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Macro-prudential View of Financial Stability

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ABSTRACT - The paper points out the key features of "macro prudential" new framework, accepted by all relevant international institutions, in an effort to mitigate the externalities that can lead to vulnerability of the financial system and trigger a systemic risk. The emergence of the term dates back to the seventies, which over time have been almost forgotten, that was resurrected again in the second half of 2008, after a major global economic crisis. There is no single universal precise definition of "macro prudential", although most definitions contain several common characteristics. I focus on systematic risk, defines the key objective "macro prudential" or the regulation and supervision of the financial system as a whole rather than individual institutions. To limit the risk of global financial shocks, suggest different macro prudential indicators and instruments for assessing the health of the financial system and its vulnerability to shocks. The regulation and supervision of the financial system used macro prudential tools that are designed to enable efficient control policies, with particular focus on improving the resilience of the financial system impact of systematic risk. Macro prudential analysis focuses on factors that may threaten the stability of the financial system and the interrelationship between macroeconomic and financial stability. Macro-prudential application is based on rules or discretion, the entire system or individual financial institution, national or global level.

KEY WORDS: macro-prudential, macro-prudential instruments, macro prudential indicators, macro prudential tools, macro-prudential analysis

Introduction

After the Great Depression in the second half of 2008 year almost forgotten name "macro-prudential" is "like a phoenix from the ashes" suddenly became the most widely used term in economic literature and economic debates. Initiatives have emerged from the major relevant organizations and institutions in order to identify future sources of risk and adoption of operational guidelines in the form of recommendations aimed at preventive action, possibly on a possible, future global economic crisis. Initiatives have focused on issues of implementation and development process in macro-prudential damping systematic risk and resilience of the financial system from future shocks and earthquakes, in particular, from the standpoint of international integration with post-ante implications.

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A key approach to the international community has a strong international focus on the analysis of financial stability, which has increased the scope of analytical challenges for economic policy makers. Innovations are already visible through greater government commitment to effective cross-border cooperation, in regular exchanges of information and so on, and on the horizon and the formation of new frameworks for cooperation.

It is the subject of this paper is that on the basis of relevant literature, point to the theoretical aspect, key terminology and the main features macro-prudential process, in order to clerks in the absence of literature in the Serbian language, initiate further discussion on the specifics macro-prudential approaches have the appearance of systemic risk, due to the effects of shocks and external elements, which may cause the vulnerability of the financial system.

The paper consists of eight parts. The first part indicates the origin and evolution of the term "macro-prudential" in the second part discusses different approaches to defining "macro-prudential", the third part deals with a number of definitions of systemic risk on the basis of which is determined by a key objective macro-prudential from which they derive, and other intermediate goals in the fourth explains the macro-prudential indicators used for assessing the vulnerability of the financial system and is mainly related to the health of individual institutions and the macroeconomic variables, in the fifth points to a wide array of instruments that can be used for amortization of systemic risk, with the aim of adapting existing macro-prudential tools toward the development of prudential standards and to mitigate the negative tendencies that can produce systematic risk, in the sixth discusses macro-prudential tools that can be used for monitoring with special emphasis on improving the resilience of the financial system from the impact of externalities, and amortization of pro-cyclical trend of market participants, in the seventh based on the reference frame IMF considers macro-prudential analysis with special reference to its role in the timely identification of factors that endanger or likely to cause financial instability, and then the crisis. Finally, it discusses the implementation macro-prudential perspective.

Origin and evolution "macro-prudential"

The international financial crisis that emerged in the second half of 2008 has sharply risen, "the old idea whose time has come" (Borio, 2009) almost neglected macro-prudential orientation. The emergence of the term "macro-prudential" two-dating the late seventies, when used in the debates of the Bank for International Settlements (BIS) to indicate a systematic relationship between the broad orientation of regulatory and supervisory framework and macroeconomics. Later, during the mid-eighties, the term "macro-prudential" was first used by the general public the economic, in the context of the ECSC (European Coal and Steel Community) report on the "innovations in international banking, devoting several paragraphs to the" macro-prudential policy." The report is defined as a policy "that broadly promote security and stability of financial systems and payment mechanisms." In a report titled "macro-prudential issues related to financial innovation for the period 1980-90. Whatever. "Examines how financial innovation can cause a risk to the entire financial system" (Clement, 2010) with special emphasis on securitization and derivatives markets, as major carriers of growth in capital market activities. I report, points to certain weaknesses that specifically relate to regulatory arbitrage, low-risk evaluation of



new instruments, the overestimation of their own liquidity risk due to the invisibility of the interconnectedness of financial institutions (risk of concentration risk), delay in payment and settlement due to the enormous increase of transactions and stronger growth in total debt. The report was intended for the Basel Committee, expressing different views and concerns on the one hand ECSC, on the other bank auditors who are focused on individual institutions. The conclusion was that the preferred approach of functional institutional control, with the ability to avoid gaps in regulation. In the future the term "macroprudential" has almost ceased to be used except in the BIS documents, especially the ECSC, but in public statements and written documents rarely could find. Only after the report ECSC in 1992 years linked to developments in international banking relationships, "macroprudential" gets a new look. The report was criticized by a group of G10, which are related to the role and interaction of banks in non-traditional markets, especially in the derivatives markets, insisting, at the same time, to examine the links between different segments of the interbank market and the active players in them, and to consider macro-prudential issues that may arise from these aspects. ECSC Working Group is in a later report Brockmeijer report from 1995 years, which treats issues in measuring market size and macro-prudential risks in derivatives markets kept this term, and the main features of the report relating to the lack of transparency in the derivatives market, market concentration in several institutions, whose decisions can affect liquidity. At the same time, the term appears in the annual report of the BIS in 1997 years, the part that deals with the evolution of central banking. In any case, the term used for the analysis of policies to improve the stability of the entire financial system, with particular focus on mutual, interactive relationship between institutions and markets.

Macro-prudential term, the later nineties began to be used outside of central banking. In particular, the term is expressed 1997th years in the wake of the Asian crisis. MMF was first pointed out macro-prudential analysis, 1998 years as "effective control of banks, which must be continuously present. This is mainly achieved through an external (off-site) supervision in macro-prudential and micro scale. Macro-prudential analysis is based on macroeconomic and market intelligence data and focus on important developments in asset markets, other financial intermediaries as well as macroeconomic trends and potential imbalances. The main policy is to monitor the development of better statistics, which should assess the vulnerability of the financial system, the so-called macro-prudential indicators. "(IMF, 2000)

It was only the beginning of the new century began the first efforts toward a more precise definition macro-prudential process with the aim of finding some implications toward building new architecture macro-prudential solutions. The architect of this effort was the then Director General of BIS E. who in a speech in 2000 the "International Conference of Banking Supervisors macro-prudential and comparative view of macro-prudential regulation and super-review", advocated that financial stability can be achieved by strengthening macro-prudential perspective. He pointed to two different aspects macro-prudential approach. The first aspect focuses on the entire financial system with the aim of limiting the costs of financial distress in the real sector. Second, it refers to the recognition that the overall risk depends on the behavior of financial institutions. Micro-prudential approach is defined as limiting the risk of failure of individual institutions. The result of the adverse effects of externalities is included.



Later, this perspective has developed Borio (2003). During this period, use of the term becomes widely accepted and used together (for example, IMF 2000). After that, many countries have gradually begun to increasingly use the term macro-prudential perspective, as already suggested by the works of Knight (2006), White (2006) and BIS (2008), to the outbreak of major global crisis in the second half of 2008 years received an extraordinary impetus and importance in the direction of application in order to combat the spread of infection to the crisis. The term is widely accepted by politicians and the academic community that fought (2009) cited a reference, "to paraphrase Milton Friedman might say that we are all macro-prudential now." The old idea whose is coming.

Terms used in wide academic and political circles have two dimensions. Deliberately styling the two views is intended to indicate the orientation of the two co-exist with each other in the existing framework macro-prudential perspective. The first orientation focused on the overall financial system and is aimed at limiting the macroeconomic costs of episodes of financial distress. Such an approach is viewed as the aggregate risk depending on the overall behavior of financial institutions, and their interconnection, and exposure to (endogenous). The second orientation is subsequently recognized by many researchers and policy makers, and addresses the risks outside the financial system (exogenous) and focused on the individual agents who are primarily related to asset prices, credit market conditions and other economic activities.

In parallel, the use of the term remains ambiguous. In some situations the term is used interchangeably with prudential approach in order to limit the impact of procyclicality in the financial system as a major cause of financial instability. In other cases it is still unclear in terms of benefits designed to indicate the approach to address widespread or systematic-systematic risk.

The definition of "macro-prudential"

In economic literature there is no single, precise, uniform definition of "macro-prudential". Basically, the definition varies depending on the needs of research, although in fact can elaborate several common characteristics most definitions. (Future Group of Thirty, 2010)

- "Macro-prudential" seeks to monitor, assess and provide appropriate policy responses to the development of the financial system as a whole rather than focusing on individual financial institutions or to single isolated policy measures,
- 2. Macro-prudential "aims to improve the resilience of the financial system and to mitigate systemic risks that arise and propagate in the internal financial system through the relationship of institutions on the basis of joint exposure to shocks and trends of behavior of financial institutions in the pro-cyclical situations in a way to increase extreme financial cycles
- 3. Macro-prudential "used on a regular basis a lot of tools to control the degree of solvency required to mitigate pro-cyclical tendencies, but they are applied in order to reduce systematic risk and increase resilience of the financial system to absorb this risk,



4. Recognizing the complementary nature "macro-prudential" in other areas of economic policy, supervisors responsible for implementing macro-prudential policies, either through a new coordinating organization or as part of existing institutions, must inform and be informed of the monetary, fiscal and other government policies, and to give primary responsibility of other entities in these areas.

Borio (2009) the most prominent advocate in the BIS survey "macro-prudential", gives the following definition: "The basic definition of "macro-prudential" a belief or perspective of the regulatory and supervisory arrangements." On the premise of the basic definitions, he defines three basic functions of access control and surveillance "macro-prudential", referring to the objectives, focus and risk characterization.

By the same author, other definitions out of context BIS have such importance. He cites two interpretations, the first "macro-prudential" seen as a synonym for any effective policies to promote financial stability and limit systemic risk, noting that such a definition is too broad, and before they could be used as a "policy of financial stability. Further, argues that any policy can have significant impact on financial stability, citing, monetary and fiscal policy. According to him, the original term to promote a different use of prudential tools in the direction of the search for better financial stability. (See, Borio, 2009)

The second view sees "macro-prudential" as a synonym for any effective policy or just as any regulatory and policy relating to too many big problems are the same or neglect, or Systematic important financial institutions (SIFI-s). For each individual financial institution can be "systematically unimportant" but collectively may be "systematically important" always when there is a possibility exposure to risk, no matter if in question assets or debt. This definition does not recognize the time dimension of the problem and ignores the correlation between exposures to all institutions.

Also, the economic literature is therefore considered that the definition of "macro-prudential" can be distinguished on several grounds, as a criterion for success, a balance between aggregate and sector approach, a balance between rules and discretion.

Objectives "macro-prudential"

"Macro-prudential" focuses on the interaction between financial institutions, markets, infrastructure and the wider economy. (Committee on the Global Financial System, 2010). Determination macro-prudential goals require the prior definition of systemic risk. There are many definitions of systemic risk. Thus, Ferguson (2010) defines systematic risk "as a situation characterized by the following three basic criteria: 1) some important set of financial asset prices are sharply separated from the base, or (2) the availability of credit market functioning in the country and perhaps internationally a significant distortion, with the result (3) the aggregate spending deviates (or is likely to deviate) significantly above or below the capacity of the economy to produce."

This definition of systemic risk caused some confusion among many, that ambiguity causes (difference from base rates) with effect (distortion of financial markets, credit availability and aggregate consumption). Besar, D., and other authors (2009/2010) instead of the previous proposed definition that covers non-financial and financial systematic risk, "the



systematic risk conjunctures when the initial disturbance transmitted through the interconnections that link businesses, households and financial institutions with each other , leading to the result of failure or degradation of these networks."

Analogous to the previous definitions, Milne (2010) provides a definition of financial instability, indicating that the systematic risk occurs when there is "widespread collapse of financial flows." At the same time, it means the result, but not necessary materialization of systemic risk of the financial system. Because this risk can be achieved in one part of the financial system (example market distortions derivatives 2005 years, when Ford and General Motors lost its investment rating) and not extend to the entire financial system and not cause interruption of financial flows.

IMF, FSB, BIS and G20 propose the following working definition of systemic risk: the risk of distortion of financial services that is caused by damage to all or certain parts of the financial system and has the potential serious adverse effects on the real economy (Caruna, 2010). As noted by Milne, the emergence of financial instability, has certainly resulted in the reduction of economic activity, but also involves systematic risk, although such a phenomenon inevitably leads to downward phase conjunctures cycle and transformation of economic activity, with a tendency to expand the systematic risk, the trend water in a deep recession, less depressed. Basically systematic risk comes from two sources: (Bank of England, 2009)

- 1. There is a strong tendency to common financial firms, and firms and households, that is too much at risk in the period of the revival of the credit cycle and become too averse declining
- 2. Individual banks usually do not take into account the spillover effects of their activities on the risk in the rest of the financial infrastructure.

The immediate goal "macro-prudential"⁴ is to limit the risk of episodes of global financial troubles, her ultimate goal is to avoid or restrain those costs generated by the real sector. In addition to this, a key, a widely accepted goal, other indirect, practical goals, not less, important is:

- Strengthening the resilience and the ability of the financial system from the impact of economic and other adverse aggregate shocks and stress,
- Focus on the risk of the entire financial system and not on individual institutions,
- Active causing limitation (mitigating) the financial risk, direct the focus on financial imbalances,
- Limiting the risk of episodes of global financial troubles, to cover the costs of macroeconomics,
- Enhancing the adaptability of the system stability and security of providing credit and other financial services, thereby focusing on finding sources of direct address systematic sources.

Define macro prudential policy objectives, not simply whether they are formulated in broad and a qualitative sense. For very complex and multiple nature of the financial system is, the creators and theorists, serious challenges in the design and development of quantitative characterization of multiple operating stability.



Table 1. Macro-prudential objectives within the general objectives and instruments: a stylized comparison

Objectives									
How to improve the resi	How to mitigate the financial								
The general approach to achieving goals	Recalibrate micro tools taking into account the systematic risk	Using dynamic tools in response to the financial cycles							
Key characteristics of the instruments	They can be micro or macro style (i.e., institutional-specific elements in the implementation and calibration	The tendency towards a macro-style: widely used, for example, all banks or markets							
The frequency adjustment	Generally less or maybe once (for example, in response to structural changes in the system), and frequent change and possible adaptation	They have a tendency to periodic monitoring and frequent adjustments in response to changes in the financial cycle							

Source: Report submitted by the Committee on the Global Financial System, Macro-prudential instruments and frameworks: a stocktaking of issues and experiences CGFS Papers No 38 2010

Macro-prudential indicators

Evans (2000) and Hilbers (2000) attempted to determine the definition of indicators macro-prudential stating that they are "indicators of health and stability of the financial system that can be used to assess its vulnerability to shocks." Macro-prudential indicators generally include micro-prudential indicators of the financial health of individual institutions and the macroeconomic variables that may affect the stability of the financial system. Total micro-prudential indicators express the state of the financial health of institutions, and macroeconomic variables are leading indicators that signaled the economy, the variables that could potentially affect the health of the financial system.

Table 2. Summary indicators macro-prudential

Aggregate macro-prudential indicators	Macroeconomic indicators		
Capital Adequacy	Economic growth		
Aggregate capital ratios	Aggregate growth rates		
The frequency distribution of capital ratio	The sector decline		
Asset Quality	Balance of Payments		
Lending institutions	The current account deficit		
Sect oral credit concentration	Adequacy of reserves		
Foreign currency-denominated lending	External debt (including the maturity		
Nonperforming loans and provisions	structure)		
Loans for losses-making public sector entities	Terms of trade		
Risk profile of assets	Composition and maturity of capital		
Connected lending	Inflation		
Leverage indicators	Volatility of inflation		



Aggregate macro-prudential indicators

Borrowing Entity

Financial leverage, the ratio Corporate profitability Other indicators of corporate status

Household indebtedness

Management of safety

Expense ratio

Earnings per employee

Growth in the number of financial institutions

Earnings and profitability

Return on assets Return on equity

Income and expenditure

Structural indicators of profitability

Liquidity

Central bank credit to financial institutions

Segmentation of interbank rate

Deposits in respect of monetary aggregates

Loans-to-deposits ratios

Maturity structure of assets and liabilities (liquidity assets

ratios)

Measures of secondary market liquidity

Sensitivity to market risk

Foreign exchange risk

Interest rate risk

Equity price risk

Commodity price risk

Market-based indicators

Market prices of financial instruments,

including equity

Indicators of excess yields

Credit rating

Sovereign yield spreads

Macroeconomic indicators

Interest and exchange rates

Volatility in interest and exchange rate

Level of domestic real interest rates

Exchange rate sustainability

Exchange rate guaranteed

Lending and asset price boom

Lending boom

Asset price boom

Contagion effects

Trade spillovers

Financial markets correlation

Other factors

Directed lending and investment

Government's recourse on the

banking system

Arrears in the economy

Source: Staff Team, Macro-prudential Indicators of Financial System Soundness led by Owen Evans, Alfredo M. Leone, Mahinder Gill, and Paul Hilbers IMF Washington DC 2000

Macro-prudential instruments

"Macro-prudential" uses a wide range of instruments to address and mitigate systemic financial risk, including the instruments used to achieve other economic goals. The emphasis is on developing and adapting existing instruments macro-prudential micro-prudential tools, aimed at strengthening prudential standards and limiting activities that may cause increased systemic risk. The standards and restrictions often vary, which requires their adjustment to alleviate the financial cycle. In this context, it is necessary to dynamically adjust the instruments (in accordance with the macro-financial stability), designing such a framework will be able to withstand and prevent financial "excesses" and episodic shocks that may arise under the influence of various externalities. (Momirović, 2010)



In Table 3 Some examples are shown macro-prudential instruments relating to the main factors that may affect or limit the risk, as well as components of the financial system. These macro-prudential instruments are used to promote flexibility and limit exposure of the financial system from shocks and vulnerability affected by externalities.

Table 3. Macro-prudential instruments-the vulnerability of financial systems and components

		COMPONENTS OF THE FINANCIAL SYSTEM					
		Bank deposit or recipients Non-				Financial	
_	-	Balance Sheet	Debt Agreements	banking investors	Securities	infrastructure	
Vulnerability	Liquidity or market risk Leverage,	· Equity ratio · Weight Risk Booking · Restrictions on profit distribution · Ceiling of credit growth · Liquidity / reserve FX borrowing limit · Currency- harmonized limit · Limitation of open FX positions · The concentration	LTV ceiling debt service / income ceiling maturity Valuation rules (egg the IMF)	The local currency or FX reserve	Margin / limit difference between the market value of securities and the value of their coverage Balance of the Central Bank	Trade exchange	
	Connection	limits · The systematic addition of				Contracting opposite sides	
		capital charges · Subsidiary					

Source: Report submitted by the Committee on the Global Financial System, Macro prudential instruments and frameworks: a stocktaking of issues and experiences CGFS Papers No 38 May 2010

Macro-prudential tools

Macro-prudential tools for managing systemic risk can be centered on four groups: (The Group of Thirty, 2010)

- 1. Avoiding the levels of leverage, systematic risk,
- 2. Ensuring a sufficient level of liquidity to well functioning markets,
- 3. Prevention of excessive credit expansion,

4. The regulation of market activities that could pose a systematic risk.

Macro-prudential tools are designed to enable efficient control policies, with particular focus on improving the resilience of the financial system to systemic risk of stroke caused by economic shocks. Emphasis is on alleviation of internal risks arising from the interaction between companies and markets and pro-cyclical tendency of market participants. Tools "macro-prudential" not primarily intended to prevent the economic cycle or to eliminate risk entirely, but are targeted at the worst effects of systematic risk. Thus, macro-prudential tools are applied to all important institutions and activities based on the signals of macroeconomic indicators, regardless of whether they agree with it or not.

There are two approaches in the implementation and enforcement macro-prudential tools, including:

- 1. Variable approach,
- 2. Fixed access.

Variable access refers to the use of tools in situation countercyclical capital depreciation, by changing variables to adjust automatically, or through regular modification macro-prudential auditor depending on macro-prudential indicators that fluctuate with economic cycles. These tools are mostly used to limit pro-cyclical tendencies and associated risks that increase the economic crisis.

Fixed access refers to the use of tools such as the ratio of gross leverage, and the relationship between the ratios of financing; however, they do not have to be adjusted during the economic cycle. Their goal is to build a more resilient financial system to systemic risk of stroke.

Macro prudential analysis

Macro prudential analysis is required, according to IMF (2006), "Financial Soundness Indicators (guide.de defines the reference frame, which includes four elements:

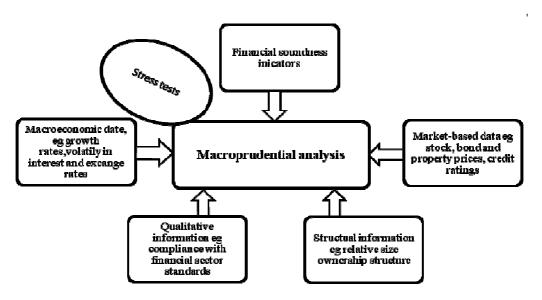
- 1. Assessment of risk in the financial system from shocks,
- 2. Application of indicators of financial stability,
- 3. Analysis of micro-interactions,
- 4. Monitoring the macroeconomic situation.

Macro prudential analysis focuses on factors that may threaten the stability of the financial system and the interrelationship between macroeconomic and financial stability. This further implies the ability to timely detect and identify factors that may threaten or cause vulnerable financial institutions to reduce credit risk, which if allowed to grow can cause an increased number of non-performing loans and lead to the inability of the banking system to perform its obligations.

Approach to macro prudential analysis is to monitor indicators from different sources and trying to identify a wide range of indicators, which could indicate an increase of imbalance at the macro level and which may represent potential sources of financial hardship. An important aspect of the analysis is the inclusion of structural and qualitative information in macro prudential analysis. (Woolgord, 2001)



Figure 1. Components of macro prudential analysis



Source: Davis, P., Macro prudential Analysis and financial soundness indicators Brunel University West London, yahoo.com/group/financial stability, 2010

Application macro-prudential

The implementation macro-prudential framework is necessary to consider the limitations macro-prudential access and choice of tools will be applied. Very important is whether the application should be based on rules or discretion. The application is based on the rule have better credibility and greater transparency, and lack of flexibility and the possibility of obsolescence due to market development. In addition, it may be more important to macro prudential regulation is based on our own attitude, that actors form their own policies based on their own judgments about the risks that are identified through recommendations macro-prudential supervisor. It is important, point to the possibility of a combination of "limited discretion" and some rules in order to properly identify potential bubbles and realize their seriousness. Then, there is a problem macro prudential application framework, is first applied to the entire financial system or individual institution. The balance between different objectives macro-prudential policy will depend, in any case, the focus of policy makers on the overall market or individual institutions.

If the focus is on individual institutions within the larger economic cycle, then measures should be designed so that influences the balance of individual institutions. Greater focus should be to mitigate credit cycle, thereby protecting the real economy from financial sector activity, and in that sense, the greater the need for tools aimed at the entire system.

Then, there is a problem of national or global approach. A new approach macro-prudential control is much easier to implement at the international level to identify potential shocks than to answer them. It is important to have in early warning of the risks involved relevant international institutions (EU, G20, and IMF). It is important to what is already working on international level early warning exercises. The Basel Committee is already



working on developing tools to strengthen macro-prudential both sources of systematic risk, and developing tools to improve the resilience of individual institutions through countercyclical safety at the micro level, as a framework for the protection of the economy at the macro level. Regardless, the international macro prudential framework is probable; in the future the main focus will be on a strong national government oversight and accountability for individual institutions and the management of national economies. Efficient implementation macro-prudential framework includes the necessary institutional adjustments and international coordination, with a clear mandate, accountability and transparency.

Instead of conclusion

On his way evolutionary, since the late seventies to the occurrence of major financial crises in the second half of 2008 year , the term "macro-prudential" was largely unknown and little used in the economic literature, they are talking about a small number of written works. Virtual appearance, after the crisis has caused a flood of usage of the term by all relevant institutions. Therefore, the focus has evolved to "macro-prudential", especially in the works of the BIS, which has clarified the term by bringing him in connection with its antonyms "micro-prudential". In this, the narrow sense, closer to its origin "macro-prudential" refers to the use of tools macro-prudential the explicit aim of promoting the stability of the financial system as a whole rather than individual financial institutions.

From the very goals macro-prudential resulting control quality, the clarification of the risk of bubbles and the concretization of corrective measures to be taken, both at national and global level. "Macro-prudential," seeks to reconcile the goals, knowledge and experience and control of various instruments. Identification of target macro-prudential simultaneously requires customization tools macro prudential tools that are used to achieve these goals. There are many specific tools that can be used for the conduct of other policies, but is an important selection of suitable, whose selection should be based on a detailed assessment of potential impacts of activities targeted at specific segments of the economy, primarily in signaling the appearance of systemic risk and stress. No matter which instrument or combination macro-prudential tool is selected, it is important to weigh their potential impact on the real economy and financial institutions.

The idea of applying macro-prudential aims to reduce pro-cyclicality and limit systemic risk, because they can have significant short-term impact on financial institutions, shareholders and all economic actors, which may reflect a temporary decrease in growth, increasing or reducing debt, reducing the return on capital and other economic variables.



References

- **Bank for International Settlements**. 1986. "Recent innovations in international banking", *Report prepared by a Study Group established by the central banks of the Group of Ten countries*. Basel.
- 78th Annual Report. Bank for International Settlements, Basel.
- **Besar, D., P. et al.** "Systemic" Risk in Financial Services", *British Actuarial Journal 14*, an earlier version presented in the 2009/2010 sessional meetings is available www.actuaries.org.uk/knowledge/publications/.
- **Borio C.** 2003. "Towards a macro prudential framework for financial supervision and regulation?". *CESifo Economic Studies*, 49(2/2003): 181–216. Also available as BIS Working Papers, 128.
- **Borio, C.** 2009. "The macroprudential approach to regulation and supervision". 2009 Borio, C "The macroprudential approach to regulation and supervision".
- **Borio, C.** 2009. "Implementing the macroprudential approach to financial regulation and supervision". Banque de France, *Financial Stability Review*, No... 13 The future of financial regulation.
- **Borio, C.** 2010. "Implementing a macroprudential framework: Blending boldness and realism". Bank for International Settlements, Borio,
- **Brockmeijer Report**. 1995. *Issues related to the measurement of market size and macroprudential risks in derivatives markets,* report prepared by a working BIS Quarterly Review, March 2010 65group established by the central banks of the G10 countries, Basel, February.
- Caruna, J. 2010. "Systemic risk; how to deal with it?". BIS.
- **Committee on the Global Financial System.** 2010. "Macroprudential instruments and frameworks: a stocktaking of issues and ehperiences". *CGFS Papers*, 38.
- **Clement, P.** 2010. "The term "macroprudential": origins and evolution". *BIS Quarterly Review,* March 2010.
- **Crockett, A. Crockett, A.** 2000. "Marrying the micro- and macroprudential dimensions of financial stability". BIS Speeches.
- **Davis, P. Davis, P.** *Macroprudential Analysis and financial soundenees indicators* Brunener University West London, yahoo.com/group/financial stability
- **Evans, O.** 2000. "Macroprudential indicators of financial systems soundness". *IMF Occasional Paper*, 192.
- **Ferguson, RW**. "Should Financial Stability be an Explicit Central Bank Objective". In *Challenges to Central Banks of Globalized Financial Systems*, ed. P. Ugolini, A. Ugolini, A. Schaechter and M. And M. Schaechter Stone, Washington DC: International Monetary Fund.
- Group of Thirty Financial Reforms: A Framework for Financial Stability. 2009. Washington
- **Future Group of Thirty Washington, DC 20036**. 2010. "Enhancing Financial Stability and Res diligence: Macroprudential Policy, Tools, and Systems".
- **IMF.** 2006 Financial Soundness Indicators (the Guide).
- **Knight, M.** 2006. "Marrying the micro and macroprudential dimensions of financial stability: six years on", speech delivered at the 14th International Conference of Banking Supervisors, BIS Speeches.
- Milne, A. and M. Onorato. 2010. "Risk-adjusted Measures of Value Creation in Financial Institutions", European Financial Management, in press.
- **Momirović**, **D.** 2010. "Makroprudencijalne perspektive i novi izazovi za centralne banke". *Finance, Journal of Theory and Practice*. 1-6/2010, Beograd.



Report submitted by the Committee on the Global Financial System. 2010. "Macroprudential instruments and frameworks: a stocktaking of issues and experiences". *CGFS Papers* 38.

Staff Team led by Evans, O., Leone, Gill M. Mahinder and P. Hilbers. 2000. "Macroprudential Indicators of Financial System Soundness". Washington: IMF.

The Group of Thirty. 2010. "Enhancing Financial Stability and Resilience Macroprudential Policy, Tools, and Systems for the Future". Washington.

Woolford, J. 2001. "Macro-financial stability and Macroprudential analysis". *Reserve bank of New Zeeland: Bulletin*, 54(3).

Makroprudencijalni pogled na finansijsku stabilnost

REZIME – U radu se ukazuje na ključne karakteristike "makroprudencijala" novog okvira, prihvaćenog od svih svetskih relevantnih institucija, u nastojanju da se ublaže eksternalije koje mogu dovesti do ranjivosti finansijskog sistema i izazovu sistematski rizik. Nastanak termina datira još iz perioda sedamdesetih godina, koji je tokom vremena skoro bio zaboravljen, da bi ponovo vaskrsnuo, u drugoj polovini 2008, nakon velike globalne ekonomske krize. Ne postoji jedna univerzalna precizna definicija "makroprudencijala", mada većina definicija sadrži nekoliko zajedničkih karakteristika. Sam fokus na sistematski rizik, definiše ključni cilj "makroprudencijala", odnosno regulisanje i nadzor finansijskog sistema u celini a ne pojedinačne institucije. Da se ograniči rizik od globalnih finansijskih šokova, predlažu se različiti makroprudencijalni indikatori i instrumenti za procenu zdravlja finansijskog sistema i njene ranjivosti na šokove. U regulisanju i nadzoru finansijskog sistema koriste se makroprudencijalni alati koji su dizajnirani tako da omogućavaju efikasnu politiku nadzora, sa posebnim fokusom na poboljšanje otpornosti finansijskog sistema na udar sistematskog rizika. Makroprudencijalna analiza fokusira se na faktore koji mogu ugroziti stabilnost finansijskog sistema, kao i na međusobnu povezanost između makroekonomskih kretanja i finansijske stabilnosti. Primena makroprudencijala zasniva se na pravila ili diskreciju, na ceo fiansisjki sistem ili pojedinačnu instituciju, nacionalnom ili globalnom nivou.

KLJUČNE REČI: "makroprudencijal", makroprudencijalni instrumenti, makroprudencijalni indikatori, makroprudencijalni alati, makroprudencijalna analiza

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