Comparative Study on the Banking Performances at BCR ERSTE BANK, BRD – GSG and Raiffeisen Bank

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Abstract: *This paper aims to make a comparison between the performances of three banks in the banking system in Romania, considered the most representative but also to achieve their classifications and identify correlations between a number of used indicators and indicators expressing banking performance.*

Keywords: ROA, ROE, net interest margin, capital adequacy ratio, net profit rate, loan/deposit ratio, nonperforming loan ratio

JEL Classification: G20, G21, G24

1. Introduction

Performance evaluation is one of the main objectives of the management of any economic entity, which is why researches in this field are numerous.

Both the literature and the authorities give great importance to the analysis of performance of the banking system, because banks are intermediaries in the financial market, so by their nature they use a very small extent of their resources.The banking sector is the main source of financing for most businesses, and thus a means of ensuring economic growth in an economy.

Perception of performance of a bank varies according to the interests of users of financial information. For example, managers are oriented towards the overall performance of the bank, shareholders perceive performance in terms of profitability and profit, employees and customers are interested in bank stability and creditors for their solvency.Therefore, the performance of a bank can be defined as the measure level of stability of its business, characterized by low levels of risks of any kind.

This study involves a comparison between the major commercial banks in the banking system in Romania: BCR ERSTE BANK, BRD – GSG and Raiffeisen Bank in terms of performance in 2008-2013. By examining the relationship existent between the size of the capital, assets, deposits and profitability expressed as ROA (Return on Assets) , ROE (Return on Equity) and net interest margin (NIM) will produce a ranking of banks based on the performance in terms of profitability and growth potential. It will make a comparison of banks according to their profitability, and identification of factors affecting the profitability of banks selected during development period.

Although net income and net profit provides a picture of how well a bank works, there are a number of disadvantages when it comes to measuring performance and especially comparing different sized banks in terms of performance.Therefore, we turn to a number of other indicators that measure peformance taking into account the size of the bank such as ROA, ROE and net interest margin.

We will make a brief review of some of the works of literature that have addressed the issue of bank performance and their conclusions.

Jha and Sarangi (2011) analyzed the performance of seven banks in the public and private sector for the year 2009-10. They used three sets of indicators, operational performance indicators, financial indicators and efficiency indicators. In all eleven indicators were used.They realized a classification of banks in the banking system in India.

Much of the current literature that analyzes the performance of banks believes that the objective of financial organizations is to achieve a certain proportion between gain and risk, namely achieving a level of profitability and minimize the assumed risks (Hempel G. Coleman,1986).

The growing competition in the European banking market has led Spathis and Doumpos (2002) to investigate the efficiency of Greek banks by asset size.They used in their study a methodology with several criteria to classify Greek banks by profit and operating factors, and to show the differences between bank profitability and efficiency between small banks and large banks .

Chien Ho and Song Zhu (2004) showed in their study that most previous studies on appraisal of performance of companies focus mainly on operational efficiency and operational effectiveness that could directly influence the survival of a company. By using a model of two-stage data analysis in their study, the empirical result of this study is that a company with a better efficiency does not always mean that it is more effective.

A paper analyzing the efficiency, customer service and financial performance of financial institutions in Australia (Elizabeth Duncan and Elliott, 2004) showed that financial performance indicators as interest margin, return on assets and capital adequacy are positively correlated with scores on quality of customer services.

Arzu Tektas and Gunay (2005) discussed the management of assets and liabilities in the financial crisis.They argued that effective management of assets and liabilities require the bank profit maximization and also control and reduction of various risks and their study showed how changes in market perceptions can create problems during the crisis.

In a study conducted in Kuwait (Edris, 1997) to determine the importance of selection factors used by business consumers in Kuwait in choosing domestic and foreign banks, it was observed that the determining factors in selecting a bank in Kuwait by the firms were: size of bank assets, personnel efficiency, banking experience , friendliness of staff , reputation, and availability of subsidiaries abroad.

2. Used indicators and methodology

To achieve the analysis we used a set of indicators commonly used in the literature and other studies to compare the performance of banks, continuing to introduce them as method of calculation, but also as the development on analyzed period.

- *Net interest margin (NIM)*

Net interest margin is calculated as the ratio of net interest income and total capitalized assets. NIM describes the bank's ability to set prices for loans and deposits in competition conditions.Thus, the NIM level reflects the competition conditions between banks. A high level of net interest margin may be the result of a significant spread of interest between interest rate of resources and the one perceived for given loans. It may also be the result of the increase in loans, which will be reflected in a higher share of interest income. In the latter case we can assume that banks adopt risky behavior, leading to a decrease of credit quality and therefore there will be a reduction in capitalization .

Table no.1. Net interest margin evolution

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	4.47	1.34	4.67
2009	5.6	1.609	4.02
2010	5.22	2.208	4.11
2011	4.4	2.075	3.75
2012	4.07	1.856	4.74
2013	4.27	1.649	4.16
Average	4.67	1.79	4.24
Standard deviation	0.60	0.32	0.39
Varriation coefficient	12.84	17.94	9.11

Source: Own calculations based on data from the annual financial statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank, 2008-2013

As can be seen from Table 1 the highest net interest margin for the period under review was at BCR ERSTE BANK 4.67 indicating that the interest collected by this bank was much higher than the one paid to customers. BRD - GSG is opposite with an average of interest margin of just 1.79, bank recording the largest variations in the interest margin compared to the other two banks in the period of analysis.

➢ *Loan / deposit ratio* - shows the proportion of bank loans based on deposits received from customers.The higher this ratio is greater than 1, the banks are uncovered regarding the tensions that may arise.

Table no.2. The evolution of loan/deposit ratio

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	1.29	1.12	0.71
2009	1.21	1.12	0.71
2010	1.21	1.1	0.77
2011	1.2	1.1	0.85
2012	1.21	0.87	0.86
2013	1.05	0.92	0.78
Average	1.20	1.04	0.78
Standard deviation	0.08	0.11	0.07
Varriation coefficient	6.56	10.83	8.35

Source: Own calculations based on data from the annual financial statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank, 2008-2013

As can be seen from Table 2 the best loan / deposit ratio is registered at Raiffeisen Bank Bank with an average of 0.78 , while the opposite is BCR ERSTE BANK with an average of 1.20 , and BRD - GSG has made efforts in recent years to improve this indicator. BCR ERSTE BANK and BRD - GSG banks that have large imbalances between loans and deposits were based on lines of funding from parent banks, but are also uncertain in a time of major turmoil in international markets.

Reduction of credit volume was due to two main factors: the high level of bad loans and deleveraging process (deleveraging), namely reducing of parent banks funding, which caused local subsidiaries to adjust their loan / deposit ratio by decreasing the volumeof loans, in parallel to deposit growth needed to compensate the foreign funding.

➢ *Debt / equity ratio* - is a financial indicator that reflects the relative proportion of bank debt and equity, or otherwise the leverage. If the ratio increases, the bank is financed from resources procured from creditors rather than from its own resources, which can be a dangerous trend .

Table no. 3. Evolution of debt/equity ratio

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	9.45	9.64	7.93
2009	9.15	8.96	7.98
2010	8.82	7.6	8
2011	8.41	7.27	7.94
2012	8.9	7.67	7.36
2013	7.49	8.12	7.79
Average	8.70	8.21	7.83
Standard deviation	0.69	0.91	0.24
Varriation coefficient	7.91	11.11	7.93

Source: Own calculations based on data from the annual financial statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank 2008-2013

➢ *Nonperforming loan ratio NPL* – is calculated as the ratio of nonperforming loans to total loans and reflects the quality of loan portfolio within the bank's balance sheet and it is widely accepted in the literature as a measure of default risk .

Table no. 4. Evolution of nonperforming loan ratio

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	4.4	1.31	1.8
2009	13.1	4.7	3.5
2010	12.8	13	7.6
2011	16	16.7	6.4
2012	19.2	21.3	7.3
2013	29.2	21.8	8.7
Average	15.78	13.14	5.88
Standard deviation	8.21	8.55	2.66
Varriation coefficient	52.05	65.09	45.30

Source: Own calculations based on data from the annual financial statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank 2008-2013

Again Raiffeisen Bank Bank recorded the lowest rate of bad loans throughout the period of analysis 5.88 , while the highest level is found in BCR ERSTE BANK 15.78 and greatest variation is in BRD - GSG.

➢ *ROA - Return on assets* directly expresses the result of the optimization activity of active operations, according to a certain volume of given resources. It is determined as the ratio of net profit and total assets. It measures the efficiency of use by the bank of its assets to generate net income .

Table no. 5. ROA Evolution

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	3.02	2.74	4.17
2009	1.72	1.68	1.56
2010	0.66	2.1	1.59
2011	0.33	1	1.7
2012	-1.72	-0.7	1.66
2013	0.52	-0.8	1.73
Average	0.76	1.00	2.07
Standard deviation	1.58	1.47	1.03
Varriation coefficient	208.85	146.68	49.88

Source: Own calculations based on data from the annual financial statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank 2008-2013

The lowest level of profitability during the analysis period is recorded at BCR ERSTE BANK 0.76 as the highest coefficient of variation, and the highest level of profitability of 2.07 and the lowest coefficient of variation at Raiffeisen Bank. Great values of the coefficient of variation for BCR ERSTE BANK and BRD - GSG are justified by the fact that in 2012 and 2012, 2013 respectively, these banks had registered losts, which was passed on the value of ROA.

➢ *ROE - Return on equity* expresses the rate of return of shareholders or the efficiency with which the shareholders' money were invested.This financial ratio shows how much profit the bank recorded compared to the capital invested by shareholders.

Table no. 6. ROE Evolution

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	38.2	39.7	43.8
2009	13.5	19.5	14.05
2010	6.7	19.2	14.4
2011	0.9	8.2	15.2
2012	-17.05	-5.8	13.91
2013	4.48	-7.2	15.23
Average	7.79	12.27	19.43
Standard deviation	18.08	17.75	11.95
Varriation coefficient	232.11	144.68	61.50

Source: Own calculations based on data from the annual financial statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank 2008-2013
The lowest average profitability level of analysis period was recorded by BCR ERSTE BANK , and the highest by Raiffeisen Bank.

- *Capital adequacy ratio* - is a rate that determines the bank's ability to cope with potential risks they may face: liquidity, credit, operational risk. It is calculated as the ratio between equity and net exposure.

Table no. 7. CAR Evolution

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	13.2	9.38	10.32
2009	15.8	12.7	12.21
2010	13.69	14	11.63
2011	14.33	14.9	12.31
2012	14.52	14	13.32
2013	20.9	14.3	17.22
Average	15.41	13.21	12.84
Standard deviation	2.83	2.01	2.36
Varriation coefficient	18.38	15.22	18.41

Source: Annual Financial Statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank 2008-2013

In terms of best level of capital adequacy in the six years of analysis, it is recorded in BCR ERSTE BANK 15.41 , followed by BRD - GSG.The large variety of equity suitability can be seen at Raiffeisen Bank.

- *Net profit ratio* – it is calculated as the ratio between net profit and total income and it is the percentage of revenue that remains after all expenses with interest are deducted, the operational ones of total revenues .

Table no.8. NPR Evolution

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	24.09	19.2	12.9
2009	10.92	14.6	10.47
2010	5.96	11.26	14.8
2011	3.2	11.3	15.94
2012	-17.65	-7.91	14.54
2013	5.62	-10.3	17.59
Average	5.36	6.36	14.37
Standard deviation	13.54	12.35	2.47
Varriation coefficient	252.72	194.20	12.9

Source: Annual Financial Statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank 2008-2013

The highest net profit rate on the six years of analysis was recorded at Raiffeisen Bank 14.37 and the lowest at BCR ERSTE BANK 5.36 . Large coefficients of variation of BCR ERSTE BANK and BRD - GSG are justified by the negative values of the indicator in the years 2012 and respectively 2012, 2013 .

- *Demand deposit ratio*- it is calculated as the ratio of bank demand deposits and its total deposits. Demand deposits are those deposits that can be withdrawn at any time by depositors.

Table no. 9. DDR Evolution

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	31.63	15.37	19.45
2009	21.67	46.1	21.81
2010	18.47	43.7	23.47
2011	19.59	38.36	24.3
2012	18.66	41.45	25.63
2013	27.27	40.89	27.33
Average	22.88	37.65	23.67
Standard deviation	5.39	11.22	2.79
Varriation coefficient	23.57	29.81	11.79

Source: Annual Financial Statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank 2008-2013

As it can be seen from the table the highest rate of demand deposits was the BRD - GSG (37.65) and lowest BCR ERSTE BANK (22.88) .

- *Time deposits ratio* – it is calculated as the ratio of time deposits to total deposits of the bank, time deposits.This gives a stable nature of bank resources based on them, being fixed in the part, and the average cost of the resources.This resource comes from the people first, then the economic and other account holders, a third category being the deposits of banks and financial institutions in the country and abroad.

Table no. 10. TDR evolution

Year	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
2008	68.37	84.62	80.55
2009	78.32	53.8	78.19
2010	81.52	56.3	76.53
2011	80.4	61.63	75.7
2012	81.33	58.54	74.37
2013	72.72	59.11	72.67
Average	77.11	62.33	76.34
Standard deviation	5.39	11.24	2.79
Varriation coefficient	6.99	18.02	3.66

Source: Annual Financial Statements BCR ERSTE BANK, BRD - GSG, Raiffeisen Bank 2008-2013

The highest rate of term deposits was BCR ERSTE BANK (77.11) and the lowest in BRD - GSG (62.33).The highest coefficient of variation was recorded in BRD - GSG (18.02).

To conclude and to classify banks on the basis of analyzed ten indicators we begin from the place each bank receives for each indicator analyzed as listed in Table 11 .

Table no.11. Place occupied by the three banks in terms of the 10 indicators

	BCR ERSTE BANK	BRD - GSG	Raiffeisen Bank
NIM	1	3	2
C/D	3	2	1
D/C	3	2	1
NPL	3	2	1
ROA	3	2	1
ROE	3	2	1
CAR	1	2	3
RPN	3	2	1
RDV	1	3	2
RDT	1	3	2

From the table it can be seen that Raiffeisen Bank Bank is the first position of the three banks in terms of loan / deposit ratio, debt / equity, NPL, ROA, ROE and RPN, while BCR ERSTE BANK dealing with all of these criteria occupies the 3rd rank. This bank, BCR ERSTE BANK, occupies first rank only at capital adequacy criteria, the ratio of demand deposits and time deposits .

Table no.12. The matrix of correlation of environments

	MD	*C/D*	*D/C*	*NPL*	*ROA*	*ROE*	*CAP*	*RPN*	*RDV*	*RDT*
MD	1.000									
C/D	0.002	1.000								
D/C	0.210	0.978**	1.000							
NPL	-0.124	0.992*	0.944	1.000						
ROA	0.210	-0.977**	-0.912	-0.996*	1.000					
ROE	-0.007	-1.000	-0.979**	-0.991*	0.976**	1.000				
CAP	0.505	0.864	0.950**	0.794	-0.738	-0.867	1.000			
RPN	0.280	-0.960**	-0.880	-0.987**	0.997*	0.958**	-0.688	1.000		
RDV	-0.996*	0.089	-0.120	0.214	-0.299	-0.084	-0.424	-0.366	1.000	
RDT	0.996*	-0.089	0.120	-0.214	0.299	0.085	0.424	0.366	-1.000	1.000

* Correlation is significant at the level.05

** Correlation is significant from the level.01

The table number 12 illustrates the correlations that exist between considered variables.Thus there is a strong positive correlation (significant at the 0.05 level) between the nonperforming credit ratio and loan / deposit ratio, net profit ratio and ROA and between time deposits and net interest margin. A positive correlation but not as strong (significant at .01) exists between the debt / equity ratio and loan / deposit ratio between ROE and ROA, between capital adequacy ratio and the debt / equity ratio, net profit ratio and ROE .

There is strong negative correlation between ROA, ROE and nonperforming credit ratio, ratio of demand deposits and net interest margin, but also a negative correlation (significant at .01) between ROA and loan / deposit ratio, ROE and debt / equity ratio, the rate of profit and the loan / deposit ratio .

3. Conclusions

The conducted study shows that bank performances are strongly influenced negatively by the NPL, net interest margin is closely related to the volume of time deposits, capital adequacy is influenced by the degree of leverage, but also by the net profit and equity return ratio.

In connection with the performance of each of the three banks we conclude that although BCR ERSTE BANK has the best level of capital adequacy, the largest margin interest and best rates on demand deposits and time deposits, these resources do not generate high profits, but on the contrary, profitability rates are the lowest of the three banks analyzed in bulk, as it emerged from the analysis of correlations caused by very high NPL .

For BRD - GSG, it has the lowest net interest margin and less favorable rates of demand deposits and term deposits, but nevertheless profitability rates are the lowest and due to the non-performing loans and loan / deposit ratio .

For Raiffeisen Bank , although it has the lowest level of capitalization of the three banks, and it has not the highest net interest margin, however, it has the best rate of return, the lowest rate of non-performing loans and the best loan/ deposit ratio.

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