

19 Impact of non-performing Loans on Lending and Capital: a Study in commercial Banks in Kosovo

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19.1 Abstract

This research is one of several works that assesses the performance of commercial banks in Kosovo, including the structure of non-performing loans in the Banking System of the Republic of Kosovo. The main purpose of this paper is the analysis of impact of nonperforming loans on the banking sector in Kosovo. The research was conducted based on the financial indicators of commercial banks such as: first tier capital, second tier capital, total capital and total loans. These indicators are obtained from the Central Bank of the Republic of Kosovo, and the examination period is 10 years 2006-2015. Consequently, several questions arise: Do nonperforming loans have a negative impact on other financial indicators in the banking system of Kosovo? What is the impact of nonperforming loans on total capital? What is the impact of nonperforming loans on lending? To answer these questions, we did a review of empirical studies using the SPSS model for the impact of bad loans measurement. In reviewing the foreign literature, one can notice that there are more studies that provide the direct relation of financial indicators in non-performing loans, whereas we have researched the impact and dependence of non-performing loans on those financial indicators.

Keywords: Non-performing loans, credit risk, lending, total capital and total loans.

JEL Code: G01 G21 G31

19.2 Introduction

Regardless of the fact that risk management techniques were considerably developed recently for risk management in a structured manner, still the risk was too exposed and created conditions for systematic instability.

According to studies of many authors, a strong and independent management is highly necessary for the bank, as well as strict monitoring by regulatory authorities, such that the risks of today's modern banks are managed adequately, and in addition, according to them, banking governance plays an important role in the bank performance (Acharya and Richardson, 2009; Kirkpatric, 2009; Diamond and Rajan, 2009). Despite ongoing efforts to control banking lending activities, problem loans are still large in numbers. According to the Global Financial Stability Report, the International Monetary Fund (2007), the overall level of problem loans exposes large disparities in many developed and developing countries.

According to studies by authors Keeton and Morris (1987) and a study by Keeton (1999) high losses suffered by banks come as a result of different processes, mainly due to a weak process of loan management, some banks represent a high level of loan losses because they are located in areas with unfavorable economic conditions, and the banks' desire to extend loans even when the problem loan ratio is increasing rapidly. The concern due to the high level presence of NPLs in the whole world and especially in Europe, prompted us to analyze the NPL status in Kosovo. The main purpose of this research is credit analysis in general in

commercial banks in Kosovo. To be exact, the study relates to problems of loans that do not perform, i.e. non-performing loans. The concern regarding non-performing loans in European countries where the level of bad loans is constantly increasing, is the instigator of our research. This financial situation is also present in Kosovo. However, with a very low significant difference compared to the countries of the region. Our study is motivated by hypotheses that non-performing loans will affect in the banking sector. In this research we have focused mainly on the analysis of the impact of these loans on capital indicators and on lending of banks. The main purpose of this research was to conduct an analysis of lending in general in the commercial banks in Kosovo with a focus on non-performing loans and their impact in the banking sector.

19.3 Literature Review

The financial system health has an important role in a country (Abiola and Olausi, 2014; Das and Ghosh, 2007), as its failure could undermine the country's economic development. The company's financial performance is the ability to generate new resources every day. Measurement of banking performance can be carried out through traditional measurements and market-based measurements (Aktan and Bulut, 2008). Empirical research has revealed evidence that supports the view that financial development contributes to economic growth. Our research concretely explores non-performing loans in the Kosovo Banking System.

The deterioration of loan quality, as per authors Reinhart and Rogoff (2010) may result in significant losses to the bank and this is known as the beginning of a bank crisis. The simple banking theory is that banks act as financial intermediaries between depositors and borrowers (Diamond et al, 1984).

According to Mishkin (2007) the financial system throughout the entire world is extremely complex, the banks are also the most important source of external funds used for financing businesses. Therefore, banks have an important position in the economy of the whole world, acting as a financial intermediary for private consumers, for the businesses and the governments. The theory on banking system as a financial intermediary has been published by many well-known journals and also includes some of the most renowned economists in the field, such as: (Keynes, 1936; Gurley and Shaw, 1955; Diamond et al., 1984, 1991, 1997; Diamond and Rajan, 2001; Eatwell, Milgate and Newman, 1989; Myers and Rajan, 1998; Allen and Santomero, 2001; Matthews and Thompson; 2005) and many other authors. Regardless of the volume of loans, both performing and non-performing, there is no relevant global standard for their classification and reporting. However, in more and more countries, the regulators and banks are moving towards adoption and adaptation of best practices (Grieser and Wulfken, 2009).

According to Sufian (2011) trend movements of credit risk are obvious from the fact of how the bank is provisioned within a year compared to total loans. In addition, Flamini, Schumacher and McDonald (2009), define credit risk as the proportion of total loans to total assets. Credit risk by many authors is considered a critical issue in bank management, and therefore special attention should be paid to credit risk as it automatically affects the bank's profitability.

Alalaya and Khattab (2015) argued that commercial banks have an important role in the economic development and are one of the main indicators that trigger economic growth as a community service provider, and meetings are also considered necessary for services carried out with monetary means in the form of loans or debts. According to researchers Pass and Davies (1993), banks in the physical sense as depository institutions should be licensed by the country's authorities to act as a depot for the depositing of financial means of natural persons, enterprises and other institutions, and also as a financial institution the bank should always be available to customers seeking financial consulting.

19.4 Methodology

This paper is based on the financial data of commercial banks of the Republic of Kosovo on the management of credit risk, namely of problem loans. The main methods used in this paper are: structure index, dynamics index and correlation. The statistical package SPSS 22, which was considered a good inclusive opportunity to increase the credibility of the scientific study, has been applied for the findings on these parameters and the processing of data. Data obtained are presented through.

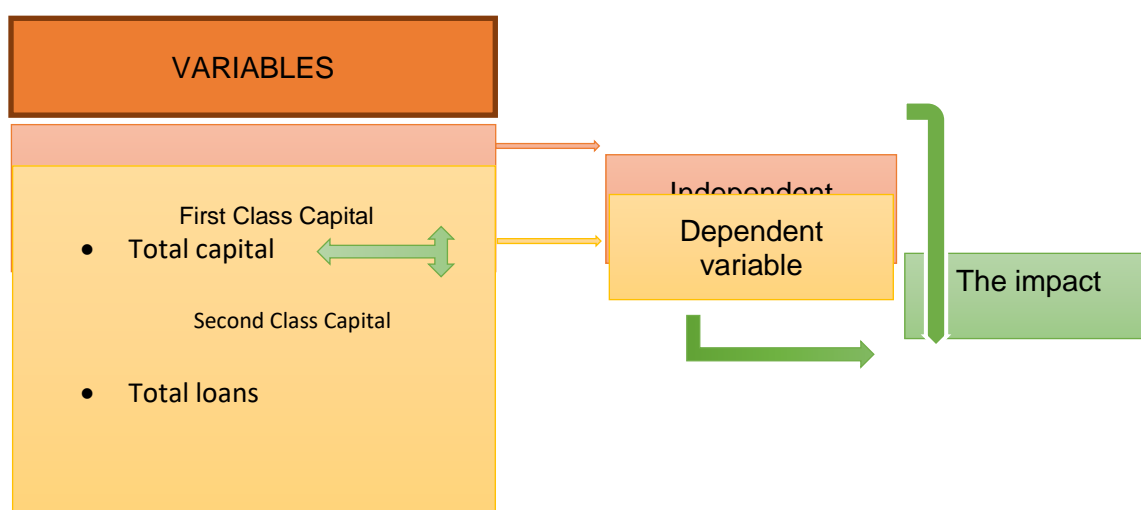


Figure. 1. Conceptual model of variables

To describe the type of information, we have used the quantitative research method, and this kind of data is collected during the analyzed experiment. Many authors have used different models to see the impact of various factors on the problem loan level.

19.5 Results and Discussion

This section presents detailed results of this empirical study. The hypotheses examine whether non-performing loans have correlation to total capital and total loans. Initially, a comparison of total capital, total loans and non-performing loans was carried out over the 10-year period 2006-2015. The main researched hypotheses have been verified through the linear regression.

Research results related to the first hypothesis

Results by linear regression

- First Hypothesis H1: Trend of nonperforming loans has no negative impact on capital indicators.

In order to answer this question and in the function of verifying the above hypothesis, a linear regression model was built from the SPSS 23 statistical package. This model assists to obtain the link between nonperforming loans (independent variable - Y) and total capital (dependent variable - X1).

The regression model is $Y = 118.631 + (1.597X1)$

Results are presented on table 1.

This model is presented as significant ($F=35.452$, $p < 0.05$) and its explanatory power is approximately 93% ($R = 0.928$).

Findings show that the independent variable, the nonperforming loans, had no negative impact ($B=1.597$) on the dependent variable which is the banks' total capital. Therefore, nonperforming loans had no impact on the decrease ($t=5.344$, $p < 0.05$) of the banks' total capital. Though theoretically, the growth of non-performing loans has an impact on the

reduction of capital indicators since when problem loans increase and become loan losses, this increases expenditures on loan losses which has an impact on reducing net profit, and this directly leads to a decrease in capital and capital adequacy ratios. In our research case, the result shows that non-performing loans have no impact on reducing total capital, because the profit over the years has been much higher than expenditure from bad debts (non-performing loans).

Summary of the model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.928.	.861	.857	.37858

- a. Predictors: (Constant), Nonperforming loans
b. Dependent variable: Total capital

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	262324.250	1	262324.250	35.452	.000.
	Residual	42336.937	38	1114,130		
	Total	304661.187	39			

- a. Dependent variable: Total loans
b. Predictors: (Constant), Nonperforming loans

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	118.631	10.061		1.791	,000
	Nonperforming loans	1.597	.104	.928	5.344	,000

- a. Dependent variable: Total capital

Table 1: Regression model results

In conclusion, the following results were obtained and discussed by comparing non-performing loans with Tier I capital, Tier II capital and total capital, and using regression, the impact of nonperforming loans on total capital was measured.

The linear regression model shows that non-performing loans did not have an adverse impact on bank total capital with coefficients ($t = 5.344$, $p < 0.05$), therefore non-performing loans did not result in reduction of total bank capital. As noted above, the growth of non-performing loans has an impact on the reduction of capital indicators since when problem loans increase and become loan losses, this increases expenditures on loan losses which has an impact on reducing net profit, and this directly leads to a decrease in capital and capital adequacy ratios. In our research case, the result shows that non-performing loans have no impact on reducing total capital, because the profit over the years has been much higher than expenditure from bad debts (non-performing loans).

19.6 Research results related to the second hypothesis

19.6.1 Results by correlation

Verification of H2 hypothesis: Non-performing loans impact a decrease of lending in the banking sector. In order to answer this question and in the function of verifying the above hypothesis, a linear regression model was built from the SPSS 23 statistical package. This model assists to obtain the link between non-performing loans (dependent variable - Y) and dividend (independent variable - X1).

The regression model is $Y = 92.665 + (-3.903X_1)$

Results are presented on table 2.

This model is presented as significant ($F=27.629$, $p < 0.05$) and its explanatory power is approximately 65% ($R = 0.649$).

The analysis shows that non-performing loans have a negative impact on lending ($t=-5.256$, $p < 0.05$). The result is also confirmed by coefficient ($B=-3.903$) where findings show that lending has been decreasing over the years in the banking system in Kosovo, while non-performing loans have been increasing.

Summary of the model

a. Predictors: (Constant), Nonperforming loans

b. Dependent variable: Total loans

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43292.380	1	43292.380	27.629	.000 ^b
	Residual	59541.874	38	1566.891		
	Total	102834.253	39			

a. Dependent variable: Total loans

b. Predictors: (Constant), Nonperforming loans

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	92.665	1.180		14.037	.000
	Total loans	-3.903	.021	-.649	-5.256	.000

a. Dependent variable: Total loans

Table 2: Regression model results

As mentioned above, the linear regression model was applied for the verification of this hypothesis. The following results were obtained and discussed by comparing non-performing loans with total loans.

The linear regression model shows that non-performing loans have a negative impact on lending ($t=-5.256$, $p < 0.05$). This result is also confirmed by the coefficient ($B = -3.303$). To study the link between these two variables, the ratio of total loans to problem loans was applied.

There has been various research on lending and non-performing loans, we have analyzed some studies that show that there is a negative correlation between non-performing loans and total loans, this suggests that we may obtain a negative impact from total loans to non-performing loans (Hosna, Manzura & Juanjuan, 2009; Felix and Claudine, 2008). Referring to

such well-known authors' research we also studied the correlation between these variables and our findings correspond to the findings of foreign authors.

19.7 Conclusions

According to the results of our research we can conclude that non-performing loans are an important factor that may affect the financial health of the banking system. In the Kosovo banking system, non-performing loans are not very high compared to the countries of the region and other countries, and during the period examined in our study they did not have any significant impact that exacerbates the banking system.

Regression findings show that non-performing loans as independent variables have an impact on almost all other variables, and we have come to the conclusion that the financial health of the banking system is affected by problem loans, which may have an impact on many financial ratios, an actual example of verification of the above is our research.

In support of the above conclusions from the theoretical approach and the analysis of empirical data we think that it is necessary to make some recommendations regarding the reduction of the number of non-performing loans.

Although non-performing loans in Kosovo are well managed and are at a lower level than those of the region, it is still very important to be careful with some factors that may affect the increase in the number of non-performing loans, an example is the loan interest rate which should be lower than it is at this point, because this can greatly affect the borrower's difficulty of repaying loan installments. Such difficulties are reflected when loans begin to be classified into different categories such as: B, C and D where, in these cases, in most banks in Kosovo, the lender initially only collects interest and the rest of the principal remains unpaid, which means that the bank receives revenue but the client's principal debt is not decreased, only interest is repaid and now calculated as default interest. All this prevents the loan repayment and causes such loans to become non-performing loans.

19.8 References

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