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CENTRAL BANKING AFTER THE EXPERIENCES OF 2007–2016: IS THERE ROOM FOR STRATEGIC CHANGE?

INTRODUCTION

This year sees the passing of a decade since the start of the financial crisis in the United States. The course and repercussions of this crisis have forced economic policy-makers to react by changing the ways in which policy is conducted. A prime example of this is the response of central banks to developments in both the industrial and financial sectors of the European economies. Economists – both academics and practitioners – began to make frequent reference to concepts such as financial stability and systemic risk. Adaptation of the central banks' role to the new circumstances became a subject of public discussion.

This paper evaluates the strategic changes that have taken place in central banking following the experiences of the first years of the economic crisis. It should be emphasised that the intention is not to assess monetary policy either *ex ante* or *ex post*, but to establish to what extent the crisis, already known in the literature as the Great Recession, marked a turning point in central banking, leading to changes in strategic monetary policy or – more broadly – to the creation of a strategy which combines not only elements associated with monetary policy, but also the conduct by the central banks of a macroprudential policy.

The starting point of these considerations is the situation existing before the crisis: the central banks conducted a monetary policy focused mainly on maintaining a stable level of prices, while analysing the economy within the framework of a theoretical consensus called the new neoclassical synthesis (NNS). The assignment to the central banks of a role in maintaining financial stability, or more broadly, (co-)responsibility for macroprudential supervision, represents a departure from this consensus and a watershed in monetary policy strategies. The new goal and new policy give grounds for a discussion concerning strategy in central banking. The change in the scope of the central banks' operations causes them to cross the boundaries of monetary policy, whether defined in the modern or traditional way.¹ Hence the reference in the title to

¹ Modern definitions of monetary policy stress the macroeconomic goal of assuring price stability. Classical definitions referred to the central bank's impact on the money supply.

central banking, which is now expected to take on the implementation of macroprudential policy in addition to its traditional mandate.

The background for the analysis of changes in central banking on the conceptual level will be the situation in selected European Union (EU) member states. Alongside the European Central Bank (ECB), which applies a common monetary policy for the 19 countries of the euro area, we shall also consider the solutions applied in Bulgaria, Croatia, the Czech Republic, Denmark, Poland, Romania, Sweden, Hungary and the United Kingdom. These countries' central banks run independent monetary policies, which is the common denominator for the research sample. However, within the sample, different strategic approaches to the achievement of monetary goals can be distinguished. Three central banks implement a strategy based on the exchange rate, while the remainder implement multi-parameter strategies, pursuing an overriding goal based on a wide spectrum of information. Moreover, the member states outside the euro area include Denmark, which is not committed to adopting the single currency, and the United Kingdom, which has decided to leave the EU. Because of the transnational character of the European regulations and recommendations, far-reaching differences should not be expected in the central banks' actions at the level of monetary or macroprudential policy. Pre-crisis frameworks of monetary policy are compared here with the solutions being implemented at the end of 2016.

The structure of the paper corresponds to the research goals. In the second section, we consider how monetary policy was conducted before the crisis, and – briefly – its theoretical basis. The third section analyses policy changes in the strategic context. The fourth section addresses the key question concerning the possible characterisation of central banking strategies which comprehensively and cohesively incorporate elements of monetary and macroprudential policy. The final section of the paper contains overall conclusions.

THE PRE-CRISIS CONSENSUS IN MONETARY POLICY

In considering the changes in central banking in the last decade, we should begin with a brief description of the starting point: the pre-crisis approach to the attainment of the central banks' goals.

In the 1990s a theoretical consensus emerged in relation to monetary policy, broadly accepted both by central bankers and by academics. EU central banks conducted a monetary policy based on this consensus. Its theoretical basis is what is called the new neo-classical synthesis (NNS), which integrates Keynesian and classical elements, as well as the real business cycle school. The NNS cannot be described fully in an article of this length;² we shall therefore mention only its practical implications for the effectiveness of monetary policy, reflected in analytical models based on the NNS:³

² The NNS is described in: J. Galí, *Monetary policy, inflation, and the business cycle. An introduction to the New Keynesian framework*, Princeton 2008; N.G. Mankiw, A quick refresher course in macroeconomics, *Journal of Economic Literature* Vol. 28, 1990, pp. 1645–1660.

³ A. Wojtyna, *Szkice o polityce pieniężnej*, Warsaw 2004, pp. 86–92.

- in the short term⁴ the central bank, by lowering interest rates, causes a decrease in real short-term interest rates⁵ and a depreciation of the currency, thereby increasing demand and production in the economy;
- in the long term the central bank must set rates so that the short-term real interest rate is equal to the average natural interest rate (at which production reaches its potential level if prices are flexible);
- if the central bank attempts to keep the short-term real interest rate below its natural level for too long, then total demand will exceed potential production, the economy will overheat and inflation will increase;
- monetary policy cannot change real values in the long term.

Precisely because of the long-term ineffectiveness of attempts to influence real values, monetary policy should be oriented towards creating conditions that stimulate long-term, stable economic growth and not towards achieving temporary gains in growth or employment. This theoretical conclusion led to the establishment of a system of goals for the central bank in which inflation played the main role. Because of the absence of a conception of the long-term impact of monetary policy on real values, and the marginalisation of the financial sector in NNS models, pre-crisis monetary policy functioned within the framework of the Jackson Hole consensus,⁶ which encompassed the following elements:⁷

- monetary policy based on the regulation of expected interest rate values was the main tool for macroeconomic stabilisation, where this should not directly influence the current level of production;
- in a flexible direct inflation targeting strategy⁸ monetary policy was expected to keep real inflation as close as possible to the inflation target;
- because of the importance of long-term interest rates in the monetary transmission mechanism, the main role in monetary policy was played by expectations regarding future central bank interest rates and the central bank's credibility, which made it possible to anchor these expectations;

⁴ It should be noted that this is a relative term. A temporary or short-term impact may in fact persist for several years, having a measurable impact on aggregate production. The economy may need so much time for adjustment processes following a shock. In economics, the short term means whatever time is necessary for adjustment processes (possibly even up to twenty years).

⁵ The central bank, by controlling short-term interest rates and market expectations regarding future interest rate changes, can exert an influence on the real long-term rate, and thereby on demand and supply.

⁶ The name comes from the location of a conference held by the Federal Reserve Bank of Kansas City: *Jackson Hole Symposium on Economic Policy*.

⁷ R. Clarida, What has – and has not – been learned about monetary policy in a low-inflation environment? A review of the 2000s, *Journal of Money, Credit and Banking* Vol. 44(1), 2012, pp. 125–127.

⁸ That is, in a strategy in which the central bank accepts a certain degree of variation in inflation (deviation from the target) in order to limit variation in production. L.E.O. Svensson, *Monetary policy and real stabilization*, in: *Rethinking Stabilization Policy*, Symposium Proceedings, The Federal Reserve Bank of Kansas City, Jackson Hole 2002.

- the central bank’s independence from political pressure, at least on the functional level (concerning decisions on the level of instruments), was a significant factor supporting the central bank’s credibility;
- the efficient market hypothesis reflected approximately the functioning of the credit market;
- price stability and financial stability were seen as complementary, their attainment was not expected to entail a conflict of interests, and direct involvement of the central bank in supporting stability was not necessary;
- the degree of regulation and oversight of financial markets was sufficient;
- in case of growing imbalance in the market for financial assets, the central bank would not intervene, nor did it target any given level of assets; intervention would take place in case of market breakdown (to provide liquidity).

The direct inflation targeting (DIT) strategy, mentioned in one of the points of the Jackson Hole consensus, appeared most compatible with modern monetary theory, and was therefore adopted by successive central banks in the 1990s. The strategy can be characterised as being oriented towards stabilising inflation expectations. Its model attributes are: the treatment of inflation as a priority goal and announcement of its level numerically; the “looking at everything” approach, which means freedom in choosing the arguments supporting the central bank’s decision-making; the preparation of inflation forecasts and their use in policy; a strategic transparency that enables evaluation of the central bank’s actions and intentions; democratic responsibility, which serves as a form of public control over the independent actions of the central bank; and a floating exchange rate, which releases the central bank from the need to take actions to stabilise the exchange rate at the expense of managing the interest rate.⁹ In this strategic framework the central bank would focus on one goal, even if it allowed a certain degree of variation in that goal and controlled expectations in striving for its attainment.

In considering the pre-crisis conduct of monetary policy, an additional comment should be made regarding the multiplicity of solutions available to the central banks. A brief introduction has already been given to the standard solution on the strategic level – the DIT strategy. Among the ten analysed central banks, however, there are four exceptions from such a monetary policy framework. The first is the European Central Bank, with its hybrid monetary strategy. The new neoclassical synthesis does not stress the role of money supply in monetary policy; therefore, central banks whose policy is based on the DIT strategy and NNS models do not attach great importance to money and credit as factors in their decision-making, even though there is research showing the connection between money supply and inflation.¹⁰ However, the ECB emphasises the role of monetary analysis in its monetary policy.

⁹ Features of DIT are described in e.g.: F.S. Mishkin, Why the Federal Reserve should adopt inflation targeting, *International Finance* Vol. 7(1), 2004, pp. 117–127; G. Hammond, *State of the art of inflation targeting*, Handbook No. 29, London 2012.

¹⁰ This is supported by research, e.g.: F. Seitz, J. Landesberger, *Households money holdings in the euro area. An explorative investigation*, Working Papers Series No. 1238, European Central Bank, Frankfurt am Main 2010; R. Horváth, L. Komárek, F. Rozsypal, Does money help predict inflation? An empirical assessment for Central Europe, *Economic Systems* Vol. 35(4), 2011, pp. 523–536.

Policies deviating significantly from the DIT strategy are adopted by three other central banks from the sample: the Bulgarian National Bank (BNB), the Danish National Bank (DNB) and the Croatian National Bank (HNB). These implement a strategy based on an indirect target, namely the exchange rate. The solutions applied will be considered in detail in the following sections. Here, the theoretical basis of such an approach should be mentioned. Central banks implementing a strategy based on a fixed exchange rate (indirect target) do not reject the theoretical foundations of the new neoclassical synthesis. However, they adopt the assumption that in their countries' specific economic circumstances it will be easier to achieve stability by pegging their national currency to that of another country, or to the euro. In this way inflation expectations, and ultimately inflation itself, will be imported from the euro area. If domestic inflation is higher than inflation in the euro area, the international competitiveness of the national economy will fall, causing a decrease in employment (in exporting firms and firms that compete with imported goods), and thus leading to a fall in salaries and prices, and consequently a decrease in inflation.

This analysis of the theoretical basis of monetary policy and its corresponding strategic framework before the crisis should be concluded by emphasising the consensus regarding the importance of financial stability in monetary policy. A summary of this consensus, by Paweł Marszałek and Magdalena Kiedrowska, can be found in the Polish subject literature.¹¹ In the 1990s, academic economists and central bankers agreed that a stable macroeconomic environment and a balanced rate of economic growth were prerequisites for financial stability. Indeed, this was one of the elements of the Jackson Hole consensus. It was considered that the best way for the central bank to contribute to macroeconomic stability was by performing other tasks: on the macro scale, ensuring a stable level of prices; and on the micro scale, supporting the functioning of the financial market and the payments system or ensuring liquidity in emergency situations (as a lender of last resort). Essentially the legal framework in most monetary systems was adapted precisely to this solution. Financial stability was not given among the central banks' goals – with a few exceptions, which will be described in the next section – and was not even listed explicitly among their tasks. There were, however, tasks related to securing financial stability indirectly (through the organisation of a settlements system, provision of liquidity, support for financial market development, etc.). Financial stability lay somewhere on the peripheries of the DIT strategy, and the central bank took a passive approach to growth in imbalance on the financial market. At the same time, despite the wide acceptance of this solution, there were a growing number of calls for central banks to be given greater responsibility for financial stability,¹² even before the crisis. However, these demands were not realised.

¹¹ M. Kiedrowska, P. Marszałek, Bank centralny i stabilność finansowa, *Bank i Kredyt* no. 6, 2003, pp. 4–16.

¹² One such call came from F.S. Mishkin, although he believed that the central bank should support financial stability by the methods hitherto applied, namely by acting as lender of last resort and exercising oversight over banks. F.S. Mishkin, What should central banks do?, *Federal Reserve Bank of St. Louis Review*, November/December 2000, p. 10.

Table 1
Outline of strategies of selected ESCB banks as at January 2008

| Bank | Strategy | Main goal | Financial stability | Exchange rate | Notes |
|------|---------------|---|---------------------|---|---|
| ECB | hybrid | stable price level | implicitly | floating | Important role played by monetary analysis. |
| BNB | exchange rate | stable price level through currency stability | implicitly | currency board | Reference to financial stability in the 2004 strategy (indirect goal). |
| HNB* | exchange rate | stable price level | implicitly | <i>de jure</i> : floating managed; <i>de facto</i> : pegged within an unpublished range | No formal nominal anchor. Goal assumed to be similar to that of the ECB. |
| CNB | DIT | stable price level | explicitly | floating managed | Supporting financial stability listed among the central bank's tasks. |
| DNB | exchange rate | stable and safe currency system | explicitly | pegged within a range of $\pm 2.25\%$ | Inflation target level as for the ECB. Krone in ERM II with a $\pm 2.25\%$ range. Financial stability among the central bank's goals. |
| NBP | DIT | stable price level | implicitly | floating | |
| BNR | DIT | stable price level | explicitly | floating managed | Inflation target gradually lowered to $2.5\% \pm 1$ p.p. from 2013. |
| SR | DIT | stable price level | implicitly | floating managed | Broad interpretation of tasks related to financial stability. |
| MNB | DIT | stable price level | implicitly | floating | <i>De facto</i> a floating managed rate. |
| BoE | DIT | monetary and financial stability | explicitly | floating | Financial stability among the bank's goals since 1997.** |

* In 2008 Croatia was not yet an EU member state; it is included in the table in view of its later membership (from 2013).

** Since 1997, based on the *Memorandum of Understanding between HM Treasury, the Bank of England and the FSA*, the BoE has had an explicit responsibility for ensuring financial stability.

The abbreviations used above will also be used in subsequent tables: Bulgarian National Bank (BNB), Croatian National Bank (HNB), Czech National Bank (CNB), Danish National Bank (DNB), National Bank of Poland (NBP), National Bank of Romania (BNR), Swedish National Bank (SR – *Sveriges Riksbank*), Hungarian National Bank (MNB) and Bank of England (BoE).

Source: compiled by the author.

The foregoing description of the pre-crisis consensus in monetary policy is complemented by a presentation of the monetary policy frameworks of 10 central banks at the start of 2008 (Table 1). They were not only shaped by a similar theoretical school, but they were also subject to the process of legal convergence of EU member states.¹³

The modern strategies applied by six of the ESCB banks did not differ significantly from the DIT model framework already described. These are the Bank of England (BoE), the Czech National Bank (CNB), the National Bank of Poland (NBP), the National Bank of Romania (BNR), the Hungarian National Bank (MNB) and the central bank of Sweden (*Sveriges Riksbank*, SR). Despite significant differences in economic development or the current economic situation in the years preceding the crisis, these central banks considered the best way of conducting policy to be the pursuit of a direct inflation target.

A characteristic solution was and continues to be applied by the European Central Bank. The ECB essentially implements a strategy with model DIT features. However, when describing its strategy it does not use that name, but refers to a quantitatively defined inflation target and a two-pillar analysis of the premises for achievement of that target. It is the way in which economic variables are analysed that differentiates the ECB's strategy from the basic DIT strategy. While the first pillar, known as economic analysis, can be identified with the standard, holistic view of the economy that is an element of DIT, the monetary analysis, which includes evaluation of long-term trends in credit and money supply in the economy, is not part of that strategy. The ECB emphasised the role of monetary analysis because it was expected to be used to some extent as a substitute for inflation forecasts, especially in the initial period of the euro area. Although since 2003 the ECB has not published a reference value for money supply growth, the Governing Council emphasises in official documents the role of monetary analysis in monetary policy and the mutual complementarity of monetary and economic analysis. This distinguishes the ECB's approach from the standard DIT strategy. As mentioned above, the use of monetary analysis is also justified by certain empirical research results. Despite the absence of deviations from DIT model elements, the ECB's strategy referring to the control of monetary aggregates is sometimes called a hybrid.¹⁴ The euro area is also grouped under "Other" in the International Monetary Fund's classification of monetary policy frameworks.¹⁵

Three central banks implemented a strategy with the exchange rate target as an indirect goal, although the ways in which they did this differed substantially. The Croatian National Bank implemented this strategy in its softest form, declaring that *de jure* the kuna's exchange rate was a floating managed rate. However, using the basic

¹³ Not all countries modified their monetary policy strategies as a result of these processes. An example is Denmark, where in autumn 1982 a reform package was announced, one pillar of which was exchange rate stabilisation. Denmark had declared such a strategy previously, although in practice the krone was devalued.

¹⁴ This term was used in C. Bordes, L. Clerc, Price stability and the ECB monetary policy strategy, *Journal of Economic Surveys* Vol. 21(2), 2007, p. 276.

¹⁵ IMF, *Annual report on exchange arrangements and exchange restrictions*, 2014, p. 5.

monetary policy instrument of currency market interventions, the bank essentially stabilised it at a constant level. The Danish National Bank implemented a classic fixed rate. The Danish krone functioned in the ERM II system within a restricted band of fluctuation with respect to the euro. The currency interventions of these two central banks were accompanied by the classic triad of monetary policy instruments: open market operations, standing facilities and a reserve requirement. By contrast, the Bulgarian National Bank operated a currency board with a stronger legal and institutional basis, namely a currency board. This system included a prohibition on the creation of domestic money through the giving of credit to commercial banks.

Before 2008 the central banks' standard duties, laid down in their statutes or in legislation regulating their operations, included acting to ensure the efficient functioning of interbank settlements and payment systems, and supporting the development of the banking sector. They thus supported financial stability on an implicit basis, despite having no direct mandate in that area. Some central banks, such as the *Sveriges Riksbank*, interpreted these provisions broadly, treating them as directly pertaining to the question of the stability of the financial system. Direct references to financial stability were rarer; in the legislation regulating central banks it was usually listed at a lower level: among the tasks, rather than the goals, of the central bank.

CENTRAL BANKS' STRATEGIES WITH REGARD TO THE NEW VIEW OF FINANCIAL STABILITY

The crisis revealed a regulatory gap in relation to financial market oversight, in the form of a lack of institutions and procedures focused on systemic risk. The institutional reforms in this area at EU level began with the de Larosière Report, which proposed a reform of financial market supervision based on micro- and macroprudential pillars. The latter pillar would be formed by the European Systemic Risk Board (ESRB), which carried out macroprudential analyses and coordinated macroprudential policy in the EU.¹⁶ A key role in this supervision was to be played by the ECB and national central banks.¹⁷ The first task of the ESRB was to prepare a recommendation concerning the shape of macroprudential supervision in EU member states. According to the Board's recommendation the central bank was to be a key institution engaged in providing macroprudential supervision. Similar views were expressed by the International Monetary Fund and the Bank for International Settlements.¹⁸

Alongside work on the institutional organisation of macroprudential oversight, the issue of the assignment to central banks of direct responsibility for financial stabil-

¹⁶ P. Szpunar, *Regulacje makroostrożnościowe sektora bankowego*, in: T. Czerwińska, K. Jajuga (eds.), *Ryzyko instytucji finansowych. Współczesne trendy i wyzwania*, C.H. Beck, Warsaw 2016, p. 117.

¹⁷ *Recommendation of the European Systemic Risk Board of 22 December 2011 on the macro-prudential mandate of national authorities*, EU OJ C/41/1.

¹⁸ IMF, *Key aspects of macroprudential policy*, June 2013, pp. 29–30; IMF-FSB-BIS, *Elements of effective macroprudential policy. Lessons from international policy*, August 2016, pp. 6–7.

ity was raised again in economic and political debate. Indeed, after the financial crisis the obligation to take care of financial stability was directly imposed on the central banks in their statutes or governing legislation. In most cases it was laid down that supporting financial stability was one of the central bank's tasks. Less often was it listed among the bank's goals, alongside control of inflation and conditional support for economic growth. Examples of specific arrangements are given in Table 3.

The formalisation of the central bank's role in conducting financial stability (macroprudential) policy was supported by traditional arguments, referring to its natural role in the financial market, as well as arguments which arose out of the crisis. The former included the central banks' historical responsibility for money issuing and circulation and its role as a lender of last resort, which required it to pay increasingly broad attention to the condition of the banking sector.¹⁹ There is even reference in the literature to the creation of an additional function of the central bank, extending that of lender of last resort. This function, called emergency liquidity support, may be activated at the crisis management stage. Central banks then exert an impact on the banking system by activating money reserves in conditions of tension on the financial market.²⁰ However, it seems more appropriate to regard emergency liquidity support as a particular method of exercising the traditional function of lender of last resort, which includes supporting individual banks that are experiencing temporary difficulties. In crises, this individual support may be extended to general or even systemic support. Traditional arguments also referred to the fact that, even in a situation where no explicit and direct responsibility for financial stability was imposed in legal instruments, such responsibility nonetheless formed part of the "genetic code" of central banks.²¹

The place of financial stability in the system of goals following changes in national legal arrangements is shown in Scheme 1. Because of the greater importance of stability, the central bank's system of goals became less transparent. Before the crisis, there had been a prioritisation of goals, whereby the stabilisation of prices was treated as an overriding goal, serving as a nominal anchor, while allowing the conditional realisation of overall economic goals. This approach was in accordance with the assumptions of the NNS: the central bank impacts real values in the short term, and should take account in its policy of the possibility of such impact and its consequences. However, no central bank published any loss function that was to be minimised, nor did they indicate in any other form the weights assigned to the stabilisation of real values within the system of goals. Nonetheless, the central banks acknowledged that they were implementing a flexible version of the DIT strategy, by describing the role played in their policy by the demand factor.

¹⁹ P. Smaga, *Rola banku centralnego w zapewnieniu stabilności finansowej*, CeDeWu, Warsaw 2014, p. 48.

²⁰ B. Dudkiewicz, *Europejski Bank Centralny i nadzór finansowy w Unii Europejskiej a stabilność finansowa*, CeDeWu, Warsaw 2016, pp. 84–85.

²¹ T. Padoa-Schioppa, *Central banks and financial stability: Exploring a land in between*, Policy panel introductory paper, Second ESCB Central Banking Conference, Frankfurt am Main 2002, p. 6.

Scheme 1
A central bank's system of goals

| | | | |
|----------------|---|---|---|
| Goal level: | Main goal | Conditional goal | Auxiliary goal |
| Domain: | Price stability | Overall economic performance | Financial stability |
| How expressed: | Numerically – nominal anchor | Without indication of target level – discretionally | Descriptively |
| Time frame: | Medium | Long | Short when reacting to a crisis; in principle long |
| Mandate: | CB, except for legislative decisions, level may be determined in consultation with the government | Government competence, CB plays an auxiliary role, taking account of real influences on inflation | Various arrangements, CB may be solely or jointly responsible for financial stability |

CB – central bank

Source: compiled by the author.

Financial stability is a goal whose realisation will entail operational difficulties, complicating the system of goals even more. These difficulties are described in Table 2.

The second group of arguments for giving central banks wider responsibility for financial stability concerned the lack of oversight of the financial system as a whole, which came to light during the crisis. As mentioned before, the framework of macroprudential supervision began to be developed relatively quickly at pan-European level. It was designed to support the financial stability of the system, not just specific institutions, and to take a “top-to-bottom” view. In discussion of the new role of the central banks, it is emphasised that they should be responsible for supervision on the macro level also because they have an advantage over other institutions in the form of legally guaranteed independence and credibility, experience in macroeconomic research, and analytical competence. Even before the crisis, central banks were publishing reports evaluating the stability of financial systems, regardless of how financial stability was presented in their system of goals. Moreover, there exists a strong interdependence between monetary and macroprudential policy.

Table 2
Operational difficulties in achieving the goal of financial stability

| Problem | Description |
|---|---|
| Definition of the goal | There is no universal, generally accepted definition of financial stability. In effect each central bank gives its own definition of the stability of the financial system, or rather a description of that state. There are also differing views on measures of financial stability and of systemic risk. Research and implementation work in this area is ongoing. |
| Instruments for achieving the goal | The mandate to achieve financial stability should be reinforced by the granting of control over the tools used for its achievement. A list of macroprudential instruments has been partially developed. However, it is not always the central bank that decides when to apply a tool (at least not independently – in a situation where macroprudential supervision is provided by a collegial body). Interest rates may be applied as an ancillary measure; they are not a selective tool. It is not possible to design tools to support stability that do not impinge on monetary policy. |
| Conflict of goals | Conflict may arise between price stability and financial stability: in case of deflation and excessive lending, or when inflation is above the target and the growth of lending is slow. A goal of unknown weight has been added to the system of goals. |
| Effect on credibility | A change to the central bank's existing role in the economy will lead to revised expectations. Credibility related to monetary policy may not include <i>ex ante</i> the new role assigned to the central bank. It is not yet possible to assess the central bank with respect to the achievement of all of its goals. |
| Organisational and institutional challenges | Actions to support financial stability ought to be carried out independently of other policies, but this is not possible when the central bank is made responsible or jointly responsible for macroprudential supervision. |

Source: compiled by the author.

The effort to ensure financial stability is the main goal of macroprudential policy. Hence the central bank, which has hitherto conducted monetary policy, is expected – independently or as part of a collegial body – to exercise macroprudential supervision, or even more broadly macroprudential policy, the main goal of which is to protect the stability of the financial system as a whole. This includes increasing the resistance of the financial system and limiting systemic risk, and thus ensuring that the financial sector makes a consistent contribution to economic growth.²² Macroprudential policy is therefore a part of macrostability policy. By this token, the central bank's mandate is significantly expanded.

²² *Recommendation of the European Systemic Risk Board...*, op. cit.

Table 3
New strategic goals of central banks after the crisis

| Bank | Financial stability in the system of goals | Role in macroprudential policy |
|------|--|--|
| ECB | Tasks carried out pursuant to the Single Supervisory Mechanism regulation: Identification of risk together with ESCB central banks Estimation of risk: the potential impact of systemic risk on the stability of the financial system of the euro area and EU and that system's degree of resistance | Since 4 November 2014 the ECB has had macroprudential tools at its disposal in case of the identification of systemic risk in the financial system. These tools include the tightening of requirements applicable to financial institutions and the expression of opinions and objections with regard to the decisions of national macroprudential supervisory bodies. |
| BNB | Indirectly: no legislative change has been made to add the assurance of financial stability directly to the bank's tasks. Even before the crisis it was treated as an indirect goal. | Macroprudential supervisory body. Has tools at its disposal in accordance with EU guidelines. Evaluates the quality of the assets of domestic institutions and performs stress tests at national level. |
| HNB | Assuring financial stability is listed among the central bank's tasks. | A member of the Financial Stability Council along with other institutions of the financial security network. Has tools at its disposal in accordance with EU guidelines. |
| CNB | Support for financial stability and the correct functioning of the financial system is one of the central bank's goals. A macroprudential mandate is assigned among its tasks. | Macroprudential supervisory body. Has tools at its disposal in accordance with EU guidelines. Evaluates the quality of the assets of domestic institutions and performs stress tests at national level. |
| DNB | Stability of the financial system is one of the central bank's three goals. | Chairs the Systemic Risk Council, which also includes representatives of economic ministries and outside experts. Has tools at its disposal in accordance with EU guidelines. |
| NBP | Support for financial stability is one of the central bank's tasks. A macroprudential mandate is given at a similar level. | Member of the Financial Stability Committee along with other institutions of the financial security network. Chairs the Committee as macroprudential supervising body. Has tools at its disposal in accordance with EU guidelines. |
| BNR | Support for financial stability is one of the central bank's tasks. | Together with other institutions of the financial security network, makes up the National Committee for Financial Stability. Has tools at its disposal in accordance with EU guidelines. |
| SR | Implicitly. However, even before the crisis, the central bank adopted a broad interpretation of the law that made it responsible for the functioning of the payments system, interpreting this <i>de facto</i> as responsibility for the stability of the financial system. | Belongs to the Financial Stability Council, an advisory body chaired by the Minister for Financial Risk. Macroprudential instruments are at the disposal of the Swedish Financial Supervisory Authority. |

| | | |
|-----|---|--|
| MNB | Support for financial stability and the correct functioning of the financial system is one of the central bank's goals. A macroprudential mandate is assigned among its tasks. | Macroprudential supervisory body. Has tools at its disposal in accordance with EU guidelines. |
| BoE | Direct; stability is one of the goals with a more explicit legal status, following the Financial Services Act 2012 (previously by way of an understanding with the government). | The Financial Policy Committee is composed of BoE representatives, outside experts, an executive of the supervisory institution, and (without voting rights) a representative of the Treasury. Has tools at its disposal in accordance with EU guidelines. |

Source: compiled by the author from information on the central banks' websites.

Changes at a strategic level affecting the analysed central banks, resulting from the experiences of the past decade, are listed in Table 3. They involve the strengthening of the role of the central bank in ensuring financial stability, as well as the implementation of macroprudential supervision, in which the central bank is assigned a significant role.²³ Financial stability is indicated as a goal of the central banks in the Czech Republic and Hungary, and as a central bank task in Croatia and Poland and in the ECB regulations. The pre-crisis provisions remain unchanged in Bulgaria (here it is an indirect goal indicated at strategic document level) and in Sweden (where a broad view is taken of stability in spite of the absence of a direct mandate).

An attempt to make a formalised measurement of the involvement of central banks in financial stability was undertaken by Paweł Smaga, based on a stability indicator of his own design. In 2012 – in the early stages of the implementation of the ESRB guidelines on macroprudential supervision – the highest value of the indicator of central bank involvement in supporting financial stability was recorded for the Czech Republic, followed by (among countries outside the euro area) Romania, Denmark, Sweden and Hungary. Below-average values of the indicator were recorded for Poland, the UK and Bulgaria.²⁴ Implementation of the macroprudential supervision regulations became a fact after 2012, hence the indicator values would be different in 2016. As Table 3 shows, the central banks have in fact been institutionally involved in the provision of macro-level supervision (as members of supervisory bodies, and in some cases as the controllers of macroprudential instruments).

²³ An exception here is the *Sveriges Riksbank*, which in 2010 stopped publishing a range of fluctuation around a stated inflation target, explaining this by the wish to embed a flexible DIT strategy in the market's consciousness. Also, the Czech National Bank undertook in 2013 to maintain an exchange rate no worse than 27 koruna to the euro, providing an additional instrument of monetary policy with respect to operation within nominal interest rate limits, but at the same time interfering *de facto* in the country's exchange rate system. The commitment was abandoned in April 2017.

²⁴ P. Smaga, *Assessing involvement of central banks in financial stability*, Center for Financial Stability Policy Paper, 23 May 2013, p. 36. The study did not include the HNB or ECB, but considered each of the euro area banks separately.

CENTRAL BANKING STRATEGY IN PLACE OF MONETARY POLICY STRATEGY?

Before the crisis, monetary policy was conducted on the basis of two consensuses: a theoretical one (the NNS) and a practical one (the Jackson Hole consensus). These were held together by a monetary strategy framework. In addition, the general acceptance of such a monetary policy and the effectiveness of the deflationary policy of the 1990s made it unnecessary to seek strategic changes. As Mervyn King stated, monetary policy was boring.²⁵ The monotony of the conduct of that policy²⁶ was encouraged by the fact that the manner of its implementation was clear, coherent and well-grounded in public awareness. In the course of the crisis, the consensus on which monetary policy was based became the target of more intense criticism. While before the financial crisis central bankers, aware of the imperfections of the NNS models, could interpret changes under the category of shocks (the continuity view), the post-crisis landscape forces them to concede that changes in the economy reflect qualitative changes (the new environment view).²⁷ To regard such changes as shocks would be too great a simplification. As a result, central bankers are more willing to engage again in discussion of the functioning of the economy and the changed role of the central bank. In spite of the increased criticism of the NNS, no real alternative theory has been proposed for describing cause-effect relationships in the economy.²⁸ Hence the central banks have intensified modelling and analytical work on additional channels of monetary transmission related to the financial sector, and declare more openly that they are conducting a flexible policy, allowing greater variation in inflation in exchange for the possibility of stabilisation with respect to a second goal, which encompasses not merely overall economic performance, but also financial stability.

While the theoretical consensus as to the manner of the functioning of the economy remains unchallenged, a new consensus is developing as to the need to introduce a new element to macroeconomic policy – namely macroprudential policy – and the leading role of the central bank in its implementation.²⁹ There is thus a blurring of the

²⁵ M. King, *Monetary policy: Theory in practice*, speech given on 7 January 2000, <http://www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2000/speech67.pdf> (accessed 15 July 2016).

²⁶ This does not mean that there were no changes in policy. For instance, from the early 1990s there was a significant improvement in the transparency of central banks and their communication with the market.

²⁷ C.E.V. Borio, W.B. English, A.J. Filardo, *A tale of two perspectives: Old or new challenges for monetary policy*, BIS Working Paper No. 127, 2003, pp. 25–28.

²⁸ The reasons for the extinguishing of discussion on revision of the mainstream view are seen by economists in the essentially effective application of tools by the central bank and in the fact that the heterodox schools were too disparate and poorly advanced to be able to present a cohesive theory. Also significant is the position occupied by mainstream economists in world economies. See A. Wojtyna, *Czy kryzys w teorii ekonomii jest głębszy niż w gospodarce?*, *Ekonomista* no. 2, 2014, pp. 193–194.

²⁹ M. Belka, *Dlaczego tylko odkrywać? Lekcje z obecnego kryzysu dla ekonomii i polityki gospodarczej*, *Ekonomista* no. 2, 2014, p. 187.

division of economic policy into the two pillars of fiscal policy and monetary policy, conducted by independent decision-making and implementing bodies.

A decade after the start of the crisis, it would be apt in economic discourse to replace the analysis of monetary policy strategy with analysis of the strategy of central banks, which includes not only monetary policy strategy (aimed at achieving price stability), but also the role of the monetary authorities in macroprudential policy. If the same institution has been given a legal mandate to work, solely or jointly, for a second goal, using instruments that have an impact on the achievement of what was previously considered its main goal, then its actions should not be considered merely in the context of monetary policy strategy, but in the broader context of central bank strategy. Such a strategy ought to be fully worked out and made public, like the monetary strategies published by central banks. The central banks would then adopt a more unambiguous position as to their own system of goals and reaction functions.

Monetary strategy is defined as a combination of the reaction function to economic events, as adopted by the monetary authorities, and their communication with the public concerning both the reaction function itself and the specific decisions taken in the area of monetary policy.³⁰ An analogously defined central bank strategy would have to define a new formula for the reaction function of central banks. The standard function – usually consistent with the Taylor rule – models changes in the central bank's interest rates in response to inflation and output gaps. Central banks assign to these factors individual weights, usually unpublished, in accordance with their system of goals. Expansion of the reaction function would mean including in the decision rule variables that signal increased imbalance in the financial market: imbalance in money supply growth or in growth in lending. It would thus be necessary to define levels of imbalance for the new arguments and to redefine the system of weights. One solution that has been proposed in the literature involves taking account, in the Taylor rule, of different interest rates: one for savers and another for lenders. The central bank would seek a balanced spread between these rates. An implication for the central bank would be the need to take account, in interest rate decisions, of changes in the financial market expressed by changes in that spread.³¹

A broader proposal has been made in the literature, involving three ways of taking account of financial market imbalance in the central bank's reaction function. In an indirect approach, account is taken of the impact of imbalance on inflation and the rate of economic growth in the future. In a direct approach, imbalance is analysed in the context of its impact on the inflation forecast. The third model would be based on a separate analysis of threats in the financial market.³² None of the proposed solutions has yet been adopted by central banks: the development of a reaction function with

³⁰ R. Kokoszczyński, *Współczesna polityka pieniężna w Polsce*, Warsaw 2004, p. 59.

³¹ M. Woodford, Financial Intermediation and Macroeconomic Analysis, *Journal of Economic Perspectives* Vol. 24(4), 2010, pp. 30, 39.

³² J.C. Cuaresma, E. Gnan, Four monetary policy strategies in comparison: How to deal with financial instability?, *Monetary Policy and the Economy* Q3-02, Oesterreichische National Bank 2008, pp. 85–86.

a component describing the situation in the financial market, satisfactory from an operational point of view and suitable for use in communication, is a matter of time.

A key element of any strategy is the goal being pursued. In the case of a broad strategy of a central bank engaged in supporting financial stability, it is necessary to define a measure of achievement of the goal. The indicator most widely recognised by the public, the consumer price index (CPI), does not take account of the prices of financial assets. Economists are also interested in the concept of asset price inflation, which refers to growth in the prices of assets on the financial market or of other particular types of assets, such as real property, not included in the basic inflation index. In principle, it is not proposed in the literature to include asset prices in the CPI.³³ At the same time, there is no alternative to this coherent and readily understood method of measuring financial stability. As early as 2005 the ECB observed that there does not exist a single measure that would take into account all aspects of such a complex phenomenon.³⁴ Attempts to analyse its determinants involve surveying multiple different macroeconomic and financial indicators. Hence the idea of integrated indices of financial stability, which apart from providing a multidimensional view of the phenomenon, would also permit comparisons between countries.

Apart from the development of a goal function and a reaction function adjusted to the new mandate, the outlining of a central bank strategy requires the adoption of definitive institutional solutions. The aforementioned guidelines of international organisations concerning organisational frameworks underline, among other things, the need for an independent supervisory body.³⁵ If the central bank is solely responsible for macroprudential oversight, it may take advantage of its previously granted independence on four planes (described by the criteria of the legal convergence of EU member states). The situation is different, however, in the case of collegial supervisory bodies in which ministers play a significant role. Here, institutional or functional independence may be called into question. Moreover, the assignment of a supervisory function to an entity responsible for monetary policy means that the practical separation of those policies will, at the very least, be made more difficult. Similar dilemmas were faced by the ECB in designing an organisational structure and decision-making process when it took on the function of microprudential supervision over major lending institutions in the euro area.³⁶

An additional aspect of monetary policy oriented towards stabilisation of the expectations of economic agents is undoubtedly communication with financial market

³³ H. Davies, D. Green, *Banking on the future: Fall and rise of central banking*, Princeton University Press, Princeton 2010, p. 130. Arguments against such a change are given in O. Szczepańska, *Stabilność finansowa jako cel banku centralnego. Studium teoretyczno-porównawcze*, Wydawnictwo Naukowe Scholar, Warsaw 2008, p. 85.

³⁴ ECB, *Financial stability review*, December 2005, p. 131.

³⁵ This has been proposed by the IMF in many documents, e.g. IMF, *Key...*, op. cit., pp. 29–30, and by the European Systemic Risk Board in the cited recommendation on the mandate of national authorities.

³⁶ These problems are described in M. Szyszko, *Polityka nadzorcza i pieniężna pod wspólnym dachem EBC*, in: M. Zaleska (ed.), *Europejska unia bankowa*, Warsaw 2015, pp. 79–97.

players. Hence the importance of a suitably formulated and measured goal in the area of financial stability. When macroprudential policy is conducted by the central bank, it is necessary to develop a method of communicating both policies. In recent years central banks have developed their communication in relation to financial stability and macroprudential supervision. In official documents and on websites, however, there is a lack of reference to the possible conflict between policies or confirmation of declarations that the inflation target takes priority in case of such conflict. The central banks would appear to be avoiding making unambiguous pronouncements in this regard.

The EU system of macroprudential supervision is currently in the implementation phase. Financial markets and real economic agents have therefore not yet had the opportunity to evaluate macroprudential policy and its associated crisis management policy. It is not possible to assess how the operation of two policies under the one roof of the central bank will affect the expectations of economic agents or the credibility of central banks. The unquestioned uncertain nature of the impact on expectations is further reinforced by the aforementioned reticence of central banks in evaluating their own role and capabilities in the area of macroprudential supervision.

The involvement of the central bank in macroprudential policy – an additional branch of macrostability policy – may alternatively be viewed not so much in terms of the development of the monetary policy strategy into a comprehensive central bank strategy, but in terms of the co-existence of previous theoretical and practical frameworks (the DIT strategy) with an extended commitment to financial stability. This would appear to be a temporary or even merely a working solution, but it represents the way in which the banks operated in 2016. Actions taken to achieve financial stability cannot yet be identified with the provision of macroprudential supervision focused on the financial system, or with a macroprudential policy serving as an additional means of stabilising the economy. Nonetheless, the ESCB central banks, following extension of their mandate in relation to financial stability, are taking on responsibility (or co-responsibility) for macroprudential supervision. Thus, the legal and institutional changes have become fact. However, they have not been accompanied – at least in 2016 – by official strategic declarations from the central banks. This situation may be compared with the implementation of an eclectic strategy, in which the system of goals, priorities and rules need not be communicated and need not remain constant over time. Coherent and comprehensive frameworks of action by the institution that conducts policy relating to inflation expectations are nonetheless necessary, particularly in a situation where a conflict may arise between monetary and macroprudential policy. The existence of such frameworks, after all, brought satisfactory results in the form of success against inflation in the twentieth century.

CONCLUSIONS

A change in the role of central banks in supporting the stability of financial systems has become fact. This article has presented some examples of new solutions for EU member states with independent currencies. Observation of this process, undoubt-

edly of interest to researchers, who for a long time have not seen such far-reaching changes in central banking, leads to the identification of a defect relating to the absence of clear declarations by central banks as to their new role or even their strategy. Analysing the information published by those bodies, one may have the impression that monetary policy and macroprudential policy are independent of each other, even though they are conducted by the same entity.

Undoubtedly, the dilemmas relating to the central bank's new goal (financial stability) and new role (macroprudential supervision) will be resolved (or replaced by new ones) when time and experience are sufficient for advanced modelling and analytical work to be carried out in these areas. This will enable the development of macroeconomic forecasts encompassing the extended mandate of the central bank, and remove operational difficulties in conducting macrostability policy, which – in spite of the reservations expressed in this article – can be regarded at the present time as a “natural extension of the goals of monetary policy and stabilisation of the financial system by the central bank”.³⁷ In such a context, the crisis has given rise to a new quality in central banking, and not only in European countries, exemplified here by the 10 central banks in the ESCB. The new solutions have not yet been joined into a framework for central banking strategy, due to a lack of sufficient knowledge backed up by research and experience in the simultaneous conduct of the two policies.

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Key words: monetary strategy, financial stability, macroprudential supervision

ABSTRACT

Prior to the financial crisis that began in the United States in 2007, monetary policy had been based on a theoretical consensus (known as the new neoclassical synthesis) and a practical consensus (the Jackson Hole consensus). These were combined into the central banks' strategic frameworks, the goal of monetary strategy being established together with a reaction function and communication strategy. After the crisis erupted, the central banking mandate was extended to include the explicit support of financial stability. Most central banks took on a new responsibility – macroprudential policy. The conduct of monetary policy and macroprudential policy under one roof creates new challenges. This article assesses the redefinition of monetary policy strategy – or more broadly, central banking strategy – in the light of the banks' newly acknowledged mandate. By 2016, however, central banks had not yet presented a framework for such an enlarged strategy. This situation would appear to be a temporary one. Modern monetary policy, which is still the central banks' responsibility, must shape the expectations of economic agents. It is therefore unsatisfactory that the banks avoid making declarations about their own priorities and possible conflicts of goals.

³⁷ T. Chmielewski, A. Sławiński, *Stabilność finansowa strefy euro. Implikacje dla Polski*, in: K. Jajuga (ed.), *Finanse: nowe wyzwania teorii i praktyki. Problemy wiodące*, Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu no. 170, Wrocław 2011, pp. 38–40.