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Impact of the Capital Adequacy on Bank Competition in the Kosovo Banking Sector

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Abstract

Sustainable growth, higher competitiveness, and a stable position should be the top mission of each bank during this century. Central banks are obliged to play their role by monitoring the banks on being sound and ensuring a stable economic system, by enforcing them to keep their CAR ratios well above the minimum required level.

On the other hand, banks should increase their profit and competitiveness by orienting their investment more on low-risk products. Banks with high levels of capital will tend to possess outstanding performance and promote public confidence. However, the requirement for a higher capital ratio appears to be a barrier to rising competition. According to the various studies, macroeconomic factors and bank-specific factors both had a significant impact on the bank's capital adequacy position.

This study through the statistical regression shows the impact of the Capital Adequacy Ratio on bank competition. The results we have obtained prove that the capital requirement has a positive impact on increasing bank competition. Supported by the results, we advise banks to focus their investment on the market for highly rated instruments. By doing so, they may spark the next round of competition and be able to keep their capital adequacy ratios at the highest possible level, improving the soundness and stability of their institution.

Keywords: Capital Requirements, Competitiveness, Kosovo Banking Sector, Capital Adequacy Ratio, Herfindahl Hirschman Index

JEL: O11, E60, E58

1. Introduction

The Kosovo industry has undergone a fundamental change after the war in Kosovo in 1999. "The Banking and Payment Authority of Kosovo – BPK was established by the international organization Mission in Kosovo UNMIK in 1999 to oversee the implementation of the monetary and financial framework, foster an efficient and safe payment system, and back the event of a sound financial sector within the territory of Kosovo" (Svetchine M, 2005). Nowadays the Banking and Payment Authority operates as the financial institution of the Republic of Kosovo, which has the complete capacity to take care of a sound and stable national economy.

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"Commercial banks, which are important to society, are a staple of the Kosovo economy. Out of the 11 commercial banks that make up the entire money-keeping sector in Kosovo, nine are currently operating outside the country, accounting for 67.8% of the division's total resources." (Kosovo Banking Association, 2020).

The fundamental role of the banks in society is to grant the chance to the people to save a big proportion their money - referred to as "depositors" – and on the other hand giving the opportunity to those who have ideas but lack the resources to implement them - referred to as "borrowers".

"The Kosovo banking industry's primary task is to link the savings of savers with the borrowings of borrowers, and so to transform the savings of savers into loans for investors. This role allows the industry to be considered among the foremost important sectors that determine the performance of a country's economy. "Banks often face credit and liability risks while providing service to different industries and any environmental impact thanks to industrial activities can affect the standard of assets and even the speed of return of banks within the long-run" (Khawaspatil and More, 2013).

Khalatur, S., Zhylenko, K., Masiuk, Y., Velychko, L., & Kravchenko M. , 2018 "determine that at the current stage commercial banks conduct their activities in a constantly changing general economic, social and political conditions."

In the empirical literature, there is a broad consensus that well-functioning financial intermediaries cause higher economic growth" (Bonin, J., & Wachtel P., 2002). "However, the role of lending does not always lead to sophisticated economic processes, unless supported by regulatory lending policies that ensure efficient resource allocation. " (Wachtel, 2001).

The Financial Crisis of the year 2008 required new regulatory requirements and stringent capital adequacy policies. Banks are being forced to report more frequently to maintain high liquidity positions and higher capitalization, which are essential for a more stable banking sector.

The Central Bank has forced the adaption of more conservative rules as per the Basel II requirement on Capital Adequacy. On the other hand, economists and banking experts highlighted that increasing the level of capital requirement ratios will decrease the extent of competition within the banking sector. However, some have argued that since there is a market for investing in highly secured exposures and triple-A (AAA) rated assets, it is possible to maintain capital adequacy ratio at a higher level without having an adverse effect on bank stability and competition.

The Financial Crisis of the year 2008 has shown the importance of capital adequacy and bank capitalization. "The issue of bank capitalization in most economies today has been a way to resolve the matter of unsound bank, enhance efficient management of the banking industry, provide better funding for bank lending activities, reduce non-performing loans and advances, increase profitability, reduce risk, to ensure quality asset management and to place banks in a very strong liquid position to always meet customers' obligation." (Ikpefan, 2012).

Competition in the banking sector has been a debate in the recent year in Kosovo Market, therefore the Central Bank of Kosovo includes in the quarterly financial report the measurement of competition in the banking sector by analyzing the Herfindahl Hirschman Index.

Boyd, De Nicolo, and Jalal (2006) as well as De Nicolo and Loukoianova (2006) in their papers show that the "Z-index, an inverse measure of bank risk, decreases with banking market concentration" (measured using the Herfindahl-Hirschman Index or HHI), "implying that the risk of bank failure rises in more concentrated markets". (Schaeck, Cihak, and Wolfe, 2006) "implement a logit model and duration analysis and find that more competitive banking systems" (measured using the Panzar and Rosse H-statistic) "have a lower likelihood of bank failure and a longer time to the crisis, and hence are more stable than monopolistic systems".

The impact of competition on banks' capital ratios is rarely thought to have been further investigated. (Schaek and Cihak, 2007) "show that banks tend to hold higher capital ratios in more competitive environments in the context of European banking". "An additional issue in the tests of these opposing theories is the measure of market power". Measures of concentration were used in several papers, such as the HHI or n-firm concentration proportion, to indicate market power, but these are ambiguous indicators" (Berger, Demirguc-Kunt, Levine, and Haubrich, 2004).

(Beck, Demirguc-Kunt, and Levine, 2006) find that both "concentration and competitiveness in banking measured in other ways such as entry and activity restrictions will lead to improvement of financial stability, by concluding that concentration might not be an appropriate measure of the degree of market power".

An additional issue considered is the business environment where the banks are operating. Banks working in weak business environments may find difficulties in expanding their services and diversifying their portfolio, which may lead to additional risk, and less competition.

The importance of bank capitalization is emphasized because better-capitalized banks are thought to be better able to withstand financial shocks and contribute to increased banking sector stability." (see for instance Santos, 1999; Van Roy 2003). "However, there are two main counter-arguments to the push for capital build-up, first, emerging evidence shows that bigger banks perceive themselves to be too big to fail and therefore engage in more risky investments and are more vulnerable to shocks than smaller banks" (Berger and Mester, 1997). The more robust case doesn't always sound more secure. Commercial banks, microfinance institutions, non-bank financial institutions, insurance firms, pension funds, and the securities market make up Kosovo's financial sector. This sector experienced a consistent annual rise of activity of 7.3 percent in the first half of 2020, bringing the total value of assets to 4 billion Euros. The development of bank activity and the strong performance of pension funds were the primary drivers of this increase, although the microfinance and insurance sectors also played a role, albeit at a lower pace.

According to the CBK report on financial stability for the period ending in June 2020, banks' assets increased by 11% annually to reach 4.03 billion euros, owing mostly to the rapid development of the loan portfolio. Loans, which make up the majority of a bank's assets, are concentrated in firms (64.8 percent), with households accounting for 35% of all loans. Consumer loans were the most common type of loan to families, and they contributed the most to the overall credit demand increase. Average interest rates, on the other hand, have been trending downward.

According to the aforesaid data, the pension sector was also characterized by a growth in the value of assets, which reached 2.03 billion euros, representing a 12.4 percent annual increase. The Kosovo Pension Savings Trust holds 99.5 percent of the total saving trust funds, while the remaining is held by the Slovenian-Kosovo Pension Fund. This industry had a strong performance in the first half of 2020, thanks to a positive return on investment and a growth in the value of both funds.

"For the period mentioned, non-life insurance accounted for 90.4 percent of the insurance market, while life insurance accounted for the rest. This category refers to a total of 12 non-life insurance firms and three other categories of insurance companies" (B. Livoreka and A. Rrustem, 2018).

The Kosovo banking industry has remained fairly sound in the twenty years since the war, even though it went through the Global Financial Crisis from 2008 to 2012. As a result, research is conducted to determine the impact of capital adequacy and the relationship between capital adequacy and bank competition.

As a result, the linear regression method will be used to examine the impact of capital adequacy and the relationship between capital adequacy and bank competition.

This study focuses on the impact of capital adequacy on bank competitiveness and the relationship between capital adequacy and competition.

2. Literature Review

The relationship between bank power in the market and bank stability has become very debated through different mediums in the last three decades following market deregulation and the different crises around the world.

Broecker (1990) "supports the "franchise value" which was first built by Marcus (1994) arguing that competition on the store showcase drives banks to embrace risk-taking procedures due to the concentration in banks, by finding a negative relationship between average banks' credit quality and the number of banks on the market".

On the other hand, Besanko and Thakor (1993) "highlight that a higher degree of bank competition is associated with a decrease in information rents obtained from relationship lending which increases banks risk-taking".

Lately Boynd et al. (2006) "provide evidence that supports the "competition-stability" hypothesis. For the US and an international bank sample, they show that a higher degree of the bank competition is not necessarily associated with an increase in the probability of bank failures". In the case of the banks operating in the European Union, Uhde and Heimeshoff (2009) "further highlight that bank concentration deteriorates financial stability. In the less developed nations of Eastern Europe, this adverse effect of bank concentration on stability is more pronounced".

"The issue of competition in the banking sector has been the subject of debate for a long time between policymakers and regulators. "Bank mergers across borders, as well as mergers within borders, have raised concerns about the commercial power that some banks can gain and the results that this merger could bring to the financial sector." Mishkin (1999)

Economic theory has not yet agreed on the implications of increased competition for banking health, respectively for capital indicators - CAR. Various authors such as Smith (1984), Hellman et al. (2000), and Repullo (2004) suggest that increased

competition reduces the health of the banking sector.

Empirical studies of various authors give us contradictory information about the effect of competition and concentration on the stability of the banking sector. Schaeck and Chihak (2007) in their paper conclude that banks that operate in countries with higher competition hold more capital. Those conclude in the paper that there is no positive relationship between concentration and equity ratios.

"Competition in any market economy has positive effects, as it cleans the market from incompetent or less capable banks, respectively from non-solvent banks and other financial institutions. "Competition makes the financial market more efficient, but it requires a stable financial system." Luboteni (2013)

"When looking at the nature and structure of competition in the banking and financial sector, three alternative concepts are identified: competition, competitiveness, and effective competition. The market may seem very competitive, but competition may not be effective. Competition is effective in practice if consumers can make rational choices and be informed to make the lowest cost choice. "Llewellyn (2006)

Competition ensures that the consumer is not harmed because of secret deals tending to high profits. The process of competition in the banking business has been launched with the disorder and liberalization of the financial sphere. Competition in the banking business is developed through the process of differentiation of banks with key indicators.

Although competition in the general sense is the same, the banking system has a special status. "It is widely assumed that banks and the banking system have a special status, mainly because they are considered more vulnerable to instability than other firms or sectors, additionally less wealthy people may hold small portions of their wealth in various types of bank deposits." Hellwing (1991).

"Competition policies are generally oriented towards regulating three business practices as Cartels, abuse of a dominant position, and mergers. Cartels refer to any agreement or coordination of market conduct (such as concentration practices) between firms that has as its objective or effect the prevention, restriction, or distortion of competition. Examples of anti-competitive cards are agreements that directly or indirectly set buying or selling prices or any other commercial condition that divides markets or sources of supply, restricting production, operating markets, technical development, or investment. Cards can be horizontal or vertical. The latter concerns agreements between suppliers and manufacturers and the former between manufacturers and distributors". Carletti et al. (2002)

Abuse of the dominant position relates to any possible anti-competitive conduct exercised by one or more firms occupying a dominant position in a market. A company holds a dominant position when it can behave independently of both competitors and customers who have limited opportunities to react to such behavior. Key examples of abuse are the pricing of fees or the imposition of terms and conditions that are unreasonably severe or that work in a way that restricts market access from other competitors or forces them to abandon their work. Being dominant is not in itself forbidden, what is forbidden is the abuse of a dominant position in the market.

"A merger (or concentration) occurs when two (or more) previously independent firms merge or when one firm gains control of another (or several others), enabling it to

exert a decisive influence on the operations of the tire. A merger is prohibited if it creates or strengthens a dominant position, which directly or indirectly hinders the existence or development of effective competition. Alternatively, a merger may be authorized provided it is amended to remove any adverse effects on competition. Because mergers can reduce competition in the banking sector, the Central Bank is the institution that approves such a merger". Kosovo Assembly 03/L-229 (2010)

Based on the law on the protection of competition approved by the Assembly of Kosovo in 2010, which is based on the work of the supervisor of the Kosovo Competition Authority, prohibited agreements are:

"Agreements between two or more independent undertakings, decisions taken between associations of undertakings and coordinated practices which are intended or may have a significant effect on distorting trade competition in the relevant market, in particular agreements which:

1.1. set, directly or indirectly, purchase or sale prices, or any other trading conditions;

1.2. restrict or control production, markets, technical development, or investment;

1.3. share markets or sources of supply;

1.4. apply different conditions to the same transactions with other commercial enterprises, putting them at a competitive disadvantage;

1.5. conclude contracts conditional on the acceptance by other contracting parties of additional obligations which, by their nature or commercial use, are not related to the object of these contracts."

All these agreements according to law 03 / L-229 are prohibited.

Using the linear regression method, this paper intends to identify the impact of capital adequacy on bank competition.

Therefore, to verify the relationship and perform the analysis we have proposed the below hypothesis:

Hypothesis: An increase in CAR will lead to an increase in competition in the banking market in Kosovo

3. Methodology

To evaluate the impact and the correlation of capital adequacy on bank competition, we will construct the model by using the linear regression method.

To see the impact of capital demand on the competition we construct the equation as follows:

Model:

$$HHI = b_0 + b_1 * CAR + b_2 * NPLGL + b_3 * LEVRAGE + b_4 * LOANG$$

Where:

CAR (Capital Adequacy Ratio - the ratio of capital adequacy) - represents the ratio between total capital and risk-weighted assets. This ratio is presented as a requirement for the level of capital that banks must maintain. This variable in this model and this hypothesis will be an independent variable.

NPL / GL (Non-Performing Loans / Gross Loans) - The share of non-performing loans in total loans.

LEVERAGE - Share of liabilities in total assets.

LOANG (Loan Growth) - represents the level of increase or decrease of loans from quarter to quarter.

Test data:

The observation included 37 quarterly periods from 2007 to 2016.

4. Results

From the Linear Regression test we have received the following results:

Table 2. Regression analysis results

R	0.85
R Square	0.72
Adjusted R Square	0.68
St. Error of the Estimate	2.67
Durbin – Watson	0.64

The table above presents the summary of the multivariate regression model with the small squares method: R, R2, and R2 adjusted as well as the standard error. The results obtained from this analysis show that the dependent variable has a strong correlation with the explanatory variables at the level of .85, respectively 85%, while R2 in our analysis is .72, which shows that 72% of the dependent variable in our case is explained by independent variables. Adjusted R2 shows that .68 or 68% of the dependent variable variation is explained by the independent variable variation. On the other hand, to analyse as reliably as possible we compared the connectivity through the Durbin Watson indicator. From the coefficient DW - although there is a propensity for one between the independent variables, we observe that there is not autocorrelation. To look at the error between the independent variables we use the heteroskedasticity test, and propose the hypothesis:

Independent variables are heteroskedastic

To prove this hypothesis, we do the Pagan-Hausman test.

* D: Heteroscedasticity *CHSQ (1) = .42486[.515] *F (1,35) = .40656[.528] *

From the test result, it is seen that our model is not heteroskedastic, and we reject the hypothesis of heteroskedasticity. So, according to the above result, our model is homoscedastic.

Table 3. Regression coefficients

Variable	Coefficient	Significant
CAR	-0.53	-1.2657[.215]
LOANG	0.32	2.6002[.014]
NPLGL	-2.21	-7.3729[.000]
LEVERAGE	1.38	2.2426[.032]
Cons	-79.55	-1.3532[.185]

Based on the model used in this analysis and based on the calculation of coefficients by the method of small squares, the complete model with coefficients will be:

HHI = -0.53 * CAR + 0.32 * LOANG – 2.21 * NPLGL + 1.38 * LEVERAGE – 79.55

At the 95% confidence level, a 1% increase in CAR will have a 0.53% decrease in HHI. Based on the results of the coefficients the level of reliability is at the level of 80%. The second LOANG variable explains that a 1% increase in LOANG will result in a 0.32% increase in HHI, with a 98% confidence level. The third variable non-performing loans explain that an increase in NPL of 1% will result in a decrease of 2.21% in HHI. The fourth variable explains that a 1% increase in LEVERAGE will affect the HHI increase of 1.38 points% with a high significance of 97%.

Based on the above results, we can say that the demand for capital has a negative correlation, but has a positive impact on increasing competition, as an increase in CAR by 1% will contribute to the reduction of the Herfindahl Hirschman Index and this decrease

leads to increased competition in the banking sector in Kosovo.

5. Conclusion

Following the results obtained from the empirical research measuring the impact of CAR on the competition, with the results obtained from linear regression, Increased competition in Kosovo's banking sector will result from a 1% increase in CAR, which will also cause the Herfindahl Hirschman Index to decline.

Based on the results presented through the graph or through the table above shows that the concentration in a single bank is decreased, so the financial system has gone in the direction of increasing competition on (loans, deposits, and assets). Hence, we can conclude that the banking system in Kosovo from 2012 has a more pronounced increase in competition, and this may be for various reasons, one of them is the implementation of the law for banks and financial institutions, as well as amending regulations that deal with capital requirements.

Therefore, we can say that the banking system in Kosovo is competitive and stable, and our hypothesis is valid since an increase in CAR will lead to an increase in competition.

We recommend to the banks to orient their investment to the area of highly rated instruments, this will lead to higher competition, and this will maintain at the highest level the Capital Adequacy Ratio, therefore the bank will become sounder and more stable.

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