

## The Impact of Banking Performance in Banking Sector - Evidence for Kosovo

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### Abstract

*In this research paper is analyzed the impact of banking performance in banking sector in Kosovo during the period of time 2009 - 2014. The main arguments are focused on challenges and contributions that banking performance has in Kosovo banking sector. Then, is identified the consequences of financial global crisis, the participation of banking performance in Kosovo's GDP and about NPL in Kosovo. The results of analysis have shown that interest rate of loans and capital adequacy ratio (CAR) have positive impact on banking sector, but non performing loans (NPL) has negative impact on the banking sector. In the conclusion, the commercial banks in Kosovo should increase further their profit on the investments in securities, as well as annual growth of assets.*

**Keywords:** efficiency, financial system, GDP, global crisis, non-performing loans

### 1. Introduction

In this section of research paper will be discussed about banking performance and its impact in banking sector through theoretical arguments. To create a favourable banking environment in the transition countries several essential requirements are required and needed to be fulfilled, such as: macroeconomic and political stability, structural reforms and creation of some new regulatory frameworks across the region and they have been crucial for the banking sector in the recent years, (Backé & Walko, 2006). Also, Fang *et al*, (2011) argue that development of institutional reform, defining ownership and privatization, the market structure and competitors and the conversion of corporate governance from the previous system have been indispensable to increase banking efficiency for all the transition countries, including Kosovo. The Central Bank of Kosovo (CBK) has been established in the 2000, with the main purpose to create a new paying system among banks in Kosovo, (CBK Report, 2011). The banking system is experiencing an expansionary and stable cycle, which is justified by the responsibility of the state institutions and the clients' behaviour on one side and the high difference between the loan and deposit rates including the low level of bad debt on the other side. The measurement of performance on the banking activity is done through these indicators: interest rate of loans, nonperforming loans (NPL) and capital adequacy ratio (CAR).

## 2. Literature Review

In this part of research paper are presented different literature theories and arguments from different sources and different data from financial reports in Kosovo, which provide a basis to understand the impact of banking performance in Kosovo. If the banking performance in the most of CEE countries get analysed it will be found that banks with higher level of liberalization and openness in their markets, have the higher level of performance (particularly in increasing their efficiency and they may offer cheaper banking services to their clients) than banks from other Central and Eastern European (CEE) countries, (Andries & Capraru, 2013). Reforms and banking competition have brought positive impact and rapid growth in banking efficiency and performance on newly acceded EU countries, from South East European (SEE) region, but other countries with negative impact have shown low banking performance particularly in effectiveness of the capital and credit risk, (Brissimis *et al*, 2008). On the other hand, the banking performance through non-performing loans (NPL) in Kosovo, compared to SEE countries, has been positive, which means that it has had lower rate of NPL ratio, (Abdixhiku & Lushi, 2011) and still it continues to have lower rate of NPL (see figure 1).

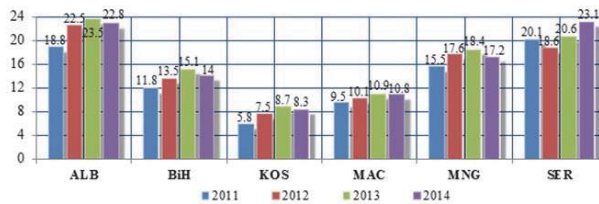


Figure 1. NPL ratio to total gross loans on the Western Balkan countries

Since the beginning, banking sector is characterized with constant growth, regardless of the financial global crisis during 2008 - 2009, and the crisis is reflected particularly in banks with foreign capital, (Zogjani & Kelmendi, 2015). Moreover, according to Toçi & Hashi (2013) the banking performance and efficiency in period of crisis was lower. Also, the profit of commercial banks in Kosovo after global financial crisis was lower than period of time 2000 - 2007. However, the impact of the crisis was not too long and banking performance has been improved and its progress is visible in the last few years, all of it as result of improvements of management performance in the banks, competition and banking experience in Kosovo, (Ahmeti *et al*, 2014). After financial global crisis the banking sector has improved in most of the SEE countries, including Kosovo. According to CBK Report (2015), the role of banking sector in financial system in Kosovo is very crucial, where in 2014 the Kosovo banking sector has managed 3,2 billion euro of total financial assets while financial system has 4,5 billion euro.

According to FMN Report (2013), banking sector in Kosovo has had rapid growth since its establishment and total banking assets have participated in Kosovo's GDP only 5 percent in 2000 whereas at the end of 2011 they have reached almost 60 percent of GDP, in other words assets in financial system as a share of Kosovo's GDP are doubled (33 percent in 2003 to over 73 percent in 2012). But, when participation of the banking assets in the total assets of the financial system in Kosovo gets analyzed for the recent years, it is understood that participation of banking assets is constantly falling. According to KAC Report, (2011), assets in banking sector in Kosovo have participated in total assets of the financial system approximately with 77 percent in 2010 but in 2013 the banking assets had lower participation (over 72 percent). Then, the banking assets in 2014 is over 70 percent and they are even lower than in 2013, as a result of reduction of the profit on investments in securities and deposits from commercial banks in Kosovo during recent years, CBK Report (2015), (please see detail in figure 2).

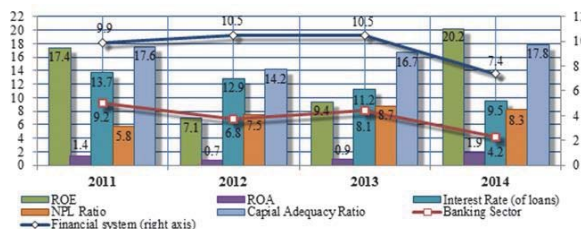


Figure 2. Banking Performance in Kosovo 2011 - 2014

Source: CBK 2015

However, according to KBA Report (2015), the banking industry in Kosovo continues to be one of the most reliable sectors in its development, and it has affected reduction of fees and commissions in overall banking sector, also they have developed their products and services to their clients and it has been a very important investment for banks during the recent years. If we analyze the main indicators of banking performance in Kosovo, we will understand that they have shown positive results and ever-increasing, whereas the interest rate of the loans in the market have been very high (compared to other countries in the region, Kosovo has had the higher interest rate of loans), as is stated in RInvest Report (2012). On the other side, nonperforming loans ratio, as a banking stability indicator, has shown low level in recent years. According to IMF Report (2014), the banking sector in Kosovo is considered to have the lowest ratio of the nonperforming loans ratio in the Western Balkan. Then, according to CBK Report (2014), the (CAR) is very stable indicator in Kosovo and its annual averages in banking sector is over 16 % (for details please see the table above) whereas the minimum level of capital adequacy ratio indicator in Kosovo must be 12 %.

According to EBRD Report (2001) in 2000 the banking performance in Kosovo has been characterized with a lot of difficulties in their activities, such as: virtual stoppage of operations, untrained labour force for banking activities, lack in monetary capital, nonexistence information about financial system and banking sector, etc. Then, during the global financial crisis banking sector in Kosovo was untouched but it faced different challenges, such as: banks couldn't use their maximum capacity of crediting in banking market and they have used a huge difference between interest rate in deposits and loans, etc. (Skenderi *et al*, 2013). Despite the challenges, the banking sector and its contribution in development and growth of the Small and Medium Enterprises (SMEs) and Kosovo's economy has been quite visible. According to EBRD Report (2013), contributions of the banking sector are focused in "big" companies through providing financing, development and increasing of competitiveness, etc., as well as in SMEs with providing funding in the first phase of entry into the market, green-field developments and acquisition projects.

### 3. Methodology and Data Collection

In this part will determine the criteria's of research methodology and their significant influence in research paper. The criteria's mostly are based on data collection, data analysis, and research approaches (deductive or inductive) as well as in research paradigms (a positivist, interpretive, or other perspective of research), (Soiferman, 2010) & (Gray, 2014). As mentioned above, the main data for analyses are collected from annual and financial reports of CBK (they cover the period of time 2009 - 2014) and data in quantitative research can be collected from many research sources (or reports), (Creswell, & Plano Clark, 2007). While, the main methods for analyses are: ordinary least squares (OLS), descriptive statistics, and correlation method. Through using of deductive research approach is made research analysis from general context to a specific focus of research, (Trochim, 2006). Then, a positivist research paradigm enables researchers to measure independent facts about a single reality (or one-way mirror), (Krauss, 2005).

#### 3.1 Definition of hypothesis

Through definition of statistical hypothesis, may present the statement of a relationship between two or more variables in analysis. The main hypothesis of research paper has shown that two out of three variables in analysis (Interest Rate of Loans and Capital Adequacy Ratio) have positive impact on banking sector, while non-performing loans ratio has shown negative impact on banking sector. Based on different sources, in one side the commercial banks in Kosovo have high interest rate particularly on the market of loans and in other side these banks every year realize a very high profit in Kosovo banking sector.

#### 3.2 Research Objective and Research Questions

Through objectives of research we can verify the facts, analyze the events, develop new concepts and scientific theories (Rajasekar *et al*, 2006). Thus, the main objectives of this research are: a) providing different theoretical arguments about banking performance for SEE countries and Kosovo; b) explaining the impact of financial global crisis in banking sector in Kosovo and its consequence after global crisis; c) providing the data about annual growth of assets in financial system and banking sector as well as nonperforming loans ratio and capital adequacy ratio in banking sector; d) discussing about difficulties, challenges and contributions that banking sector has had and still continues to have in Kosovo; e) measuring the impact of banking performance (through few important indicators) in banking sector in Kosovo. The research questions help to articulate the intentions and perspectives that are involved directly in research paper (Agee, 2009). Then, the main research question is focused in the impact of banking performance in Kosovo banking sector from 2009 -

2014. However, as the sub-questions of the research are:

- Which are the main sectors that banking sector has the bigger influence?.
- How many is the impact of banking performance in banking sector?
- How many is correlation between banking indicators and banking performance?

### 3.3 Definition of method for data analysis

In linear regression model, the dependent variable is predicted from other independent variables by using a linear equation. Through regression method is analysis banking sector (as a dependent variable) and interest rate of loans, nonperforming loans and capital ratio (as independent variables), then these variables cover period time from 2009 - 2014. Definition of regression method about impact of banking performance in Kosovo banking sector is as follows:

$$\ln(BSt) = \beta_0 + \beta_1 \ln(IRLt) + \beta_2 \ln(NPLt) + \beta_3 \ln(CARt) + \epsilon t \quad (1)$$

Where the main variables for analyses are as following:

- BS = Banking Sector;
- IRL = Interest Rate of Loans;
- NPL = Nonperforming Loans;
- CAR = Capital Adequacy Ratio;
- $\epsilon t$  = Stochastic Error Term;
- $\beta_0$ ,  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are the respective parameters;

## 4. Empirical Results and Interpretations

In empirical part, usually is used to express about the results of quantitative (or qualitative) data on variables that are included in analysis of research paper, as cited (Pasek, 2012). Based on results on OLS method (table 1), we have found that coefficient of two out of three variables of banking performance have positive impact on banking sector in Kosovo and one of them has negative impact. Interpretations of results are as following: the first variable of interest rate of (total) loans has positive impact ( $\beta_1 = 1.76$ ) on banking sector. It means that when other variables in analysis are fixed or constant and when interest rate of (total) loans increases for a unit, it has impact on banking sector with 1.76 per unit (so, it has positive impact). Also the third variable in analysis (capital adequacy ratio) has positive impact ( $\beta_3 = 1.52$ ) on banking sector. However, the second variable (nonperforming loans ratio) of analysis has negative impact ( $\beta_2 = -0.62$ ) on banking sector. It means, that when other variables in analysis are fixed or constant and when nonperforming loans ratio increases for a unit, it will have impact on banking sector with -0.62 per unit (negative impact).

**Table 1.** Test of Ordinary Least Squares (OLS) Method

	Coefficient	Standard Error	T-Statistic	P > t
Constant	-33.72	170.88	-0.20	0.86
Interest Rate (of Total) Loans	1.79	5.49	0.33	0.77
Nonperforming Loans Ratio	-0.62	7.40	-0.08	0.94
Capital Adequacy Ratio	1.52	3.50	0.44	0.71
No of Observations	6			
F (3, 2)	1.17			
Probability > F	0.49			
R - square	0.64			
Adjusted R - square	0.09			

**Source:** Authors estimates

Analysis of standard error are used to help the researchers measure the statistical fluctuation of variables and this analysis is important when we have to compare two and more estimate variables in analysis (Ahn & Fessler, 2003). The highest standard error value in our analysis is found to be the non-performing loans ratio with 7.40, followed by the interest rate of (total) loans with 5.49 and the last one is found to be the capital adequacy ratio with 3.50. Through T-statistics, we can understand the explanatory capability (or significance) that the variables have between them and the significance can be positive ( $T > 2$ ) or negative ( $T < 2$ ). Based on T-statistic results, all variables (interest rate of loans

with 0.33, nonperforming loans ratio with -0.08 and capital adequacy ratio with 0.44) in our analysis have negative significance ( $T < 2$ ). Also, in Table 1 is found and presented even the coefficient of determination ( $R^2$ ); it is defined as the squared value of the correlation coefficient (Brown, 2007). Its value in our analysis is  $R^2 = 0.64$ , which means that correlation coefficient of variables in analysis are relatively strong, while 0.36 (100% - 64%) include other factors that are not included in the correlation coefficient.

In Table 2 is presented the analysis through Statistic Descriptive Method, which has helped the researchers to simplify large amounts of data in sensitive way (Jaggi, 2003). In Table 2 is presented the banking sector variable and the minimum value is 4.2 (which means the lowest value of "banking sector" in the period of research) and maximum value is 24.1 (which means the highest value of "banking sector" in the period of research), the value of mean is 11.0 (which means the average value of "banking sector" in period of research) and standard deviation value is 7.13 (which means how much close is the "banking sector" variable, between 4.2 to 24.1). Then, the value of median is 8.65, (which means that 8.65 is the average number of period time that is included in the analysis). Banking sector has the highest value of range (19.9) in the analysis and the result of range means the difference between the lowest and the highest values of banking sector. The value of variance is 50.88, and it means that numbers of variables in banking sector are too far from mean number (11.0). The value of variables Skewness and Kurtosis are 1.11 and 2.94 and it means that both of them have positive value in analysis of the banking sector. The coefficient of variance is 0.65 and it means that 0.65 is the degree of variation from one data series to another data in the banking sector.

**Table 2.** Statistic Descriptive Method

Variables:	Banking Sector (BS)	Interest Rate of (Total) Loans (IR)	Nonperforming Loans Ratio (NPL)	Capital Adequacy Ratio (CA)
Observation	6	6	6	6
Sum	66.1	75.7	40.2	103.8
Minimum	4.2	9.5	4.9	14.2
Mean	11.0	12.6	6.7	17.3
Maximum	24.1	14.3	8.7	18.8
Standard Deviation	7.13	1.90	1.68	1.70
Median	8.65	13.3	6.65	17.7
Range	19.9	4.8	3.8	4.6
Variance	50.88	3.60	2.83	2.90
Skewness	1.11	-0.76	0.05	-1.05
Kurtosis	2.96	2.08	1.27	2.89
Coefficient of Variance	0.65	0.15	0.25	0.10

**Source:** Authors estimations

The analysis of the interest rate of total loans has provided the following results: the minimum and maximum is 9.5 respectively 14.3; value of the mean is 15.6; standard deviation is 1.90 and median is 13.3. Value of range and variance are 3.8 respectively 2.83, and the coefficient of variance has the value of 0.25 but value of the Skewness in interest rate of total loans variable is negative (-0.76). The analysis shows that the Nonperforming Loans Ratio has the minimum 4.9 and maximum 8.7, followed by the mean and standard deviation with 6.7 respectively 1.68, while other analyses in the variable of nonperforming loans have shown positive results. All analyses in the capital adequacy ratio have shown positive value, except the analysis of Skewness that has shown negative value (-1.05). In Table 3 is presented the Correlation Method, which is defined by Schlomer, & Borden, (2011) as the relationship between dependent variable and independent variables. Results in Table 2 have shown that interest rates of loans have positive correlation (0.68) with banking sector, and it has higher correlation than other variables. Also, capital adequacy ratio has positive correlation (0.55) but nonperforming loans ratio has negative correlation (-0.78) with the banking sector.

**Table 3.** Correlation Matrix

	Banking Sector	Interest Rate of (Total) Loans	Nonperforming Loans Ratio	Capital Adequacy Ratio
Banking Sector	1.00			
Interest Rate (of Loans)	0.68	1.00		
Nonperforming Loans Ratio	-0.78	-0.88	1.00	
Capital Adequacy Ratio	0.55	0.21	-0.57	1.00

**Source:** Authors estimates

## 5. Conclusion

In this research paper is analyzed the impact of banking performance in the banking sector of Kosovo, through the evidence. The data used are secondary data and they have been collected from the financial institutions in Kosovo, such as: central bank of Kosovo (CBK), national and international financial institutions operating in Kosovo. The data used in this research paper include the period 2009 - 2014. The results in OLS method have shown that interest rate of loans ( $\beta_1 = 1.76$ ) and capital adequacy ratio ( $\beta_3 = 1.52$ ) have positive impact on banking sector but nonperforming loans ratio ( $\beta_2 = -0.62$ ) has negative impact on banking sector. In T-statistic analysis, all variables that are including in analysis have negative significance ( $T < 2$ ) on banking sector. The result of coefficient of determination in our analysis is 0.64 ( $R^2 = 0.64$ ), then in correlation method the results have shown that interest rate of loans (0.68) and capital adequacy ratio (0.55) have positive correlation on banking sector. Thus the conclusion of this research paper focuses on improvement of the annual growth of assets of commercial banks in Kosovo (particularly their profit on securities and deposits) because annual growth of assets few years ago has been higher than recent years.

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## Appendixes

Appendix 1/A the main data for analysis

Years	Banking Sector (BS)	Interest Rate of Loans (IR)	Nonperforming Loans Ratio (NPL)	Capital Adequacy Ratio (CAP)
2014	4.2	9.5	8.3	17.8
2013	8.1	11.2	8.7	16.7
2012	6.8	12.9	7.5	14.2
2011	9.2	13.7	5.8	17.6
2010	13.7	14.3	5.0	18.8
2009	24.1	14.1	4.9	18.7

**Source:** Banking Sector, Return of Equity & Return of Assets - Annual Reports of CBK 2015 & 2013; Nonperforming Loans Ratio & Capital Adequacy Ratio - Financial Stability Report of CBK 2015 & 2013;

**Appendix 1/B** Variable descriptions and data sources of variables

Variable	Description	Source
Banking Sector (BS)	Banking sector as the main sector of financial system, it enables devotion to the holding of financial assets and investing those financial assets as leverage to create more wealth through lending and deposits	Annual Report of CBK, 2015 & 2012
Interest Rate (of Loans) (IR)	Interest Rate is expressed as a percentage of principal, by a lender to a borrower for the use of assets	Annual Report of CBK, 2015 & 2012
Nonperforming Loans Ratio (NPL)	A nonperforming loan is a loan that doesn't perform, when the odds that it will be repaid in full are considered to be lower.	Financial Stability Report of CBK, 2015 & 2013
Capital Adequacy Ratio (CA)	Capital Adequacy Ratio (CA) is the ratio of a bank's capital in relation to its risk weighted assets and current liabilities.	Financial Stability Report of CBK, 2015 & 2013

**Source:** Authors

