SYSTEMIC RISK AND MACROPRUDENTIAL POLICY IN THE BANKING SECTOR

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ABSTRACT: *The purpose of this paper is to provide a perspective on the crucial importance of financial stability and the significant role of prudential regulations and banking supervision to ensure the solvency and viability of the banking system. The recent global financial crisis revealed certain week points in regulation concerning supervision and oversight of the financial system as a whole and showed that microprudential supervision could not prevent the increase of excessive risks in the financial system and did not have the means to stop the emergence of systemic risk and to mitigate its effects. It therefore became* clear *that a macroprudential dimension complementing micro-level supervision was necessary and financial regulators began to focus on preventing damage from systemic risk.*

KEY WORDS: *systemic risk, financial stability, banking crises, contagion, macroprudential policy, prudential capital requirements.*

JEL CLASSIFICATIONS: *G21, G28.*

1. INTRODUCTION

Traditionally, the banking system has been subject to a high degree of regulation and supervision. Although there is a tendency in many countries to deregulate the banking system, banking continues to be one of the most regulated economic activities in the world. Depending on the reasons behind their application, three classes of banking regulations can be distinguished: economic regulation, prudential regulation, monetary regulation. Prudential regulation aims to guarantee the efficient allocation of resources, to minimize the risks assumed by banks and to ensure the stability and financial health of each bank and the banking system as a whole.

In general, central banks are directly responsible for and directly involved in prudential supervision. In Romania, the National Bank of Romania ensures the *prudential supervision* of credit institutions by establishing *prudential regulations*,

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setting rules and *prudential banking indicators* and by monitoring their compliance so as to prevent and reduce specific banking risks. In order to protect depositors and to ensure a sound and viable banking sector, the NBR establishes and facilitates effective supervision carried out on an individual basis, as well as on a consolidated or sub-consolidated basis.

Central banks have always been involved in resolving banking crises, being called "crisis managers" with the opportunity and responsibility to save banks facing financial difficulties. Over time, central banks have played a significant role in crisis prevention by developing prudential regulations as a way to mitigate systemic risk (the risk that several banks will go bankrupt at the same time).

There are two main reasons for the intervention of the banking authority in the banking system, namely the need to protect depositors and the existence of systemic risk in the banking sector. Thus, in order to prevent and reduce bank failures, central banks develop *prudential regulations* and ensure *banking supervision*. If prudential regulations aim to ensure the solvency and viability of the banking system, banking supervision focuses on assessing the way in which credit institutions operate. Therefore, the purpose of prudential regulations is to reduce the number of bank failures and to reduce the frequency of systemic banking crisis.

2. SYSTEMIC RISK AND FINANCIAL STABILITY

In the economy, systemic risk is generally considered a specific feature of the financial system. Although the phenomenon of contamination can occur in other sectors as well, the banking system is considered more vulnerable to contagion than other industries since banks are viewed as more susceptible to failures. In general, the sources of systemic risk are:

- first, banks may have correlated exposures and an adverse economic shock may cause multiple bank failures simultaneously;
- then, systemic risk may occur as a result of the contagion effect caused by the bankruptcy of a bank that targets two directions:
  - real exposure within the interbank market and the payment system;
  - bad news on troubled banks spread rapidly and the public usually concludes that other credit institutions are facing similar difficulties.

Systemic risk represents the possibility that financial difficulties at a bank level could trigger severe instability or collapse the entire banking system and generate significant adverse consequences for the real economy. Systemic risk in banking is highlighted by significant correlation and clustering of bank failures in a single country or in several countries throughout the world. Systemic risk can occur as a result of a macro shock that simultaneously affect several banks or as a result of contagion in the banking industry (the failure of one bank can subsequently lead to the failure of other banks).

A financial crisis can be considered systemic if several banks go bankrupt at the same time or if the bankruptcy of a bank propagate among the industry causing the failure of several institutions. The insolvency of a bank leads to a chain reaction within the system and the risk spreads from unhealthy institutions to relatively healthier institutions through a transmission mechanism. The domino effect is a cumulative effect *produced* when one event sets off a chain of similar events. A large scale breakdown of financial intermediation causes huge economic and social costs. Banking crises have not only shown that banks often take excessive risks, but that risk taking differs across banks. Thus, the purpose of prudential banking regulation is to ensure the stability and viability of the entire banking system.

In comparison with price stability, *financial stability* is a much more elusive concept, for which there is no unanimously accepted definition, because it is impossible to assess by a single indicator and to address by a single instrument (Popescu, 2014). However, financial stability can be defined in close connection with:

- the capacity of the financial system to perform its basic functions (intermediation, payment services, risk management);
- the possibility of maintaining a high level of confidence in the ability of a bank to fulfil its obligations;
- the ability to withstand shocks without external interference;
- the ability to maintain an adequate level of economic activity.

According to the National Committee for Macroprudential Oversight, „financial stability is a precondition for the continuity of financial intermediation carried out by financial system operators, essentially contributing to sustainable economic growth, job creation and higher standards of living" (http://www.cnsmro.ro). From the perspective of the European Central Bank, „financial stability is a state whereby the build-up of systemic risk is prevented" (https://www.ecb.europa.eu).

3. PRUDENTIAL SUPERVISION AND REGULATION ON PRUDENTIAL REQUIREMENTS

The main objective of microprudential supervision is to monitor and limit the problematic situations of supervised entities. Unlike microprudential supervision, which refers to the solvency of individual entities rather than the health of the entire financial system, macroprudential supervision aims to prevent the emergence of systemic risk and to mitigate its effects, focusing on the activity of systemically important financial institutions.

The distinction between the micro- and macroprudential approaches can be outlined from the perspective of objectives, the risk model and the interconnections in the system (FSA):

- *from the microprudential standpoint* - risk management is aimed at monitoring the risks that may affect the soundness of the supervised entities; the risk is considered exogenous, independent of individual behaviour and the common interconnections and exposures between entities are irrelevant;
- *from a macroprudential standpoint* - risk management aims at monitoring the risks that may affect the stability of the entire financial system and limiting costs arising from difficulties encountered; the risk is endogenous (internal), influenced by the collective behaviour of the entities and common links and exposures between institutions are significant at the level of the system.

Thus, the risk highlighted by the microprudential approach is "idiosyncratic" (customized to a certain institution), while the risk that is in the centre of attention of the macroprudential approach is "systemic". While, microprudential regulation concerns the safety and soundness of individual entities, macroprudential regulation considers the overall stability of the financial system as a whole and its link with the macro-economy.

In order to ensuring a healthy banking system and considering the features of banking and the significant negative effects of bank failure, regulatory interventions are required. Multiple measures have been initiated in order to improve the stability of the banking system, ensuring an optimal combination of formal and market discipline. Also, a widespread view is that official discipline, implemented through supervision and regulation, should be directed to ensure the stability of the entire banking system. Prudential regulation of banks is therefore necessary to prevent systemic risks by ensuring that banks hold sufficient capital at all times (Ekpu, 2016).

Prudential capital requirements for credit institutions are part of the single regulatory framework of the Banking Union and implement the Basel III Agreement (internationally agreed bank capital adequacy standards) in the EU. Basel III addresses a number of shortcomings in the pre-crisis regulatory framework and new standards imposed by Basel III are more demanding targeting the macroprudential component (capital shock absorbers - novelties of the Basel III agreement), aiming to absorb shocks and reduce the risk of contagion from the financial sector to the real economy. The timetable for implementing the regulations of the Basel III agreement ends on January 1, 2019.

The Basel Committee reforms concentrate on risk management and supervision and key elements of the Basel III framework promote broader financial stability. The reform package of global standards of the Basel III higher capital and liquidity requirements refer to both micro prudential and macro prudential measures:

- the microprudential reforms are institution-specific reforms and promote greater financial system resilience;
- the macroprudential reforms aim at promoting financial stability and limiting systemic risk.

Following the 2007/08 global crisis, the European Commission pursued a number of initiatives to create a banking system less vulnerable to economic shocks for the single market. *Rules on capital requirements* for the banking sector consist of the Capital Requirements Regulation – CRR and of the Capital Requirements Directive - CRD IV and they apply in all EU member states since 1 January 2014 (https://www.consilium.europa.eu/):

- *The Capital Requirements Regulation (CRR)* - is directly applicable in all EU member states, establishing prudential requirements for capital, liquidity and credit risk for o credit institutions:
  - *Capital requirements* - the total amount of capital that banks and investment firms are required to hold should be equal to at least 8% of risk-weighted assets;
  - *Liquidity requirements* - liquidity coverage requirements are introduced starting with 2015; The liquidity coverage ratio that refers

to the proportion of highly liquid assets held by by banks was gradually introduced, starting at 60% in 2015 and reaching 100% in 2018;
  - *Leverage* - is the relationship between a bank's capital base and its total assets. Banks are required to disclose their leverage ratio (which is a bank's tier 1 capital divided by its average total consolidated assets) during an initial observation period that started on 1 January 2015. This ratio indicates how well the bank is prepared to meet its long-term financial obligations.
- ***The capital requirements directive (CRD IV)*** - is transposed into the national law of member states and lays down rules on *capital buffers*, remuneration and bonuses for bank employees, prudential supervision and corporate governance.

The particularly importance played by the transparency of prudential supervision has been emphasized both by the Basel Committee on Banking Supervision and by the relevant European legislation. To this end, the European Banking Authority (EBA) has developed a standardized web structure of publication requirements for supervisory authorities from every EU country and developed technical standards for the implementation of publication requirements. The EBA website is an electronic register of centralized data allowing a quick comparison of all relevant information, while the websites of the supervisory authorities will provide comprehensive and detailed data.

4. MACROPRUDENTIAL POLICY

In order to manage and mitigate systemic risk and to maintain financial stability macroprudential policies were introduced. Thus, the European Central Bank has two main tasks in order to safeguard financial stability and also provides analytical support to the European Systemic Risk Board (https://www.ecb.europa.eu/):

- *to identify risks*, the ECB, together with the European System of Central Banks and the other central banks of the Eurosystem, monitors cyclical and structural developments in the EU banking sectors;
- *to assess risks*, the potential impact of systemic risks on the stability of the EU financial system and its degree of resilience is assessed by using quantitative instruments, such as the ECB’s macro stress-testing framework, network analysis and other tools; a macro stress-testing framework is often used to anticipate the resilience of the banking sector to adverse macroeconomic and financial developments.

The emergence of the global financial crisis has shown that microprudential supervision could not prevent the increase of excessive risks in the financial system and did not have the tools to prevent negative developments at the macroprudential level. If until 2007 there was not too much attention given to macroprudential policy, since 2007 there is a significant increase of interest on the subject.

In response to the recent financial crisis, financial regulators began to focus on making a safer financial sector and have created firewalls to prevent damage from systemic risk. Thus, while microprudential regulations involve the regulation of individual entities, macroprudential regulation seeks to protect the financial system as a whole and macroprudential policy is closely related to systemic risk and financial stability.

Therefore, there has been an increased emphasis on the concept of financial stability worldwide and, starting with 2009, a number of institutions were created in order to identify and monitor risks in the financial system and to maintain financial stability:

- G-20: Council for Financial Stability, 2009;
- USA: Financial Stability Oversight Council, 2010;
- EU: European Systemic Risk Board (ESRB)[1], 2010.

In the European Union, the European Systemic Risk Board is responsible for the macroprudential oversight of the EU financial system and the prevention and mitigation of systemic risk. The ESRB has a significant role in ensuring the efficient functioning of the internal market and the sustainable contribution of the financial system to economic growth. In pursuit of its macroprudential mandate, the ESRB monitors and assesses systemic risks and, where appropriate, issues warnings and recommendations. In order to create a coherent and effective macroprudential framework, the establishment of the European Systemic Risk Board is complemented by the establishment of national macro-prudential authorities, which are responsible in for taking the necessary measures to maintain financial stability in each EU member state (https://www.esrb.europa.eu/).

Following the Recommendation of the European Systemic Risk Board on the macro-prudential mandate of national authorities (ESRB/2011/3), all Member States have set up a designated authority to conduct macroprudential policy (Schoenmaker et al., 2014):

- a single institution:
    - central bank (Belgium, Czech Republic, Cyprus, Estonia, Greece, Ireland, Latvia, Lithuania, Malta, Great Britain, Portugal, Slovakia, Hungary);
    - supervisory authority (Finland, Sweden);
- a board composed of authorities whose actions have a substantial impact on financial stability (Austria, Bulgaria, Croatia, Denmark, France, Germany, Italy, Luxembourg, the Netherlands, Poland, Romania, Slovenia, Spain).

In Romania, by Law 12/2017 on the macroprudential supervision of the national financial system, the *National Committee for Macroprudential Oversight* (NCMO) is established as a structure for inter-institutional cooperation. NCMO, this newly created entity, took over the attributions of the National Committee for Financial Stability (NCFS), established in 2007, in the field of financial stability and macroprudential policies, as well as those related to financial crisis management. All recommendations on implementing the macroprudential policy were thus transferred to NCMO after it became operational on 11 April 2017. Romania's macroprudential strategy is approved by the NCMO and implemented at sectoral level by the National

[1] The ESRB is responsible for the macroprudential oversight of the EU financial system, while the microprudential oversight is exercised by EBA, ESMA and EIOPA, which work together in a joint committee.

Bank of Romania, the Financial Supervisory Authority and the Government, based on recommendations issued by the National Committee for Macroprudential Oversight.

5. CONCLUSIONS

The magnitude of economic losses caused by the international financial crisis showed the relevance of systemic risk, the crucial importance of financial stability and the viability of the banking system. While the main objective of microprudential supervision is to monitor and limit the problematic situations of supervised entities, macroprudential policy addresses risks of a systemic nature. But, and microprudential and macroprudential supervision are complementary as a stable financial system needs financially solid entities and vice-versa.

Following the 2007/08 global financial crisis, the regulators pursued a number of initiatives to create a banking system less vulnerable to economic shocks for the single market as higher capital requirement should increase the resilience of banks in time of crisis allowing them to sustain the real economy and ensure the stability of the banking system as a whole. If in the years before the crisis there was a shallow interest in macroprudential policy, since 2007 financial regulators began to focus on creating firewalls to prevent damage from systemic risk and, starting with 2009, a number of institutions were created in order to identify and monitor risks and maintain financial stability.

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