

THE IMPACT OF OPERATIONAL RISK IN CAPITAL ADEQUACY RATIO IN ALBANIA

Denada Bushi (Hafizi)

PhD Candidate Faculty of Business, University "Aleksandër Moisiu", Durrës, Albania

Marketing Manager, Shkodra Branch, National Commercial Bank (BKT), Albania

dbushi@bkt.com.al

Abstract

As we know, all the countries have improved their banking regulation and there is a moving through agreements like Basel Accords. Albania is getting prepared to have the minimum required of Capital Adequacy Ratio (CAR) by 8% from 2013, 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 operational risk to CAR, because the high level of management needs to have a quantity analyze. The aim of this research is give an overall view of operational risk impact in capital adequacy rate for Albanian banking system for a period of 2010-2014. The main factors that have impact on CAR from Basel point of view are Average Interest Loan Rate and Exchange Rate Euro/ALL and USD/ALL. The data used are from secondary sources and are taken from statistical reports of Bank of Albania for a time series of 2004-2014. Through this study will be possible to prove the identification of the relationship between the Average Interest Loan Rate, Exchange Rate taken in the study and CAR. In the end there are some conclusions.

Keywords: Operational risk, CAR, Average Interest Loan Rate, Exchange Rate

INTRODUCTION

This study intend to give an overall view of operational risk impact in capital adequacy rate for Albanian banking system for a period of 2010-2014. A description of the meaning for the main variables taken in analyze according to the definition by foreign literature for the variables used in this research. Operational risk is a form of risk that summarizes the risks a company undertakes when it attempts to operate within a given industry and this risk is not inherent in

financial, systematic or market-wide risk. Operational risk results from problems in internal procedures, systems and people.

Interest rates are tied to changes in market interest rates and the bank is a source of risk. An increase in market interest rates has a direct effect on the profit of the bank and vice versa. Also an increase in interest rates will change behavior after receiving the loan borrowers including risky projects taking (hazard moral) (Weiss Stiglitz1981)

According to Lindgren et al. (1996) level of exchange rate fluctuations constitute the main impact on the profitability of banks, and therefore gives very important connection with exchange rate risk credit risk currency than as currency. Exchange rate fluctuations and their impact on the performance of banks depends on the foreign exchange exposure that bank

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:

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

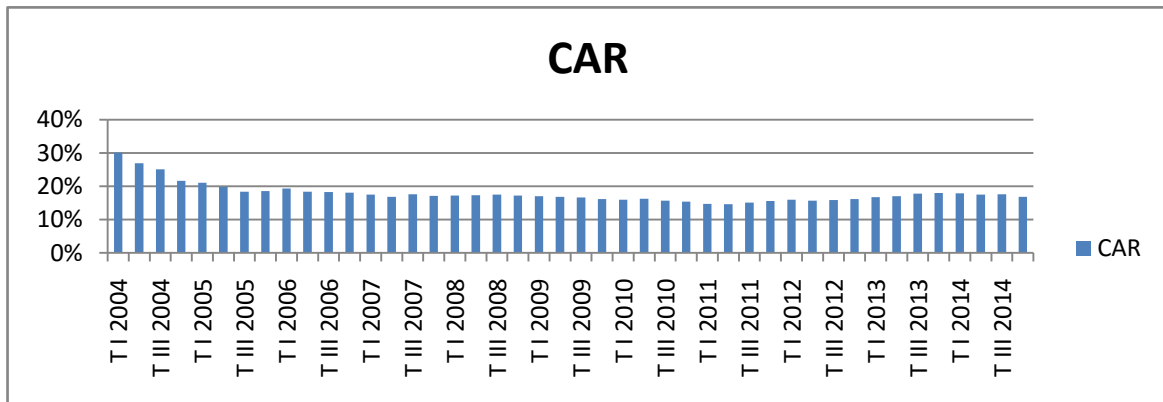
Risk weighted assets include the capital for credit risk, for market risk and operational risk.

METHODOLOGY

Albania makes regulatory changes introduced in late 2011, and this have helped to protect the economy against operational risk. The banks can manage the operational risk, but they can be protected from this risk through maintaining a certain level of capital reserve only for exposures to operational risk.

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

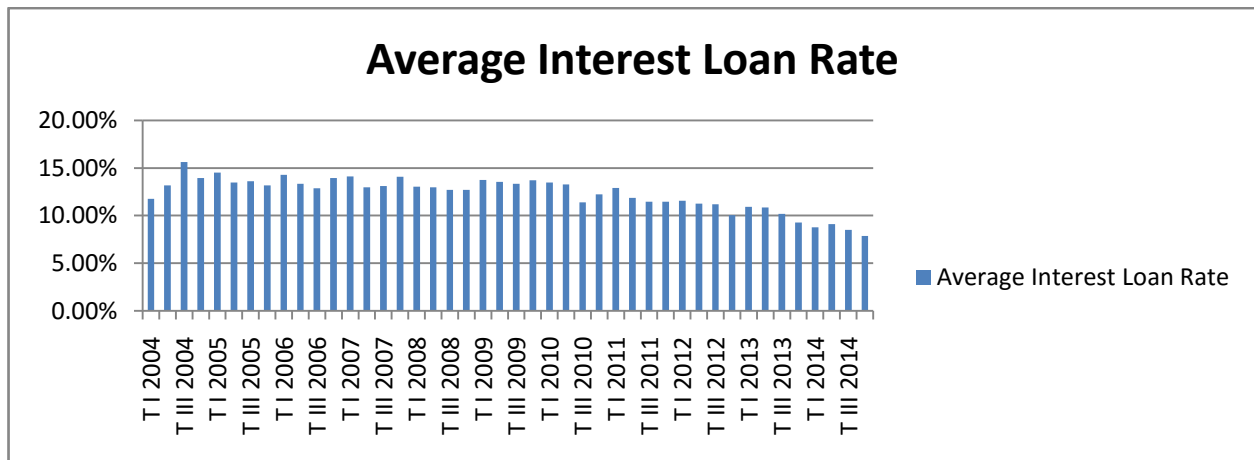
Figure 1: Capital Adequacy Ratios



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%.

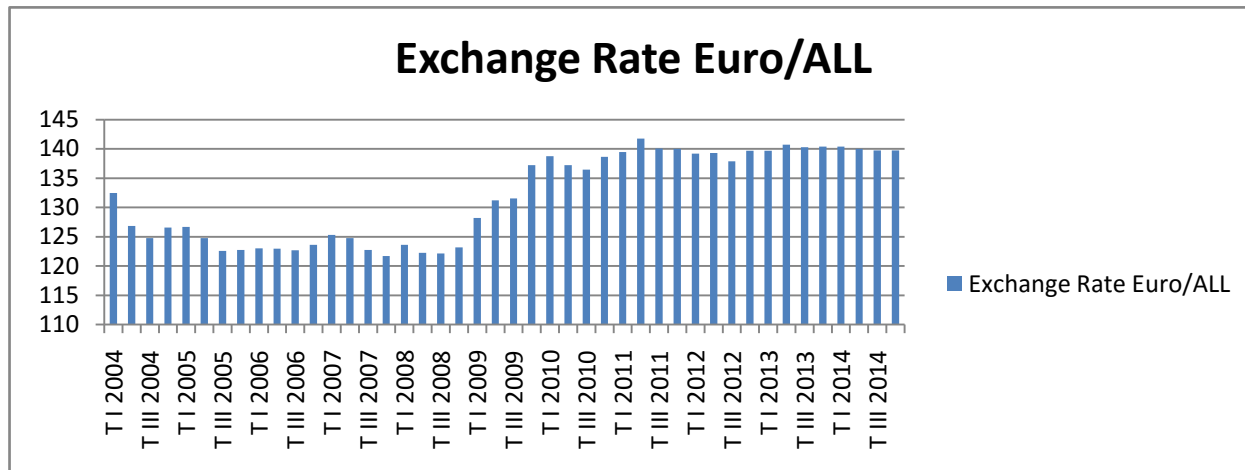
Figure 2: Average Interest Loan Rate



Source: Bank of Albania

As we can see the Average Interest Loan rate from 2004-2014 has decreased gradually. The smallest value is 7.87% in the fourth quarter of 2014, and the largest value 15.63% is in the third quarter of 2004. This tendency is good for banking system.

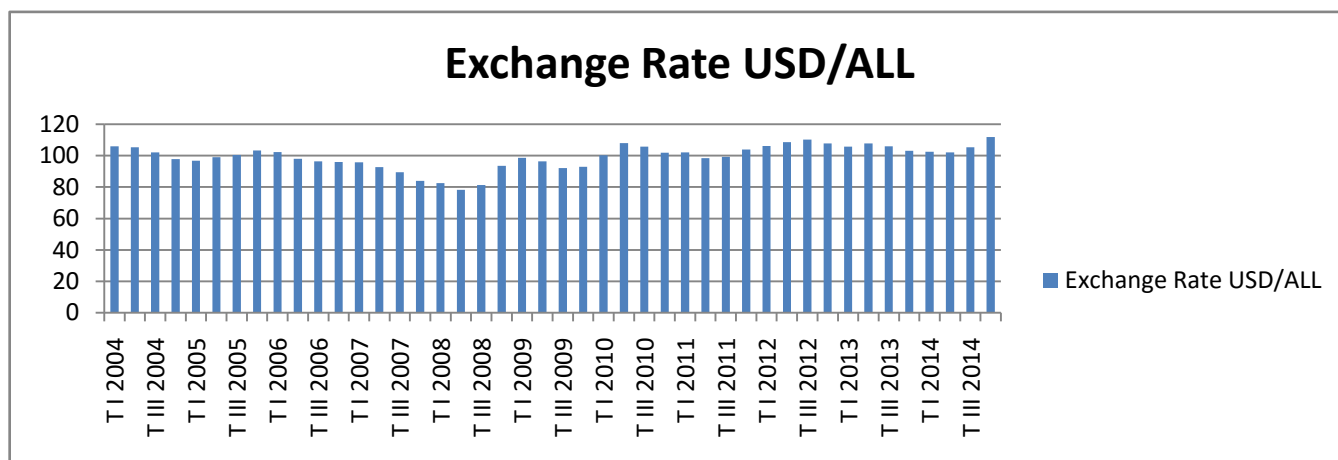
Figure 3: Exchange Rate Euro/ALL



Source: Bank of Albania

As we can see the Exchange Rate Euro/ALL from 2004-2009 is increased and it looks stable from 2010-2014. The smallest value is 1 Euro=121.69 ALL in the fourth quarter of 2007, and the largest value is 1 Euro=141.75 ALL in the second quarter of 2011. The difference from maximum to minimum is 20.06 point. At the first view it doesn't look problematic for banking system.

Figure 4: Exchange Rate Euro/ALL



Source: Bank of Albania

As we can see the Exchange Rate Euro/ALL from 2004-2014 is relatively stable. The smallest value is 1 USD=78.23 ALL in the second quarter of 2008, and the largest value is 1

USD=111.88 ALL in the second fourth quarter of 2014. The difference from maximum to minimum is 33.65 point. At the first view it doesn't look problematic for banking system.

If we compare the graphs, Euro/ALL looks worse than USD/ALL, but in terms of point we see that the exposure from exchange rate USD/ALL is larger than Euro/ALL. These differences are because the level of loan in euro and the remittances from euro zone have been stable in comparison with loans in USD, or remittances from USA.

Analytical Approach

The main aim of this paper is to determine the main operational risk variables that have an impact on capital adequacy 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 paper in used panel data multi regression model where the dependent variable is the capital adequacy ratio while all other three variables are the independent variables.

Hypotheses

The three hypotheses that describe the main aim of the paper are as follow:

- Hypothesis 1: Average Interest Loan Rate is significant to Capital Adequacy Ratio for Albanian banking system
- Hypothesis 2: Exchange rate Euro/ALL is significant to Capital Adequacy Ratio for Albanian banking system
- Hypothesis 3: Exchange rate Euro/ALL is significant to Capital Adequacy Ratio for Albanian banking system

EMPIRICAL RESULTS

The estimated model is as following:

$$CAR = c + AILR,t + EXeuro,t + EXusd,t + \varepsilon,t$$

Where:

- CAR represents Capital Adequacy Ratio
- AILR represents Average Interest Loan Rate
- EXeuro represents Exchange rate Euro/ALL
- EXusd represents Exchange rate USD/ALL

The Estimated regression results of the model are as below:

$$CAR = 34.755 - 0.002AILR,t - 0.286EXeur,t + EXusd,t + \varepsilon,t$$

Table 1: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	34.755	13.042		2.665	.011
AILR	-.002	.322	-.001	-.008	.994
EXeuro	-.286	.085	-.720	-3.353	.002
EXusd	.210	.068	.536	3.104	.003

a. Dependent Variable: CAR

The p-values of the EXeuro and EXusd 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 two independent variables are significant. The AILR variable resulted to have a p-value greater than 0.05, and this variable is statistically insignificant to CAR.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.554 ^a	.306	.254	2.61369	.306	5.891	3	40	.002

a. Predictors: (Constant), EXusd , AILR , EXeuro

b. Dependent Variable: CAR

Also, it results that the R-Square of the model is 0.306 indicating that 30.6% of the data is explained by the model. R-square is very low because operational variable are less important than credit and market variable. The F Change is 5.891 with a p-value 0.002 less than 0.05 confirm that the model is statistically important.

According to the panel regression model AILR has resulted to have a negative impact on CAR. An increase of 1% AILR, it impact in a decrease of -.002 CAR. One of reasons behind of this result may be explained by the fact that an increase in interest rate is associated with reduced solvency of installments of loans , and thus the growth of problem loans , which means increasing the capital to cover the risk and consequently with a lower CAR.

According to the panel regression model the Exchange ratio Euro/ALL have a negative impact on CAR. An increase of 1% EXeuro, it impact in a decrease of -.286CAR, while Exchange ratio USD/ALL result different, an increase of 1% EXusd, impact in a increase of 0.210 CAR. These differences between two currencies are because the trend of EXeuro-ALL is more stable than EXusd-ALL.

CONCLUSIONS

The study examined the determinants of CAR taking in consideration only operational risk in Albanian Banking system. The findings of the study indicate that the relationship between EXeuro/all and EXusd/all is statistically significant to Capital Adequacy Ratio. Therefore the first and the third alternative hypotheses are accepted. Also the findings of the study indicate that the relationship between AILR is not statistically significant to Capital Adequacy Ratio. Therefore the second alternative hypothesis is refused accepted.

The study contributes in a better understanding for bank managers of the impact of operational risk in CAR. As scope for further studies, in the model can be added even qualitative variables and not only quantitative ones.

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