

THE ROLE OF VALUE-BASED INDICATORS IN THE PERFORMANCE OF THE ENTITY

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Abstract. *This article aims to address performance through the lens of the economic-financial analysis, namely through the analysis of traditional and value-based indicators. Classical indicators do not expressly reflect the creation of value, thus the study takes into consideration the EVA indicator. Therefore, the study focuses on verifying if a number of traditional indicators evolve in the same trend as the EVA indicator, comparing this way the indicators used to measure the value of the shareholders. The article analyses the dynamics of the indicators at S.C. ROMGAZ S.A. By comparing the results of the indicators and by analysing their trends, it is possible to accurately identify the factors that actually influence the value, so the entity can focus on improving them. The article highlights the impact of using the EVA indicator in optimizing the added value measurement. This article investigates the effectiveness of EVA use at entity level. The concept of economic added value is analysed because it takes into account the cost of the invested capital, not only the results.*

Keywords: performance, economic added value, return on capital, earnings per share

1. Introduction

The notion of performance will always be a dynamic concept around which there will be assumptions and contradictions. This is why there is a variety of definitions in the literature. A generally accepted definition cannot be adopted because of the particularities of each entity and the expectations of those involved. Therefore, a common definition would be subjective and variable. Measurement of value creation for shareholders has become a debated issue worldwide, becoming a paramount issue due to the fact that more and more entities have engaged in this process. No consensus has been reached regarding the measurement of the created value; however, the aspect that all entities share is that value for shareholders is the general objective of an entity. The new measurements, based on the economic model, were generated as a consequence of the fact that the traditional measurements based on the accounting model are not harmonized with the creation of value for shareholders. The general shared opinion of those who have written articles in this field is that the value for shareholders is created when the investment made brings income higher than the

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cost of the capital used. "The value for shareholders is created when the investment produces a rate of return higher than the rate of return required for the risk class of the investment" [1].

The research in the field is guided by the economic changes and is focusing on the following aspects: The concept of performance and role within the entity; Creating value - the main objective of the entity; Case study - Indicators used in performance measurement. In order to establish the strengths and vulnerabilities at entity level, such an economic-financial analysis plays a vital role [2-4]. Due to the creation of economic value, more and more entities have raised the issue of measuring this value. In the first part of the paper are presented the concepts of performance and value of the shareholders, while the second part exemplifies indicators of establishing the performance and added value using information from S.C. ROMGAZ S.A.

2. The concept of performance and role within the entity

Performance is not a static concept and its management is certainly a more complex process than its measurement. Performance cannot be separated from the activities that generate it, but especially from the activities that can be evaluated. The concept of performance has experienced several stages in its evolution, of which we mention: in the 1950s, performance was concerned with costs and benefits; In the 1960s, the emphasis was on achieving remarkable profit margins, the basic idea being that a significant profit margin ensures future financing, without being considered the efficiency of fixed capital; In the '80s, the focus was on obtaining the profit in absolute size, the way in which the assets are exploited being overlooked; In the 1990s, a key element in establishing performance is the cost of capital and cash flow, which allow for better management of resources and risk. Regarding the evolution of the concept of performance, the focus was on the use of indicators reflecting the process of value creation (E.V.A., M.V.A., C.V.A.) in the USA in 1990 and in Europe in 1995.

Financial reports reflect the financial performance, liquidity and solvency of an entity, the performance being summarized only in the analysis and interpretation of the indicators calculated on the basis of these reports. One of the sources of information for measuring performance is the Profit and Loss Account. The elements that influence the indicators in this component of the annual financial statements will also affect the economic-financial performance of the entity. Cash flow offers high support for performance evaluation and creation of value. The performance can be evaluated with the starting point from the economic-financial analysis of the accounting and economic information, the creation of value being reached to be measured. Integrating the concept of performance into the entity's evaluation could be the basis for creating value for all categories involved.

3. Creating value for shareholders

Creating value has become a goal of entities, which is precisely why the measurement of value becomes difficult to be found at the intersection of different opinions. The approach and reflection of the financial position of an economic entity through the indicators presented in the balance sheet is no longer relevant. The balance sheet (which ultimately presents nothing but the entity structure of the entity), the profit and loss account remained only a source of raw information for the implementation of models to express the position and financial performance in both practical and theoretical approaches. The intrinsic value is ultimately determined by the company's long-term ability to generate cash flows. Therefore, the intrinsic value can be measured by the updated cash flow [4]. A clear distinction needs to be made between accounting results and economic results [5]. Profitability is an old-fashioned concept and successive waves of innovation are the main driver of long-term performance in a new business [6]. Basically, we can discuss a difference between accounting profit and economic profit. The concept of accounting profit is generally based on the accepted accounting principles contained in the International Financial Reporting Standards. According to these standards, entities are required to record transactions and report their financial position and performance (IFRS No. 1).

Traditional value measurement tools do not take into account risk, and opportunity cost. Traditional indicators take into account the performance of the entity without taking into account the cost of invested capital. Basically, traditional indicators only consider the purposes of using capital. The new indicators take into account the short- and long-term benefits, which is an advantage over the traditional ones. The economic-financial analysis has often proven its limit in evolving but also in accurately reflecting the real performance of the entities. The consulting firm McKinsey & Co emphasizes that performance can be achieved by maximizing shareholder wealth. McKinsey & Co promotes the theory that economic profit is the basis of performance measurement. The economic profit is created only if the return on investment is higher than the cost of capital. The dynamics of the economic environment imposes the choice and the skilful and prudent use of the indicators in the economic-financial analysis.

The relationship of the profits obtained through the declared investment of the shareholders in a company is closely monitored by the financial community. Analysts follow several keys, measures that express the performance of the company in relation to the participation of the owners [5]. The return on the investments of the shareholders and the return on equity, reflects the profitability of the total investment, while the earnings per share measures the proportional participation of each investment unit in the earnings for the respective period. Hostettler considers "the present value of all net cash flows received by investors"

to be the value for shareholders [7-10]. The creation of shareholder value was introduced and was based on a variety of adjusted data as a key criterion for performance evaluation. A key element was the rediscovery of the cost of capital (which first appeared in the economic literature around 1890). Another key element was the rediscovery of the cash flow as an engine of value, either in the form of a free cash flow for judging an entire company, or of the net cash flows for investment proposals.

4. Indicators used to measure performance

We try to use indicators that do not contain easily manipulable information and whose results do not diminish the reflection of reality. A series of carefully established indicators whose values will be compared and analyzed could be the basis for removing the shortcomings related to performance reflection. Two categories of indicators are identified, namely: those based on accounting information (ROI, ROE, EPS, etc.), those based on information related to economic value, (TSR - total shareholder return - total shareholder return, EVA - economic added value - economic added value, MVA - market added value). The factors that influence the value can be easier to identify in the situation of using the second category of indicators, this being an advantage that will lead to their use to a greater extent.

Rapaport believes that only the cash flow below the nominal/reduced value (DCF - Discounted Cash Flow) can give an objective picture of the company's performance and the increase of shareholder value (Rapaport, 1998, p. 32). Each of the two approaches, the accounting profit and the economic profit through the specific steps can be used in the economic-financial analysis. The factors that influence the creation of the value for the shareholders have an accentuated dynamic and do not act individually. Rapaport identifies seven critical factors that determine the value of any company: sales growth rate, operating profit margin, additional investment in fixed capital, additional investment in working capital, tax level, and cost of capital and duration of value growth. At the operational level, these factors are too general and it is necessary to determine the factors at the micro level that influence the seven macro factors. In the literature, there appear a variety of instruments for measuring the value created for shareholders, but it seems that in general they are based on the comparison between the market value and the accounting value of the company or on the measurement of residual income [7]. There are real controversies between authors, but also between consulting firms, regarding the most appropriate indicator to measure the value created by an entity. There is no recognized model for measuring performance. However, there is a vast controversy regarding the measurement of value.

5. Value indicators

EVA (Added economic value), is calculated as follows:

$$\text{EVA} = \text{Net operating profit after taxes} - \frac{\text{The opportunity cost of invested capital}}{\text{capital}} \quad (1)$$

$$\text{EVA} = \text{Rexpnet} - \text{CI} \times \text{CMPC} = \text{Rexp} (1 - \text{Ipr}) - \text{CI} \times \text{CMPC} \quad (2)$$

Where:

$$\text{Rexpnet} = \text{net operating profit} \\ = (\text{operating income} - \text{operating expenses}) * (1 - 16\%);$$

$$\text{CI} = \text{invested capital} = \text{equity} + \text{long-term debt};$$

$$\text{CMPC} = \text{weighted average cost of capital}$$

In order to calculate EVA, some accounting adjustments are needed to be made, such as: recognizing R&D expenses as capital investments, depreciation added to profits, adjusting taxes. The cost of equity is determined by three factors: the risk-free rate of return, the risk premium at the market level (the expected return of the market portfolio) and a risk adjustment [9]. Taking into account the calculation method and the defining elements of the EVA, the entities can act with regard to the efficient use of the assets, maintaining a constant value of the profit or even an increase at the same time as the reduction of the invested capital. The current trend is intense analysis of the use of capital.

6. Economic added value (EVA)

A major advantage of this indicator is that it uses the cost of capital that takes into account the degree of risk of the entity. The cost of capital is the opportunity cost of the capital investment in a particular risk class [10-12]. An extremely important element in establishing value is the estimation of the cost of capital. Many Nobel Prizes for Economic Sciences have been awarded for research work on the cost of capital. EVA represents the extra gain from operational activities [10]. This guides us in taking into account the balance sheet information related to the operational activity. NOPAT must reflect the value before collecting the financing costs. EVA promises an effective way to measure and manage value, allowing performance analysis. Basically, it goes from studying accounting data to studying the dynamics of cash flows. EVA reflects economic profit.

The EVA indicator can improve the assets of the shareholders, and indirectly that of the clients and employees, being practically an indicator of financial performance measurement that will help in the financial management process of the entity. A common practice is to offer the administrators bonuses represented by a percentage of EVA. The low comparability of entities of different sizes is the limit of the EVA indicator. From the point of view of the use of accounting information as other indicators, there is a risk of manipulating the information

used [13]. The fact that the valuation is done from the owners' perspective can be seen as a limitation of the EVA indicator. EVA is characterized by the fact that its increase in value is directly proportional to the increase of the owners' welfare, which is not the case with the increase in gross profit or profitability rates.

7. Profit indicators

7.1. Return on Common Equity (ROE)ROE

The most common rate used to measure the profitability of the owners' investment is the relation of the net profit with the own capital or the total investment of the shareholders. The net profit no longer requires adjustments because it has already been reduced including any interest paid to creditors. The impact of non-current events such as restructuring and major accounting changes and adjustments should not be overlooked. The net profit is the residual result of the operations and belongs entirely to the holders of common and preferential shares. Only shareholders holding joint stock have a claim on the remaining profit after the dividends of the preferred shares have been paid. The purpose is to analyze a profitability based on the profits of the joint stock holders. Thus, the net profit is reduced by dividends paid to the holders of preferential shares.

The return on equity is an intense indicator used by entities. The indicator is closely monitored by the management of the entities but also by the analysts. Due to the fact that the indicator uses equity, it is not an optimal solution for comparing entities that have very different weights of the respective sources respectively of the foreign ones and especially of the long-term loans. This is explained by the fact that the expected profitability obtained by the owners can be higher if the leverage reaches an optimal point, compared to the situation of an entity that has no long-term loans. Equity should not be left undervalued due to the mismatches between the accounting values and the economic values of some assets. The value of registered capital is the residual value of all accounting transactions. However, the value shown on the balance sheet may be different from the market value of the shares. In publicly traded companies with operations and prospects for success, the market value of common shares will be much higher than the book value of these shares, often two to three times or even more. When the return on equity is calculated on the basis of market value, the result will therefore be lower. As a result, despite the widespread use of return on equity based on book value, this case is not a reflection of economic return.

7.2. Earnings per share

From the owners' point of view, the profit is reflected in that gain calculated by the entity that returns to each action. This simply involves dividing the net profit

of the common shares by the average number of shares of the common shares. The limit of this indicator is that it does not adequately reflect the performance of the cash flows and the expectations that determine the creation of shareholder values. EBITDA, Earnings Before Interest, Taxes, Depreciation and Amortization - profit before interest, taxes, depreciation and amortization, is calculated as follows:

$$\text{EBITDA} = \text{net profit} + \text{interest expense} + \text{tax expense} + \text{depreciation expense (and depreciation)} \quad (3)$$

$$\text{EBITDA} = \text{operating income} + \text{depreciation and amortization} \quad (4)$$

It expresses the gross accumulation from the operating activity, depreciation and depreciation provisions which are only calculated but not paid. Basically, the value generated from the current activity, before paying its debts, taxes and reflecting the non-cash expenses (depreciation). The growth of this indicator from one period to another is being followed, the growth reflecting an increase in profitability over time. It can be based on estimating the market value of an entity. EBITDA excludes the effects of non-operational decisions such as financing, taxation or non-cash costs (depreciation). However, this indicator can be influenced through the measures of accounting policies. A negative value of the indicator shows that the entity has fundamental problems with profitability.

Indicators derived from EBITDA. In practice, other indicators that are quite close in meaning are also used:

- EBIT Earnings Before Interest, Taxes calculated:

$$\text{EBIT} = \text{net profit} + \text{interest expense} + \text{tax expense} \quad (5)$$

- EBITDAR Earnings before interest, taxes, depreciation, amortization, and restructuring or rent costs:

$$\text{EBITDAR} = \text{net profit} + \text{interest expense} + \text{tax expense} + \text{depreciation expense} + \text{restructuring expenses or rents} \quad (6)$$

8. Case Study

In order to reflect the practical nature of the way of using the evaluation through the EVA indicator, we conducted a case study at ROMGAZ SA. Through this study, we shall compare the results obtained by applying indicators based on accounting data respectively of indicators based on economic value. The information used in the case study is based on the annual reports for the analyzed period. The results of the indicators are compared with each other.

Romgaz is the largest producer and main supplier of natural gas in Romania. The company is admitted to trading since 2013 on the market of the Bucharest Stock Exchange and the London Stock Exchange (LSE). Romgaz assumes the role of promoting a transparent business climate, thus integrating the causes of social

responsibility and business objectives into a corporate initiative of cooperation with all interested parties for the development of the company in an ethical manner, with respect to the community and the environment. <https://www.romgaz.ro/>.

8.1. Working method

In order to reflect the way in which the value for the shareholders is measured, indicators used by the entity SC ROMGAZ S.A. listed on the stock exchange were presented. These are the following indicators: ROE, EBITDA, EPS, EVA. For each of the mentioned indicators, a theoretical presentation was made and for the practical part, information from 2013, 2014, 2015, 2016, 2017 was used.

8.2. Calculation methodology

Table 1. Indicators

	2013	2014	2015	2016	2017
Total capital	9715405,00	10142881,00	10058625,00	10030318,00	9710959,00
Net income	995554,00	1409881,00	1194285,00	1024579,00	1854748,00
CMPC	1440794,56	1504189,25	1491694,09	1487496,16	1440135,22
Personal capital	9292774	9712018	9692222	9676161	9310876
Long-term debt	422631	430863	366403	354157	400083

9.

Table 2. The values of the performance indicators S.C. ROMGAZ S.A.

Year	ROE	EBITDA	EPS	EVA
2013	10,71 %	1959800	2,58 %	-445240,56
2014	14,52 %	1409900	3,66 %	-94308,25
2015	12,32 %	2218000	3,1 %	-297409,09
2016	10,59 %	1570000	2,7 %	-462917,16
2017	19,92 %	2708000	4,8 %	414612,78

9.1. Comparison of results

"The most important thing to say about an indicator is that no one tells the whole story and that a minimum of additional analysis is always required. However, we use them because it is an extremely easy to understand and very quick mechanism to make a primary selection between actions", explains Andrei Anghel, the executive director of an investment consulting company. NOPAT must reflect adjusted profit, net operating profit. One can observe a discrepancy in the analysis of the entity's performance through the chosen indicators. According to the traditional indicators used: ROE and EBITDA, performance is recorded throughout the analyzed period, in the case of the EVA indicator in only one case.

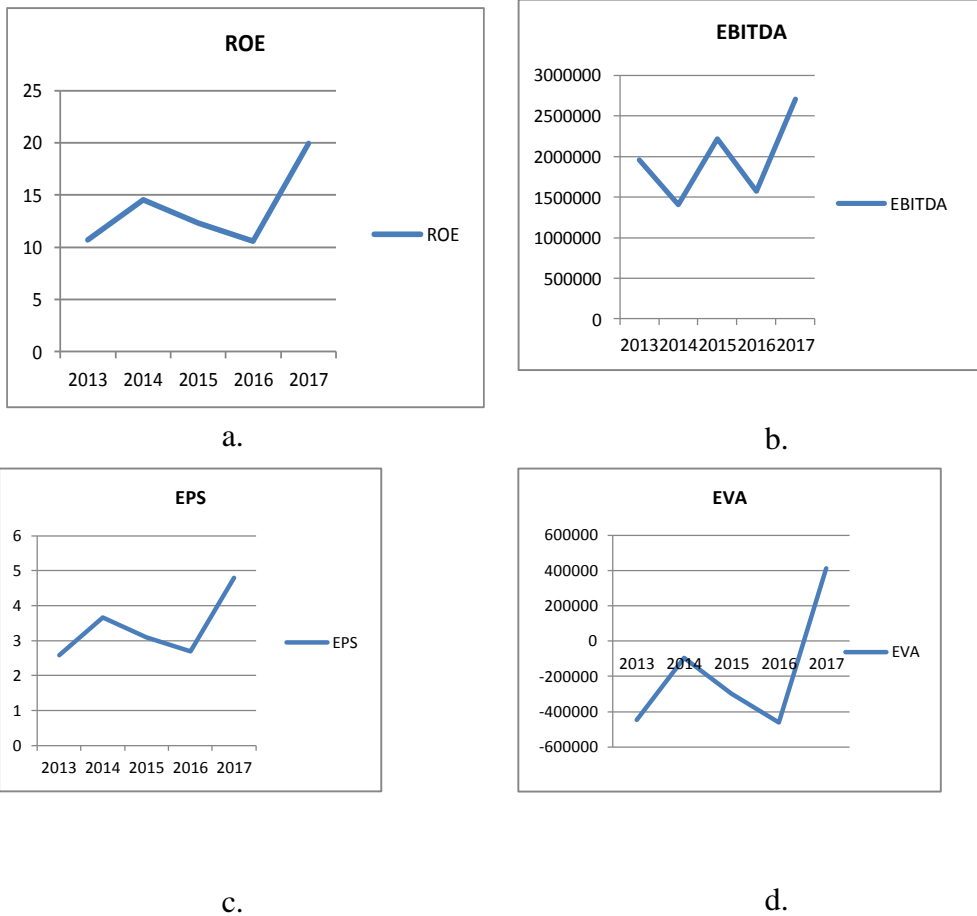


Fig. 1. Evolution of indicators
 a. ROE b. EBITDA c. EPS d. EVA

Conclusions

Indicators based on the entity's internal data reflect a value creation, even though in different proportions, while value-based indicators indicate a destruction of value. Even if the entity created value in a period of time, the share price did not increase, as there is no certainty that this value creation can be maintained in the future. At the same time, indicators based on accounting data are not correlated with the evolution of the share price. Basically, the two categories of indicators have their own evolution, as shown above.

Each indicator/rate has its advantages and disadvantages. Those calculated on the basis of accounting information are those calculated in a conventional manner by entities. From the other category, I would focus on EVA. For higher complexity, the EVA calculation should be supplemented with another measure of shareholder

value, chosen by the entity. In order to have a high validity, the estimates made must take into account as many influencing factors as possible. The adjustments made also have a very important role but that implies a low degree of objectivity. Subjectivity can be reduced only by observing the factors that influence the value of the entity and the mechanisms applied to increase this value.

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