### UNIVERSITY OF CRAIOVA FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION DOCTORAL SCHOOL IN ECONOMIC SCIENCES

## FINANCIAL STABILITY – SYSTEMIC GOAL IN THE CONTEXT OF GLOBALIZATION

**PH.D.THESIS** 

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#### ABSTRACT

This work is dedicated to the concept of financial stability, which is the main pursuit of the research, from which derives a variety of related aspects, as depicted below.. In the context of the a global financial system, but also taking into account the dynamics of the national ones, marked by interdependence among links in the system and a multitude of risks, . Questions that we sought an answer were: What can be considered a multidimensional concept as systemic financial stability? What are the possibilities for quantitative measurement of the phenomenon? We can quantify financial stability in each "cell" of the global financial system?

There are many reasons why the subject is deemed important and topical. First, we note an increase in the frequency of financial crises and their impact internationally. Economic and social costs of these episodes of fragility or even financial collapse are particularly high, which drives decision-making authorities to find ways to prevent imbalances. Secondly, there is a constantly changing nature of financial risks amid globalization and innovations in the field and risk diversification can reduce systemic risk or can generate more points vulnerable to risky exposures.

Structure aims to analyze a range of factors related to the assessment of systemic financial stability, taking into account globalization and its inherent systemic feature, which creates interdependence in all areas that characterizes modern society, especially in the economic field.

In this case not only the soundness of financial institutions is important, but also the links between them and the regulatory framework of their work. Therefore, connections between financial institutions must be seen as a result of globalization, with all its dimensions.

It also needs to identify systemic risks known ways to prevent their manifestation. The monetary policy promoted by the National Bank of Romania and the fundamental objectives of the interim strategy pursued by means of monetary policy should take account of the need to respect European regulations, resulting in Basel agreements.

Given its many dangers to financial stability arising from globalization requires action related so gradual liberalization of the capital account, accompanied as I said the efficiency gains of macroeconomic policies and prudential supervision and the development of sufficient financial systems. Special attention should be paid to the interdependencies between financial sectors, increased volatility in asset prices and, not least, knowledge of complex financial products operation, however in order to reduce systemic risk and avoid financial crises.

Lastly, it needs an empirical measurement of the phenomenon that summarizes factors influencing stability: macroeconomic conditions, strong institutions, system development, business climate, and microeconomic factors specific identification and quantification of national financial systems. They in turn determines aggregate indicators characterizing the health of the banking sector NPL, adequacy capital, the solvency ratio, which must fall within certain ranges to caution away from a potential financial damage.

The research results will be presented in order of the chapters of the work, always putting emphasis on the conclusions of the deepening level of knowledge as well as personal opinions.

The first chapter, " THE CONCEPT OF FINANCIAL STABILITY -SYSTEMIC GOAL IN THE CONTEXT OF GLOBALIZATION " surprise multicauzalitatea and facets of globalization, at its size, whereas complex concept so there is no generally accepted definition and valid. A first result of the research shows the intensification of financial globalization and phenomena of crisis. Usually financial crises affecting the emerging economies, amid the liberalization of capital and a weak financial system, but not bypass any developed economies. If we analyze only the recent financial crisis, we see that outbreak occurred in the United States and European Union countries are the most affected by the crisis. Underlying this crisis macroeconomic conditions have not necessarily state, but rather links between markets, risky activities of credit institutions and investor exuberance. We can also say that financial globalization is "the glue" between the economies affected by the crisis, given that globalization is by definition interdependent system, and contagion, when relations between states are deteriorating due to difficulties in one or more " partners "of these relationships. Thus, there is a polarization between proglobalists and antiglobalists regarding the potential benefits of globalization: proglobalisti believes that globalization has fundamentally positive effects on the living standards of the population on its income through diversification, but also by the liberalization of movement of labor, capital, technology. While proglobalistii argue that the main beneficiaries of globalization are poor countries, anti-globalists antagonistic convictions, according to which globalization has devastating effects on poor countries because it affects local culture. environment and quality of life. Furthermore, another focus of the first chapter is on defining the concept of financial stability, which, like the concept of globalization, involves several approaches in the literature. I believe that financial stability may be the easiest, but correctly defined in terms of lack of instability, namely the situation where the financial system did not

suffer any deviation from equilibrium, which could be disrupted in deteriorating financial situation of the economy or institution financial coming into contact with it. Thus, there is a close link between financial system stability and ability to withstand shocks to absorb them, so that systemic risk is diminished.

The next result of the work is about identifying systemic risks the authorities will face in the future and to whom may not stay indifferent. Development of financial conglomerates necessary to adapt supervisory framework. Even if at European level were taken several measures in this regard, an important mission have national authorities. That in times of severe financial turmoil shock over part of conglomerates spreads easily across their work highlights the importance of collaboration between regulators and supervision both nationally and internationally. Currently this cooperation is reduced to the exchange of information. But the future is necessary to take clear measures regarding interventte ways to imbalances occurring in these institutions, and drawing clear tasks for financial crisis management.

However, based on Mishkin's statement that financial instability is often replaced with notions of fragility or vulnerability, it is necessary to make a distinction between them. Vulnerability refers to the deterioration of financial stability as a result of external shocks felt in the financial integration process of the affected system in the international financial system, while the fragility keep the system's exposure to risks endogenous and manifests the degree of system development Financial instability unawareness and certain "myths" that have dominated economic thinking over time as market efficiency, rationality of economic agents etc. Along with chaos theory and its specificity in the economy, about the dynamics of the financial system can be made and the efficient market theory. Eugene Fama is the pioneer of this theory, whose postulate argues that efficient capital market is effectively processing the information available and the market price of traded assets reflect the knowledge and expectations of investors. However, financial markets were dominated by imperfections, as reveals the latest global financial crisis. One of the imperfections that reduce market efficiency is the information asymmetries. Accessibility of information does not imply their symmetry, so that market operators have not equally necessary and sufficient information in decision-making. For example, dividend policy depends on the outcome of a firm and the management's decision to reinvest the profit. Leadership choose to distribute dividends instead retain profits and to finance themselves because this policy adds to the company's market image and is considered a period of prosperity crossing signals. The asymmetry of information can lead to phenomena such negative selection; erroneous perception of a credit institution can cause customers to hoard cash instead of making investments to obtain future earnings. Another market imperfection is the externalities that affect operators by market systemic risk, so risk management should judicious be strengthened regulation the bv of market. The banking market is an oligopolistic structure, and modern banking systems are mainly concentrated, being dominated by a small number of credit institutions, in addition to operating and other smaller institutions. Therefore, the behavior of the big banks is particularly important to ensure the financial stability of the system. The banking sector currently enjoy strong regulations to achieve the goals of stability, but the stock market is likely to have destabilizing effects in the behavior of financial intermediaries

that dominate the market. The second chapter, " AMONG THE MACROSTABILIZING POLICIES – ROMANIAN EVIDENCE " is a foray into the Romanian monetary policy, surprising elements of it and continuing with their critical approach. The problem sinuous monetary policy developed, implemented and monitored by the central bank, by customizing the strategy used in our country, those strategy of direct inflation targeting is addressed critically, even comparative analysis in terms of various monetary policy strategies.

Another result of the study shows the progress that the central bank has done in terms of stability. The central bank had an important role in implementing the acquis communautaire in the field of financial regulation and supervision. Also, the strategy of inflation targeting and controlled flexibility of the exchange rate, the central bank contributed to the improvement of the stability of the system. To fulfill the objective of

financial stability central banks can use a wide range of tools such as: promoting a high transparency of the system, identifying risks through supervision of credit institutions, strengthening financial infrastructure and raising awareness among financial markets on vulnerabilities, cooperation with other institutions that supervise the financial markets and providing liquidity to the system as lender of last resort. These safety nets may be labeled "classic functions of stability". National Bank of Romania performs these functions in a framework compatible with the existing European Union. This compatibility is important because by joining the monetary union, central bank actions are carried out on the basis of guidelines and any adjustment or modification occurred after joining the euro area can have a negative impact on stability. NBR contribute to ensuring financial system stability through open-market operations by participating in the deposit guarantee and management of payment systems. An important function is the lender of last rank, whereby the central bank can provide liquidity support to distressed institutions in exchange for solid guarantees or overall market liquidity. The role of the institution in banking supervision is very important, NBR participating in the implementation of Basel agreements.

In Romania, the central bank formally adopted direct inflation targeting strategy in August 2005. The decision to move to inflation targeting was adopted only after this change specific preconditions were met preconditions pertaining to the inflation rate to below the 10 percent increase and strengthen central bank independence, higher bank intermediation (Romania has the lowest degree of banking intermediation in the European Union, macroeconomic indicator related and level of development of the financial system of the country, in our country which is predominated at a rate of 78 percent of the banking system), the recovery and strengthening the banking system. Development and use of the central bank of a performer inflation forecasting is essential in an inflation targeting regime, given the above mentioned anticipatory of such a monetary policy strategy. As shown, reliability predictions however, it depends on many factors, such as knowledge transmission process and, in general, the functioning of the economy, appropriation art theoretical models and econometric appropriate, the existence of relevant statistical data, some information on the side of the capital markets etc. However, the target was missed during the years 2005-2010, with the exception of 2006, and this can be blamed on establishing "artificial" of targets that meet the requirements arising from the specific implementation of monetary policy, but also the need process development nominal and real convergence of the Romanian economy. However, domestic financial and economic context of the "favored" inflation target was missed due to rising inflationary pressure and the demand, and because of liberalization of access to non-residents from making deposits in lei, resulting in increasing volatile capital inflows.

In conclusion, the application of inflation targeting is not simple, for achieving the inflation target depends on numerous political, economic and, ultimately, the support of society. This is because inflation targeting is more than just a technique; it increases the accountability of central banks and obliges it to a close collaboration with the government, unions, employers, etc. For Romania, adopting such an approach is especially important disciplines through its role.

According to NBR, "projected track the annual rate of CPI inflation will record negative by the end of 2016, positive but lower central inflation target (2.5 percent) during the year 2017 following the projection horizon (the second quarter 2018) to reach 3 percent. Excluding from the calculation of the annual rate of CPI inflation effects of successive reductions in the VAT rate, exceeding the expected value recorded at the end of 2015 (1.9 percent) only in the second half of next year, given the persistence of this powerful disinflationary developments interval associated external environment ". A particularly important aspect is the identification of the central bank for monetary policy in the context of globalization, given their need for reconfiguration. The question "overthrowing" the fundamental objective of price stability in favor of financial stability, but I think it is appropriate tracking their correlated without an objective to exclude the other. This reasoning is due to the fact that the recent global financial crisis has demonstrated that price stability, keeping inflation under control in question is not a prerequisite for creating a stable financial framework and protected.

We can say that the effectiveness of monetary policy should be enhanced by all factors of influence on it or act as long-term monetary policy through growth and streamlining the employment, promoting price stability over the medium and long term, to eliminate volatility market control inflationary pressures and anticipating expectations of economic operators on the meaning of price developments and correlation of monetary policy with other policies of the mix macrostabilizator, transmission channels of monetary policy, monetary policy instruments and, not least, the contribution of monetary policy objective financial to the of stability. The third chapter of the work, "METHODS OF FINANCIAL STABILITY QUANTIFICATION", presented together with the relevant arguments, the regulatory and prudential monitoring existing and being implemented as prudential supervision is dependent on the requirements of Basel agreements. Prudential supervision, especially at the macro level is interconnected with ways to quantify the level of financial stability as stable or unstable financial system provides information on the effectiveness of prudential regulations to enhance system's resilience to potential shocks.

Therefore, the effectiveness of the regulatory and prudential supervision is a necessary condition for financial stability. Supervisors must meet the requirements of independence, credibility, accountability and transparency for their actions to enjoy successful. The supervisory framework must be compatible with the design and the regulated industry, in Romania's case, it also requires compatibility with the regulation and supervision at European level. This is necessary to streamline operations and facilitate information exchange among authorities. Even if the creation of a single supervisory body may be a better solution in certain circumstances, as regards the financial sector Romanian argue that BNR role in the regulation and supervision of the banking sector is and should remain important and the work of a joint committee of supervision supervision conglomerates. can challenges of of financial Another important finding of the study relates to highlight the complementarity of quantitative methods for assessing financial stability. EWS helps to identify the likelihood of financial crises. Stress tests assess the responsiveness of the factors destabilizing the financial system, while the discriminant analyzes allow a group of credit institutions according to their risk profile. But these techniques involves numerous limitations. For example, the performance of early warning systems outside the sample are relatively modest. Referring in particular to the method signals, we see that a large part of them are false, and retaining only the analysis of indicators that have high volatility during periods of crisis is not always relevant for the calculation of probability of occurrence of turbulence. Shock resistance tests are complex methods for assessing stability that take into

account both strong institutions and the relationships between them to calculate the strength of the system. And these methods have significant limitations such as data availability or The scenarios that most often is arbitrary.

None of the above methods but do not allow dynamic tracking financial stability or to make a comparison between different financial systems. Therefore, building an aggregate financial stability index that includes all the dimensions of this phenomenon (financial development, its vulnerability to external factors, macroeconomic soundness of banks and the economic climate in the world) is an exercise that is designed to complement the analyzes carried out by the authorities stability assessment. Of these complementary methods we have deepened particular form of early warning system used in our country, namely CAMEL, which consists in giving ratings and determining a diagnosis for a particular bank, depending on the values of the indicators chosen for analysis. It should be noted that banks use their own rating systems, but ultimately particular forms system. they are of this These international agreements are aimed at strengthening the regulation and supervision of financial institutions, but they also have a macro-prudential role by increasing market transparency and the involvement of authorities in managing systemic risk. The novelty of this agreement lies mainly in the need to ensure and maintain financial stability at micro-level bank in our case, to achieve the objective of macroeconomic stability. We also highlighted the innovations introduced by Basel III, these dampers capital requirements of these and their implementation results in banking

It should be noted that the standards imposed by Basel III requirements are more demanding compared to previous agreements, touching macro component, aiming shock absorption and reducing the risk of contagion "from the financial sector into the real economy." They aim at improving the management of financial risk by credit institutions, individual and consolidated financial statements prepared in accordance with IFRS as an interface activities with the public interest of the banks. The timetable of the implementation of Basel III regulations ends on 1 January 2019 with the corresponding breakdown of the measures requires an optional implementation and / or gradual, stepwise increasing, as appropriate. The optimistic scenario of implementation of these measures for prudential European banking system characterized by a return on equity (ROE) "which would fall by 3.7 to 4.3 percentage points from the 15% recorded before the crisis."

policy in different countries more or less developed.

In Romania, ROE is calculated as ratio between net profit and equity to average

and the evolution of this indicator over the last year has seen an upward trend favorable banking system, reaching 12.28 percent in June 2016, doubling to June last year, 2015. I believe that the favorable evolution of ROE can be blamed on improving the quality of the capital base, as presented in the package of measures for prudential reasons, but also to the fact that the profitability of the banking sector is in the process of recovery due to recovery of credit activity, after many banks recorded losses over several consecutive years. However, it should be noted that the high degree of concentration of the Romanian banking sector entails dependence on system performance from large banks that dominate the market, when in reality, many small banks are still at a loss. The fourth chapter and the last, "STUDY ON QUANTIFICATION wide financial stability of the banking system ROMANIAN" aprofundeasză one method of measuring financial stability, this time from the micro level, of a banking, the macro level, the banking system consists of many banks. The method of measuring financial stability has undergone a process of econometric modeling, to establish causal relationships between it and certain independent variables that you have chosen for reasons of usefulness, relevance, and accessibility of data. Regarding the availability of data, branches of foreign banks do not provide information on solvency adequacy ratio of own funds, the volume of bad loans, so some of them could not be included in the study, while others were found financial information consolidated .

In order to analyze the predictive risk of bankruptcy (financial instability) for banks, many researchers have used the function Z-score, the high level of accuracy demonstrated in research conducted in the banking sector Italian, French, Islamic, and of transnational research that analyzes compared the health of the banking system of various countries with the help of Z-score. Z-scores are a method of measuring the risks posed to individual banks. This simple technique has become a popular method for measuring the soundness of banking institutions by Z-scores that are inversely correlated with the probability of insolvency (the probability that the value of assets to be lower debt). The wording is different from the original Altman and adapted to the specific banking and account for financial return or ROE, equity relative to total assets and standard deviation of return on assets, used as a proxy for volatility, as expressed spreading values individual banks obtained analyzed around its average.

Econometric modeling offers a plus of originality, complexity and deepens the investigation of the phenomenon of financial stability, resulting in a multiple linear regression model. Modeling influences determine certain independent variables on the dependent variable, the variable outcome or measure of financial stability, the score Z. The independent variables are chosen microeconomic variables, such as nonperforming loans, capital adequacy, liquidity, net interest margin, the bank size, which can be categorized as part of CAMEL system.

The case study started from an attempt to quantify the financial stability of the Romanian banking system, reflected in the Z score (Z-score), determined as shown in chapter 4. its values cover a wide range, this being due to the heterogeneity analyzed the financial results of banks, and negative values are justified by this loss record at the end

of certain financial years. Losses can be made, obviously, due to deteriorating financial situation as a result of the global financial crisis. After years of record losses and credit contraction, the banking sector appears to lie afloat, and profitability since 2015. Banks have given "unlocked" loans and were able to defer payment issue Release Act so that and Z scores have increased considerably. However, aggregate indicators characterizing the Romanian banking sector, as well as performing loans ratio, capital adequacy, solvency ratio, values are favorable, even exceeding safety parameters imposed by Basel. Even compared to the same period of 2015, the values recorded in 2016 are much higher; for example, ROE reached 12.28% compared to 6.44% in 2015, the solvency ratio exceeds the limit of 8%, reaching levels of up to 20% this year.

Thus, we proceeded to generating the regression model initially having as independent variables indicators of risk management at the level of 13 banks in the Romanian banking system, and as the dependent variable Z score in logarithmic form, its processing is necessary to correct excessive fluctuations manifested in the the data series. By assessing the quality adjustment model linear regression we obtained the following equation:

 $ZSC = 2.775255 + 0.571253*CAR - 0.003023 * NPL + 0.099164 * LQR - 2.528167*NIM - 1.408571*LNA + 8.565735e-10 * ROE+ <math>\varepsilon$ ; through which a percentage of about 75% of the variation is explainable through factorial variables (R2 = 0.749).

Since the approach of testing the predictive value of the model estimated through analysis of assumptions specific fundamental linear regression multiple confirmed the presence of significant correlation series in the regression model, it has imposed the need to take measures to correct the correlations and respecificării initial model. Following the implementation of corrective measures by the procedure differences generalized regression model on the market in terms of return on financial performance has become:

 $\Delta ZSC = 1.185887 + 0.543118*\Delta CAR - 0.002180*\Delta NPL + 0.095632*\Delta LQR-1.109453*\Delta NIM - 1.047203*\Delta LNA + 6.99e-10*\Delta ROE + <math>\varepsilon$ ; where approximately 54% of the variance in the dependent variable is explained by the evolution of independent variables (R2 = 0.543), the percentage being considered significant. This statement is substantiated by the very nature of our experimental approach based on modeling banking sector stability is obvious that in addition to economic rationale, and other causes irrational, and speculation will influence the price of shares on the market. Either surprise these causes irrational in any type of model is an approach unworkable in practice. After analyzing all the assumptions of the model validation estimated both general characteristic procedure multiple linear regression, and the particular level, according to the specific data set being processed, we can say that the new regression model is a viable tool in statistically and economically with which is performed to quantify the financial stability of the Romanian banking system, using a technique simplistic, but explained by the influence of microeconomic variables, specific to each bank.