FINANCIAL CRISIS AND ITS IMPLICATIONS IN RISK AND PERFORMANCE OF BANKS IN ROMANIA

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Abstract. *In this paper I addressed the most significant aspects of performance banking on a sample of 10 banks in Romania. We started with the significant aspects of the banking crisis began in 2007 and whose consequences are still felt today both in the EU and USA. Based on the rate method I tried to capture the extent to which the financial crisis has had a negative impact on the sample of analyzed banks.*

Keywords: financial crisis, bank risk, the net margin, ROA, ROE

JEL: F34; G01; G21; G30; M41

1. Introduction

Many analysts believe the financial crisis is a new phenomenon, unprecedented in the world economy. From the moment the real estate credit crunch has turned into a world financial crisis, central banks and governments of developed countries strived to release crediting in order to support the economy, which later gradually came into recession. Doing a review on the world economy, we identified other crises unraveled in countries like Brazil or Mexico, but these particular crises were due to inappropriate government policies based on low taxation and a fixed exchange currency rate. "Allah's punishment", "Pearl Harbor's economy", "The explosion of the financial bubble", "The new spill", "Vortex" are some of the phrases used by specialists like Warren Buffett or Alan Greenspan to define the global financial crisis. This unprecedented event has left its mark on all countries worldwide. Given the fact that it had a negative impact, the situation requires an analysis of the factors which led to it. Therefore, the aim of the paper is to draw a clearer picture of the phenomenon and to identify possible solutions. (**Bătrâncea, Bătrâncea, 2009) [1].**

The banking crisis is a subcategory of the financial crisis consisting in moments of panic, temporary confusion regarding incidents within the financial system. The crisis began in the U.S., but because of deregulation and financial liberalization, this phenomenon has spread to Europe and other continents, having a negative impact on the economy and forcing banks to deal with a difficult situation. After receiving bailouts from the government, some banks were nationalized, others were saved, but in many cases they went bankrupt. **(Bătrâncea, Moscviciov, Sabău, Bătrâncea, 2013) [2].**

Due to the complexity of the work carried out by the banking institution, which is intermediate in relation savings-investment banking risk implies a complex event with adverse consequences for the bank, and an event can generate unfavorable banking and other adverse events in the chain. Thus, credit risk can be regarded as a conglomeration of adverse events that generate adverse effects for banks and often interrelated, in that they may have common causes and one can generate systematic production and other adverse events.

2. Literature review

According to literature, the risk is considered to be likelihood or probability of losses not yield expected profit in certain transactions. Thus, the phenomenon of credit risk that occurs as a result of the banking operations and thus causing adverse effects on those activities which damage the quality of the business, the decrease of the profit and record losses and may affect finally functionality banking institution .

In a recent study Berrios, Myrna R., analyzed the relationship between credit risk, profitability and liquidity and has concluded that there is a negative relationship between bank deposits and cash flow banks. On the other hand an excessive prudence causes a reduced performance of the financial institution **(Berríos, Myrna R., 2013) [3].**

Björn Simbierowicz and Christian Rauch in a research undertaken for a period between 1998 and 2010 on a sample of commercial banks in the US have analyzed the relationship between two major sources of risk, namely credit risk and liquidity risk and to what extent this link can measure the probability of bank failure. The two researchers concluded that the two sources of risk directly influence the probability of failure of US banks (**Imbierowicz, B., Rauch, C., 2014) [4].**

Bank risk is uncertainty about the possibilities of collecting value of future earnings or placement **(Cociug, Cinic, 2008) [5]**. And this definition expresses the essence of an adverse event caused by banking business management. Thus the previously reported show that the risk is the chance of an injury, loss, damage, and credit risk is represented by the quantitative expression of the realization of an event that generates loss. The probability of loss is an element that can be determined by statistical and analytical methods.

Simplified expression banking risk refers to the present value of all losses or additional expenses that are incurred by a banking institution. Uncertainty in the banking system has increased with the expansion of national and international credit systems, financial markets became more fragile and also default risks specific financial and banking system have multiplied.

Heightened risks are the main cause of the main problems faced by banking institutions, proven experience. This situation is explained by the fact that the future evolution of the value of assets and liabilities of costs cannot be predicted accurately because they depend on macroeconomic factors: inflation, gross domestic product, however, and monetary policy.

An important cause of the current financial crisis can be identified on the one hand in the absence of regulation in the banking (financial) system of the United States, on the other hand, in the decrease in reference interest by FED after the terrorist attack from 09.11.2001, in order to create liquidity in the banking system and to protect numerous financial institutions entering the payment inability (**Bătrâncea, L.M., Bătrâncea, I., Moscviciov, A., 2009) [6].**

In literature there are other approaches to the causes underlying the problems facing banks, especially in times of crisis, and some of them consider that the risks depend on variations in the level of income set and expenditures covered from them. The main sources of income consist of interest on investments made, and the main expense is the interest that must be honored on deposits.

Bankruptcy prediction models are generally known as modalities of the "dangers" of financial entities. In financial theory are three types of assessment addressed the financial issues namely univariate analysis, multivariate analysis and logit analysis **(Bătrâncea, Bătrâncea, Stoia, 2013) [7]**.

Other theories claim that the main cause of banking risks is macroeconomic factors whose changes are difficult to predict. The most common cause financial losses and insolvency is given the difficulty to cope with events that may occur but cannot be provided. Thus, we consider the risk; intensity and size are given ways exercised to cover the loss, market conditions and the complexity of instruments that lies behind the loss.

The concept of performance in banking activity is associated with value creation, a proportion between cost and benefits. The performance is a hypostasis of general interests, economic and social, which the company uses to improve individual and collective situation. The performance takes different forms, depending on the periods in which reference is made, such as productivity, adaptability, efficiency, etc. Since the concept of performance is used increasingly more for a wide range of activities, it is associated with success, growth, effort, achieving an exceptionally good.

The performance of the banking system can be understood differently in the light efficiency or effectiveness depending on goals, so hedge the performance differ from one institution to another, from one banking system to another, depending on the socio-economic context in which it operates. At the same time the performance of the banking system can be regarded as that condition which is characterized by stability decisions, legislative, through a prudential monitoring and coordination of the players. Also performance can be achieved only by taking risks that can be administered systemically or entity level, making credit risk component of market mechanism. In the context of a world financial standing under the sign of major changes generated by financial innovations that have invaded the banking environment and the changes at the institutional level, ensuring functionality fair and profitable entire mechanism of bank lending requires an organization unique to this activities, as well as principles and rules, prudential rules and risk management of credit, lending techniques and modern methods.

From the institutional point of view the performance evaluation include: allocation of revenues and expenses per unit of activity for the different lines of business, products or segments of a bank; use a system for pricing to quantify the contributions of the various business units; extension of territorial and thus increasing the volume of resources and investments, diversification of products and services is a concern for healthy growth performance of banking institutions.

3. Prudential supervision in Romania in terms of performance and risk in banks

The main project of modernization of the Romanian banking system was transposition of European legislation that ensures the implementation of Basel II standards on capital requirement. In order to supplement primary law on the capital requirement were published the secondary legislation drafted by NBR and NSC, with the purpose of including them in national legislation and technical issues stipulated by EU directives. The approach presented allows applying the same legal requirements to credit institutions and investment services companies. By New Capital Accord published by the Basel Committee encourages cooperation between supervisors of financial institutions that are members of the group, as new standards are applicable to each group entities. For the implementation of capital standards of Basel II requires financial group to obtain approval from the supervisory authority of the host State on methods of calculating the capital requirement for individual levels, but also of the supervisory authority of the home state for the strengthened.

The main objective of banking supervision is represented by improving the current system of monitoring and reporting by creating a unified interface capable of providing information in real time about various queries. In the context of developments alerts Romanian banking system, banking supervision is increasingly oriented to analyze the risk profile of the institution, which is performed using rating systems and early warning tests or the type of stress-testing.

In developing models for credit risk management by banks it is necessary to consider some principles that are consistent with the recommendations of the Basel Committee:

• Credit institutions must take into account that the primary responsibility in the process of composition

• The model must have real capabilities of predictability and risk estimation banks and estimate how they are used in the relevant activities of the credit institution;

• Lack of universal methods of drafting, but only minimal items to be included in the model;

• It should include qualitative and quantitative elements of a contrary;

• The results and the process must be subject to independent review.

4. Performance and risk management in the banking system

In the present socio-economic context, boosted by the economic crisis, it takes performance to be able to "survive" competition. Performance must be achieved by achieving the objectives of financial stability and by finding an optimum ratio between performance and risk.

In the same time liquidity is necessary for the banks to compensate the expected and unexpected balance sheet fluctuations and to provide the funds necessary for development. Liquidity represents the capacity of a bank to cope efficiently with the withdrawal of deposits and the maturity of other debts and to cover the necessary of additional financing for the credits and investments portfolio. **(Bătrâncea, Bătrâncea, Moscviciov, 2008) [8].**

With the integration of European credit market in Romania has gained importance increasingly higher for foreign banks and thus increased vulnerability to the risks arising from this activity. As a result of these market events, the main concern of management of banking institutions became development of relevant risk management policies, which are also reflected at every level of the bank's structure by applying specific tools.

Performance management and risk in banks can be quantified through indicators, namely financial return, which is determined as the ratio between net profit and equity, which is net profit brought a monetary unit of capital. However, this indicator is the most significant expression of banking profit from the perspective of shareholders, as highlights the effect of their employment in banking. Another indicator is economic viability, which is determined as the ratio between net profit and total assets of banks, brought the net profit percentage expressing a monetary unit of assets. This indicates reflect management capacity to use bank resources for profit and is considered the most relevant indicator in terms of efficiency expressed as net result as bank asset management performance.

One of the main challenges to bank management is the implementation of Basel II requirements, which requires companies impact on lending, risk monitoring and customer knowledge. Since credit risk is inherent and inevitable, bank managers to manage risk so they can be kept to acceptable levels in terms of profitability for the banking system. Basel II contains a better assessment of risk exposure by entering into the equation and operational risk and market risk exposures seeing how using methods which are based on historical observations.

In the context of the current economic and financial performance trends and risks in the banking consider the following elements: macro-prudential supervision is the novelty that changes the system of supervision of banks, which aimed to identify and prevent systemic risk; to achieve this using macro-prudential indicators, including the balance sheet indicators, prices, econometric models for analyzing financial crisis, stress test and early warning indicators.

One of major problems for researchers to quantify performance was the banking system, its effectiveness. Performance management requires a thorough weighing from managers regarding the necessary compromises to be made between growth, risk and return. Lately, banks have begun to adopt innovative methods of computing performance, such as return on capital adjusted for risk (RAROC) and economic value added (EVA).

The ultimate objective of RAROC indicator is reflecting a unitary framework for measuring bank performance, but can be useful in determining capital allocation or bonuses for managers.

RAROC risk assessment by the measure entails taking into account the average cost of risk and determining the yield on equity. Relationship determining that consists in reporting the difference between operating income and total equity risk premium. The main limit of this method is to consider only own funds regulated. VAR method is used by all major banks for market risk assessment, this method for the determination of levels of losses over a given period and enables assessment of capital and own funds needed to cover the risk of potential losses. Economic Value Added (EVA) is a modern tool that determines whether a business has earned more than the actual cost of capital. This tool focuses on maximizing shareholder value and application in the banking system is relatively new.

Since the risk can have a strong impact negatively on the value of banking institutions due to losses that may arise, risk management has become a key feature of banks Modern and performance is the main element in analyzing banking business from the perspective of shareholders, management, customer and supervisory institutions. Optimize return-risk relationship is the aim of which is applied at levels each banking product, and then extending to the entire portfolio of the bank. Since the synthetic indicator reflecting economic efficiency of the banking business is profit, banks organize their activities so as to attract a greater number of customers to ensure achievement of the objective, but for this must take account of the competitive nature of the market.

Performance and risk analysis in banks in Romania have done on a sample of 10 banks; the results are summarized in the table below.

Table 1 The evolution of banking performance indicators

Indicator/year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Net margin of bank assets (MAB = VND*100/AB)	5.1574%	4.2518%	3.0954%	3.1868%	3.5227%	3.8125%	4.5429%	3.9025%	3.1715%	3.7236%
Net margin capitalized assets (MAV= VND*100/AV)	5.4078%	4.4380%	3.1959%	3.2557%	3.5956%	3.8823%	4.6151%	3.9639%	3.2274%	3.7845%
*Return On Assets - ROA = RNE *100/AB)*	2.3360%	2.0215%	1.4867%	2.4537%	2.3325%	0.3181%	0.4516%	0.5122%	1.0836%	1.1692%
*Return On Equity (ROE=RNE*100/CPR)*	20.1550%	21.5214%	17.1228%	28.1292%	23.1559%	3.4865%	4.8873%	6.1957%	11.8901%	12.1625%
The profit margin (MP=RNE*100/CAN)	22.8673%	23.3228%	19.9165%	36.8598%	39.7630%	4.7967%	6.5744%	8.8946%	20.5254%	21.7501%
Turnover Assets Ratio KAT=CAN / AB)	10.2155%	8.6675%	7.4646%	6.6570%	5.8659%	6.6310%	6.8689%	5.7587%	5.2791%	5.3756%
Capital multiplier (EM=AB/ CPR)	8.627988	10.646223	11.517336	11.463779	9.9276611	10.96142	10.82247	12.09586	10.973186	10.402329
General profitability ratio (PRG = RNE*100/CTE)	0.1253698	0.1425995	0.0980782	0.1478717	0.1038048	0.01289	0.01866	0.022614	0.1372379	0.166355

Source: Author's calculus

The indicators in the table below are as defined above.

Net margin indicator of bank assets highlights the ability of bank assets to generate net interest income and net interest income reporting determines the total assets.

On the other hand margin net capitalized assets that generate earnings, highlights the extent to which such assets to participating financial gain interest. This indicator is obtained by reporting net interest income to assets capitalized.

Performance evidenced by rate of return on assets (ROA) reflects the profitability of the entire capital invested in the bank. This indicator is obtained by reporting net income by total assets.

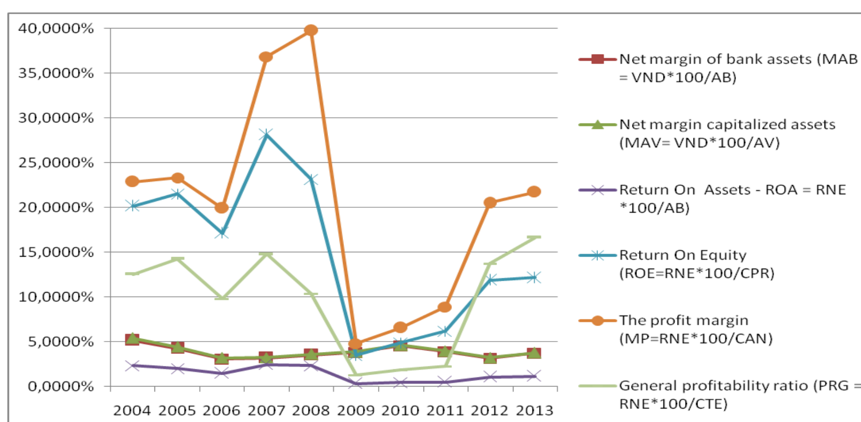
While the rate of return on equity (ROE) reflect the fruit yield of the equity of the bank and measure reporting net profit to equity. In literature this indicator is met as the financial return that measures the return on investment made by shareholders.

Also summarizes profit margin gains from financial operations. Is a function of the operating lever and the added value and the speed of rotation of assets is measured by dividing net turnover of the asset side. This indicator shows how to use the asset and is measured by the number of revolutions.

An important component of performance multiplier is to obtain capital reporting balance sheet assets to equity. The bank's financing activity using both attracted and borrowed funds as well as funds to the shareholders and the higher the multiplier amount of capital means that a portion of the funding is done through debt.

Finally overall profitability rate, determined by dividing net earnings to total expenditure, indicates the total efficiency of resources of the financial institution.

Chart 1 - Evolution of performance indicators

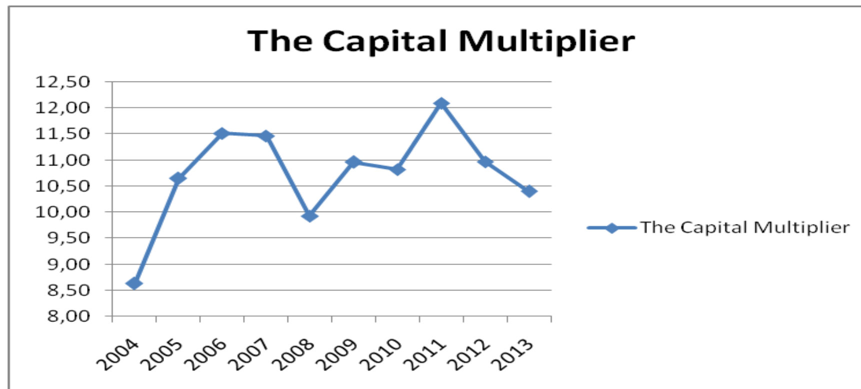


Source: Author's calculus

From the evolution shown in the image above graphic shows the influence of the financial crisis. This picture shows the effects of the financial market in Romania since 2007, on the profitability of banks analyzed. The most obvious is the decline of the profit margin, which aggregates earnings from operations. Return on equity and overall profitability rates

were similar developments but at lower values. Net margin of bank assets, the capitalized assets and rate of return on assets shows a slightly fluctuating trend during the period taken for analysis.

Chart 2 – The Evolution of Capital multiplier



Source: Author's calculus

Capital multiplier represents an increase per whole period but a fluctuating trend from year to year; marking is also here a sharp decline 2007-2008. The evolution of credit risk indicators is shown below.

Table 2 - Evolution of credit risk indicators

Indicator/Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Overall risk ratio	67.7661%	70.4803%	70.7071%	71.1334%	72.5871%	68.8822%	66.9828%	64.5116%	54.0847%	53.3683%
The rate of overdue and doubtful loans in total assets	0.0000%	0.0000%	15.4591%	12.4942%	17.9669%	36.6189%	16.3310%	22.3800%	29.9100%	30.4900%
Operational Risk Index	20.7013%	19.6566%	22.4660%	29.0278%	31.8103%	35.2021%	34.8552%	36.8255%	12.4606%	10.8939%
Market Risk Index	0.0000%	1.9725%	4.0335%	2.4672%	2.2049%	1.7227%	1.6334%	1.4327%	1.8057%	1.9746%
Liquidity risk management	8.627988	10.64622	11.51734	11.46378	9.927661	10.96142	10.82247	12.09586	10.97319	10.40233
Interest rate risk	2.714966	2.440433	2.712418	2.853142	4.217171	4.690932	3.899155	3.985429	3.566433	3.527936

Source: Author's calculus

As can be seen overall risk ratio is the ratio between total assets and net exposure (including off-balance sheet assets). Net exposure is determined by aggregating the total risk-weighted assets and liabilities - off-balance sheet items.

Indicator overdue and doubtful loans are those loans whose repayment is uncertain, based on existing conditions and safeguards. Assets are unprotected or minimally protected realizable value of their collateral.

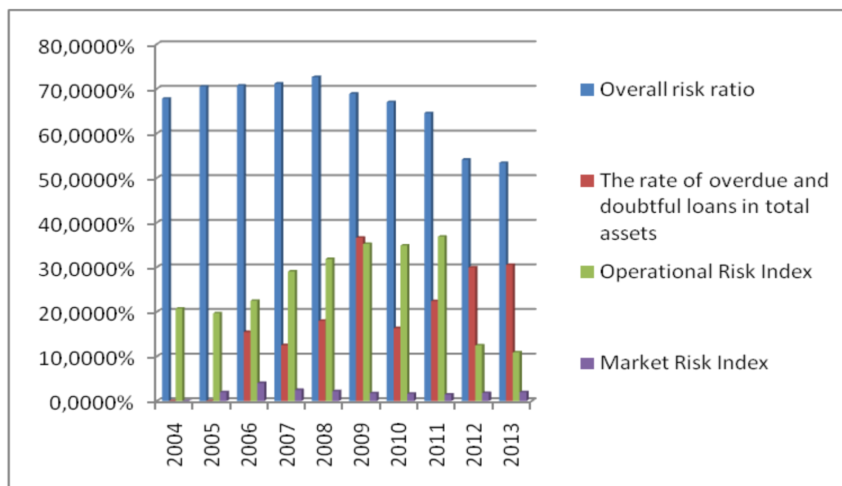
We used the research conducted and operational risk index is determined by dividing the funds allocated for operational risk (12% of total revenue) Tier 1 funds (share capital, reserves, share premium, profit etc.).

Market risk index also is another measure of risk by dividing Tier 2 extra (subordinated debt) to net exposure.

On the other hand the management of liquidity risk is an indicator that underpins confidence in the banking system as banks are credit institutions heavily indebted as the ratio of assets to Tier 1.

Lastly, we find that interest rate risk is determined by dividing the assets sensitive to changes in interest rates (loans and advances to customers and receivables to credit institutions) in liabilities sensitive to changes in interest (debt to credit institutions at sight, liabilities to customers on demand).

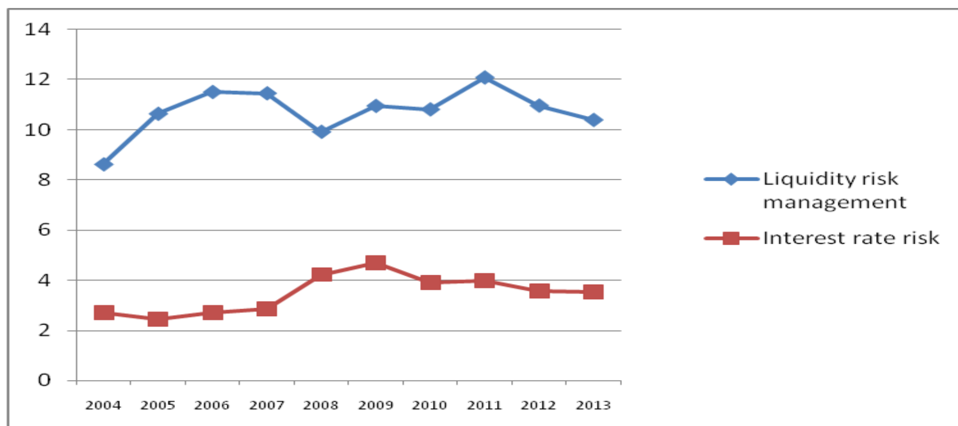
Chart 3 - Evolution of risk indicators



Source: Author's calculus

The above data shows that compared to the general risk index operational risk has a significant weight and an upward trend from year to year until 2011, followed a downward curve, but overall records a halving of values compared to the base year, 2004. The rate of overdue and doubtful loans in total assets recorded an oscillating trend from year to year, and market risk index reflects insignificant compared to other risks mentioned indications.

Graph 4 – The evolution of management of liquidity risk and interest rate risk



Source: Author's calculus

Regarding the management of liquidity risk and interest rate risk, both indicators registered an increase compared to the base year, but oscillatory developments throughout the study period.

5. Conclusions

Due to the complexity of the work carried out by the banking institution, credit risk implies a complex event with adverse consequences for the bank, and an event unfavorable bank may generate more adverse events in the chain of often interrelated, in that they may have common causes and one can generate systematic production and other adverse events

The performance of the banking system reflects the effectiveness of mobilization and allocation of capital, and in that sense banks are forced to mobilize domestic savings, allocate funds for investment, which contributes to increased productivity, structural changes in the economy, find correlations as fair between efforts and effects between efficiency and effectiveness. Thus, the performance is the result of activities undertaken by banking institutions to achieve the desired outcome; this information has become increasingly important higher being called performance management. Also performance can be achieved only by taking risks that can be administered systemically or entity level.

According to international standards, risk management must consider the following aspects: to be an ongoing strategy organization to translate strategy into tactical objectives and operational, to consider all risks affecting the activities of the credit institution and be integrated into the culture organization.

Performance management requires a thorough weighing from managers regarding the necessary compromises to be made between growth, risk and return. Optimize return-risk relationship is the aim of which is applied at each banking product, then extending to the entire portfolio of the bank.

The main objective of banking supervision is improved current system of monitoring and reporting by creating a unified interface capable of providing information in real time about various queries. In the context of developments alerts Romanian banking system, banking supervision is increasingly oriented to analyze the risk profile of the institution, which is performed using rating systems and early warning tests or the type of stress-testing.

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