



UDC: 336.711(497-15)

DOI: 10.2478/jcbtp-2024-0015

*Journal of Central Banking Theory and Practice, 2024, 2, pp. 109-128**Received: 23 September 2023; accepted: 02 November 2023***Vera Gojčaj***

Analysis of the Transparency Index of the Central Banks of the Western Balkan Countries

** Directorate for Monetary Policy,
Monetary and Financial Statistics
and Fiscal Research,
Central Bank of Montenegro*

E-mail:

vera.gojcay@cbcg.me

vera.nuculovic@yahoo.com

Abstract: Transparency in the work of central banks has become one of the key features of monetary policy. Because of this, many economists have diverted to finding the most suitable way to measure it. Although a unique method of measurement has yet to be achieved, there are various studies in the literature that deal with the calculation of the transparency index of central banks. Most studies have focused on measuring transparency of the largest central banks, while countries of the Western Balkans have been neglected. In the literature, there are no studies related to the analysis and measurement of transparency of the central banks in the Western Balkan countries. Starting from the index calculated by Eiffinger & Geraats, this paper aims to calculate the transparency index for five central banks: the Central Bank of Montenegro, the Croatian National Bank, the Central Bank of Bosnia and Herzegovina, the National Bank of the Republic of North Macedonia, and the Bank of Albania.

Keywords: central bank transparency, central bank transparency index, monetary policy.

JEL Classification: E50, E52, E58.

1. Introduction

In recent years, central banks have focused on increasing transparency. In earlier historical periods, central banking was extremely different from today. As Dincer & Eichengreen (2007) explain, in the beginning, central banks were created as private providers of loans for the needs of the government. Competing

with other financial institutions, they did not publish their price and portfolio information. Because of its privileged relationship with the state, the information was confidential and known only to the bank and the client. In such circumstances, central banks were not transparent. The growth of financial markets and transactions has made the market's response to policies even more important to achieving the central bank's ultimate goals.

Recent events that have increased the level of uncertainty (the 2007 financial crisis, the COVID-19 crisis and the Ukraine-Russia war) have turned all attention to central banks to intervene immediately or implement unconventional measures to salvage what can be salvaged to bring things back to normal, be it to stimulate growth or control inflation (Haoudi & Touati, 2023). All this contributed to central banks communicating with market participants in a manner that instilled confidence and avoided causing excessive volatility. Dincer & Eichengreen (2007) also point out that democratization has contributed to central bank independence, which is closely related to transparency. The increased importance of transparency in monetary policy lies in the fact that most central banks nowadays have websites and publish data externally and so the internet has made it possible to publish large amounts of information to the general public at zero marginal cost (Laurens, Arnone & Segallotto, 2009). Some economists believe that it is better to have as much information as possible (Dincer & Eichengreen 2007). They point out that when the central bank better communicates its objectives, its assessment of the effects of policy actions and information on economic conditions, will improve social welfare. Policy is more predictable, agents will be able to align their decisions with the decisions of the central bank.

Laurens et al. (2009) indicate that the reasons why central bank transparency is a basic prerequisite for successful central banking are as follows: it increases the credibility of the central bank, influences expectations, is a guardian of the independence of the central bank, contributes to a clearer understanding of monetary policy, reduces information asymmetry and uncertainty in financial markets, improves market efficiency, eliminates Government uncertainty regarding the performance of monetary policy, improves coordination of fiscal and monetary policy. For this reason, there are many attempts to measure the central bank transparency index. The authors also argue that a consensus on how to measure transparency has not yet been reached.

The aim of this paper is to determine whether the selected central banks are transparent and to what extent, using the methodology of Eiffinger & Geraats (2004). The paper consists of five parts. After the introduction, the literature review is presented in the second part. The research methodology is laid out in the

third part, while the results are presented in the fourth part of the paper. The paper ends with a conclusion.

2. Literature review

Central banks have gone through a remarkable transition during the last two decades and a multitude of literature shed light on a steady increase in central bank transparency (Aftab & Mehmood, 2023). The measurement of transparency enables a precise analysis of central bank behaviour and an analysis of the role of transparency in the monetary process and its relationship with autonomy and responsibility (Laurens et al., 2009). Indices for measuring central bank transparency reflect the amount of information published by central banks, the quality and clarity of this information, the complexity of central bank websites, the degree of openness with regard to financial markets, the media and the general public (Dumiter, 2014). Different ways of calculating central bank transparency have been proposed in the literature. After surveying 94 central banks, Fry, Julius, Mahadeva, Roger, and Sterne (2000) created an index of policy explanations consisting of the following components: explanations of policy decisions, explanations in forecasts and future analyses, and explanations in published assessments and research. They showed that 74% of central banks consider transparency "important" or "very important" component of their monetary policy framework. Bini-Smaghi and Gros (2001) presented an indicator of central bank transparency and accountability for six major central banks that includes four components: Objectives, Strategy, Disclosure of Data and Forecasts, and Communication Strategy. The ranking was made for the following central banks: ECB, Fed, Bank of Japan, Bank of Canada, Bank of England and Bundesbank. The authors suggest that the ECB should be more accountable and transparent than most other central banks. However, the ECB is widely regarded as less transparent, which could be improved with a few changes. For example, the publication of detailed minutes of ECB Governing Council meetings. In the authors' opinion, the best way to make the ECB more accountable is to provide more information on the background analysis that leads to policy decisions. However, accountability is not only provided by the ECB. The European Parliament, the EU Council of Finance Ministers, and the general public also play an important role.

Siklos (2002) measured the transparency of twenty central banks from advanced industrial countries. The Siklos index consists of 11 variables concerning the supply of information, understanding of the monetary policy process, procedural transparency, and autonomy and responsibility. According to Siklos, the most transparent are the Bank of England, the Fed and the Riksbank, while the least

transparent are the Austrian National Bank, the Bank of France and the National Bank of Belgium.

Fracasso, Genberg, and Wyplosz (2003) evaluated the inflation reports of 21 central banks that adopted inflation targeting. They assess the quantity, quality and availability of information that provided clarity of assumptions about key macroeconomic variables, presentation of the policy-making process and executive summary.

In addition, they provide an overall score for each inflation report based on its persuasiveness, expertise, completeness, writing style, and information. They conclude that the inflation report should cover three issues.

First, it must include an analysis of the current situation. This includes production and the labour market (wages and employment), monetary and financial developments, and external conditions. Next, it must present a forecast of the inflation rate, along with the associated uncertainty. The third question is related to monetary policy. The inflation report should explain how the monetary policy committee interprets current evidence and forecasts, including current and future uncertainties. It also needs to include how the committee views its previous analyses, forecasts and decisions, which may occasionally require an admission that mistakes have been made.

Eijffinger & Geraats (2004) distinguish five types of transparency: political, economic, procedural, policy and operational. This measure rates the central bank as transparent if relevant information is communicated on time with an explanation for key decisions (Aftab & Mehmood, 2023). Their index is constructed for nine major central banks including the Reserve Bank of Australia, the Bank of Canada, the ECB, the Bank of Japan, the Reserve Bank of New Zealand, the Riksbank of Sweden, the Swiss National Bank, the Bank of England and the Federal Reserve. The index was calculated for the period from 1998 to 2002.

The results show sharp differences in the transparency of central banks, with the Reserve Bank of New Zealand, the Bank of England and the Swedish Riksbank at the top in terms of transparency, while the Reserve Bank of Australia, the Bank of Japan and the Swiss National Bank are the least transparent. Their analysis shows that central banks place different emphasis on different aspects of transparency. For example, the transparency index calculated in 2001 is the same for the European Central Bank and the Federal Reserve. However, the ECB bases its strength on policy transparency, while the Fed emphasizes the transparency of policy decisions. Eijffinger and Geraats (2004) also investigated the impact of transpar-

ency on economic performance. The results show that central banks with greater political transparency in 1998 experienced more variable inflation and higher unemployment in the following five years.

Dincer and Eichengreen (2007) extended the data set of Eijffinger and Geraats (2004) in two ways: the sample was extended to 100 countries instead of 9, and the data period was extended to cover the years from 1998 to 2005. The indices show that there has been a movement towards greater transparency and independence over time. Additionally, they showed that the outcome such as inflation variability is significantly influenced by central bank transparency and independence.

Siklos (2010) extends the index of Eijffinger and Geraats (2004) to a wider data set and a 10-year time horizon (1999-2009). Siklos concluded that the improvement in transparency was noticeable in Central and Eastern Europe, while the index showed a much smaller increase in most other parts of the world.

Many authors have examined the relationship between transparency and economic and financial variables. Using the Eijffinger-Geraats index, Demertzis and Hughes Hallett (2007) examine the relationship between central bank transparency and the level and variability of inflation and the output gap in the period from 1990 to 2001. The results show that increasing the degree of transparency does not affect the average levels of inflation and output. However, the degree of volatility in the level of the gap between inflation and output and in the volatility of production would be reduced if the central bank had conservative preferences.

Chortareas, Stasavage & Sterne (2001) examine the impact of transparency on inflation and output volatility, using a cross-section of 87 countries over the period 1995-1999. The results show that there is a statistically significant negative correlation between transparency and inflation, especially in countries with flexible exchange rate regimes. At the same time, there is no evidence of the cost of transparency in terms of increased production volatility.

Crujisen and Demertzis (2005) investigate how the relationship between inflation and inflationary expectations changes with increasing transparency. They prove that with a higher level of transparency, the relationship between these two variables is weaker, and that with an increase in transparency, the level of persistence of inflation decreases.

3. Research methodology

This paper presents the indices of central banks of the Western Balkan countries that cover five aspects of transparency established by Geraats (2002) and these are political, economic, procedural, policy and operational transparency. Earlier studies referred to certain aspects of transparency, while Eiffinger and Geraats showed that transparency has multiple dimensions (Dincer & Eichengreen, 2007). Eiffinger & Geraats (2004) indicated that for each aspect there are sub-indices that are based on three questions, each of which has the same weight and a maximum number of points of one. They obtain a comprehensive measure of transparency by summing five sub-indices, which makes a total of 15 points.

A detailed description of the monetary policy transparency index is given in the Annex. The transparency index was calculated for five central banks of countries in the region: the Central Bank of Montenegro, the Croatian National Bank, the Central Bank of Bosnia and Herzegovina, the National Bank of the Republic of North Macedonia, and the Bank of Albania. The methodology used in the paper is as follows: questions with a description of the transparency index were sent to central banks to answer the questions. Then the answers were analysed based on the information available on the central banks' websites, statutes, annual reports, and other published documents. The individual indices for the year 2022 were calculated for each central bank.

4. Results and interpretation of results

The results of the conducted research are presented below in graphic form and then interpreted.

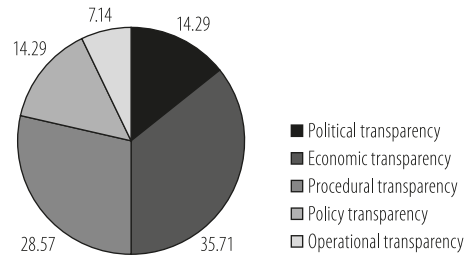
4.1. Central bank of Montenegro

„The Central Bank of Montenegro regularly informs the public about significant issues discussed at the meetings of the Central Bank of Montenegro Council and basic trends in the economy of Montenegro, monthly through the Bulletin of the Central Bank of Montenegro, quarterly through the Macroeconomic Report of the Central Bank of Montenegro and the Report on Price Movements, annually through the Annual Report on the Work of the Central Bank of Montenegro, Financial System Stability Report, CBCG Annual Macroeconomic Report, Price Stability Report and CBCG Financial Report with Independent Auditor's Report. Also, the Central Bank prepares and publishes working studies dealing with cur-

rent economic issues." (Central Bank of Montenegro, n.d.). The research results show that the calculated transparency index of the Central Bank of Montenegro is 46.67% of the maximum value of the index.

Graph 1 shows the calculated transparency index of the Central Bank of Montenegro.

Graph 1: Transparency index of the Central Bank of Montenegro¹



Source: Author (Survey results, 2022)

The first question in the framework of political transparency refers to the main objective of the monetary policy of the central bank. "The main goal of the Central Bank of Montenegro is to encourage and preserve the stability of the financial system, including encouraging and maintaining a healthy banking system, safe and efficient payment transactions and contributing to achieving and maintaining price stability.

Since the entry of Montenegro into the European Union, the main goal of the CBCG will be to maintain price stability, which is in accordance with the provisions of Articles 127 (1) and 282 (2) of the Treaty on the Functioning of the European Union and Article 2 of the Statute of the European System of Central Banks and the European Central Bank." (Central Bank of Montenegro, n.d.). The Central Bank of Montenegro contains an explicit independence arrangement. The greatest transparency was observed in the area of economic transparency. However, the lack of economic transparency is that the Central Bank of Montenegro does not publish quarterly series of data for money supply and capacity utilization. Macroeconomic models used by the central bank to analyse monetary policy are published, as well as quarterly numerical forecasts on inflation and production for a medium-term time period (one to two years in advance), with the assumptions on which the forecasts are made. In terms of procedural transparency, which accounts for 28.57% of the total points achieved, the Central Bank of Montenegro does not have an explicit monetary policy rule. The Central Bank explains the decisions and publishes the minutes of the sessions. The first and last question regarding the transparency of policy decisions is not applicable, and thus the total number of points is low. In the area of transparency of policy decisions, it is possible to emphasize that the central bank explains monetary pol-

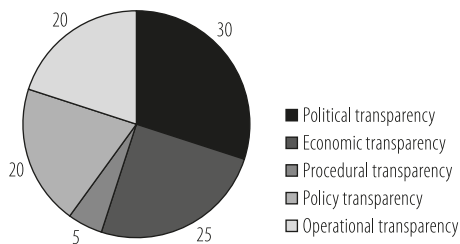
¹ Since Montenegro is a euroised economy, it was not possible to apply all fifteen questions. Answers to seven questions were obtained, based on which the percentage was calculated.

icy decisions, including future forecasts. The Central Bank of Montenegro publishes information on macroeconomic disturbances that affect the transmission mechanism of monetary policy only through short-term forecasts or analyses of current macroeconomic trends (at least quarterly).

4.2. Croatian National Bank

The Croatian National Bank (CNB) has been part of the Eurosystem since January 1, 2023. The total number of points of the Croatian National Bank calculated on the basis of the questions given in the Annex is 10. The highest number of points was achieved for political transparency. The Croatian National Bank has one basic primary goal, which is to maintain price stability. The Governing Council of the ECB believes that price stability is best maintained by targeting inflation of 2% in the medium term. (Croatian National Bank, n.d.).

Graph 2: Transparency Index of the Croatian National Bank



Source: Author (Survey results, 2022)

Graph 2 shows the calculated transparency index for the Croatian National Bank.

The Croatian National Bank contains an explicit independence arrangement. Economic transparency accounts for 25% of the total points, with 0.5 points missing because it publishes quarterly data series for three or four of the five variables. Macroeconomic models used for monetary policy analysis are published, as well as quarterly numerical forecasts on inflation and production for a medium-term time period

(one to two years in advance), specifying the assumptions on which the forecasts are made. The lowest number of points includes procedural transparency (5%). The central bank does not publish an explicit monetary policy rule within the monetary strategy. The central bank explains monetary policy decisions after a significant time lag (more than eight weeks) and there are no meeting minutes. Decisions on the compliance of the main operational instrument or objective are published by the Croatian National Bank no later than on the day of implementation of the decision. Monetary policy decisions are always explained as well as future forecasts, but the central bank does not publish, at least not quarterly, explicit monetary policy actions after Council meetings nor does it give explicit in-

dications of likely future actions. Operational transparency accounts for 20% of the total points achieved. The Croatian National Bank regularly publishes information on macroeconomic disturbances that affect the transmission mechanism of monetary policy, but only through short-term forecasts or analyses of current macroeconomic developments (at least quarterly). It also partially provides an assessment of policy outcomes regarding macroeconomic objectives. The Croatian National Bank has political transparency, but procedural transparency is very weak.

Central Bank of Bosnia and Herzegovina

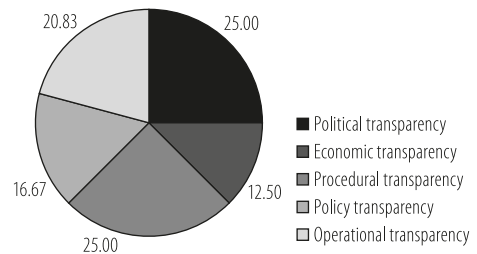
The calculated transparency index for the Central Bank of Bosnia and Herzegovina is 12. The highest number of points was achieved for political transparency and procedural transparency. Economic transparency contains the smallest number of points and accounts for 12.50% of the total number of achieved points.

Graph 3 shows the calculated transparency index of Central Bank of Bosnia and Herzegovina.

The main goal of the Central Bank of Bosnia and Herzegovina (CBBiH) is to achieve and maintain currency stability, by issuing local currency in accordance with the rules of the currency board (Fabris, 2006). The CBBiH contains an explicit independence arrangement. Economic transparency represents the area with the lowest number of points and this is where the CBBiH shows the lowest transparency.

Quarterly data series are published for three or four variables. The bank does not publish formal macroeconomic models used for monetary policy analysis, while quarterly numerical forecasts on inflation and production are published for the medium-term time period (one to two years in advance), with the assumptions on which the forecasts are made. The CBBiH publishes explicit monetary policy rules within the framework of the monetary strategy, explains the decisions, and publishes the minutes of the Governing Board meeting. The transparency of policy decisions accounts for 16.67% of the total points achieved. At the latest on the day of implementation of the decision, the central bank publishes decisions

Graph 3: Transparency index of Central Bank of Bosnia and Herzegovina



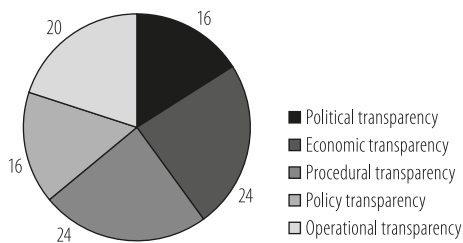
Source: Author (Survey results, 2022)

on the compliance of the main operational instrument or objective. Monetary policy decisions and future forecasts are explained, however, at least quarterly, the central bank does not publish explicit monetary policy actions after Governing Board meetings or explicit indications of likely future actions. In the field of operational transparency (20.83%), the CBBiH assesses the extent to which its main operational goals have been achieved, publishes short-term forecasts or analyses of current macroeconomic developments (at least quarterly) on macroeconomic disturbances that affect the transmission mechanism of monetary policy, and provides regular assessments of policy outcomes regarding macroeconomic goals.

National Bank of the Republic of North Macedonia

The calculated transparency index for the National Bank of North Macedonia is 10. The most transparent are economic and procedural transparency, each with 24% of the total number of achieved points, while the transparency of fiscal policy decisions is transparent with 16% of the total achieved points.

Graph 4: Transparency Index of the National Bank of the Republic of North Macedonia



Source: Author (Survey results, 2022)

Graph 4 shows the calculated transparency index of the National Bank of the Republic of North Macedonia.

The main objective of the monetary policy of the National Bank of Macedonia is to maintain price stability and it is not quantitatively determined (National bank of Macedonia, n.d). The National Bank of Macedonia has an explicit independence arrangement. As part of economic transparency, quarterly data series are published for all five variables (money supply, inflation, gross domestic product, unemployment rate, capacity utilization).

The National Bank of Macedonia publishes macroeconomic models that it uses to analyse monetary policy. The National Bank publishes quarterly numerical forecasts on inflation and production for a medium-term time period (one to two years in advance), specifying the assumptions on which the forecasts are made. With procedural transparency, an explicit monetary policy rule is published within the monetary strategy. The National Bank of Macedonia explains monetary policy decisions within a reasonable time

frame, but the minutes of the sessions are not published. Meeting minutes are for internal use only. Decisions on the compliance of the main operational instrument or objective are published no later than on the day of implementation of the decision. The National Bank explains monetary policy decisions, including future forecasts.

Bank of Albania

The Bank of Albania has a total of 12 points. With 25% of the total points achieved, the central bank's greatest transparency is attained in political, operational and policy transparency. The lowest transparency was calculated in the area of procedural transparency.

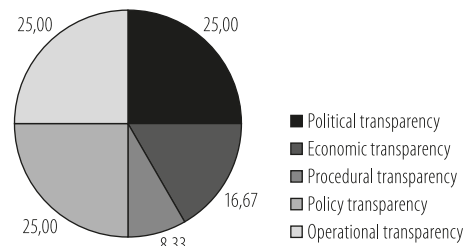
Graph 5 shows the calculated transparency index of the Bank of Albania.

The main objective of the monetary policy of the Bank of Albania is to maintain price stability. In quantitative terms, the Bank of Albania defines price stability as maintaining the consumer price inflation rate at 3.0% in the medium term. (Bank of Albania, n.d.) The Bank of Albania contains an explicit independence arrangement.

Regarding economic transparency, it publishes quarterly series of data for all

five variables (money supply, inflation, gross domestic product, unemployment rate, capacity utilization). The Bank of Albania publishes formal macroeconomic models that it uses to analyse monetary policy, but it does not publish numerical forecasts of inflation and output. Procedural transparency has the lowest number of points, 8.33. As a part of its monetary strategy, the central bank publishes an explicit monetary policy rule. Monetary policy decisions are not explained or they are explained but only after a significant time lag (more than eight weeks). There are no minutes from the Supervisory Council's meetings or there are, but only after a significant time delay (more than eight weeks). Within the framework of transparency of policy decisions, decisions on the compliance of the main operational instrument or objective are published no later than on the day of implementation of the decision. Monetary policy decisions are explained as well as future forecasts. The central bank publishes on a quarterly basis explicit

Graph 5: Transparency index of the Bank of Albania



Source: Author (Survey results, 2022)

monetary policy actions or indications of likely future actions after each meeting of the Supervisory Council.

Conclusion

This paper aimed to present the transparency index of the central banks of Croatia, Bosnia and Herzegovina, North Macedonia, and Albania. The analysis shows that the Croatian National Bank has strong political transparency. The improvement of transparency needs to be focused on the area of procedural transparency. Monetary policy decisions are explained only after a significant time lag (more than eight weeks) and there are no minutes of the sessions. In terms of economic transparency, the availability of quarterly series of data for all five variables listed in the questionnaire should be made available. Improvements should also be focused on the area of operational transparency, because the Croatian National Bank provides only a partial assessment of policy outcomes regarding macroeconomic goals, while information on macroeconomic disturbances affecting the transmission mechanism of monetary policy should have been published together with a discussion of past errors in forecasts. The highest transparency of the Central Bank of Bosnia and Herzegovina (CBBiH) was achieved in the area of political and operational transparency, while the lowest was economic transparency. Improvements in the framework of economic transparency should be aimed at the publication of quarterly series of data on all five variables (money supply, inflation, gross domestic product, unemployment rate, capacity utilization). Also, the CBBiH should publish the macroeconomic models it uses for monetary policy analysis. In the case of transparency of policy decisions, explicit tendencies of monetary policy should be published after each meeting of the monetary board or explicit indications of likely future actions (incentives quarterly). Recommendations for improving transparency for the National Bank of the Republic of North Macedonia are in the area of procedural transparency, where the minutes of the meetings should be published and not used for internal use only. The assessment of policy outcomes regarding macroeconomic goals is only partially explained, and the central bank does not publish explicit actions of monetary policy after each meeting of the monetary board or explicit indications of probable future actions (quarterly rate). With political transparency, there is no quantification of the goal of monetary policy. At the Bank of Albania, political, operational and policy transparency is the greatest. The weakest is procedural transparency. As with the National Bank of Croatia, the shortcoming is that decisions are explained only after a significant time delay (more than eight weeks) and there are no minutes from the sessions. Another shortcoming is in the area of economic transparency, where it is necessary to provide quarterly se-

ries of data for all five variables. As the Central Bank of Montenegro is a euroised economy, some questions from the questionnaire were not applicable. However, what is evident is that it is necessary to increase economic transparency in terms of publishing quarterly series of data for all five mentioned variables. Also, with operational transparency, the information that is published about macroeconomic disturbances should also include a discussion of past errors in forecasts.

ANNEX

The Annex provides a description of the method of calculating the transparency index of central banks Eijffinger & Geraats (2004).

1. Political transparency

Policy transparency refers to openness regarding policy goals and institutional arrangements that reveal the motives of monetary policy makers. These include explicit inflation targets, central bank independence and contracts (Geraats, 2002). The political transparency index was calculated based on the answers to the following questions:

- a) Is there a formal statement of the objective(s) of monetary policy, with an explicit prioritization in case of multiple objectives?
No formal objective(s) = 0.
Multiple objectives without prioritization = 1/2.
One primary objective, or multiple objectives with explicit priority = 1.
- b) Is there a quantification of the primary objective(s)?
No = 0.
Yes = 1.
- c) Are there explicit institutional arrangements or contracts between the monetary authorities and the government?
No central bank contracts or other institutional arrangements = 0.
Central bank without explicit instrument independence or contract = 1/2.
Central bank with explicit instrument independence or central bank contract (although possibly subject to an explicit override procedure) = 1.

2. Economic transparency

Economic transparency focuses on economic information that is used for monetary policy, including economic data, central bank policy models and forecasts Geraats (2002).

- a) Is the basic economic data relevant for the conduct of monetary policy publicly available? The focus is on the following five variables: money supply, inflation, GDP, unemployment rate and capacity utilization.
Quarterly time series for at most two out of the five variables = 0.
Quarterly time series for three or four out of the five variables = 1/2.
Quarterly time series for all five variables = 1.
- b) Does the central bank disclose the formal macroeconomic model(s) it uses for policy analysis?
No = 0.
Yes = 1.
- c) Does the central bank regularly publish its own macroeconomic forecasts?
No numerical central bank forecasts for inflation and output = 0.
Numerical central bank forecasts for inflation and/or output published at less than quarterly frequency = 1/2.
Quarterly numerical central bank forecasts for inflation and output for the medium term (one to two years ahead), specifying the assumptions about the policy instrument (conditional or unconditional forecasts) = 1.

3. Procedural transparency

Procedural transparency describes the way monetary policy decisions are made. This includes monetary policy strategy and the presentation of policy deliberations, usually through voting records Geraats (2002).

- a) Does the central bank provide an explicit policy rule or strategy that describes its monetary policy framework?
No = 0.
Yes = 1.

- b) Does the central bank give a comprehensive account of policy deliberations (or explanations in case of a single central banker) within a reasonable amount of time?

No, or only after a substantial lag (more than eight weeks) = 0.

Yes, comprehensive minutes (although not necessarily verbatim or attributed) or explanations (in case of a single central banker), including a discussion of backward and forward-looking arguments = 1.

- c) Does the central bank disclose how each decision on the level of its main operating instrument or target was reached?

No voting records, or only after substantial lag (more than eight weeks) = 0.

Non-attributed voting records = 1/2.

Individual voting records, or decision by single central banker = 1.

4. Policy transparency

Policy transparency means prompt announcement and explanation of policy decisions, and an indication of likely future policy actions in the form of political leanings Geraats (2002).

- a) Are decisions about adjustments to the main operating instrument or target promptly announced?

No, or after a significant lag = 0.

Yes, at the latest on the day of implementation = 1.

- b) Does the central bank provide an explanation when it announces policy decisions?

No = 0.

Yes, when policy decisions change, or only superficially = 1/2.

Yes, always and including forwarding-looking assessments = 1.

- c) Does the central bank disclose an explicit policy inclination after every policy meeting or an explicit indication of likely future policy actions (at least quarterly)?

No = 0.

Yes = 1.

5. Operational transparency

Operational transparency refers to the implementation of monetary policy actions, including a discussion of control errors for the operating instrument macroeconomic traffic Geraats (2002).

- a) Does the central bank regularly evaluate to what extent its main policy operating targets (if any) have been achieved?

No, or not very often (at less than annual frequency) = 0.

Yes, but without providing explanations for significant deviations = 1/2.

Yes, accounting for significant deviations from target (if any); or, (nearly) perfect control over main operating instrument/target = 1.

- b) Does the central bank regularly provide information on (unanticipated) macroeconomic disturbances that affect the policy transmission process?

No, or not very often = 0.

Yes, but only through short-term forecasts or analysis of current macroeconomic developments (at least quarterly) = 1/2.

Yes, including a discussion of past forecast errors (at least annually) = 1.

- c) Does the central bank regularly provide an evaluation of the policy outcome in light of its macroeconomic objectives?

No, or not very often (at less than annual frequency) = 0.

Yes, but superficially = 1/2.

Yes, with an explicit account of the contribution of monetary policy in meeting the objectives = 1.

Table 1: Transparency index of the central banks of the Western Balkan countries

| Central bank transparency | Central bank of Montenegro | Croatian National bank | Central Bank of Bosnia and Herzegovina | National Bank of the Republic of North Macedonia | Bank of Albania |
|-------------------------------|----------------------------|------------------------|--|--|-----------------|
| 1. Political | 1 | 3 | 3 | 2 | 3 |
| a) Formal objectives | N/A | 1 | 1 | 1 | 1 |
| b) Quantitative targets | N/A | 1 | 1 | 0 | 1 |
| c) Institutional Arrangements | 1 | 1 | 1 | 1 | 1 |
| 2. Economic | 2.5 | 2.5 | 1.5 | 3 | 2 |
| a) Economic data | 0.5 | 0.5 | 0.5 | 1 | 1 |
| b) Policy models | 1 | 1 | 0 | 1 | 1 |
| c) Central bank forecasts | 1 | 1 | 1 | 1 | 0 |
| 3. Procedural | 2 | 0.5 | 3 | 3 | 1 |
| a) Explicit strategy | N/A | 0 | 1 | 1 | 1 |
| b) Minutes | 1 | 0 | 1 | 1 | 0 |
| c) Voting records | 1 | 0.5 | 1 | 1 | 0 |
| 4. Policy | 1 | 2 | 2 | 2 | 3 |
| a) Prompt Announcement | N/A | 1 | 1 | 1 | 1 |
| b) Policy Explanations | 1 | 1 | 1 | 1 | 1 |
| c) Policy Inclinations | N/A | 0 | 0 | 0 | 1 |
| 5. Operational | 0.5 | 2 | 2.5 | 2.5 | 3 |
| a) Control Errors | N/A | 1 | 1 | 1 | 1 |
| b) Transmission Disturbances | 0.5 | 0.5 | 0.5 | 1 | 1 |
| c) Evaluation Policy Outcome | N/A | 0.5 | 1 | 0,5 | 1 |
| Total | 7 | 10 | 12 | 12.5 | 12 |

Source: Author (Survey results, 2022)

References

1. Aftab, M. & Mahmood, A. (2023), Does Central Bank Transparency Deter the Exchange Rate Volatility? New Evidence from Asian Emerging Markets: *Journal of Central Banking Theory and Practice*, 2, pp. 133-163. Available at: https://www.cbcg.me/slike_i_fajlovi/fajlovi/journal/vol12/jcbtp-2023-0017.pdf
2. Bank of Albania (n.d). Objective and strategy. Retrieved from: https://www.bankofalbania.org/Monetary_Policy/Objective_and_strategy/(Accessed: March 3, 2023)
3. Bini-Smaghi, L. & Gros, D. (2001). Is the ECB sufficiently accountable and transparent? *European network of economic policy research institutes*. Working paper no. 7. Available at : <https://www.lorenzobinismaghi.com/documents/publicazioni/2001/Is%20the%20ECB%20sufficiently%20accountable%20and%20transparent.pdf>
4. Central Bank of Montenegro (n.d). CBCG independence and transparency. Retrieved from: <https://www.cbcg.me/en/core-functions/monetary-policy/cbcg-independence-and-transparency> (Accessed: December 2, 2023)
5. Central Bank of Montenegro (n.d). CBCG objectives. Retrieved from: <https://www.cbcg.me/en/core-functions/monetary-policy/objectives> (Accessed: December 2, 2023)
6. Chortareas, G., Stasavage, D. and Sterne, G. (2001). Does it pay to be transparent? International evidence from central bank forecasts. The bank of England, working paper. Available at: <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=e9664c453b7160d9dbd6811c2af1939b06458df4>
7. Croatian National bank (n.d). CBCG objectives. Retrieved from: <https://www.hnb.hr/en/core-functions/supervision/basics-and-objectives> (Accessed: October 21, 2023)
8. Croatian National Bank. Monetary policy implementation, Available at: <https://www.hnb.hr/en/core-functions/monetary-policy/monetary-policy-implementation>
9. Croatian National Bank. Predstavljamo makroekonometrijski model za Hrvatsku (PACMAN). Available at: https://www.hnb.hr/analize-i-publikacije/povremene-publikacije/html/-/asset_publisher/ifyaTaizWMhG/content/predstavljamo-makroekonometrijski-model-za-hrvatsku-pacman-
10. Cruijsen, C. & Demertzis M. (2005). The Impact of Central Bank Transparency on inflation expectations. *European Journal of Political Economy*. 23(1), 51-66. Available at https://nbp.pl/wp-content/uploads/2023/01/cruijsen_demertzis.pdf

11. Demertzis, M. & Hughes Hallet, A. (2007). Central Bank Transparency in Theory and Practice. *Journal of Macroeconomics* Volume 29(4), 760-789. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0164070407000316>
12. Dincer, N. & Eichengreen, B. (2007). Central bank transparency: where, why, and with what effects? Nber working paper series. Working Paper 13003, 1-51. Available at: https://www.nber.org/system/files/working_papers/w13003/w13003.pdf
13. Dincer, N. & Eichengreen, B. (2014). Central Bank Transparency and Independence: Updates and New Measures. *International Journal of Central Banking*, Vol. 10 No. 1, 189-253. Available at : <https://www.ijcb.org/journal/ijcb14q1a6.pdf>
14. Dincer, N. & Einchergreen, B. (2010). Central Bank Transparency: Causes, Consequences and Updates. *Theoretical Inquiries in Law* 11, 1-64. Available at: https://www.nber.org/system/files/working_papers/w14791/w14791.pdf
15. Dumiter, F. (2014). *Timisoara Journal of Economics and Business*, 7(1), 35-51. doi: [10.2478/tjeb-2014-0002](https://doi.org/10.2478/tjeb-2014-0002)
16. Eijffinger, S. & Geraats, P. (2004). *How transparent are Central Banks?* *European Journal of Political Economy*, 22(1), 1-21. Available at <https://aspace.repository.cam.ac.uk/bitstream/handle/1810/390/cwpe0411.pdf?sequence=1&isAllowed=y>
17. Fabris, N. (2006). Centralno bankarstvo u teoriji i praksi. Central Bank of Montenegro. Available at: https://www.cbcg.me/slike_i_fajlovi/fajlovi/fajlovi_publicacije/nase_knjige/centralno_bankarstvo_u_teoriji_praksi.pdf
18. Fracasso, A., Genberg, H. & Wyplosz, C. (2003). *How Do Central Banks Write? An Evaluation of Inflation Reports by Inflation Targeting Central Banks*. Geneva: International center for monetary and banking studies.
19. Fry, M., Julius, D., Mahadeva, L., Roger, S. & Sterne, G. (2000). *Monetary policy frameworks in a global context*. London: Routledge.
20. Geraats, P. (2002). Central bank transparency. *The Economic Journal*, 112 (November), 532-565. Available at: http://www.redeconomia.org.ve/redeconomia/admin_redeconomia/uploads/temas%20de%20investigacion/200211261417540a3556635.pdf
21. Haoudi, A. & Touati, A. (2023). Central Bank Independence: The Case of North African Central Banks. *Journal of Central Banking Theory and Practice*, 3, pp. 61-85. Available at: https://www.cbcg.me/slike_i_fajlovi/fajlovi/journal/vol12/jcbtp-2023-0025.pdf
22. Laurens, B., Arnone, M. & Segalotto, J. (2009). *Central bank independence, Accountability and transparency, A global perspective*. London: Palgrave Macmillan

23. National Bank of the Republic of North Macedonia (n.d). Objectives and tasks. Retrieved from: <https://www.nbrm.mk/ns-newsarticle-functions.nsp>
(Accessed: May 6, 2023)
24. Siklos, P. (2002). The changing face of Central banking, Evolutionary trends since World War II. Cambridge: Cambridge university press.