INTRODUCTION TO THE WORLD OF MACRO-PRUDENTIAL POLICIES*

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Abstract*: This overview is based on a synthesis of the knowledge gained through research papers dealing with macro-prudential policies and financial stability in theory and practice and has as its primary objective to raise awareness of the importance of macro-prudential policies and to maintain the financial stability of the system.*
Keywords*: macro-prudential, macro-prudential policies, financial stability, systemic risk.*
JEL Classification*: E00, E52, E58, E60, E61*

1. Introduction

Despite the rapidly increasing popularity of the subject and the increasing number of research papers dealing directly or indirectly with the macro-prudential policies, the general public still has an unclear perception of this subject and related concepts, such as financial stability and systemic risks. This is partly because these are extremely complex concepts, which are not yet evenly defined with all the significant progress that was made in recent years.

The sound operation of the financial system contributes to economic growth because it guarantees that only the best investment opportunities will be financed, favors capital accumulation and improves the distribution of the risk.

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Before the 2008 financial crisis, the international financial system was characterized by rapid growth, but this development was not sustainable and generated large macroeconomic and financial imbalances globally. The financial crisis has aggravated these imbalances and added new ones. Against this backdrop, the need to approach financial intermediation and supervision both from a micro-prudential and macro-prudential perspective has become increasingly important, and there has been noticed a lack of intervention framework to help identify potential economic imbalances.

2. The origins and history of the macro-prudential term

The history of the macro-prudential term is a complicated one, but according to Clément's (2010) rigorous documentation, BIS argues that this word has been used for the first time in an international context since 1979 at a meeting of the Cooke Committee (the forerunner to the current Basel Banking Supervision Committee, BCBS).

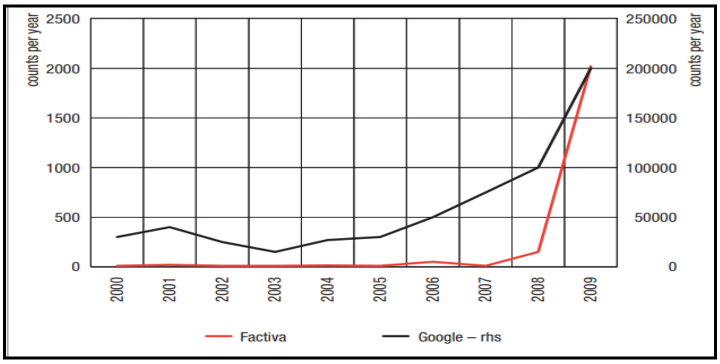
The first appearance of the macro-prudential term in an international document dates back to 1986. It is in a report that refers to the latest innovations in financial services where several paragraphs focus on the concept of "macroeconomic policies". The report defines a policy that promotes "the safety and the soundness of the overall mechanism of the financial system and payments" (BIS (1986, p. 2)) and analyzes how financial innovation can generate risks for the entire financial system.

The second occurrence of the macro-prudential term is in a document written by the Bank of England for a working group led by Alexandre Lamfalussy, BIS economic adviser and chairman of the standing committee for the euro. In the coming years, the term "macroprudential" has largely disappeared. It probably continued to be used in internal BIS documents, but public documents rarely contained it.

The next occurrence is in the ECEC report from 1992 regarding recent developments in international banking relations (Promisel Report, BIS (1992)). This report was drafted by a working group that instructed the G10 governors to "focus on the role and interaction of banks in non-traditional markets, especially in derivatives markets, to examine the links between different segments of interbank markets and among players which act within them and take into account the macro-prudential concerns that these issues could bring about."

In October 2000, BIS Managing Director Andrew Crockett made a speech at the International Banking Supervisors Conference. The thesis was that obtaining financial stability forced the consolidation of the macro-prudential perspective. The speech was an attempt to provide a more accurate analytical definition of the two perspectives, seen as inevitably coexisting within the prudential framework (Crockett, 2000).

By the end of 2000, the term "macro-prudential" was also used outside central banking, with the 1997 Asian financial crisis acting as the main trigger but widened only after the global financial crisis of 2008 (Clement, 2010). This is also confirmed by the data on the number of academic publications in which it is mentioned and the number of results of this term on Internet search engines (Figure 1).



Source: Galati and Moessner (2011).

Figure 1

3. Macro-prudential policies

The macro-prudential word is formed from the prefix "macro-" which helps to compose some nouns or adjectives and means "big" or "very large" thus referring to the fact that the policies or actions refer to the whole component or to a significant part of the financial system, and not to individual financial institutions. By contrast, supervisory or regulatory policies for individual financial institutions are known as micro-prudential policies.

Prudence is another word for caution and refers to a conscientious judgment, a careful examination of the circumstances. Thus, prudential policies refer to actions that promote robust practices and seek to prevent as much as possible risk-taking. Macro-prudential policies should, therefore, help ensure that everyone has a cautious approach to taking risks that could impact the entire financial sphere, i.e. systemic risks.

The central bank of Germany has a similar definition for macro-prudential policy, referring to the fact that the objective of these policies is to influence the stability of the financial system as a whole (hence the "macro"), using regulatory and supervisory instruments "prudential") - unlike micro-prudential supervision, which deals with individual financial intermediaries (such as banks or insurers).

As a first step towards understanding the importance of a macro-prudential approach to the process of maintaining the stability of the financial system as a whole, the most common definitions of macro-prudential policy and closely related concepts - financial stability and systemic risk will be presented.

The term "macro-prudential policy" has developed over the last thirty years in correlation with the advance in monetary theory, and it is clear now that the objective is to achieve financial stability, but this term does not have a unanimously recognized definition.

Because the functioning of the financial system depends to a large extent on macroeconomic developments, it is necessary to understand also the financial interconnection of institutions and markets with the real sector (Rodriguez Moreno and Pena, 2011). Macro-prudential policies study the relationship between financial institutions and the non-financial segment of the private sector in mobilizing and allocating financial resources on financial markets and the ability of these sectors to meet their obligations (Johnston, 2011a).

As originally defined, the term "macro-prudential" meant the orientation of supervisory regulations to systemic risks and the stability of the financial system as a whole (Borio, 2010), pointing out that the determinants of systemic risk depend on the collective behavior of financial institutions.

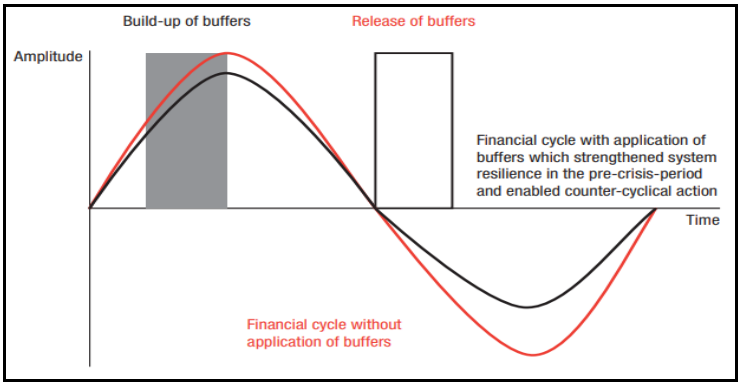
By the Bank of England (2009), the objective of macro-prudential policies is to ensure the resilience of the financial system as a whole, in order to maintain a stable supply of financial intermediation services throughout the credit cycle. In other words, this policy aims at preventing systemic risks and reducing the probability of systemic events related to financial institutions, markets, infrastructure and instruments that could threaten the stability of the financial system.

In general, the macro-prudential policy addresses the financial system and its interconnection with the real economy. Over time, it has been observed that price stability fails to lead exclusively to macroeconomic stability in the long run. The fundamental idea is that prudential supervisors should have a vision at the level of the whole system as they supervise. They should recognize that the actions of individual enterprises can collectively generate a systemic risk, even if those actions are individually rational. They should recognize that risk can be built over time and that risk distribution may be important. And, according to this view, it should avoid strictly focusing on the safety of individual institutions, without considering the feedback from the behavior of these institutions to the wider system.

There are three important dimensions of "macro-prudential" policies - structural, time and regulatory.

The structural dimension refers to systemic risks arising in an institution or group of institutions due to externalities such as interconnection or high concentration of individual financial services (Johnston, 2011b).

The temporal dimension is used to determine the risks from the point of view of the economic and financial cycle phase. In the expansionary phase of the economic cycle, the macro-prudential policy should be geared towards capital and liquidity buffers, thereby reinforcing the system's resilience to potential shocks and attenuating this phase of the cycle. This also allows an anti-cyclic effect during a recession (Figure 2).



Source: European Systemic Risk Board (2014).

Figure 2. Stylised transmission of buffers over the financial cycle

The macro-prudential policy should be understood as a framework to mitigate systemic risk (or its accumulation), thereby contributing to the ultimate goal of the financial system stability and thus to sound economic growth.

Macro-prudential instruments are qualitative or quantitative tools or systems-wide measures that authorities responsible for maintaining the stability of the financial system use it to achieve financial stability.

In the last decades, the global financial system has been characterized by the processes of financial liberalization and integration and the acceleration of technological development. However, financial liberalization has also become one of the main sources of systemic risk and financial integration has widened the magnitude of crisis episodes, while technological development and sophisticated financial products have greatly accelerated their proliferation (Haldane, 2006). A survey carried out on a sample of 21 countries showed that there was only one banking crisis in the 25 years from 1945-1970, while in the next 30 years there were up to 19 crisis episodes (Bordo et al., 2001).

It has been demonstrated that regulation and financial supervision based on the micro-prudential perspective are not always enough and cannot function separately to safeguard financial stability. Therefore, a macro-prudential framework that complements the micro-prudential one is necessary. For example, according to Crocket (2000), financial stability can be most productively obtained if a better "marriage between micro- and macro-prudential dimensions" is achieved.

Borio (2003) argues that the prevention of financial instability can be improved only if the macro-prudential approach of regulatory and supervisory frameworks is strengthened.

The increase in the importance of the concept of financial stability by supervisors at both European and global level has been materialized by defining a framework for the operationalization of macro-prudential policy, together with the establishment of coordination bodies in this field. For example, the European Systemic Risk Board (ESRB) appeared in Europe, the Financial Policy Committee (FPC) was launched in the UK, and the Financial Stability Oversight Council (FSOC) was established in the United States.

The European Systemic Risk Board (ESRB) was set up in 2010 as the responsible body for macro-prudential oversight of the financial system within the European Union. It aims to contribute to the prevention or mitigation of systemic risks and the efficient functioning of the internal market. The ESRB issues recommendations and warnings in the field of macro-prudential oversight for all EU Member States.

The Single Supervision Mechanism (SSM) was set up in 2014 and the ECB has therefore become responsible not only for micro-prudential oversight powers but also for macro-prudential and intervention rights vis-à-vis SSM Member States.

The European Systemic Risk Board (ESRB) made recommendations on macro-prudential policy and its objectives in 2011 and 2013. The identification of intermediate objectives makes macro-prudential policy more operational, transparent and accountable and provides an economic basis for the selection of instruments.

The 2013 ESRB Recommendation refers to the macro-prudential mandate of national authorities through the development of macro-prudential policy objectives and instruments. ESRB / 2011/3 Recommendation of 22 December 2011 refers to the identification of intermediate targets as operational. The Recommendation of ESRB / 2013/1 aims to take the necessary measures for macro-prudential operational supervision.

The ultimate goal of macro-prudential policy is to protect financial stability, strengthen the resilience of the financial system, and reduce the accumulation of systemic risks. A stable financial system contributes to sustainable economic growth (ESRB, 2013a).

4. Financial stability

The core objective of central banks on price stability was considered enough to ensure financial stability. The 2008 global financial crisis has shown that it was not a sufficient condition.

Financial stability is the first condition for ensuring financial intermediation processes between the participants in the financial system, thus contributing fundamentally to ensuring sustainable economic growth, job creation, and livelihoods.

The economic importance of the stability of the financial system stems from its key role in the allocation of capital, i.e. in the transfer of financial resources from entities with surplus funds to deficient entities.

The concept of financial stability does not yet have a well-established definition or an analytical model or framework. On the other hand, taking into account the functions of the financial system, it can be appreciated that a financial system is stable when it is able to efficiently allocate economic resources (both spatially and especially inter-temporally), manage financial risks through a proper measurement and has the capacity of self-correction when it is affected by external shocks.

The simplest definition of financial stability is a denial, i.e. the absence of financial instability. In addition to the concise character, the main deficiency of such a definition is that it does not adequately reflect the importance of financial stability for the financial system and the economy in general.

The European Central Bank defines financial stability as a condition where the accumulation of systemic risks is prevented. Systemic risks may block the process of providing financial services by the financial system, and economic growth and welfare could be significantly affected. Thus, a financial system is in a state of stability when: it is capable to efficiently allocate real resources, increase production investments and savings, create wealth, identify and dissipate financial imbalances that endogenous appear or as a result of adverse and unpredictable events.

Thus, a financial system, irrespective of its size or complexity, can be considered stable when it is able to facilitate the performance of an economy and correct the imbalances that arise from significant adverse shocks.

The National Bank of Romania describes financial stability as a global public good characterized by non-equity and non-exclusion. This public good cannot be offered exclusively by the market, the central bank and other state institutions playing an important role in ensuring financial stability.

Financial stability is a prerequisite for a sound financial system that contributes to sustainable economic growth. Therefore, financial stability is the basic prerequisite for the sustainable growth of an economy as a whole.

5. Systemic risk

One of the fundamental ideas of macro-prudential policy is that responsible authorities need to consider risks from a systemic perspective. It is not enough for individual banks to be stable and resilient. The effects of contamination must be included in the analysis - and not only in terms of liquidity issues. The financial crisis has shown what happens when many banks assume the same type of credit risk. Systemic risk has made a major contribution to the 2008 financial crisis.

The term (systemic risk) was invented at the beginning of the Latin America debt crisis in the early 1980s by economist William Cline (Ozgöde, 2011). According to its definition, systemic risk poses a threat that disturbances in the financial system will have serious negative effects on the entire financial market and the real economy.

To understand what systemic risk is, first of all, must be clarified, the concepts of systemic process and the systemic crisis. The systemic process is that in which the emergence of negative information about a financial institution (or even its bankruptcy) triggers a series of adverse effects on other financial institutions. A systemic process is considered strong if at least one entity affected by the initial shock goes bankrupt although it was solvable before. In any other case, the systemic process is considered weak.

Thus, the systemic crisis is a powerful systemic process involving a sufficient number of entities that affect the proper functioning of the financial sector. The good functioning of the financial system refers to the efficiency with which depositors' savings are allocated to the real sector.

The European Systemic Risk Board (ESRB) defines systemic risk as the risk of disturbance of the financial system which can have serious negative consequences for the internal market and the real economy. All types of intermediate financial entities, markets, and financial infrastructures may be systemically important to a certain extent (Regulation (EU) No 1092/2010).

The National Bank of Romania says about the systemic risk that it is the risk that the failure of a participant to fulfill its obligations to participate in a system, or in the financial market, will lead to non-fulfillment of the obligations assumed by other participants. This failure to meet obligations may cause significant liquidity or credit problems and may, therefore, endanger stability or confidence in the financial system.

Macro-prudential policies aim to address both the systemic risk (timeframe) and the distribution of risks in the financial system at one point (the "structural dimension") (BIS, FSB, IMF, 2011). Thus, both the temporal dimension and the structural dimension define systemic risks. As a rule, they accumulate over time in the correlation between the financial sector and households, corporations and government and, at the same time, in the correlation with foreign financial institutions (IMF, 2013). Examples are significant concentrations in certain banking activities (e.g., real estate sector credit concentrations in some countries), significant leverage, rapid borrowing, the oversupply of external ratings, large sovereign exposures, or asset and maturity mismatch. Silva (2016) finds that banks' liquidity and maturity mismatch decisions are indeed strongly affected by the respective choices of competitors and show that these strategic funding liquidity decisions increase both individual banks' default risk and overall systemic risk.

All these risks and any other possible new challenges need to be identified and monitored in a timely manner, while instruments and mitigation mechanisms should be implemented at both macro and micro-prudential levels. As a rule, they accumulate over time in the correlation between the financial sector and households, corporations and government and, at the same time, with foreign financial institutions (IMF, 2013). The structural dimension of systemic risks influences the magnitude and speed at which they are spreading.

Along the time dimension, periods of abundant liquidity can increase institutions' liquidity risk-taking. During a boom phase, the financial system can suffer from a liquidity illusion. At this stage, indicators of funding and market liquidity tend to suggest low liquidity risk, causing investors to regard their own liquidity risk exposure as low. Issuers also regard it as low because funding and market liquidity are abundant. In response, individual investors and issuers increase their liquidity risk exposure, reducing their liquidity risk-bearing capacity.

6. Interaction between monetary policy and macro-prudential policy

The two policy areas interact and their effects on each other must be considered. There is usually no compromise between price stability and financial stability. Price stability contributes to financial stability by eliminating inflation-related distortions in financial markets. At the same time, financial stability facilitates the central bank's task of maintaining price stability by contributing to a stable money transmission mechanism - a prerequisite for a central bank to carry out its tasks.

In the spirit of Tinbergen, two different objectives require the use of two different sets of instruments, the objective of monetary policy remains to maintain price stability over the medium term, while the main task of macro-prudential policy is to address the risks to financial stability and to limit the latter financial cycle, so that the risk of financial crises is reduced and the real economic effects of financial crises are mitigated.

Monetary and macro-prudential policies complement and need each other. Monetary policy is best implemented during stable financial market conditions without liquidity shortages or excesses. To ensure such an environment of financial stability, a macro-prudential liquidity policy is necessary. In a crisis, monetary policy could, in turn, play an important role in contributing to financial stability.

Financial stability is a prerequisite for efficient transmission of monetary policy. Ensuring price stability through monetary policy is based on the efficiency of the money transmission mechanism. The central bank has direct control over short-term interest rates. Decisions on monetary policy on interest rates work in the economy through various channels and affect both expectations and a wide range of asset prices. It is clear that financial instability would affect the transmission of monetary policy.

Thus, the objective of monetary policy remains to maintain price stability over the medium term. As mentioned earlier, the main task of the macro-prudential policy is to address the risks to financial stability and ultimately to limit the financial cycle so that the risk of financial crises is reduced and the real economic effects of the financial crises to be mitigated.

7. Conclusions

It is essential that countries around the world complete and implement the new types of regulation. In order to counteract growing vulnerabilities, macro- and micro-prudential policies should be developed and implemented as soon as possible.

Vítor Constâncio, the former ECB vice-president, mentioned in 2014 at a seminar held at the Central Bank of the Netherlands that we must accept the prudent uncertainty and experimentation for the decisions we must take based on the empirical studies of real experiences and sometimes on econometric evidence poor. In his view, success can only be achieved if central banks have the right to play an important role in the macro-prudential decision-making process.

Adrian Tobias from the IMF said in October 2018 that more active use of countercyclical buffers could have good results at the moment. Regulatory and prudential supervision must remain vigilant and pay attention to emerging risks, including those related to cyber-attacks, new technologies and other risky activities that are developing beyond the regulatory perimeter. International cooperation is essential to maintaining global financial stability and fostering sustainable economic growth (IMF, 2018).

A recent study by the BIS on a sample of 64 countries has shown that countries that use the macro-prudential instruments more often face stronger and less volatile GDP growth. These effects are also influenced by the financial opening and development of each economy (BIS 2017). The purpose of the macro-prudential policies should certainly be to temper the cycle, rather than to increase the resilience of the financial sector before the crisis. Macro-prudential policies are designed to make financial crises less likely or less serious.

Now that many countries now have an institutional framework, including Romania (in December 2017 the National Committee for Macro-prudential Supervision was set up), the challenge is to make macro-prudential policy really operational stimulating authorities to take action.

The central bank should have a significant role in macro-prudential policy, irrespective of the type of institutional model. The reasons are expertise in identifying systemic risks, incentives to pursue macro-prudential policy effectively, and less likely to be affected by political pressures.

Despite the challenges in detecting and reacting to real-time risk accumulation, analyses suggest that a macro-prudential regime with a correspondingly strong mandate coupled with the power to adapt the leverage of the financial system and to transform maturity / liquidity and to limit the degree household indebtedness sector significantly improved the macroeconomic decline of the real estate bubble collapse.

Ten years after Lehman Brothers failed, the global economy continues to grow and the progress towards a safer global financial system is unquestionable. New supervisory, regulatory and regulatory standards, tools and practices have been developed and implemented across the globe. Banks are now stronger because the quality and quantity of capital have steadily increased, and minimum liquidity standards have been introduced across the globe. Supervision stress tests have been widely adopted, and many countries now have macro-prudential frameworks and policy tools to address systemic risks.

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