ANALYSIS OF PERFORMANCE INDICATORS IN CREDIT INSTITUTIONS BASED ON THE EXAMPLE OF CARPATICA COMMERCIAL BANK DURING 2007-2010

IOAN DUMITRU MOTONIU
„VALAHIA” UNIVERSITY OF TÂRGOVIŞTE, DOCTORAL SCHOOL, LT. STANCU ION STREET , NO. 35, TÂRGOVIŞTE, DÂMBOVIŢA COUNTY, 130105, E-MAIL: ioan.motoniu@bnro.ro

Abstract

Performance measurement is a necessary, but not sufficient, condition to ensure entity progression. It’s said, that progress witch is not measured does not exist, but measurement is not an end in itself; it makes the success be the extent that generate recurring action. So, we can say that information about an entity’s performance, in particular its profitability, are important, first to evaluate potential changes in economic resources that the entity will be able to control in the future, and on the other part, they are useful to predict the entity's ability to generate cash flows with the resources existing and to make judgments about the efficiency with which entity can use the new resources.

Key Words

Performance indicators, profit, ROA, ROE

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1.Introducere

Defining performance as ,,the means of establishing a bank activity, characterized by low levels of risk of any kind and normal growth trend of profits from a period of analysis to another" (Bătrâncea I., cape I. , Bejenaru A., S. Borlea 2008, p 374) leads to the idea that, one can speak of developing a system of indicators to determine the performance level of the credit institution only when the bank activity is a **performing one**, otherwise (of bad performance), bank performance analysis loses its significance, the performance level can be detected only from the bank's balance sheet structure

Thus, an unbalanced distribution of bank funds, a high level of provisions, a low level of capital in relation to obligations, are some elements which point to a bad bank assets and liabilities management as well as the bank’s exposure to risk.

But performance is not limited to profitability, so to make a telling snapshot of the performance of banks, experts use an analysis model known as “Du Pont" system, which allows comparison of obtained profit bank with risk by balancing gains with losses from the production risk." (Bătrâncea I., I. cape, Bejenaru A., S. Borlea 2008, p 375) .

2.Profit - the main element of performance appraisal

Making an assessment of possible risks to occur at the bank, some specialists believe that only financial risks are the only risks whose quantification can be achieved through a system of indicators, they being a direct consequence of permanent imbalances over which bank management have control. In addition, another type of risks faced by a bank is non-financial risks (commercial environment), generated by external factors over which bank management has no control or, it is limited.

Referring to profit as the main factor for assessing a bank's performance, it is nothing but an expression of absolute amount, but compared to elements that can determine it, it highlights the interdependencies in the evolution of bank performance and highlights the action leverage for their improvement. Thus, in assessing bank performance indicators are considered as defining, it's about *profit rate of assets and profits rate of capital.*

Profits from the use of assets are defined as net income divided by the average value of the assets. This indicator called “the rate of economic return" (ROA-Return On Assets) is, according to experts, the best measure of bank efficiency, because it expresses directly the result of the activity to optimize the active operations, according to a certain volume of data resources.

The second indicator known as, “the rate of financial return" (ROE-Return On Equity), provides information on the profit made per unit of book value of shareholders investment in the bank, being defined as 'net profit divided by the average number of investments." (Bătrâncea I., I. cape, Bejenaru A., S. Borlea 2008, p 377). It is considered the most important indicator in terms of shareholders

But a review of various categories of risk affecting the bank, should be based on the correlated analysis of bank assets and liabilities, which requires constant adaptation of the bank's balance at the level of risks considered as acceptable.

As the banking risks represent a source of unpredictable expenses, analysis, quantification and their reduction can contribute to stabilizing revenues over time having the role of dampening the shock, while ignoring them can lead to losses reflected in profit decrease, thus affecting the bank performance .

Referring further to the main indicators of financial performance calculated in the Carpatica Commercial Bank SA, we analyze their evolution during 2007-2010, as compared to their performance in the banking system in Romania as they are presented in Table no.2.1

Table no.2.1 **Evolution of financial performance indicators in the Carpatica Commercial Bank relative to the aggregate amounts calculated in the Romanian banking system**

-mill. lei-

Financial bank performance indicators	**Carpatica Commercial Bank**				**Average on the banking system**			
	2007	**2008**	**2009**	**2010**	**2007**	**2008**	**2009**	**2010**
ROE (%)	**1.6**	**1.7**	**2.3**	**-8.9**	**11.4**	**18.1**	**2.7**	**-1.7**
Net profit	3,5	4,5	6,5	-23,0	2.746,6	4.681,9	815,9	-305,0
Equity capital	214,3	278,6	285,1	259,9	24.093,0	25.866,9	30.218,5	17.745,7
ROA (%)	**0.1**	**0.1**	**0.2**	**-0.9**	**1.3**	**1.7**	**0.2**	**-0.09**
Net profit	3,5	4,5	6,5	-23,0	2746,6	4.681,9	815,9	-305,0
Total assets	2.245,0	2,918,5	2.735,8	2.439,3	211.276,9	275.405,9	330.183,5	341.946,3
Net profit rate (%)	**1.6**	**1.7**	**2.2**	**-9.9**	**17.6**	**21.7**	**3.5**	**-1.25**
Net profit	3,5	4,5	6,5	-23,0	2.746,6	4.681,9	815,9	-305,0
Total incomes	216,9	265,1	295,1	231,8	15.605,7	21.581,1	23.609,7	24.318,0
Rate of assets utilisation (%)	**9.7**	**9.1**	**10.8**	**9.5**	**7.4**	**7.8**	**5.8**	**7.1**
Total incomes	216,9	265,1	295,1	231,8	15.605,7	21.581,1	23.609,7	24.318,0
Total assets	2.245,0	2.918,5	2.735,8	2.439,3	211.276,9	275.405,9	407.950,5	341.946,3
Capital multiplication	**10.5**	**10.4**	**9.6**	**9.4**	**8.8**	**10.6**	**13.5**	**19.3**
Total assets	2.245,0	2.918,5	2.735,8	2.439,3	211.276,9	275.405,9	407.950,5	341.946,3
Equity capital	214,3	278,6	285,1	259,9	24.093,0	25.866,9	30.218,5	17.745,7

Source: annual bank situations Carpatica Commercial Bank and RNB annual reports

3.Rate of return on assets-ROA analysis in Carpatica Commercial Bank and in the Romanian banking system during 2007-2010

Economic rate of return (ROA), also known as return on assets, profit or assets, is "the expression of the overall profitability of a bank and measures the effects of managerial capacity to use financial and real resources of the banking company in order to generate profit " (Bătrâncea I., I. cape, Bejenaru A., S. Borlea 2008, p 382).

From its conception as an expression of profitability asset utilization, in other words, from how many assets was obtained net profit, the economic rate of return can be presented in the form of relations no.2.2 or no.2.1 (Badea L. Socol ., V. Dragoi, I. Driga 2010):

$$\frac{Net\ profit}{Total\ incomes}\ X\ \frac{Total\ incomes}{Total\ assets} = \frac{Net\ profit}{Total\ \ assets} \qquad (1)$$

Relation no.3.1 – **Calculation of economic rate of return**

$$Net\ profit\ rate\quad X\quad asset\ utilisation\ rate\quad =\quad rate\ of\ assets\ return \qquad (2)$$

Relation no.3.2 – **Calculation of economic rate of return**

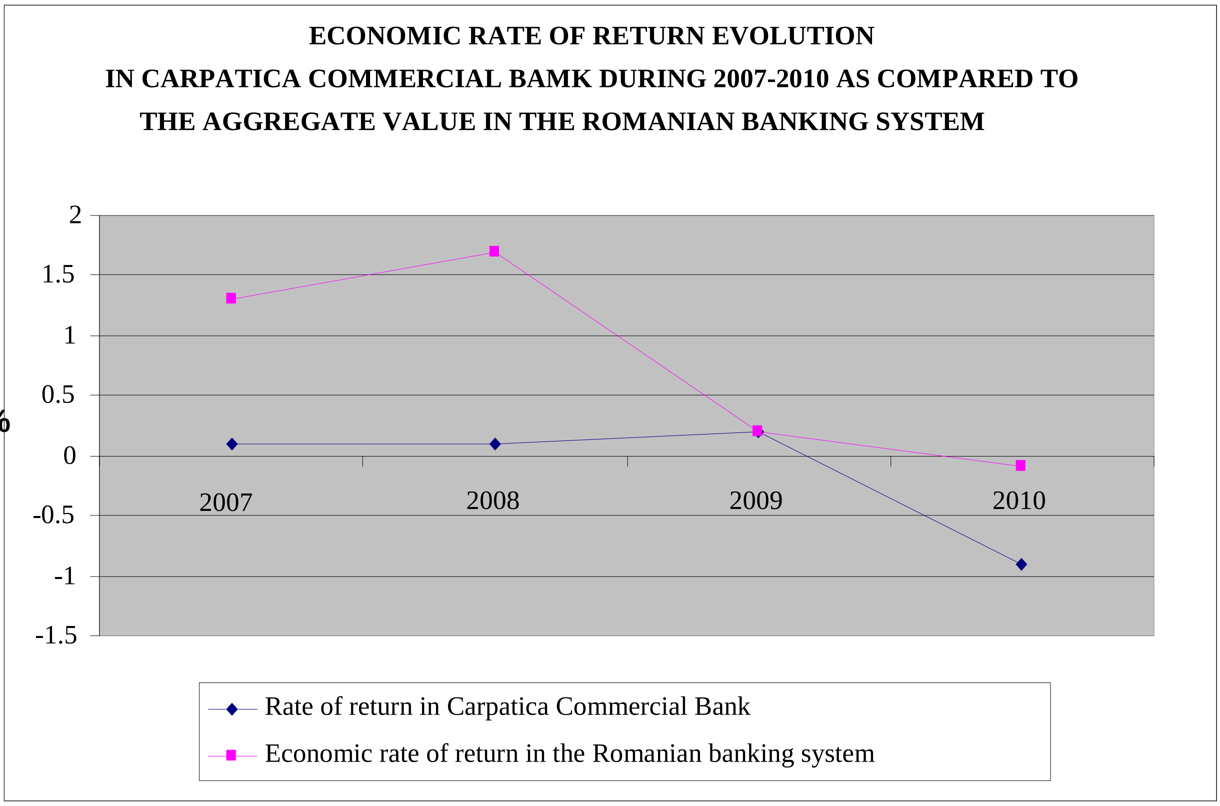
The first term of the relation no.3.1 – rate of net profit (PM = $\frac{\textit{Net profit}}{\textit{Total incomes}} X100$) depends mainly on the ratio between bank's incomes and expenses but also on their structure, and if the incomes and the expenses can be identified on activities (credit, financial operations and others) then this indicator can be determined in banking activity in such way that there can be established which banking activity is more profitable and which is less profitable or even loss generator.

The second indicator –use of assets (AU = $\frac{\textit{Total incomes}}{\textit{Total assets}} X\ 100$) depends mainly on the level of active interest on the market , if the credit is the main activity in a bank and interest income have their share in total bank revenues and expresses total income is obtained from the use of assets.

Analyzing the Return on economic development indicator (ROA) in the Carpatica Commercial Bank during 2007-2010 compared with the average Romanian banking system (fig.nr.3.1) the following conclusions can be drawn:

The activity of the Carpatica Commercial Bank joined the activity *pattern* of the entire Romanian banking system in that, in the first three years of the interval taken in the survey the activity of the bank and that of the bank system was a profitable one, the only difference being that in the Carpatica Commercial Bank 2009 was the peak year of activity as opposed to the system, where, in 2008 was detached through the favourable result of banking, in 2009, in the banking system was a year characterized by a drifting activity that predicted the outcome that was to be in 2010, the first year after 1999 when the Romanian banking system activity resulted in loss, which is reflected in the Carpatica Commercial Bank.

Fig. no.3.1 **Evolution of economic rate of return in Carpatica Commercial Bank and in the Romanian banking system**

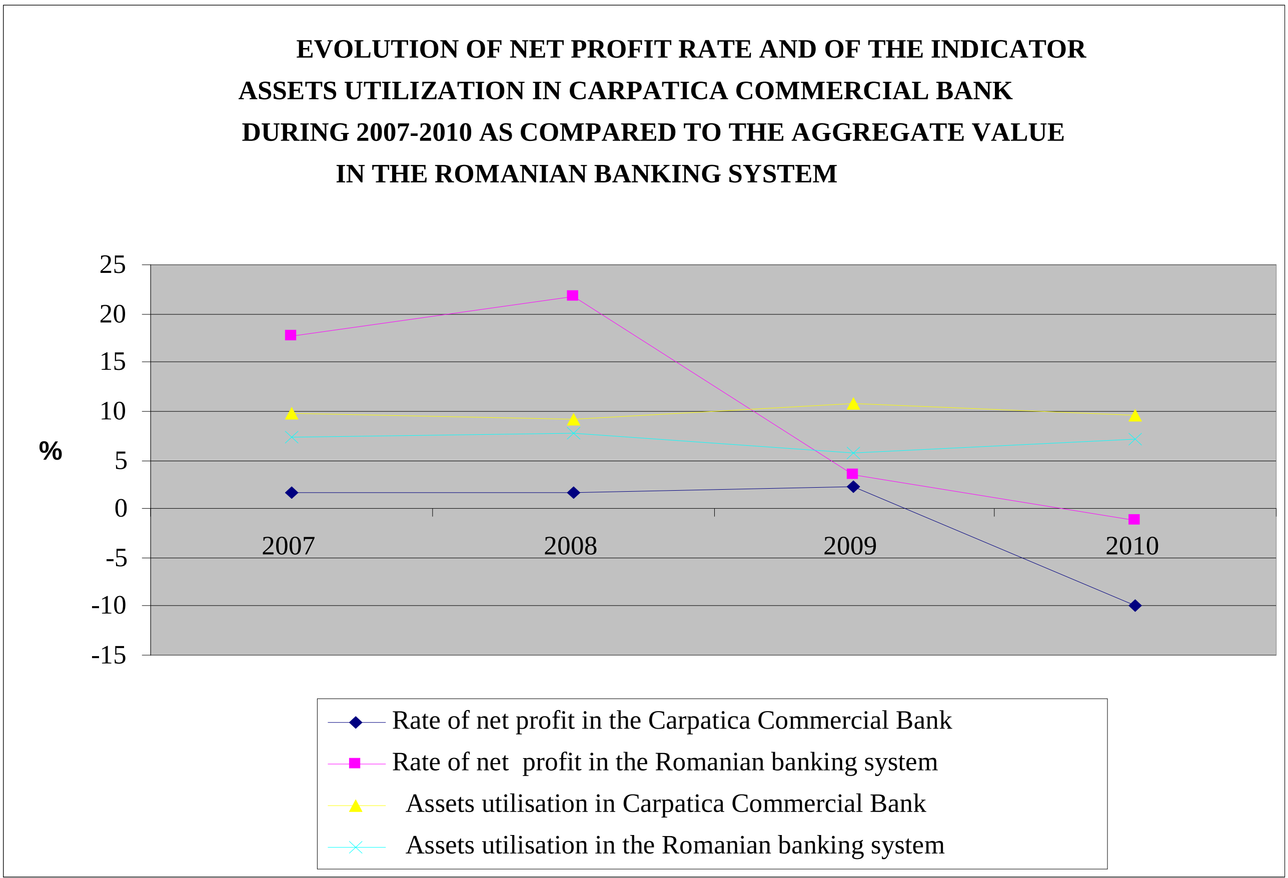


Source: own projection based on data in Table no.*2.1 and annual BNR reports*

In this context, the indicator analyzed had a similar pattern in that it has been positive in the first three years, then in 2010 this indicator had value below 0. It should be stressed here that the analyzed economic rate of return (ROA) determined in the bank was lower than the average in the banking system in the first two years of the survey, and in 2010, then in 2009 to record equal values (Fig. no.3.1). It is important to note that the values of the analyzed indicator or matched since it grew up, in the bank and lowered very sharply in the banking system.

Analyzing the influence of net profit rate, ie the asset utilization rate (two factors that make economic rate of return, according to the relation no.3.2)on the ROA indicator, we can say that it was totally different with Carpathian Commercial Bank to the banking system in the sense that, if the analyzed bank the favourable development of economic profitability rate was due almost exclusively to the asset utilization rate whose level was even higher than the system average for the entire period analyzed (9.7% versus 7.4% in 2007, 9.1% to 7.8% in 2008, 10.8% to 5.8% in 2009 and 9.5% to 7.1% in 2010), for the banking system, the determining factor in the evolution of economic profitability rate was the rate of net profit whose values were much higher than recorded in the Carpatica Bank (table nr.2.1 and Fig. nr.3.2)

Fig. nr.3.2 **Evolution of net profit rate and of the indicator assets utilisation in the Carpatica Commercial Bank and in the Romanian banking system**



Source:Own projection based on data in table no.2.1.and annual BNR reports

Corroborating the values recorded by the two indicators, rate of utilization of assets and net profit rate we conclude that the Carpatica Commercial Bank although asset utilization rate was above average on the system, however, recorded profits at the end of each of the three years was registered to be insignificant as a percentage of the profit recorded in the banking system and the net profit rate be lower than the system average in the system.

This means that in the bank's business, the costs have a significant weight and their evolution into a higher rate than revenue growth led to significant losses recorded in 2010.

4.Analysis of financial profitability, ROE rate in the Carpatica Commercial Bank and in the Romanian banking system during 2007-2010

This indicator, as said before, is relevant because it provides information on bank ownership to profit per unit recorded book value of shareholders investment by the credit institution. To determine this indicator are taken into account two elements, namely: net profit after deduction of tax and capital resulting from adding capital, reserve funds and retained earnings.

Return on equity (ROE) is of great expressiveness of bank financial activity showing in itself a great deal of aspects:"level of profit generation, operational efficiency, financial leverage and forecast tax obligations." (Bătrâncea I. Raincoat I., A. Bejenaru, Borlea S. 2008, p 384).

Generating profits for owners of the bank results from profitability on the one hand assets, on the other hand from the capital multiplier (Equity Multiplier).

The relation between these two indicators can be shown by the relations 4.1, 4.2 and 4.3 (Bătrâncea I., Trenca I., Bejenaru A., Borlea S. 2008):

Profit from assets x equity multiplier = Profit from equity (3)

Relation no.4.1 – **Calculating the rate of financial return**

Return on assets (ROA) x equity multiplier (EM) = Return on equity (ROE) (4)

Relation no.4.2– **Calculating the rate of financial return**

$$\frac{Net\ profit}{Assets} x \frac{Assets}{equity} = \frac{Net\ profit}{Equity} \quad (5)$$

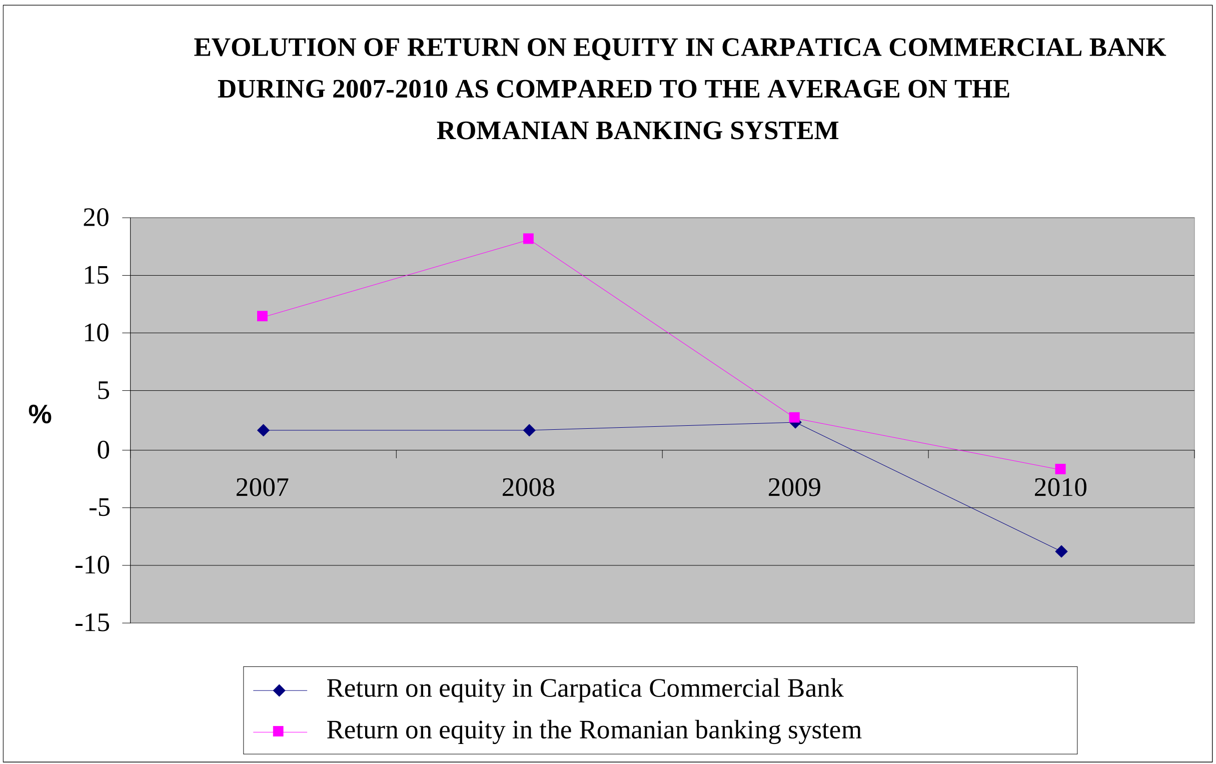
Relation no.4.3 – **Calculating the rate of financial return**

Capital multiplier is the indicator which shows the degree to which the use of additional resources contributes to bank profit growth and occurs when hiring new sources is advantageous in terms of their cost less than or equal to the maximum economic return

In other words, equity multiplier reveals that the use of borrowed resources (not included in the equity of the bank) is reflected in increase in the ratio of total assets and equity as loan sources utilization leads to increase the assets without increase of equity.

From the relation no.4.3 the more the bank leverage is higher (as measured by the ratio between total assets and equity), the higher ROE will be as compared to ROA.

Fig. no.4.1 **Evolution of return on equity in Carpatica Commercial Bank and in the Romanian banking system**



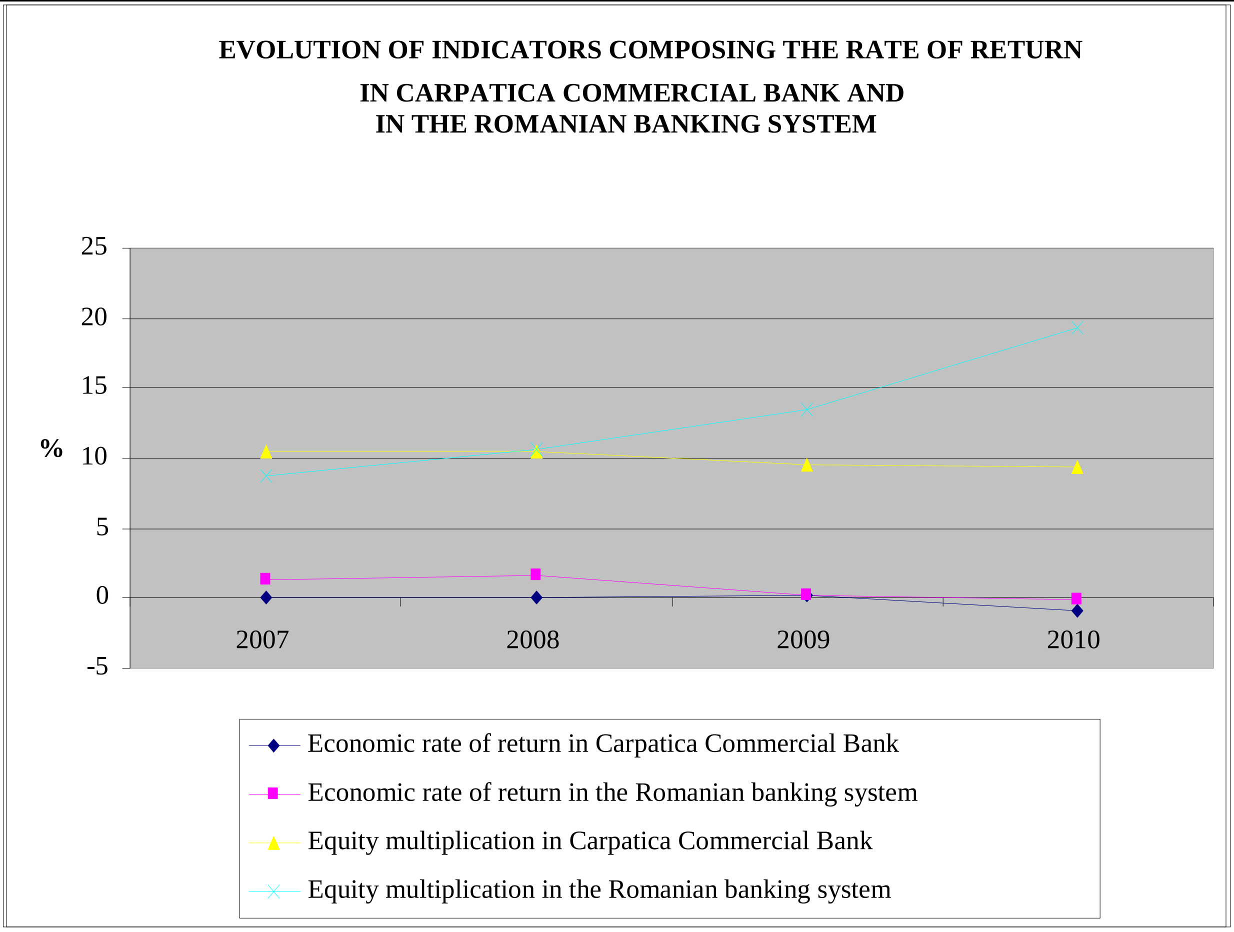
Source: *Own projection based on the data in table no.2.1 and annual BNR reports*

Analyzing the evolution of the rate of financial return in the period 2007-2010 in the Carpatica Commercial Bank and the Romanian banking system (Table no.2.1 and Fig. no.4.1), the first conclusion that emerges is that the indicator analyzed, calculated at the bank was lower than the system average in 2007, 2008 and 2010, because only in 2009 it approached the system average (2.3% vs. 2.7%), a common situation in the case of the economic rate of return

It should be noted that, unlike the average system, the calculated financial return on the bank registered a growth in 2008 and 2009, when the average banking system decreased significantly (from 18.1% to 2.7%).

Next, referring to the evolution of factors that contribute to determining the rate of financial return (Fig. no.4.2) and their influence on the analyzed indicator we can say that in the evolution of the analyzed indicator in the first three years of the period the multiplying capital was decisive, whose values were somewhat close to the bank and the banking system as a whole (over the bank in 2007 and lowest in 2008 and 2009).

Fig. no.4.2 **Evolution of economic rate of return and of the indicator equity multiplication in Carpatica Commercial Bank and in the Romanian banking system**



Source: *Own projection based on data from table no.2.1. and BNR reports*

Higher levels of capital multiplier indicates that Carpatica Commercial Bank, as well as the banking system as a whole, have borrowed sources in order to increase their assets whose quality (in constant depreciation) has had an impact on financial results both in 2009 (for the banking system), and especially in 2010, the year when the Romanian banking system as a whole, recorded the loss for the first time since 1999. Thus, as a result of adverse financial results, 2010 was the year when the financial return registered negative values for both the Carpatica Commercial Bank (-8.9%) and the Romanian banking system as a whole (-1.7%).

5.Conclusions

The activity of Carpatica Commercial Bank in the period, namely 2007-2010 joined the developed activity *pattern* in the entire Romanian banking system, meaning that, in the first three years of the interval taken in the poll the bank activity as well as the activity of the banking system was a profitable one, the only difference being that in Carpatica Commercial Bank, 2009 was the peak year of activity unlike the banking system, where in 2008 was detached by the favourable result of the banking business, 2009 was a year characterized by a drifting activity , which seems to have predicted the outcome that was to be in 2010, the first year after 1999 when the Romanian banking system activity resulted in loss, which is reflected in the Carpatica Commercial Bank

In this context the analyzed performance indicators had a similar pattern in that they have been positive in the first three years, then 2010 was the year when the loss registered in the Romanian banking system aggregate and Commercial Bank Carpathian caused negative values of performance indicators.

It should be noted that for most of the indicators which have been analyzed, their value determined in the Carpatica Commercial Bank, was much lower than the aggregate value in the banking system, both during the first two years of the survey and also in 2010, then, 2009 was the year in which the values were, if not equal, at least close, due to their growth, in the bank and their great decrease in the banking system

Even if the first three years of the interval of analysis were characterized by a profitable activity in the Carpatica Commercial Bank still the recorded profit at the end of each year was reduced slightly as a percentage of the profit recorded in the banking system, which led to values lower values of performance indicators than the average on the system.

This means that in the bank activity the costs have a significant weight and their evolution into a higher rate than revenue growth led to significant losses recorded in 2010, leading to the idea that, in the Carpatica Commercial Bank management capabilities in terms of financial resources to generate profits are modest.

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