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Macroprudential policies and the central bank – a marriage of convenience?

Abstract

The Global financial crisis caused a redefinition of the institutional arrangements of the financial safety net. One of the most popular changes was the correction of financial supervision optics, from microprudential to macroprudential and the selection of the central bank as a proper institution to perform the role of a systemic financial supervisor. The main objective of this article is to analyze and critically assess the central bank's competences over macroprudential policies. This study was carried out in two aspects. Firstly, theoretical considerations showing pros and cons were analyzed. Secondly, the results of empirical qualitative research were presented. The main aim of that research was to identify tendencies in highly-developed countries in relation to the location and character of macroprudential policy competences.

Keywords: central bank, macroprudential policy, financial stability, systemic risk.
JEL CODE: E58, E61, G28.

Polityka makroostrożnościowa i bank centralny – małżeństwo z rozsądku?

Abstrakt

Globalny kryzys finansowy wymusił redefinicję rozwiązań instytucjonalnych sieci bezpieczeństwa finansowego. Jedną z najszybciej wprowadzanych zmian jest korekta optyki nadzorczej z mikro na makroostrożnościową i uznanie banku centralnego za instytucję właściwą dla sprawowania tego nadzoru. Głównym celem artykułu jest analiza i ocena kwestii lokalizacji kompetencji w zakresie polityki makroostrożnościowej w banku centralnym. Cel ten realizowano na dwóch płaszczyznach. Po pierwsze, dokonano przeglądu argumentów za i przeciw lokalizacji polityki makroostrożnościowej w banku centralnym na gruncie teorii. Po drugie, dokonano prezentacji danych empirycznych o charakterze jakościowym, w których z identyfikowano dominujące w krajach wysoko rozwiniętych rozwiązania instytucjonalne w odniesieniu do kompetencji nadzorczych w wymiarze makroostrożnościowym.

Słowa kluczowe: bank centralny, polityka makroostrożnościowa, stabilność finansowa, ryzyko systemowe.

Introduction

The Global Financial Crisis has stimulated a profound redefinition of the institutional solutions adopted with regard to the financial safety net. The crisis has also shown that the current objective of most central banks in developed countries, i.e. price stability, does not guarantee macroeconomic stability. In many countries, dangerous financial imbalances have materialised, with low and stable inflation and a small demand gap at the same time.

As a consequence of the financial crisis, the need to introduce regulatory and supervisory policy in a broader, systemic perspective, i.e. the use of supervisory tools to mitigate systemic risk[1], is very strongly emphasised. In many countries, either new institutions are being created or existing ones are being strengthened and given a financial stability mandate. In 2010, the US Congress adopted the Dodd-Frank Act, which created the Financial Stability Oversight Council (FSOC). The FSOC includes a Federal Reserve responsible for identifying risks and responding to events that may threaten financial stability. In Europe, in turn, a new institution was established – the European Systemic Risk Board (ESRB) responsible for macro-prudential policy, in which the European Central Bank plays a key coordinating role. In the United Kingdom, the Financial Stability Committee, has been set up within the Bank of England and entrusted with a financial stability mandate.

It should be stressed that institutional and legal changes are ahead of theoretical considerations in this respect, and at the same time there is a tendency to identify the central bank as the institution which is to play a key role in macro-prudential policy.

The main aim of the article is to analyze and evaluate the legitimacy of locating competences in the field of macro-prudential policy in the central bank. This objective has been executed on two levels. First, the arguments for and against the location of macro-prudential policy in the central bank were reviewed on the basis of theory. Secondly, qualitative empirical studies were carried out in order to identify institutional solutions dominating in highly developed countries with regard to supervisory competences in the macro-prudential dimension.

The essence of macro-prudential policy

[1] The concept of systemic risk refers to the risk of disruptions in the provision of financial services resulting from the malfunctioning of parts of the financial system, or the entire financial system, which may be negatively reflected in the real economy (Smaga 2014; Karkowska 2015; Masciandaro, Volpicella 2016).

Macro-prudential policy is seen as complementary to traditional financial supervision, which uses a micro-prudential approach as a type of macroeconomic policy that should complement traditional monetary, fiscal and structural policies to ensure macroeconomic stability (Olszak 2012; Dobrzańska 2016).

The macro-prudential approach in the activities of supervisory authorities is not a new solution. Many central banks and supervisory institutions used it in the run-up to the Global Financial Crisis, yet rather as ancillary instruments than as a deliberately chosen basis for the strategy of these institutions. Much has also been said about the advantages of this approach among economists of the Bank for International Settlements in Basel and the International Monetary Fund already in the early 2000s (Evans et al. 2000; Borio 2003).

Table 1. Macro- and micro-prudential perspective – comparison

Comparison criterion	Macro-prudential Perspective	Micro-prudential Perspective
the primary objective of supervision	counteracting instability in the financial system	reducing the failure of individual financial institutions
the ultimate purpose of the supervision	avoiding the macroeconomic costs of the crisis (GDP decline)	consumer protection (depositor in the case of banks or retail investor in the case of other financial institutions)
the subject-matter of the analysis	aggregated data for the financial system as a whole	individual data considered at the level of individual financial institutions
the nature of the risk	(partly) endogenous	exogenous
relations between financial institutions	significant	minor
'calibration' of supervisory instruments	from the point of view of the stability of the financial system as a whole (top-down approach)	from the point of view of individual financial institutions (bottom-up approach)

Source: own study based on Borio 2003, p. 18.

Macro-prudential policy should be understood as the adoption of a strictly defined perspective (orientation) in the exercise of financial supervision (Borio 2011). This perspective is completely different from the micro-prudential approach commonly used so far (Table 1).

What distinguishes the macro-prudential approach is a holistic (systemic) view at the issue of risk, its sources or methods of materialisation. The impact of this policy should also have a systemic dimension (i.e. the impact on the entire financial system, and even beyond the system and operating also at the 'junction' of the financial system and the real economy (Sławiński, Chmielewski 2010; Szpunar 2012, p. 9; Bańbuła 2013).

The essence of macro-prudential policy can be defined by defining its three dimensions (Financial Stability Board 2011):

1. policy objective: to mitigate and counter systemic risk and thereby contribute to financial stability,

2. policy scope: the whole financial system,
3. policy execution instruments: the set of instruments is to a large extent identical to that used in micro-prudential supervision, but the prospect of their use is systemic.

At the same time, it should be stressed that within the framework of macro-prudential policy, the regulatory and supervisory institution tries to maintain the stability of the financial system, the immediate threat of which may result in a side effect of the behaviour of individual financial institutions, as well as the structure of the financial system (Giese et al. 2013).

While it is not difficult to define macro-prudential supervision, the implementation of this approach and making it operational for policy purposes is not so unambiguous. One of the proposed analytical conceptualizations to the macro-prudential approach is to take into account two of its dimensions (Borio 2010): timelike, in which instruments are used to limit pro-cyclicality in the financial system and inter-sectoral, in which mutual exposures to risks and relationships occurring in the financial system at a given moment are analysed.

Theoretical dilemmas of macro-prudential competence location and previous experience

Designing the institutional framework for macro-prudential policy is a difficult task and requires a number of in-depth analyses. Key research questions in this area can be formulated as follows: firstly, who and why should conduct macro-prudential policy, secondly, what macro-prudential policy objective to adopt and how to define it, thirdly, with what tools shall be used to implement this policy (Birchwood, Kolasa, Makarski 2013)? In this article an attempt has been made to answer the first of the research questions posed.

Analysing the adopted institutional solutions on a sample of 119 countries, it is important to stress the dominant location of decision-making powers in relation to macro-prudential policy in the central bank (this applies to 71% of the examined cases, see Cerutti, Claessens and Laeven 2015). Hence, the natural direction of considerations in the further part of the article is a critical and multi-faceted assessment of the legitimacy of transferring the competences in the field of macro-prudential policy to the central bank. In particular, this assessment will focus on the analysis of interrelations between monetary policy (as the primary domain of the central bank) and macro-prudential policy.

The starting point for the analysis may be a reflection on the relationship between monetary and fiscal policies. Both policies have differently defined objectives, a range of instruments that can be used and centres of power. There are also numerous interactions

between the two policies. Referring to Nash's theory of games and equilibrium (Nash 1950), monetary policy and fiscal policy are implemented independently (taking into account the impact of one policy on the other), with coordination occurring to a greater or lesser extent (cf. Blinder 1982). Thus, the question arises as to whether the relations between monetary policy and macro-prudential policy can be shaped in a way similar to the one that has been developed over the years and embedded in economic theory in relation to monetary and fiscal policy.

Monetary policy and macro-prudential policy should be seen as different issues. This is evidenced above all by the separately defined objective of each policy, i.e. price stability and financial stability[2], in accordance with the Tinbergen rule, and the assignment of policy instruments to these objectives. While the monetary policy objective is well defined and measurable, there is still no consensus with regard to financial stability with regard to the understanding of the concept and the possibility of measuring it (Svensson 2015). Despite such a clear separation of policies, there are also voices that the objective of macroeconomic stability should be treated as a priority and both monetary and macro-prudential policies should be used together to achieve this overarching objective (Eichengreen et al. 2011).

What are the arguments in favour of transferring macro-prudential policy competences to the central bank?

1. The central bank seems to be the institution with the greatest competence and knowledge in macroeconomic analysis (Caruana 2010; Borio 2011). The resource-based approach therefore indicates that this institution is competent to exercise macro-prudential supervision.
2. The central bank has knowledge of the financial market and takes an active part in the functioning of this market. Moreover, owing to its reputation and high credibility , the influence of the central bank through, among others, the expectation channel is much more effective in comparison with a separate, newly established regulatory and supervisory institution (Group of Thirty 2010; Smets 2014).
3. The central bank as a macro-prudential supervisor is also indicated as the lender of last resort (lender of last resort). The central bank is strongly motivated to minimise the likelihood of a financial crisis, due to the need to cover losses in the materialisation of the crisis (Smets 2014). Moreover analyzing the situation in the euro area, Maddaloni and

[2] Financial stability is understood as the absence of financial instability, i.e. a situation in which economic activity and the state of the economy in general are weakened by the malfunctioning of the financial system or certain elements thereof (Ferguson 2003, p. 209; Crockett 1997; Padoa-Schioppa 2003, p. 287; Schinasi 2004).

Peydró (2013) pointed out the possibility of using central bank interest rates in conjunction with the function of providing liquidity to the market (also in the form of a lender of last resort) as a combination of monetary and macro-prudential policy tools, ensuring reduction of pro-cyclicality in the credit market.

4. The central bank, as the macro-prudential supervisor, also benefits from its competence to supervise the payment and settlement system as an important element of the financial system.
5. The location of the two policies - monetary and macro-prudential - in the central bank allows for a faster and better (more efficient) circulation of information and enables an efficient coordination of the decision-making process (Smets 2014).
6. Moreover, the central bank is usually an institution with a high level of institutional, personal, functional and financial independence, which allows for quick, parliamentary-free decision-making (which is particularly important in the event of a financial crisis). One independent centre of power in the central bank increases the effectiveness of stabilisation efforts thanks to short internal policy delays (Eusepi and Preston 2007; González-Páramo 2007).

On the other hand, it is also worth considering arguments against entrusting the central bank with a macro-prudential policy mandate.

1. Regardless of the instruments used, macro-prudential policy is unlikely to be fully effective and will not avoid a crisis in the future. With the central bank being burdened with the objective of financial stability the mere risk of a financial crisis may have a strong impact on the bank's reputation and credibility. This in turn may translate into a reduction in the effectiveness of central bank monetary policy, which affects the financial market mainly through the expectations channel.
2. A uniform distribution of emphasis on the objectives of price stability and financial stability creates the possibility of the problem of a time-inconsistency problem, originally identified in relation to monetary policy by Kydland and Prescott (1977) and developed by Calvo (1978) and Barro and Gordon (1983), and adapted to the objective of financial stability by Ueda and Valencia (2012), among others. The latter authors argue that the incoherence of policy over time may result from the lack of possibility of frequent adjustments in macro-prudential policy and the temptation of the central bank to use monetary policy to stabilize the financial system [6].

3. Another problem highlighted by economists and politicians concerns the excessive concentration of power in one institution and the emergence of a phenomenon of overburdening the central bank with responsibility[3] (Group of Thirty 2010; Issing 2016).

To sum up, the interactions between the two policies can be positive (creating synergies between policies), negative (when there is a conflict of goals) and neutral (Table 2).

Table 2. Possible interactions between monetary policy and macro-prudential policy

Moment of the financial cycle (credit and financial assets market)	Inflation forecasts		
	Inflation above the inflation target (policy tightening)	Inflation close to Inflation target	Inflation below the inflation target (policy mitigation)
financial imbalance - wave of excessive enthusiasm (exuberance)	synergy between policies	neutral	Conflict of objectives
lack of financial imbalances	neutral	neutral	neutral
financial imbalance - contraction wave	Conflict of objectives	neutral	synergy between policies

Source: Own elaboration based on (Beau, Clerk, Mojon 2012; Dunstan 2014; Smets 2014).

Analysing the institutional models of macro-prudential policy adopted in individual countries, three dominant solutions for locating competences can be identified (IMF 2013, p. 30)[4]:

model 1: the mandate for macro-prudential policy is exercised by the central bank and decisions on macro-prudential policy are taken exclusively by the bank's decision-making body (board of directors, board of management); this model is typical of those financial systems where central banks traditionally exercise financial supervision (micro-prudential dimension);

model 2: the macro-prudential policy mandate is exercised by a specially established committee, but it operates within the organisational structure of the central bank, with representatives of various institutions, including the Ministry of Finance, the regulatory and supervisory institutions, in addition to the central bank;

model 3: the mandate in the area of macro-prudential policy is exercised by a specially established committee, located outside the organisational structure of the central bank, with

[3] The mechanism is presented as follows: the central bank sets a socially optimal inflation target and conducts a monetary policy aimed at achieving this goal, but in the face of the crisis, the central bank responsible for macro-prudential policy deliberately chooses a suboptimal inflation level, which reduces the real value of debt and minimizes the losses resulting from the financial crisis (Ueda, Valencia 2012).

[4] Issing (2016, pp. 1-2) identifies at least two dimensions of the phenomenon of excessive central bank burden, i.e. operational overburdening and expectational overburdening.

the active participation of a central bank representative in the work and decision-making process of this committee.

In all these models, the central bank appears as the institution responsible (or co-responsible) for the conduct of macro-prudential policy.

Summary

Most politicians and economists have unanimously identified macro-prudential policy as the missing link in the financial safety net and regulatory and supervisory policy. As a result, further countries are reforming the network and establishing a new dimension of financial supervision. All of these measures are ad hoc in nature and have not yet been thoroughly justified in economic theory.

A characteristic feature is the strong empowerment of the central bank as the entity responsible (or at least co-responsible) for macro-prudential policy. Regardless of the adopted solutions or selected elements of the structural model, the central bank appears there as an important element of the new institutional framework of this policy.

From the point of view of the current state of knowledge about macro-prudential policy, its effectiveness or institutional and legal structure, the choice of the central bank as the entity responsible (co-responsible) for achieving the objective of financial stability seems to be socially optimal. Analysing the theoretical justification for locating macro-prudential policy competences in the central bank, it should be stressed that the number of arguments for and against such a solution is unevenly distributed. The former dominate, i.e. the arguments in favour of transferring the macro-prudential policy mandate to the central bank.

Although less numerous, the identified arguments against such a solution seem so important that their omission in shaping the institutional and legal framework of macro-prudential policy may result in high social and economic costs in the future. In particular, the loss of central bank credibility as a consequence of the financial crisis and the problem of policy incoherence over time may have far-reaching consequences for the effectiveness of central bank monetary policy. Both risks can be mitigated by a clear separation of objectives, instruments, communication process and democratic accountability in monetary and macro-prudential policy. Such a solution would therefore point to the need to place macro-prudential policy decision-making powers outside central bank structures, which runs counter to the trends observed.

References

Bańbuła P. (2013), *Polityka makroostrożnościowa: przesłanki, cele, instrumenty i wyzwania*, „Materiały i Studia", nr 298, Narodowy Bank Polski, Warszawa.

Barro R.J., Gordon D.B. (1983), *A Positive Theory of Monetary Policy in a Natural Rate Model*, „Journal of Political Economy", vol. 91, no. 4 (August), p. 589-610.

Beau D., Clerc L., Mojon B. (2012), *Macro-Prudential Policy and the Conduct of Monetary Policy,* „Banque de France Working Paper", no. 390.

Blinder A.S. (1982), *Issues in the Coordination of Monetary and Fiscal Policy*, NBER Working Paper, no. 982, September.

Borio C. (2003), *Towards a macro prudential framework for financial supervision and regulation*, BIS Working Papers, no. 128, Bank for International Settlement, Basel.

Borio C. (2010), *Implementing a macroprudential framework: Blending boldness and realism*, Bank for International Settlements, Basel.

Borio C. (2011), *Central banking post-crisis: What compass for unchartered waters?* Bank for International Settlements, Basel.

Brzoza-Brzezina M., Kolasa M., Makarski K.(2013), *Macroprudential policy and imbalances in euro area*, „NBP Working Paper", no. 138, National Bank of Poland, Warsaw.

Calvo G.A. (1978), *On the time consistency of optimal policy in the monetary economy*, „Econometrica", vol. 46, no. 6, p. 1411-1428.

Caruana J. (2010), *The challenges of taking macroprudential decisions: who will press which button(s)?* 13th Annual International banking Conference, Federal Reserve Bank of Chicago, Chicago, 24 September.

Cerutti E., Claessens S., Laeven L. (2015), *The use and effectiveness of macroprudential policies: New evidence*, „IMF Working Paper", no. 61, International Monetary Fund, Washington.

Crockett A. (1997), *The theory and practice of financial stability*, GEI Newsletter, no. 6.

Dobrzańska A. (2016), *Polityka makroostrożnościowa banku centralnego*, Difin, Warszawa.

Dunstan A. (2014), *The interaction between monetary and macro-prudential policy*, „Reserve Bank of New Zealand Bulletin", vol. 77, no. 2.

Eichengreen B., El-Erian M., Fraga A., Pisani-Ferry J., Prasad E., Rajan R., Ramos M., Reinhart C., Rey H., Rodrik D., Rogoff K. (2011), *Rethinking Central Banking*, Report of the Committee on International Economic Policy and Reform.

Eusepi S., Preston B. (2007), *Central bank communication and expectations stabilization*, NBER Working Paper 13259 (July).

Evans O., Leone A.M., Gill M., Hilbers P. (2000), *Macroprudential indicators of financial system soundness*, IMF Occasional Paper, no. 192, International Monetary Fund, Washington.

Ferguson R.W. (2003), *Should financial stability be an explicit central bank objective?* w: Ugolini P.C., Schaechter A., Stone S.R. (red.), *Challenges to Central Banking from Globalized Financial Systems*, International Monetary Fund, Washington.

Financial Stability Board (2011), *Macroprudential Policy Tools and Frameworks, Progress Report to G20*, International Monetary Funds, Bank for International Settlements, 27 October, http://www.imf.org/external/np/g20/pdf/102711.pdf.

Giese J., Nelson B., Tanaka M., Tarashev N. (2013), *How could macroprudential policy affect financial system resilience and credit? Lessons from the literature*, „Financial Stability Paper", no. 21, May, Bank of England.

González-Páramo J. (2007), *Expectations and credibility in modern central banking: a practitioner's view',* speech at the Conference on „Inflation targeting, central bank independence and transparency", University of Cambridge, Cambridge.

Group of Thirty (2010), *Enhancing Financial Stability and Resilience. Macroprudential Policy, Tools, and Systems for the Future*, Group of Thirty, Washington.

IMF (2013), *Key Aspects of Macroprudential Policy*, „International Monetary Fund", June10, Washington.

Issing O. (2016), *Central banks: from overburdening to decline?*, „White Paper Series", no. 42.

Karkowska R. (2015), *Ryzyko systemowe – charakter i źródła indywidualizacji w sektorze bankowym*, Oficyna Wolters Kluwer Business, Warszawa.

Kydland F., Prescott E. (1977), *Rules rather than discretion: the inconsistency of optimal plans*, „Journal of Political Economy", vol. 85, no. 3, p. 473-492.

Maddaloni A., Peydró J.-L. (2013), *Monetary Policy, macroprudential Policy and banking stability. Evidence from the Euro Area*, „ECB Working Paper Series", no. 1560, July.

Masciandaro D., VolpicellaA. (2016), *Macro prudential governance and central banks: Facts and drivers*, „Journal of International Money and Finance", vol. 61, March, p. 101-119.

Nash J. (1950), *Equilibrium Points in n-Person Games*, „Proceedings of the National Academy of Sciences of the United States of America", vol. 36, no. 1, p. 48-49.

Nier E.W., Osinski J., Jácome L.I., Madrid P. (2011), *Towards effective macroprudential policy frameworks: An assessment of stylized institutional models*, „IMF Working Papers", no. 250, International Monetary Fund, Washington.

Olszak M. (2012), *Polityka ostrożnościowa w ujęciu makro – cel, instrumenty i architektura instytucjonalna*, „Problemy Zarządzania", vol. 10, nr 4 (39), Uniwersytet Warszawski, Warszawa.

Padoa-Schioppa T. (2003), *Central banks and financial stability: exploring a land in between,* w: Gaspar V., Hartman P., Sleijpen O. (red.), *The transformation of the European financial system*, Second ECB Central Banking Conference, European Central Bank, Frankfurt am Main.

Schinasi G.J (2004), *Defining Financial Stability*, „IMF Working Paper", no. 187, International Monetary Fund, Washington D.C.

Sławiński A., Chmielewski T. (2010), *Wykorzystanie instrumentów nadzorczych w polityce makrostabilnościowej*, „Zarządzanie Publiczne", vol. 13, nr 3, s. 49-66.

Smaga P. (2014), *Istota ryzyka systemowego*, „Studia Ekonomiczne", INE PAN, nr 1 (LXXX), Warszawa.

Smets F. (2014), *Financial Stability and Monetary Policy: How Closely Interlinked?* „International Journal of Central Banking", vol. 10, no. 2, June, p. 263-300.

Svensson L.E.O. (2015), *Monetary Policy and Macrorpudential Policy: Different and Separate*, Federal Reserve Bank of Boston 57th Economic Conference, October 2-3.

Szpunar P.J. (2012), *Rola polityki makroostrożnościowej w zapobieganiu kryzysom finansowym*, „Materiały i Studia", nr 278, Narodowy Bank Polski, Warszawa.

Ueda K., Valencia F. (2012), *Central Bank Independence and Macro-prudential Regulation*, „IMF Working Paper", no. 12/101, International Monetary Fund, Washington.