Analysing the Financial Soundness of the Commercial Banks in Romania: An Approach Based on the Camels Framework

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Abstract

The Romanian banking system has undergone through tremendous changes in the last decade, its financial soundness and performance being paramount in the achievement of a stable and sustainable economic growth. Thus, the aim of our research is to comparatively analyse the financial soundness of the commercial banks that operate in Romania. In order to achieve this we have used one of the most popular methods for the analysis of the financial soundness of banks, namely the CAMELS framework. The obtained results highlight the strengths and the vulnerabilities of the analysed banks, underlining the need to strengthen the concerns of the decision makers from banks to improve and increase their soundness.

1. Introduction

In order to ensure a healthy, solid and stable banking sector, the banks must be analysed and evaluated in a way that will allow the smooth correction and removal of the potential vulnerabilities. In this way, one of the most popular methods for the analysis and evaluation of the banks soundness is represented by the CAMELS framework. The aim of our research is to analyse the financial soundness of the commercial banks that operate in Romania. In order to achieve this aim our methodology is based on the CAMELS framework. This framework, firstly known.
under the name of CAMEL, has been created in 1979 in USA by the bank regulatory agencies, and afterwards its use has been extended, being considered a useful tool for the supervisor authorities from different countries in order to assess the soundness of the financial institutions. The acronym CAMEL derives from the five main segments of a bank operations: Capital adequacy, Asset quality, Management quality, Earnings ability and Liquidity. Since 1996, out of the desire to stronger focus on risk, to the five components was added the sixth component "S", so that the CAMEL approach became the CAMELS approach, where „S” refers to the sensitivity to market risk. All six parameters are relevant indicators for assessing the financial soundness of a bank, being recommended also by the IMF and the World Bank (2005), grouping, moreover, the financial soundness indicators of the banking sector, according to the six key areas of potential vulnerability, in the CAMELS approach.

The reminder of the research is organised as follows: part two presents a review of the academic literature on the subject, part three is dedicated to the data and the methodology used, part four concerns the analysis and discussion of the selected banks soundness and part five contains the concluding remarks.

2. Review of the academic literature

The insurance of a healthy, solid and stable banking sector it’s of the highest importance for all the participants to the economic life, from depositors, stakeholder, employees and throughout the economy in its whole. Starting from this appreciation, the national and international regulatory and supervision authorities and also the academic researchers have deepened their interest on the evaluation and analysis of the soundness and performances of the financial system in general and implicitly of the banking sector.

The first studies undertaken on the subject of banks performance have appeared in the late 1980s and the early 1990s, employing one of the two model types: the Market Power (MP) model or the Efficiency Structure (ES) model (Mensi et Zouari, 2010).

With the development of the analysis methods, the studies on banks profitability and soundness have evolved from the ones previous mentioned to more sophisticated analysis models based on empirical evidence that were focused both on the banks performance and its determinants. Most of these studies underline that the bank size plays a significant role in the determination of a bank performances and soundness, its role however being still a subject of intense debate. There is large body of academic literature that underlines a positive link between the size of a banking institution and its determinants (e.g. Molyneux and Seth, 1998; Pilloff and Rhoades, 2002; Sufian, 2009).

In recent years one of the most used models for the estimation of a bank performances and soundness is represented by the CAMELS framework (Baral, 2005). This system is used also as a bank supervision instrument by the regulatory authorities (Gilbert et al, 2000; Hays et al, 2009) and also as a main model for the evaluation of the banks performances (Evan et al., 2000; Derviz et Podpiera, 2008; Atıkoğulları, 2009; Mishra et al., 2012).

One of the most comprehensive studies on banks soundness in the new European Union member states that employs CAMELS is represented by the research of Derviz et Podpiera (2008) on the Czech Republic banking sector. The study underlines the evolution of the financial soundness for the five largest Czech banks in the pre and post privatisation period, namely 1999 to 2005.

Atıkoğulları (2009) employs a similar approach based on CAMEL framework to analyse the performances of the Northern Cyprus banking sector. The research is focused on the five largest banks in the post 2001 period. The results suggest that the profitability and the management quality of the analysed banks have improved during the analysed period of time, while a deterioration has been registered in the capital adequacy and liquidity level.

Despite being such a popular analysis tool, the CAMEL framework has been used to a lesser extend for the analysis of the Romanian banking sector performances and soundness, among the most representative researches being those of Albulescu et Coroiu (2009) and Dardac et Moinescu (2009). Thus, our research intends to fill this gap by providing an analysis of the financial soundness for the Romanian banking sector in the pre and post crisis period.

3. Data and methodology

The data used in our research are obtained from the unconsolidated financial and annual reports of the banks from our sample and from the Bureau Van Dijk Bankscope database. The sample is composed by 15 commercial
banks that operate in Romania, that together own over 78.10% of the total banking assets. In order to evaluate and analyse the soundness of the commercial banks that operate in Romania we have chosen one of the most popular methods for analysis used in this type of research namely the CAMELS framework. The variables used in our research and the way that are computed are presented in table 1. We have computed the average separately for each of the indicators used and each parameter from the CAMELS framework for the analysed period of time (2004 - 2011). The obtained averages have been used in order to rank the banks. The best score obtained by a bank got the rank one followed up to rank fifteen using a step of one. If we have obtained the same average for two or more banks the respective banks were assigned the average rank. Based on the components of the CAMELS framework we estimate the financial soundness of the commercial banks from our sample.

Capital adequacy (C) is one of the most important indicators for the financial health of the banking sector because it guarantees the capacity of this sector to absorb the eventual losses generated by the manifestation of certain risks or certain significant macroeconomic imbalances.

Most of the studies used for the measurement of the capital adequacy the capital ratio that is compounded as a ratio of total capital to total assets. The measurement of capital adequacy is done, also through other significant ratios like: the ratio of total equity to total asset, the ratio of equity to net loans or the ratio of equity to debts.

Asset quality (A) is a significant element that measures the strength of a bank and is directly linked with the capital adequacy because most of the times the solvency risks are determined by the depreciation of the assets (IMF and World Bank, 2005, p. 26).

In the case of the banking institutions, the quality of the assets is determined especially by the quality of the loans because this category of assets represents a significant share in the overall balance sheet of a bank. Most of the times, the quality of the loans is measured through the ratio of non-performing loans to total loans, that reflects the share of non-performing loans in total loans that a bank has. Another significant indicator in the evaluation of the assets quality is the ratio of total loans to the total assets. Normally, in the case of a bank, the loans represent the most important part of the assets, but a high ratio reflects also an assets structure more sensitive to loan losses (Atikoğullari, 2009, p. 216). Also, in order to underline the assets quality there are other indicator that can be used like: loan loss reserves to total assets, loan loss provisions to total loans and the ratio of loan loss provision to net interest revenue.

Table 1. CAMELS parameters and their calculation method

| CAMELS variables | Ratios | Calculation method |
|------------------|--------|--------------------|
| Capital Adequacy | Capital adequacy ratios | Total Capital Ratio |
| Asset Quality    | Impaired loans ratio | Impaired Loans / Gross Loans |
|                  | The coverage of non-performing loans | Loan Loss Provisions / Net Interest Revenues |
|                  | The ratio of the total loans to total assets. | Total loans / total assets |
| Management Quality | Operating expense as a percentage of total assets | Operating expenses / Total Assets |
| Earnings Ability | Deposit interest expense as a percentage of total | Interest expenses / Deposits |
| Return on Assets | ROA |
| Return on Equity | ROE |
| Liquidity | The ratio of liquid assets in total deposits and short term | Liquid Assets / Deposits and short term funding |
| Size of the assets | The ratio of assets to the total assets of the banking | Total Assets / Total sector assets |

Source: authors elaboration based on the academic literature

The management quality (M) is of great importance for the insurance of banks health and stability. In some studies dedicated to the evaluation of the banks performances, this natural qualitative parameter is not considered taking into account the measurement difficulties that occur, while in some other studies the quality of the management is expressed through DEA. Despite all these, more indicators can be used for the evaluation of the management soundness namely: the operating expense as a percentage of total assets, deposit interest expense as a percentage of total deposits, non-interest expense to the sum of net interest income and non-interest income, personnel expenses to average assets, and the cost to income ratio (Avkiran and Cai, 2012; Gunsel, 2007).
In the analysis of the earnings (E) and profitability of a bank normally the following indicators are used: Return on Assets, Return on Equity and Cost to Income Ratio. Return on Assets (ROA) underlines how profitable are the bank assets in generating revenues. Return on Equity reflects the profitability of a bank own capitals, the values of this indicator must be interpreted with caution, as a high level can underline a high profitability but also a low level of capitalisation, while a low level can underline a low level of profitability and a high capitalisation of the bank (Evan and others, 2000, p. 7). The Cost to Income Ratio expresses the capacity of the bank to cover its operating expenses from the income generated and is compounded by dividing the operational costs to operational incomes.

Liquidity (L) is the most important component for a bank and has a significant impact on its financial soundness. It constitutes one of the vital elements that evaluates the operational performance of a bank because it indicates the capacity of a bank to pay its short term debts and face unexpected withdrawals of depositors. The indicators that measure the liquidity reflect the capacity of the banks to withstand shocks to cash flows (IMF and World Bank, 2005, p. 26) the most used being: the ratio of liquid assets to total deposits and short term funding, the ratio of the liquid assets to total assets, the ratio of the net loans to total deposits and short term funding and the ratio between loans and deposits.

Sensitivity to market risks is evaluated through the measurement of the way in which the market prices, especially the interest rates, the exchange rates and the equity prices negatively influence the bank’s earnings and capital (Sarker, 2006, p. 12). Although the banking activity is significantly influenced by the variation of the financial assets prices, a series of studies do not consider this to be the sixth component of the CAMELS especially as a result of the measurement difficulties based on the accounting and financial data. Thus, in its place in some studies (Avkiran and Cai, 2012; Sarker, 2006) it is considered the Size (S) of the bank, that is represented by the ratio of that bank assets in the total assets of the banking sector.

4. Analysis and discussion

In this section of our research we will analyse the financial soundness of the 15 selected banks based on the CAMELS framework.

In order to estimate the capital adequacy of the banks from our sample we have employed two representative indicators. The first is the total capital ratio that reflects the ability of a bank to meeting the time liabilities and other risks such as credit risk or operational risk. The highest rank is attributed to the bank that has registered the highest score for this indicator, as it reflects that the bank has the necessary internal resources to face all risks. The second indicator used is represented by the ratio of the equity to total assets. This indicator measures the proportion of the total assets that are financed by the shareholders of the banks. Implicitly the higher this ratio the more stable the situation of that bank is and implicitly the highest rank has been attributed to the bank that has registered the highest level for this indicator.

In regard to the first indicator named the solvency ratio we can acknowledge that the banks from our sample have registered a solvency level above the minimal requirements, that has been established by the NBR at 12% until December 2006. Afterwards, the minimal level of this indicator has been harmonised with the one used at the European level, 8% respectively. In the context of the international financial crisis in Romania, NBR has imposed a minimal level for the solvency indicator at 10% in order to increase the resilience of the banking sector to potential shocks. Thus, based on the data from table 2 we can observe that in the case of our sample the overall solvency rate has been between 38.88% and 11.92%, a superior level to the one stated in the banking prudential norms. Such a situation underlines that the selected banks are well capitalised and have an enhanced capability to absorb potential losses determined by the undertaken activity.

In the period 2004-2011, the average of the solvency rate presents significant differences, registering a lower level in the case of the larger banks that still have a better quality of their loans portfolio. Thus, the top five banks, that have registered a high level of the solvency rate, of over 19% are: RBS Bank, OTP Bank Romania, Banca Românească, Alpha Bank and CEC Bank. Comparatively, the bottom five ranked banks, that have registered a solvency rate between 14.31% and 11.92% are: Banca Transilvania, BRD-GSG, MKB Romexterra, UniCredit Țiriac, Banca Comercială Carpatica.
Table 2: Capital adequacy indicators for the banks from the sample, for the period 2004-2011

| Bank                        | Total Capital Ratio Average (%) | Rank | Total equity/ total asset Average (%) | Rank | Group Ranking Average | Rank |
|-----------------------------|---------------------------------|------|----------------------------------------|------|-----------------------|------|
| Alpha Bank                  | 19.57                           | 4    | 8.63                                   | 15   | 9.5                   | 11   |
| Banca Comercială Carpatica | 11.92                           | 15   | 12.60                                  | 3    | 9                     | 8.5  |
| Banca Comercială Română     | 15.55                           | 8    | 10.16                                  | 10   | 9                     | 8.5  |
| Banca Românească            | 20.39                           | 3    | 10.93                                  | 7    | 5                     | 4    |
| Banca Transilvania          | 14.31                           | 11   | 9.74                                   | 14   | 12.5                  | 15   |
| Bancpost                    | 18.69                           | 6    | 10.49                                  | 9    | 7.5                   | 6    |
| BRD-GSG                     | 14.17                           | 12   | 10.00                                  | 12   | 12                    | 14   |
| CEC Bank                    | 19.07                           | 5    | 11.10                                  | 6    | 5.5                   | 5    |
| MKB Romexterra              | 14.01                           | 13   | 11.41                                  | 5    | 9                     | 8.5  |
| OTP Bank Romania            | 23.98                           | 2    | 13.94                                  | 1    | 1.5                   | 1    |
| Piraeus Bank                | 16.98                           | 7    | 12.74                                  | 2    | 4.5                   | 2.5  |
| ProCredit Bank              | 15.15                           | 9    | 9.79                                   | 13   | 11                    | 13   |
| Raiffeisen Bank România     | 15.12                           | 10   | 10.13                                  | 11   | 10.5                  | 12   |
| RBS Bank                    | 38.99                           | 1    | 10.87                                  | 8    | 4.5                   | 2.5  |
| UniCredit Țiriac             | 13.44                           | 14   | 12.24                                  | 4    | 9                     | 8.5  |

Source: Authors calculations based on Bureau Van Dijk Bankscope database (https://bankscope2.bvdep.com)

In regard to the ratio of total equity to total asset, we can note that most of the selected banks have registered, in the period 2009-2011, a raising trend, especially because of the faster increase of the own funds compared with the assets. On the other hand we can observe that the smaller banks have a higher auto-financing level compared with the large ones. Thus, the top five banks in the case of this indicator are: OTP Bank Romania, Piraeus Bank, Banca Comercială Carpatica, UniCredit Țiriac and Banca Românească. Comparatively the bottom five ranked banks, that have for this indicator a value between 10.13% and 8.63%, are: Raiffeisen Bank România, BRD-GSG, ProCredit Bank, Banca Transilvania and Alpha Bank. Based on the group average of the two ratios for the capital adequacy that are reflected in table 2, the top five banks that have the best position in the case of the capital adequacy are: OTP Bank Romania with a group average of 1.5, followed by Piraeus Bank and RBS Bank (2.5), Banca Românească (5) and CEC Bank (5.5). Banca Transilvania has the lowest position in the group ranking because of the poorer financial soundness registered in the case of the ratio of total equity to total asset and the solvency ratio (see table 2).

In order to measure the quality of the assets owned by the banks from our sample, we have selected the ratio of impaired loans to gross loans, the ratio of loan loss provision to net interest revenue and the ratio of the total loans to total assets. The first ratio underlines the ability of a bank to grant loans to prime clients that will repay their debts. Thus, the lower this ratio the better the quality of the loans portfolio and the banks will reach a higher rank. The loan loss provisions to net interest revenues ratio underlines the ability of a bank to cover the expenses with the provisions for impaired loans from the interest that it collects. The lower the value of this indicator, the higher the quality of the assets of a bank and implicitly the higher the rank.

Analysing the data regarding the ratio of impaired loans to gross loans underlines an ascending evolution of this indicator, especially between 2009 and 2011, determined by the manifestation in Romania of a economic recession, an increase of the unemployment rate, the diminishing of the net income, the significant depreciation of the national currency and the increase of the interest rate as a result of the risks amplification. In the case of our sample the distribution of banks according to the level of this indicator (see table 3) underlines that five banks have registered in the period 2004-2011 the lowest level (under 5.3%) for the non performing loans (ProCredit Bank, Banca Românească, Banca Transilvania, UniCredit Țiriac and RBS Bank), five banks have registered a level between 5.35% and 8.04% (Alpha Bank, Bancpost, OTP Bank Romania, Raiffeisen Bank România, BRD-GSG) while other five banks have registered the highest level, Piraeus Bank, CEC Bank, Banca Comercială Română, Banca Comercială Carpatica, MKB Romexterra, respectively. Based on these evolutions, the credit risk has become the main vulnerability to the financial stability in Romania.
Table 3: Assets quality indicators for the banks from the sample, for the period 2004-2011

|                       | Impaired loans/Gross Loans | Loan Loss Provision/ net interest revenue | Loan/Asset | Group Ranking |
|-----------------------|---------------------------|------------------------------------------|------------|---------------|
|                       | Average Rank              | Average Rank                             | Average Rank | Rank          |
| Alpha Bank            | 5.35 6                    | 22.21 7                                  | 63.48 14    | 9.00 10       |
| Banca Comercială Carpatica | 5.44 14                | 32.61 11                                 | 46.97 3     | 9.33 12.5     |
| Banca Comercială Română | 9.42 13                 | 30.05 10                                 | 58.02 8     | 10.33 13      |
| Banca Românească      | 3.23 2                    | 20.85 4                                  | 63.14 13    | 6.33 4        |
| Banca Transilvania    | 4.44 3                    | 30.29 12                                 | 59.24 9     | 8.00 8        |
| Bancpost              | 6.59 7                    | 44.11 13                                 | 52.85 5     | 8.33 9        |
| BRD-GSG               | 8.04 10                   | 21.96 6                                  | 63.02 14    | 9.33 12.5     |
| CEC Bank              | 8.93 12                   | 38.83 15                                 | 51.48 4     | 11.33 14      |
| OTP Bank Romania      | 7.19 8                    | 26.70 8                                  | 56.71 7     | 7.67 6.5      |
| Piraeus Bank          | 4.58 9                    | 5.72 14                                  | 60.65 11    | 12.00 15      |
| ProCredit Bank        | 1.75 1                    | 13.42 2                                  | 71.05 15    | 6.00 3        |
| Raiffeisen Bank România | 7.44 9                   | 21.65 5                                  | 53.85 6     | 6.67 5        |
| RBS Bank              | 5.3 5                     | 18.56 1                                  | 42.42 2     | 2.67 1        |
| UniCredit Țaraie      | 4.92 4                    | 29.93 9                                  | 59.47 10    | 7.67 6.5      |

Source: Authors calculations based on Bureau Van Dijk Bankscope database (https://bankscope2.bvdep.com)

During the analysed period of time, the indicator operating expenses to total assets has registered a continuous decrease in the case of almost all the banks from our sample. This has been determined by two major factors. Thus, on the one hand, during the credit boom period, especially between 2004 and 2007, the decrease of this indicator has been determined by the ability of the banks to extend their businesses much faster than their cost, implicitly the increase of their assets has not been followed by a similar increase in operating costs. On the other hand, since 2007 and the star of the international financial and economic turmoil, the banks have shifted their strategy and readjusted their network and workforce size, thus the operating costs have decreased at a much faster rate than the value of the owned assets. The top five ranked banks in the case of this indicator are: Alpha Bank, Banca Comercială Română, BRD-GSG, CEC Bank and RBS Bank. The bottom five ranked banks are: OTP Bank Romania, Raiffeisen Bank România, Banca Comercială Carpatica and ProCredit Bank. Overall, the data from table 4 underline that the best performing banks from the management quality point of view are: again RBS Bank with an average of 3, followed by Banca Comercială Română (4), Alpha Bank, BRD-GSG and UniCredit Țaraie (5).

Table 4: Management quality indicators for the banks from the sample, for the period 2004-2011

|                       | Operating expenses/ Total assets | Interest expenses/ Deposits | Group Ranking |
|-----------------------|----------------------------------|----------------------------|---------------|
|                       | Average Rank                      | Average Rank               | Rank          |
| Alpha Bank            | 2.55 1                            | 6.65 8                     | 5 4           |
| Banca Comercială Carpatica | 7.56 14                        | 7.71 12                    | 13 13.5       |
| Banca Comercială Română | 3.62 2                           | 5.19 5                     | 4 2           |
| Banca Românească      | 4.81 7                           | 8.28 13                    | 10 11         |
| Banca Transilvania    | 5.44 10                          | 5.75 7                     | 9 10          |
| Bancpost              | 5.38 9                           | 4.90 4                     | 7 6.5         |
| BRD-GSG               | 3.89 3                           | 5.24 6                     | 5 4           |
| CEC Bank              | 4.11 4                           | 6.77 9                     | 7 6.5         |
| MKB Romexterra        | 7.43 13                          | 7.66 11                    | 12 12         |
| OTP Bank Romania      | 6.21 11                          | 8.71 14                    | 13 13.5       |
| Piraeus Bank          | 4.58 6                           | 7.12 10                    | 8 8.5         |
| ProCredit Bank        | 9.54 15                          | 8.79 15                    | 15 15         |
| Raiffeisen Bank România | 6.35 12                         | 4.51 3                     | 8 8.5         |
| RBS Bank              | 4.57 5                           | 2.51 1                     | 3 1           |
| UniCredit Țaraie      | 4.82 8                           | 3.96 2                     | 5 4           |

Source: Authors calculations based on Bureau Van Dijk Bankscope database (https://bankscope2.bvdep.com)
Analysing the evolution of the ratio of interest expenses to total deposits for the studied period of time we can observe that until 2007 all the banks from our sample have registered a decrease of this indicator, as the pre crisis period has been characterised by a prolonged credit boom. Since 2007, as the international situation deteriorated the banks from our sample have increased their interest paid on deposits in order to attract additional resources. This has culminated in 2009, when this indicator is registering its highest values, in that year the analysed banks paying the highest interest rates for the attracted deposits. Top five banks in the case of this indicator are: RBS, UniCredit Țiriac, Raiffeisen Bank, Bancpost and Banca Comercială Română. The bottom five banks in the case of this indicator are: MKB Romexterra, Banca Comercială Carpatica, Banca Românească, OTP Bank and ProCredit Bank.

As we have mentioned, in the analysis of the earning and profitability of a bank there are currently used the indicators: Return on Assets, Return on Equity and Cost to Income Ratio. In the case of the first two indicators, the higher their value is the more profitable the bank is and thus it will be better placed in our ranking for these indicators. In the case of the Cost to Income Ratio, the lower this ratio is the more profitable the bank will be and higher the rank achieved.

Table 5: Earnings and profitability indicators for the banks from the sample, for the period 2004-2011

| Bank                  | ROAA Average | Rank | ROAE Average (%) | Rank | Cost To Income Ratio Average (%) | Rank | Group Ranking Average | Group Ranking Rank |
|-----------------------|--------------|------|------------------|------|----------------------------------|------|-----------------------|-------------------|
| Alpha Bank            | 1.19         | 7    | 12.58            | 6    | 54.34                            | 3    | 5.33                  | 5.5               |
| Banca Comercială      | 0.66         | 10   | 2.14             | 12   | 81.18                            | 12   | 11.33                 | 11.5              |
| Banca Comercială      | 1.64         | 4    | 15.88            | 5    | 50.82                            | 2    | 3.67                  | 2                |
| Banca Românească      | 0.56         | 11   | 5.24             | 10   | 76.30                            | 9    | 10.00                 | 10               |
| Banca Transilvania    | 1.88         | 3    | 18.64            | 3    | 61.52                            | 6    | 4.00                  | 3.5               |
| Bancpost              | 0.43         | 12   | 4.58             | 11   | 77.47                            | 11   | 11.33                 | 11.5              |
| BRD-GSG               | 2.62         | 1    | 27.39            | 1    | 46.70                            | 1    | 1.00                  | 1                |
| CEC Bank              | 0.73         | 9    | 6.00             | 9    | 76.92                            | 10   | 9.33                  | 9                |
| MKB Romexterra        | -1.56        | 15   | -44.18           | 15   | 82.15                            | 13   | 14.33                 | 14.5             |
| OTP Bank Romania      | -0.90        | 14   | -5.47            | 14   | 97.26                            | 15   | 14.33                 | 14.5             |
| Piraeus Bank          | 0.92         | 8    | 7.06             | 8    | 60.57                            | 5    | 7.00                  | 8                |
| ProCredit Bank        | -0.38        | 13   | -3.65            | 13   | 93.49                            | 14   | 13.33                 | 13               |
| Raiffeisen Bank România | 1.97   | 2    | 20.06            | 2    | 67.47                            | 8    | 4.00                  | 3.5               |
| RBS Bank              | 1.50         | 5    | 16.35            | 4    | 65.18                            | 7    | 5.33                  | 5.5               |
| UniCredit Țiriac       | 1.24         | 6    | 11.09            | 7    | 58.27                            | 4    | 5.67                  | 7                |

Source: Authors calculations based on Bureau Van Dijk Bankscope database (https://bankscope2.bvdep.com)

In the period 2004 - 2008, in the context of a favourable national and international economic environment most of the banks from our sample have registered an ascending evolution of the profitability indicators, that is doubled by a high capitalisation that has contribute to the enhancement of their resilience to shocks. In the period 2009 - 2011 as a result of the significant deterioration of the loans portfolio of most of the banks from our sample, the increase of the provision expenses, higher financing costs, the profitability indicators have registered a significant deterioration. The distribution of the banks according with the average of the two profitability indicators (see table 5), for the analysed period underlines that the top five banks are: BRD-GSG, Raiffeisen Bank România, Banca Transilvania, RBS Bank and Banca Comercială Română. The bottom five banks in the case of these indicators are: Banca Românească, Bancpost, ProCredit Bank, OTP Bank Romania and MKB Romexterra.

The analysis on the banks from our sample underlines especially a significant deterioration of the cost to income ratio, because of the crisis and the rapid growth of the provision expenses and the diminishing of the operational income of the bank. Based on the average cost to income ratio for the analysed period of time the best performing banks are: BRD-GSG, Banca Comercială Română, Alpha Bank, UniCredit Țiriac, Piraeus Bank. Comparatively in the other extreme, the banks that have registered the lowest efficiency of their operation activity are: Bancpost, Banca Comercială Carpatica, MKB Romexterra, ProCredit Bank and OTP Bank Romania. The data from table 5 underlines that the best performing banks are: BRD-GSG, with an average of 1, followed by Banca Comercială...
Performances have been registered by MKB Romexterra and OTP Bank Romania (14.33). The liquidity of the banking institutions from our sample is underlined by the ratio of liquid assets to deposits and short term funding and the ratio of net loans to total deposits and short term funding. The distribution of the banks from our sample underlines that the top five banks that have registered the best average liquidity, between 44% and 38.41%, based on the ratio of liquid assets to total deposits and short term funding are: RBS Bank, Raiffeisen Bank România, Bancpost, Banca Comercială Carpathia and UniCredit Țîriac.

Table 6: Liquidity indicators for the banks from the sample, for the period 2004-2011

| Liquid Assets/ Deposits & Short Term Funding | Net Loans / Deposits & Short Term Funding | Group Ranking |
|---------------------------------------------|------------------------------------------|---------------|
| Average (%) | Rank | Average (%) | Rank | Average | Rank |
| Alpha Bank | 36.19 | 9 | 73.15 | 9 | 9 | 7.5 |
| Banca Comercială | 39.88 | 4 | 64.59 | 5 | 4.5 | 3.5 |
| Banca Comercială Română | 34.08 | 12 | 71.18 | 7 | 9.5 | 9.5 |
| Banca Românească | 35.26 | 10 | 75.84 | 11 | 10.5 | 12.5 |
| Banca Transilvania | 34.69 | 11 | 75.34 | 10 | 10.5 | 12.5 |
| Bancpost | 41.43 | 3 | 66.18 | 6 | 4.5 | 3.5 |
| BRD-GSG | 36.72 | 7 | 79.83 | 13 | 10 | 11 |
| CEC Bank | 33.48 | 13 | 46.14 | 1 | 7 | 6 |
| MKB Romexterra | 36.55 | 8 | 59.47 | 3 | 5.5 | 5 |
| OTP Bank România | 37.91 | 6 | 77.98 | 12 | 9 | 7.5 |
| Piraeus Bank | 30.28 | 14 | 72.48 | 8 | 11 | 14 |
| ProCredit Bank | 28.57 | 15 | 100.12 | 15 | 15 | 15 |
| Raiffeisen Bank Română | 42.08 | 2 | 63.81 | 4 | 3 | 2 |
| RBS Bank | 43.39 | 1 | 50.20 | 2 | 1.5 | 1 |
| UniCredit Țîriac | 38.41 | 5 | 84.68 | 14 | 9.5 | 9.5 |

Source: Authors calculations based on Bureau Van Dijk Bankscope database (https://bankscope2.bvdep.com)

The analysis of the banks liquidity through the ratio of the net loans to total deposits and short term funding underlines that in the period 2004 - 2007 there has been an ascending evolution of this indicator because of the rapid growth of the bank’s loans as the banking institutions were trying to significantly increase their market share. The diminishing of the loans granting activity especially in the period 2009 - 2011 has been reflected also in the diminishing of the previous mentioned indicator. The distribution of the banks according to the ratio of net loans to total deposits and short term funding underlines that the top five banks are: CEC Bank, RBS Bank, MKB Romexterra, Raiffeisen Bank România and Banca Comercială Carpathia. Comparatively, other banks that have a ratio of net loans to total deposits and short term funding between 75.84% and 110.12% have a less favourable situation form a liquidity point of view, these institutions are: Banca Românească, OTP Bank România, BRD-GSG, UniCredit Țîriac and ProCredit Bank. Based on the group averages of the two liquidity indicators, reflected in table 6, RBS is the best positioned bank, with a group average of 1.5 followed by Raiffeisen Bank România (3), Banca Comercială Carpathia, Bancpost (4.5) and MKB Romexterra (5). In contrast, ProCredit Bank is positioned last, having the lowest level for the ratio of the liquid assets to deposits and highest average level for the ratio of the net loans to deposits.

In order to underline the size of the assets that a bank has we have calculated the ratio of its assets to the total assets of the banking sector. Thus, the higher this ratio the more important is the bank for that given banking sector and the higher the rank achieved. The data from table 8 underline that for this indicator the top five banks ranked are: Banca Comercială Română with an average assets to total assets for the Romanian banking sector for the period 2004 - 2011 of 24.25%, followed by BRD-GSG (15.11%), Raiffeisen Bank România (7.28%), UniCredit Țîriac (6.09%) and Banca Transilvania (5.32%). As a result, these banks are less sensible to the market risk in the analysed period. Comparatively, the banks placed in the last five ranks are: Piraeus Bank (2.13%), OTP Bank Romania
(1.08%), Banca Comercială Carpatica (0.86%), MKB Romexterra (0.76%) and ProCredit Bank (0.09%), these banks registering an increase of the market risk during the analysed period of time.

Table 7: The size of the assets indicator for the banks from the sample, for the period 2004-2011

| Assets/sector assets | Rank | Assets/sector assets | Rank |
|----------------------|------|----------------------|------|
| Alpha Bank           | 4.92 | 7                    | 5.28 | 6                    |
| Banca Comercială Carpatica | 0.86 | 13                   | 0.76 | 14                   |
| Banca Comercială Română | 24.25 | 1                    | 1.08 | 12                   |
| Banca Românească     | 2.19 | 10                   | 2.13 | 11                   |
| Banca Transilvania   | 5.32 | 5                    | 0.09 | 15                   |
| Bancpost             | 4.55 | 8                    | 7.28 | 3                    |
| BRD-GSG              | 15.11 | 2                   | 2.93 | 9                    |
| CEC Bank             | 5.28 | 6                    | 6.09 | 4                    |

Source: Authors calculations based on Bureau Van Dijk Bankscope database (https://bankscope2.bvdep.com)

The overall ranking of the banks from our sample for the financial soundness, made based on the CAMELS parameters is presented in table 8. The results of the analysis underline that the best positioned bank is RBS Bank, that has held the best position in regard to assets quality, management quality and liquidity being followed by Raiffeisen Bank România, CEC Bank, Banca Comercială Română and UniCredit Țiriac. The last five ranking are held by OTP Bank Romania, that has registered the lowest results in the case of the earnings and profitability indicator, being followed by Piraeus Bank, Banca Comercială Carpatica, MKB Romexterra and ProCredit Bank.

Table 8: Overall ranking of the selected banks based on the CAMELS parameters

| C    | A    | M    | E    | L    | S    | Average | Rank |
|------|------|------|------|------|------|---------|------|
| Alpha Bank | 11   | 10   | 4    | 5.5  | 7.5  | 7.50    | 8    |
| Banca Comercială Carpatica | 8.5  | 12.5 | 13.5 | 11.5 | 3.5  | 10.42   | 13   |
| Banca Comercială Română    | 8.5  | 13   | 2    | 2    | 9.5  | 6.00    | 4    |
| Banca Românească           | 4    | 4    | 11   | 10   | 12.5 | 8.58    | 9    |
| Banca Transilvania         | 15   | 8    | 10   | 3.5  | 12.5 | 9.00    | 10   |
| Bancpost                   | 6    | 9    | 6.5  | 11.5 | 3.5  | 7.42    | 6.50 |
| BRD-GSG                    | 14   | 12.5 | 4    | 1    | 11   | 7.42    | 6.50 |
| CEC Bank                   | 5    | 2    | 6.5  | 9    | 6    | 5.75    | 3    |
| MKB Romexterra             | 8.5  | 14   | 12   | 14.5 | 5    | 11.33   | 14   |
| OTP Bank Romania           | 1    | 6.5  | 13.5 | 14.5 | 7.5  | 9.17    | 11   |
| Piraeus Bank               | 2.5  | 15   | 8.5  | 8    | 14   | 9.83    | 12   |
| ProCredit Bank             | 13   | 3    | 15   | 13   | 15   | 12.33   | 15   |
| Raiffeisen Bank România    | 12   | 5    | 8.5  | 3.5  | 2    | 5.67    | 2    |
| RBS Bank                   | 2.5  | 1    | 1    | 5.5  | 1    | 3.33    | 1    |
| UniCredit Țiriac           | 8.5  | 6.5  | 4    | 7    | 9.5  | 6.58    | 5    |

Source: Authors calculations

5. Conclusions

Our research has been focused on 15 banking institutions that operate in Romania, for which we aimed to highlight their soundness through certain representative indicators that express the main content of the six parameters of the CAMELS framework. Based on an important set of indicators, that express the banks financial soundness and health, our research reflects a quite heterogeneous distribution of the banks from our sample. Thus, the largest bank from our sample and at the same time from the Romanian banking system, Banca Comercială Română ranked among the best five performing banks only in the case of the indicators regarding the management
quality and those regarding earnings and profitability. Instead, the mentioned bank recorded weak results in the case of the liquidity indicators.

In terms of capital adequacy, it appears that all the selected banks are well capitalized and have an increased capacity to absorb potential losses resulted from the performed activity. In terms of asset quality, our analysis points out in particular that Piraeus Bank recorded the lowest assets quality in terms of the three indicators analyzed. The analysis of the management quality indicators show that the weakest results were recorded by Banca Românească, MKB Romexterra, Banca Comercială Carpaţica, OTP Bank Romania and ProCredit Bank. The indicators regarding earnings and profitability highlight that the weakest financial performances have been recorded by MKB Romexterra and OTP Bank Romania. The liquidity analysis emphasizes vulnerabilities especially in the case of ProCredit Bank. Nevertheless, in terms of increased sensitivity to market risk, the banks that stand out are especially MKB Romexterra and ProCredit Bank.

The added value of our research results in particular from highlighting the strengths, but especially the vulnerabilities of the selected banks, highlighting thus the main segments of the banking activity on which the decisions making concerns from the banking system must focus in order to record an improvement and increase of their soundness.

As future research directions, we intend to empirically assess the impact of major factors, both macro and micro, on the financial soundness of banks operating in Romania and other EU countries.

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