



DEZVOLTAREA ECONOMICĂ ÎN CONTEXTUL GLOBALIZĂRII

METODOLOGIA ȘI INSTRUMENTELE POLITICII MACROPRUDENȚIALE

Radu CUHAL, doctor în economie, conferențiar universitar, BNM

Ludmila STARIȚÎNA, doctor în economie, conferențiar cercetător, BNM

Nicolae BASISTÎI, BNM

Rezumat

Conceptul abordării macroprudențiale - nu reprezintă ceva nou (Crockett, 2000), totuși numai după criza financiară globală, instituțiile de conducere pe deplin au conștientizat probabilitatea și costurile unui eșec sistemic pe piețele financiare moderne și necesitatea controlului riscului dat. Ca rezultat această abordare se află încă în curs de dezvoltare (FSB/ FMI/ BIS, 2011). Politica macroprudențială deseori utilizează mecanismele și instrumentele tradiționale de reglementare în scopul asigurării unei abordări integrate, care necesită implementarea unui nou regim de reglementare pentru monitorizare în sistemul financiar a semnelor de creștere a pericolului pentru stabilitatea financiară și adoptarea unor măsuri pentru combaterea acestor amenințări. În articolul dat sunt justificate abordările metodologice ale politicii macroprudențiale; se iau în considerație instrumentele pentru prevenirea crizei financiare și pentru reducerea riscurilor posibile.

Cuvinte – cheie: Politica macroprudențială, riscul de lichiditate, sistemul financiar, monitoring bancar, evaluarea riscului sistemic, bufer de capital.

METHODOLOGY AND INSTRUMENTS OF MACROPRUDENTIAL POLICY

Radu CUHAL, Ph. D. in Economics, NBM

Ludmila STARITÎNA, Ph. D. in Economics, NBM

Nicolae BASISTÎI, NBM

Abstract

The concept of macro-prudential approach is not new (Crockett, 2000), but only after the Global Financial Crisis the possibility and the system failure costs in the financial markets, as well as the necessity of the systemic risk control were recognized by policymakers. As a result, this approach is still developing (FSB/IMF/BIS, 2011). The traditional mechanism and regulation instruments are often used by macro-prudential policy to ensure an integrated approach, which requires the new regime of regulation for monitoring the signs of increasing threats to stability and measures adopted by the regulator to eliminate these threats. In the article the methodological approaches to macro-prudential policy are grounded, and its instruments to prevent the financial crisis and reduce risk are analyzed.

Keywords: *Macroprudential policy, liquidity risk, financial system, bank monitoring, measurement of systemic risk, capital buffer.*

Introduction

Because it is increasingly recognized what traditional financial regulation allowed uncontrolled increasing of budget and financial vulnerability, contributing with this to the Global financial crisis, the authorities of many countries are ready to examine much more systemic approach to financial regulation. This complex approach is named macroprudential policy.

Macroprudential policy doesn't intend to replace the traditional regulation of financial organizations, such as commercial banks, which are needed for financial system prosperity. Instead of this, the policy adds and supplements microprudential policy. It usually uses traditional regulatory instruments and relies on traditional regulatory authorities to implement and maintain the regulation. But the policy uses these instruments to withstand growing risks in the financial system. This developing approach can require new form of regulatory regime to trace in financial system the signs of increasing threats to stability and measure adoption by the authorities to deal with these threats.



The notion of macroprudential policy is not new [1], but only after global financial crisis had occurred, policymakers completely realized the probability and costs of systemic failure on modern financial markets and the necessity of systemic risk control. As a result, this approach is still developing [3].

Main content

Macroprudential framework

Macroprudential policy has to discover and smooth system stability risks, lowering in its turn economy costs during the failures of financial services, which are underlies the functioning of financial markets (for example, credit providing, insurance services and payment and settlement services [2;5].

As the example of these failures may serve credit contraction, when the losses of banks and other creditors lead to reduction in lending to households and companies, what, in its turn, lows general economic activity.

These failures may be caused by general or aggregate financial sector weakness or the bankruptcy of so-called large single systemic organizations, which have financial connections with many other organizations.

General weakness appears when financial sector meets in general the same risks of excessive volumes – be it credit risk (lenders won't pay their debts), market risks (the value of the collateral will be lowered) or the risk of liquidity (it will appear difficult to sell assets or to refinance the debts). For example, on the threshold of crisis in the United States and in other regions credit was more and more tied with the value of pledge in the form of real estate. After the housing market collapse creditors found themselves liable to market (because real estate prices were lowered) and credit risk due to borrowers' limited possibilities to return their loans. Besides, in some countries lenders were increasingly borrowing the facilities on wholesale markets (for example, money market mutual fund), they provided afterwards as loans, relying in the less degree on traditional clients' deposits. When the resources of these markets were exhausted (especially after Lehman Brothers bankruptcy in 2008), such kind of lenders faced the liquidity risks because of their incapability to refinance their debts with approaching maturity [9].

If financial institutions had general open positions on these risk sources or these positions are linked between financial institutions, the most or even all financial intermediaries (such as banks and other lenders), probably will find themselves under some pressure because assets value is lowering and

replacement costs of lendable funds (liabilities) is increasing. This has negative impact over system capability to provide to economy main financial services, including credit and payment services.

The bankruptcy of a single institution can create a systemic risk, when it limits the ability of other institutions to continue to offer financial services to the economy. Usually, this kind of major organizations, which are linked with many other institutions, can provide secondary effects in the way that their bankruptcy threatens the system stability. These secondary effects can be spread by one or several chain reaction channels:

- direct connections of other financial institutions with suffered organization;
- asset fire sale of suffered organization, which leads to reducing the costs of similar assets, forcing other organizations to bear losses on their assets;
- other financial institutions reliance on the continuation of the provision to suffered institution of such financial services as loans, insurance and payment services;
- increase in the financing cost and mass deposit withdrawal from other organizations after the bankruptcy of the systemically important organization [10].

For instance, Lehman Brothers bankruptcy in 2008 led not only to direct losses in other financial institutions, but also to drastic increasing of financing costs for all financial institutions because financing providers weren't sure, which organizations bore losses, caused by Lehman Brothers ruin. As a result, they were wary of lending of any institution.

To allow to macroprudential policy to low expected costs of general weakness and irregularities caused by bankruptcy of single but systemically important institutions, two kinds of organizations must be included in its competence – systemically significant institutions and all lenders with leverage (which use borrowed funds for lending).

There are not only major banks, which are included in the group of the systemically significant organizations, but also there are the organizations providing the most important payment and insurance services to other financial organizations. For instance, American International Group (AIG) to the point provided insurance services to other financial organizations in the form of protecting the value of the securities owned by these institutions and linked with mortgages. If the AIG bankruptcy had been allowed, this insurance protection would have been vanished causing large losses of other institutions.



All lenders, who use borrowing funds for lending, irrespective of their size, are included in the range of macroprudential policy activity, because their joint weakness can influence over lending to the economy in general [10]. Despite of the fact that usually banks are the largest leverage lenders, in some jurisdictions on the important classes of creditors, which are not banks, the macroprudential policy coverage should be extended too. Otherwise, there is a risk that lending process will be transferred from banks sector to non-banks whose operations are limited to a lesser extent.

Methodology and applied materials

Macroprudential policy in practice

Macroprudential policy has to use a number of instruments to overcome general weakness and the bankruptcy of separate companies. As one taken separately instrument is unlikely to be able to cover the various sources of systemic risk, macroprudential regulation authority must be able to adapt specific macroprudential instruments for particular vulnerabilities identified by their analysis [8].

A number of instruments were elaborated and used recently to limit the aggregate risk accumulation with time. The dynamic capital buffer is an important instrument. Regulatory authorities required a long time ago financial organizations to have a certain amount of capital (usually, of share capital and retained earnings), allowing to cover (or smooth) losses on credits or securities. Dynamic buffer, suggested by the international group of specialists on regulation which is being congregated in Basel, Switzerland, lead to requirements from macroprudential policy authorities to financial organizations to increase their capitals in case, they face the signs of unusual rapid credit growth or sharp rise in asset prices, caused by credits. Accumulation of capital buffer has dual effect. Since lenders have to raise their own funds more costly, the cost of credit should be increased while its growth should slow down.

At the same time, the buffer should strengthen the system stability, allowing it to bear better any losses when a boom gives way to decline, which in turn reduces the likelihood of costly credit crunch.

Dynamic, or counter-cyclical, capital buffer is just one of the instruments at the disposal of macroprudential authorities to mitigate the specific vulnerabilities. Many of these tools were used in the past (especially in emerging market economies) to prevent the cycles of boom and bust and they include the instruments to eliminate the interaction between market risks and credit risks (such as maximum norms of the loan-to- the collateral



value for mortgages ratio) and to annihilate the accumulation risk of lack of liquidity proportional to the sharp increase in loan (such as instruments measures to limit the over-reliance on unstable wholesale funding):

- Variations of sectoral balance taking into account risks. Supposed to be less rough than dynamic capital buffer, they enforced organizations to add funds for covering of new loans in the sectors where excessive risks are accumulated. For example, Turkey has recently raised its norms for new loans to households to restrain high rates of credit growth in this segment.

- Macroprudential policy has to use a number of instruments to overcome general weakness and bankruptcies of single firms. Dynamic reserves force banks to set aside money in good times to cover loan losses when credit losses are relatively low, so that the balance sheets of banks increases the readiness to cover losses accumulated during the recession. The dynamic reserves regime was introduced in Spain in 2000 and later in Columbia, Peru, Uruguay and Chile.

- The ratio of the loan-to-collateral value. The maximum values of the ratio of loan-to-collateral value are increasingly used to reduce systemic risk in the episodes of boom and bust in real estate markets. The ratio of the loan-to-collateral value help to limit leverage ratio of households by limiting the size of the loan amount, significantly inferior to the value of property. They can also restrain the growth of housing prices and reduce the possibility that households with negative difference between providing costs and debts will be forced to go to default on their debts during the phase shift of housing cycle [6]. They are often complemented with a debt-to-income ratio, which seek to limit the proportion of household income spent on debt service.

- Measures relating to foreign currency lending. If borrowers receive loans in foreign currency, their ability to repay the debt may be changed substantially as they are not protected against oscillations in case of the foreign currency value increase. The threat of increasing the foreign currency value enhances credit risk for lenders as debt repayment becomes more expensive for borrowers. Macroprudential measures for reducing these risks include portfolio limits on foreign currency loans and other targeted restrictions such as the requirement of capital increases and more stringent limits on loan-to-collateral value and debt-to-income ratio on foreign currency loans (an approach recently adopted in a number of countries of Central and Eastern Europe with emerging markets).

- Liquidity requirements. With easy access to funding, increase in obligatory buffer of liquid assets (which are easy to convert quickly into cash)



provides cash, which can be used when funding runs out. This increase of requirements liquidity changing in time can also restrain the expansion under the influence of short-term and unstable wholesale financing and weaken dangerous dependence on such kind of financing. Recently, such measures have been introduced in New Zealand and Korea.

Official authorities have also to be capable to reduce bankruptcy risk of single systemic financial organizations. Most of the instruments, which are currently being discussed in this context, are designed to reduce the probability of failure of too important organizations to allow them to go bankrupt. The Financial Stability Board, an international regulatory authority created in 2009, has recently announced that a number of financial institutions, which have a great importance to the world economy, mainly major international investment banks, will have to carry out additional requirements regarding the ratio of the minimum capital size and the amounts related to the level of risk to which the global financial system is exposed by these organizations.

Despite the fact that these additional requirements regarding the minimum capital will help to restrain the growth of such kind of organizations, and better prepare them to cover the losses, some additional tools would also be useful to mitigate the effects of a systemically important institutions bankruptcy. For instance, arguments in favor of requiring from the organizations to increase their capitals for the actual risk associated with major systemically important institutions appears to be weighty, because the effect of major company bankruptcy is transferred by this open positions.

The requirement for greater transparency of open positions, including the transparency among financial institutions in the derivatives markets, is another potentially effective instrument to mitigate the uncertainty and, in its turn, the influence of single systemic organization bankruptcy to the market as a whole. It is this kind of uncertainty, which contributed to the freezing of financial markets after the Lehman collapse.

Results of investigations

Effective components of macroprudential policy

Since macroprudential policy is at an early stage of implementation, the authorities must cope with three major challenges before it can become effective:

- the construction or the improvement of its institutional framework;
- the development of an analytical framework for effective monitoring and the evaluation of systemic risk to direct corresponding policy measures;
- the establishment of international cooperation



Institutional framework

While the institutional foundations development of macro-prudential policy should take into account the special circumstances of countries and differences in institutional initial conditions, some general goals are likely to be relevant to all countries. Mechanisms must contribute to the effective identification of potential risks, provide powerful incentives to take effective measures to deal with these risks timely, and facilitate coordination of policies affecting the systemic risk [10].

To achieve these goals the system should avoid complex and overly fragmented structures. With numerous players institutional fragmentation and competition may hamper the identification of risks and the reduction of systemic risk, reducing the effectiveness of macro-prudential policy. In addition, to create strong incentives for action, the system must specify the leading body with a precise mandate and corresponding authority for it to be responsible for the achievement of its goals.

An independent central bank must play an important role in all the mechanisms. Central banks do not only have experience in risk assessment, as lenders of last resort of organizations, faced with liquidity problems. They have also the incentives to take timely measures to reduce the increasing risks. In addition, the important role of a central bank allows establishing the coordination with monetary policy that specifies the common conditions affecting the demand for credit and its supply. Government involvement is useful in order to support tax policies to promote changes in legislation that may be required in order to allow the authorities to reduce systemic risk. These changes include the regulator creation of non-bank credit organizations and other systemically important institutions. However, the important role of the government can create a risk, because of government's political character and due to the fact that it have incentives to oppose the adoption of macroprudential measures in good time when they are most needed.

The measurement of systemic risk

The question of how to create an analytical framework that would identify effectively and beforehand the systemic risks and encourage the adoption of macroprudential authorities' timely and suitable measures is also an important issue. Some attempts have been made to develop a single indicator of general systemic risk that could trigger the macroprudential instruments. But despite of the attractiveness of these statistics – because it would be easy to explain and use this statistics to evaluate the effectiveness of policies - such an indicator is still not found.



Instead, policy makers tend to use a set of indicators [7]. This approach recognizes that systemic risk is not limited to one single aspect. Additional information can also help policymakers to determine which instrument or instrument combination would resolve potential problems most effectively. For instance, to measure aggregate risk macro-prudential authority must monitor the general credit risk, liquidity risk and market risk, as well as the concentrations of any of these risks in a particular sector, such as housing and consumer credit. The authority will then analyze all these risks to make a decision on the most effective policy instruments to eliminate them.

International aspect

As national financial systems around the world are interconnected and the financial services provision extends beyond the borders of the countries, the countries need to coordinate their macroprudential policy. The necessity for international coordination is caused by the situation, where credit boom and the formation of asset price bubbles can contribute to attracting loans from abroad. The coordination also limits the abilities of systemic important on the international level organizations to transfer their activity to less restricted jurisdictions opposing in that way one country to another.

General instruments and international agreements on “mutual” use of such instruments can facilitate the coordination. As a good example may serve dynamic capital buffer created under the aegis of Financial Stability Board. But what will happen when countries discover what they have to use the instruments, which have no standards of reciprocity? It is not clear and have to be in the centre of international discussions during the evolution of global financial system.

Conclusion

Even the best macroprudential policy is not capable to prevent all financial crises. It means that there is a need of the reliable and flexible lender of last resort (usually it is central bank) to smooth temporary deficits of liquidity. There is also the need of trustworthy policy instruments to use the measures of influence (sanctions) towards the insolvent financial organizations or even to close them. Moreover, macroprudential policy can't work in vacuum. Rational monetary policy, tax policy and spending policy are needed to create stable conditions, contributing to healthy financial system development. Finally, directory authorities have to take into consideration that macroprudential policy as well as any other public policy is linked with costs, and the compromises between stability and financial system efficiency are possible. For in-

stance, requiring from financial organizations to maintain the high level of their capital and liquidity, authorities can strengthen the system stability but at the same time they can take measures when credit would be more expensive, and in its turn, the economic growth can be slowed down.

References

1. Crockett, Andrew, (2000) *Marrying the Micro- and Macro-prudential Dimensions of Financial Stability*, remarks before the Eleventh International Conference of Banking Supervisors, September 20-21, Basel, <http://www.bis.org/review/rr000921b.pdf>, [Accessed 10 April 2013].
2. Financial Stability Board, International Monetary Fund, and Bank for International Settlements (FSB/IMF/BIS), (2009) *Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations, report to the G-20 finance ministers and central bank governors*, Basel, <http://www.imf.org/external/np/g20/pdf/100109a.pdf>, [Accessed 10 April 2013].
3. Financial Stability Board, International Monetary Fund, and Bank for International Settlements (FSB/IMF/BIS), (2011) *Macroprudential Policy Tools and Frameworks, progress report to the G-20*, Basel, <http://www.bis.org/publ/othp13.pdf>, [Accessed 10 April 2013].
4. Jacek, O., Luis I., Jacome, and Pamela Madrid, (2011) *Institutional Models for Macroprudential Policy*, IMF Staff Discussion Note 11/18 Washington: International Monetary Fund, <http://www.imf.org/external/pubs/ft/sdn/2011/sdn1118.pdf>, [Accessed 10 April 2013].
5. International Monetary Fund (IMF), (2011a) *Macroprudential Policy: An Organizing Framework*, *IMF Policy Paper*, Washington, <http://www.imf.org/external/np/pp/eng/2011/031411.pdf>, [Accessed 10 April 2013].
6. International Monetary Fund (IMF), (2011b) *Housing Finance and Financial Stability – Back to Basics?*, *Global Financial Stability Report, Chapter 3*, Washington, <http://www.imf.org/external/pubs/ft/gfsr/2011/01/pdf/chap3.pdf>, [Accessed 10 April 2013].
7. International Monetary Fund (IMF), (2011c) *Toward Operationalizing Macroprudential Policies: When to Act?*, *Global Financial Stability Report, Chapter 3*, Washington: September, <http://www.imf.org/External/Pubs/FT/GFSR/2011/02/pdf/ch3.pdf>, [Accessed 10 April 2013].
8. Lim, Cheng Hoon, Columba, F., Costa, A., Piyabha, K., Akira, O., Saiyid, M., Torsten W., (2011) *Macroprudential Policy: What Instruments and How to Use Them? Lessons from Country Experiences*, IMF Working Paper 11/ 238, Washington, <http://www.imf.org/external/pubs/ft/wp/2011/wp11238.pdf>, [Accessed 10 April 2013].



9. Merrouche, Ouarda, and Erlend W. Nier, (2010) What Caused the Global Financial Crisis? Evidence on the Drivers of Financial Imbalances 1999-2007, *IMF Working Paper 10/ 265*, Washington, <http://www.imf-ieo.org/external/pubs/ft/wp/2010/wp10265.pdf>, [Accessed 10 April 2013].

10. Nier, Erlend W., (2011) Macroprudential Policy - Taxonomy and Challenges, *National Institute Economic Review*, Vol. 216, No.1, p. R1- R15. http://api.ning.com/files/cXoyaNxi7x*EEzSoHp90KCq*ArV9TRPCIqh0a2QzAZVblZay2N17ITDPBLptOLV018yxTHTe75aahOANA*CvmPn*G8SQy0fl/NierMacroprudentialPolicies.pdf, [Accessed 10 April 2013].

Radu.Cuhal@bnm.md

Ludmila.Staritina@bnm.md

Nicolae.Basistii@bnm.md