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Study on the Influence of CEO Duality on the Performance of Listed Entities

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Abstract
This paper analyzes the relationship between the duality of the positions held within the company by a single person in the same time, respectively Chairman of the Board of Directors and CEO, and financial performance of the entities listed on the Bucharest (BSE) and Athens Stock Exchange (ATHEX). The data source included in our study is represented by the information published in the Annual and Sustainability reports for 2018 by 62 entities listed on the BSE and 40 entities listed on the main market ATHEX. The results obtained from the econometric modeling reflect the existence of a positive relationship between CEO duality and performance. The theme and results of the research undertaken are important for understanding the influence that duality can have on the performance of entities, being useful to shareholders, potential investors but also to other people interested in corporate governance.

Keywords: CEO Duality, performance, listed entities, corporate governance.

JEL classification: G34, M21.

1. Introduction

Corporate governance is a set of mechanisms by which a corporation is managed and controlled. Whether we talk about the management model in which all the company's stakeholders are considered equally important or about the shareholder model, in which the shareholder is given more importance compared to the other stakeholders, corporate governance policies are essential for the sustainable development of entities. Through an effective corporate governance, companies can maximize their long-term market value, which may lead to increased performance, sustainable development, protection of the stakeholders' interests, increased transparency and building a trust-based business environment.

The aim of our paper is to analyze the influence of CEO duality on the company's performance. If there is no separation of roles within the entity, the CEO also being Chairman of the Board of Directors, the situation is known as "CEO duality". Therefore, in this paper we will analyze the information published in the Annual and Sustainability reports by 102 companies listed on BSE and ATHEX Stock Exchange in order to identify if CEO duality influences the companies' performance measured by the Return on Assets (ROA) and the Return on Equity (ROE) indicators.

The study is structured into 4 sections. The first section provides the literature review. Section 2 presents the methodology, sample data and research hypotheses. Section 3 highlights the empirical results while last section concludes by providing research limitations and avenues for future analysis.

2. Literature review

In the specialized literature, the way a company is managed and controlled represent a topic of great interest, with numerous studies and debates regarding the corporate governance contribution to the entity's performance, sustainable development and stakeholders' protection (like the research conducted by Paniagua, J., et al., 2018, Shahid, M.S., et.al., 2019, Rose, C., 2016, Pillai, R., 2018, Al – ahdal, W., 2020, Naciti, V., 2019).

Considering the theories that represent the conceptual foundation of corporate governance (A. Ionescu, 2015), respectively the agency theory and stewardship theory, about the influence of duality on performance we can state that:

- Based on Agency theory, when ”CEO and the Chairman of the Board are two different individuals, we talk about separation of functions and this separation increases the independence of the board from management and brings new knowledge”. (Michelon,G., et al., 2012). The separation of function can enhance effectiveness in management responsibility and decrease agency costs (Naciti, V., 2019). CEO duality could diminish the board’s effectiveness of its monitoring function, leading to further agency problems and, ultimately, poor firm performance (Lin Shao, 2018).
- Based on stewardship theory (Davis et al.,1997) states that duality can increase the performance of the entity due to the fact that there is only one person who will take efficient and timely decisions for the benefit of the company.

In the literature there are studies that demonstrate the significant and positive link between duality and performance measured by various indicators, such as those studies conducted by Tian and Lau (2001) and Weir et al., (2001). There are also studies (Lin Shao, 2018), that highlight the negative impact that duality can have on performance, being in line with the prediction of agency theory, which implies that the separation of board chairperson and CEO may improve firm performance. According to researchers such as Sharma, D.S., (2004), Grose, C., (2014), Nazar. M.C.A., (2016), the Chairman of the Board of Directors should not hold the CEO position because, in such a case, “the power is in the hands of a single person”, thus generating conflicts that can harm the interests of the shareholders.

3. Methodology

Through this study we want to provide an answer to the following research question: Is there a correlation between CEO duality and financial performance measured through the ROA and ROE indicators?

- H_0: There is a positive correlation between CEO duality and financial performance
- H_1: There is a negative correlation between CEO duality and financial performance

The answer to the research question stated above depends on the validation of one of the two research hypotheses. Thus, the result of the econometric model indicates that hypothesis H_0 cannot be rejected, which reflects in return the invalidation of hypothesis H_1, in the opposite situation, the validation of hypothesis H_1 determines the invalidation of hypothesis H_0.

The research conducted to validate one of the two research hypotheses involves the following steps:

- Collecting the necessary information from the Annual Financial Statements for 2018, such as Total assets, Equity and Net profit to determine the value of ROA and ROE indicators, used to measure the performance of entities. Taking into account the fact that the entities listed on ATHEX present the financial results in euro, in order to ensure the comparability of the data between the entities listed on the two stock markets, for the entities listed on BSE, we transformed into euro, the amounts presented in the national currency of Romania. The exchange rate was the one published by BNR on 31.12.2018.

- Transformation the qualitative data extracted from the information published by the entities included in the study into quantitative data, through the following scoring system (see table 1):

Table 1. Conformity marks

Conformity mark	**Significance**
1	the CEO is also the President of the Board
0	Otherwise

- Testing the link between CEO duality and performance, using a regression model in which the dependent variables are, by turn, the two indicators that measure performance. As explanatory variables we will use, first of all, CEO duality – independent, dummy variable and other attributes of corporate governance included in the model as control variables.

The regression model:

$$Performance_i = \beta_0 + \beta_1 CEO\_duality_i + \sum \beta^* \text{Corporate governance attributes} + \varepsilon_i$$

Where:

— $Performance_i$ - measured through ROA and ROE indicators.

— β_0 – quantifies all factors that were not taken into account by using an explanatory variable in the anayzed model

— β_1 – specific parameter of the factor of influence

— $CEO\_duality_i$ - represents the CEO duality for the entities listed on each of the two analyzed stock exchanges;

— β^*Corporate governance attributes – reflects the influence of corporate governance attributes such as: the board size, the number of non-executive directors on the Board, the CEO duality, the company's size, the type of audit opinion, the number of women on the Board, the existence of the Audit Committee. To reflect their influence we will present the average of the results obtained, by dividing the sum of the results at the number of attributes included in the study.

— ε_i – reflects the residual term that quantifies the influence of random factors or any other that were not included in the analysis.

The corelation between duality an performance can be highlighted as follows (see figure 1):

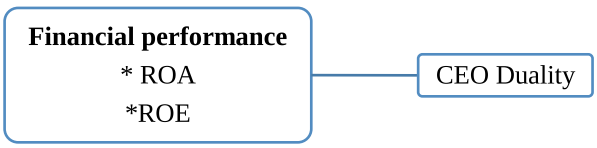

Figure 1. Conceptual framework

4. Results and discussions

In the first stage of our research we wanted to identify in how many entities out of the 102 under study, the CEO is also the Chairman of the Board.

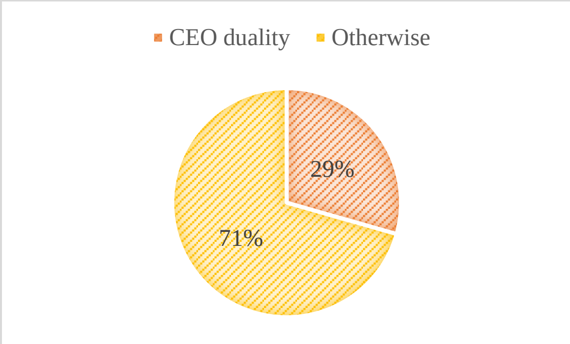

Figure 2. CEO duality

The results (figure 2) reflect the fact that duality is found only in the case of 30 entities out of 102, which represents 29% of cases, while for the other 72 entities, respectively 71%, the cumulation of functions is not a practice within the administrative board.

From the financial market perspectives, the results are as follows:

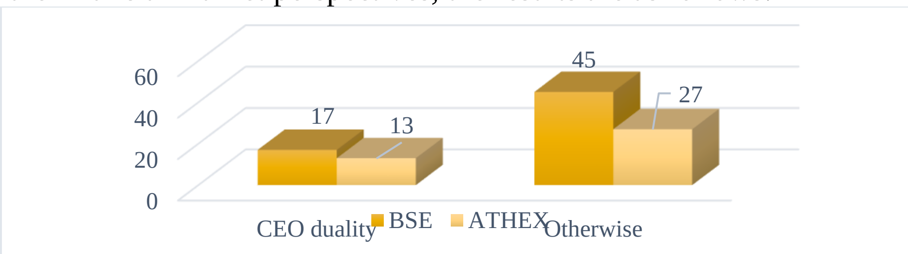

Figure 3. CEO duality BSE vs ATHEX

As can be seen from the graph above (figure 3), in the case of entities listed on BSE, 45 of the companies studied (which means a percentage of 73%) apply the principle of separation of the two functions within the administrative board, while only 17 entities (27%) choose the duality of functions.

In the case of the entities listed on the ATHEX main market, 27 companies (68%) apply the principle of separation and (13) 32% choose the duality of functions.

Using Data analysis we obtain the following descriptive statistics (Table 2,3,4) of the variables used to determine the impact of the duality of functions on the performance measured by the two indicators.

Table 2. Descriptive statistics - General

Descriptive statistics	ROA		ROE		CEO duality	
	RO	GR	RO	GR	RO	GR
Mean	6.37	5.52	10.48	8.68	0.27	0.33
Median	4.64	3.86	6.95	6.81	0	0
Standard deviation	6.97	6.55	12.90	7.44	0.44	0.47
Min	0.05	0.02	0.06	0.12	0	0
Max	40.10	37.96	86.18	27.46	1	1
Count	62	40	62	40	62	40

Table 3. Descriptive statistics – ROA

ROA				
	Romania		*Greece*	
	Duality	Otherwise	Duality	Otherwise
Mean	8.50	5.56	6.16	5.22
Count	17	45	13	27

Table 4. Descriptive statistics – ROE

ROE				
	Romania		*Greece*	
	Duality	Otherwise	Duality	Otherwise
Mean	14.32	9.03	10.49	6.90
Count	17	45	13	27

- Entities listed on BSE

The above tables show that the average ROA is 6.37%. For entities where the two positions are not separate, the average ROA is 8.50% and for entities where these functions are separate, the average return is 5.56%. The average ROE is 10.48%, higher than the ROA for the entities listed on the BSE under analysis. For companies where the two functions are not separate, the average ROE is 14.32% and for entities with no duality, the average ROE is 9.03%.

- Entities listed on main market ATHEX

As it can be seen in the previous table, the average ROA is 5.52%. For companies where the functions are not the same, the ROA value is 5.22%, lower than the average ROA of 6.16% for the entities where the Chairman of the Board also holds the role of CEO.

The average ROE is higher than the average ROA, which means that the equity value of the studied companies is lower than the value of total assets. The average ROE is 8.68% and it is associated to the 40 Greek entities included in the study. For the companies with separate functions, the average ROE is 6.90%, lower than in the case of dual boards, where ROE reaches 10.49%.

The following output (table 5) presents the results of the regression models. The included explanatory variables are represented by the average of the results of the specific attributes of corporate governance included in the model. CEO duality is defined as an independently explanatory variable within the regression model in order to identify its influence on performance.

Table 5. Regression Statistics

	Regression Statistics			
	Model 1 ROA		**Model 2** ROE	
	RO	**GR**	**RO**	**GR**
t-stat CEO duality	1.8499	-0.1921	1.7378	1.0306
P-value CEO duality	0.0693*	0.8487	0.0873*	0.3093
t-stat corporate governance attributes	1.12	0.75	1.23	0.80
P-value corporate governance attributes	0.33	0.46	0.39	0.62
R Square	0.48	0.47	0.43	0.64
Significance F	0.0000	0.000	0.0000	0.000
PEARSON	0.69	0.69	0.65	0.80

*p<0.1; **p<0.05; ***p<0.01

Using ROA as a dependent variable in regression Model 1, our results reflects that the CEO duality variable has a significant and positive influence on performance for BSE-listed entities, while in the case of ATHEX main market-listed entities, the average of other corporate governance attributes influences performance. Thus, we will present the results for the entities listed on the BSE:

- The coefficient of the variable represented by *CEO duality* is significant and positive for a significance level of 10%, in accordance with the studies conducted by Weir et al., (2001).
- The coefficient of determination R^2 is 0.48, which indicates that the variation of the dependent variable ROA is 48% explained by the cumulative variation of the significant explanatory variables of the regression model.

Using ROE as a dependent variable in regression Model 2, our results reflects that the CEO duality variable is insignificant for the entities listed on the ATHEX main market, so that the analysis concerns the results of the entities listed on BSE:

- The coefficient of the variable represented by *CEO duality* is significant and positive for a significance level of 10%, in accordance with the studies conducted by Weir et al., (2001).
- The coefficient of determination R^2 is 0.43, which indicates that the variation of the dependent variable ROE is 43% explained by the cumulative variation of the significant explanatory variables of the regression model.

The probability of 0.00% of Fisher's test reflects that the regression Models (1 and 2) are valid. The values of the Pearson correlation coefficient, namely 0.60 and 0.65, reflects a high correlation between the analyzed variables.

The research undertaken, respectively the analysis of the impact of duality of management functions on performance measured by ROA and ROE indicators, identified the existence of a significant relationship between CEO dualiy and financial performance at a significance level of 10%.

The analysis undertaken considering the entities listed on the main market ATHEX reflects the fact that no statistically significant correlations are established between the studied variables.

Conclusions

In this research we performed an analysis of the influence of the duality of management functions on the company's performance indicators. In our study we included 102 listed companies, of which 62 are listed on BSE and 40 on the main market ATHEX. To identify the link between duality and performance, we introduced dependent variables into the database of econometric models, represented by the financial indicators ROA and ROE and the independent explanatory variable CEO duality. Within the model we also included control variables, to measure their impact on selected indicators.

The research results showed that there are positive correlations between duality and performance, at a level of significance of 10% for entities listed on BSE. In the case of entities listed on the ATHEX main market, the econometric results could not demonstrate the existence of a statistically significant link.

The limitations of the model taken into account the relatively small sample of entities listed on the ATHEX main market as well as the heterogeneity of the data. Based on these limits, future research aims to complete the model by adding new explanatory variables both company-specific (market capitalization, total assets) and country-specific, such as: rule of law or investors protection score.

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