirements (= costs of financial resources)}
\]

"Financial requirements" are calculated as defined assets (adjusted balance sheet), multiplied by the appropriate WACC.

Although the advantage of the EVA concept as an indicator, which is here still asserting itself, lies in its long-term orientation while taking into account the overall capital cost (Bržan, 2008, p. 5), according to investors, quite some errors appear in accounting (Stewart, 1991). They need be corrected in order to simulate cash flow. Disadvantages exist primarily in the valuation of inventories, depreciation, revenue recognition, capitalization and depreciation of R & D activities, marketing, education, restructuring costs, acquisitions premiums, and so forth.

EVA should be a framework for VBM (value-based management). Is it really? This depends on how well this framework simulates the business reality from the point of view of shareholders, i.e. the reality of financial markets. If it is supposed to be simulated closely, a number of adjustments in accounting are required. And even if we succeed in performing as many adjustments as required by the EVA (original EVA author Bennett Stewart identified as many as 164 of them) - in practice, of course, this is a bit more difficult - EVA will still not be an ideal indicator. EVA measure is implemented in firms mainly for two reasons:

a) Its objective is to extend a firm’s organizational knowledge and the understanding of its process’s financial implications, which should improve the decision making process and thereby eventually increase a firm’s value.

b) It can be easily understood.

1.2. Cash value added

Weissenrieder (1998, p. 5) defines the cash value added (CVA) as a net present value model which classifies the calculation of net present value at a time and investments into two categories: strategic and non-strategic. Strategic investments are those whose goal is to create new value for shareholders such as firm’s growth. Non-strategic investments are those that maintain the value created by strategic ones. A strategic investment, such as, for example, an investment in a new product development or an investment in the acquisition of a new market, is followed by several non-strategic. A strategic investment may be tangible or intangible; traditional view of whether an investment is expenditure or not is here irrelevant. Anyway, all that in a firm counts as cash expense which is associated with creating new values and can be defined as a strategic investment.

Strategic investments form a capital base in the CVA model, because the financial demands of shareholders (i.e. a reward for invested money) should come precisely from the entrepreneurial ventures, from strategic business decisions, but not, for example, from office furniture. This means that all other investments that are intended to preserve the original value of strategic investments have to be considered as "costs" such as, for example, buying new office equipment.

How is thus capital base in the CVA calculated? The operating cash flow demand (OCFD) is calculated for each strategic investment (the first factor out of four, which defines value). The sum of the required operating cash flow of every strategic investment in each business unit is the capital base of this business unit. OCFD is calculated as cash flow (the second factor out of four which defines the value). These are the same amounts in real values of every year. If it is discounted at the appropriate cost of capital (the fourth factor out of four which defines value), we will get net present value equal to zero for a strategic investment during its economic lifetime (the third factor out of four which defines the value). OCFD is a real annuity, adjusted to the actual annual inflation (not average inflation). If strategic investments are supposed to create value, the operations cash flow (OCF), which is a cash flow before strategic investments, but after non-strategic investments, has to cover OCFD.

OCFD is in no way predictive of what would have to be a future OCF. It is merely a common benchmark for future cash flows. OCFD is "fixed" in current prices during the economic lifetime of an investment, since this is the only way we can illustrate financial logic. Our understanding of how this is related to cash flow of a business unit or an entire firm could be paraphrased by business logic. It is difficult and sometimes even impossible to understand business logic unless we have a constant benchmark at current prices (we will see this later). A strategic investment creates value if at the time period OCF is higher than OCFD which can according to Weissenrieder (1998, p. 5) be presented as follows:

\[
\begin{align*}
+ & \text{ Net sales revenues} \\
- & \text{ Costs} \\
\hline
= & \text{ Operating profit or loss (excess of income over expenditure)} \\
+ & \text{ Changes in working capital} \\
- & \text{ non-strategic investments} \\
\hline
= & \text{ Cash flow from operating activities} \\
\hline
- & \text{ Required cash flow from operating activities} \\
\hline
= & \text{ Cash value added (CVA)}
\end{align*}
\]

CVA shares common origins with EVA and it represents value creation from the point of view of shareholders. It can be shown for different time periods. It can also be expressed as an index (Ottosson, Weissenrieder, 1996, p. 6):

\[
\text{Cash flow from operating activities} \\
\hline
\hline
\text{- Required cash flow from operating activities} = \text{ CVA index}
\]

Required cash flow from operating activities

CVA is based solely on cash flow.
2. ADVANTAGES OF EVA AND CVA OVER OTHER INDICATORS OF PROFITABILITY

Conceptually, both EVA and CVA as measures (indicators) of value creation are better than accounting gains, because they take into account the cost of capital and therefore also the risk of company’s operations (Lehne & Makhija 1996, p. 34). EVA provides a good measure of the extent to which the firm has added to shareholder value (Brigham and Houston, 2004, p. 56). EVA and CVA are constructed in such a way that their maximization can be set as a goal. Traditional measures do not work like that. Therefore, for example, maximizing accounting gain or accounting rate of return does not lead to the desired outcome. Later on we try to briefly highlight the benefits of EVA and CVA as compared to conventional performance criteria (indicators).

Return on equity is a very general and widely used performance indicator. Different firms calculate this indicator using different formulas and also name it differently, for example, return on investment (ROI), return on invested capital (ROIC), return on capital employed (ROCE), return on net assets (RONA), etc. The main disadvantage of all these rates of return lies in the fact that maximizing the rate of return does not mean maximizing return for shareholders. Firm’s operations should not be based on or guided by the objective of maximizing the rate of return. As a relative indicator, which takes no account of risk, ROI cannot guide operations correctly. Consequently, the ROI-based capital can be invested or allocated incorrectly. In particular, ROI neglects (ignores) the exact requirement that the rate of return should be at least as high as the cost of capital. Secondly, the ROI indicator does not admit that shareholders’ wealth is not maximized when the rate of return is maximized. Shareholders want the firm to maximize the absolute return over the cost of capital and do not wish it to maximize the percents. Firms should not ignore projects that bring more than is the cost of capital simply because their return may be lower than the current return of a firm. Cost of capital is a much bigger hindrance than the current firm’s ROR. Hočevar (2002, p. 91) sees the advantages of EVA criteria over the ROI indicator also in comparative judgment and planning.

The difference between EVA and ROI is actually the same as the difference between NPV (net present value) and IRR (internal rate of return). IRR represents a good approach to evaluating investment opportunities and investors should always take into account such an opportunity discount factor which conveys best use of resources with the same risk (Tajnikar et al, 2001, p. 12), but they should not give priority to one investment project over another with regard to IRR.

Mäkeläinen (1998, p. 25) deems it to good to know that in corporate control EVA and CVA (as well as NPV) go hand in hand, just as ROI and IRR. The first three show the effects on shareholders’ wealth, while the other two show the rate of return. There is no reason to abandon ROI and IRR. They are in fact appropriate and illustrative indicators which tell us about rate of return. IRR can always be used in conjunction with NPV in investment calculations while ROI can always be used with EVA and CVA in evaluating business operations. We should not, however, pursue the objective of maximizing IRR and ROI, and base our decisions on these two criteria. IRR and ROI give us additional information, although all decisions could be made without them. Maximizing rate of return (IRR, ROI) is not important if the objective is to maximize returns for shareholders. Mäkeläinen believes (1998, p. 25) that EVA and CVA (as well as NPV) should play a leading role in corporate control while ROI and IRR are supposed to play the role of giving further details.

In the case of ROE which measures profitability of ordinary equity (Tekavčič, 1999, p. 303), we come across the same flaws as with ROI. Risk is not included and therefore there is no comparison. ROE also does not tell the owners if a firm creates or diminishes their property’s value. With ROE this deficiency is more pronounced than with ROI, because a simple increase in the leverage (debt) can increase ROE. As we know, a deterioration of solvency does not always improve financial position of shareholders due to increased (financial) risk. Just as ROI and IRR the return on equity (ROE) is likewise an informative indicator and should not be used in firms for conducting the operations.
3. WHY CVA FOLLOWS PROFITABILITY AND VALUE CREATION BETTER THAN EVA

Someone might think that EVA and CVA are similar. In theory they are, but not in reality. In theory, they are alike. As we know, in reality only a few corrections and adjustments are carried out to calculate CVA (Ekar, 2000, p. 81). According to Weissenrieder (1998, p. 22) they are therefore not similar in real life.

The first of the two adjustments which are necessary in order to use CVA as a relevant criterion for decision making relates to the so called non-strategic investments. Why should we not, say, office furniture, which is included in the accounting data and financial requirements of EVA include into financial needs of the company? Because owners of firms are not interested in this. But they are very interested in which strategies create value and which do not.

Why should management of a firm be directed by accounting principles rather than business logic in making investments? Some costs associated with development, research, and marketing should be treated and regarded as an investment in firms, and vice versa, certain payments which are today regarded as capital expenditures should take their place among running costs.

Traditionally, accounting has a fairly sharp view of what is an investment. The confusion in today's business environment, where cash expenditure for a machine is far from achieving success by selling a product or service in the global market, has many faces. All of a sudden, "hidden values" are found within firms and those holding responsibility in firms rush looking for the value of intangible assets (intangible investments) and intellectual capital, rather than triggering a change in the basic economic framework of a firm. Can we really be surprised by the fact that firms often create money out of investments that are not listed in their balance sheets? Hopefully not. The balance sheet is produced by accountants with regard to the relevant legislation and accounting standards, not business reality and business logic. Therefore, discussions regarding the nature of the overall strategic assets of a firm (tangible and intangible) are very important and should according to the previously mentioned author (Weissenrieder, 1998, p. 27) be focused on relevant topics.

Value of the firm is created by long-term and short-term strategic assets. The firm's managers have to understand their mutual relationship well, because only on this basis do the business reality and reality in financial markets join. Relying merely on the financial concept of investments only increases the confusion.

Effective value-based management (VBM) structures strategic assets to intangible and tangible assets and makes no distinction between the two. Thus, capital will have its price or cost and all of a sudden a debate about the value of the capital structure (strategic assets) will become important. When comparing the value of strategic assets with the market value of equity, we must be careful because the latter will not include only the present value of the existing strategic assets, but also the net present value of future strategic investments. Net present value of future strategic investment may be positive or negative.

If we include non-strategic investments in cash flow from operations instead of activating them as investments, financial requirements will be very close to the required cash flow of the CVA indicator. This is followed by another necessary adjustment.

After all this we can ask ourselves a simple question: why use EVA with all those necessary adjustments if CVA is simpler to compute. It is not possible to measure historical performance and value until CVA is developed. Now that we have developed it, firms have strategic and operational tool that focuses solely on strategic investment (tangible and intangible assets), their cash flow, their economic life and cost of capital. In such firms we can now link their business reality with the reality in financial markets.

Let's go back to the process of value-based management (VBM). To achieve a successful VBM, we have to improve the three already existing functions. A process is successful if it increases wealth for shareholders (value of shares and dividends).
1. A firm has a properly oriented concept of value-based management (VBM) if management focus on important issues, if they rely on four factors that determine value: strategic investments (both tangible and intangible assets), their cash flow from operations, their economic lifetime and in their cost of capital. Accounting, unfortunately, does not focus on these four factors. EVA can to some extent help us (it is well designed in theory), but we are still in accounting.

2. The concept of VBM, which is based on financial theory, gives a firm an opportunity to increase the quality of financial analysis. EVA offers a firm a little better analysis, but is still far from what should in the real world be our ambitions.

3. The two functions will have an effect on the intrinsic value of a firm, which will in the long term have an impact on market value. If a firm is to equate its intrinsic value to the market value at a time, then the function of investors’ (owners’) relationships should also rely on value. The following issues become important in a firm: allocation of capital (what are strategic investments for a firm), investment strategies, information about areas of profitable growth, analysis of cash flow from operations, and others. Some analysts will not immediately perceive this information, because they are not yet observing the market mechanism today, i.e. discounted cash flow. The latter will in future become a key factor. Discounted cash flow should much better fulfill the requirements of the shown process than those concepts which rely on financial statements. Some firms will still choose the criterion measure of EVA instead of CVA because their management have smaller ambitions with the VBM process. If ambition in a firm within the framework of the value of property for shareholders is smaller, then EVA may be a perfectly appropriate criterion. Making up to ten corrections and adjustments in accounting is not such a difficult task. Some proponents of the EVA criteria (Stewart, 1991) suggest that EVA is all we have to know and that it is also simple. It is simple because it draws data from the accounting. Some authors, as for example Korošec (2001, p. 115) go a step further and suggest that for the assessment of achievements it is advisable to use also other long-term criteria in addition to the EVA amount, as well as non-financial criteria. We also want to somewhat move away from the latter. CVA is also simple if we have any knowledge of corporate finance. CVA focuses on relevant factors, while EVA does not. CVA is more correct. We simply cannot meet our expectations with the criterion of EVA, when our ambitions for the quality of information from our VBM process are bigger, or if we want to change a firm in the direction of understanding the meaning of "property value for shareholders." In other words, if we have to make a number of accounting adjustments, then we according to Weissenrieder (1998, p. 37) certainly benefit more if we use a concept that is based on cash flow. In this case accounting adjustments are no longer needed. We pursue the discounted cash flow, wherever it appears.

4. CASE STUDY

In the empirical part of my paper calculations of both EVA and CVA performance indicators are applied on a concrete economic entity. I picked a big Slovenian company (it wishes to remain anonymous) who is a parts manufacturer for the European automotive industry. It is the X company with 1050 employees and annual net sales of approximately € 400 million in the last two years. The company has since more than last decade on recorded a relatively high and dynamic growth (an annual average of more than 20%), but in the last quarter of the year t it was halted by the economic recession.

Because of the space limit I skip showing the entire process of calculating the indicator EVA and show only the methodology for computing CVA for the selected company for a five year period from year t-4 to year t, and then at the end of this chapter I summarize key findings on the basis of the results.

4.1. CVA calculation

CVA = NOPAT (on cash basis) - Cost of Capital

4.1.1. NOPAT on cash basis

According to Young & O'Byrne (2001, p. 438) it is as follows:
Cash-based NOPAT = NOPAT (Table 1) + Depreciation (as a write-down of assets in the Income statement) + Changes in other long-term liabilities
Table 1: Calculation of NOPAT

<table>
<thead>
<tr>
<th></th>
<th>t-4</th>
<th>t-3</th>
<th>t-2</th>
<th>t-1</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>A NOPAT</td>
<td>8,844</td>
<td>8,993</td>
<td>8,627</td>
<td>10,023</td>
<td>16,308</td>
</tr>
<tr>
<td>B Depreciation</td>
<td>12,040</td>
<td>12,693</td>
<td>13,346</td>
<td>14,689</td>
<td>13,691</td>
</tr>
<tr>
<td>C Changes in other long-term liabilities</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>A+B+C cash-based NOPAT</td>
<td>20,884</td>
<td>21,686</td>
<td>21,973</td>
<td>24,713</td>
<td>29,999</td>
</tr>
</tbody>
</table>

Source: The income statement and balance sheet of the X company for the period from year t-4 to year t

Cost of capital

Cost of capital = WACC (see calculation of EVA) x cash-based invested capital

Cash-based invested capital = Unadjusted Invested Capital + accumulated assets depreciation (the sum of value adjustments)

Unadjusted invested capital is in its basis capital employed without any adjustments. Such was used in the calculation of EVA.

Table 2: Cash-based invested capital

<table>
<thead>
<tr>
<th></th>
<th>t-5</th>
<th>t-4</th>
<th>t-3</th>
<th>t-2</th>
<th>t-1</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Unadjusted invested capital</td>
<td>142,707</td>
<td>144,771</td>
<td>170,182</td>
<td>215,378</td>
<td>253,064</td>
<td>263,068</td>
</tr>
<tr>
<td>b Accum. assets depreciation (The sum of value adjustments: NW-SW)</td>
<td>73,522</td>
<td>80,473</td>
<td>86,960</td>
<td>97,518</td>
<td>109,217</td>
<td></td>
</tr>
<tr>
<td>a + b cash-based invested capital</td>
<td>218,294</td>
<td>250,655</td>
<td>302,337</td>
<td>350,582</td>
<td>392,285</td>
<td></td>
</tr>
</tbody>
</table>

Source: Internal data of the X company for the period from year t-4 to year t

The table below shows the calculation of the cost of capital:

Table 3: Cost of capital for the calculation of CVA

<table>
<thead>
<tr>
<th></th>
<th>t-4</th>
<th>t-3</th>
<th>t-2</th>
<th>t-1</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>a*b cost of capital</td>
<td>16,097</td>
<td>17,961</td>
<td>20,878</td>
<td>23,640</td>
<td>26,713</td>
</tr>
<tr>
<td>a cash-based invested capital</td>
<td>218,294</td>
<td>250,655</td>
<td>302,337</td>
<td>350,582</td>
<td>392,285</td>
</tr>
<tr>
<td>b WACC</td>
<td>7,37%</td>
<td>7,17%</td>
<td>6,91%</td>
<td>6,74%</td>
<td>6,81%</td>
</tr>
</tbody>
</table>

Source: Internal data of the X company for the period from year t-4 to year t

Thus we can now calculate the final value for CVA which is the difference between cash-based NOPAT and cost of capital:

Table 4: The CVA calculation

<table>
<thead>
<tr>
<th></th>
<th>t-4</th>
<th>t-3</th>
<th>t-2</th>
<th>t-1</th>
<th>t</th>
</tr>
</thead>
<tbody>
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<td>21,973</td>
<td>24,713</td>
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<td>17,961</td>
<td>20,878</td>
<td>23,640</td>
<td>26,713</td>
</tr>
<tr>
<td>A - B CVA</td>
<td>4,787</td>
<td>3,725</td>
<td>1,095</td>
<td>1,072</td>
<td>3,286</td>
</tr>
</tbody>
</table>

Source: The income statement and balance sheet of the X company for the period from year t-4 to year t

4.2. Conclusive findings

Let us show both the calculated criteria of business performance, EVA and CVA, for our X company during the past five years in a joint table (Table 5).
Table 5: A review of EVA and CVA for the X company in the period from year t-4 to year t

<table>
<thead>
<tr>
<th>Indicator</th>
<th>t-4</th>
<th>t-3</th>
<th>t-2</th>
<th>t-1</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVA</td>
<td>1.720</td>
<td>1.331</td>
<td>-1.901</td>
<td>-837</td>
<td>2.893</td>
</tr>
<tr>
<td>CVA</td>
<td>4.787</td>
<td>3.725</td>
<td>1.095</td>
<td>1.072</td>
<td>3.286</td>
</tr>
</tbody>
</table>

Source: Table 8 and Table 12

We find that both the criteria for their absolute values differ one from another (largely due to consideration of depreciation in the calculation of CVA), but indicate approximately the same trend in changing business performance of an economic entity.

CVA has throughout the period from year t-4 to year t always been positive, while EVA was negative in both years t-2 and t-1. Those years have owing to exceptionally high growth of business in society seen a great increase in the demand for additional working capital. The company financed them by short-term borrowed resources, which resulted in an increase in the cost of debt capital. The relationship between the equity and total debt of the company also deteriorated, and its financial leverage increased. Depreciation as a result of increased investment in tangible assets (increase in production capacity, while technological upgrading) has also contributed to the increased lower value of the EVA indicator.

The comparison of the two time series shows that the business performance of our commodity producer in the automotive industry despite the relatively highly dynamic revenue growth in absolute and relative terms deteriorated in the years t-2 and t-1, but despite the economic crisis the last quarter of the year t saw a markedly improved business performance. The company despite almost the same volume of sales of its products in the European automotive market (approximately €400 million) over the years t and t-1 and even with slightly increased adjusted invested capital in the business year t achieved a relatively better business outcome as measured by the two criteria than the year before (t-1). Such a change can be attributed to a significant decrease in the prices of raw materials and components with unchanged selling prices of finished goods. These have decreased at the expense of so-called productivity which manufacturers of car parts have to grant to their customers in the amount of up to 5% every year.

Furthermore, the company in the second half of year t immediately embarked on cost reduction (cost cutting) based on the rationalization of its business. It reduced the stocks, took certain measures in collecting receivables (although most of its customers are fairly reliable payers), reduced short-term payables and made all its hired labor redundant, etc.

When examining CVA we should not overlook the fact that its value will certainly slightly decrease in year t+1 (but not necessarily be negative), because the significant reduction in orders in the fourth quarter of year t (by about 30%) will strongly reflect in its value as soon as the first half of year t+1. The company has relatively long payment periods with its customers (more than 100 days on average).

A certain decrease in the value of EVA can also be expected in the company in year t+1. There are two major reasons for this: reducing the physical volume of sales in year t+1 by fifth and the effect of price indexation of raw materials with buyers with a certain delay in the reduction of selling prices of finished products. The decrease in the value of both indicators in year t+1 will undoubtedly be influenced by general economic conditions (recession).

We used a concrete example to show that EVA and CVA are relatively good alternative criteria of so called residual income statement of a company. CVA is designed in such a way that it tries to bring a company’s profit and cash flow together while still maintaining the advantage that EVA has over standard indicators of performance when considering the cost of capital. The main shortcoming of the CVA indicator lies in the fact that it can get us into a dangerous illusion, believing that cash flow is the only thing that matters in capital market, so we have to devise a measure right on it. Such thinking may be wrong, or as Young & O’Byrne (2001, p. 442) put it “money may be the king, but only in the form of the expected free cash flow”.

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5. CONCLUSION

For an ongoing strategic development of every economic entity measuring business performance is extremely important. Shortcomings of traditional, standard indicators of business performance, while looking at business performance and a relationship between the attainment of the aims expressed by outputs from operations and set goals expressed by outputs from operations (Turk, 2002, pp. 791), have long been subject of many discussions of economists, especially because traditional indicators attempt to measure only past business performance. Any criterion of a firm’s profitability, which does not take into account the total cost of capital and which does not incorporate all the relevant information for strategic decision making, may be misleading. With the classic indicators of business performance short-term aspect is highlighted, which may, for example, quickly lead an economic entity to irrationally reduce investments in research and development. Thus the short-term business performance increases, but in the long run such economic entities run into difficulties and may fall out of the market.

These and similar shortcomings should be resolved by EVA and CVA measures. Their advantage lies in their long-term orientation and in their consideration of the total cost of capital. Managers who make investment decisions focused also on the opportunity cost of their own resources create a basis for increasing the value of owners’ property. Both criteria, EVA and CVA, reflect business performance in the temporal scope. They are indicators which represent a criterion for decision making, where emphasis lies on the added value on the invested resources of the owners.

The last decade and a half has seen academic discussions revolving around a single concept on which useful value of EVA indicator is designed. Questions are raised whether EVA is suitable enough as a benchmark, albeit at an indicative value it exceeds the standard indicators and is at the same time a simple and easily understood indicator. Let us only recall the problem of its adjustments, which must be implemented urgently if the indicator should have an indicative value. Odar (2001, p. 9) here warns us that users of accounting information that represent a record of past events and owners for decision-making need also more recent and other information, as they are usually focused on the future.

For this reason and also because of criticism directed at the accounting concept of EVA, where no notice is taken of future operations, the idea of CVA came into existence. All the louder are also the advocates of the so-called market value added (MVA). The aim of the value-based management (VBM) is to increase the value of an owner’s property as much as possible. But how can we measure this? Authorities with strong expertise in the field of VBM, such as, for example, Stewart (1991), thus introduced a MVA measure. They argue that owners’ property only maximizes by maximizing the difference between the total value of a firm and the total capital invested by owners - investors. This difference is named MVA. Grant (2001, pp. 4-5) in this respect even equates it with the present value of the future EVA. However, one of the major disadvantages of this criterion once again lies in complete adjustment of the balance sheet, when defining the capital in the calculation of MVA.

In conclusion of my paper I wish to emphasize that, despite numerous attempts in academic circles to find on the one hand, a comprehensive, integrated, all inclusive and on the other hand simple and easy to evaluate measure of business performance, no measure of a firm's performance is ideal, or such that we could with it, expressed in absolute values or in relative numbers, unambiguously and subject to many factors, stakeholders (mainly shareholders) and aspects, including the time dimension, measure business performance of a firm. EVA and CVA definitely represent a step further away from traditional or standard performance indicators. I think it is opportune to calculate both criteria simultaneously. If the former focuses more on past performance the latter strongly focuses on future, because the CVA concept is built on strategic investments. Although the criteria are based on two different concepts, EVA on accounting and CVA on finance, there is a strong correlation between the two. In the time series they both indicate the same trend in changing business performance. We have also seen this in our case. Their combined use may be quite a fortunate combination or such a system of indicators devised on the value-based management (VBM), which on the one hand expresses value and profitability, and on the other it reflects the opportunities and points out the dangers. Last but not least the owners - investors can with this strongly bind the management of the firm to striving to increase the value of their property.
I also advocate the thesis that a simultaneous selection of the two indicators has a significant impact both on management resources and strategy selection, as well as on the question of how investors (owners) evaluate a certain firm as their potential investment.

REFERENCE LIST

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