

## **ABOUT ECONOMIC VALUE ADDED, AGAIN. DID SOMETHING CHANGE?**

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### **Abstract**

*While creation of value for listed companies became the main criteria by which shareholders evaluate performance, obtaining a negative Economic Value Added means that the company is losing shareholder's money, even in the case of a positive accounting result. During 2006-2013, considering the crisis and post crisis effects, most companies listed on the Bucharest Stock Exchange, activating in industry and construction, obtain a negative value of Economic Value Added. The aim of this paper is to determine if the situation has improved, at least for the best performing companies, ranked in the Premium category listed on the Bucharest Stock Exchange.*

**Keywords:** Economic Value Added, Bucharest Stock Exchange, Listed Companies

**JEL classification:** G32, G01, G30

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### **1. Introduction**

In earlier researches (Vasiu, Baltes, Gheorghe 2015) it was followed the way the 51 companies listed on the Bucharest Stock Exchange, which are active in industry and construction, obtained an appropriate Economic Value Added. In most of the companies analyzed, in the period 2006-2013, Economic Value Added has negative values, which means that they do not cover the cost of capital through the realized operating result, losing money even in the case of a positive accounting result. Most companies (over 86%) fail to get a Return on the Invested Capital (Ri) above the Weighted Average Cost of the Capital (WACC), thus recording a negative Economic Value Added (EVA).

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Taking into account the results of previous research, we wanted to broaden the analysis in the 2014-2016 periods, to identify the situations where there were improvements in Economic Value Added.

The latest World Bank reports (World Bank, 2017) show that Romania has significantly reduced its macro-fiscal imbalances since the 2008 crisis and achieved one of the fastest growth rates in the EU in 2016. In this context, the financial performance of listed companies on the BVB should have experienced an improvement in financial performance compared to the crisis and the following period.

## **2. Economic Value Added**

In view of the evolution of financial markets, the movement of capital to the most cost-effective investments, shareholders are no longer satisfied simply by remuneration based on a residual income, sometimes uncertain. In this context, the creation of value for shareholders must be of a constant nature, with the company being required to pay its own capital.

The expression of satisfaction of all interest holders in an entity results in the creation of value. It represents the market's validation of the strategic objectives of the company, quantifying its financial performance in relation to its owners, as residual amount of the value generated by the enterprise's activity (Petcu, 2009, p.403).

Value creation is, for listed companies, the major criterion through which shareholders measure performance, starting from the strategic goal of maximizing current and future earnings.

The reasoning for Economic Value Added is based on the specific cost of equity that, unlike the cost of borrowed capital, which is explicitly recognized in the income statement, has a different accounting treatment. In this context, the enterprise should consider not only the expenses in the bookkeeping but also the cost of own capital when calculating the value added (Niculescu, 2005, pp 95-98) (Petrescu, 2008, p.194).

Economic Value Added is used to assess investment opportunities as a tool for capital allocation and to avoid the erosion of invested capital. If the company does not achieve a return at least equal to the average rate of return on the market, investors are attracted to other more advantageous placements.

According to Stern Stewart's model, to which the concept of Economic Value Added belongs, the indicator is determined as the difference between Net Operating Profit and the Opportunity Cost of Invested Capital.

The opportunity cost of capital is the Weighted Average Cost of Capital (WACC) (Stern Stewart, 2013), determined as the weighted average arithmetic mean (CAPM) of the cost of equity capital and the cost of borrowed capital, according to the weight of each category and the related remuneration rate (Petrescu, 2008, p.283). In this case, the Economic Value Added is the actual economic profit obtained by the company, in relation to the whole capital used and determined by the difference. (Petrescu, 2008, p.284) (Neculai, Dicu, 2007)

Economic Value Added evaluates the performance and management of a business. According to this indicator, a company is profitable only if it creates wealth for shareholders, which implies a performance above the cost of the company's capital.

### **3. Case study**

#### **3.1. Research hypothesis**

The research hypothesis in the Economic Value Added (EVA) analysis is that the companies listed on the Bucharest Stock Exchange, in the Premium category, which are active in industry and construction, have seen an improvement in their added value.

#### **3.2. Research objectives**

The research is aimed at achieving the following objectives:

- *Determination of Economic Value Added for each analyzed company and dynamic analysis of the Economic Value Added for the period 2006-2016;*
- *Identification of the causes that determined the evolution of the Economic Added Value;*
- *Comparing the financial performance from the perspective of Economic Value Added in the periods 2006-2013 and 2014-2016*

#### **3.3. Research methodology**

In 2015, the Bucharest Stock Exchange registered a restructuring of the spot regulated market by replacing categories 1, 2 and 3 for shares with two new categories - Premium and Standard (BVB, 2014). Considering this aspect, the 51 companies listed and traded on the Bucharest Stock Exchange, operating in industry and construction, whose financial performance was analyzed for the period 2006-2013, were allocated to Standard and Premium categories, depending on the fulfilment performance criteria.

The Economic Value Added evolution analysis was conducted for industry and construction companies in the Premium category, believing that

they achieved the highest performance standards and therefore obtained Economic Value Added optimum values. The companies analyzed were OMV Petrom S.A., S.N.G.N. Romgaz S.A., Antibiotice S.A., Biofarm S.A., Electromagnetica SA, S.N. Nuclearelectrica S.A., C.N.T.E.E. Transelectrica, Impact Developer & Contractor S.A.

Considering the need to ensure data comparability, the EVA calculation was based on the same methodology as previous research, according to the model

$$EVA = (R_i - WACC) \times CI \tag{1}$$

Where:

R<sub>i</sub> - Rate Of Return On Total Invested Capital

$$R_i = \frac{\text{Operating Net Profit After Tax (NOPAT)}}{\text{Invested Capital}} \tag{2}$$

Net operating profit after tax (NOPAT) =

$$\text{Result of exploitation} - \text{Profit tax} \tag{3}$$

WACC -the Weighted Average Cost Of Capital

CI - Invested Capital,

The Economic Value Added calculation was based on the data taken from the financial statements of the companies analyzed, available on [www.bvb.ro](http://www.bvb.ro). Considering the date on which they began to be traded on BSE, the financial statements for Romgaz are available started with 2007, and for Nuclearelectrica, started with 2009.

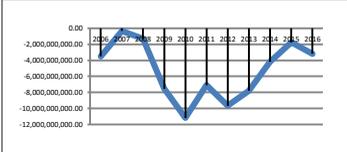
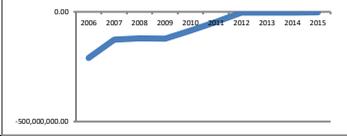
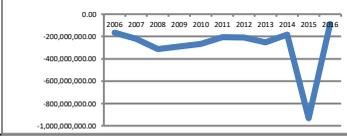
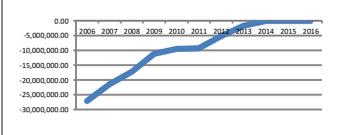
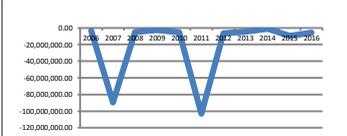
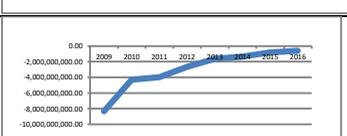
### **3.4. Data Analysis**

In the Economic Value Added studies for the period 2006-2013, among the 51 companies surveyed, between 2% and 7% of companies achieved positive Economic Value Added values each year, between 2% and 4% of the companies had zero values of Economic Value Added each year, in all other cases, Economic Value Added values being null.

None of the companies in the Premium category recorded positive Economic Value Added values, either between 2006-2013 or 2014-2016. We find that even the best performing companies in industry and construction, listed on the BVB, have not yet been able to obtain a positive Economic Value Added, which would bring shareholder wealth and not consume their capital.

In this context, the Economic Value Added evolution was analyzed, for each of the eight companies surveyed and the situation is presented in the table 1.

**Table 1: The Economic Value Added Evolution**

Company	The Economic Value Added Evolution	Average Annual Growth Rate		
		Period		
		2006-2013	2014-2016	2006-2016
<b>OMV PETROM S.A.</b>		12,12	-12,94	-0,98
<b>S.N.G.N. ROMGAZ S.A.</b>		<b>-52,47</b>	-32,74	-43,65
<b>ANTIBIOTICE S.A.</b>		6,22	-29,97	-5,94
<b>BIOFARM S.A.</b>		-32,77	-25,82	<b>-47,39</b>
<b>ELECTROMAGNETICA SA</b>		4,32	136,1	3,01
<b>S.N. NUCLEARELECTRICA S.A.</b>		-33,26	<b>-33,03</b>	-31,23

<p align="center"><b>C.N.T.E.E. TRANSELECTRICA</b></p>		<p align="center">-7,73</p>	<p align="center">-19,79</p>	<p align="center">-6,52</p>
<p align="center"><b>IMPACT DEVELOPER &amp; CONTRACTOR S.A.</b></p>		<p align="center">-9,07</p>	<p align="center">-24,66</p>	<p align="center">-14,06</p>

Source: Author, based on the annual financial statements available [www.bvb.ro](http://www.bvb.ro)

Considering the Average Annual Growth Rate, except for Electromagnetica, all other companies surveyed have seen increases in Economic Value Added over the 2014-2016 period. The same situation is registered for the hole 2006-2016 period, where, excepting Electromagnetica, all other companies have registered increases in Economic Value Added.

The highest average annual growth rate of Economic Value Added during 2014-2016, of 33%, was recorded in the case of C.N.T.E.E. Transelectrica, and the lowest average annual growth rate of Economic Value Added of 12.93% was obtained by OMV. Compared to the 2014-2016 period, the highest average annual growth rate of Economic Value Added during 2006-2013, of 52.47%, was recorded in the case of Romgaz, and the lowest average annual growth rate of Economic Value Added of 7.73% was obtained by C.N.T.E.E. Transelectrica.

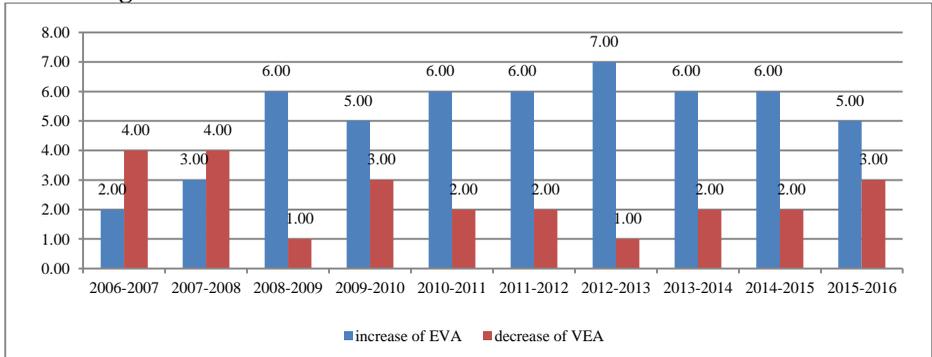
Compared to the period 2006-2013, average change rates were more pronounced for all companies except Antibiotice S.A., Biofarm S.A and C.N.T.E.E. Transelectrica. The most significant change was recorded at C.N.T.E.E. Transelectrica, where from an average annual change rate of 4.32%, registered during 2006-2013, an average annual change of 136.07% was reached.

For the hole 2006-2016 period, the highest average annual growth rate of Economic Value Added, of 47,49%, was recorded in the case of Biofarm, and the lowest average annual growth rate of Economic Value Added of 0,98% was obtained by OMV.

Since all Economic Value Added values were negative, we have analyzed the situations in which an increase in Economic Value Added has occurred, starting from the reason that although companies are not able to

provide added value higher than the cost of capital from the operating result achieved, at least an improvement in the financial situation was registered.

**Figure 1: Increases and Decreases in Economic Value Added**



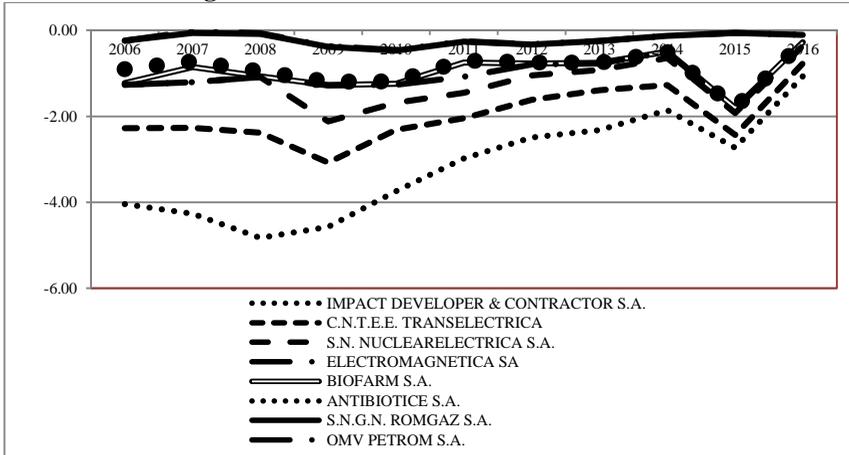
Source: Author, based on the annual financial statements available [www.bvb.ro](http://www.bvb.ro)

Starting with the period 2008-2009, the number of companies that have seen increases in Economic Value Added is higher than those which have seen Economic Value Added reductions, the best situation being in the 2008-2009 and 2013-2014 periods when the ratio was 6 to 1 and 7 to 1 respectively, as presented in Figure 1.

Taking into account the method of calculating Economic Value Added, the evolution of the indicator depends on the evolution and values of invested capital (CI) and the result of the Ri-WACC difference. If the Rate of Return on Total Invested Capital (Ri), determined as the ratio between the Net Operating Profit and the Capital Invested, is higher than the WACC, the difference between the indicators generates a negative Economic Value Added, which means an erosion of the invested capital

The evolution of the Ri-WACC difference is shown in the figure 2

**Figure 2: The Evolution of the Ri-WACC difference**

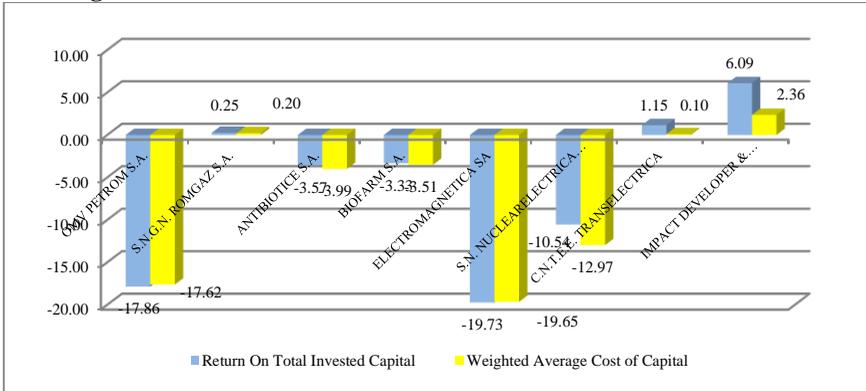


Source: Author, based on the annual financial statements available [www.bvb.ro](http://www.bvb.ro)

For the entire period 2006-2016, the Premium companies analyzed have negative values of the Ri-CMPC difference, which means that none of the wages record a Return on Total Invested Capital higher than The Weighted Average Cost of Capital. However, there is a narrowing of the gap between the two indicators starting in 2012.

Comparing the Annual Average Change Rate of Return on Total Invested Capital (Ri) and of Weighted Average Cost Of Capital (WACC), the situation presented in the figure 3 shows relatively similar values of the average annual rate of change of the two indicators. More, increases of Ri and WACC were recorded in the case of S.N.G.N. Romgaz S.A., C.N.T.E.E. Transelectrica and Impact Developer & Contractor S.A.

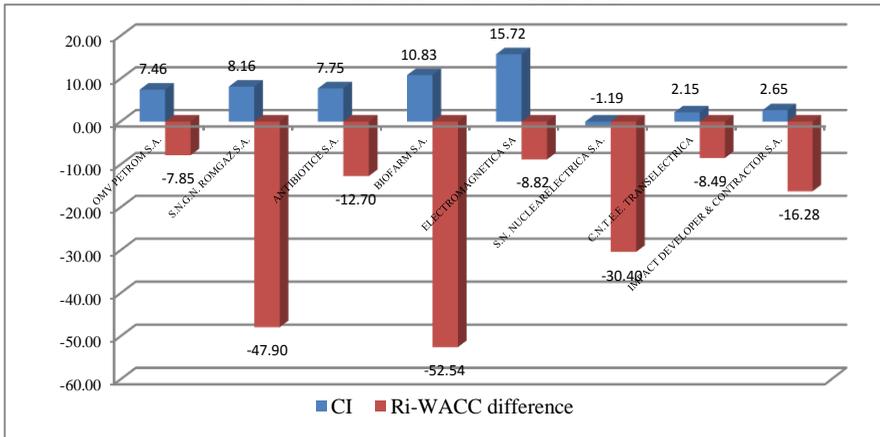
**Figure 3: Increases and Decreases in Economic Value Added**



Source: Author, based on the annual financial statements available [www.bvb.ro](http://www.bvb.ro)

Considering the evolution and values of Invested Capital (CI) and the result of the Ri-WACC difference, as presented in figure 4, it can be noticed that in all cases, Ri-WACC difference recorded decreases, while Invested Capital decreased only in case of Nuclearelectrica.

**Figure 4: The Evolution and Values of Invested Capital (CI) and the Result of The Ri-WACC Difference**



Source: Author , based on the annual financial available [www.bvb.ro](http://www.bvb.ro)

#### **4. Conclusions**

Evolution of the determinants of the previously analyzed Economic Value Added, also led to the achievement of negative values of EVA during 2014-2015-2016.

Even if significant improvements in Romania's macroeconomic conditions have been registered, no positive results regarding Economic Value Added were obtained.

In terms of number of companies that registered increases of EVA, the situations in which increases of Economic Value Added during 2014-2016 were registered are similar to the post-crisis period.

The objectives of the research allowed us to validate the research hypothesis, namely that the Economic Value Added registered in companies listed on the Bucharest Stock Exchange, in the Premium category, activating in industry and construction, have seen an improvement in their added value. Despite this, the negative values of EVA still indicates that the capital allocated by shareholders is consumed, the cost of capital not being covered by the operating result.

Thus, it is not yet the time to talk about an increase in performance. But the growth trend of Economic Value Added, in case of most analyzed companies, indicates that positive values may be obtained in the next period.

## **5. References**

- *Neculai Tabara, Dicu Roxana-Manuela. (2007) Indicatori de performanță în contextul reglementărilor contabile internaționale. Universitatea Danubius Galați, EIRP International Conference on European Integration - Realities and Perspectives, Proceedings, vol 2*
- *Niculescu, Maria. (2005) Diagnostic global strategic. Vol II. Diagnostic financiar, Editura Economică, București*
- *Petcu, Monica. (2009) Analiza economico - financiară a întreprinderii. Probleme, abordări, metode, aplicații. Editura Economică, Ediția a doua*
- *Petrescu, Silvia. (2008) Analiză si diagnostic financiar-contabil: ghid teoretico-aplicativ. Editura CECCAR, București*
- *Vasiu, Diana Elena Balteș, Nicolae, Gheorghe, Iulian. (2015) Economic Value Added (EVA). A structural and dynamic analysis, during 2006-2013, of the companies having the business line in industry and construction, listed and traded on The Bucharest Stock Exchange. Revista „Theoretical and Applied Economics” Ediție Supliment 2015, pp. 343-353*
- *<http://www.worldbank.org/ro/country/romania/overview>, accessed November 2017*
- *<http://www.sternstewart.com/?content=proprietary&p=eva>, accessed September 2013*
- *[http://www.bvb.ro/press/2014/comunicat\\_de\\_presa\\_modificari\\_Cod\\_BVB\\_03112014.pdf](http://www.bvb.ro/press/2014/comunicat_de_presa_modificari_Cod_BVB_03112014.pdf), accessed September 2017*