

## **Financial Analysis of the Financial Institutions Sector in Kosovo**

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**Abstract:** Paper work “Financial analysis of the financial institutions sector in Kosovo” treats financial sector in Kosovo. Paper work contains the current position of the economy, economic prospects and macroeconomic projections for the financial sector in Kosovo, future potential and possibilities of financial sector in Kosovo. The main goal of this research is financial analysis of Kosovo financial institutions sector - overview of key indicators. This research evaluates the performances of commercial bank’s profitability, which have operated in the market during the period 2006-2012. This research is conducted through financial analysis coefficients: Return on Equity, Return on assets and Cost to Income. Test *t*-Student is used to analyze the profitability for the period 2006/2007 before the financial crisis and the period 2011/2012 after financial crisis.

**Keywords:** financial sector; commercial banks; profitability performance; economic prospects

**JEL Classification:** G21

### **1. Introduction**

In the last period, the financial sector faced significant progress. Major advances have been achieved in many areas. The greatest improvement observed significantly to public finance management; macro-economic environment has been stable and has adopted a sounded legal framework that favors a liberal market economy. Central Bank of the Republic of Kosovo has a significant role on supervision of the banking

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sector, micro finance institutions, insurance companies, exchange offices and pension funds, mainly to implement credit policy in banking system in Kosovo. Commercial banks offer a wide range of products and services including: loans, guarantees, different types of accounts, domestic and international payments, and other services. The banking sector in Kosovo faced a significant growth rate in the past and it is expected that these positive growing rates will continue in the future.

## **2. The Main Goal of this Research**

This paper tend to analyze the financial institution sector in Kosovo. This research evaluates the performances of commercial bank's profitability, which have operated in the banking market during 2006-2012. This research will be conducted through financial coefficients stated below: Return on Equity (ROE), Return on Asset (ROA) and Cost to Income (C/I). T test-will be used to analyze and compare the profitability of the period 2006/2007 the period before financial crisis with the period (2011/2012) after financial crisis. The sample used includes commercial banks operating in Kosovo: Pro Credit Bank, Raiffeisen Bank, Bank for Business, Lubljanska Nova Banka and Economic Bank (Reports, 2006-2012).

## **3. The Current Position of the Economy**

Kosovo has made significant progress in many areas in the post-war period, where the financial sector is established from scratch. During this period, significant progress is achieved in the financial sector, there is a significant improvement on management of public finances; macro-economic environment has been stable and has adopted a good legal framework that favors a liberal market economy. With the help of the donor community, the Central Bank of Kosovo today is established to oversee the banking sector, micro finance institutions, insurance companies, exchange offices and pension funds. While these banks lending activity has played a crucial role in the economic development of Kosovo, another important function played payment system which contributed on lowering the cash transactions in the economy.

These high rates of unemployment have also contributed to high rates of poverty (around 45%) and extreme poverty (around 15%).

**Table 1. Budget Revenues (in millions of euros)**

| Description              | 2006 | 2007 | 2008 | 2009  | 2010  | 2011  |
|--------------------------|------|------|------|-------|-------|-------|
| Tax Revenues             | 620  | 714  | 805  | 816   | 894   | 1,060 |
| Non-tax Revenues         | 92   | 117  | 165  | 328   | 231   | 203   |
| Total budgetary revenues | 712  | 891  | 970  | 1,143 | 1,125 | 1,263 |

*Source: (Ministry of Economy and Finance)*

#### **4. Economic Perspectives**

In order for Kosovo to reduce the high rates of unemployment, improve its trade balance by increasing exports and substitute imports and to reduce the incidence of poverty, higher increasing rates are needed

However, it should be noted that long ago there was the idea of involving the private sector in generating capacity, but still not enough progress has been made. The government has also approved the strategy for involving the private sector in the field of telecommunications. It is believed that this project will potentially attract any well-known companies in this market and if successfully completed, will not only provide additional funding for the activities of government spending, but will also send positive signals to the Kosovo market attractiveness for other potential investors. Another important priority, as defined in the statement of government priorities, will be the Education field. In recent years, significant investments have been made to build new schools and more investment is still expected. The Ministry of Education is working on curriculum to ensure that it reflects the new market circumstances and strengthened the criteria for private higher education. It is therefore expected that in the long run, improve the quality of education and to reflect market needs.

#### **5. Macroeconomic Projections**

Based on macro projections of the Ministry of Finance, is expected over the next three years, Kosovo's economy to grow at an average rate of 5.5%, where investments are expected to have the highest contribution, followed by the contribution of exports and consumption then. It is important to note that in the recent publication by the World Bank and the IMF, it is suggested that Kosovo is among those European countries with growth rates higher and expect in the future to have good growth rates.

**Table 2. Projections of key macroeconomic indicators, 2009-2014 (in millions of EUR)**

| Description                          | 2009   | 2010  | 2011  | 2012  | 2013  | 2014  |
|--------------------------------------|--------|-------|-------|-------|-------|-------|
| Gross domestic product GDP (mln EUR) | 3,912  | 4,289 | 4,640 | 4,977 | 5,214 | 5,500 |
| Consumption                          | 4,280  | 4,760 | 5,074 | 5,336 | 5,545 | 5,819 |
| Investments                          | 1,166  | 1,213 | 1,433 | 1,620 | 1,704 | 1,756 |
| Export                               | 612    | 820   | 875   | 933   | 995   | 1,049 |
| Import                               | 2,146  | 2,504 | 2,742 | 2,912 | 3,030 | 3,124 |
| Real GDP growth                      | 2.90%  | 4.00% | 5.30% | 5.10% | 5.40% | 6.00% |
| Inflation                            | -2.40% | 3.50% | 5.30% | 2.10% | 1.50% | 1.40% |
| Remittances                          | 356    | 42    | 430   | 453   | 477   | 507   |

*Source: (KASH 2011-2013, Ministry of Finance)*

## 6. Research Methodology and hypotheses

In order to conduct this research is used descriptive analysis – as well as descriptive financial coefficients which explain the banks performance in Kosovo during 2006/2007 and 2011/2012. For this research are used secondary data taken from annual reports of commercial banks for the reporting period of seven years. This research focuses mostly on comparing the values of the movement during the financial years (2006/2007) before the financial crisis, and the period between the years (2011-2012).

In order to verify if there is a statistical significant difference in performance of profitability of the banks during 2006-2007 compared to 2011-2012, this research applies the Student t test. T-test is applied to test the hypothesis that the averages of these two periods are the same for all variables applied in this research. This distribution is named W.S. Gosset based author, who in 1908 found similar to the distribution of normal and whose published under the pseudonym Student (Nuhju, 2005). Therefore in theory and in practice is known as Student distribution and denoted by the letter *t*.

In this case the hypothesis is zero.

**H<sub>0</sub>:  $\mu_1 = \mu_2$**

The alternative hypothesis can be introduced through the non-reconciliation:

**Ho:  $\mu_1 \neq \mu_2$**

This research was conducted including commercial banks which have operated in the banking market in the period 2006-2012. Considering the sample includes commercial banks operating in Kosovo: PCB, RBKO, BPB, EB, NLB.

**7. Research Variables**

Profitability Performance - The coefficients key profitability measure performance are:

- a. Return on Equity (ROE) - net profit/total equity. This ratio is the best indicator of profitability and growth potential. Represents the rate of return to shareholders of the bank.
- b. Return on assets (ROA) - net profit/total assets. This ratio shows how much net profit is generated for each 1 € real bank. The higher the ROA, more profitable is a bank, i.e. how well the bank's assets are managed in order to maximize returns.
- c. Cost to Income (C/I) - total costs/total revenues. This ratio shows how expensive it is for the bank to produce a unit of output (revenue, profit). The lower the coefficient of C/I, the higher the performance of the bank is.

**8. Results of the Survey**

Performance analysis of profitability - Performance of the banking sector profitability in Kosovo during 2006/2007 and 2010/2011 is measured with these coefficients measured by: Return on Equity, Return on assets and Cost to Income.

**Table 4. Performance of profitability during the period 2006-2012**

| <b>Coefficients (%)</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Mean ROE</b>         | -25.4       | 25.5        | 20.2        | 13.2        | 10.8        | 7.8         | -2.2        |
| <b>Mean ROA</b>         | -1.1        | 3.3         | 2.3         | 1.3         | 1.1         | 0.9         | 0.3         |
| <b>Mean C/I</b>         | 107.1       | 74.7        | 78.6        | 86.3        | 88.5        | 90.1        | 96.2        |

## 9. Testing of Hypotheses

To analyze the performance of the banking sector's profitability in the period before the global financial crisis, during the years 2006 - 2007, the time of last years 2011 - 2012, we applied the Student *t* Test to test the hypothesis whether the averages of these two periods are same for the three variables discussed above and analyzed.

**Table 5. Results of Student *t* test period (2006/2007 and 2011/2012)**

|                                | Performance of profitability |                            |                            |
|--------------------------------|------------------------------|----------------------------|----------------------------|
|                                | ROE                          | ROA                        | C/I                        |
| Mean 2006/2007                 | 0.04%                        | 1.12%                      | 90.87%                     |
| Mean 2011/2012                 | 2.81%                        | 0.62%                      | 93.17%                     |
| Value 'P'                      | 0.427193                     | 0.317785                   | 0.71252                    |
| Alfa                           | 0.05                         | 0.05                       | 0.05                       |
| The decision on the hypothesis | The hypothesis is accepted   | The hypothesis is accepted | The hypothesis is accepted |

From the data presented in the table above, the average ROE for the period 2006/2007 was 0.04% compared with 2011/2012, which has grown to 2.81%. Whereas the average ROA for the period 2006/2007 was 1.12% compared to 2011/2012 is reduced to 0.62%. While the average C/I in 2006/2007 was 90.87% and in recent years has increased by 93.17%. Regarding the value "P" for each coefficients have the following results: ROE values for "P" is 0.427193, for ROA value "P" is 0.317785, while the C/I value "P" is 0.71252. From these data we can say that the performance difference between profitability to pre-crisis period, the last period (during 2011/2012) is not statistically significant, since the values "P" have value "Alfa" that is 0.05/2 because the test is two side, i.e. the region of rejection of the hypothesis zero located on the two ends of the normal curve. Based on the results we can say that the zero hypothesis should be accepted.

## 10. Summary

- In this paper is discussed for financial sector, where significant progress is visible in many areas. Greater improvements observed significantly to the management of public finances; macro-economic environment has been stable and has adopted a good legal framework that favors a liberal market economy.
- The survey was conducted through descriptive analysis - descriptive financial coefficients, to explain the performance of banks in Kosovo during the period 2006 - 2012. The data for this research are secondary data and are taken from annual reports of commercial banks for seven years reporting.

- In this research through the analysis of financial coefficients: ROE, ROA and C/I is using student t-test to analyze the profitability for the period 2006/2007 compared to 2011/2012 period. Considering the sample which includes commercial banks operating in Kosovo: Pro Credit Bank, Raiffeisen Bank, Bank for Business, Lubljanska Nova Banka and Economic Bank. The banking sector in Kosovo has had good growth rate in the past and it is expected that these positive rates will continue in the future.

## 11. Recommendations

- According to the survey results we can conclude that there was no significant difference, including measurement of profitability during the period 2006-2007 compared with the period 2011-2012.
- Such a result may have been due to the fact that Kosovo faced the global financial crisis in a good macro-fiscal position, allowing less sensitive effects.
- We can conclude that Kosovo's banking sector has remained stable despite the appearance of disorder and crisis in the global financial markets during 2006-2007. Regarding capital adequacy and liquidity acceptable level were maintained, were in line with all regulatory requirements.
- Also, it can be said that banks remained stable and protected from the global financial crisis, as they have benefited from the limited exposure to foreign securities.

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**Annexes**

**Annex 1: Details Student t test:**

T Test Results: **ROE**

|                              | 2006/2007   | 2011/2012  |
|------------------------------|-------------|------------|
|                              | Variable 1  | Variable 2 |
| Mean                         | 0.04        | 2.81       |
| Variance                     | 136.04425   | 280.51425  |
| Observations                 | 5           | 5          |
| Pearson Correlation          | 0.683382909 |            |
| Hypothesized Mean Difference | 0           |            |
| Df                           | 4           |            |
| t Stat                       | 2.821277081 |            |
| P(T<=t) one-tail             | 0.023883058 |            |
| t Critical one-tail          | 2.131846782 |            |
| P(T<=t) two-tail             | 0.047766116 |            |
| t Critical two-tail          | 2.776445105 |            |

T Test Results: **ROA**

|                              | 2006/2007   | 2011/2012  |
|------------------------------|-------------|------------|
|                              | Variable 1  | Variable 2 |
| Mean                         | 1.12        | 0.62       |
| Variance                     | 3.747       | 2.68325    |
| Observations                 | 5           | 5          |
| Pearson Correlation          | 0.862393575 |            |
| Hypothesized Mean Difference | 0           |            |
| Df                           | 4           |            |
| t Stat                       | 1.14034649  |            |
| P(T<=t) one-tail             | 0.158892593 |            |
| t Critical one-tail          | 2.131846782 |            |
| P(T<=t) two-tail             | 0.317785187 |            |
| t Critical two-tail          | 2.776445105 |            |



T Test Results: *C/I*

|                              | 2006/2007    | 2011/2012  |
|------------------------------|--------------|------------|
|                              | Variable 1   | Variable 2 |
| Mean                         | 90.87        | 93.17      |
| Variance                     | 545.817      | 280.11825  |
| Observations                 | 5            | 5          |
| Pearson Correlation          | 0.840137552  |            |
| Hypothesized Mean Difference | 0            |            |
| Df                           | 4            |            |
| t Stat                       | -0.395704232 |            |
| P(T<=t) one-tail             | 0.356260592  |            |
| t Critical one-tail          | 2.131846782  |            |
| P(T<=t) two-tail             | 0.712521184  |            |
| t Critical two-tail          | 2.776445105  |            |

**Annex 2: Details of the financial Coefficients 2006 -2012**

| <b>Bank</b>            | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| a) Coefficient ROE (%) |             |             |             |             |             |             |             |
| PCB                    | 31.0        | 39.2        | 36.9        | 34.9        | 29.2        | 21.0        | 19.5        |
| RBKO                   | 24.4        | 24.9        | 20.6        | 8.8         | 11.1        | 12.7        | 12.3        |
| NLB                    | 10.3        | 10.3        | 14.3        | 11.7        | 12.5        | 11.4        | 11.1        |
| BPB                    | -202.1      | 50.0        | 20.8        | 5.5         | 6.4         | -8.0        | -28.3       |
| BE                     | 9.5         | 2.9         | 8.5         | 5.3         | -5.4        | 1.8         | -25.4       |
| Mesatarja              | -25.4       | 25.5        | 20.2        | 13.2        | 10.8        | 7.8         | -2.2        |

| <b>Bank</b>            | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| b) Coefficient ROA (%) |             |             |             |             |             |             |             |
| PCB                    | 1.8         | 3.0         | 2.9         | 3.0         | 2.8         | 2.3         | 2.4         |
| RBKO                   | 2.9         | 3.1         | 2.5         | 1.1         | 1.5         | 1.8         | 1.9         |
| NLB                    | 1.3         | 1.3         | 1.7         | 1.3         | 1.2         | 1.1         | 1.1         |
| BPB                    | -12.7       | 8.7         | 3.0         | 0.6         | 0.7         | -0.7        | -1.9        |
| BE                     | 1.2         | 0.6         | 1.2         | 0.7         | -0.5        | 0.1         | -1.9        |
| Mesatarja              | -1.1        | 3.3         | 2.3         | 1.3         | 1.1         | 0.9         | 0.3         |

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| <b>Bank</b>            | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| c) Coefficient C/I (%) |             |             |             |             |             |             |             |
| PCB                    | 82.6        | 73.6        | 76.4        | 72.9        | 74.0        | 79.4        | 77.4        |
| RBKO                   | 72.2        | 72.0        | 78.0        | 89.2        | 83.1        | 79.9        | 79.8        |
| NLB                    | 82.3        | 82.3        | 82.3        | 84.9        | 84.8        | 85.4        | 84.9        |
| BPB                    | 210.9       | 50.7        | 70.5        | 93.2        | 97.6        | 107.2       | 119.4       |
| BE                     | 87.4        | 94.7        | 85.7        | 91.3        | 103.2       | 98.6        | 119.7       |
| Banka                  | 107.1       | 74.7        | 78.6        | 86.3        | 88.5        | 90.1        | 96.2        |