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Corporate Governance Influence on Banking Performance. An Analysis on Romania and Bulgaria

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Abstract

The aim of the paper is to find if the corporative governance characteristics have an impact on bank performance. We conducted an OLS regression on panel data (fixed, random effects and first-difference). We used data from Romanian and Bulgarian commercial banks as reported by Bureau van Dijk database and categorical variables manually collected by analyzing the annual reports of the banks from our sample. These latest dummy variables reflect the corporative governance component for our model. The data used in our paper is from 2003 to 2015 period. Our results showed that there are some statistically significant effects of our categorical variables on bank profitability in both countries, so, the good practice of corporate should be applied for obtaining higher bank`s performance.

Keywords: corporate governance; financial reporting; bank profitability.

JEL classification: G34; G21, C23.

1. INTRODUCTION

Good corporate governance practices had been a worldwide concerned issue by many academics, researchers and corporations. The topic of corporate governance has been also studied regarding the banking system in developing countries (Manea, 2015; Tunay and Yüksel, 2017; Aebi *et al.*, 2012; Acrey *et al.*, 2011) in which efficient corporate governance conducts to greater performance.

The Code of Corporate Governance and regulators recommend that the board of director's members should be balanced and consist of independent directors. The board of directors represents a collective body that must act in the in the best interest for the

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shareholders. Therefore, there is a need in this conditions, for both executive and non-executive directors to act in the best interest for the shareholders. The board of directors monitor also the Chief Executive Officer (CEO)`s remuneration (Byrd *et al.*, 2010).

The presence of the CEO in the board of directors can influence the decisions made by the board, favoring the personal interests of the CEO. From this perspective, the implication of the CEO on entity decisions that affect bank performance can also be stimulated by the good practices of the corporate governance system and the effectiveness of the entities.

The objective of our research is to determine if the corporate governance characteristics, such as CEO duality and the fact that the CEO is also member of the Board, have a potentially negative impact on bank performance. This paper contributes to the existent literature by analyzing the impact of corporate governance characteristics on bank performance in transition countries. Also, our paper provides empirical evidence of the corporate governance practices in Romania and Bulgaria and the impact of these practices on bank performance, which can support shareholders, investors and other parties and helps banks in improving their governance system and thus improving their performance.

The remainder of this paper is organized as follows: Section 2 reviews the literature. Section 3 describes methodology and data collection. Section 4 presents the tests and results of our analysis. Section 5 provides the conclusions.

2. PRIOR RESEARCH ON CORPORATE GOVERNANCE

In an analysis for 29 commercial banks from Romania and Bulgaria during 2003-2012 Roman and Bilan (2015) showed that both macroeconomic and bank-specific variables have a significantly influence on the quality of bank loans. Moreover, their results show that the GDP growth rate, the unemployment rate, the inflation rate, the return on average total assets and the size of the bank are the main factors that influence the quality of bank loans. An analysis of the profitability of the commercial banks using as proxy return of assets, return of equity and net interest margin in Turkish banking sector trough 1990-2011 was the concern of Acaravci and Calim (2013). Using Johasen and Juselius co-integration test they found that the bank specific determinants have a higher influence upon the banking performance in Turkish than the macroeconomics factors.

The European Commission suggests that the role of the Executive Director and the Chairman of the Board should be separate (European Commission, 2011). Moreover, in the composition of the board of directors there should be competent members with experience and expertise in the field but without executive functions (European Commission, 2011, p. 10) because the ultimate responsibility for risk management and governance is attributed to the Board.

An analysis on the effect of corporate governance on the performance of US investment banks, Mamatzakis and Bermpei (2015) implied that the board size has a negative effect on the performance, if has more than ten members, and the CEO power has a positive effect on the bank`s performance. Furthermore, an analysis of 150 industrial firms of Japanese, United States and United Kingdom regarding board composition and CEO duality showed differences between these countries Dalton and Kesner (1987). While in the United States and United Kingdom the CEO duality is frequent in industrial companies, in Japan this concept is unusual, the authors agreed that in Europe and United States there were pressures in modifying boards of directors in order to more independence from management as O'Connell (1984) implied.

CEO duality is measured by the dual role of the CEO and chairman of a company. There are several studies in this field with mixed results. Kyereboah-Coleman and Biekpe (2006), in a comparative analysis of listed and non-listed banks analyzed the implications of the CEO duality, board composition and size and board tenure of office on 18 Ghana banks. They found mixed results in which the CEO duality has a positive impact on bank`s performance in the case of non-listed banks but in the listed banks there was no statistically significant effect. Furthermore, Simpson and Gleason (1999) analyzed 287 banking firms from SNL Quarterly Bank Digest and found that the CEO duality may influence the internal control system of the banks in a way in which it reduces the probability of financial distress. In contrast the dual role of the CEO diminishes the capacity of the board to accomplish its governance function and in addition is created the conflict of interests (Mueller, 1978; Mills, 1981; Vance, 1983; and Dayton, 1984). The CEO presence in the board of directors may cause a conflict of interest because "he should not represent the shareholders and impartially sit on a judgment on himself" (Geneen, 1984, p. 29).

Rouf (2011) analyzes the role of CEO and Board of Directors independence on the performance of 93 firms listed in Dhaka Stock Exchange (DSE). Its results suggest that the independent board of directors has a positive effect on the performance and the CEO duality has a negative effect on return on assets (ROA) and return on equity (ROE), used as measured of the performance.

The CEO duality has a negative impact on the bank's performance by affecting the voluntary disclosure meanwhile the existence of the independent internal audit has a positive impact regarding the bank's performance (Samaha *et al.*, 2015). The CEO power and monitoring intensity have a negative impact on the performance of an entity (Baldenius *et al.*, 2014). The CEO duality has also a negative impact on firm performance in the case in which the "independent directors account for a small proportion of a board's membership" and if this proportion rises then the negative effect dilutes and can also lead to its disappearing (Duru *et al.*, 2016). An analysis of 141 corporations, from the US, for a 6-year period, indicates that the dual role of the CEO results in lower performance of the firm while the firms that have an independent board of directors obtain higher performance (Rechner and Dalton, 1991).

The independence of the board of directors has no effect on earnings management, in the case of Malaysia (Johari *et al*., 2008), and Wooi and Ming (2009) additionally found that independent directors fail in their internal monitoring role. McCabe and Nowak (2008) obtained that non-executive directors deliver a protection for the balance of power or management relationship. Other study such as suggested that there is no relationship between CEO duality and board`s independence but there are other studies such as Byrd *et al.* (2010) indicate an association between independent directors and the CEO remuneration, in the case of United States banking sector. If the independent directors attend more than 75% of the meeting the CEO remuneration is low, thus the independent directors monitor the excessive payment to the CEO.

Karayel and Dogan (2016) analyze the implications of the composition of the board of directors on firm performance using a sample of 100 listed companies in Turkey for a period of 3 years (2012-2014). Their results suggest that the board's independence has a positive and statistically significant influence on both ROA and ROE, used as measures of the performance.

Gani and Jermias (2006) examine the board`s independence and firm performance using data from the manufacturing firm listed in the Compustat S&P500 and found that board`s independence has a positive effect on firm`s performance. Moreover, Dunn and

Sainty (2009) found that, in the case of 104 Canadian firms, the independence of the board of directors contributes to more social responsibility of the firm. Zhang (2012) found that board`s independence contributes in mitigating bad corporate reputation due to higher information disclosure to shareholders. Mishra and Nielsen (2000) used a data set composed of 67 large commercial banks and 40 random nonfinancial firms and analyzed the effects of CEO duality, CEO tenure and board independence. They found that CEO duality has a negative effect on bank`s performance but a positive effect on nonfinancial firms.

3. DATA AND METHODOLOGY

3.1 Sample description

The purpose of our paper is to provide empirical evidence regarding the effects of corporate governance practices (analyzed in banks from Romania and Bulgaria) on bank performance.

The definition of the variables table, presented below (Table no. 1), offers the variables used in our model with their description and the expected effect of the independent variables on the dependent variables.

Table no. 1 – Definition of the variables

Variables	Notation	Description	Expected Effect
Dependent			
Profitability	ROAA	the return on average total assets of the banks (%). ROAA calculated as net income divided by average total assets	
	ROAE	the return on average equity is defined as net income by average total equity	
Independent			
Bank-specific (internal factors)			
Capital adequacy	EA	capital adequacy of a bank is measured by equity to asset ratio	+/-
Loan loss reserves rate	LLR	loan loss reserve to gross loans	-
Management Quality	CIR	cost to income ratio calculated as the operating costs over total income	-
Liquidity	LIQA	the ratio of liquid assets (cash and due from banks+ available for sale securities + government securities) to total assets (LIQA)	-
Funding costs	FC	interest expense on customer deposits as a percentage of average customer deposits	-
Income diversification of bank	NIIR	calculated as non-interest income over total gross revenues	+
Bank size	LNTA	bank size is measured by the natural logarithm of the accounting value of the total assets of bank	+/-
Macroeconomic and Industry-specific Factors (External Factors)			
Economic Activity	GDP	GDP per capita growth (annual %)	+
Inflation	INF	the annual inflation rate (consumer prices)	+/-

Variables	Notation	Description	Expected Effect
Domestic credit	DCPSB	domestic bank credit to private sector (% of GDP)	+/-
Banking industry concentration	CR	calculated as the assets of the five largest banks over total commercial banking assets (%)	+/-
Corporate governance variables			
CEO duality	DUAL	categorical variable CEO duality, if the CEO is also the CBO (YES if it is and NO if not)	-
CEO Board Member	CEOand BM	categorical variable representing the same person that is CEO and board member (YES= same person, NO=different person)	-/+

Source: authors computation

We have constructed a model with 15 variables, in which 7 represent the bank specific variables (internal factors), 4 represent the macroeconomic specific factors (external factors) and our variable of interest consisting in two are the categorical variables. These reflect the CEO presence in the Board as a member (presented further as CEOandBM), and the CEO duality (presented further as DUAL) representing our corporate governance characteristics. Also, we expect a negative effect of our interest variables (CEO duality and CEOandBM) on bank performance based on the existent literature.

The study uses as dependent variables ROAA and ROAE that reflect the profitability of the bank as a measurement of the bank`s performance consistent with other studies such as (Lo, 2003; Brown and Caylor, 2006).

Our bank specific variables (internal factors) are capital adequacy, loan loss reserves rate, management quality, liquidity, funding costs, income diversification of bank and bank size. We expect a negative effect on bank performance of the loan loss reserves rate, management quality, liquidity and funding costs variables, mixed effects of capital adequacy and bank size variables and a positive effect on bank performance of the income diversification of bank variable. Our macroeconomic specific factors (external factors) are economic activity, inflation, domestic credit and banking industry concentration. We expect a positive effect on bank performance of the economic activity (GDP) variable and mixed effects of inflation, domestic credit and banking industry concentration variables. We are not mainly interested in these effects, in our study these variables being used, primarily, as control independent variables for corporate governance (our variables of interest) influences on bank performance.

In order to analyze the corporate governance characteristics influence on banking soundness and based on our expected effect on our interest variables we conducted 2 key hypotheses:

H1*: CEO Duality has negative impact on bank profitability.*

H2*: CEO presence in the Board as a member has a negative impact on bank profitability.*

Due to our analysis in the literature field we expect that the CEO duality variable to have a greater impact on bank profitability because of the dual position of the CEO in decision making regarding the entity.

The data we used in our model if from a twelve years period (2003-2015) as reported by Bureau Van Dijk database and the data for the corporate governance characteristics was processed manually from the annual reports of 27 Romanian and Bulgarian commercial banks.

In Table no. 2 we present in the first part our initial sample, without any transformations or modifications. Due to the existence of possible outliers, that disturbs the kurtosis and

skewness values in our sample, we decided to perform a data cleaning by winsorization, presented in the second part of the table. We present in our descriptions only numerical variables. The categorical variables (DUAL and CEOandBM) are not shown in tables.

We used Alfons, package Alfons (2016) in R Core Team (2017).

Table no. 2 – Descriptive statistics of the variables (before and after data cleaning)

VARS	VARIABLES	N	MEAN	SD	SKEW	KURTOSIS	SE
1	ROAA	374	0.9319	1.5545	-1.6101	9.4379	0.0804
2	ROAE	374	7.6605	19.2520	-7.2126	93.5433	0.9955
3	EA	374	12.1735	6.9872	3.8599	20.0370	0.3613
4	CIR	374	63.6067	21.3301	0.8037	1.8464	1.1030
5	LIQA	374	27.2170	16.9518	1.7120	4.4425	0.8766
6	FC	368	4.7995	4.6302	5.1698	34.4878	0.2414
7	NIIR	374	33.6637	14.2409	0.4029	0.4930	0.7364
8	lnTA	374	8.2929	1.4025	-0.1912	-0.2834	0.0725
9	LLR	371	6.0486	5.7436	1.9852	5.2172	0.2982
10	CR	377	53.9856	3.8638	-0.6019	0.3025	0.1990
11	GDP	377	4.1158	4.0220	-0.7321	0.1991	0.2071
12	INF	377	5.2011	3.9776	0.6210	0.0648	0.2049
13	DCPSB	377	43.9149	18.6605	0.3233	-1.0818	0.9611

VARS	VARIABLES	N	MEAN	SD	SKEW	KURTOSIS	SE
1	ROAA	377	0.993547	1.173897	-0.06321	-0.00105	0.060459
2	ROAE	377	8.868242	10.98631	-0.21532	0.283924	0.565824
3	EA	377	11.34013	3.472148	0.930223	0.881068	0.178825
4	CIR	377	63.25952	17.62474	0.498348	0.472035	0.907721
5	LIQA	377	26.65537	13.89895	1.053198	1.302492	0.715832
6	FC	377	4.381953	2.337722	0.985164	0.739768	0.120399
7	NIIR	377	33.77673	12.16094	0.519602	0.049366	0.62632
8	lnTA	377	8.371121	1.26113	-0.00221	-0.43834	0.064951
9	LLR	377	5.403148	4.189502	1.012232	0.185583	0.21577
10	CR	377	54.05429	3.607267	-0.59181	0.448322	0.185784
11	GDP	377	4.175082	3.792246	-0.76166	0.408927	0.195311
12	INF	377	5.152889	3.616381	0.525105	0.041069	0.186253
13	DCPSB	377	43.7703	17.50233	0.430191	-0.95343	0.901416

Source: authors calculation

We decided to clean the data by winsorization because there are several improvements on skewnenes and kurtosis. As we can see from Table no. 2, in our first descriptive regarding the dependent variable ROAE the kurtosis had a value of 93.5433, after data cleaning our variable presented a kurtosis of 0.283924.

Our sample is composed of 27 banks from Romania and Bulgaria, from 2003 to 2015 and based on the data disclosure regarding our interested variables (DUAL and CEO and BM) the time period for each bank varies as presented in Annex 1.

In order to control for possible interactions between independent variables we computed the Pearson's correlation matrix available in Table no. 3.

Table no. 3 – The Pearson's correlation matrix

	EA	CIR	LIQA	FC	NIIR	lnTA	LLR	CR	GDP	INF	DCPSB
EA	1										
CIR	-0.31	1									
LIQA	-0.21	0.22	1								
FC	0.34	0.16	0.09	1							
NIIR	-0.33	0.22	0.19	-0.13	1						
lnTA	-0.24	-0.31	0.02	-0.34	0.19	1					
LLR	0.15	-0.09	0.18	-0.08	0.1	0.2	1				
CR	-0.04	0.25	0.03	0.13	0.02	0.09	-0.25	1			
GDP	-0.05	0.13	-0.09	0.07	0.02	-0.21	-0.32	0.28	1		
INF	-0.01	0.2	0.15	0.3	-0.07	-0.15	-0.41	0.49	0.44	1	
DCPSB	0.09	-0.36	-0.15	-0.27	-0.22	-0.03	0.08	-0.37	-0.41	-0.38	1

Source: authors' calculation

The correlation matrix does not suggest any possible correlation problems, as the largest correlations (0.49) is between the annual inflation rate (INF) and banking industry concentration (CR).

3.2 Methodology description

The panel data model is described through some restrictions such as parameter homogeneity, for all *i,t*, applied to the general model (equation 1), resulting a linear model pooling all the data across *i* and *t* (equation 2). To model individual heterogeneity, the error term has two separate components (one of which is specific to the individual) and doesn't change over time (equation 3). In the case of *fixed* or *random* effects models: the estimation depends on the properties of the error component, which may be either uncorrelated with the regressors (*random effects* model) or correlated (*fixed effects, within* or *least squares dummy variables* model).

$$y_{it} = \alpha_{it} + \beta_{it}^{T} x_{it} + u_{it} \quad (1)$$

$$y_{it} = \alpha + \beta^{T} x_{it} + u_{it} \quad (2)$$

$$y_{it} = \alpha + \beta^{T} x_{it} + u_{i} + \varepsilon_{it} \quad (3)$$

When time specific components are taken into consideration (e.g. Year) the error has three components:

$$u_{it} = u_i + \lambda_t + \epsilon_{it}$$

The individual component may be in turn either independent of the regressors or correlated.

If it is correlated, the ordinary least squares (OLS) estimator of would be inconsistent, so it is customary to treat the u_i as a further set of n parameters to be estimated, as if in the general model $\alpha_{it} = \alpha_i$ for all t. This is called the fixed effects (a.k.a. within or least squares

dummy variables) model, usually estimated by OLS on transformed data, and gives consistent estimates.

Our fixed effects equation becomes:

$$\boldsymbol{ROAA_{it}} = \beta_1 EA + \beta_2 CIR + \beta_3 LIQA + \beta_4 FC + \beta_5 NIIR + \beta_6 lnTA + \beta_7 LLR + \beta_8 CR + \beta_9 GDP + \beta_{10} INF + \beta_{11} DCPSB + \beta_{12} DUAL + \beta_{13} CEOandBM + u_i + e_{it}$$

$$\boldsymbol{ROAE_{it}} = \beta_1 EA + \beta_2 CIR + \beta_3 LIQA + \beta_4 FC + \beta_5 NIIR + \beta_6 lnTA + \beta_7 LLR + \beta_8 CR + \beta_9 GDP + \beta_{10} INF + \beta_{11} DCPSB + \beta_{12} DUAL + \beta_{13} CEOandBM + u_i + e_{it}$$

Our random effects equation becomes:

$$\boldsymbol{ROAA_{it}} = \alpha + \beta_1 EA + \beta_2 CIR + \beta_3 LIQA + \beta_4 FC + \beta_5 NIIR + \beta_6 lnTA + \beta_7 LLR + \beta_8 CR + \beta_9 GDP + \beta_{10} INF + \beta_{11} DCPSB + \beta_{12} DUAL + \beta_{13} CEOandBM + u_{it} + e_{it}$$

$$\boldsymbol{ROAE_{it}} = \alpha + \beta_1 EA + \beta_2 CIR + \beta_3 LIQA + \beta_4 FC + \beta_5 NIIR + \beta_6 lnTA + \beta_7 LLR + \beta_8 CR + \beta_9 GDP + \beta_{10} INF + \beta_{11} DCPSB + \beta_{12} DUAL + \beta_{13} CEOandBM + u_{it} + e_{it}$$

where:

u_i is the unknown intercept for each entity

e_{it} is the error term (idiosyncratic errors)

α – constant

1. Bank specific variables (used as control variables):

EA (Capital adequacy);
LLR (Loan loss reserves rate);
CIR (Management Quality);
LIQA (Liquidity);
FC (funding costs);
NIIR (Income diversification of bank) and
LNTA (Bank size);

2. Macroeconomic factors (used as control variables):

GDP (Economic Activity);
INF (Inflation); DCPSB (Domestic credit) and
CR (banking industry concentration);

3. Corporate governance characteristics (our interest variables):

DUAL (CEO duality) and
CEOandBM (CEO Board Member)

4. TESTS AND RESULTS

In order to control heteroscedasticity and autocorrelation and possible serial correlation with some lags we used robust covariance matrix Driscoll-Kraay model.

In this section we present the tests and results of our panel data. We used the specific tests for panel data from plm package Croissant and Millo (2008). We present in the paper only VIF results and Hausman tests, other tests being available on demand or in annexes.

As for multicolliniarity, there could be a problem in regression analysis if present, we computed the VIFs, and the results are shown in Annex 2. As all the values for VIFs are below 3, we conclude that there are no multicollinearity problems for our models.

To select the most appropriate model between random and fixed effects models we conducted the Hausman test presented in Annex 3. The results of Hausman test suggest that the fixed effects model is more adequate than the random effects model. Further tests (Wald test and Wooldridge`s first-difference test for serial correlation in panels, see Annex 4 and 5) suggest that within "two-ways" models are the most appropriate ones (columns 3 and 4 in Tables no. 4 and no. 5).

Table no. 4 – Data panel regression results for dependent variable ROAA

	(1)	(2)	(3)	(4)	(5)	(6)
EA	0.0705***	0.0655***	0.0957***	0.0924***	0.0614***	0.0559***
	(0.0156)	(0.0112)	(0.0133)	(0.0106)	(0.0152)	(0.0138)
CIR	-0.0294***	-0.0269***	-0.0277***	-0.0242***	-0.0336***	-0.0325***
	(0.0057)	(0.0061)	(0.0060)	(0.0065)	(0.0053)	(0.0057)
LIQA	-0.0015	-0.0008	-0.0013	-0.0012	0.0006	0.0013
	(0.0024)	(0.0024)	(0.0021)	(0.0023)	(0.0033)	(0.0033)
FC	-0.0451	-0.0429	-0.0524**	-0.0508**	-0.0740***	-0.0785***
	(0.0278)	(0.0279)	(0.0236)	(0.0237)	(0.0136)	(0.0165)
NIIR	0.0001	-0.0005	-0.0028	-0.0036	0.0038	0.0033
	(0.0056)	(0.0059)	(0.0053)	(0.0054)	(0.0044)	(0.0042)
LNTA	0.0753	0.1577	-0.0606	0.0510	-0.0242	-0.0176
	(0.1920)	(0.1776)	(0.2269)	(0.2155)	(0.0759)	(0.0778)
LLR	-0.1357***	-0.1280***	-0.1307***	-0.1192***	-0.1313***	-0.1252***
	(0.0086)	(0.0083)	(0.0132)	(0.0117)	(0.0144)	(0.0154)
CR	0.0069	0.0096**	0.0021	0.0001	0.0079	0.0088
	(0.0062)	(0.0047)	(0.0132)	(0.0125)	(0.0097)	(0.0100)
GDP	0.0382***	0.0333**	0.0221	0.0306	0.0402***	0.0383***
	(0.0135)	(0.0141)	(0.0285)	(0.0349)	(0.0109)	(0.0117)
INF	0.0396**	0.0518***	0.0481***	0.0661***	0.0451***	0.0524***
	(0.0153)	(0.0161)	(0.0127)	(0.0163)	(0.0115)	(0.0130)
DCPSB	-0.0160*	-0.0194**	-0.0296***	-0.0339***	-0.0112***	-0.0114***
	(0.0086)	(0.0081)	(0.0093)	(0.0111)	(0.0041)	(0.0039)
DUALYes	-0.5464***		**-0.6046*** **		-0.4767***	
	(0.1813)		**(0.1747)**		(0.1482)	
CEOand BMYes		-0.4817**		**-0.5465*** **		-0.3434**
		(0.2009)		**(0.1989)**		(0.1420)
Constant					3.2892***	3.2110***
					(0.9147)	(1.0624)
Obs.	273	273	273	273	273	273
R^2	0.5368	0.5306	0.3208	0.3114	0.5320	0.5233
Adjusted R^2	0.4616	0.4544	0.1678	0.1563	0.5104	0.5013
F Statistic	22.5974*** (df = 12; 234)	22.0443*** (df = 12; 234)	8.7376*** (df = 12; 222)	8.3658*** (df = 12; 222)	24.6182*** (df = 12; 260)	23.7699*** (df = 12; 260)

Note: (1) - vcovSCC.within.DUAL.; (2) - vcovSCC.within.CEOandBM.; (3) - vcovSCC.within.twoways.DUAL; (4) - vcovSCC.within.twoways.CEOandBM; (5) - vcovSCC.random.DUAL; (6) - vcovSCC.random.CEOandBM.

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

Source: authors' calculation

Due to the limitation regarding the dimensions of the article, the tests of poolability, tests for individual and time effects, tests for heteroskedasticity, cross-sectional dependence

and unit root tests can be provided on demand. Due to presence of cross-sectional and possible temporal dependence, we have decided to use Driscoll and Kraay (1998) standard errors for the coefficients estimated by the within-group regression (robust to heteroskedasticity and other forms of cross-sectional and temporal dependence).

In Tables no. 4 and no. 5 we present our panel data regression result for fixed, random effects and first-difference.

Table no. 5 – Data panel regression results for dependent variable ROAE

	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
EA	-0.1194	-0.1820	0.0327	-0.0145	-0.1659	-0.2329	0.8410***	0.8277***
	(0.1759)	(0.1582)	(0.2160)	(0.1859)	(0.2073)	(0.2111)	(0.3076)	(0.3047)
CIR	-0.2807***	-0.2588***	-0.2577***	-0.2268***	-0.3291***	-0.3202***	-0.2793***	-0.2764***
	(0.0592)	(0.0645)	(0.0611)	(0.0661)	(0.0499)	(0.0535)	(0.0465)	(0.0460)
LIQA	-0.0034	0.0032	-0.0035	-0.0022	0.0174	0.0251	0.0044	0.0070
	(0.0240)	(0.0249)	(0.0235)	(0.0249)	(0.0283)	(0.0291)	(0.0382)	(0.0385)
FC	-0.1443	-0.1207	-0.4581	-0.4396	-0.4879***	-0.5434***	0.1061	0.0979
	(0.2489)	(0.2576)	(0.2989)	(0.3077)	(0.1276)	(0.1324)	(0.3740)	(0.3661)
NIIR	0.0012	-0.0009	-0.0537	-0.0582	0.0490	0.0474	0.0728	0.0778
	(0.0642)	(0.0650)	(0.0598)	(0.0595)	(0.0494)	(0.0461)	(0.0752)	(0.0703)
LNTA	1.1209	1.8541	0.6756	1.6989	-0.0362	-0.0195	2.7990	2.8625
	(1.8643)	(1.8778)	(2.1584)	(2.1143)	(0.7063)	(0.7344)	(3.2673)	(3.2346)
LLR	-1.2340***	-1.1586***	-1.0449***	-0.9338***	-1.2067***	-1.1486***	-1.3223***	-1.3101***
	(0.0958)	(0.0848)	(0.1270)	(0.1029)	(0.1545)	(0.1549)	(0.3920)	(0.3861)
CR	0.0169	0.0449	-0.1213	-0.1336*	0.0263	0.0364	0.2253	0.2121
	(0.0682)	(0.0573)	(0.0857)	(0.0785)	(0.0819)	(0.0795)	(0.1424)	(0.1360)
GDP	0.4796***	0.4420***	0.0831	0.1822	0.5002***	0.4882***	0.5668***	0.5526***
	(0.1270)	(0.1315)	(0.1848)	(0.2431)	(0.1090)	(0.1172)	(0.1105)	(0.1094)
INF	0.3594**	0.4624***	0.1586	0.3162	0.4121***	0.4708***	0.1429	0.1411
	(0.1633)	(0.1679)	(0.1747)	(0.1954)	(0.1218)	(0.1270)	(0.1558)	(0.1599)
DCPSB	-0.1179	-0.1480**	-0.0382	-0.0804	-0.0614	-0.0626	-0.0912	-0.0923
	(0.0799)	(0.0747)	(0.1203)	(0.1141)	(0.0422)	(0.0401)	(0.1175)	(0.1170)
DUALYes	-5.0913**		**-5.7410*** **		-4.6858***		-3.0311*	
	(1.9665)		**(1.9029)**		(1.5125)		(1.7277)	
CEOand BMYes		-3.8792**		**-4.5648** **		-2.6275**		-2.6982**
		(1.8564)		**(1.8549)**		(1.2920)		(1.2811)
Constant					36.6808***	36.0978***		
					(9.3533)	(10.3265)		
Obs.	273	273	273	273	273	273	246	246
R^2	0.5157	0.5065	0.2388	0.2225	0.5147	0.5014	0.3115	0.3105
Adjusted R^2	0.4370	0.4264	0.0673	0.0473	0.4923	0.4784	0.2791	0.2781
F Statistic	20.7639*** (df = 12; 234)	20.0157*** (df = 12; 234)	5.8028*** (df = 12;222	5.2931*** (df = 12; 222)	22.9712*** (df = 12; 260)	21.7774*** (df = 12; 260)	9.6226*** (df = 11; 234)	9.5736*** (df = 11; 234)

Note: (9) - vcovSCC.within.DUAL.; (10) - vcovSCC.within.CEOandBM.; (11) - vcovSCC.within.twoways.DUAL.; (12) - vcovSCC.within.twoways.CEOandBM.; (13) - vcovSCC.random.DUAL.; (14) - vcovSCC.random.CEOandBM.; (15) - vcovSCC.fd.DUAL.; (16) - vcovSCC.fd.CEOandBM.

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

Source: authors' calculation

Our results indicate that our independent (control) variables, both internal and external factors, have the expected sign. EA (Capital adequacy) variable has a positive and statistically significant sign on ROAA. LLR (Loan loss reserves rate) and CIR (Management Quality) variables have a negative and statistically significant sign on both ROAA and ROAE. FC (funding costs) variable has a negative and statistically significant sign on ROAA.

The variables LIQA (Liquidity), LNTA (Bank size) and NIIR (Income diversification of bank) have the expected sign but are not statistically significant on both ROAA and ROAE. Our macroeconomic variables INF (Inflation) and DCPSB (Domestic credit) have the expected sign and are statistically significant on ROAA.

GDP (Economic Activity) variable has the expected sign but lacks the statistical significance in our model. The CR (banking industry concentration) variable, also has the expected sign and is statistically significant on ROAE. As stated above, we do not thoroughly explain these effects on bank profitability, due to our declared objectives – to investigate the impact of corporate governance variables, these results being explained below. In this respect, we found that in all the constructed models, our interest variables (DUAL and CEOandBM) are statistically representative and in line with stated hypothesis.

In all the constructed models, our interest variables (DUAL and CEOandBM) are statistically representative.

The results in our analysis suggest that our first hypothesis H1 – CEO Duality has negative impact on bank performance is accepted, the CEO Duality has negative and statistically significant impact on bank performance, while the banks that do not have the dual role of the CEO have higher performance.

As suggested above, we take into considerations the results mainly obtained when using fixed - time effects. We have found that, in the case of the existence of CEO duality ROAA decreases with 0.6046 and ROAE with 5.7410. The CEO duality variable has the expected effect reducing the banking profitability in our analysis on both ROAA and ROAE. This result suggests that the banks that have different Chief Executive Officer and Chairman of the Board have a higher profitability.

Regarding our second hypothesis H2 – CEO presence in the Board as a member has a negative impact on bank profitability.

The CEOandBM variable has a negative and statistically significant impact on both ROAA and ROAE, and thus our second hypothesis is accepted.

The existence of CEO as a Board member determines a decrease of ROAA with 0.5465 and decreases ROAE with 4.5648, while other banks with independent board have higher performance.

The CEO as Board member has the expected effect reducing the banking profitability in our analysis on both ROAA and ROAE. The banks that do not have the Chief Executive Officer as Board member, have a higher profitability.

As we expected the CEO duality (DUAL) has a greater impact on both dependent variables (ROAA and ROAE), that the presence of the CEO as Board Member (CEOandBM).

Our results are in line with other studies such as Gani and Jermias (2006) in which the independence of the Board of Directors has a positive impact on the entity`s performance in a way in which reduces the bad corporate reputation Zhang (2012) and contributes to more social responsibility of the entity Dunn and Sainty (2009). Our results are in accordance with (Samaha *et al.*, 2015) in a way in which the CEO duality has a negative impact on bank`s performance, affecting the voluntary disclosure. The CEO duality places the Chief Executive Officer in a two decision making positions increasing his power and there by affecting in a negative way, confirmed by our results, the performance of the bank.

Given the fact that the board of directors represents a collective body that must act in the in the best interest for the shareholders but also the board of directors monitor the Chief

Executive Officer (CEO) `s remuneration (Byrd *et al.*, 2010), we consider that the presence of the CEO in the Board of Directors, as a member, has a lower impact on dependent variables (the probability quantified by ROAA and ROAE) than the CEO duality effects on the same variables, confirmed also by our results.

The dual role of the CEO results in lower performance of the bank while the banks that have an independent board of directors obtain higher performance, this argument being in line with Rechner and Dalton (1991) in which the United States corporations have present same results.

5. CONCLUSIONS

This paper aimed to investigate if the corporative governance characteristics, especially if the CEO duality or the presence of the Chief Executive Officer as member of the Board, has an impact on bank performance. The subject is largely treated in scientific literature, but the studies are mainly oriented to banks from developed countries. The main contribution to specialized economic literature of our paper is related to the analyses regarding banks from emerging and developing countries (Romania and Bulgaria), where the adoption and enforcement of the corporate governance rules are weaker. As we presented in the results section, both of our hypothesis (H1 – CEO Duality has negative impact on bank profitability; H2 – CEO presence in the Board as a member has a negative impact on bank profitability) were confirmed.

The CEO presence in the Board (CEOandBM) as a member and the CEO Duality, both have a negative and statistically significant impact on bank profitability.

Our results indicate that non-independent directors influence the bank`s performance, characterized in our analysis by the return on average total assets and the return on average equity, in a negative way, and that the CEO duality has a greater negative impact on bank profitability than the presence of the CEO as a Board member. In addition to that, our results also suggest that good practices of corporate governance regarding the independence of directors, presented in The Code of Corporate Governance and recommended by regulators regarding the board, in which members should be balanced and independent, conduct to greater performance.

Our study provides empirical support for corporate governance system regarding the dual role of the CEO and the independence of the Board of Directors and implies that the management decisions of the CEO should not interfere with the decisions of the Board of Directors. These findings are mainly important for the decision makers in firms that should enforce the independence of CEO's in order to achieve highest levels of bank performance.

Our study presents some limitations due to the absence of some public annual reports of the banks, as presented in Annex 1. Further investigations related to our variables also other governance and audit variables, would be aimed to, improving the quality of investigation with better information from annual reports when available.

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ANNEX 1

Banks and time period for each bank available for our interest variables

Bank	begin	end
Allianz_Bank_Bulgaria_AD_CB	2007	2015
Alpha Bank Romania	2003	2015
Banca Comerciala CARPATICA	2005	2015
Banca Comerciala Romana	2003	2015
Banca Romaneasca	2008	2015
Banca Transilvania	2004	2015
Bancpost	2008	2015
BRD Groupe Societe Generale	2003	2015
Bulgarian_Development_Bank_AD	2010	2015
CEC Bank	2003	2015
DSK_Bank	2004	2015

Bank	begin	end
First_Investment_Bank	2006	2015
MKB ROMEXTERRA	2003	2008
MKB_Unionbank_AD	2006	2015
Municipal Bank Plc	2003	2015
OTP Bank Romania	2006	2015
Piraeus Bank Romania	2006	2015
Postbank	2003	2015
ProCredit Bank	2003	2015
Procredit_Bank_AD	2003	2015
Raiffeisen Bank Romania	2003	2015
Raiffeisenbank	2003	2015
RBS Bank Romania	2008	2015
Societe_General_Expressbank AD	2005	2015
UniCredit Tiriac	2007	2015
UNICREDIT_Bulbank	2003	2015
United_Bulgaria_Bank_UBB	2006	2015

ANNEX 2

VIFs results

Model lm.DUAL.ROAA

EA	CIR	LIQA	FC	NIIR	lnTA	LLR	CR	GDP	INF	DCPSB	DUAL
1.288584	2.279813	1.216044	2.041266	1.209674	2.00175	1.661669	1.569411	1.787935	2.344473	1.912435	1.068877

Model lm.CEOandBM.ROAA

EA	CIR	LIQA	FC	NIIR	lnTA	LLR	CR	GDP	INF	DCPSB	CEOandBM
1.299741	2.274639	1.233893	2.063536	1.305418	1.980698	1.710962	1.587	1.791043	2.326105	1.966512	1.079975

Model lm.DUAL.ROAE

EA	CIR	LIQA	FC	NIIR	lnTA	LLR	CR	GDP	INF	DCPSB	DUAL
1.288584	2.279813	1.216044	2.041266	1.209674	2.00175	1.661669	1.569411	1.787935	2.344473	1.912435	1.068877

Model lm.CEOandBM.ROAE

EA	CIR	LIQA	FC	NIIR	lnTA	LLR	CR	GDP	INF	DCPSB	CEOandBM
1.299741	2.274639	1.233893	2.063536	1.305418	1.980698	1.710962	1.587	1.791043	2.326105	1.966512	1.079975

Source: authors' calculation

ANNEX 3

Hausman test

	statistic	p.value	parameter	method
phtest.plm.DUAL.ROAA	18.64176	0.09754848	12	"Hausman Test"
phtest.plm.CEOandBM.ROAA	25.0759	0.01446728	12	"Hausman Test"
phtest.plm.DUAL.ROAE	40.36991	0.0000624172	12	"Hausman Test"
phtest.plm.CEOandBM.ROAE	29.76555	0.00303029	12	"Hausman Test"

Source: authors' calculation

ANNEX 4

Wald test results

walt test	
Model 1 :	ROAA=EA+CIR+LIQA+FC+NIIR+lnTA+LLR+GDP+INF+DCPSB+DUAL+as.factor(Bank)
Model 2 :	ROAA=EA+CIR+LIQA+FC+NIIR+lnTA+LLR+GDP+INF+DCPSB+DUAL+as.factor(Bank) +as.factor(Year)

Res.	Df	Df	F	Pr(>F)
1	264			
2	252	12	3.3821	0.0001339***
11	234			
21	222	12	2.284	0.0093654**
12	264			
22	252	12	2.5112	0.0039117**
13	234			
33	222	12	1.8991	0.0355949*

*Signif. Codes : 0 "***" 0.001 "**" 0.01 "*" 0.05 "." 0.1 " " 1*

Source: authors' calculation

ANNEX 5

Wooldridge`s first-difference test for serial correlation in panels

	stratistic	parameter	p.value
pwftest.plm.DUAL.ROAA	9.529377	Numeric,2	0.002285688
pwftest.plm.CEOandBM.ROAA	9.058829	Numeric,2	0.002923684
pwftest.plm.DUAL.ROAE	8.132716	Numeric,2	0.0047672
pwftest.plm.CEOandBM.ROAE	7.983244	Numeric,2	0.005161658
	method		
pwftest.plm.DUAL.ROAA	"wooldridge`s first-difference test for serial correlation in panels"		
pwftest.plm.CEOandBM.ROAA	"wooldridge`s first-difference test for serial correlation in panels"		
pwftest.plm.DUAL.ROAE	"wooldridge`s first-difference test for serial correlation in panels"		
pwftest.plm.CEOandBM.ROAE	"wooldridge`s first-difference test for serial correlation in panels"		
	alternative		**data.name**
pwftest.plm.DUAL.ROAA	"serial correlation in differenced errors"		"plm.model"
pwftest.plm.CEOandBM.ROAA	"serial correlation in differenced errors"		"plm.model"
pwftest.plm.DUAL.ROAE	"serial correlation in differenced errors"		"plm.model"
pwftest.plm.CEOandBM.ROAE	"serial correlation in differenced errors"		"plm.model"
	statistic	**parameter**	**p.value**
pwftest.plm.DUAL.ROAA	1.342256	Numeric,2	0.2579099
pwftest.plm.CEOandBM.ROAA	1.303212	Numeric,2	0.2548855
pwftest.plm.DUAL.ROAE	0.6775166	Numeric,2	0.4113468
pwftest.plm.CEOandBM.ROAE	0.6610569	Numeric,2	0.4170782
	method		
pwftest.plm.DUAL.ROAA	"wooldridge`s first-difference test for serial correlation in panels"		
pwftest.plm.CEOandBM.ROAA	"wooldridge`s first-difference test for serial correlation in panels"		
pwftest.plm.DUAL.ROAE	"wooldridge`s first-difference test for serial correlation in panels"		
pwftest.plm.CEOandBM.ROAE	"wooldridge`s first-difference test for serial correlation in panels"		
	alternative		**data.name**
pwftest.plm.DUAL.ROAA	"serial correlation in original errors"		"plm.model"
pwftest.plm.CEOandBM.ROAA	"serial correlation in original errors"		"plm.model"
pwftest.plm.DUAL.ROAE	"serial correlation in original errors"		"plm.model"
pwftest.plm.CEOandBM.ROAE	"serial correlation in original errors"		"plm.model"

Source: authors' calculation

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