

THE IMPACT OF CREDIT RISK IN CAPITAL ADEQUACY RATIO IN ALBANIA

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Abstract

All the countries have improved their banking regulation and there is a moving through agreements like Basel Accords. From 2013 the Albania is getting prepared to have the minimum required of Capital Adequacy Ratio (CAR) by 8%, but this model is very important because from 31 December 2014 the new regulation for CAR is 12% in order to be well is capitalized Albanian banking system. It is important to measure how the impact of credit risk to CAR is, because the high level of management needs to have a quantity analyze. The aim of this research is give an overall view of credit risk impact in risk weighted assets rate for Albanian banking system for a period of 2010-2014. The sources of data are the reports of Bank of Albania for a time series of 2004-2014. This study is an attempt to present scientific, quantitative impact of some specific and factors in the CAR of Albania banking system for a period of 10 years (2004-2014). Through this study will be possible to prove the identification of the relationship between the factors taken in the study and CAR. In the end there are some conclusions.

Keywords: NPL's, CAR, Loan/Deposit, Loan/Active, Credit Risk, Basel, Albania

INTRODUCTION

An introduction of the meaning for the main variables taken in analyze according to the definition by Bank of Albania and by foreign literature for the variables used in this research. Credit risk implies the inability of the borrower and the guarantor or counterparty for the other assets to meet obligations to the bank or branch of a foreign bank, under the agreement concluded between them.

A credit loans is called nonperforming loan when is not paid or delays in payment has appeared. When called troubled loans and installment payments (interest and principal) have exceeded the payment for 90 days or more. According to the IMF, "loan is troubled when payments of interest and principal are past due by 90 days or more, or at least 90 days from interest payments, refinanced, or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons to doubt whether the payments are made in full." The non-performing loans ratio is the result of delayed repayment of the loan installments in relation to the rest of the loan (principal).

Capital adequacy ratio is the result of the report of the bank's capital to its risk. Central Bank controls this rate from time to time to ensure that commercial banks can withstand potential losses and if the statutory requirements are in conformity with capital.

This rate serves to protect depositors and promote the stability and efficiency of financial systems in place.

To calculate this rate measured two types of capital : capital of the first group (Tier 1), which can absorb losses without stopping banking activity , and capital of the second group (Tier 2), which can absorb losses slowing down its activity and so provides a lesser degree of protection for depositors .

The formula for its calculation is:

$$CAR = \frac{\text{Tier 1 capital} + \text{Tier 2 capital}}{\text{Risk weighted assets}}$$

The loan to deposit rate is the report loan/deposit that help to measure the management of funds lent in relation to deposits given.

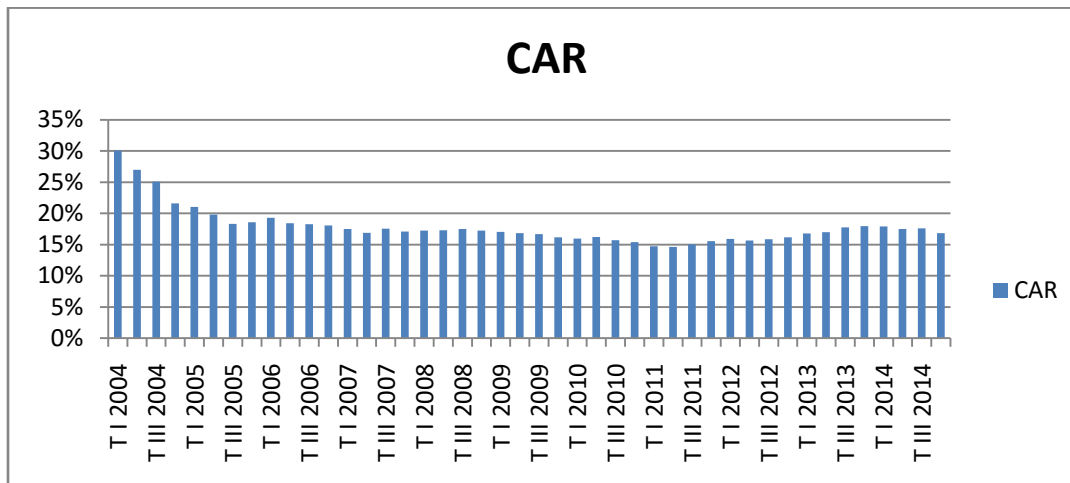
The total loan to total active rate is the report total loans/total active that help to measure how much actives are exposed to loans.

METHODOLOGY

Albania makes regulatory changes introduced in late 2011, and this have helped to protect the economy against possible contagion effects. The adequate capitalization, the increase in NPLs had been rather manageable so far.

According to Bank of Albania below there is a panorama for the main variables for a time series of 2004-2014.

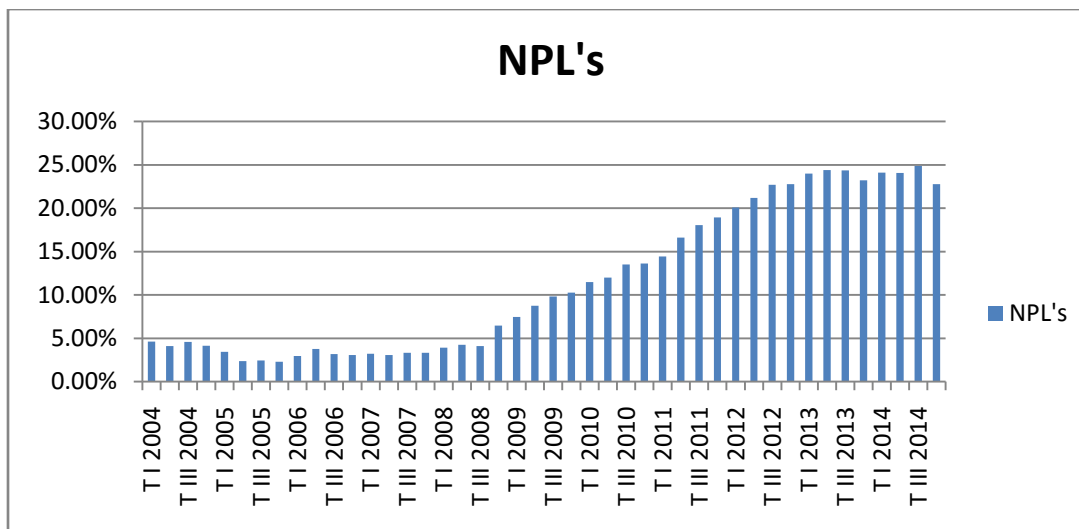
Figure 1: Capital Adequacy Ratios



Source: Bank of Albania

As we can see the CAR variable from 2004-2014 has fallen gradually. The smallest value is 15% in the third quarter of 2011, and the largest value is 30% in the first quarter of 2004. According to Basel II the minimum requirement is over 12%.

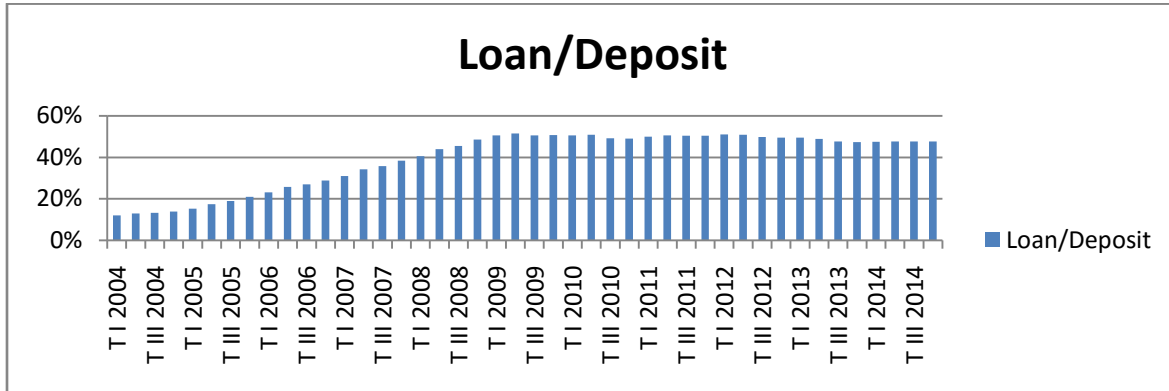
Figure 2: Non Performing Loan Ratios



Source: Bank of Albania

As we can see the NPL's variable from 2004-2014 has increased rapidly. The smallest value is 2.3% in the fourth quarter of 2005, and the largest value 24.88% is in the third quarter of 2014. This level is not good for CAR and less good for banking system.

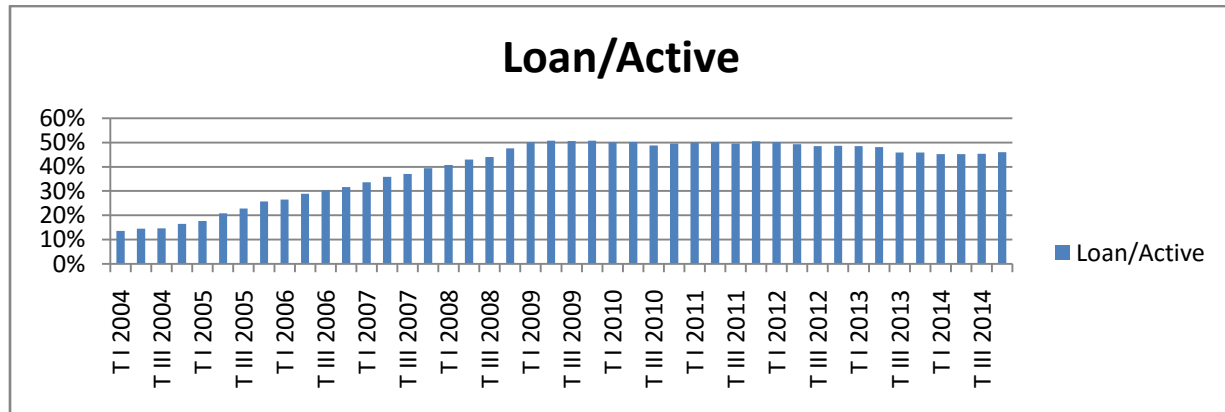
Figure 3: Loan/Deposit Ratios



Source: Bank of Albania

As we can see the Loan/Deposit rate from 2004-2014 has increased rapidly and seem to be stable. The smallest value is 12% in the first quarter of 2004, and the largest value 51% is in the second quarter of 2009. This level is very good for banking system.

Figure 4: Loan/Active Ratios



Source: Bank of Albania

As we can see the Loan/Active rate from 2004-2014 has increased rapidly and seem to be stable. The smallest value is 14% in the first quarter of 2004, and the largest value 51% is in the fourth quarter of 2009. This level is very good for banking system.

Research Approach

The main aim of this paper is to determine the credit risk variables that have an impact on risk weight assets ratio of the banks in the Albanian Banking System. Data is taken for a period of 2004-2014, and are generated by SPSS17. To fulfill the aim of the paid in used panel data multi

regression model where the dependent variable is the capital adequacy ratio while all other three variables are the dependent variables. The three hypotheses that describe the main aim of the paper are as follow:

Hypothesis 1: Non Performing Loans is significant to Capital Adequacy Ratio for Albanian banking system

Hypothesis 2: Loan to deposit ratio is significant to Capital Adequacy Ratio for Albanian banking system

Hypothesis 3: Loan to Assets ratio is significant to Capital Adequacy Ratio for Albanian banking system

EMPIRICAL FINDINGS

The estimated model is as following:

$$CAR = c + NPLs,t + L/D,t + L/A,t + \epsilon,t$$

Where:

- CAR represents Capital Adequacy Ratio
- NPLs represent Non Performing Loan
- L/D represents Loan to Deposit Ratio
- L/A represents Loan to Assets Ratio

The Estimated regression results of the model are as below:

$$CAR = 31.268 - 0.032NPLs,t - 1.045L/D,t - 1.362L/A,t + \epsilon,t$$

Table 1: Coefficients from SPSS

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|--------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| 1 (Constant) | 31.268 | 1.091 | | 28.652 | .000 |
| NPL's | -.032 | .036 | -.090 | -.891 | .048 |
| Loan/Deposit | -1.045 | .193 | -4.741 | -5.413 | .000 |
| Loan/Active | -1.362 | .208 | -5.498 | -6.556 | .000 |

a. Dependent Variable: CAR

The p-values of the three variables are less than 0.05 therefore indicating that at significance level 0.05% there is enough evidence to reject the null hypothesis which predicts that these three independent variables are insignificant.

Table 2: Model Summary from SPSS

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | Sig. F Change |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | |
| 1 | .917 ^a | .841 | .829 | 1.25011 | .841 | 70.703 | 3 | 40 | .000 |

a. Predictors: (Constant), NPLs, L/D, L/A

b. Dependent Variable: CAR

Also, it results that the R-Square of the model is 0.829 indicating that 82.9% of the data is explained by the model, and the F Change is 70.703 with a p-value 0.000 less than 0.05 confirm that the model is statistically important.

According to the panel regression model NPLs has resulted to have a negative impact on CAR. An increase of 1% NPLs, it impact in a decrease of -0.032 CAR. One of reasons behind of this result may be explained by the fact that banks must maintain a certain amount of capital to cover NPLs. One of reasons behind of this result may be explained by the fact that banks must maintain a certain amount of capital to cover NPLs.

According to the panel regression model the Loan/Deposit ration and Loan/Assets ratio have negative impact on CAR. An increase of 1% L/D, it impact in a decrease of -1.045CAR, and an increase of 1% L/A it impact in a decrease of -1.362 CAR.

CONCLUSIONS

The study examined the determinants of CAR taking in consideration only credit risk in Albanian Banking system. The findings of the study indicate that a negative relationship between Non Performing Loans, Loan to Deposit Ratio, Loan to Assets Ratio with Capital Adequacy Ratio. Therefore the three alternative hypotheses are accepted. The study contributes in a better understanding for bank managers of the impact of good management for credit risk in CAR.

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