# ANTI-CRISIS MEASURES IN THE BANKING SYSTEM IN THE BALKAN REGION. THE REVALUATION OF CAPITAL ADEQUACY RATIO.

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## ABSTRACT

The macroeconomic environment under which Central Banks of the Balkan region are operating now days is faced with many challenges and threats significantly impacted from financial indicators such as the Capital Adequacy Ratios. As the effects of the last economic crisis of 2008 still continue to impact the banking system causing a high credit risk due to non-performing loans, the question arises if banks have implemented through the years efficient anti-crisis measures and if they were capable of preserving their financial stability. Under these conditions, does the banking system of the Balkan Region have a sufficient capital in order to cope with deteriorated scenarios such as the increase of interest rate by central banks or unemployment? This paper aims to identify the topical anti-crisis measures taken by the banking systems in the Balkan Region since 2010 and examine their effects in the financial sector. The applied methodology is based on the literature's review on anti-crisis measures whereas quantitative data on financial indicators such as CAR are collected by annuals report of the Central Banks for the period 2010-2016. As per regulatory frameworks of the Central Banks, the assessment of capital adequacy ratio ranges from 12 to 15% which is deemed to be reasonable. The focus of this paper shall fall into evaluating whether the minimum CAR set by Central Banks is appropriate and in the case of variation what could be the impact in each economy under assessment. Additionally, the recovery and resolution plan determined by second tiers Banks as one of the preventive anti-crisis tools that a Central Banks monitors on a regular basis. The reasonability of the CAR ratio in association with monetary policies as their related impact on the fiscal and social policies would be as one of the alternatives to be considered as anti-crisis measures in the banking system in the Balkan Region.

**Keywords:** *Central bank, banking system, financial stability, non-performing loans, capital adequacy ratio, economic crisis*
**JEL Classification:** *E5*

## 1. Introduction

As the effects of the latest economic crisis of 2008 still continue to impact the banking system of the Balkan region, associated with a high credit risk, the most common instrument for determining whether credit risk is well managed by second tier banks is the capital adequacy

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ratio. Such ratio measures if the banks and the banking system are sufficiently capitalized and may cope with deteriorated scenarios such as increase of interest rates, inflation and unemployment rate. Central banks, in accordance with the framework presented by Basel III, have implemented a minimum capital adequacy ratio for each country. However, since the capitalization capability of each bank of the banking system is different from one country to another, questions may arise on the reasonability and appropriateness of such minimum set. The purpose of this paper is to identify the effects of the financial crisis in the banking system in the Balkan region composed of countries such as Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Bulgaria, and Montenegro. The methodology of this paper consists in the review of literature related to the effects of the financial crisis, measures undertaken by second tier banks and the leverage of capital adequacy ratio. The period under assessment will be from 2010 to 2016, which comprise the period for which the banking system was more sensitive towards the financial crisis. The limitation of this paper is the inclusion of only six states comprising the Balkan region which are located entirely in the region and a lack of information on specific measures taken by second tier banks for the management of the credit risk.

The first chapter will present the main effect of the economic crisis in the banking system of the Balkan region and the measures taken by second tier banks for managing the high credit risk. The reasonability and appropriateness of the capital adequacy ratio will be presented in the second chapter and the conclusion will be presented in the third chapter.

## 2. Effects of the financial crisis in the banking system of the Balkan region and measures taken by second tier banks

Starting from the year of the latest global economic crisis of 2008, second tiers banks are faced with many challenges that comprise managing a high credit risk of their portfolios. Even though they have implemented several changes in their policy for managing such risk, it is the obligation of Central Banks to establish and coordinate comprehensive policies in order to obtain a financial stability of the banking system.

The economic crises initially started in the U.S but were expanded in many countries by putting in jeopardy financial institutions and their portfolios as well. The effect in the European countries as in the Balkan region started to be more visible in the latest 2009, due to the presence of foreign capital. Since banking systems of the countries in the region are faced with a concentration of capital from certain countries, they may be exposed to the risks associated with the economy of these countries (Baleta T. & Selami Xh., 2001). According to statistics of ECB, over 60% of second-tier banks in the Balkan region are composed of foreign capital or branches, affiliates and representative offices of foreign banks.

Under these circumstances, there is no doubt that the banking system of the countries in the Balkan region would be affected by the international economic crisis causing them a financial instability. According to a study published by IMF (Claessens S. & Van Horen N., 2014), the main effects of the economic crisis in the banking system of 2008 are as follows:

1. Decline of funds for investments

Banks were more reluctant in lending to firms and consumers due to a lack of liquidity, especially for businesses taking risky investments. Therefore, there was a decrease investment financing and of consumable expenditure for consumers. The effect of a lower investment may cause up to 20% decrease of the aggregate demand so it has a significant impact on the economy.

For the Balkan region composed by Albania, Bulgaria, Bosnia and Herzegovina, Kosovo, FYR Macedonia and Montenegro the GDP growth rate from 2010 varies from (1%) for Albania to an increase of 4% for Bulgaria, while there are no significant changes for Macedonia or Montenegro.

2. Negative multiplier effect

Investment tends to be quite cyclical, therefore a fall in investment levels causes lower economic growth, a lower demand, a thus lower initiative for financing new investments. The reduction in economic growth causes job losses in many sectors such as retail or production which are more relevant for countries in the Balkan region.

3. Confidence in the banking system

A financial crisis, especially when is spread across the countries quickly, will have an impact on general economic confidence by the "bank customer". News about a banking crisis and the actual effect will tend to make people more risk-averse, thus they will prefer to increase savings and reduce spending. Also if they fear savings are not safe in a bank, they will also switch from savings account to cash saving, which causes a lack of liquidity to banks.

4. Unemployment

Due to the decrease of the economic growth, lack of investments and decrease in demand, it is naturally that unemployment rate will increase. For the Balkan region the statistics of World Bank Group show that for the period from 2010 to 2016, the Balkan countries have increased employment by creating roughly 300,000 jobs, from an estimated 5.5 million in 2010 to 5.8 million in 2016. However, this rate of job creation is not enough to address the many challenges confronting Balkan labor markets. Unemployment was estimated up to 200,000 people, from 23% to 21% (The World Bank, 2017), but inactivity remains high, especially among women, the low-educated, and youth. In addition, informal employment and long-term unemployment remain a significant challenge in the region.

**Table 1** Unemployment rate as a % of total labor force.

| | **Gender (%)** | | | **Age (%)** | | | **Education (%)** | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Total** | **Male** | **Female** | **15-24** | **25-54** | **55-64** | **Low** | **Medium** | **High** |
| *Albania* | -2.4 | -4.9 | 0.9 | -36.4 | -9.5 | 67.1 | -12.9 | 0.2 | 34.0 |
| *Bosnia & Herzeg.* | -5.0 | -3.4 | -7.6 | -13.2 | -10.1 | 32.4 | -23.2 | -2.8 | 10.1 |
| *Kosovo* | -1.5 | -4.2 | 6.4 | -16.9 | -2.4 | 20.6 | -12.8 | -5.0 | 20.2 |
| *Montenegro* | 6.2 | 1.6 | 12.2 | 24.6 | 0.7 | 24.0 | 4.9 | -7.0 | 45.1 |
| *FYR Macedonia* | 12.5 | 11.4 | 14.3 | -14.1 | 10.6 | 39.8 | -9.6 | 11.6 | 40.4 |
| *Bulgaria* | -2.3 | -2.6 | -2.0 | -36.8 | -2.9 | 11.4 | -19.8 | -6.7 | 15.3 |

**Source:** World Bank Data, Year: 2017 (The World Bank, 2017)

For the countries in the Balkan region, the entry of foreign capital in the banking system was crucial for increasing the profitability of the sector until 2009.

*"The high profitability in the banking sector in the Balkans and the increasing profit-orientation of EU banks has been the major cause of this credit growth, which was mainly driven by the rising indebtedness of the household sector. Furthermore, the rise in domestic loans has been accompanied by an increase in cross-border lending by the Balkan countries"* (Cetkovic, 2011).

During the increase of lending activity, banks were engaged in risky lending practices, accompanied by a fast credit rate growth and an inability to appropriately assess the risk of borrowers. As the financial and economic crisis was spread to the Balkans, these risky loans turned into bad loans. Bosnia and Herzegovina were the most representative of the increase NPL rates by being tripled from 2008 to 2010. In Croatia, bad loans have doubled, and Montenegro had an 18% rate of NPL. With the outbreak of the recent financial and economic crisis and the increase in bad loans, banks reduced their lending, particularly lending to private households, which led to a slowdown in credit growth rates.

Based on the statistics of WWB for the year 2016, the rate of NPL to gross loans for the period from 2010 to 2016 has varied from a reduction of 2% for FYR Macedonia to a 6% increase for Albania. The highest rates were pointed out for the year 2013 and 2014 with the highest ratio of 23.5% in Albania (composed by 16 commercial banks).

Followed by such deteriorated macroeconomic indicators and a weak banking sector, the recovery rate is deemed slow for the Balkan region. Since the countries in the Balkan region are sensitive towards the financial stability and their development is due to the increase of the banking sector, it is important for second tier banks and the central banks to establish measures and take actions for recovering from such deficiency.

Credit risk is the most representative indicator for evaluating the deficiency of the banking system. Credit risk refers to the risk that a borrower may not be able to repay a loan and that the lender may lose the principal of the loan and the interest associated with it. Such risk arises because borrowers expect to use future cash flows to pay the current debts and the repayment capacity of the borrower cannot be measured with a full assurance.

Credit risk is associated with other challenges that second tier banks are facing nowadays. Banks in Balkan region have even a greater responsibility since such sector has a direct impact on the economic development of the countries. Based on the Financial Stability Report of the Bank of Albania (Bank of Albania, H1, 2016) the banking system is faced with several risks such as liquidity risk, market risk, reputational risk, business risk, systemic risk and moral hazard.

Different types of risk have a different approach in different countries. For example in Albania the credit risk, lack of liquidity and the operational risk are the most representative of the challenges faced by the banking system, whereas for Bulgaria and Montenegro are sensitive also to the risk of moral hazard and reputational risk. On the other hands, banks in FYR Macedonia and Bosnia and Herzegovina are also vulnerable to the operational risk.

Second-tier banks have implemented different measures throughout the period under assessment for reducing the credit risk. The measures are related to more rigid evaluations of the potential borrower and the collaterals subject to loans, and risk assessment in order to identify all internal and external risks associated with the client which determine whether his repayment capacity is appropriate for the bank. Such measures were initially induced by the parent companies or decisions by Shareholder’s assembly due to previous experiences of foreign banks. This started as a necessity of the banks to precede the risky borrower and to establish a more prudent policy towards their objectives.

On the other hand, banks did not stop their activity, but they continue to diversify their portfolio, by including different categories of the customer based on the risk assessment performed and offering different types of loans which comply with the customer needs. Commercial banks offered several services including payroll, ease of conducting payments for consumers which were translated to commission fees and diversified income sources.

The main objectives of second tier banks are related to the implementation of new policies and strategies for maintaining a sufficient capital adequacy ratio. They aim to preserve their financial stability in the market and to maintain a sufficient capital in order to cope with deteriorated scenarios of the economy.

Except the measures taken by the bank itself, the central bank has also implemented several policies for preserving the financial stability. The reduction of base interest rate, increase of monetary policy, the reduction and preserve of the inflation rate, increase of the legal reserve are measures provided by the Central banks for the financial stability. Also the central bank have implemented several changes in its policy and guidance for second tier banks, obliging them to perform several procedures and implement policies and the establishment of structures or department which will control the performance of financial indicators of the bank and will evaluate its capability to cope with deteriorated scenarios such as volatility of interest rate, inflation rate, increase of unemployment etc.

## 3. The appropriateness of the Capital Adequacy Ratio

Capital adequacy ratio is the most common tool used by the Central Banks to control the performance of financial indicators of second tier banks. The capital adequacy ratio (CAR) is a measure of a bank's capital. It is expressed as a percentage of a bank's risk-weighted credit exposures. Also known as capital-to-risk weighted assets ratio (CRAR), it is used to protect depositors and to promote the stability and efficiency of financial systems comprising the banking system (Basel Committee on Banking Supervision, 2015).
As per regulation of the Bank of Albania, which is in line with the framework provided by the Basel Committee, the purpose of determining the CAR is to define the criteria for the calculation of such indicator and to set the minimum of the ratio. Banks shall calculate the capital adequacy ratio between the amounts of regulatory capital to the amount of risk weighted exposures (assets), expressed in percentage, on an individual and consolidated basis (Bank of Albania, amended in 2017).
The minimum required of CAR in accordance with Basel III is 8%. So a bank with a CAR of 8% means that capital would meet all minimum criteria required, but would have a zero conservation capital for deteriorated scenarios, therefore it would be necessary to reallocate the capital and to make strategic decisions for the portfolio diversification (Basel Committee on Banking Supervision, 2015). CAR for countries under assessment as of 2016 are Albania of 12%; Bosnia and Herzegovina of 12%; FYR Macedonia of 8% and Kosovo of 12%; Bulgaria of 4,5% based on backtesting programs and Montenegro of 10% (Bank of Albania, H1, 2016).
The variance of the ratio is not significant between the countries and the method of evaluating such ratio is similar. The evaluation is conducted through stress testing performed individually by second tier banks and also by the central bank during the evaluation of the banking system.
The financial indicators and hypothetical scenarios used for performing the stress tests may be different, based on the economy of each country. However, the regulatory framework of Basel III has determined the main analysis to be performed in a stress test in order to identify whether the banks are capitalized above the minimum ratio and if the banking system itself has a sufficient capital to cope with deteriorated scenarios.
As summarized in the report of the Financial Stability of the Bank of Albania, CARs of each country of the Balkan region are higher than the minimum set by the framework. Therefore the banks are deemed capitalized and the banking system is considered to have a sufficient capital for maintaining its financial stability.
However, by taking into consideration the fact that the Balkan region is in continuous development and subject to rapid changes, does the financial indicators fairly represent such

conditions? Is it necessary to reevaluate the minimum set of the capital adequacy ratio for second tier banks or is it appropriate for all banking systems?
The banking system of each country is quite dynamic and composed of banks of various size and complexity. Therefore, even if the banking system is considered fully capitalized since the CAR is above the minimum set, there may be banks which are not capitalized as required by the central bank. In this case, it would be necessary to undertake measures for preventing a financial instability of the bank suffering a lower CAR compared to the others. If the bank has had a lower CAR for consecutive years, it means that the bank does not have a sufficient capital for facing hypothetical scenarios and cannot manage the credit risk. A higher credit risk is translated to an increase of liquidity and reputational risk (Cetkovic, 2011).
Under these circumstances, a bank with a lower CAR cannot be evaluated and treated by the central bank in a similar way as a bank which is fully capitalized. The increase of the minimum set of CAR would affect the way the bank manages its capital and thus manages the credit risk (R., 2012). The main effects of an increase of the minimum level of CAR up to 14% estimated as an average of the capitalization rate of second tier banks under assessment are as follows:

1. The decrease in available funds for the lending and/or investing activity;
2. Use of a more prudent strategy for the lending activity by increasing the procedures of risk assessment process and the evaluation of the repayment capacity (including collaterals);
3. Better efforts for the diversification of the portfolio;
4. Use of automated controls other than judgmental analysis, for identifying whether there are non-performing loans and why;
5. The increase of provision for clients which are considered risky.

Such effect may not be considered favorable for banks which are capitalized and have a balanced capital adequacy ratio. However, it would be favorable in a long term for banks which are not fully capitalized and suffer from a low CAR. An increase of the minimum CAR would be necessary for evaluating the banking system in real terms, therefore if the banks individually are capitalized, then the banking system would be considered as such.

## 4. Conclusions

The macroeconomic environment under which Central Banks of the Balkan region operates is faced with many challenges and threats which are impacted from financial indicators such as the capital adequacy ratio. The economic crisis of 2008, which was expanded quickly in the Balkan region, was associated with a higher credit risk for second tier banks, a decrease in the economic growth of the countries, increase of unemployment rate and a lack of confidence in the banking system.
Such deteriorated indicators have caused a financial instability of the banking system for the period from 2010 to 2016. However, there is improvement of the financial indicators throughout the period due to measures were undertaken by banks due for their internal purposes and central bank for preserving the financial stability of the banking system. Such measures include risk assessment procedures, a proper evaluation of the repayment capacity of the client, reduction of interest rate, etc.
The capital adequacy ratio is used by the central bank for evaluating whether the banks and the banking system itself have sufficient capital in order to cope with deteriorated scenarios and whether banks are capitalized in accordance with the regulation set by the central bank.

As presented in the report of the Financial Stability of the Bank of Albania for countries of the Balkan region, the banking system is fully capitalized. However, there are banks within the banking system which are not fully capitalized or have a significantly lower capital adequacy ratio compared to other banks. Therefore, it would be necessary for several banks to implement new policies for achieving the proper rate of capitalization. Under these circumstances, in order to evaluate the banking system based on real observations, the reconsideration of the capital adequacy ratio would be appropriate. An increase of the minimum CAR up to 14% would decrease the available funds for investing and lending purposes, but it would be a more prudent approach for the use of available funds, diversification of the portfolio and preserving the financial stability of the banking system of the Balkan region.
The optimal level of CAR is one of the main issues of a central bank for maintaining a balanced banking system. The leverage of CAR may be determined by different factors which differ from one country to another; therefore the determination of the appropriateness of CAR would be one of the biggest challenges of the future for the second tier banks and other financial institutions as well.

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