Piotr Misztal✉
Uniwersytet Jana Kochanowskiego w Kielcach

COMMUNICATION OF THE CENTRAL BANK AS A DETERMINANT OF THE CREDIBILITY AND EFFECTIVENESS OF THE MONETARY POLICY ON THE EXAMPLE OF THE EUROPEAN CENTRAL BANK

ABSTRACT

The aim of the undertaken research is an attempt to explain, on theoretical and empirical grounds, the interdependence between central bank communication, its transparency credibility and, consequently, the effectiveness of monetary policy pursued by central banks. The study used research methods based on the literature analysis on the subject in the field of banking and finance, as well as statistical and econometric methods (Granger causality analysis and the generalised linear model – GLM). Literature studies are aimed at answering the question of what is the relationship between the transparency, credibility of the central bank and the effectiveness of monetary policy in theoretical terms. However, the empirical research studies aim to confirm the hypothesis (H_0) or reject the hypothesis (H_1) about the causal relationships between the variables mentioned. Empirical analyses were conducted on the example of the European Central Bank, which, from the point of view of its monetary policy, is characterised by relatively high efficiency, relatively effectively stabilising inflation in the monetary union. All statistics used in the study were taken from databases of the International Monetary Fund (IMF World Economic Outlook), the European Union statistical office (Eurostat) and the Organisation for Economic Cooperation and Development (OECD) (OECD Data). The analysis covers the period from 2010 to 2022 based on monthly data. The results of the research confirmed the existence of the null hypothesis (i.e., the significant impact of communication, transparency and credibility of the European Central Bank on the effectiveness of monetary policy in the Euro area). The results of the conducted research may be a starting point for further, more in-depth research on the relationship between communication, transparency, credibility and effectiveness of central banks in countries with different levels of economic development.

Key words: communication, transparency, credibility, European Central Bank, monetary policy
JEL codes: E50, E51, E59, D83

Introduction

Not so long ago, central bankers believed that decisions made as part of the pursued monetary policy should surprise the markets to achieve maximum impact on the real economy. Over the past two decades, there has been a radical change in this regard. Namely, central banks are trying to increase and more transparency in their monetary policy, particularly regarding goals, strategies and the basis of decisions taken. This change is closely related to the growing independence of the central bank in functional,

---

✉ P. Misztal, Wydział Prawa i Nauk Społecznych, piotr.misztal@ujk.edu.pl, https://orcid.org/0000-0003-2609-3439

financial, personnel and institutional terms, which requires a counterbalance in the form of increased transparency and accountability of the central bank. Also, the achieved economic benefits are considered to be another key reason for greater transparency of activities on the part of the central bank [Dincer et al. 2022].

As Freedman and Laxton [2009] claim, it is widely believed in the central bank environment that providing more information about the monetary policy conducted by the central bank may increase its effectiveness. This view is based on theory and empirical research highlighting the importance of monetary policy expectations as a key element in determining interest rates and other asset prices. Overall, the transparency of the central bank's activities and adequate communication with the central bank's environment contribute to a decrease in volatility in financial markets, increase the predictability of upcoming interest rate decisions and help achieve monetary policy goals. In order to convey the mood of the central bank to the society and markets properly, and – thus – to improve the effectiveness of the pursued monetary policy, the central bank is required to be more transparent in its activities and to actively and well-planned communication with the environment. Accordingly, there is now a lot of attention to the way central banks present their key messages. Central banks are expected to communicate more and more actively with the market, which will ultimately contribute to increasing the effectiveness of the pursued monetary policy [Issing 2005].

Communication and credibility strategy of the European Central Bank

The public can better comprehend ECB monetary policy thanks to transparency. The policy is more credible and successful when the public's views are better understood. The ECB must be transparent in how it interprets its mission and plans to carry out its policy goals. By clearly stating its mission and procedures, the ECB improves its credibility. Inflation expectations are firmly anchored when the ECB is viewed as being able and ready to carry out its political mandate. Regular updates on the central bank's evaluation of the state of the economy are especially helpful. Additionally, it is advantageous for central banks to be forthright and honest about what monetary policy can and, more significantly, cannot accomplish. Decision-makers are forced to practice self-discipline through a fervent commitment to transparency. It makes sure that their policy judgments and justifications remain constant over time. Decision-making bodies are more motivated to carry out their duties to the best of their ability when public scrutiny of monetary policy activities is made easier [Lustenberger and Rossi 2020].

The European Central Bank regularly assesses the state of the economy and releases its findings in public. This aids markets in comprehending the mechanism by which monetary policy responds to societal changes and potential economic shocks. In the medium term, it improves the market predictability of central bank movements. Market expectations can be created more effectively and precisely in this way. The ECB has created its own structure for communicating with the environment, similar to many other central banks of industrialised economies [Wyplosz 2022].

The European Central Bank (ECB) first revealed its monetary policy plan in October 1998, defining price stability quantitatively and defining a two-pillar medium--term analytical framework with economic and monetary analysis to evaluate price stability concerns. This established a strong foundation for trustworthiness and reaffirmed its dedication to openness and transparency. In particular, the ECB has given the public

a foundation for effectively influencing expectations and lowering the sensitivity of inflation expectations to short-term shocks by developing and publicising a quantitative definition of price stability (below, but close to, 2%). The choice was successful. According to the Consensus Economics Forecast, for instance, long-term inflation estimates for the Euro area have remained in the 1.7-2% range since the introduction of the Euro in 1999.

During the same period, financial market expectations of inflation were more volatile. Although these expectations occasionally showed only slight deviations from the accepted definition of price stability, as in the recent spike in food and energy prices, we were able to quickly regain control of these expectations thanks to the ECB's openness and steadfast dedication to the achievement of its main objective. Further evidence that inflation expectations are securely anchored at levels consistent with the current definition of price stability comes from recent empirical findings suggesting long-term inflation expectations in the Euro area are essentially resistant to changes in actual inflation performance. This is a significant accomplishment, especially in light of the several recent negative supply shocks affecting the Euro region. In addition, the quantitative definition provides a precise benchmark against which to measure the inflation experienced by all market participants.

A genuine understanding of the strategy is a necessary, though insufficient, condition for the public to form appropriate expectations about the future course of monetary policy. This is true despite the extraordinary role the ECB's strategic framework plays in communication policy. In a world of uncertainty with scant information on the health and prospects of the economy, differences in interpretation and appraisal of the state of the economy and accompanying policy actions may result in discrepancies between the private sector and central bank forecasts at any moment. As a result, the ECB goes to great lengths to explain the economic justification for monetary policy choices by offering thorough analyses of the current state of the economy and the financial system as well as the Governing Council's assessment of medium- to long-term threats to price stability.

Finding the ideal balance between the necessity of giving the guidance of the market, remaining adaptable to constantly revaluate the appropriateness of the monetary policy stance in light of changing circumstances, and never making an upfront commitment to the medium-term sequence of future interest rates is difficult in this type of communication. An essential instrument, in this regard, is the opening statement made during the news conference held each month after the first Governing Council meeting. It conveys the Governing Council's collective opinion of the monetary policy stance, is structured in accordance with the established strategy and provides a detailed explanation of the monetary policy decisions made. Thus, the information provided in this manner is actually comparable to that released by other central banks [Moschella and Romelli 2022].

The ECB's communication strategy has two major benefits, though. First, a bigger audience is reached with better timeliness and greater flexibility than disclosing collegial protocols. The press conference, in particular, not only offers in-depth details on the monetary policy considerations made far earlier than the final procedure. Specifically, a press conference is held 45 minutes after the decision on the main interest rates is announced, giving the public a chance to read about the many topics in an open and unfiltered manner. The purpose of the news conference amply demonstrates the necessity and demand for an honest and transparent dialogue between decision-makers and public

representatives. In order to highlight the collegial nature of the ECB's decision-making process and the unique institutional circumstances in which the ECB functions as a supranational institution, the Governing Council decided not to publish the voting minutes. The Governing Council members' votes, particularly those of the governors of national central banks, run the risk of being interpreted from a national viewpoint, regardless of their true justifications, if the information on individual voting behaviour is made public. The validity of the choices made could be jeopardised. Based on its immediate influence on financial markets, the ECB news conference can be evaluated as a key source of information about monetary policy. Since the ECB does not publish its decisions and justifications at the same time as other central banks do, there is a small lag between the announcement of the decision and the justification made at the press conference. This presents an especially interesting opportunity to highlight different signals of communication with the central bank. Therefore, news about the future direction of short-term interest rates must be the only factor driving changes in forwarding rates during the press conference; news about the release of decisions must not be included. According to a recent ECB poll, market activity on the days of Governing Council meetings has gradually decreased over time.

Similarly, a related study discovered that ECB press conferences typically had a bigger impact on asset prices than ECB decision releases. The signal-to-effects ratio of the press conference is high, as evidenced by the fact that the impact on interest rates is inversely proportional to the impact on asset price volatility. This outcome does not at all come as a surprise. A question-and-answer session actually gives journalists a chance to ask clarifying questions and process the information presented. The public can verify through speeches given by the monetary authorities that the committee that determines monetary policy is a true collegial body and not a body and that its members have a feeling of shared accountability for the decisions made. The goal of the "one-voice" rule, which the Governing Council members adhere to while speaking in public, is to make sure that the opinions voiced on an individual basis consistently represent those of the Council as a whole. According to the empirical literature, this approach is an example of communal responsibility because of its improved message clarity and successful reduction of possible media noise in communication. The growth and expansion of the Euro area by new members will undoubtedly strengthen the significance of this policy. Accordingly, the ECB study demonstrates that a higher level of dispersion among the monetary policy committee members decreases the ability of financial markets to predict future monetary policy actions and raises uncertainty.

The Central Bank Communication Index (CBCI), which examines the content of opening remarks made at press conferences held by the European Central Bank, is one way to rate the effectiveness of a central bank's communication with the outside world (as of 2006). Using linguistic analysis, this indicator shows the empirical findings of the ECB's inclination to make opening statements, distinguishes between content related to monetary policy decisions, including standard and non-standard monetary policy instruments, content related to monetary policy decisions and information on future decisions. Content related to the Euro area's economic outlook includes information on production, price changes, and monetary aggregates [Picault and Renault 2017].

As a result, the CBCI index really consists of two sub-indices: the economic outlook index and the monetary policy index. Three components comprise the monetary

policy index, which evaluates the preliminary monetary policy announcement from the ECB. They tend to adopt a hawkish, neutral, or dovish tone (e.g., we decided to increase the key ECB interest rates), respectively (e.g., the Governing Council decided to lower the key ECB interest rates by another 75 basis points). If the statement's monetary policy index is 1, then all of its monetary policy sentences are dovish. On the other hand, the economic outlook index provides three components that evaluate the information in the ECB's preliminary economic outlook statement. They show a propensity to be either optimistic (for example, the domestic demand in the Euro area is anticipated to sustain its relatively high momentum), neutral (for example, the Governing Council continues to assess the threats to these outlooks as roughly balanced) or negative (intensification and deepening of the turmoil in the financial markets is likely to weaken global and Euro area demand). An economic outlook index of 1 indicates that all of the statement's predictions for the Euro area's economy are optimistic [Picault and Renault 2017].
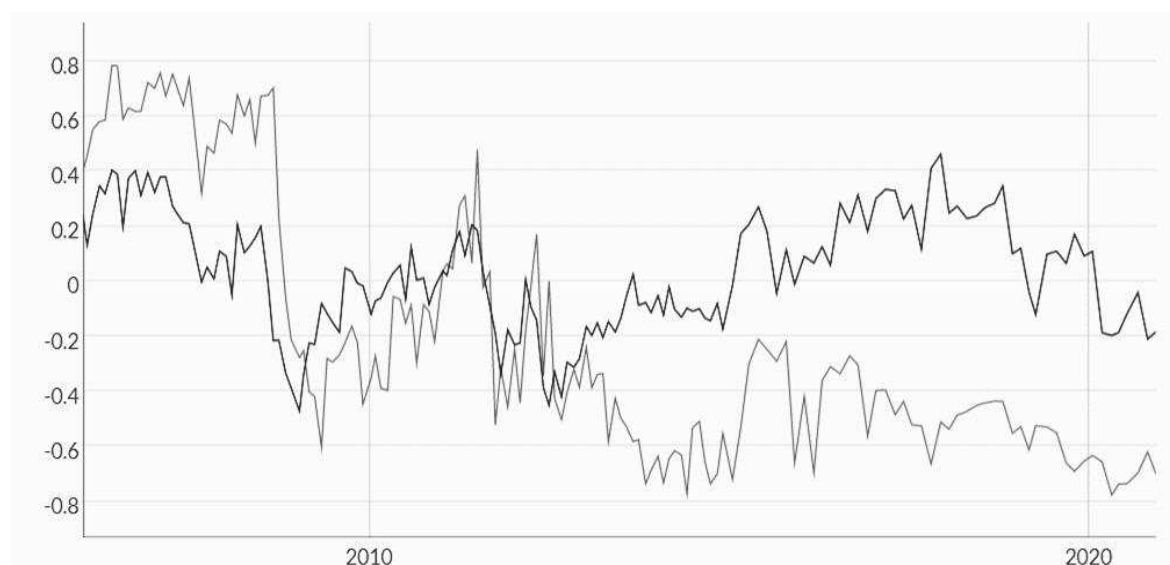

Monetary policy index – light grey. Economic perspective index – dark grey.
Figure 1. CBCI communication indicator for the European Central Bank in the period 2008-2022
Source: [Picault and Renault 2017].

In line with the data presented in the figure above, it can be seen that the monetary policy and economic outlook indices in the Euro area frequently changed in the analysed period, which was a consequence of changes in economic activity and inflation in the Euro area. What's more, the analysed indicators were highly correlated with each other, proving that the nature of the ECB's monetary policy was very consistent with the outlook for economic development in the Euro area.

While analysing the inflation rate in the period 2010-2020, it can be noticed that in the period 2010-2021, the Euro area recorded a stable level of prices (i.e., inflation oscillating around the inflation target set by the ECB at a level close to 2%). It was only in 2022 that a sharp increase in inflation was recorded, amounting to almost 9%, mainly due to the global energy crisis caused by Russia's attack on Ukraine.
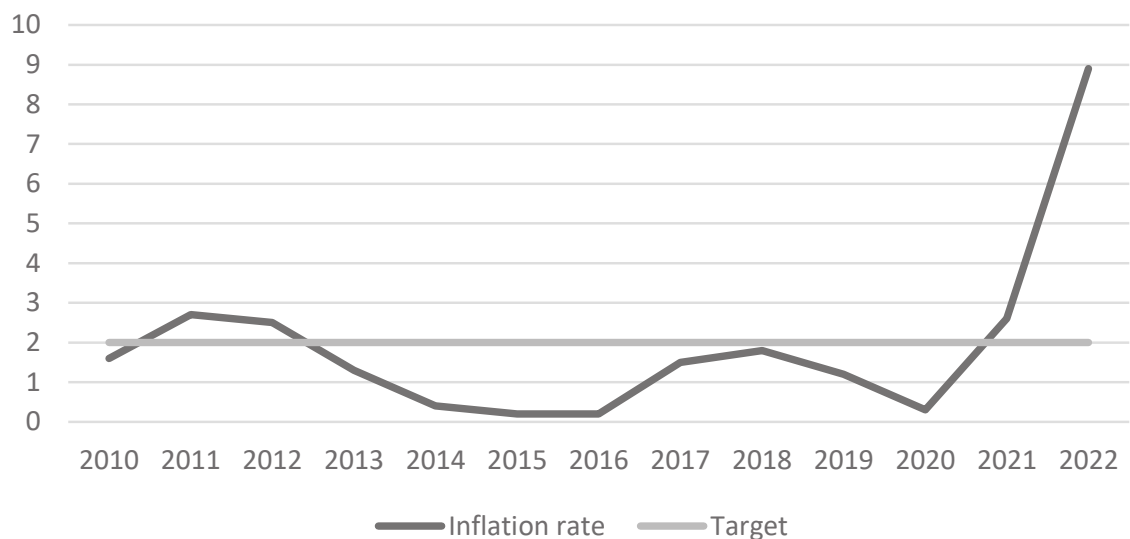
Figure 2. Inflation rate in the Euro area in (EA 17) in the period 2010-2022
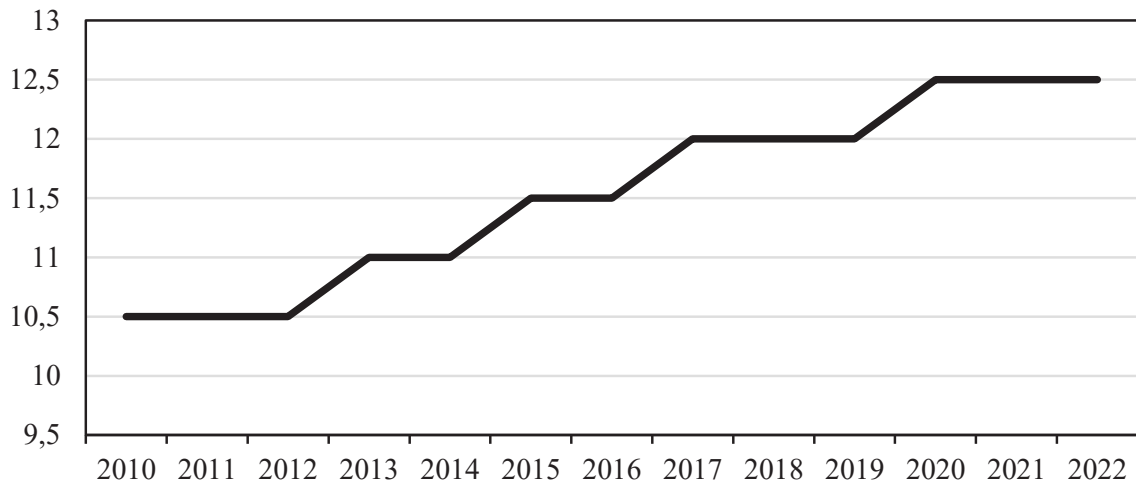Source: own study based on [IMF 2022].

So, too, in this instance, a significant negative correlation can be seen between changes in the central bank's communication index and in inflation in the Euro area. This means the ECB properly communicates with the environment by transmitting appropriate signals to the market regarding its intentions regarding the pursued monetary policy.

Transparency, credibility and effectiveness of the monetary policy of the ECB

According to the methodology outlined by Dincer et al. [2022], the central bank transparency index is the total of evaluations associated with 15 criteria that fall into the following categories (min = 0, max = 15). The bigger the indicator's value, the more transparent the central bank is (following 4 cateories):

- Political openness is referred to as political transparency. This involves a formal declaration of goals, detailed institutional structures, prioritising of the major goal or goals and quantifying the second goal or goals.
- Economic transparency deals with economic evidence used in monetary policy. It covers economic statistics, the economic model a central bank uses to prepare predictions or measure the influence of its choices and internal predictions (model--based or judgmental) on which the central bank counts.
- Procedural transparency deals with the method of making decisions by the central bank and concerns the method of making decisions by the central bank in the context of the monetary policy used.
- Operational transparency deals with the implementation of central bank activities. It includes a discussion of control faults in implementing operational objectives and macroeconomic disturbances affecting the transmission of monetary policy impulses to the real economy [Dincer et al. 2022].

The European Central Bank's transparency score exhibited an upward trend over the period examined, indicating that the Euro area central bank recognised real benefits from an improved market and ECB communication regarding the pursued monetary policy.

Figure 3. Transparency index of the European Central Bank in the period 2010-2022
Source: own study based on IMF data (2022).

However, a technique to quantity the central bank's credibility is to look at how closely inflation expectations link to the actual inflation rate in the country [Demertzis et al. 2012]. The closer to these two variables, the more credible the central bank is in terms of its monetary policy. Credibility is, thus, estimated as the square of the difference between the predicted inflation and observed inflation. The higher the index value, the lower the central bank's credibility.
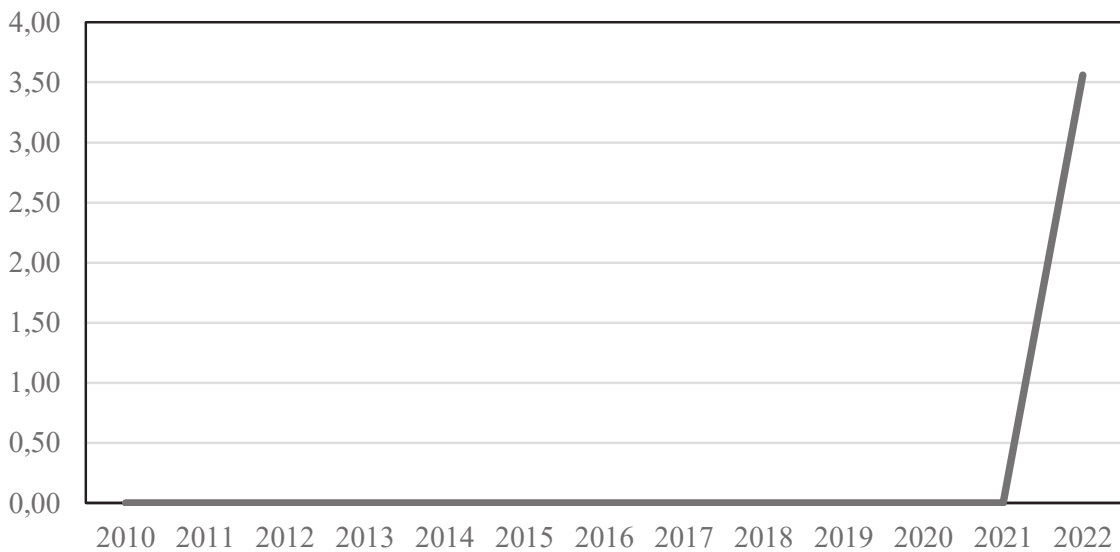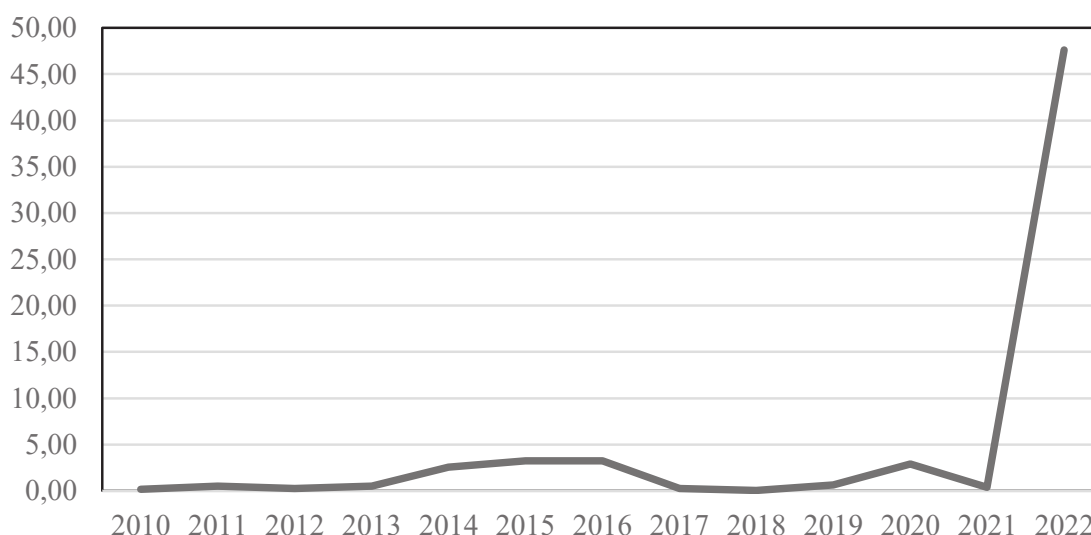

Figure 4. ECB credibility indicators in the period 2010-2022
Source: own study.

The credibility of the European Central Bank in the period 2010-2022 was relatively high and stable; however, this credibility significantly worsened in 2022 due to the rising inflation in the Euro area, significantly different from the forecast by the ECB. On the other hand, the efficiency of monetary policy is associated with the scope of implementation of the inflation objective set by the central bank. It is calculated as the square of the difference between the observed inflation and the set inflation target. The higher the value of the index, the lower the effectiveness of the central bank's monetary policy.

In the period 2010-2021, the ECB's monetary policy efficiency index was relatively low and stable over time, which confirmed the high effectiveness of monetary policy in the Euro area. But the effectiveness of the monetary policy in the Euro area has recently deteriorated since 2022, which resulted from a sharp acceleration of inflation in this economy. Of course, this inflation was largely caused by external factors (including a sharp increase in energy commodity prices as a result of Russia's invasion of Ukraine), over which the ECB had no significant influence; nevertheless, the effectiveness of monetary policy was significantly limited.

Figure 5. ECB monetary policy performance indicators in the period 2020-2020
Source: own study based on IMF (2022).

In turn, in the case of the Euro area, a very high linear relationship between the credibility and efficiency of the European Central Bank and a significant but lower correlation between transparency and efficiency of the central bank were revealed.

Table 1. Coefficients of correlation between the transparency, credibility and effectiveness of the monetary policy of the central bank in the EU-5 and the Euro area

Specification	CI / EI	TI / EI
Correlation coef. EA-17	0.995	0.386

Source: own study based on IMF (2022).

Nevertheless, it is wrong to draw causal conclusions based on simple correlation analysis because correlation only informs about the stochastic connection of a particular set of variables in a specific research case.

Results of econometric analysis

The goal of the undertaken original model research was an attempt at practical verification of the relationships between the transparent communication policy of the central bank, its credibility and the effectiveness of the monetary policy pursued by the central bank in the context of meeting the inflation target, present in the theoretical analyses. Two aspects of the study's methodology are covered below in more depth. Both qualitative and quantitative analyses are included in the study. First, econometric and statistical tools are applied. To analyse the cause-and-effect link between the openness and credibility of central banks and the efficacy of monetary policies, the statistical approaches employed in the analysis include comparative analysis and financial modelling. The research includes qualitative as well as quantitative analysis. First of all, statistical and econometric methods are used. The statistical methods used in the analysis cover a comparative analysis and financial modelling to examine the cause-and-effect relationship between the transparency and credibility of central banks and the effectiveness of monetary policies following the expression below. All statistics used in the study were taken from databases of the International Monetary Fund (IMF World Economic Outlook), the European Union statistical office (Eurostat) and the Organisation for Economic Cooperation and Development (OECD) (OECD Data). The analysis covers the period from 2010 to 2022 based on monthly data.

$$EI_{EA_{17}} = a + \beta \times CI_{EA_{17}} + \gamma \times TI_{EA_{17}} + \varepsilon,$$

where:
$EI_{EA_{17}}$ – monetary policy efficiency index of European Central Bank,
$CI_{EA_{17}}$ – the European Central Bank credibility index,
$TI_{EA_{17}}$ – the European Central Bank Transparency Index,
a – intercept of the equation,
β, γ – sensitivity coefficients,
ε – random component.

Initially, Graner's causality analysis was used to determine whether the explanatory variables were significant causes of the explanatory variable of the model. The main assumption of Granger causality analysis is the existence of a cause-and-effect chain, according to which if the effect occurs in period t, the cause occurs in period t. Variable x is the Granger cause of variable y if the current value of y can be predicted with greater accuracy by using past values of x rather than without them, with the information remaining unchanged [Maddala 2008].

Based on the obtained results, it can be concluded that there was a significant connection between the transparency and efficiency of the central bank and between the credibility and efficiency of the central bank in the Euro area in the period 2010-2022 was confirmed. The results of the relevant tests are shown in the Table 2.

Table 2. Results of Granger causality tests

Null Hypothesis:	F-Statistic	Prob.
EI_EA_17 does not Granger Cause CI_EA_17	0.17068	0.8470
CI_EA_17 does not Granger Cause EI_EA_17	1.01132	0.4183
EI_EA_17 does not Granger Cause TI_EA_17	0.80436	0.4904
TI_EA_17 does not Granger Cause EI_EA_17	1.02820	0.4131

Lags: 2

Source: own study.

Next, the connections between the aforementioned variables was analysed by estimating the structural parameters of the model using the generalised linear model (GLM), which is a flexible generalisation of ordinary linear regression. GLM generalises linear regression by allowing the linear model to be associated with the response variable using a link function and allowing the magnitude of the variance of each measurement to be a function of its predicted value. Generalised linear models were formulated by John Nelder and Robert Wedderburn as a way to standardise various other statistical models, including linear regression, logistic regression and Poisson regression. The results are presented in the Table 3.

Table 3. Estimation results of equation (1) for the Euro area

Dependent Variable: EI_EA_17				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
CI_EA_17	1.020769	0.095177	10.72493	0.0000
TI_EA_17	0.018165	0.027031	0.672022	0.5016
Mean dependent var	4,786154	SD dependent var		12.92926
Sum squared resid	19.20341	Log-likelihood		-21.06795
Akaike info criterion	3,548916	Schwarz criterion		3,635831
Hannan-Quinn criteria.	3.531051	Deviance		19.20341
Deviance statistic	1.745765	Pearson SSR		19.20341
Pearson statistic	1.745765	Dispersion		1.745765

Source: own study.

The results of estimating equation showed that in the Euro area, there was a significant cause-and-effect relationship between the credibility of the ECB and the effectiveness of the monetary policy of the central bank. In this case, the sensitivity coefficient was 1.02, which meant that in the case of the Euro area, the sensitivity of the central bank's efficiency to changes in the credibility of the central bank was relatively high. On the other hand, the research results did not confirm the existence of a significant relationship between the transparency of the central bank and the effectiveness of the monetary policy pursued. This situation may result from the fact that the ECB is characterised by relatively high credibility among its participants and, therefore, a high degree of predictability – which means that the ECB's transparency is not a necessary condition for conducting a sufficiently effective monetary policy. Moreover, according to the results of empirical research, the ECB's transparency significantly determines the credibility of the ECB and, thus, indirectly influences the effectiveness of monetary policy led in the Euro area.

Conclusions

The central bank's actions ought to be foreseeable under a transparent monetary policy. The capacity of market participants to predict impending changes in monetary policy can be viewed as predictability. This implies that monetary policy choices should have a low level of surprise on the days the monetary policy committee meets. It is anticipated that when markets can accurately forecast central bank operations, market participants will make more logical and efficient judgments [Poole 2001]. According to theoretical literature and actual data, transparency is crucial to a central bank's credibility. Transparency is a multifaceted phenomenon that includes both the proper interpretation of the information provided by the public and the issuance by the central bank of sufficient information in terms of quantity and quality. In this regard, transparency ought to improve the ability of the private sector to anticipate changes in monetary policy [Blinder 2018].

Therefore, theoretical and empirical analyses confirm that in countries with a relatively high degree of the central bank's communication with the market, there is relatively high effectiveness of monetary policy led by the central bank thanks to the bank's transparency and credibility.

The findings of the study could serve as a springboard for a more in-depth investigation into how central banks in nations with various degrees of economic development interact in terms of communication, legitimacy and efficiency. This issue appears to be particularly significant during the current market volatility associated with an increase in global inflation brought on by supply-and-demand shocks.

References

Blinder A. (2018). Through a Crystal Ball Darkly: The Future of Monetary Policy Communication. American Economic Association Papers and Proceedings, 108, 567-571.

Dincer N. Eichengreen B. Geraats P. (2022). Trends in Monetary Policy Transparency: Further Updates. International Journal of Central Banking, 3, 331-348.

Freedman C. Laxton D. (2009). Inflation Targeting Pillars: Transparency and Accountability. IMF Working Paper, 09(262), 1-19.

IMF (2022). International Financial Statistics, Washington.

Issing O. (2005). Communication, transparency, accountability: Monetary policy in the twenty-first century. Federal Reserve Bank of St Louis Review, 87, 65-83.

Lustenberger T. Rossi E. (2020). Does Central Bank Transparency and Communication Affect Financial and Macroeconomic Forecasts? International Journal of Central Banking March, 153-201.

Maddala G.S. (2008). Econometrics. PWN, Warszawa.

Moschella M. Romelli D. (2022). ECB communication and its post-pandemic challenges Manuela Moschella and Davide Romelli. [In:] Communication. complexity and credibility of monetary policy. Compilation of papers. Publication for the committee on Economic and Monetary Affairs, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg, 1-32.

Picault M. Renault T. (2017). Words are not all created equals: a new measure of ECB communication. Journal of International Money and Finance 79, 1-54.

Poole W. (2001). Expectations. Federal Reserve Bank of St. Louis Review, 83(2), 1-38.

Wyplosz C. (2022). Communication is not just talking in: Communication. complexity and credibility of monetary policy. Compilation of papers. Monetary Dialogue February, 1-23.

Komunikacja banku centralnego jako determinanta wiarygodności i skuteczności polityki pieniężnej na przykładzie europejskiego banku centralnego

STRESZCZENIE

Celem podjętych badań jest próba wyjaśnienia na gruntach teoretycznym i empirycznym współzależności między komunikacją banku centralnego, jej przejrzystością i wiarygodnością, a w konsekwencji skutecznością polityki pieniężnej prowadzonej przez banki centralne. W badaniach wykorzystano metody badawcze oparte na analizie literatury przedmiotu z zakresu bankowości i finansów oraz metody statystyczne i ekonometryczne (analiza przyczynowości Grangera oraz uogólniony model liniowy – GLM). Studia literaturowe mają na celu odpowiedź na pytanie, jaki jest związek między przejrzystością, wiarygodnością banku centralnego a efektywnością polityki pieniężnej w ujęciu teoretycznym. Z kolei przeprowadzone autorskie badania empiryczne mają na celu potwierdzenie hipotezy (H_0) lub odrzucenie hipotezy (H_1) o związkach przyczynowych między wymienionymi zmiennymi. Analizy empiryczne przeprowadzono na przykładzie Europejskiego Banku Centralnego, który z punktu widzenia prowadzonej polityki pieniężnej charakteryzuje się relatywnie wysoką efektywnością, relatywnie skutecznie stabilizując inflację w unii walutowej. Wszystkie statystyki wykorzystane w badaniu zostały zaczerpnięte z baz danych Międzynarodowego Funduszu Walutowego (IMF World Economic Outlook), urzędu statystycznego Unii Europejskiej (Eurostat) oraz Organizacji Współpracy Gospodarczej i Rozwoju (OECD) (OECD Data). Analiza obejmuje okres od 2010 do 2022 roku na podstawie danych miesięcznych. Wyniki przeprowadzonych badań potwierdziły występowanie hipotezy zerowej, czyli istotnego wpływu komunikacji, przejrzystości oraz wiarygodności Europejskiego Banku Centralnego na efektywność polityki pieniężnej w strefie euro. Wyniki przeprowadzonych badań mogą stanowić punkt wyjścia do dalszych, bardziej pogłębionych badań dotyczących relacji między komunikacją, transparentnością, wiarygodnością i skutecznością banków centralnych w krajach o różnym poziomie rozwoju gospodarczego.

Słowa kluczowe: komunikacja, przejrzystość, wiarygodność, Europejski Bank Centralny, polityka pieniężna