Determinants of profitability according to groups of banks in Albania

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Abstract

The paper analyzed the determinants of profitability of all the commercial banks in Albania, where the banks were analyzed by dividing into groups[1]. These determinants are categorized into two groups, internal and external factors. The objective of the study is to determine the factors that affect the profitability in commercial banks, to show how they differ according to groups of the banks and making some recommendations which can help the management. A panel data with all the commercial banks that operate in Albania is analyzed for the period 2009-2014. To measure the profitability is used the independent variable return on assets. Banking specific factors that are used in this study include variables such as bank size, asset management, credit risk, liquidity of assets, capital adequacy, operational efficiency and cost of financing. On the other hand is taken into consideration only one industry specific factor, which is the concentration and

[1] According to the Bank of Albania, in December 2014, banks in the Albanian sector are divided by size of activity: 1) The bank group 1 (0-2% of total banking sector assets) include United Bank of Albania, Veneto Bank, International Commercial Bank, First Investment Bank, Credit Bank of Albania; 2) The bank group 2 (2-7% of total banking sector assets) include Procredit Bank, Credit Agricole Bank, National Bank of Greece, Societe Generale Bank - Albania, Alpha Bank - Albania, Union Bank; and 3) The banks group 3 (about 7% of total banking sector assets) include Raiffeisen Bank, Credins Bank, National Commercial Bank, Intesa Sanpaolo Bank-Albania, Tirana Bank.

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some macroeconomic factors as GDP, exchange rate and inflation. The quantitative data are obtained from the financial statements of commercial banks, INSTAT, Bank of Albania, World Bank and Bankscope, in order to make empirical analysis needed to identify and measure the determinants of bank profitability. In particular, the multiple regression analysis is used to measure the impact of determinants in bank profitability and to realize empirical analysis is used Eviews 7.

The results of the study showed a positive relationship between bank size and profitability, statistically important in the group 2, with 1% level of significance. The credit risk had an inverse relation with profitability in the model, statistically significant at 1% level of significance for the group 2 and 5% for the group 1 and 3. While, in terms of macroeconomic factors, GDP had a positive relationship with profitability and it is statistically significant in the group 3. On the other hand, inflation and exchange rate showed a positive relation with profitability (ROA/ROE) but statistically insignificant for the model.

Key words: Albania; Internal Factors; External Factors; Profitability; RoA;

1. Introduction

It is a known fact that banks are the main factor contributing to the economic development of each country as they stand in the centre of the economy because of their role as financial intermediaries. The Albanian banking sector occupies 90.4% of financial system assets and 91.7% of the country's GDP (Bank of Albania, 2014). The factors affecting the profitability of the banks are important for stakeholders as central banks, governments, associations of bankers, executives of banks and other financial authorities. The study of profitability is important because it provided information every year about the health of an economy and because profit is a major determinant of growth and employment in a medium term period. In fact what makes the debate about the determinants of profitability is that these determinants are dynamic from time to time and vary in relation of the nature of the firm operation from one country to another. There are no universal findings about the determinants of profitability in the banking sector because countries differ from each other

for the economic, financial and political systems and also the operating environment.

2. Research Methodology

2.1. Model specification

Studies conducted on the profitability of banks, mainly used as a measure, three indicators: RoA, RoE and NIM (Ezra, 2013). But there are contradicting views among scholars about the superiority of one indicator over another, as a better variable to measure profitability.

In the literature, the bank profitability is generally measured by return on assets (Molyneux and Thornton, 1992; Sathya, 2005; Athanasoglou, Brissimis and Delis, 2008; Gul, Irshad and Zaman, 2011; Rachdi 2013). As noted by Pasiouras and Kosmidou (2007); Athanasoglou et al., (2008); Olweny and Shipho (2011); Sufian (2011), and also many scholars suggest that RoA is the main indicator to measure bank profitability because it is not distorted by the high multiplier of capital, while RoE ignore the financial leverage.

RoA is a financial ratio that measures bank profitability (Taani, 2013)and it is measured as net profit after tax divided by total assets or net income/total assets (Olson and Zoubi, 2011).

2.1.1. Bank specific factors

The bank specific factors that are included are bank size, asset management, credit risk, liquidity of assets, capital adequacy, operational efficiency and cost of financing.

MADH- In the study, the bank size is measured by the natural logarithm of total assets (Ismi, 2004). The bank size is usually used to indicate the potential economies or diseconomies of scale in the banking sector (Ravid and Sariga, 1991). In the study the relationship between bank size and profitability is expected to be positive.

MAK- The asset management is measured by the ratio of operating income/total assets. This independent variable is used to explain how assets are able to generate income (Okoth and Gemechu, 2013). In this study the relationship between asset management and profitability is expected to be positive.

RKR- In the study, the credit risk is measured by the ratio of provisions for loan loss/total loans. This variable serve as a measure for bank quality loans and it is used to predict the risk of loans that banks are exposed (Zainol and Kassim, 2010). In this study the relationship between credit risk and profitability is expected to be negative.

LIK- In the study, the asset liquidity is measured by the ratio of liquid assets/total assets. This variable is used as a measure of a bank's liquidity (Mathuva, 2009). A higher ratio tell about a higher bank liquidity. In this study the relationship between asset liquidity and profitability is expected to be negative.

EOP- In the study, operational efficiency is measured by the cost-income ratio, where this variable is given by the ratio of total expenses/total revenues generated (Coffinet and Matins, 2010). In this study the relationship between operational efficiency and profitability is expected to be negative.

KAP- In the study, capital adequacy is measured by the ratio of shareholders' equity/total assets available in a bank (Wanzenried and Dietrich, 2010). The relationship between capital adequacy and profitability is expected to be positive.

KF- In the study, the financing cost is measured by the ratio of interest expenses/total deposits (Suminto and Yasushi, 2011). The relationship between the cost of financing and profitability is expected to be negative.

2.1.2. Industry specific factors

PRQ- The concentration is measured by the ratio of total assets held by five largest banks to the total assets of the entire banking sector (Syafri, 2012). Concentration is used as an indicator for the market structure. In this study the relationship between liquidity and profitability is expected to be positive.

2.1.3. Macroeconomic factors

Regarding macroeconomic factors, economic activity, inflation rate and exchange rate are considered.

AEK- The economic activity is measured by the annual growth rate of real GDP (Sufian, 2011). Gross domestic product is a measure of overall economic activity within the economy and it is commonly used as a measure of macroeconomic conditions (Graham and Bordeleau, 2010). In

this study the relationship between economic activity and profitability is expected to be positive.

INF- In the study, inflation is measured by the annual rate of inflation (Kasman, 2010). Another important macroeconomic indicator that affects the fair value of both, as well as revenue and expenditure of banks is the rate of inflation (Kosmidou, Pasiouras and Tsaklanganos, 2007). In this study, the relationship between inflation and profitability is expected to be positive or negative.

NKK- In the study, the exchange rate is measured by the nominal effective exchange rate, which is calculated against the currencies of five main trading partners: Italy, Greece, Germany, Turkey and China (Said and Tumin, 2011). An increase of the nominal effective exchange rate means depreciation of the Albanian lek. in this study the relationship between norms of the exchange rate and profitability is expected to be positive.

The empirical model used in this study is given as below:

$$ROA_{it} = c + \beta_1(MADH)_{it} + \beta_2(MAK)_{it} + \beta_3(RKR)_{it} + \beta_4(LIK)_{it} + \beta_5(EOP)_{it} + \beta_6(KAP)_{it} + \beta_7(KFN)_{it} + \beta_8(PRQ)_t + \beta_9(PBB)_t + \beta_{10}(INF)_t + \beta_{11}(NKK)_t + \varepsilon_{it}$$

2.2. Source of data

The study is based on a panel data of all the commercial banks in Albania, for the period 2009-2014 (6 years). The necessary information was obtained from INSTAT, Bank of Albania, World Bank and Bankscope. Before showing the empirical results, it is important to look at some preliminary features of the data revealed by the descriptive statistics.

Table 1: Summary of results for the analyses of banks in groups: Descriptive analysis.

	Banks in group 1	Banks in group 2	Banks in group 3
RKR	36.43%	54.07%	49.78%
KAP	8.8%	10.9%	12.09%
LIK	73.86%	66.47%	74.12%
R^2	95.1%	79.5%	70.9%
R^2 adjusted	81.6%	68.7%	86%

Source: Author's calculations.

Provisions for loan loss holding in the banks of group 1 are on average 36.43% of total loans and standard deviation is high (0.1073), where of course this high value has a negative impact on profitability (ROA), so the bank is forced to hold reserve funds to cover potential losses from the loans. Provisions for loan loss holding in the banks of group 2 are on average 54.07% of total loans with a high standard deviation (0.1357), from which we conclude that the level of provisions is increased by banks of group 1 in relation to banks of the group 2. Provisions for loan loss holding in the banks of group 3 are on average 49.78% of total loans with a standard deviation 0.1392, from where it is ascertained that the level of loan loss provisions has declined in the banks of group 3, compared with provisions of non-performing loans in the banks of group 1 and 2.

By the descriptive analysis of the variables for the banks in group 1 is concluded that the capital ratio is with an average of 8.8% and a standard deviation (0.0029), whereas for banks in group 2 is 10.9% and banks in group 3 is 12.09%. Against the required regulatory minimum of 12% by BoA.

The value of R^2 shows how changes in independent variables are explained by the changes in the dependent variable. From the results it is concluded that these variables together are quite good explanatory variables of profitability for the three groups of the banks, but especially are optimal for banks of group 1.

3. Empirical results

For the banks of group 1: In the group of independent variables, for the bank specific factors, credit risk has a significant impact of 5% level of significance for the model and there is a negative relationship. So, an increase of 1 unit of the provisions to loans loss, will reduce profitability (RoA) by 0.030 units. The level of provisions for loan loss is an indication of the quality of bank assets and affects the future changes in performance, therefore, by improving the oversight of credit risk, banks can improve their profits. Capital adequacy is statistically significant at 5% level of significance for the model and is negatively correlated with profitability. While for the macroeconomic factors, only the economic activity is significant in the model with 5%. Of course, the fact that the other variables are not relevant for the model means that they have no impact on profitability and during the period of analysis in the paper (2009-2014) may not have been sensitive to fluctuations as to bring some impacts.

Table 2: Summary of results for the analysis of banks according to groups.

	Banks in group 1	Banks in group 2	Banks in group 3
1%		MADH, RKR, KAP	AEK
5%	RKR, KAP, AEK		MAK, RKR, KAP
10%		MAK, AEK	MADH

Source: Author's calculations.

For the banks of group 2: In the group of independent variables, the bank specific variable, bank size is an important variable for the model with 1% level of significance and the sign between bank size and profitability is negative by signalling that banks in this group suffer from diseconomies of scale, that it is mainly due to the tendency of banks when they are trying to expand. The capital adequacy is statistically significant at 10% level of significance for the model and it has a positive correlation with profitability (RoA). The economic theory says that there will be a negative relation between the financing costs and profits because a lower cost will generate good returns for the banks. While in the macroeconomic factors, the economic activity is significant at 1% level of significance for the model.

Implying the fact that the other variables are not relevant for the model means that they have no impact on profitability measured by ROA, since during the six years of the study there have not been many fluctuations.

For the banks of group 3: In the group of independent variables, bank size is an important variable for the model (ROA) with 10% level of significance. Also asset management is statistically significant at 5% level of significance and it has a positive correlation with profitability. The credit risk is relatively significant with an impact of 5% level of significance and there is a negative relationship between it and profitability, a sign predicted by the literature. So, an increase of 1 unit of provisions to loans loss, will reduce profitability by 0.011 units. Capital adequacy is statistically significant at 5% level of significance for the model and it has a positive correlation with profitability (RoA). Well capitalized banks are faced with a lower cost to bankruptcy, which reduces their funding cost and brings the increase of profitability. While in the macroeconomic factors, the economic activity is important at 1% level of significance. Of course, the fact that other variables are not relevant for the model, it means that they have no impact on profitability as measured by ROA, perhaps since there have not been fluctuations in these variables in the period of the study.

Econometric models from the empirical analysis of the banks for the three groups:

$ROA_{it} = -0.077183 + 0.004283\ (MADH)_{it} - 0.075364\ (MAK)_{it} - 0.029262\ (RKR)_{it} - 0.041058\ (LIK)_{it} + 0.004854\ (EOP)_{it} - 0.396517\ (KAP)_{it} + 1.512131\ (KFN)_{it} - 0.088971\ (PRQ)_{it} + 0.205846\ (AEK)_{t} + 0.021439\ (INF)_{t} + 0.001557\ (NKK)_{t} + \varepsilon_{it}$	**(1)**
$ROA_{it} = 0.097932 - 0.005626\ (MADH)_{it} + 0.005394\ (MAK)_{it} - 0.001434\ (RKR)_{it} + 0.004458\ (LIK)_{it} - 0.012731\ (EOP)_{it} + 2.568918\ (KAP)_{it} - 0.155440\ (KFN)_{it} - 0.070145\ (PRQ)_{it} + 0.210781\ (AEK)_{t} + 0.012373\ (INF)_{t} + 0.002369\ (NKK)_{t} + \varepsilon_{it}$	**(2)**
$ROA_{it} = 0.023347 + 0.000152\ (MADH)_{it} + 0.034874\ (MAK)_{it} - 0.011521\ (RKR)_{it} + 0.008743\ (LIK)_{it} + 0.008347\ (EOP)_{it} + 0.875495\ (KAP)_{it} + 0.123411\ (KFN)_{it} + 0.131236\ (PRQ)_{it} + 0.089684\ (AEK)_{t} + 0.034523\ (INF)_{t} - 0.001493\ (NKK)_{t} + \varepsilon_{it}$	**(3)**

4. Conclusions and Recommendations

The explanatory power of bank-specific variables is much more important to explain the variability of the model of profitability (RoA) for commercial banks in Albania than the external factors. But among the external factors involved in this study, the economic activity is a key measure of profitability in the Albanian banks. This is a clear signal that all the banks should take into account the macroeconomic environment in developing strategies to improve their performance or profits in particular.

The bank capitalization should be encouraged in order that the banking performance can be increased. A well-capitalized banking system will ensure financial stability and make the industry more resilient to external shocks and risks. That's because the best capitalized banks have lower financial risk and so have more ability to survive the financial crisis. Although the capitalization ratios are currently at good levels, it is recommended that banks should carefully evaluate future development opportunities and needs for additional capital.

Efficient liquidity management should be adapted by bank managers to ensure that banks will be able to pay. The more cash and other liquid assets the banks maintain, the lower will be the expected return, given that these assets do not generate any revenue.

The economies of scale derived from the bank size and it plays a crucial role in the banks profitability. The benefit from the size is reflected in the ability to reach wider markets. Therefore, banks should be encouraged to look beyond the local markets and expand their operations in other geographical markets and other sectors of the economy. Location of the bank branches is strategically priority if banks aim to maximise return on investment. The agricultural sector is still a potential market for banks. In connection with the expansion of branches, banks should consider the diversifying of the portfolio with products. In this way banks can use their assets to provide other ancillary services and to maximise the return.

The performance of the banks in the group 3 is estimated with a sustainable growth, in which the Raiffeisen Bank distinguishes. While RoA for the banks of group 2 has a larger downward trend in the recent years and is flexible enough for the banks in this group. Banks of the group 1 are characterized by a negative RoA more often at levels even higher. This situation confirms that, generally the banks of group 1 are unable to generate sufficient profit to cover the costs. A good part of the banks do not

cover their operating expenses with operating income, which shows distinct lack of efficiency coupled with a limited volume of banking activity.

Before 2010 would show a rankings where banks in the group 1 had the worst portfolio and then came the banks of group 3 and finally the banks of group 2, while from 2010 to 2014 is observed that this ranking has changed where the banks of the group 2 have a stronger trend in the deterioration of the portfolio, while the banks of the group 3 and 1 continue with the same durability trend. The capital adequacy ratio seems more stable in time for banking of group 2 and 3 but not so for the banks in group 1.

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