FACTORS THAT DETERMINE THE PROFITABILITY OF COMMERCIAL BANKS IN KOSOVO

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Abstract

The main role of any financial system is to help transfer funds from savers to borrowers by increasing consumption and investment in the economy. If a financial system is efficient, then it should show improvements in profit, increasing the volume of flow of funds into the economy and providing quality customers service. Unlike developed countries, where this flow of funds is enabled by financial markets, in developing countries where we are part, the functioning of these markets is often lacking. Due to the lack of markets, all the weight of this falls in the banking sector, which sector plays an important role in the intermediary economy and this indicates the importance of studying the profitability of this sector, which profitability depends on many factors.

The paper aims to analyze the profitability sensitivity of the banking sector in Kosovo to some of the factors that we have treated in the paper as internal and external or macroeconomic factors. To carry out this analysis, the paper uses a regression analysis for a time series covering a period of 7 years (2012 - 2018), using the data from commercial banks in Kosovo and some macroeconomic indicators. The result shows that the ratio of non-performing loans is negatively related to the profitability of commercial banks in Kosovo measured by ROA and ROE and is considered to be the most influential factor on the profitability of these banks, among other factors studied.

I. INTRODUCTION

In the middle of financial intermediaries, commercial banks are considered to have the most important effect in the functioning of any economy. That is especially important for countries that lack financial markets. In our country, banks are the only providers of financial funds, thus enabling the transfer of money from lenders to borrowers and thus enabling investment in the economy. Such a role is very important for financial stability within the country. Profit achieved in the banking sector lead to financial stability, so it is important to analyze the factors affecting the profitability of the banking sector.

According to previous studies, bank's profitability is best measured by Return on Equity (ROE) and Return on Assets (ROA), (Fadzlan & Habibullah, 2009; Andreas & Gabrielle, 2011). These two indicators are used in our study to measure banks' profit, while factors affecting this profit are divided into specific banking factors and macroeconomic factors. Internal factors are influenced by bank management decisions and policy of banks. These factors are liquidity level, credit risk, capital adequacy, bank size, expenditure management (Fadzlan & Chong, 2008). Among these factors, we have only studied three of them. On the other side, external factors have to do with the industrial and macroeconomic conditions that affect the economic and legal environment of any financial institution. Among the most important factors that affect the profitability of the banking sector are: inflation, economic growth, the market interest rate and exchange rates.

Many studies have been done to find the determinants of profitability in commercial banks in different countries and the determination of profitability varies according to studies. So far, not considered to have been conducted studies that have analyzed the factors of profitability of in banking sector in Kosovo. The data for banks provides a favorable environment for analyzing this issue since in Kosovo operates a well-functioning and competitive banking system, so such a study like this fills the gap created in existing literature on this issue and gives some insight more clearly regarding the profitability of the banking sector in Kosovo.

Since many factors affect the profitability of commercial banks, the most important objective of this study is to find the relationship between some internal and external (macroeconomic) factors and the profitability of commercial banks in Kosovo, by analyzing indicators of profitability for the period 2012 - 2018.

II. LITERATURE REVIEW

Has a wide and varied literature available that deals of banks profitability and also many studies that investigate the determinants with banks profitability. Profitability essentially means the reason for creation of every business and financial institution. Banking profitability shows the success of bank management. Since the banks play a central role in economy financing, their success has a positive role in the economy as a whole. A profitable and stable banking system can withstand adverse thrill and contribute to the stability of the financial sector (Althanasoglou et.al 2005). So, studying the factors that affect the profitability of this sector has particular importance.

According to Tan and Floros (2012), Return on Assets (ROA) and Return on Equity (ROE), are financial ratios that measure the profitability of banks. ROA is an indicator of return on assets and helps us to understand how much profit an institution can generate from investments made into assets. Whereas ROE is a financial report showing how much one company can generate profit addition to the total amount of share capital invested (Petkovski, 2009). According to past studies, there are a considered number of factors that can affect these two profitability indicators. Short (1979) and Bourke (1989) are among the earliest researchers to have attempted to identify the factors that can determine the profitability of comercial banks. Then many studies have begun to try to identify these factors. In general, empirical studies on the determinants of commercial banks profitability are divided into studies focusing on a particular country and studies conducted on a number of countries.

According to Owoputi (2014) who studied the factors that determine the profitability of commercial banks in Nigeria, determinants of profitability are internal and external. According to him, internal determinants are products of banking activities and are influenced by bank-level management and such are: capital adequacy ratio, liquidity ratio, asset quality, cost efficiency, bank size and risk management. While external determinants are not related to bank management activities, they are products of the social, economic and legal environment that can affect the functioning and performance of this sector. The same researchers say that external factors that can affect the profitability of commercial banks are macroeconomic factors such as inflation, economic growth, market interest rates, exchange rates and other factors such as ownership. Athanasoglou et. al (2008) studied the impact of specific and macroeconomic factors on the profitability of banks in Greece for the period 1985 - 2001, where according to him, such factors as capital, credit risk, expense management, inflation and economic growth had a positive impact and important in the profitability of banks, while the size of the bank had a negative role.

The author who conducted a study on the determinants of profitability of commercial banks is also Serwadda in 2018 in Hungary. His study uses a sample of 26 Hungarian commercial banks for a period of 16 years, namely the period 2000 to 2015. He analyzed only the internal factors that can affect the profitability of banks, like non-performing loans, liquidity, bank size and capital adequacy. According to him, non-performing loans and liquidity had a significant negative impact on the profitability of Hungarian banks during this time period, while asset quality and capital adequacy had a significant positive impact.

According to Petria et. al (2013), credit risk is one of the most important variables affecting the performance of the bank, as it presents the possibility of loss as a result of a default on the bank. Changes in banks' profitability are attributable to changes in credit risk, as high exposure to this risk affects the bank's profitability. Cooper (2003), argued that changes in credit risk can reflect changes in the health of the loan portfolio, thus directly affecting the health of the bank. According to Sufian (2010), credit risk had a negative impact on ROA but a positive impact on ROE. Another important factor affecting profitability is also a liquidity position. Liquidity position positively influences bank profitability (Singh & Chaudhary, 2009). But according to them also too much liquidity can be an obstacle to the bank's performance. Another internal factor and much important is the capital of bank's. The more capital the bank has available, the less likely it is to go bankrupt and the chances of greater profit are also higher (Berger, 1995). According to Berger (1995), the mos performing banks are banks that hold the highest level of capital in relation to assets.

While regarding macroeconomic factors, inflation is an important factor that can affect banking performance. According to Sufian and Chong (2008), among the factors of profitability, the inflation rate is a macroeconomic factor that positively affects the performance of the bank. High inflation rates determine the increase in credit interest rates, thereby increasing the bank's profitability. While the study of Albreu and Mendes (2000) shows a negative relationship between inflation and profitability and that's the reason that the realized findings for the relationship between inflation and bank profitability are considered mixed. The other indicator, economic growth, implying in this case GDP growth is considered to have a positive impact in bank profitability (Sufian & Chong, 2008). Other studies that highlight the importance of economic growth in bank profitability are also the studies of Guru et al. (2002), Bashir (2000) and Nier (2000).

III. METHODOLOGY AND DATA

Our study is entirely based on secondary data. This is due to the availability of the data needed for the study and also based on the fact, that the secondary data in the case of our study are more reliable and have higher quality than the primary data. Since the main objective of this paper is to identify the relationship between specific and macroeconomic factors with the profitability of the banking sector, this paper analyzes some of these factors which we considered to be most important. We will analyze the relationship of these factors with profitability indicators (ROA and ROE).

Data collection

Currently in Kosovo operating 10 commercial banks. To investigate the determinants of bank profitability in commercial banks in Kosovo, we collected data from 8 commercial banks (for two banks we lacked the data) for period of 7 years, respectively from 2012 - 2018. Bank-specific data that are used for the empirical analysis has been excised from annual reports published by selected banks while the data for macroeconomic variables, called in our paper as external factors (GDP and Inflation), are taken from IMF-s databases, which base provides public access for a large number of macroeconomic variables.

Data processing

To carry out the empirical analysis we included 7 variables, two of the dependent variables (ROA and ROE) which represent profitability indicators of banks and 5 independent variables, 3 of which are considered internal factors (non-performing loans which in this case measure credit risk, capital adequacy and size of banks) and 2 macroeconomic variables (inflation and economic growth). Statistical software SPSS version 23 was used to perform the various analyzes during the study. The data processing process went through a series of stages. Initially, the data was prepared in SPSS, where the coding of the variables was done. Then check the data to identify possible errors. Then continued with the measurement of variables, the calculation of descriptive statistics and in finally through the regression analysis were generated the main findings and results of the study.

Specification of the econometric model

To realize empirical analysis, the data for the selected variables were analyzed for the period 2012 - 2018, were used the small squares method for estimating multiple regression.

$$Y = \beta 0 + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + \dots \beta n Xn + \varepsilon i$$

Through this method, we will see the impact of each of these independent variables on the profitability indicators defined in the paper as dependent variables. Because we want to measure both profitability indicators, we have chosen to construct two econometric equations based on the selected variables.

$$Y (ROA) = \beta o + \beta 1(CAR) + \beta 2(Bank\ size) + \beta 3(NPL) + \beta 4 (INFR) + \beta 5(RGDP) + \varepsilon i$$
$$Y (ROE) = \beta o + \beta 1(CAR) + \beta 2(Bank\ size) + \beta 3(NPL) + \beta 4 (INFR) + \beta 5(RGDP) + \varepsilon i$$

Where:

Y = Profitability (measured by ROA and ROE), ROA - Return on assets, ROE - Return on equity

$X1$ = Capital adequacy (CAR)

$X2$ = Bank size (Bank size)

$X3$ = Nonperforming loans (NPL)

$X4$ = Inflation (INFR)

$X5$ = Economic growth (RGDP)

β_0 = represents a constant, or value of Y when all values of X are zero

$\beta 1$ to $\beta 5$ = regression coefficients for the relevant variables

εi = Error term that includes the effect of variables not included in the model.

Definition of variables:

ROA (Return on Assets) is a profitability indicator that shows how efficiently are managed banks' assets to reach profits. ROA is calculated as net profits in relation to total assets. This indicator measures the bank's management ability to generate revenue by using its available assets. A high ROA indicates that the company has used its resources efficiently, ie. how much in this case the bank has gained from investing in assets.

ROE (Return on Equity) as other profitability indicator is calculated as net profit in relation to share capital. It is a financial report showing how much profit a company generates relative to the total amount of the capital invested in the bank (Petkovski, 2009). Return on equity is the profit that shareholders expect from investments made. A bank that has this high ratio is more likely to generate revenue.

Capital Adequacy (CAR). This is the ratio of capital to total assets, that is considered from many studies as one of the basic ratios for capital strength. The higher this ratio is, the lower is the need for external financing and the higher the bank's profitability.

Bank size. The variable, logarithm of total assets is used to determine the size of the bank. Size is one important factor that can determine the bank profitability. In general, a growing bank is thought to have an increasing impact on its profit.

Non-performing loans (NPLs). The ratio of non-performing loans is an important indicator of financial stability that shows the quality of loans that banks have given. The quality of bank loans plays an important role in the overall health of the bank because one of the most important activities of the banking sector is lending (Park, 2012). The ratio of non-performing loans represents the relation of non-performing loans to total loans. This is an important indicator of credit risk management.

Inflation (INF). In the study, inflation is measured at the annual inflation rate. This measures the overall increase in the percentage of prices in the Consumer Price Index (ICK) for all goods and services.

Economic Growth (GDP). Is a measure of overall economic activity. It is expected to have a major impact on the factors to demand and supply of deposits and loans to banks.

Table 1. Presentment of variables used in study

	Variables	**Description**	**Measuring**
Dependen	**ROA**	*Return on Assets*	*Net Income / Total Assets*
	ROE	*Return on equity*	*Net Income / Capital*
Independent variables	**CAR**	*Capital adequacy*	*Share capital / Total assets*
	Bank size	*Bank size*	Natural logarithm of total assets
	NPL	*Nonperforming loans*	Bad loans / Total loans
	INFR	*Inflation*	Annual percentage rate of inflation
	GDP	*Economic growth*	Growth rate than GDP in percentage

Source: Author

As explained earlier, capital adequacy, bank size, nonperforming loans, inflation, and economic growth are defined in our study as independent variables that for full analysis we divided them into internal and external factors. While the dependent variables in the study have two profitability indicators (ROA / ROE).

IV. STUDY RESULTS

At the outset of our research, we have explained that our main purpose is to address the profitability sensitivity of Commercial Banks in Kosovo unto some internal and external factors. This relationship is further elucidated by regression from which analysis we can see the impact of each of these factors on the profitability of the Commercial Banks selected for the study.

Descriptive statistics

Table 2 summarizes the descriptive statistics for all study variables (ROA, ROE, Bank size, CAR, NPL, GDP and Inflation). Initially, the table gives descriptive statistics for both profitability indicators, Return on Assets and Return on Equity. The study shows that ROA as a performance measure has an average value of 1.66% for the banks studied for the period 2012 - 2018, with 1.35% standard deviation. The value of ROA by results varies from -3.97% to 4.30%. In the case of ROE, the table shows that the shareholders gained an average of 17.37%. Although this may be considered good, some banks during the study period have performed well below zero and in some cases with negative results, as seen in the minimum ROE value of -25.40%. While the maximum value of this indicator has gone up to 51.10%.

In terms of factors of banking characteristics, the average value of bank size is 19.33%. The size of the bank varies from 14.64% to 19.39%. The average value of nonperforming loans is 5.94%. This implies that 5.94% of the bank loan portfolio during the period under study is composed of non-performing loans, while the capital adequacy ratio with an average of 16.56%.

In terms of macroeconomic determinants, the table shows that GDP has an average of 2.98% with a standard deviation of 1.25%. The study period recorded maximum value of 4.20 while a minimum value of 1.10%. While inflation averaged 1.01% with a standard deviation of 0.95%, while with a maximum value only up to 2.50% during the period under study. The table shows that macroeconomic or external factors like inflation and economic growth have fluctuated in very small percentages over the period studied.

Table 2. Descriptive statistics of the variables (author's calculations)

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	56	-3.97	4.30	1.6650	1.35333
ROE	56	-25.40	51.10	17.3784	11.65730

Bank size	56	14.64	20.79	19.3339	1.36565
CAR	56	11.44	36.66	16.5686	3.86185
NPL	56	1.90	11.87	5.9452	2.44096
INFL	56	-.50	2.50	1.0143	.95335
GDP	56	1.10	4.20	2.9857	1.25964
Valid N (listwise)	56				

Source: Author's calculations

Regression results for model 1

Following is the summary table of the first model (Table 3).

$$Y (ROA) = \beta_0 + \beta_1(CAR) + \beta_2(MADH) + \beta_3(NPL) + \beta_4(INFR) + \beta_5(RGDP) + \varepsilon_i$$

In this table, an important value that explains the model to us is the value of R Square, which indicates how many % of the dependent variable (in our case ROA and ROE) is explained by the independent variables in the model. In our results for the first model, this value is 44.5%, which shows that 44.5% of the change in ROA is explained from independent variables, such as: Bank size, CAR, NPL, INFL and GDP, while the rest is explained by variables. which are not included in the model.

Table 3. Model Summary 1 (Author's calculations)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.659[a]	.445	.379	1.06661
a. Predictors: (Constant), GDP, Bank size, CAR, INFL, NPL				

In Table 4, we see the coefficients of the independent variables which in this case determine the impact of these variables on ROA. The table shows that the bank size ratio is positively related with ROA, which relationship is found to be statistically significant (within acceptable levels, Sig. = 0.04), which implies that increasing of bank size increases the return on assets. Another positive but statistically insignificant relation, according to the table gives GDP (Sig.0,826). The capital adequacy ratio and inflation give a negative relationship with ROA but statistically insignificant. While the ratio of nonperforming loans is negative and statistically significant, indicating that with the increase of nonperforming loans the return on assets drops. As expected from the results, there is a significant negative relationship between nonperforming loans and bank profitability measured by ROA. This is in line with many previous studies conducted in different countries. When looking in term of definition of variables as internal and external factors, according the results, we see that internal factors, in this case, have a greater impact on ROA, against external or macroeconomic factors, like GDP and inflation, due to very small fluctuations of these factors as e results of macroeconomic developments.

Table 4. Coefficients of the independent variables of model 1 (author's calculations)

Coefficients[a]						
Model		Unstandard. Coefficients		Standard. Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.315	2.592		-.893	.376
	Bank size	.328	.115	.331	2.853	.004
	CAR	-.064	.039	-.184	-1.637	.108
	NPL	-.188	.064	-.338	-2.937	.004
	INFL	-.247	.159	-.174	-1.551	.127
	GDP	.026	.117	.024	.221	.826
a. Dependent Variable: ROA						

From results of the table of coefficients we come to the construction of the econometric model:

ROA = -2.315 + 0.328 (Bank size) – 0.064 (CAR) – 0.188 (NPL) – 0.274 (INFL) + 0.026 (GDP) + ε_i

Unlike this, the increase of non-performing loans shall reduce the return on assets. An increase of 1 unit in nonperforming loans will reduce ROA by 0.188. Over the years, non-performing loans in Kosovo have marked a declined and the profitability of commercial banks has increased significantly.

Regression results for model 2

Ongoing is the summary table for the second econometric model (Table 4).

Y (ROE) = βo + β1(CAR) + β2(MADH) + β3(NPL) + β4 (INFR) + β5(RGDP) + Ɛi

The value of R Square in the second model is 28.1%, which tells us that 28.1% of the change in ROE is explained from the independent variables like: Bank size, CAR, NPL, INFL and GDP. This value is lower than the first model when explanatory variables had a greater impact.

Table 4. Model Summary 2 (Author's calculations)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.519[a]	.281	.200	10.42937
a. Predictors: (Constant), GDP, Bank size, CAR, INFL, NPL				

Starting from the coefficients table (table 5) for the second model we come to these results. The bank size ratio the same as in the first model is seen to have a positive relationship but unlike the first model this relationship is statistically insignificant for ROE. Another positive and also insignificant link gives the GDP. Other variables such as CAR, INFL, and NPL give negative relation, of which only the NPL ratio results in significant negative relation and statistically significant (within acceptable levels Sig. 0.02). It can be seen from this that non-performing loans have a significant impact on ROE. With the increase of non-performing loans, both of these indicators decreased and on the contrary, the decrease of non-performing loans as has occurred in recent years has contributed to the increase of profitability of commercial banks in Kosovo.

Table 4. Coefficients of the independent variables of model 1 (author's calculations)

Coefficients[a]						
Model		Unstandard. Coefficients		Standard. Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	29.296	25.348		1.156	.253
	Bank size	.374	1.123	.044	.333	.741
	CAR	-.360	.385	-.119	-.936	.354
	NPL	-2.024	.625	-.424	-3.240	.002
	INFL	-1.977	1.555	-.162	-1.272	.209
	GDP	.289	1.143	.031	.253	.802
a. Dependent Variable: ROE						

From the results of the table of coefficients we come to the construction of the econometric model:

ROE = 29.296 + 0.374 (Bank size) – 0.360 (CAR) – 2.024 (NPL) – 1.977 (INFL) + 0.289 (GDP) + Ɛi

The regression model gives us significant links only to nonperforming loans, as an important part of each country's commercial banking due to the very nature of the banking business. An increase of 1 unit in nonperforming loans will reduce the ROE by 2,024. In recent years, commercial banks have seen an increase in assets and a decrease in nonperforming loans, which also shows the high quality of the credit portfolio that the banking industry has to its clients.

V. CONCLUSION

Profitability is a very important criterion for measuring the financial performance of commercial banks. This study examined the relationship between some internal (specific factors) and external (macroeconomic) factors with the profitability of commercial banks in Kosovo for a period of 7 years, namely 2012 - 2018.

The two main profitability measures used in the banking industry are Return on Assets (ROA) and Return on Equity (ROE). Therefore, the measurement of profitability in this paper was made through these two indicators. Based on other studies and based on our findings, we have come to the conclusion that bank profits are usually expressed as a function of internal and external factors.

Based on the findings of the study we came to the following conclusions:

Regarding the relationship of nonperforming loans with banks' profit, we have come to the conclusion that there is a significant negative relationship. With the increase in non-performing loans the profitability of

banks drop. Over the years, non-performing loans in Kosovo have declined and the profitability of banking sector has increased significantly. This represents the impact of these loans on the profitability of banks. This factor in the paper had a significant impact on ROA and ROE.

Another important factor is the bank size, which had a significant positive impact on ROA but not on ROE. Increasing bank assets also means increasing return on assets. Another internal factor was the Capital Adequacy Ratio which had a negative but insignificant impact on both indicators in our study.

From the macroeconomic factors, economic growth had a positive impact on both ROA and ROE, but this impact was insignificant, due to very small increases as a result of macroeconomic developments. While inflation had a negative impact on both of these indicators but also insignificant.

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