METHODS OF PERFORMANCE ANALYSIS IN BANKS

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Abstract. *Performance generally in the banking specifically highlight on the one hand the financial institution's ability to generate profit, and on the other hand shows the consequences of financial decisions taken by the bank's management. In our opinion bank decisions are based on the analysis of the effects of the bank's policy in the past period. Therefore the paper presents such an analysis that supports decision makers banking.*

Key words: ***Bank, Efficiency, Performance, Ratios***

JEL: *G21, G24*

1. Introduction

The performance of banks is highlighted in numerous papers of banking. The performance of banks is closely integrated elements of profit issue rating as an integral part of CAMEL rating models as well as in USA, PATROL in Italy, and PEARLS in USA, Orap in France, the UK RATE, and RAST in Holland. Therefore we believe that an analysis of bank performance can highlight strengths and weaknesses of a bank as a consequence of the credit institution's management.
The work we structured it on two levels: an analysis of vertical and horizontal revenues, expenses and loan portfolio and the exposure of banks on the one hand and analysis on the basis of rates of banking performance on the other.
Concrete ways analysis is based on annual financial reports of banks and a number of indicators on both volume and indicators presented in the form of financial ratios. Technical analysis is based on both static analysis and dynamic analysis and the results compared in the bank by a group of credit institutions in the interval of time between 2006 and 2011.

2. Literature review

In a recent paper examines whether individual banks did improve their performance through securitization and the results show that securitizing banks tend to be more profitable institutions, with higher credit risk exposure. On the

other hand the authors also find that securitizing banks tend to hold larger and less diversified loan portfolios, have less liquidity, and hold less capital. (Casu, Clare, Sarkisyan, 2013)

Others analysts consider that banking's success largely depends on public confidence and only a small part of the banking services customers understand the indicators and ratios which are used to assess bank's activities. Therefore, there is a need to analyze banks performance results in Lithuania. The paper presents a principal component analysis model applied on banks performance ratios in Lithuania. (Vidzbelyte, Jaseviciene, Bronius, 2013)

Using a panel of Chinese banks over the 1997–2004 periods, other analysts assess the effect of bank ownership on performance using a static, selection, and dynamic effects of (domestic) private, foreign and state ownership. They find that the "Big Four" state-owned commercial banks are less profitable, are less efficient, and have worse asset quality than other types of banks except the "policy" banks (static effect). (Lin, Zhang, 2009)

Based on panel of eleven transition countries 225 banks and 856 observations some authors use the efficiency measures along with return on assets to investigate the influence of ownership type and conclude that privatization by itself is not sufficient to increase bank efficiency as government-owned banks are not appreciably less efficient than domestic private banks. (Bonin, Hasan, Wachtel, 2005)

Another paper empirically examines how capital affects a bank's performance and how this effect varies across banking crises, market crises, and normal times that occurred in the US over the past quarter century and they got two main results: First, capital helps small banks to increase their probability of survival and market share at all times (during banking crises, market crises, and normal times); Second, capital enhances the performance of medium and large banks primarily during banking crises. (Berger, Bouwman, 2013)

In a recent research is analyze the impact of ownership concentration on MENA banks' performance over the period 2004-2011 includes 38 commercial banks belonging to ten countries of the MENA region. Based on an econometric method the researchers show that ownership concentration is significant in explaining performance differences between MENA banks and the bank performance depends on the identity of large shareholder. (Rim, Majdi, 2015)

In their paper some authors aim at examining the relationship between the relatively strong banking industries and the values of stakeholder systems. The authors compare international successful stock markets systems such as the US and the UK with successful stakeholder systems such as Japan, Germany, and most of continental Europe. (Behery, Eldomiaty, 1991)

Using a sample of 50 largest Chinese banks during the period of 2003–2010, other researchers explore a comprehensive set of board characteristics (size, composition and functioning of the board) and analyze their impacts on bank performance and bank asset quality in China and find that the number of board meetings and the proportion of independent directors have significantly positive impacts on both bank performance and asset quality while board size has a significantly negative impact on bank performance. (Liang, Xu, Jiraporn , 2013)

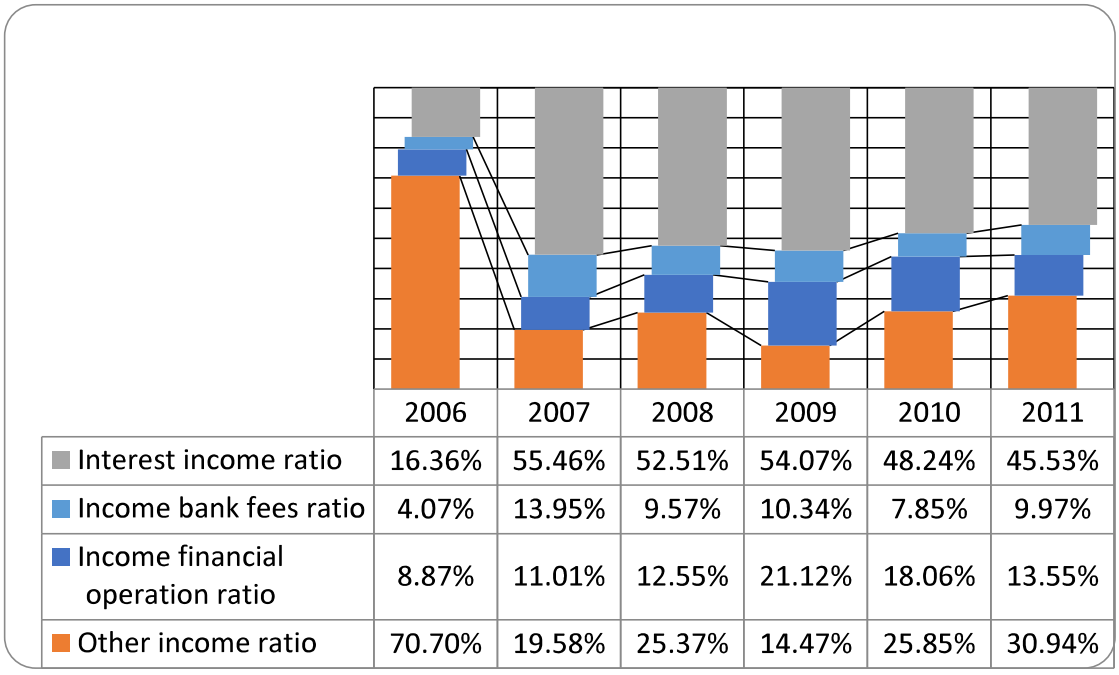
In another study other develop a measure of bank performance based on the Malmquist index approach based on existing financial ratios such as ROA and ROE. (Lee, Kim, 2013)

Credit is the business and recovery is the core issue of banks. Documentation of transactions is indispensible to effect complete and timely recovery of banks' credits. That is why in their study some authors focus on commercial banks (the term commercial bank includes the Islamic banks). (Niazi, Azim, Ahmed, 2012)
In Japan, some researchers construct and estimate a dynamic network Luenberger productivity indicator for Japanese banks during fiscal years 2006–2012. The network aspect to the model recognizes that banks produce deposits in the first stage of production using inputs such as labor, physical capital, and equity capital and then in the second stage use those deposits to generate a portfolio of loans and securities investments. (Fukuyama, Weber, Measuring 2015)
The financial crisis had important consequences in banking sector and that is why in another paper is show that a bank's stock return performance during the 1998 crisis predicts its stock return performance and probability of failure during the recent financial crisis. This effect is economically large. The authors' findings are consistent with persistence in a bank's risk culture and/or aspects of its business model that make its performance sensitive to crises. Banks that relied more on short-term funding, had more leverage, and grew more are more likely to be banks that performed poorly in both crises. (Fahlenbrach, Prilmeier, Stulz, 2012)
Analyzing the China banks evolution before the financial crises some authors investigate the effects of focus versus diversification on bank performance using data on Chinese banks during the 1996–2006 period and construct a new measure, economies of diversification, and compare the results to those of the more conventional focus indices, which are based on the sum of squares of shares in different products or regions. Diversification is captured in four dimensions: loans, deposits, assets, and geography. (Berger, Hasan, Zhou, 2010)
Finally in a recent study is examine the effect of corporate governance denoted by board size, duality, agency cost etc. on the performance of selected 24 GCC banks based on the criteria of total assets for the financial year 2012-13 and Tobin's Q and Return on Total Assets (ROTA) are adopted as a measurement of accounting and financial performance respectively. The results indicate that smaller boards are more capable for monitoring the management closely in GCC banking sector. (Naushad, Malik, 2015)

2. Method and results

A first dimension of performance analysis in banks refers to the structure of revenues, expenses and portfolio quality, vertical analysis of the profit and loss and is based on percentages in each income or expense, expressed as a figure percentage of total revenues, expenditure respectively.
In our study we take into account the annual reports during 2006 -2011 of the following banks: Unicredit Bank, Volksbank and BCR - Erste Bank.

First we analyzed the evolution of the income structure and found the following.



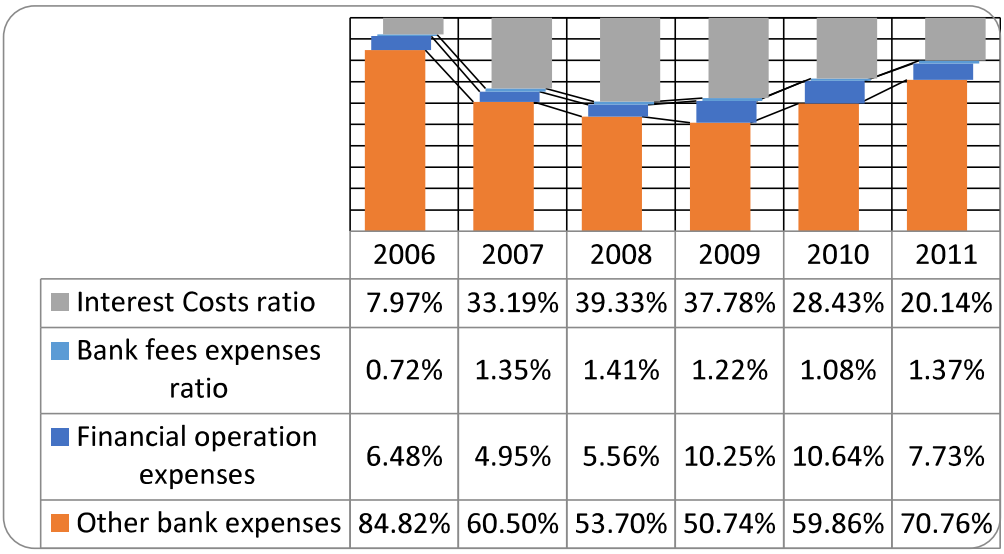
	2006	2007	2008	2009	2010	2011
Interest income ratio	16.36%	55.46%	52.51%	54.07%	48.24%	45.53%
Income bank fees ratio	4.07%	13.95%	9.57%	10.34%	7.85%	9.97%
Income financial operation ratio	8.87%	11.01%	12.55%	21.12%	18.06%	13.55%
Other income ratio	70.70%	19.58%	25.37%	14.47%	25.85%	30.94%

Figure 1 The evolution of income structure ratios
Source: Own calculus

This representation is observed the following:

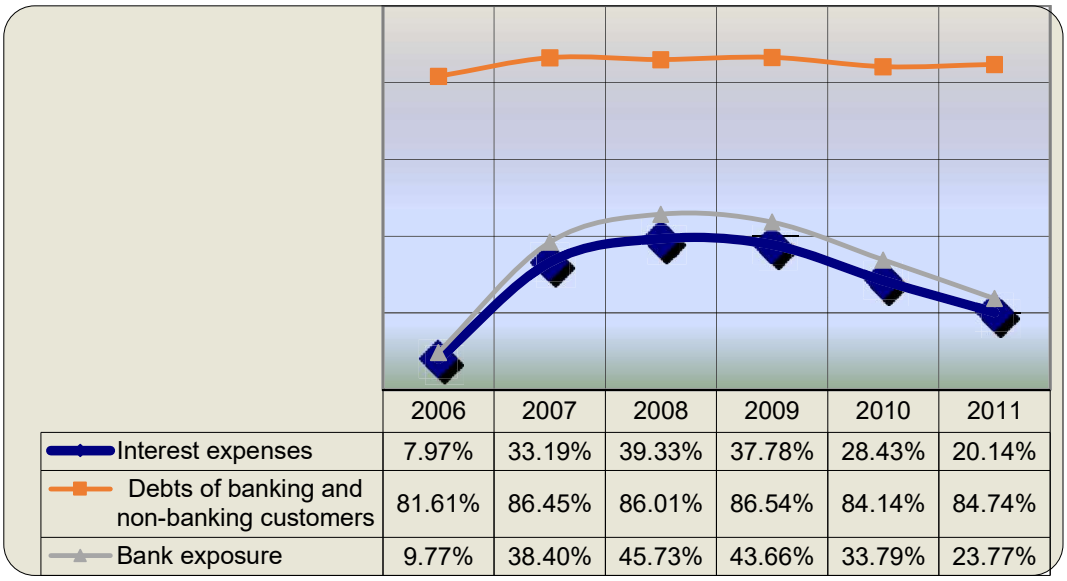
- an interest income fluctuated between first and second category share in total revenues during the period analyzed, with a clear upward trend;
- rate fee income has fluctuated but an increasing trend; rate income from financial operations followed an upward trend with a maximum weight of 21.14% in 2009;
- Other income rates had the largest share in total revenues in 2006 (70.70%), after which it decreased considerably, reaching a low of 14.47% in 2009.

Another dimension of performance that connects expense accounts relates to the structure of expenditure and highlights the bank's financial resource consumption to achieve revenues in the financial year.



	2006	2007	2008	2009	2010	2011
Interest Costs ratio	7.97%	33.19%	39.33%	37.78%	28.43%	20.14%
Bank fees expenses ratio	0.72%	1.35%	1.41%	1.22%	1.08%	1.37%
Financial operation expenses	6.48%	4.95%	5.56%	10.25%	10.64%	7.73%
Other bank expenses	84.82%	60.50%	53.70%	50.74%	59.86%	70.76%

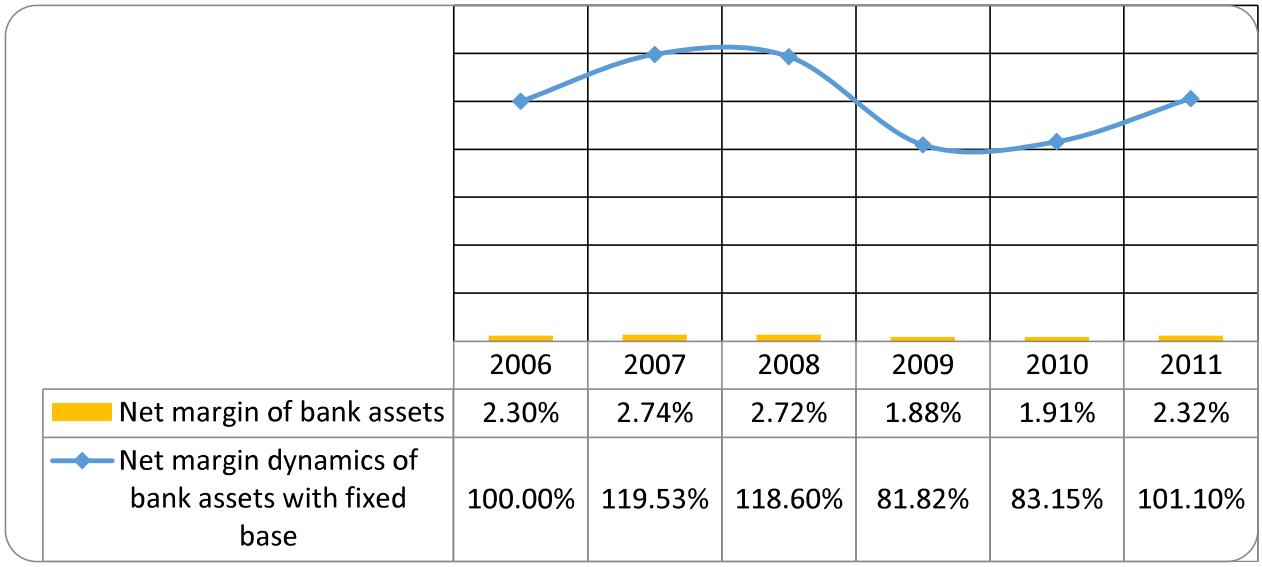
Figure 2 Evolution of structural spending rates banks analyzed
Source: Own calculations based on the profit and loss account of banks analyzed
According to the chart above that: the share of expenses related to commissions and financial operations is rather low total cost hardly exceeds 10%; interest expense rate has a significant share in the total expenditures on average hovering at 30%; interest expense rate was the steepest dynamic evolution for the period.
Another dimension of analysis concerns the extent of exposure of the group of banks through an analysis of the correlation between the evolution of the share of interest expense and bank debt ratio to non-bank customers and banking.



	2006	2007	2008	2009	2010	2011
Interest expenses	7.97%	33.19%	39.33%	37.78%	28.43%	20.14%
Debts of banking and non-banking customers	81.61%	86.45%	86.01%	86.54%	84.14%	84.74%
Bank exposure	9.77%	38.40%	45.73%	43.66%	33.79%	23.77%

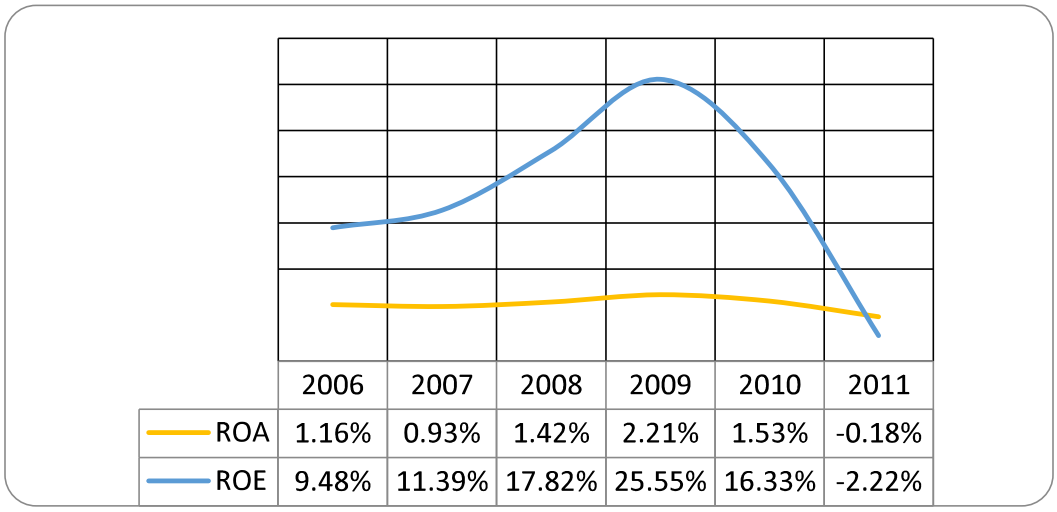
Figure 3 Evolution of the exposure of the banks analyzed
Source: Own calculations based on the profit and loss account of banks analyzed
Analyzed the exposure of banks to non-bank customers and the bank followed a trend of accelerated growth during the financial crisis of 38.40% in 2007 and 45.73% in 2008, after which he lowered to 23 77% in 2011.

Analyzing bank performance cannot ignore the analysis of rates of profitability among which we considered net margin of bank assets (MV), return on bank assets (ROA), return on equity (ROE) and profit margin so as present below.



	2006	2007	2008	2009	2010	2011
Net margin of bank assets	2.30%	2.74%	2.72%	1.88%	1.91%	2.32%
Net margin dynamics of bank assets with fixed base	100.00%	119.53%	118.60%	81.82%	83.15%	101.10%

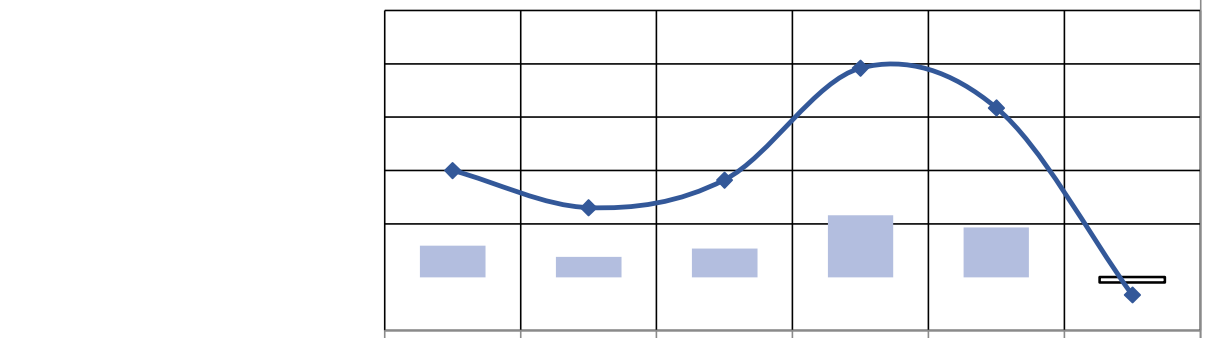
Figure 4 The evolution of net margin assets to banks analyzed
Source: Own calculations based on the profit and loss account of banks analyzed
From the chart above we can see that the net asset values of the indicator margin bank recorded a random evolution, decreasing in 2009 amounted to 1.88% after posting a comeback performance in 2006, but has not reached maximum of 2007.



	2006	2007	2008	2009	2010	2011
ROA	1.16%	0.93%	1.42%	2.21%	1.53%	-0.18%
ROE	9.48%	11.39%	17.82%	25.55%	16.33%	-2.22%

Figure 5 Evolution of ROA and ROE banks analyzed
Source: Own calculations based on the profit and loss account of banks analyzed
The rate of return on assets for banks analyzed had a downward trend since 2009 (2.21%) when it peaked, increasing to 1.53% in 2010 and -0.18% in 2011.

The rate of return on equity for banks analyzed had as a downward trend since 2009 when it registered a value of 25.55%, falling to 16.33% in 2010 and -2.22% in 2011 .



	2006	2007	2008	2009	2010	2011
The profit margin	29.51%	19.26%	26.91%	57.83%	46.84%	-4.92%
Dynamics profit margin fixed base	100.00%	65.27%	91.19%	195.95%	158.73%	-16.66%

Figure 6 Evolution profit margin banks analyzed
Source: own calculations based on financial statements of banks analyzed
The chart above is noted that the profit margin indicator aiming recorded a strong downward trend from 29.51% in 2006 to -4.92% in 2011.

4. Conclusions

The analysis undertaken above is observed the following:
► State banking performance depends primarily on the quality of bank assets;
► Secondly we find that the return on equity has a strong impact on bank performance;
► While bank policies taken in respect of interest and fees are reflected in the bank's performance;
► Not least we find that the return on bank investments both deposits and equity decisively influence the performance of the bank;
► We finally found that too high a degree of exposure to non-bank debt and banking customer can affect performance of state banks.

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