



The Impact of Cost Control on the Profitability of Commercial Banks

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Abstract: There are 10 commercial banks operating in Kosovo today and they make up 65 percent of the total assets of the financial sector. Their products and services include bank accounts, loans, local and international payments, bank cards, bank guarantees, letter of credit, e-banking. The structure of assets according to the first quarter of 2020 is dominated by loans totaling 4,721.9 million euros, while the structure of liabilities of the banking sector is dominated by deposits in the amount of 3,845.4 billion euros. Commercial banks in Kosovo have different shareholder structures. Eight of them are banks with foreign capital and two with domestic capital. The purpose of this research is to investigate the impact of cost control on the profitability of banks. The research was done through multivariate regression, where as dependent variables we have Net Profit Margin (NMF), Return on Equity (ROE) and return on assets (ROA) and as independent variables we have interest expenses, salary expenses and provisions expenses. Profitability is the term that refers to the ability of the institution to maintain its profit year after year. Based on the linear regression model, it is found that in one of the dependent variables two dependent variables have a significant impact, while in the other two dependent variables only one of the independent variables has an impact.

Keywords: Cost control; interest expenses; salary expenses; provision expenses; NPM; ROE; ROA

JEL Classification: G24

Introduction

The banking industry is estimated to be one of the most profitable sectors in Kosovo. Ten commercial banks operating in the market, eight of them with foreign capital, have found a suitable market to maintain high profit levels. According to the analysis of the Economic Bulletin, in the last 10 years, banks in Kosovo have earned a total of about 630 million euros. The high profit of banks is mainly affected by the large difference between interest rates on loans and deposits.

Their products and services include bank accounts, loans, local and international payments, bank cards, bank guarantees, letters of credit, e-banking. The structure of assets according to the first quarter of 2020 is dominated by loans totaling 4,721.9 million euros, while the structure of liabilities of the banking sector is dominated by deposits in the amount of 3,845.4 billion euros.

According to the quarterly assessment of the banking sector, published by the CBK (Central Bank of Kosovo), banking sector expenses increased, but in lower way. The largest category, that of general and administrative expenses reached the value of 27.0 million euros (by 1.5 million euros higher than in Q1 2019). The category of non-interest expenses in Q1 2020 amounted to 13.5 million euro (by 2.5 million

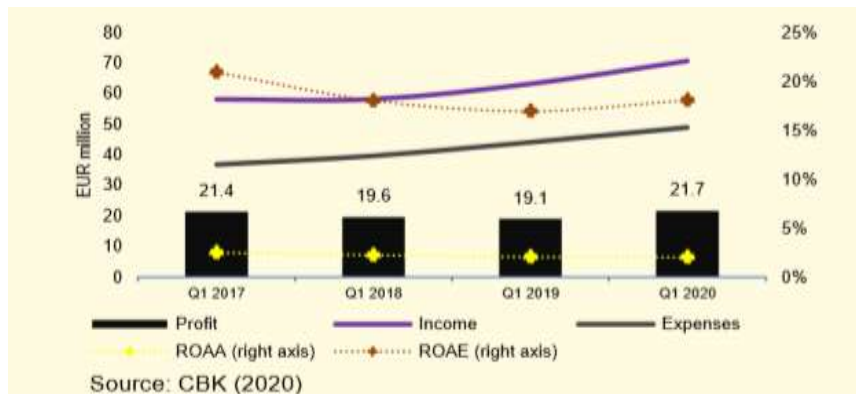
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more than in the previous period), mainly due to the higher allocation of expenses for provisions for possible loan losses. Whereas, the category of interest expenses reached the value of 5.8 million euro (for 0.9 million euro more than in the previous period).

The CBK in its quarterly assessment of the banking sector stated that in Q1 2020 the ratio of expenditures to revenues was at the level of 69.3 percent, or 0.5 percentage points lower compared to the same period of the previous year. This decline was due to higher revenue growth along with lower expenditure growth. This ratio means that for every 1 euro collected, the banking sector spends 0.693 euros.



Costs have always been one of the main components of a company’s overall business, even a commercial bank. Costs are a function of the company’s business, because it is impossible to operate without costs. (Ahmeti, 2013).

Cost control refers to the management effort to influence the actions of individuals who are responsible for performing tasks, costing, and generating revenue, while reducing costs to ensure the best for the business at the same time. Cost control is an ongoing process that begins with the annual budget. As the fiscal year progresses, management compares current results with those projected in the budget and incorporates into the new plan the lessons learned from its assessment of current operations.

Literature Review

A number of studies have concluded that cost control is the key determinant of a bank’s profitability. Cost management offers a great and sustainable opportunity to improve profitability. With large size and large variations in wages and salaries, efficient use of labor is a key determinant of profit. Staff costs, as conventional wisdom suggests, are expected to be inversely related to profit because these costs reduce the “bottom line” or total operations of the bank. The level of staff costs appears to have a negative impact on banks’ ROA in the Bourke (1989) study.

However, Molyneux (1993) found a positive relationship between staff costs and total profits. While the author suggests that the high profits earned by firms in a regulated industry can be appropriated in the form of higher wage costs.

Another variable used in some studies is the degree of adjustment in some banking sectors. Jayaratne and Strahan (1998) find that operating costs and commissions are significantly reduced as states allow for nationwide branching rather than interstate banking. Improvements after branching disorder seem to occur because better banks grow at the expense of their less efficient rivals.

Haslem (1968, 1969) calculated the balance sheet and income statement reports for all member banks of the Federal Reserve System in a two-year study. Its results showed that most of the reports were



significantly related to profitability, especially capital ratios, interest paid and received, wages and salaries. The author also stated that an improved management guide should first emphasize expenditure management, fund resource management, and finally fund use management.

Expenditures as they are one of the most significant determinants of the income statement which focus on management efficiency in minimization, they are also an indicator of cost effectiveness. Expenses are the operating cost of banks that represent a portion of banks' net profits and have an inverse relationship to the bank's profit, as an indicator of the ability of the banking administration in its relationships during operations. In a study of European banks (Abreu & Mendes, 2001) it has been researched that banks' operating expenses have an indirect correlation with bank profit, although they have a direct correlation with the base net interest margins.

Various studies in different parts of the world found that bank spending has a negative relationship with bank profitability as included by (Grigorian & Manole, 2006) in Ukraine. The result of the study determines that skillful cost supervision is a fundamental pillar that clarifies the bank's profit. Banking expenses are also considered as very essential determinants of profit, directly related to the concept of skilled management. While the expected ratio of cost to income is opposite and positive in various studies, saying that efficiency in cost management is the strongest factors of performance and profitability of banks in the UK (Pasiouras & Kosmidou, 2007).

Another research with positive results within the determinants of profitability of commercial banks is the study of Athanasoglou, Panayiotis and Delis, Manthos and Staikouras, Christos (2006), where according to them the increase in the level of equity would reduce the cost of capital. Also, this research states that investments made in capital by foreign investors would reduce the fiscal costs of commercial banks as well as foreign banks increase competition, causing a country's commercial banks to reduce costs and improve efficiency.

On the other hand, the research of Rahman, Ashraf, Zheng and Begum (2017) yielded results for 1190 banks in Brazil, Russia, India, China and South Africa during the years 2007-2015. These analyzes show that highly efficient banks have higher capital and lower financial cost costs. During the years 2007-2009 when the global financial crisis was present in these countries, a positive cost impact on the capital of banks is observed. Also, studies show that during this period banks have increased the cost of financial intermediation.

Fang, Lau, Lu, Tan & Zhang (2019) also suggested that bank size and cost-effectiveness, and especially inflation have an impact on the profitability of Chinese banks. Moreover, the positive effect of cost-effectiveness on efficiency is certainly greater in the case of a higher level of risk and more competition in the financial market.

The overall cost is very significant and is positively related to the bank's profit in relation to ROE, Net Interest Margin and pre-tax profit. This finding can be explained by the fact that the large volume of operating expenses is derived from the payment of salaries and wages to staff, while higher levels of salaries and wages paid to staff significantly improve staff productivity, while the improvement that results in the benefit of the bank is much larger than the wages and salaries paid by the bank (Tan, 2016).

Research Objectives and Questions

The banking industry is estimated to be one of the most profitable sectors in Kosovo. Ten commercial banks operating in the market, eight of them with foreign capital, have found a suitable market to maintain high profit levels. According to the analysis of the Economic Bulletin, in the last 10 years, banks in Kosovo have earned a total of about 630 million euros. The high profit of banks is mainly influenced by the large difference between interest rates on loans and deposits.

The purpose of this research is to investigate the impact of cost control on the profitability of banks.

Through this research, we will understand which of the expenses affect the profitability of the bank, if they have more interest interest or operating expenses.

To justify the purpose of the research topic and achieve the research objectives we will answer the following research questions:

1. What is the impact of not controlling interest expense on NPM, ROE and ROA?
2. What is the impact of non-control of wage expenditures on NPM, ROE and ROA?
3. What is the impact of non-control of provision expenditures on NPM, ROE and ROA?

Research Methodology

During this research we are based on the descriptive methodology by collecting data in order to answer research questions and test hypotheses regarding the impact of cost control on the profitability of banks.

The financial statements of six commercial banks in Kosovo for the period 2014-2019 have been used as a secondary basis of the methodology. The financial statements are taken from the annual reports of the banks, which are published on their respective websites.

In order to analyze the research problem which is the impact of cost control on the profitability of banks, then the following hypotheses are made. In addition to problem analysis, hypotheses will also serve as a tool by which we will test research questions.

Research Hypotheses and Econometric Model

Three hypotheses have been constructed for the study:

H1: Net profit margin is affected by controlling interest expense, payroll expenses and commission expenses.

H2: ROA is affected by controlling interest expense, payroll expenses and commission expenses.

H3: ROE is affected by the control of interest expense, payroll expenses and commission expenses.

To answer the research questions and to validate the above hypotheses, we used multivariate regression as a research model:

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon \quad (1)$$

y-dependent variable,

β_0 - constant which indicates the expected value of the dependent variable if all independent variables take the value equal to zero,

β_1 and β_2 - are parameters, or coefficients, that determine the effect that independent variables have on the dependent variable,

ε - the estimation variable of the residual error in the period t .

In our research this model is done as follows:

$$\text{Net Profit Margin (NPM)} = \beta_0 + \beta_1 \text{Interest Expenses} + \beta_2 \text{Salary Expenses} + \beta_2 \text{Commission Expenses} + \varepsilon$$

$$\text{ROE} = \beta_0 + \beta_1 \text{Interest Expenses} + \beta_2 \text{Salary Expenses} + \beta_2 \text{Commission Expenses} + \varepsilon$$

$$ROA = \beta_0 + \beta_1 \text{ Interest Expenses} + \beta_2 \text{ Salary Expenses} + \beta_3 \text{ Commission Expenses} + \varepsilon$$

Empirical Findings

There are 10 commercial banks operating in Kosovo today and they make up 65 percent of the total assets of the financial sector. Their products and services include bank accounts, loans, local and international payments, bank cards, bank guarantees, letters of credit, e-banking. The structure of assets is dominated by loans totaling 4,721.9 million euros, while the structure of liabilities of the banking sector is dominated by deposits in the amount of 3,845.4 billion euros. Commercial banks in Kosovo have different shareholder structures. Eight of them are banks with foreign capital and two with domestic capital.

Empirical findings of this research include descriptive statistics, correlation analysis, and linear regression analysis. Within the descriptive statistics we analyzed the movements for the dependent variables NPM, ROA and ROE and the independent or explanatory variables which are included in the regression model. Descriptive statistics are as follows: number of observations, minimum, maximum, mean, standard deviation and variance which are reflected in the table below:

Table 1. Descriptive Statistics

'000	N*	Minimum	Maximum	Mean	Median	Mode
Interest Expenses	36	1,009.00	9,603.00	3,076.14	2,454.50	1,009.00
Salary Expenses	36	2,173.00	13,518.00	6,473.53	6,085.00	2,173.00
Provisions Expenses	36	3,994.00	31,314.00	17,221.86	20,087.50	3,994.00
NPM	36	0.07	0.63	0.40	0.43	0.34
ROE	36	0.07	0.49	0.19	0.18	0.19
ROA	36	0.01	0.05	0.02	0.02	0.02

* The number of observations includes the six largest banks, for six years 2014-2019

Source: Authors' calculation

Based on the descriptive statistics over a 6-year period, banks averaged interest expenses of EUR 3,076MIO, salary expenses of EUR 6,473MIO, commission expenses of EUR 17,221MIO, while the average of Net Profit Margin is 40%, the average ROE is 19% . , and the average ROA is 2%.

Table 2. Correlation

	Interest Expenses	Salary Expenses	Provisions Expenses	NPM	ROE	ROA
Interest Expenses	1					
Salary Expenses	0.20	1				
Provisions Expenses	0.53	0.56	1			
NPM	(0.49)	0.36	0.18	1		
ROE	(0.32)	(0.16)	(0.03)	0.45	1	
ROA	(0.31)	0.22	0.18	0.74	0.82	1

Source: Authors' calculation

Table 2 presents the correlation matrix which enables us to summarize the reciprocal relationships between all variables. As can be seen from the data, we can not say that we have a very strong correlation. Based on the correlation matrix it can be seen that we have a negative correlation between the three dependent variables and interest expenses, while salary and provision expenses have a negative correlation with ROE, while with ROA and NPM they have a positive correlation. From this we conclude that for any increase in interest expense, the three dependent variables will decrease, whereas as wage and commission expenses increase, ROE will decrease and NPM and ROA will increase.

Regression Analysis

Regression analysis was performed for each dependent variable separately.

Net profit margin

Table 3. Model Summary

Model summary			
R	R square	Adjusted R to square	Standard deviation estimated
0.7505	0.5632	0.5223	0.0869

Source: Authors' calculation

The table above summarizes the linear regression model with the following data: R, R² and adjusted R² as well as the estimated standard error. The results obtained from the model data show that the dependent variable has a strong correlation with the explanatory variables at the level of .7505, respectively 75.05 percent. While R² in our analysis is .5632, which shows that 56.32 percent of the dependent variable is explained by the independent variables. Adjusted R² is equal to .5223, which indicates that 52.23 percent of the variable of the dependent variable is explained by the variation of the independent variables.

Table 4. Regression Analysis

Coefficients					
	Non-standardized coefficients		Standardized coefficients	t	Sig.
	B	Stan.Dev	Beta		
Constant	0.38	0.04		10.25	0.00
Interest Expenses	(0.00005)	0.00	(0.78)	(5.60)	0.00
Salary Expenses	0.00001	0.00	0.28	1.98	0.06
Provisions Expenses	0.00001	0.00	0.42	2.58	0.01

Source: Authors' calculation

Based on the results of the linear regression model, where as a dependent variable we have NMF and as independent variables we have interest expenses, salary expenses and commission expenses, the equation of this model is as follows:

$$NPM = 0.38 - 0.00005x \text{ Interest Expenses} + 0.00001 x \text{ Salary Expenses} + 0.00001 x \text{ Provisions Expenses} + \epsilon$$

Regarding the significant, based on P-value (Sig.), which must have values less than 0.05 in order for an impact of the variable to be a significant impact, we conclude that impact on the net profit margin have two of the three variables used in the model, interest expenses and provision expenses, but interest expenses have a greater impact than provision expenses, given the fact that the results generated are statistically significant and at a confidence level of 99.9 percent since P-value (P = 0.000). Salary costs do not have any major impact considering that the significant turned out to be greater than 0.05. The positive impact of operating costs, which include staff costs, was confirmed by Molyneux (1993), who in his research found a positive relationship between staff costs and total profits. Tan (2016) also came to the same conclusion, where according to him the large volume of operating expenses derives from the payment of salaries and wages for staff, while higher levels of salaries and wages paid to staff significantly improve staff productivity, while the resulting improvement in the bank's profit is much greater than the wages and salaries paid by the bank.

As the correlation results showed, even from the regression equation it is observed that the control of salary expenses and provision expenses have a negative effect on the net profit margin, because any reduction of both of them reduces the net profit margin, while the control of interest expense positively affects the net profit margin, because the reduction of interest expense affects the increase of the net profit margin.

With this conclusion we can say **that the first hypothesis is completely correct.**

Return on Equity (ROE)

Table 5. Model Summary

Model summary			
R	R square	Adjusted R to square	Standard deviation estimated
0.4323	0.1869	0.1107	0.0626

Source: Authors' calculation

The table above summarizes the linear regression model with the following data: R, R² and adjusted R² as well as the estimated standard error. The results obtained from the model data show that the dependent variable do not have a very strong correlation with the explanatory variables at the level of .4323, respectively 43.23 percent. While R² in our analysis is .1869, which shows that 18.69 percent of the dependent variable is explained by the independent variables. Adjusted R² is equal to .1107, which indicates that 11.07 percent of the variable of the dependent variable is explained by the variation of the independent variables.

Table 6. Regression Analysis

Coefficients					
	Non-standardized coefficients		Standardized coefficients	t	Sig.
	B	Stan.Dev	Beta		
Constant	0.22	0.03		8.35	0.00
Interest Expenses	(0.000015)	0.00	(0.47)	(2.51)	0.02
Salary Expenses	(0.000005)	0.00	(0.26)	(1.35)	0.19
Provisions Expenses	0.000003	0.00	0.37	1.65	0.11

Source: Authors' calculation

The equation of linear regression when as a dependent variable we have ROE and as independent variables we have interest expenses, salary expenses and commission expenses, is as follows:

$$ROE = 0.22 - 0.000015 x \text{Interest Expenses} - 0.000005 x \text{Salary Expenses} + 0.000003 x \text{Provisions Expenses} + \varepsilon$$

Based on the P-value (Sig.), which must have values less than 0.05 in order for a variable impact to be a significant impact, we conclude that in ROE impact has one of the three variables used in model, only interest expense, taking into account the fact that the results generated are statistically significant and at the level of reliability of 99.9 percent since P-value (P = 0.02). Salary expenses and provisions expenses do not have any major impact considering that the significant turned out to be greater than 0.05.

As the correlation results showed, even from the regression equation it can be seen that controlling interest expenses and salary expenses has a positive effect on ROE, because any reduction of both increases the return on equity, while controlling provision expenses has a negative effect. in ROE, because the reduction of commission expenses affects the decrease of ROE.

With this conclusion we can say **that the second hypothesis is completely correct.**

Return on Assets (ROA)

Table 7. Model Summary

Model summary			
R	R square	Adjusted R to square	Standard deviation estimated
0.4201	0.1765	0.0993	0.0071

Source: Authors' Calculation

The table above summarizes the linear regression model with the following data: R, R² and adjusted R² as well as the estimated standard error. The results obtained from the model data show that the dependent variable do not have a very strong correlation with the explanatory variables at the level of .4201, respectively 42.01 percent. While R² in our analysis is .1765, which shows that 17.65 percent of the dependent variable is explained by the independent variables. Adjusted R² is equal to .0993, which indicates that 9.93 percent of the variable of the dependent variable is explained by the variation of the independent variables.

Table 6. Regression Analysis

Coefficients					
	Non-standardized coefficients		Standardized coefficients	t	Sig.
	B	Stan.Dev	Beta		
Constant	0.02	0.00		7.24	0.00
Interest Expenses	(0.0000017)	0.00	(0.45)	(2.38)	0.02
Salary Expenses	0.0000003	0.00	0.14	0.70	0.49
Provisions Expenses	0.0000002	0.00	0.22	0.97	0.34

Source: Authors' calculation

The equation of this model, in the case when as a dependent variable we have ROA and as independent variables we have interest expenses, salary expenses and commission expenses is as follows:

$$ROA = 0.02 - 0.0000017 x \text{Interest Expenses} + 0.000003 x \text{Salary Expenses} + 0.000002 x \text{Provisions Expenses} + \epsilon$$

Considering the values of P-value (Sig.), which must be values less than 0.05 in order for an impact of the variable to be a significant impact, we conclude that impact on ROA has one of the three variables used in the model, only interest expenses, taking into account the fact that the results generated are statistically significant and at a level of reliability of 99.9 percent since P-value (P = 0.02). Salary expenses and commission expenses do not have any major impact considering that the significant turned out to be greater than 0.05.

As the correlation results showed, the regression equation also shows that the control of interest expenses has a positive effect on ROA, because any decrease in them increases the return on equity, while the control of salary and commission expenses negatively affects ROA. because the reduction of commission expenses affects the decrease of ROA.

With this conclusion we can say **that the third hypothesis is completely correct.**

Conclusion

Profitability is an important criterion for measuring the performance of banks, especially in a changing environment of the banking system. This study examined the impact of cost control on the profitability of commercial banks in Kosovo. The research was done through multivariate regression, where as dependent variables we have the net profit margin, ROE and ROA and as independent variables we have interest expenses, salary expenses and commission expenses.

Profitability is the term that refers to the ability of the institution to maintain its profit year after year. Based on the linear regression model, it is found that in the net profit margin, interest expenses and provisions expenses have a significant impact, while in ROE and ROA, only interest expenses have a significant impact.



Based on the regression analysis and the correlation analysis, it is noticed that the control of salary expenses and provisions expenses have a negative effect on the net profit margin, because any reduction of both reduces the net profit margin, while the control interest expense positively affects the net profit margin, because the reduction of interest expenses affects the increase of the net profit margin. With this conclusion we can say that the first hypothesis is completely correct. As the correlation results showed, even from the regression equation it can be seen that the control of interest expenses and salary expenses has a positive effect on ROE, because any reduction of both increases the return on equity, while the control of provision expenses has a negative effect. In ROE, because the reduction of commission expenses affects the decrease of ROE. Based on this we conclude that the second hypothesis is completely correct. We came into conclusion that the third hypothesis is completely correct because the control of interest expenses has a positive effect on ROA, because any reduction of them increases the return on equity, while the control of salary and provisions expenses negatively affects ROA, because the reduction of provision expenses affects the decrease of ROA.

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