FINANCIAL PERFORMANCE EVALUATION OF THE COMMERCIAL BANKS IN KOSOVO

Fitim Raci, University of Pristina
Skender Ahmeti, University of Pristina
Hysen Ismajli, University of Pristina
Muhamet Aliu, University of Pristina

ABSTRACT

Through this research we have measured the impact that have: capital adequacy (CAR), costs/revenues (CIR) and non-performing loans (NPL), on the performance of Banks in Kosovo, measured by the average return on equity (ROE).We have evaluated the financial performance of seven commercial banks in Kosovo for the period of nine years (2011-2020), using secondary data from the annual reports of banks, financial statements of commercial banks and reports from the Central Bank of Kosovo. We achieved the research objective using the multifactorial regression model and correlation analysis. Based on the multiple regression model, the research results show that the independent variables CIR and NPL have a significant impact on the dependent variable ROE, whereas the independent variable CAR has not been shown to affect the dependent variable ROE. Results of this study can be using from shareholders, investor and third interest parties to identify factors that have effect on bank performance. The performance analysis of banks has been examined empirically and this study will contribute to the relevance of new studies related to this field of research.

Keywords: Banks, Financial Performance, ROE-Return on Equity, CIR-Cost to Income Ratio, NPL-Non Performing Loans.

JEL Classification: C23, G21, G28.

INTRODUCTION

There are ten commercial banks operating in Kosovo, of which two banks are with local capital and eight banks are with foreign capital. The deposit portfolio in Kosovo banks reaches the value of 3.8 billion euros, while the loan portfolio reaches the value of 3.08 billion euros with a loan/deposit ratio of 80.2% (CBK, 2020). Banks' performance is an indicator of how to create and implement managerial policies including strategic risk management, competition, operational and financial risk the quality of a bank's management, efficiency and ability to manage risks; the ability of the management of commercial banks to take risk and increase its capital, or the quality of management.

The indicators return on assets (ROA) and return on equity (ROE), in the banking sector are related to each other, and they in particular provide the same performance indicators related to the trend and movement of financial performance. The assessment of financial performance of banks has been empirically researched, although the definition of performance varies between different studies, still the determining indicators of financial performance analysis are: Return on assets (ROA) and return on equity (ROE). These two indicators are evaluated through financial

indicators such as capital adequacy ratio; cost/income ratio; the ratio of net income and the ratio of non-performing loans. In this study, the capital adequacy ratio, cost/income ratio and non-performing loans ratio were investigated by analyzing the impact of these factors on the return on Equity.

Capital adequacy ratio (CAR) is the amount of capital that a bank or other financial institution must hold as required by its financial regulator. In Kosovo, the capital adequacy of commercial banks is regulated by the Central Bank of Kosovo, which determines the minimum capital they must have. Cost-to-income ratio is another indicator that measures the efficiency and performance of banks. Being a standard for measuring the efficiency of banks, the cost revenue report (CIR) measures the operating cost of a bank in relation to its total income.

Non-performing loans are defined as loans classified in the credit rating categories as: doubtful and loss (CBK, 2013). Greuning & Bratanovic (2003) argues that non-performing loans are loans that do not generate income.

This research explains and evaluation the impact of capital adequacy, cost/income ratio and non-performing loans on the performance of commercial banks in Kosovo for the period 2011 to 2020.

LITERATURE REVIEW

Financial performance evaluation studies are conducted to understand the effectiveness and efficiency of commercial banks.

Research of Shingjergji & Hyseni (2015) showed that ROA and ROE are not correlated with CAR, meanwhile, size, nonperforming loans NPL, loans to deposits ratio LTD and equity multiplier EM have a negative and significant impact on CAR.

Asarkaya & Ozcan (2007) investigate the determinants of CAR in Turkish banks where they pointed out that lagged capital, portfolio risk, economic growth, ROE, average capital level was positively correlated with CAR. While, deposits to assets ratio was negatively correlated with CAR. Also, Ahmet Buyuksalvarcı & Hasan Abdioglu (2011) analyzed determinants of the capital adequacy ratio (CAR) in the Turkish. Results showed that loans, loans loss reserves, leverage, ROA and ROE have a significant relationship with CAR while bank size, deposits, liquidity and net interest margin do not have effect on the CAR in the Turkish banks.

As for the Influential Factors on Capital Adequacy Ratio, Bateni et al, (2014) examined this influential in Iranian Banks. They found a negative relationship between size and CAR, and positive relationship with: loans assets ratio LAR, ROE, ROA and CAR. In the other side deposits assets ratio DAR and risk assets ratio were not having impact on CAR. According to Pradhan & Shrestha (2017) in their research, the impact of capital adequacy and bank operating efficiency on financial performance of Nepalese commercial banks found that bank operating efficiency, loan ratio, total deposit to total assets, loan loss provision to total equity has significantly positive impact on financial performance of commercial banks. Loan loss provision to total loan, core capital ratio, risk weighted ratio, total capital ratio has negative impact on financial performance of Nepalese commercial banks. A research paper by Mendoza & Rivera (2017) looking at in 567 rural banks in the Philippines concluded that credit risk has a negative and statistically significant relationship with profitability. However, empirical analysis showed that capital adequacy has no significant impact on the profitability of rural banks in the Philippines.

Regarding Cost-to-income ratio (CIR) Hassan (2019) in his research has estimate the relationship between return on equity (ROE) and four company-specific explanatory variables. The researcher used cross-section random effects model to measure the relationship between ROE

as dependent variable and bank size, investment-to-deposit, non-performing investment and cost-to-income ratio as independent variables. Findings pointed out that investment-to-deposit have positive correlation with ROE and all other three variables have negative relationship with ROE. Also, this research found statistical significance for investment-to-deposit and cost-to-income. Muriithi & Muigai (2017) in their research has analyses the effect of operational risk on profitability of commercial banks in Kenya. Operational risk was measured by cost income ratio while profitability by return on equity. Results state that cost income is negatively associated with bank profitability both in long run and short run. Dietrich & Wanzenried (2011) used the GMM estimator technique to analyze the profitability of 372 commercial banks in Switzerland for a period from 1999 to 2009. Their results besides others confirm that capital, cost to income, credit quality, yearly growth of deposits, bank size, and funding costs are found as significant determinants of bank profitability. Mathuva (2009) analyses the relationship between Capital Adequacy, Cost Income Ratio and the profitability of Kenyan Commercial Banks. They find out that the CIR being a measure of operational risk is inversely related with return on assets and return on equity. The study showed a negative association between cost-income ratio and profitability.

Regarding the empirical studies of NPL's determinants Makri, Tsagkanos, & Bellas (2014) found strong correlations between NPL and various macroeconomic (public debt, unemployment, annual percentage growth rate of gross domestic product) and bank-specific (capital adequacy ratio, rate of non-performing loans of the previous year and return on equity) factors. Meanwhile according to Ekinci & Poyraz (2019) which used Return on Asset (ROA) and Return on Equity (ROE) as proxies for financial performance indicators and Non-Performing Loans (NPL's) as credit risk indicators found that there is a negative relationship between credit risk and ROA as well as between credit risk and ROE.

HYPOTHESES

Based on research issues and literature review have derived two main objectives:

1. Identification of factors that affect the assessment of financial performance of commercial banks in Kosovo and
2. Evaluation the impact of CAR, CIR and NPL on the performance (ROE) of banks in Kosovo

Hypotheses have been raised to achieve the study objectives, as follows:

H1: Capital adequacy has an impact on ROE.

H3: Costs / income have an impact on ROE.

H4: Non-performing loans have an impact on ROE.

RESEARCH METHODOLOGY

Secondary data from annual reports, financial statements of commercial banks and reports from the Central Bank of Kosovo were used to conduct this research. The population of commercial banks in Kosovo is ten (10), while the research sample includes seven commercial banks, treated for the period of nine years (2011-2020). For the research sample, 32 observations were made against a single variable (ROE), through which we drew conclusions about the existing population.

We have described the description of the variables used in Table 1.

Table 1

DEFINITION OF VARIABLES		
Variable	**Formula**	**Type of Variables**
Average Return on Equity Ratio (ROE) *	Net income / average equity	Dependent variable
Capital adequacy ratio	Total capital / Risk weighted assets	Independent variable
Cost / income ratio	Total operating expenses / gross operating income	Independent variable
Non-performing loans	Total non-performing loans / Total active loans	Independent variable
Source of formulas: Central Bank of Kosovo - Financial Indicators Report		
* ROE means the performance of banks.		

The Multifactorial Regression Model was used for the econometric testing of the hypotheses:

$$PB(ROE)=B0+B1CAR+B3CIR+B4NPL+e;$$

Description of regression:

a. PB - Banking Performance (ROE),
b. B0 - Constant or intercept,
c. Bi - Regression coefficient,
d. CAR - Capital Adequacy Ratio,
e. CIR - Cost / Income Ratio,
f. NPL - Non-performing loans,
g. e - Error Coefficient.

RESEARCH RESULTS

The descriptive statistics show the mean, median, mode, standard deviation, variance, skewness, kurtosis, minimum and maximum of the dependent variable ROE and the independent variables CAR, CIR and NPL, which are reflected in Table 2. From the table of descriptive statistics, it is noticed that the standard deviation of each variable is at the acceptable level. Regarding kurtosis and skewness after calculating the distribution of observations it turns out that we have a normal distribution for the ROE variable and an abnormal distribution for the other variables.

Table 2
DESCRIPTIVE STATISTICS

Category	AVG ROE	CAR	CIR	NPL
Mean	0.194365	0.156631	0.704395	0.04094
Median	0.20492	0.159927	0.68293	0.032657
Mode	0.0036a	0.1294[a]	0.5924[a]	0.0215[a]
Std. Deviation	0.076936	0.0108474	0.0886728	0.0171921
Variance	0.006	0	0.008	0
Skewness	-0.665	-1.066	1.27	1.175
Std. Error of Skewness	0.414	0.414	0.414	0.524
Kurtosis	0.666	0.48	1.119	1.032
Std. Error of Kurtosis	0.809	0.809	0.809	1.014
Minimum	0.0036	0.1294	0.5924	0.0215

Maximum	0.3428	0.1721	0.9322	0.086
Sum	6.2197	5.0122	22.5406	0.7779
a. Multiple modes exist. The smallest value is shown				
ROE=Return on Equity, CAR=Capital Adequacy Ratio, CIR=Cost to Income Ratio, NPL=Non Performing Loan.				

From Table 3, it results that the value of R is 0.872 which shows that there is a strong correlation between the dependent variable ROE (Return on Equity) and the independent variables CAR, CIR and NPL. The adjusted value of R-square is 0.76 which indicates that 76% of the dependent variable ROE can be explained by three independent variables (CAR, CIR and NPL) while the remaining 24% can be explained by other variables which are not are included in the model and are not taken for study in this research so they are considered as external factors. A value of 2,380 by Durbin Watson indicates the auto-correlation of the model and it turns out that the model is accepted as it is within the allowed limits.

Table 3
MODEL SUMMARY[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.872[a]	0.76	0.712	0.0172305	0.76	15.812	3	15	0	2.38
a. Predictors: (Constant), CAR, CIR, NPL.										
b. Dependent Variable: AVG ROE										
Source: Authors										

From Table 4 we see that the F test value of 15,812 with level of significant value from 0.000 which is less than 0.05 indicating model correlation between dependent and independent variables.

Table 4
ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.014	3	0.005	15.812	.000[b]
	Residual	0.004	15	0	-	-
	Total	0.019	18	-	-	-
a. Dependent Variable: AVG ROE						
b. Predictors: (Constant), CAR, CIR NPL						
Source: Authors						

From Table 5 it results that Capital Adeqacy Ratio (CAR) has a regression coefficient in the value of -0.021 with a significance level of 0.982 which shows that this variable has no effect on the dependent variable ROE and as a result the basic hypothesis is rejected and approved alternative hypothesis that CAR does not affect ROE.

Cost to Income Ratio (CIR), as an independent variable has a regression coefficient of -0.630 with a significance level of 0.000 indicates that this variable has an impact on the dependent variable ROE and as a result the basic hypothesis is approved and the alternative hypothesis is rejected that CIR does not affect ROE.

Non-Performing Loan-NPL as an independent variable has resulted in a regression coefficient of -2.064 and a significance level of 0.000 which indicates that this variable has an impact on the dependent variable ROE and as a result the basic hypothesis is approved and the alternative hypothesis that NPL is rejected does not affect ROE.

Table 5 Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.545	0.194	-	2.805	0.013
	CAR	-0.021	0.891	-0.003	-0.023	0.982
	CIR	-0.63	0.136	-0.828	-4.617	0
	NPL	-2.064	0.315	-1.106	-6.549	0
a. Dependent Variable: AVG ROE						
Source: Authors						

According to Table 6, it is noticed that the correlation coefficient between the variables ROE and CAR is 0.652 which shows that these two variables have a strong positive relationship this is also supported by the value-P of the 2-tailed test of these two variables with significance level of 0.000 which indicates that the variables affect each other. Negative correlation is the correlation coefficient between the variables ROE and CIR with a value of -0.483. The P-value of the 2-tailed test is 0.05 which indicates that the variables affect each other. The correlation coefficient between the ROE and NPL variables is -0.588 which indicates that these two variables have a strong negative correlation. The P-value of the 2-tailed test is 0.008 which proves that these two variables affect each other.

The correlation coefficient between the variables CAR and CIR is -0.714 which proves that the variables have a strong negative correlation and affect each other since they have a significance level of 0.000 of the Value-P of the 2-tailed test. The correlation coefficient between the variables CAR and NPL is -0.008 which results that the variables have a very weak negative correlation and do not affect each other as they have a significance level of 0.974 of the 2-tailed value test -P.

The correlation coefficient between the variable CIR and NPL is 0.626 which shows that these two variables have a strong positive correlation. The P-value of the 2-tailed test is 0.004 which indicates that these two variables affect each other.

Table 6 CORRELATIONS					
		AVG ROE	CAR	CIR	NPL
AVG ROE	Pearson Correlation	1	0.652**	-0.483**	-0.588**
	Sig. (2-tailed)	-	0	0.005	0.008
CAR	Pearson Correlation	0.652**	1	-0.714**	-0.008
	Sig. (2-tailed)	0	-	0	0.974
CIR	Pearson Correlation	-0.483**	-0.714**	1	0.626**
	Sig. (2-tailed)	0.005	0	-	0.004
NPL	Pearson Correlation	0.588**	-0.008	0.626**	1
	Sig. (2-tailed)	0.008	0.974	0.004	-
**. Correlation is significant at the 0.01 level (2-tailed).					
Source: Authors					

CONCLUSION

After analyzing the data, we have come to some valid conclusions regarding the impact of financial indicators (CAR, CIR and NPL) on ROE. After testing the hypotheses and regression and correlation analysis we conclude that Capital Adeqacy Ratio (CAR) as an independent variable with regression coefficient in the value of -0.021 and significance level of 0.982 results that this

variable has no effect on the dependent variable ROE and as a result the basic hypothesis is rejected.

As for the variable independent of the results of multiple regression analysis, P value and T test we have concluded that the independent variable CIR with regression coefficient of -0.630 and significance level over 0.000 has an impact on the dependent variable ROE. The independent NPL variable with regression coefficient of -2.064 and significance level of 0.000 has an impact on the dependent variable ROE. According to the results we conclude that the variables two independent variables CIR and NPL have a significant negative impact on the performance of banks. Thus, an increase in the CIR and NPL variable affects the decrease in ROE and conversely a decrease in the CIR and NPL coefficients will result in an increase in ROE. While the CAR variable has turned out to have no impact on ROE at all. Based on the empirical results we conclude that if banks reduce their individual CIR and NPL ratios then the results show that their ROE will increase significantly. While for the CAR financial indicator the results show that this factor does not affect ROE at all and as such capital adequacy has no impact on the performance of commercial banks in Kosovo.

Regarding the correlation analysis for the correlation of the variables we conclude that the independent variable which has a strong positive correlation with the dependent variable ROE is CAR while the variables CIR and NPL have a negative correlation with the variable ROE. Regarding the interaction of independent variables, we conclude that CIR has a strong positive relationship with the NPL variable. Future research may include more variables, such as NIM, taxes, exchange rates, and indicators of the quality of services provided by banks in the model used in this study.

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First Author: Fitim RACI PhD.c., Faculty of Economics, University of Pristina, Kosovo, email: fitim-raci@hotmail.com
Skender AHMETI, Vice Dean and Professor, Faculty of Economics, University of Pristina, Kosovo, email: skender.ahmeti@uni-pr.edu
Hysen ISMAJLI, Professor, Faculty of Economics, University of Pristina, Kosovo, email: hysen.ismajli@uni-pr.edu
Corresponding Author: Muhamet ALIU, Associate Professor, Faculty of Economics, University of Pristina, Kosovo, email: muhamet.aliu@uni-pr.edu

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