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Corporate Governance in the Banking Industry of Kosovo: Does Board Size and Board Independence Matter?

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Abstract

The main purpose of this research is to study the impact of corporate governance on the financial performance of the banking sector in Kosovo. To analyze this impact, the Pearson correlation coefficient, multiple regression analysis related to the board size and board independence and banking sector performance in Kosovo were applied. The key corporate governance variables that have been studied in this research are: (i) size of the board of directors, (ii) the independence of the board of directors (the ratio between non-executive directors and the total number of board members). The data for this research were collected from the annual reports and audited financial statements of commercial banks in Kosovo for the 12 year period (2006-2017) and from questionnaires addressed to board members of commercial banks in Kosovo as well as other publications from relevant local institutions such as the Central Bank of Kosovo (CBK), Statistical Office of Kosovo (SOK), Tax Administration of Kosovo (TAK), etc. The results of the multiple regression analysis regarding the influence of the board of directors on the financial performance of the banking sector indicate that: the size of the board of directors and the independence of the board of directors have a positive and significant impact on the financial performance of the banking sector in Kosovo, expressed through return on assets (ROA) and return on equity (ROE). Findings of this research are in line with the findings of other researchers in this field and confirm the assertion that the management of the above variables improves and has a positive impact on the financial performance of banks in Kosovo.

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[1] This research paper is part of my PhD thesis "Corporate Governance and Internal Auditing as a Performance Function of Banking Sector in Kosovo".

Introduction

Successful corporate governance in banks is one of the key factors affecting the overall performance of banks. Due to the lack of many research studies of the banking sector in transition countries such as Kosovo (Uwuigbe, 2011) and a rather new banking sector in Kosovo, this research claims to bridge the gap in existing corporate governance literature in the banking sector. According to the authors Heidi and Marleen, banking supervision cannot function properly if banks fail to implement a proper and effective corporate governance framework (Heidi & Marleen, 2003). Therefore, the main motivation of this research is the claim to analyze and study the relationship between corporate governance variables and financial performance of the banking sector in Kosovo.

To analyze these relationships, among others, the Pearson correlation coefficient, and regression analysis will be applied in relation to corporate governance variables and banking sector performance. The key variables of corporate governance will be *(i) the size of the board of directors* and *(ii) the independence of the board of directors* (the ratio between non-executive directors[2] and the total number of board members).

Corporate Governance has been partially developed as a response to the agency's problem, in order to respond to the difficulties in making sure that the entity's shareholders are able to exercise sufficient control over their agents, directors and managers. Corporate governance is a system under which banks are directed and controlled (Cadbury Committee Report, 1992). Corporate Governance is a set of relationships between directors, shareholders and other stakeholders of a company. At the same time it sets out the structure by which the banks objectives are set and the way in which the achievement of these objectives and the performance monitoring are determined (OECD Principles, 2015).

A study by McKinsey in relation to corporate governance in 2008, suggests that investors are prepared to pay an additional premium to buy shares of companies which have enhanced corporate governance systems (McKinsey, 2008). Some of the important indicators of good corporate governance for investors are the fact that the board had a majority of independent non - executive directors, the fact that the directors owned a significant share of the shares and that the compensation was based on shares, the fact that the performance of board directors was made by formalized methods and providing good and timely responses to shareholders' information requests. The key participants in corporate governance are: *Board of Directors, Management and Shareholders* (Aebi, Sabato, Schmid, 2012).

Just as in all corporations and banks, corporate governance plays an essential role. Given the specificities of the bank's operations, the general principles of good governance cannot be applied to all banks. Macey & O'Hara argue that banks are quite specific in their organizational structure, so their corporate governance needs to be looked at differently (O'Hara, 2003). Banks are organized in different ways. Banks' assets are more specific, which makes them more difficult for their owners to monitor their banking activities. Banks are also subject to strict regulation by central banks due to deposit holdings, which has important implications for risk taking by bank managers and the moral hazard problem by banks. Another reason for banks to be treated differently is the role of stakeholder groups, such as depositors, debtors and regulators.

The weak and ineffective mechanisms of corporate governance in banks have been highlighted as the main factors contributing to the recent financial crisis. Deep changes in this area are needed to strengthen the stability of the financial sector (Marcinkowska, 2012) .The failure of a bank to pursue good practices in corporate governance and the lack of effective governance are among the most important internal factors that could endanger a bank's liquidity and solvency.

Corporate governance in the banking sector is important because this sector plays an essential role in the health and economic performance of a country (Saidi, 2004). The Basel Committee on Banking Supervision (BCSB), in its report on enhancing corporate governance in the banking sector, stressed that corporate governance in banks is essential for the international financial system and is needed to guarantee a sound

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[2] Note: executive directors are also known as internal directors, while non-executive directors are also known as external or independent directors.

financial system and development of sustainable economy of a country (Basel Committee on Banking Supervision, 2006).

Literature review

This part deals with the literature review in the area of corporate governance related to the topic of this research.

One of the big four audit firms *"Deloitte"* in collaboration with Nyenrode Business University has conducted a meta-analysis of scientific papers published during 2006-2016 on the impact of various corporate governance variables on entity performance (Deloitte, Neynrode Business University, 2016). The research finds the presence of correlation between several corporate governance variables and entity performance. Some of the corporate governance variables with a correlation effect are specified to be: (i) the independence of the board of directors, (ii) the diversity of the board of directors; (iii) Compensation; (iv) the characteristics of the Executive Director (CEO); (v) oversight, and (vi) ownership structure. The following table presents the variables of corporate governance and their impact or performance effect based on this research.

Table 1: Corporate governance variables and their impact on performance

Variables	Impact on performance
Board independence	A greater number of independent board members have an impact on improving the board's objectivity and its ability to present some views on various issues. However, with the increased size of the board, this may have an impact on the slowdown in the decision-making process.
Diversity of the board	Demographic diversity has a positive impact on performance. However, when diversity is mandated by law, this effect is not present.
Compensation	Compensation contributes to performance by coordinating shareholders' and management interests. Stock options for the CEO may work well in good times, but may not be effective when the firm's performance is stagnating.
CEO characteristics	If the CEO has a strong position, this has a positive effect on performance, but can lead to more risk-based decision-making.
Oversight	The active supervisory role of owners and boards has a positive effect on performance, especially in international companies.
Ownership structure	Institutional ownership has a positive impact on the quality of strategic decisions made by the board, engaging actively and having a prospective outlook.

*Source: Deloitte (*Deloitte, Neynrode Business University, 2016).

Authors Belhaj and Mateus researched the effect of corporate governance on financial performance on eleven (11) European banks. The variables tested in this research paper were board size, board composition (independence), gender diversity and the CEO duality during 10-year period (2002-2011). The results show that the board size and board gender diversity have a significant positive effect on bank performance. They found out that banks with larger number of board members and more female members had better financial performance. They also concluded that board composition (executive vs. non-executive) and CEO duality had no significant impact on the performance of the sampled European banks (Belhaj & Mateus, 2016).

Authors Isik & Ince (2016) have reviewed the impact of two key corporate governance variables, board size and board composition, on commercial banks in Turkey during a time-span of 5 years (2008-2012). They also used control variables such as bank size, credit risk, liquidity risk and net interest margin to account for any effect on bank performance by these variables. Empirical results show that board size have a significant and positive impact on bank performance, while the board composition (inside vs. outside directors) does not have any effect on bank performance (Isik & Ince, 2016).

Through a very large longitudinal study, and a 40 years period covered (1959-1999), authors Adams and Mehran (2008) have analyzed weather board size and its composition have impact on Tobin's Q (financial indicator) of banking firms in USA. They concluded that larger boards do not have lower financial performance than other banks in terms of Tobin's Q (financial indicator). Setting limits on board sized may be non-productive (Adams & Mehran, 2008).

Table 2 shows the empirical research of various authors who have tested hypotheses on the impact of corporate governance on the financial performance of banks in different countries of the world. All the works listed in the following table have applied econometric models to quantify the effect of independent variables (the characteristics of the board of directors) on the dependent variables (financial performance of banks). In the table we have presented the data on the authors, the location of the researched banks, the time period of research, the test variables and the test results.

Table 2: Summary of empirical studies related to impact of corporate governance

in bank performance

#	Authors	Country and Period Covered	Variables tested	Test results (positive, negative or mixed)[3]
1	Salma Belhaj & Cesario Mateus	Europe, 2002-2011	ROA, ROE, Tobins-Q Board Size Board Independence Gender diversity CEO Duality Banks Size Financial leverage Liquidity	Positive Positive Mixed Positive Negative Negative Negative
2	Ozcan Isik & Ali Riza Ince	Turkey, 2008-2012	ROA Board Size Board Composition Banks Size Credit Crisk Net Interest Margin Other income	Positive Negative Positive Positive Positive Positive
3	Ekadah, John Wachudi & Josphat Mboya	Kenya, 1998-2009	ROA Gender diversity i bordit Credit Crisk	Negative Negative
4	Renée B. Adams Hamid Mehran	USA, 1959-1999	Tobin's-Q Board Size Board Independence	Positive Negative
5	Mesut Doğan & Feyyaz YILDIZ	Turkey, 2005-2010	ROA, ROE, Tobin's-Q Board Size	Negative
6	Rim Boussaada & Majdi Karmani	North America, 2004-2011	ROA Board Size Foreign Directors	Negative Positive
7	Ahmed Al-Baidhani	Qatar & UAE, 2014-2017	ROA, ROE Board Size Bank Age	Negative Positive

[3] Note: 'Positive' implies that the variable has an increasing effect on the banks' financial performance, 'negative' implies that the variable has an opposite effect, whereas the 'mixed' effect implies that the variable may affect a period positively analyzed, while in the other periods negatively.

				Board Independence	Negative
8	Ashenafi Beyene Fanta, Kelifa Srmolo Kemal & Yodit Kassa Waka	Ethiopia, 2005-2011	ROA, ROE Board Size Audit Committee Banks Size Capital Adequacy		Negative Negative Positive Positive
9	Adel Bino & Shorouq Tomar	Aman, 1996-2006	ROA, ROE Board Size Ownership Structure Board Composition		Positive Positive Negative
10	Maria-Eleni Agoraki & Manthos D Delis & Panagiotis Staikouras	EU, 2002-2006	Cost/Profit Board Size Board Composition		Negative Positive
11	Pablo de Andres & Eleuterio Vallelado	Canada, USA, England, 1995-2005	Tobin's-Q, ROA Board Size Board Composition		Positive Positive
12	Ilduara Busta & Bersant Hobdari	France, Germany, Italy, Spain and Great Britain	ROA, ROE Board Size Board Independence Banks Size		Positive Positive No effect
13	Bowo Setiyonoa1 & Amine Tarazia	Indonesia 2001-2011	ROA, ROE Gender Diversity of the Board Ethnic Diversity of the Board Professional Diversity of the Board Educational Diversity of the Board		No effect Negative Positive Positive
14	Emma García-Meca & Isabel-María García-Sánchez & Jennifer Martínez-Ferrero	EU 2004-2010	ROA, ROE Gender Diversity National Diversity		Positive Negative
15	Shams Pathan & Robert Faff	USA, 1997-2011	ROA, ROE Board Size Board Independence Gender Diversity		Negative Negative Mixed
16	Sungho Choi & Iftekhar Hasan	Korea, 1998-2002	ROE, ROA Foreign Investors Presence Board Nationality		Positive Positive
17	Tanna, S. , Pasiouras, F. & Nnadi, M	England, 2001-2006	Bank Efficiency Board Size Board Composition		Positive Positive

From the literature review, it has been noted that research on corporate governance in banks is more focused on developed countries where the capital market is quite efficient (Cohern & Pharell, 2009, Mconnel, Servaes and Lins, 2008). There is little such research on transition countries, as is the case in Kosovo. Some corporate governance research in banking industry has focused only on a single aspect of corporate governance, such as the role of the board of directors or shareholders, without analyzing other factors and interactions that may be important within corporate governance framework. For example, only one research was conducted in 2009 by the RIINVEST Institute in Kosovo, which mainly elaborates on the existing state

of corporate governance of the banking and insurance sector, but does not go on to show its impact on the banking sector performance (RIINVEST, 2009).

Therefore, to close as much as possible the knowledge gap on corporate governance of the banking sector in transition countries, this research will focus on the analysis of the impact of these concepts on the performance of the banking sector in Kosovo. The focus is on the banking industry because the problems of corporate governance are important in the banking sector as a result of the special role that this sector has in providing loans to natural and legal persons of the economy and maintaining the stability of the banking sector and its impact on economy as a whole.

Research and Methodology

Concerning the testing of the hypotheses of this research, these forms of data analysis will be applied:

a) Correlation analysis - to analyze the relationship or correlation between dependent variables and independent variables (explanatory variables) - the correlation testing between them will also be performed.

b) Descriptive statistics - from the summarized data the analysis of the mean, mode, standard deviation, minimum, maximum, which provide information about the overall tendency of the explanatory and dependent variables.

d) Panel data[4] regression analysis - which includes panel data analysis technique, where data is analyzed both from time perspective and from the aspect of different banks (longitudinal study).

The population of this research consists of banks operating in Kosovo. Therefore, a benchmark sample includes all commercial banks operating in Kosovo for at least 12 consecutive years (2006-2017) so that the variables of corporate governance and those of financial performance can be comparable over the years.

The data for this research will be gathered directly from (i) audited annual financial reports of banks operating in Kosovo (secondary data), and (ii) through a questionnaire that is designed in accordance with the elements of the problem discussed in this research (primary data).

Based on the research objectives listed in the introductory section, the following hypotheses will be tested:

H1) H_0: There is no significant positive relationship between the size of the board of directors and the performance of banks in Kosovo.

H2) H_0: There is no significant positive relationship between the independence of the board of directors and the performance of banks in Kosovo.

To test the hypothesis this research uses fixed effect multiple regression panel data model which is divided into two main groups, those which, as a bank performance indicator have (ROA) and those which have the return on equity (ROE). In order to measure the specific impact of each of the above listed corporate governance indicators, specific models are developed below, each of which have an independent variable and other control variables.

Group 1 (ROA – dependent variable)
Model 1a: $ROA_{i,t} = \beta_0 + \beta_1 MBD_{i,t} + \beta_2 MB_{i,t} + \beta_3 RRK_{i,t} + \beta_4 D_{i,t} + \beta_5 RRL_{i,t} + \varepsilon_{i,t}$
Model 2a: $ROA_{i,t} = \beta_0 + \beta_1 PABD_{i,t} + \beta_2 MB_{i,t} + \beta_3 RRK_{i,t} + \beta_4 D_{i,t} + \beta_5 RRL_{i,t} + \varepsilon_{i,t}$

Group 2 (ROE – dependent variable)
Model 1b: $ROE_{i,t} = \beta_0 + \beta_1 MBD_{i,t} + \beta_2 MB_{i,t} + \beta_3 RRK_{i,t} + \beta_4 D_{i,t} + \beta_5 RRL_{i,t} + \varepsilon_{i,t}$

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[4] In statistics and econometrics, the term 'panel data' refers to multi-dimensional data which mainly includes their evaluation over a period of time.

Model 2b: $ROE_{i,t} = \beta_0 + \beta_1 PABD_{i,t} + \beta_2 MB_{i,t} + \beta_3 RRK_{i,t} + \beta_4 D_{i,t} + \beta_5 RRL_{i,t} + \varepsilon_{i,t}$

Table 3: Summary of research variables and the basis for their measurement

Variables	Acronym	Basis for measurement
1. Depended variables (performance measurement indicators):		
Return on Assets	ROA	Net income divided by total assets at the end of each accounting year.
Return on Equity	ROE	Net income divided by total equity at the end of each accounting year.
2. Independent variables (board of directors characteristics):		
Board of Directors Size	MBD	Expressed as a natural logarithm of total number of board of directors for each accounting year.
Board of Directors Independence	PABD	The ratio between the number of non-executive directors to the total number of board directors for each accounting year subject to this research.
3. Control variables:		
Bank Size	MB	Expressed as a natural logarithm of the total balance of bank assets at the balance sheet date (statement of financial position) for each accounting year.
Credit Risk	RRK	Expressed as the ratio between loan loss provision to total gross loans for each accounting year.
Deposits	D	Expressed as a natural logarithm of total deposits for each accounting year.
Liquidity Risk	RRL	Expressed as a ratio of gross loans and the total of deposits for each accounting year.

Findings

The two dependent variables (bank performance indicators) used in this research are *Return on Assets (ROA)* and *Return on Equity (ROE)*. Based on the results of the descriptive statistics presented in table 4 we can conclude that during the 12 year period (2006-2017), commercial banks in Kosovo have recorded an average ROA of 1.4% (0.014) and an average ROE of 12.8% (0.128). This means that on average, the banks, for every 1 euro of their total assets, have realized a net profit of 0.014 EURO, while for every 1 euro of their total equity, they realized net profit of 0.128 EURO. The maximum ROA over the same period was 8.7% (0.087), while the minimum ROA was -4% (-0.040). Meanwhile, the maximum ROE was 50% (0.500), while the minimum ROE was -28.3% (-0.283). Also, based on the standard deviation of 9.6% (0.096) for ROA and 12.5% (0.125) for ROE, we can conclude that the performance of banks in Kosovo has had a large variation range in ROA and ROE values from positive to negative ones.

Table 4 presents two independent explanatory variables of the impact of the board of directors on the financial performance of banks in Kosovo. Based on the results of the explanatory statistics of these variables we can ascertain the following:

(i) The Board of Directors Size (MBD) varies from maximum 8 to minimum 4, with an average of 5 and a standard deviation of 1.52. This implies that during the reviewed period 2006-2017, the maximum number of board members in a commercial bank in Kosovo was 8, while the minimum number was 4, with an average of 5 members.

(ii) The Board of Directors Independence (PABD) varies from a maximum of 60% (0.60) to a minimum of 33.3% (0.333), with an average of 50.2% (0.502) and a standard deviation of 7.9% (0.79). This implies that during the reviewed period 2006-2017, the maximum percentage of non-executive members of the board of directors in commercial banks in Kosovo was 60%, while the minimum percentage was 33.3%, with an average of 50.2%. Thus, almost half of the members of the Board of Directors of commercial banks in Kosovo are non-executive (external and independent from the management of the bank) while the other half are internal directors (executive). The standard deviation of 7.9% indicates an average variation of the values of this variable in commercial banks in Kosovo.

Table 4 presents four explanatory control variables of the impact of other factors on the financial performance of banks in Kosovo. Based on the results of the explanatory statistics of these control variables we can ascertain the following:

(i) The size of banks (MB) ranges from the maximum value of 900,919 to the minimum value of 8,941, with an average of 356,284 and a standard deviation of 260,460. This implies that during the reviewed period 2006-2017, the highest value of total assets of a bank was 900,919,000 EURO, while the lowest was 356,284,000 EURO, with an average of EUR 356,284.00. Thus, the average total assets of the banking sector in Kosovo are 356,284,000 EURO. The standard deviation of EUR 260,460,000 shows a high variation among commercial banks in Kosovo, as regards to their total assets in the statement of financial position (balance sheet).

(ii) Credit Risk (RRK) varies from the maximum value of 10.8% (0.108) to the minimum value of 1.1% (0.011), with an average of 4.9% (0.049) and standard deviation 2.5% (0.025). This implies that during the reviewed period 2006-2017, the maximum percentage of suspicious credit reserves was 10.8%, while the minimum percentage was 1.1%, while the average was 4.9%. So, almost all commercial banks in Kosovo had a credit risk of 4.9%, which is the lowest level in the region. The standard deviation of 2.5% shows a very low variation of credit risk in commercial banks in Kosovo that may be due to a conservative credit policy.

(iii) Bank Deposits (D) range from a maximum of 735,790 to a minimum 4,022, an average of 301,417 and a standard deviation of 217,529. This implies that during the reviewed period 2006-2017, the highest total deposits in a bank were 735,790,000 EURO, while the lowest was 4,022,000 EURO, with an average of 301,417.00 EURO. Thus, the average total of deposits of the banking sector in Kosovo was 301,417,000 EURO. The standard deviation of EUR 217,529,000 shows a high variation among commercial banks in Kosovo, as regards to their total deposits in the statement of financial position (balance sheet).

(iv) The liquidity risk (RRL) varies from a maximum of 241% (2,410) to a minimum 50.4% (0.504), an average of 81.2% (0.812) and a standard deviation of 28.9% (0.289). This implies that during the reviewed period 2006-2017 the maximum percentage of gross loans to deposits was 241%, while the minimum percentage was 50.4%, with an average of 81.2%. So, almost all commercial banks in Kosovo had a liquidity risk of 81%, which is of average level, since 20% of deposits have been held as a reserve. The standard deviation of 28.9% indicates a very high variation of liquidity risk among commercial banks in Kosovo.

Below is presented the table number 4 which includes a summary of descriptive statistics of the banking sector in Kosovo, during the research period 2006-2017.

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Table 4: Summary of descriptive statistics of commercial banks in Kosovo for the period 2006-2017

Variable	# Observations	Minimum	Maximum	Average	St. Deviation
1. Depended variables (performance measurement indicators):					
ROA	84	(0.040)	0.087	0.014	0.096
ROE	84	(0.283)	0.500	0.128	0.125
2. Independent variables (board of directors characteristics):					
MBD	84	4.000	8.000	5.000	1.521
PABD	84	0.333	0.600	0.502	0.079
3. Control variables:					
MB[5]	84	8,941	900,919	356,284	260,460
RRK	84	0.011	0.108	0.049	0.025
D[6]	84	4,022	735,790	301,417	217,529
RRL	84	0.504	2.410	0.812	0.289
Total observations: 1260					
Source: author (XLSTAT)					

Correlation analysis allows to empirically verify the presence or not of the relationship between the two factors (variables). This method of analysis does not indicate the level of influence (significance) of a variable to another, but only expresses the existence or not of a relationship or correlation.

Table 5 presents a correlation results in the form of a matrix showing correlation coefficients along with the significance level for each dependent, independent, and control variable. As can be seen from the results, in almost all coefficients of correlation of independent or control variables the value does not exceed 0.90 ($r \leq 0.90$), which means that the presence of multicollinearity is not a problem, except for the correlation coefficient between deposit (D) and total assets (MB) which is 0.99, which is expected, as deposits have a direct impact on the total assets of a bank.

Based on the results presented in this table we can conclude the following:

(i) Dependent variables, ROA and ROE, have a positive correlation coefficient with all *independent variables*, respectively with independent variables of the board of directors (MBD, PABD). Almost all correlation coefficients have a high level of significance (credibility) equal to 95% ($p \leq 0.05$), respectively 99% ($p \leq 0.01$). Positive correlation coefficients imply that, with the increase in the values of the board of directors variables have an increasing impact on the financial performance of banks (ROA and ROE). These findings are consistent with the findings of the research by performed by Ondieki (2012), Bett (2014), Ozcan (2016), Salma (2016), Matari (2013), Pablo (2008).

(ii) Dependent variables, ROA and ROE, have positive correlation coefficients with *control variables* such as (i) size of banks (MB), (ii) credit risk (RRK) and (iii) deposits (D) of 5% ($p \leq 0.05$), and 1% ($p \leq 0.01$), while the negative correlation with the liquidity risk (RRL). This implies that by increasing the size of banks, credit risk and bank deposits, there will be an increase in bank financial performance, expressed through ROA and ROE, while with increased liquidity risk there will be a decrease in banks' financial performance (negative impact). This finding is in line with the research findings of the authors Stanisic (2016) dhe Ozcan (2016). These findings also confirm the theory that the larger the bank, the more it will have loans and other placements in its total assets, which result in net profit growth. Also, the more deposits the bank has, the more it can put them in the form of loans and this can bring higher net profits. However, the strongest and most significant correlation between the bank's control and performance variables (ROA and ROE) is in the variables of banks' size ($r = 0.42$ and $r = 0.48$) and deposits ($r = 0.42$ and $r = 0.43$). On the other hand, liquidity risk has a weak negative correlation ($r = -0.21$ and $r = -0.14$) with ROA and ROE and not quite significant ($p = 0.05$ and $p = 0.19$). Credit risk (RRK) also has a weak

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positive correlation (r = 0.27 and r = 0.10) with ROA and ROE and not quite significant (p = 0.01 and p = 0.35).

Table 5: Correlation matrix summary

Variables		ROA	ROE	MBD	PABD	MB	RRK	DE	RRL
ROA	Pearson (r)	1.00							
	Sig. (2-tail)	0.00							
ROE	Pearson (r)	0.90	1.00						
	Sig. (2-tail)	0.00	0.00						
MBD	Pearson (r)	0.5**	0.57**	1.00					
	Sig. (2-tail)	0.00	0.00	0.00					
PABD	Pearson (r)	029**	0.42**	0.58**	1.00				
	Sig. (2-tail)	0.00	0.00	0.00	0.00				
MB	Pearson (r)	0.42**	0.48**	0.19	0.12	1.00			
	Sig. (2-tail)	0.00	0.00	0.07	0.26	0.00			
RRK	Pearson (r)	0.27**	0.10	0.09	-0.07	0.21*	1.00		
	Sig. (2-tail)	0.01	0.35	0.40	0.49	0.04	0.00		
DE	Pearson (r)	0.42**	0.43**	0.19	0.11	0.99	0.22*	1.00	
	Sig. (2-tail)	0.00	0.00	0.07	0.28	0.00	0.03	0.00	
RRL	Pearson (r)	-0.21	-0.14	0.01	0.06	-0.24	-0.37	-0.26	1.00
	Sig. (2-tail)	0.05	0.19	0.92	0.56	0.02	0.01	0.01	0.00
*Source: author (XLSTAT); *0.05 (5%), **0.01 (1%).*									

To better derive the impact of the board of directors 'variables on banks' financial performance (ROA and ROE), and to eliminate the deficiencies of the two previous analysis (descriptive and correlation), the following section applies the fixed effect multiple regression analysis of panel data which will show the precise impact of independent and control variables on the financial performance of banks in Kosovo during 2006-2017 time period. This analysis is categorized as *'multivariate analysis'*.

In table 6 we have presented fixed effect (FE) multiple regression results of panel data for all models of this research, with ROA and ROE as a dependent variable. Each model aims to derive the individual effect of each variable of the board of directors on the financial performance of commercial banks in Kosovo, while at the same time for all models the effect of control variables is also taken into account.

Hypothesis 1: There is no significant positive relationship between the size of the board of directors and the performance of banks in Kosovo

This hypothesis is tested by model 1a and model 1b specified in the econometric section. Model 1a is used to test the impact of the size of the board of directors on the financial performance of commercial banks in Kosovo over the period 2006-2017 expressed through ROA, while model 1b is used to test the same impact but through ROE as a dependent variable.

The regression results presented in table 6 show a significant and positive impact between the size of the Board of Directors (MBD) and the financial performance of commercial banks in Kosovo expressed through ROA and ROE as dependent variable. According to model 1a, which applies ROA as a performance metric, the regression coefficient is r = 0.0047 with a confidence level (significance) of p = 0.0000 (p≤1%). Also, according to model 1b, which applies ROE as performance metric the regression coefficient is r = 0.03867 with a confidence level of p = 0.0000 (p≤1%). This implies that the size of the board of directors has a significant positive impact on the ROA and ROE of commercial banks in Kosovo, and that an increase in the size of the board would have an increasing impact on the financial performance of banks, respectively, in the

growth of ROA and ROE. This result rejects the zero hypotheses (H0), where it is foreseen that there is no positive and significant relationship between the size of the board of directors and the performance of banks in Kosovo, so alternative hypothesis (H1) is accepted. The result of this hypothesis is in accordance with the findings of the research performed by Isik-Nice (2016), Mateu-Belaj (2016), Adams (2011), but contradicts with the findings of authors Dogan (2013), Boussaada & Karmani (2015).

Regarding the control variables included in the regression analysis, model 1a shows a significant positive impact between bank size (MB) (r = 2.64e-7, p = 0.0138) and ROA, which implies that an increase in bank size, will affect the bank's financial performance, in terms of ROA. Also, the results show a significant negative impact on total deposits (D) (r = -3.35e-7, p = 0.0104) and ROA, which implies that an increase in total deposits will negatively affect the ROA due to increased interest expense and the costs associated with holding the deposits. Other control variables such as credit risk (RRK) and liquidity risk (RRL) have shown positive relationships with ROA, but their effect is not significant (p = 0.0529 and p = 0.9468). Similar results were also noted in model 1b, where a significant positive impact was observed between the bank size (r = 2.64e-6, p = 0.0040) and ROE, and the credit risk (r = 1.1861, p = 0.0293), while a significant negative impact was observed between total deposits (r = 3.06e-6, p = 0.0038) and ROE. With regard to liquidity risk (RRL) (r = 0.01662, p = 0.6781), the impact on ROE is positive and not significant.

The coefficient R^2 of model 1a is 0.3712, while model 1b is 0.7333, meaning that model 1a has the ability to explain 37.12% of changes in ROA of commercial banks in Kosovo, while model 1b has the ability to explain for 73.33% of changes in ROE of commercial banks in Kosovo.

Hypothesis 2: There is no significant positive relationship between the independence of the board of directors and the performance of banks in Kosovo.

This hypothesis is tested by model 2a and model 2b specified in the econometric section. Model 2a is used to test the impact of the independence of board of directors on the financial performance of commercial banks in Kosovo over the period 2006-2017 expressed through ROA, while model 2b is used to test the same impact but through ROE as a dependent variable.

The regression results presented in tables 6 show a significant and positive influence between the independence of the Board of Directors (PABD) and the financial performance of commercial banks in Kosovo expressed through ROA and ROE. According to model 2a, which applies ROA as performance measure, the regression coefficient is r = 0.0525 with a confidence level of p = 0.0029 (p≤1%). Also, according to model 2b, which applies ROE as performance measure, the regression coefficient is r = 0.3512 with a confidence level of p = 0.0148 (p≤5%). This implies that the independence of the board of directors, i.e. the level of non-executive (external) directors, has a significant positive impact on the ROA and ROE of commercial banks in Kosovo, and that an increase in this variable would have an increasing impact on performance of banks, respectively, in the growth of ROA and ROE. This may be due to the fact that external directors may have greater expertise and are more objective, professional and independent during the decision-making process. This result rejects the zero hypothesis (H0), where it is foreseen that there is no positive and significant relationship between the independence of the board of directors and the performance of banks in Kosovo, so alternative hypothesis (H1) is accepted. The result of this hypothesis is in accordance with the research findings of authors Delis et.al (2010), Boussaada dhe Karmani (2015), Mateu-Belhaj (2016), Adams (2011), but contradicts with the findings of authors Ozcan (2016) and Al-Baidhani (2015).

Regarding the control variables included in the regression analysis, model 2a shows a significant positive relationship between the bank size (r = 2.06e-7, p = 0.0084) and ROA, which implies that an increase in bank size, will affect the bank's financial performance (ROA). Other control variables such as credit risk (RRK) and liquidity risk (RRL) have shown positive relationships with ROA, but their effect is not significant (p = 0.1511 and p = 0.4552), while deposits (D) have shown negative and not significant results (r = -2.34e-7, p = 0.1052). Similar results were also noted in model 2b, where a significant positive impact was observed between the bank's size and ROE (r = 2.01e-6, p = 0.0421), while the non-significant positive effect was observed between

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credit risk (r = 0.9932, p = 0.1115) and ROE as well as liquidity risk (r = 0.0494, p = 0.2818) and ROE, while non-significant negative impact was observed also between deposits (r = -2.23e-6, p = 0.0626) and ROE.

The coefficient R^2 of model 2a is 0.1894 while model 2b is 0.6421, which means that model 2a has the ability to explain 18.94% of changes in ROA of commercial banks in Kosovo, while model 2b has the ability to account for 64.21% of changes in bank ROE commercial in Kosovo.

Table 6: Fixed effect (FE) multiple regression panel data results – <u>*ROA and ROE*</u>
as dependent variable

		Model 1a	Model 2a	Model 1b	Model 2b
R^2		0.4545	0.2968	0.7687	0.6895
R^2 (adjusted)		0.3712	0.1894	0.7333	0.6421
Statistic-F		5.4552	12.763	21.754	14.540
Significance		0.0000	0.0000	0.0000	0.0000
MBD	R	0.0047**	-	0.0386**	-
	Sig	0.0000	-	0.0000	-
PABD	R	-	0.0525**	-	0.3512*
	Sig	-	0.0029	-	0.0148
MB	R	$2.64e^{-7}$*	$2.06e^{-7}$**	$2.64e^{-6}$**	$2.01e^{-6}$*
	Sig	0.0138	0.0084	0.0040	0.0421
RRK	R	0.1299	0.1084	1.1861*	0.99324
	Sig	0.0529	0.1511	0.0293	0.1115
D	R	$-3.35e^{-7}$*	$-2.34e^{-7}$	$-3.0e^{-6}$**	$-2.23e^{-6}$
	Sig	0.0104	0.1052	0.0038	0.0626
RRL	R	0.0003	0.0041	0.01662	0.0494
	Sig	0.9468	0.4552	0.6781	0.2818
Source: author (Eviews 10.0); *0.05 (5%); ** 0.01 (1%);					

Conclusions

The main purpose of this research was to analyze and study the relationship between the corporate governance metrics such as board size and board independence and its impact on financial performance of the banking sector in Kosovo during the period 2006-2017. The following are the main findings of the research regarding the impact of the Board of Directors on the financial performance of the banking sector in Kosovo. The findings were analyzed for five (2) independent variables of the board of directors. In addition to discussing the findings, this section will also list the recommendations according to the findings of the research. Based on the descriptive analysis, it has been identified that the average size of the board of directors of banks in Kosovo during the time period 2006-2017 is 5, with a maximum number of 8 and a minimum of 4. Also, based on the results of the multiple regression panel data is confirmed that the board of directors size has had a positive and significant impact on banks' financial performance in Kosovo, hence, this variable should be considered as an important variable for the banking system in Kosovo. The size of the boards of Kosovo banks can be considered as small as, according to Coleman and Biekpe's suggestions, the optimum level of board of directors for a bank varies from 11 to 15 (Biekpe, 2018). The results of other authors' research suggest that boards (above 11-15 members) are considered to be less effective, efficient and the level of co-ordination of decisions is more difficult. Therefore, based on the findings of this research, it is recommended that the level of the board of directors of the banking sector in Kosovo should not exceed 11, i.e. not become 'large boards', which are considered not to have a positive impact on banks' financial performance.

Based on the descriptive analysis, it has been identified that the average value of the independence of the board of directors of banks in Kosovo during the time period 2006-2017 is 50.2%, which means that half of the board members of commercial banks in Kosovo are non-executive (external) while the other half are internal director (executive). Also, based on the results of the multiple regression panel data, it has been concluded that the independence of the board of directors has had a positive and significant impact on banks' financial performance, hence, this variable should be considered as an important variable for the banking system in Kosovo. Based on previous research by various authors, a high level of participation of external (non-executive) directors may not have such a positive effect on the banks and may not affect performance improvement, while the participation of a number of internal directors can have a positive impact. However, according to Baysinger & Butler (1985), Ozcan (2016), an optimal board should have a sufficient mix between executive and non-executive directors, as each party brings skills and expertise in the process of monitoring and supervising the bank's management. Therefore, based on the findings of this research, it is recommended that the level of non-executive (external) directors of the banking sector in Kosovo remain at the current level of 50%, as a very high number may not have such beneficial effects on banks in Kosovo.

Like any other research, this research may also have many limitations that are listed below and which should be taken into account when evaluating the findings of the research:
   • The ROA and ROE are used as a benchmark for bank performance. During the literature review phase, it has been noted that there are other performance measures that could have been used as dependent variables of this research, such as return on investment (ROI) and net interest margin (NIM). Therefore, if other performance measures were taken into account in the research, the results and recommendations could have been different, and therefore the results of the current research should be interpreted in the light of this limitation.
   • The average number of commercial banks during the research period 2006-2017 is seven (7) and the number of analyzed variables is 15, resulting in 1260 total observations. However, the results would have been more powerful if the analysis would involve a larger number of banks, i.e., all the banks in the Western Balkans region.
   • The research period is limited to twelve years (12 years), which can be considered as a sufficient time period for similar studies. However, a larger period of study would result in more powerful findings. It should be noted that the current research period is above the average of the periods investigated by other authors of this field.
   • Only 2 independent Board of Directors and 4 control variables were taken into account. The research does not address other factors that may have had an impact on banks' financial performance, such as cost efficiency, inflation, gross domestic product (GDP), risk index, credit protocols composition, gender diversity of board members, etc. Therefore, future researchers can include these internal and external factors as well as other control variables.

Prospective researchers in this field can take into account the above specified limitations of this research and incorporate them into their research. Following are some of the proposals for further research in this area.
   (i) Future researchers, as a variable for measuring the performance of commercial banks, except for ROA and ROE, can also use other coefficients such as return on investment (ROI) and net interest margin (NIM). (ii) Sample size is considered to be taken across the region so that the results are more robust and comparable between countries, e.g., 'the impact of the board of directors in banks of the Western Balkans countries.
   (iii) The research period should be taken for at least 15 years, so that the phenomenon is followed for a longer period and the results are more reliable and statistically more significant.
   (iv) The control variables may include other factors that may have an impact on the performance of banks, including external factors and internal factors such as cost efficiency, inflation, gross domestic product (GDP) the risk index, the composition of the credit portfolio, etc.

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