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*Unconventional monetary policy of the European Central Bank:
A brief recapitulation*

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Abstract

The financial and economic crisis that has hit many economies in recent years has significantly increased the activity of central banks. After using the standard instruments of conducting monetary policy, in view of the obstruction of monetary impulse transmission channels, they reached for non-standard instruments. Among them, asset purchase programs played a significant role. The European Central Bank (ECB) launched the largest asset purchase programme (APP) of this type in 2014 and expired in December 2018. The aim of the undertaken activities was to improve the situation on the financial market and stimulate economic growth. The article reviews the literature and results of research on the effects of the program and indicates the possibility of using the ECB's experience in conducting monetary policy by the National Bank of Poland.

Introduction

In December 2018, the European Central Bank (ECB) brought to an end the asset purchase programme (APP), an unconventional instrument of monetary policy activated in response to the financial crisis and the economic crisis that followed. It was yet another tool within the whole series of actions ranging from lowering – in two series – interest rates to zero (where the deposit rate turned negative), to modifications of conditions for running open market operations and standing facilities, to further asset purchase programmes. The objective of actions taken went beyond a narrow mandate of the ECB, that is, to keep inflation low (close to, but below 20%) and stable (Mersch, 2019). Further steps were taken to boost economic growth in the eurozone countries by improving the functioning of the financial markets. Discontinuing the APP provides an opportunity to summarize the current state of the research on the effects of unconventional measures of operations taken. The article is an overview and provides the basis for further in-depth analyses. It aims to provide an overview of the research and organize the current state of knowledge on the effects of the unconventional monetary policy of the ECB. The paper also takes up the issue of possible options for using solutions adopted by the ECB in the activities of the National Bank of Poland.

The structure of the article goes as follows. The first section presents a critical analysis of the literature on the subject. This is followed by an overview of existing studies on the effects of applying unconventional measures of monetary policy in the real economy. Conclusions regarding possibilities for using unconventional instruments of monetary policy by the National Bank of Poland are described next. Finally, we offer some suggestions for further discussion, particularly in the context of the monetary policy run by the National Bank of Poland. A summary of our discussion constitutes the conclusions.

Literature review

From the beginning, facing a financial crisis, central banks ran active monetary policies, which – through various stages of implementation – were oriented toward the realization of different goals. At the initial stage, when disturbances were diagnosed as temporary liquidity problems affecting individual institutions, instruments of monetary policy were traditional and aimed at increasing liquidity in the financial system (Tymoczko, 2010; Bednarczyk, 2015). Over time, when one aspect of the crisis, a loss of mutual confidence by interbank market partners and the resulting disturbances, was transmitted into the real economy, the instruments used acquired an unconventional character (Łasak, 2017). There is an abundance of literature dealing with unconventional instruments of monetary policy and addressing various issues of this subject. First of all, one should note the discussion on the rationale for defining what these very

unconventional instruments are. A number of authors point out that, in fact, these are conventional tools at the disposal of monetary authorities and their diversity results from the modification and flexibility of already existing rules of application (Przybylska-Kapuścińska & Szyszko, 2017; Borio & Disyatat, 2009). While this view seems to be justified as regards qualitative easing or quantitative easing, such an approach may raise some doubts concerning deposit rates below zero as set by some central banks (Jackson, 2015). One essential aspect discussed in the literature refers to the target of the instruments of monetary policy run by central banks. Most authors indicate that the requirement for activating them is reducing the base interest rate to zero (*zero lower bound*) and the loss of the possibility of transmitting the monetary impulse into the real economy by the interest rate channel (Łasak, 2017; Kapuściński & Pietryka, 2019). Thereby, monetary authorities were losing their possibility of having an impact through short-term interest rates on long-term rates (more important for investors). Activating unconventional instruments allowed an increase in liquidity reserves of commercial banks, which should bring an increase in the creation of credit money (Bukowski & Bukowska, 2017). In addition, asset purchase should lower bank margins and, consequently, interest rates, which was meant to foster credit growth (Raczko, 2017). The research indicates that the objective of the monetary policy conducted with the use of unconventional instruments was to have an impact on economic growth rather than to achieve the inflation target. It should be noted, however, that in the case of the ECB, some researchers regard keeping an inflation mandate is too stiff (and too persistent) (Bednarczyk, 2015; Ehrman, Blinder, de Haan, & Jansen, 2017; Mersch, 2019), to the detriment of the economic situation.

A third aspect of the discussion in the literature on unconventional instruments of monetary policy concerns channels through which a monetary impulse generated by these instruments reaches the economy. In general, there are three avenues of impact indicated. The first one is connected with the influence of the asset purchases made by the central bank on the level of securities price, bank liquidity, and its ability to intensify credit growth with a simultaneous decrease in credit rate (market liquidity channel). The second is connected with the effect of the portfolio balance channel. The asset purchases have an influence not only on prices of traded securities but also on the increase in the price of other assets. It brings about the improvement of the financial situation of enterprises and households, increasing their borrowing capacity and propensity to consume (wealth effect). Finally, the third channel of impact is connected with the signaling effect (signaling channel). The unconventional policy of the central bank affects the expectations of future increase in interest rates and boosts current consumption financed by cheap credit (Joyce, Tong, & Woods, 2011; Bednarczyk, 2015; Andrade, Breckenfelder, de Fiore, Karadi, & Tristani, 2016; National Bank of Poland, 2019).

Research and discussions on unconventional instruments of monetary policy go beyond these issues. However, the three aspects presented above seem to be the most essential in terms of the problems discussed in the article.

Unconventional instruments of the ECB's monetary policy: An overview of current research on the effects of implementation

The European Central Bank introduced its anti-crisis monetary policy relatively late. The US Federal Reserve System began a series of interest rate cuts as early as September 2007, but the ECB decided to do so more than a year later. In mid-2012, the deposit rate was 0%, and since June 2014, it has been negative. Since September 2014, the base reference rate has been close to zero. Figure 1 presents the data on the changes in the base interest rates of the ECB.

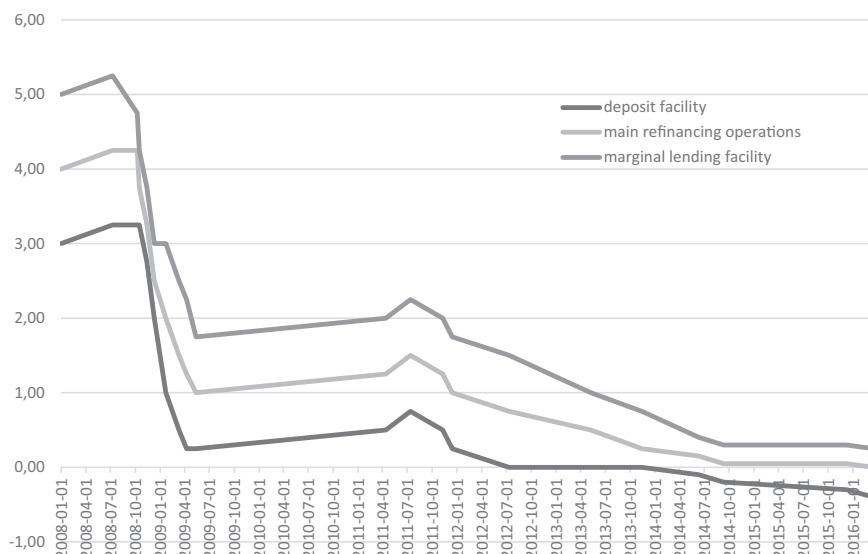


Figure 1. Changes in the European Central Bank interest rates between 1 January 2008 and 31 December 2018

Source: (European Central Bank, 2019a).

Unconventional monetary policy run by the ECB also involved alleviating requirements for access to liquidity for banks as well as activating further programmes of financial assets purchase on the European market. Table 1 presents the extent of activities undertaken.

Table 1. The ECB's unconventional instruments of monetary policy

Launch date	Programme
March 2008	Long-term refinancing operations (LTRO), extension of the deadline for open market operations
July 2009	Covered bond purchase programme (CBPP), programme of purchase of collateralized debt obligations
May 2010	Securities market programme (SMP), purchase of government and commercial debt securities on the second market
October 2011	CBPP2, the second launch of purchase of covered bonds

Launch date	Programme
September 2012	Outright monetary transaction, purchase of government debt securities of countries benefiting from the European Stability Mechanism
June 2014	Targeted long-term refinancing operations (TLTRO), extension of the deadline for the open market operations conditioned by credit growth
October 2014	CBPP3, the third launch of purchase of covered bonds
November 2014	Asset-backed securities purchase programme (ABSPP), purchase of asset-backed securities
January 2015	Expanded asset purchase programme (APP), including ABSPP, CBPP3, PSPP (public sector purchase programme) at a total of 60 billion euro per month
March 2016	TLTRO-II, extension of the deadline for open market operations conditioned by credit growth

Sources: (Fawley & Neely, 2013, p. 62; European Central Bank, 2018, pp. 4–5).

The last programme implemented by the ECB was APP, which the bank brought to an end in December 2018. It did not mean, however, that the phase of running unconventional monetary policy was finished and there was a return to conventional activities (Pyka & Nocoń, 2017; National Bank of Poland, 2019). Perhaps, in the future, the ECB will decide to use other unconventional instruments, which, given the economic slowdown recorded at the turn of 2018 and 2019 (National Bank of Poland, 2018a), seems to be quite likely.

Launching unconventional instruments of monetary policy (and, in particular, asset purchase programmes, including the last APP) was aimed at increasing the liquidity reserves of commercial banks. It was to provide impetus to the dynamics of gross domestic product (GDP). On the other hand, in undertaking these activities, the ECB could not deviate from its mandate, that is, maintaining low and stable inflation. Figure 2 shows information on the reference rate, inflation (measured by the Harmonised Index of Consumer Prices – HICP) with launch dates of successive programmes of quantitative easing.

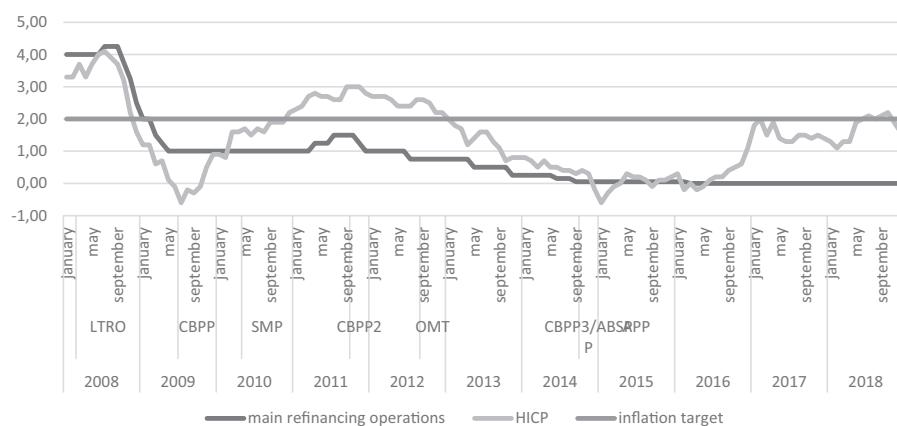


Figure 2. Unconventional instruments of the ECB's monetary policy

Source: (European Central Bank, 2019a; Eurostat, 2019).

Note: HICP – Harmonised Index of Consumer Prices.

Figure 3 presents the data on the dynamics of GDP (on a quarterly basis compared with the corresponding quarter of the previous year) in the eurozone countries in comparison to liquidity in the banking sector of the eurozone countries (measured in terms of the liquidity reserve on the ECB's current and deposit accounts).

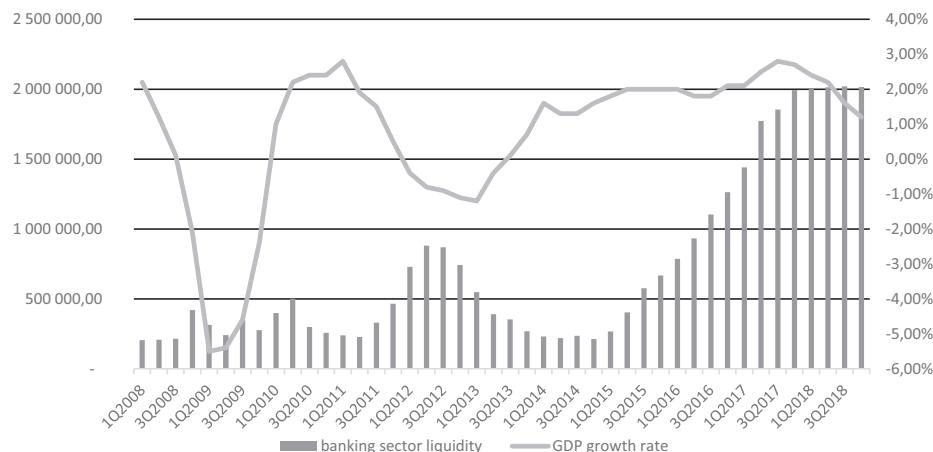


Figure 3. The dynamics and liquidity in the banking sector of the eurozone countries

Source: (OECD.Stat, 2019; European Central Bank, 2019b).

The assessment of the effects of applying unconventional instruments of monetary policy for the economy is difficult and ambiguous (Janus, 2013). The published results refer to their impact on the treasury bond yields in the eurozone and on the inflation and GDP rates. Table 2 presents selected results of the research on the impact of unconventional instruments of monetary policy on bond yields.

Table 2. Results of the research on the impact of unconventional instruments of monetary policy on bond yields

Authors	Method applied	Estimated impact on yield level (p.b.)
Altavilla, Carboni, and Motto (2015)	Analysis of impact of changes in debt securities supply on yields (the investor's perspective) with the use of a structural model with various risk premia	6–15
Andrade et al. (2016)	Analysis of impact of different transmission channels with the use of correlation indicators	43–53
Blattner and Joyce (2016)	Estimation of factors affecting the yield level with the use of DNS	10–45
De Santis and Holm-Hadulla (2017)	Analysis of impact of changes in liquidity of debt securities	6–36

Source: (Altavilla et al., 2015; Andrade et al., 2016; Blattner & Joyce, 2016; De Santis & Holm-Hadulla, 2017).

The results mentioned indicate there is a connection between asset purchase and their profitability; the values achieved differ significantly, however. This is also the case with the results of the research on the impact of asset purchase programmes on GDP and inflation rate. They are presented in Table 3.

Table 3. Results of research on the impact of unconventional instruments of monetary policy on inflation and GDP

Authors	Method applied	Estimated impact on the inflation rate (p.b.)	Estimated impact on the GDP (p.p.)
Blattner and Joyce (2016)	Analysis of the impact of changes in debt securities supply with the use of the DNS model	5	0.4
Hohberger, Priftis, and Vogel (2018)	Analysis taking into account investors' preferences and the balance structure of the central bank with the use of the DSGE model	3–6	–
Gambetti and Musso (2017)	Analysis of the effects of asset purchase programmes with the use of the VAR model	6–36	0.15–0.16
Mouabbi and Sahus (2019)	Structural model with the use of shadow rates	26	0.51

Source: (Blattner & Joyce 2016; Hohberger et al., 2018; Gambetti & Musso, 2017; Mouabbi & Sahus, 2019).

Note: DNS – Dynamic Nelson–Siegel; DSGE – dynamic stochastic general equilibrium; VAR – vector autoregression.

Unconventional instruments of monetary policy: Conclusions for Poland

Since the outbreak of the financial crisis in 2008, the European Central Bank has applied different instruments of monetary policy. Over time (and with experience gained), the intensity of their implementation has been growing. It also seems that the objective set by the ECB has been changing too, evolving from strictly monetary (inflation) to more pro-growth objectives. Referring to the extent to which the objective was achieved, it may be concluded that the ECB fulfills well the obligations in line with its mandate – to maintain inflation close to 2% in the medium term. From this perspective, the monetary policy and the tools applied to it proved to be effective (Schäfer, 2017).

The analysis of the data on GDP dynamics does not, however, allow unambiguously positive conclusions to be drawn regarding the effectiveness of implementing unconventional instruments of monetary policy by the ECB. Increasing liquidity in the banking sector and activating asset purchase programmes as well as ensuring monetary stability are necessary requirements but not sufficient or the only ones for ensuring positive dynamics of economic growth. Undoubtedly, the best results were brought by the largest-ever APP. Yet, in this case, the quarterly GDP dynamics did not exceed 3%, and since mid-2017 (despite the ongoing programme) it has been slowing down. Therefore, it might be rightly stated that the ECB's activity alone is insufficient to ensure sustainable economic growth. Increasing the liquidity level in the banking sector brings positive effects only to a limited extent and for the sector itself (increasing its stability) rather than for the whole economy.

The answer to the question of whether the experience of the ECB might be useful for the National Bank of Poland is not simple. The situation of the Polish banking sector differs from the situation in banking sectors of the eurozone countries. In Poland, banks operate in conditions of excessive liquidity, and the level of their liquidity reserves is high and growing (National Bank of Poland, 2018b). This means that the programme of asset purchases oriented towards increasing liquidity reserves of commercial banks might not prove to be an effective instrument having an impact on the real economy, and might not bring desired effects (even limited ones as those in the eurozone), that is, an increase in the GDP dynamics. Therefore, from this point of view, the possibilities of making use of the ECB's experience in the practices of the National Bank of Poland seem to be limited. However, the conclusions on the ways the central bank may realize its mandate in conditions of zero interest rate and economic recession might be useful.

Directions for future research

The discussion on the efficiency of unconventional monetary policy and the effectiveness of the instruments used will certainly be continued. There is ongoing quantitative research on both transmission channels and the impact of asset purchases on long- and short-term interest rates, real interest rates. The background discussions refer to possible necessity to reformulate the objective of the monetary policy. Many central banks (among others, the Federal Reserve, the Bank of England, and the European Central Bank) have gained a lot of experience connected with the use of unconventional instruments of monetary policy. It is worth starting up a debate on the possibilities of using them for conducting monetary policy in Poland (Kapuściński & Pietryka, 2019). Further discussions and research should focus on the analysis of the effects of implementing unconventional instruments of monetary policy for monetary stability while realizing inflation targets as well as boosting economic growth. In this context, it seems essential to redefine the role of the central bank in conducting economic policy and the limits (or extension) of its liability.

Summary

The ECB using unconventional instruments of monetary policy has concentrated not only on achieving inflation targets but also on stimulating growth in GDP. The ECB realized it with unconventional instruments using identified in numerous studies transmission channels of generated in this way monetary impulses to the economy. The increase of liquidity reserves of banks resulted in the improvement of access conditions for external financing for enterprises in the real economy. It happened mostly due to impacts on long-term interest rates. Analyzing the effects of the ECB's

activities, one may consider them in the context of realizing the inflation target and stimulating GDP. The research carried out indicates higher effectiveness of monetary authorities ensuring monetary stability than stimulating economic growth. The short time that has elapsed after closing down the largest programme of asset purchases by the ECB does not, however, allow far-reaching conclusions to be drawn. Moreover, with the variability of the eurozone economic environment (such as the economic shock connected with Brexit), the achieved results should be viewed with caution. Therefore, it seems that further research is essential for putting forward fully objective conclusions based on deeper analysis.

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