Reforms to the European banking system aim to increase commercial banks’ ability to withstand various shocks and volatility of the current economic and social environment. Changes to European and international legislative framework aimed among other things, the level of capital adequacy and quality of loan portfolios, which are most affected by the turmoil arising in financial markets. Thus, it was considered appropriate to studying these two groups of prudential ratios, over a period of 9 financial years (2007-2015) at 8 banking systems in Europe: Austria, Czech Republic, France, Germany, Greece, Italy, Hungary and Romania. The results obtained showed that the Romanian banking system has an adequate level of capital, although the quality of loan portfolios has significantly decreased, especially in the last period of the research. National Bank of Romania’s involvement in the significant reduction of risk and sovereign debt crisis contributed to the increase of comparability of the Romanian banking market with the European market. Major problems have been reported in the Greek and Italian banking systems, largely affected by the sovereign debt crisis.

Key words: total own funds rate, tier 1 capital rate, non-performing loans rate, the provisioning coverage of equity, capital adequacy level, quality of loan portfolios.

Jel Classification: C11, C13, C15, C33

I. Introduction

European banking system is in a process of restructuring, changing paradigms and business models assumed. Bank failures recorded in developed economies and fear of not generating a systemic risk prompted European governments to lend to banks, thereby triggering a “sovereign debt crisis”.

European commercial banks have become less successful in recent years, due to the reduction of the level of own funds caused by the deteriorating quality of loan portfolios. Following the stress tests conducted by the European Central Bank at the end of 2014, banks in European countries such as Greece, Italy and even Austria, were required to carry out massive capitalization to be able to continue their activity.

II. Literature

In this study we considered the presentation of the evolution of prudential indicators, such as capital adequacy and loan portfolio quality.

Capital adequacy to risks

At the level of commercial banks, own funds must hold an appropriate level necessary to cover credit risk and thus avoid bank failure. Economic and financial crisis has demonstrated that a lack of adequate capitalization, combined with excessive risk-taking were the main causes of the emergence of such imbalances. Fear of triggering a systemic risk prompted supervisors to amend the legislative framework (European Directive CRR IV/CRD, the Basel III, Regulation 575/2013), particularly in the methodology for calculating indicators of banking prudence. Capital adequacy is assessed through indicators such as: own funds rate; the ratio of net non-performing loans and own funds; the ratio of capital to total assets (solvency ratio).

The quality of loan portfolios

The main feature of the European model of construction of the banking system, from an organizational perspective, is the wide range of operations that a commercial bank is authorized to provide. The vast majority of operations performed are classical, financial intermediation, or redistribution of funds in the economy. As such, the granting of credits is the main active operation carried out by a major commercial bank and the risk that can arise in lending, require close monitoring of developments in credit portfolios.

Assessing loan quality is achieved through a series of indicators such as: non-performing loans; the general risk; credit risk rate; the provisions made; loans given. Widespread use in evaluating the quality loan
portfolios is held by non-performing loans indicator. Although there are banking systems that use different methodologies for calculating underperforming credit (see the case of Estonia, Lithuania, Russia etc.), through the use of compilation guide of financial stability indicators developed by the International Monetary Fund, it is advisable that a credit is framed as non-performing only by reference to the debt service (over 90 days late in paying principal and interest). From the perspective of the definition assigned to it by Regulation 575/2013, a bad loan is generated by the debtor’s state of non-reimbursement, that occurs when: the debtor, according to the institution, is no longer able to repay his obligations to a credit institution, to the parent bank or any subsidiary thereof, unless the guarantee; repayment of obligations assumed is delayed for more than 90 days on any significant obligations from the credit. This period may be extended up to 180 days in case of exposures secured by residential or commercial real estate belonging to SMEs or public sector entities.

Regulatory technical standards, developed by the European Banking Authority, proposes the use of non-performing exposures’ rate to the detriment of non-performing loans’ rate. Therefore, the definition assigned to this new indicator takes into account depreciation and default criteria set by the International Financial Reporting Standards and CRR (which are using professional judgment), and a common identification criteria (i.e. the number of days of back payment). Non-performing exposures are considered to be in these conditions and there should be reported for surveillance purposes those fulfilling at least one of the following criteria: outstanding exposures over 90 days, which have a higher level of materiality set by the credit institution; exposures that credit institutions consider unlikely the reimbursement of all credit without carrying cash flows generated by the sale of associated collateral, irrespective of the existence of overdue amounts or the number of days of arrears.

The growth rate of lending is influenced by non-performing loans’ rate in terms of the three variables (Mesnard B., Margera A, Power C., Magnus M, 2016): the low profitability of the bank in question due to the volume of provisions created, which significantly reduces operating income; increasing capital requirements, given that this asset class is defined as a risky one; much higher cost of attracted source, amid negative perceptions of investors seeking a higher yield, which diminishes the capacity to generate profit for a bank.

III. DATA AND METHODOLOGY

The study was conducted on 8 European banking systems, namely: Austria, Czech Republic, France, Germany, Greece, Italy, Hungary and Romania, over the period 2007-2015. The selection of banking systems was based on: their exposure in the European banking system; their development potential and relatively similar characteristics to those of Romania (including the Czech Republic and Hungary - former communist countries). Prudential indicators considered in the study are capital adequacy and loan portfolio quality. The database necessary to the research was provided by the International Monetary Fund, the “Financial Soundness Indicators” section; National Bank of Romania and the EBA. The research method used is descriptive and comparative analysis.

IV. THE RESULTS OF THE RESEARCH

The evolution of total own funds ratio at the 8 banking systems included in the survey is shown in the chart no. 1.

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Chart no. 1. Evolution of total own funds ratio, period 2007-2015
Source: Authors’ personal processing, according to the data from the International Monetary Fund – „Financial Soundness Indicators”
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The results summarized in chart no. 1 illustrates that total own funds ratio recorded at the 8 banking systems falls over the entire period above the minimum imposed by Cooke (8%). The lowest levels of the indicator were registered in the case of Greek and Italian banking systems, two systems that have been affected by the sovereign debt crisis, which has arisen amid excessive indebtedness of governments. Although, from 2013, it has recorded an upward trend rate of total own funds, the Greek banking system recorded major problems in terms of capital adequacy. This statement is also supported by the results of stress tests applied to several banks and systems in Europe, which confirmed the need for a massive capitalization of three major banks belonging to the Greek banking system, with significant exposure in Romania.

Romania is at a level comparable to the Austrian, French and German banking systems. In the Romanian banking system, the minimum indicator was recorded in the fiscal year 2007 (following the trend recorded in Europe). Despite the appearance of the first signs of the financial crisis, European banks have been directed towards increasing market share, decreasing their level of capitalization, so that, when the shock occurred, most of them turned out to be vulnerable. Analysing the credit market in Romania, according to reports of the National Bank, an increase of the loans granted and assumed by commercial banks was noticed. Negative development recorded in the solvency ratio was mainly due to the increase of financial intermediation of banks in Romania. This increase of the intermediation level within the Romanian banking system is substantially lower than the growth in the majority of European Union banking systems.

Changes in the level of capital adequacy for the 8 European banking systems, analysed from the perspective of tier 1 capital ratio, is shown in chart no. 2.

![The evolution of tier 1 capital ratio](chart.jpg)

**Chart 2: Evolution of tier 1 capital ratio, period 2007-2015**

*Source: Authors’ processing, according to the data from the International Monetary Fund – „Financial Soundness Indicators”*

During the research period, there was a tendency to increase the level of the indicator, to all eight European banking systems. Given that Tier 1 capital provides the highest quality, the stability of European banking systems may be considered to be at an appropriate level. However, the expected depreciation is much lower in the developed banking systems, compared to those in developing countries (World Economic and Financial Surveys, IMF, 2016). Therefore, one first finding targeted the banking systems that have experienced considerable macroeconomic problems and where, the Tier 1 capital ratio was lower (Greece and Italy). Also, a lower value of the indicator is also found in the developed banking systems such as Austria and France, due to the decrease of their profitability, resulting from the depreciation of loan portfolio quality. The level registered by the indicator Rate of tier 1 capital in the Romanian banking system is relatively close to that recorded for the indicator Rate of total own funds, due to the fact that in the Romanian banking system, tier 1 holds about 91% of own funds.

Evolution of the ratio of non-performing loans/equity at the 8 European banking systems during the period 2007-2015 is shown in chart no. 3.
Although it is recommended that the indicator is as low as possible, the volatility of the economic environment and the deteriorating macroeconomic conditions has caused serious problems of loan portfolios, suffering significant devaluations. Risks and vulnerability of the systems has increased significantly during the period analysed, being tempered by specific protective measures and policies adopted by central banks. In the Greek and Italian banking systems it can be noticed that own funds proved insufficient to cover losses from impairment of loan portfolio quality. As for the Romanian banking system, the indicator may be comparable to other developed banking systems (Austrian, French, German) also recording a downward trend during the period covered by the research. This development is due to measures taken by the National Bank of Romania, that, by imposing write-off processes, full credit provisioning and implementation of International Financial Reporting Standards, in conjunction with the capital contributions of shareholders, maintained a manageable level of that rate. The evolution of the relationship between the capital and the assets, indicator for assessing the solvency of the banking system, is shown in chart no. 4.
It may be noted that the developed banking systems (German, French) record low levels of this relationship. Therefore, although it is preferable that this indicator be as high as possible, developed banking systems are operating with small and relatively constant values (without significant variations). This is due, on the one hand, to the high degree of banking intermediation and specificity of these banking systems.

Romanian banking system has an adequate level of capital, which is why the likelihood of imbalances is minor (if no major variations occur in the system, likely to trigger a systemic risk). Although it has been identified that in the banking systems of Greece and Italy, risks are major, and the situation is not yet fully stabilized, their impact on the Romanian banking system was minor. Capital issues which Greek banks faced have led to numerous attempts to their withdrawal from the Romanian banking market, by selling shares to other financial groups. However, we appreciate that the Romanian banking system, in terms of the level of capitalization, can be compared with the banking systems in developed European countries.

At the level of the 8 European banking systems, the evolution of rate of non-performing loans during the period 2007-2015, is shown in chart no. 5.

Since 2009, the NPL recorded in the European banking system doubled compared to the recommended minimum (7.89%), increasing annually by the end of 2013. The Greek banking system has registered the biggest declines in the quality of loan portfolios, followed by the Romanian banking system, Bulgarian and Italian (considered as having a medium risk of vulnerability). Banking systems in southern Europe are considered to be riskier in terms of this report and the International Monetary Fund experts have pointed out that in the banking systems where NPL ratio is high, the volume of loans to the real economy was considerably reduced.

In order to manage this rate of non-performance, one of the techniques used was selling packages in a secondary market, companies specializing in recovering non-performing loans being developed. This practice was used in the banking systems in Italy and Greece. Thus, in Italy, it is estimated the sale of packages of bad loans in the year 2016 in the amount of 20 billion euros. In Greece, for better management of this indicator, Parliament passed Law no. 4354/2015 on non-performing loans. Through this regulatory document, the way of constitution of recovery companies and minimum requirements which they must meet was established. Another measure adopted by Greece in an attempt to improve this indicator targeted the implementation of insolvency law, in order to speed up the settlement of arrears pending before the courts.

Non-performing loans rate in the Romanian banking system after 2013 followed a downward trend. Economic theory appreciated that a proper management of the loan portfolio, the non-performing loans’ level of the indicator must be below the 3% level (level reached only in developed banking systems in France, Austria and Germany).

A comparative approach of the level of provisioning for non-performing loans, recorded in the eight European banking systems studied is shown in the chart no. 6.
The Romanian banking system represents the highest degree of provisioning of non-performing loans, followed by the Austrian and French banking system. Since 2013, there is an increasing trend of this indicator for the Italian and Greek banking systems, which highlights the concern of supervisory authorities of the states concerned to minimize risks and vulnerabilities in the face of various shocks. For Germany, the resulting decrease in the years 2014 and 2015 is not real, as the level of this system in the years mentioned for these indicators have not been reported. According to the European Banking Authority’s evaluations conducted at the end of 2015, for a comfortable situation, this indicator should exceed 55%, while a level below 40% indicates the existence of problems within the system indicated. Thus, the seven European banking systems analysed (since Germany has not reported this indicator) recorded a value above the threshold of 40% required for the entire period covered by the research.

V. CONCLUSIONS

The study conducted confirmed that the European banking authorities are concerned to increase the total own funds of commercial banks. In terms of the quality of bank assets, a considerable deterioration in loan portfolio quality was found, mainly due to the financial crisis and mismanagement found at commercial banks. Volatility of the economic environment by damaging certain macroeconomic indicators (rising unemployment, lower growth rate of GDP, price increases, legislative and tax changes, increased public debt) has negatively affected the evolution of the European banking system. The increase in provisions made by banks is a consequence of the deteriorating quality of loan portfolios. The involvement of central banks and supervisory authorities in resolving this problem has resulted in new standards for credit, more rigid national and international regulations in terms of loan classification and recognition of depreciation, which impacted on the modalities for determining capital requirements, at European banking systems included in the research.

VI. REFERENCES

Books and articles:

Reports and legislation:
1. Basel Agreements, available online: http://www.bis.org/publ/bcbs54.htm
2. NBR Annual Reports 2007-2015
3. NBR Monthly Bulletins from 2007-2015
6. International Monetary Fund – „Financial Soundness Indicators”
7. Regulation 575/2013 - on prudential requirements for credit institutions and investment firms - published in the Official Journal of the European Union L176 / 1 of 27.06.2013;

Online sites:
1. www.bnro.ro
2. www.imf.org