

Aspects Regarding the Monetary Policy in The European Union's Countries

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Abstract

Monetary policy is a task of central banks. Until recently, each country had its own monetary policy. After the introduction of the single euro, monetary policy for the whole euro area is the ECB's responsibility. In non-euro EU countries, monetary policy is conducted by each national central bank.

In EU countries, regardless of currency, the monetary policy instruments are: open market operations, standing facilities and minimum reserve requirements. These operations are based on the monetary policy interest rate, but also on the interest rate on the lending and deposit facility.

The study analysed the corridor in which these rates are situated in the period 2017-2022 for the EU countries. It will be seen that there are situations where we have a symmetric corridor with respect to the base rate, but also countries or periods where the corridor is asymmetric.

The analysis of interest rates is a topical subject, especially at a time when inflation is an international problem.

Key words: monetary policy interest rate, banking system, spread

J.E.L. classification: G01, G20, G21, G24, G30, E50

1. Introduction

Over the past decade, monetary policy has been an important topic in the financial world and beyond. The free movement of capital in the EU and many other regions, technological breakthroughs and their applications in financial systems have made money easy to use and transfer.

Rising inflation in recent years has made monetary policy and the policy interest rate a hot topic in the financial world, analysts and the general public.

We must not forget that there were periods when the question of the morality of interest was raised. Today this paradigm brings smiles. Regardless of the type of contract, the borrower of a loan will pay interest to the lender.

Within a country's banking system, the cost of money can be influenced by the level of the policy interest rate. This paper has therefore analysed the evolution of these rates in the EU.

The interest rate is the price paid by the borrower for the use of funds provided by the lender. The interest rate contains, in addition to the *price of money*, a margin that quantifies the risk of default. An increase in interest rates leads to a decrease in the money supply in circulation by reducing the volume of credit.

In the last 10 years, the economies of European countries have become more connected, through trade, investment and free transfers of financial funds. That is why it is important to look at interest rates in monetary policy at EU level.

2. Theoretical background

Central banks have single or multiple objectives. If in the US or Japan the central bank has multiple objectives, in all EU countries the objective is unique: to ensure and maintain price stability. The strategy adopted in the EU is inflation targeting. The objective is achieved through monetary policy and its instruments. Within this framework, standing facilities take two forms: the lending facility and the deposit facility. The central bank initiates the operations and the partners are credit institutions.

The spread between the interest rate on the lending and deposit facility is an important indicator of financial stability.

In classical theory, the interest rate is the price paid by the borrower for the use of funds provided by the lender. In the past, the monetary policy interest rate (originally the repo rate) was the base rate for the other loan rates.

In recent decades the mechanisms have evolved, and the monetary policy interest rate is important, but not determinative in setting all bank rates. Taufiq Carnegie Dawood (2019) has shown that the lending rate is influenced by changes in the policy interest rate and that a monetary contraction reduces the volume of credit in the banking sector, even if there is a stretched response (lag).

Studies have also been published showing the link between monetary policy, the fiscal system and banking. One such paper shows the causality between monetary policy, the banking system or the fiscal system and the effects on the economy (Lipară & Dănilă, 2015).

Rising interest rates lead to a shrinkage of the money supply in circulation by reducing the volume of credit. This has implications for financial intermediation (Munteanu & Dobre, 2021).

In addition, the effects of central bank decisions generate changes or adaptations to the systems used by commercial banks (Cerchia & Zaif, 2019).

3. Research methodology

Monetary policy is part of a country's economic policy and is carried out by the central bank. Monetary policy instruments are used by the central bank alternatively in order to achieve the objective(s). Worldwide there are central banks that have multiple objectives and banks that have a single objective. Central banks in the ESCB have a single objective: to ensure and maintain price stability. The strategy of EU banks is inflation targeting. In recent years, inflation has been a constant topic of discussion. Hence the increasingly visible role of central banks.

In this paper we will conduct an analysis of monetary policy interest rates and the standing facilities corridor.

In 2019-2021, some central banks have announced negative interest rates. We have paid attention to this. The implications for the economy of negative interest rates are special. That's why we looked at these cases.

We have noticed that the Eurozone, Denmark, Sweden and Hungary have at times announced negative interest rates on one or more facilities. Thus, out of the 27 EU countries, 22 countries (81.48% of the total EU countries) had negative interest rates on one or more facilities.

The standing facilities are the lending facility and the deposit facility. The central bank initiates money market operations involving commercial banks and other eligible participants. The corridor in which these rates are located in relation to the monetary policy interest rate is set by each central authority and can be changed.

The current methodology allows countries to have their own monetary policy. The level of these rates is announced publicly after each meeting of the central bank's Governing Council.

Geopolitical changes have influenced prices and brought inflation in all countries. It is therefore interesting to look at central bank decisions and monetary policy issues in this context.

4. Findings

4.1. Monetary policy interest rates in European countries. Implications of negative interest rates

In the study we used EU and ECB databases. In Figure no.1 we can see the interest rates of the ESCB central banks, period 2017 - 2022.

The central banks that are part of the Eurosystem use the euro as their national currency, and ECB decisions apply in all of them. Reference to them as a whole is made by the term Eurozone.

Figure no.1. Monetary policy interest rates in the EU

	Valid from date of:	Interest rate of monetary policy (%)	Deposit interest rate (%)	Lending interest rate (%)
Eurozone	18.09.2019	0,00	-0,50	0,25
Bulgaria	01.02.2022	0,00	-	-
Czech Republic	06.05.2022	5,75	4,75	6,75
Croatia	02.10.2017	0,05	0,00	2,50
Denmark	01.10.2021	-0,60	-0,60	-0,45
Poland	06.05.2022	5,25	4,75	5,75
Romania	11.05.2022	3,75	2,75	4,75
Sweden	04.05.2022	0,25	0,15	0,35
Hungary	27.04.2022	5,40	5,40	8,40

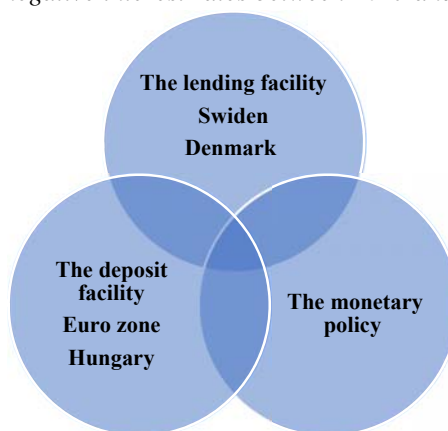
Source: authors' processing based on data provided by ECB & non-euro EU central banks [Accessed 21.09.2022]

As regards the **negative** monetary policy interest rate, two of the Union states (7.41%) had negative interest rates; 22 states (81.48% of all Union states) had negative interest rates on the deposit facility and one of the 27 (3.70%) had negative interest rates on the lending facility.

20 of the 27 states (74.07%) had only negative deposit facility rates, one state had negative benchmark interest rates and negative deposit interest rates, and one state had all three key interest rates negative.

In the Eurozone, the interest rate on deposits attracted by the ECB was negative throughout the period under review: -0.40% from January 2017 to August 2019 and -0.50% from September 2019 onwards, a decrease of 0.10 percentage points.

Figure no. 2. Countries with negative interest rates between 2017 and 2022



Source: authors' design

The Central Bank of Denmark has set a negative deposit facility interest rate for the whole period: -0.65% until September 2019, when it fell by 0.10 percentage points to -0.75%. In March 2020 it announced a 0.15 percentage point increase but remained negative: -0.60%. As of March 2021, both the deposit interest rate and the monetary policy and credit facility rates are negative, i.e. the base interest rate fell from 0.00% to -0.50%, the deposit interest rate increased by 0.10 percentage points to -0.50%, identical to the base rate, and the credit facility rate fell from 0.05% to -0.35% by 0.40 percentage points; these were valid until January 2022, and in the month immediately following, February, they each fell by 0.10 percentage points. Thus, monetary policy and deposit interest rates became -0.60% and the interest rate on the credit facility fell to -0.45%.

Sveriges Riksbank had two negative rates (out of 3), the monetary policy rate and the deposit facility rate until early 2020. By January 2020 there were two changes: in January 2019 both rates increased by 0.25 percentage points, with the base rate increasing to -0.25% from -0.50% and the deposit rate increasing to -1.00% from -1.25%; the second change took place ten months later, in October 2019, when the deposit facility rate increased by 0.65 percentage points to -0.35%. Since January 2020 the Central Bank of Sweden has only had a negative rate, with the policy rate and the deposit rate both increasing by 0.25 percentage points, the former to 0.00% and the latter to -0.10%.

As in the case of the ECB, the National Bank of Hungary announced a negative deposit facility interest rate, but only until June 2021. From the beginning of the review period until September 2017, the interest rate was -0.05%, at which point it fell by percentage points to -0.15%, and returned to its original value in March 2019. In July 2021, it increased by 0.30 percentage points to 0.25% above the 0.00% threshold.

4.2. Corridor analysis *Deposit interest rate - Lending facility interest rate*

As part of the adopted policy, it is interesting to compare countries that have announced symmetric or asymmetric paths of credit and deposit rates in relation to the monetary policy interest rate.

Of the 25 countries that had an *asymmetric corridor*, 21 countries maintained their decision for the whole period analysed and 4 countries only for a limited period of time.

The Eurozone corridor was between -0.40 and +0.25 percentage points between January 2017 and August 2019, and between -0.50 and +0.25 percentage points from September 2019 onwards.

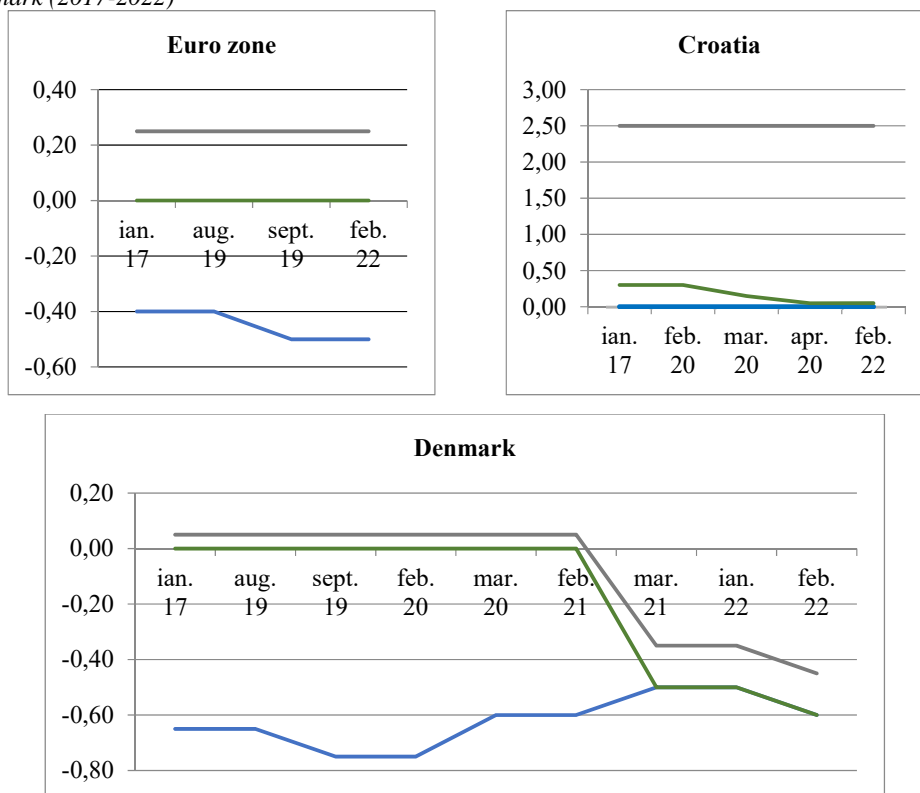
Croatia has a spread between the monetary policy interest rate and the standing facility interest rates of -0.30 and +0.20 percentage points in the period January 2017 to February 2020, -0.15 and +2.35 percentage points in March 2020, -0.05 and +2.45 percentage points from April 2020.

The Central Bank of Denmark had a corridor of -0.65 and +0.05 percentage points between January 2017 and August 2019. Between September 2019 and February 2020 it was between -0.75 and +0.05 percentage points, after which it narrowed by 0.15 percentage points to between -0.60 and 0.05 percentage points from March 2020 to February 2021. From March 2021 the monetary policy interest rate is identical to the deposit facility rate. Figure no. 3 shows the developments of these rates.

The case of the Czech Republic is the following. From January 2017 to July 2017, the monetary policy interest rate was identical to the deposit facility interest rate of 0.05% and the lending rate was 0.20 percentage points higher at 0.25%; from August 2017 to October 2017 the corridor was between -0.20 and +0.15 percentage points; between November 2017 and January 2018 it was between -0.45 and +0.50 percentage points; between February 2018 and May 2018 it was between -0.70 and +0.75 percentage points; and between June 2018 and July 2018 it was between -0.95 and 1.00 percentage points. It can be seen that in the four time periods, the corridor was almost symmetric, with the difference between the limits being 0.05 percentage points.

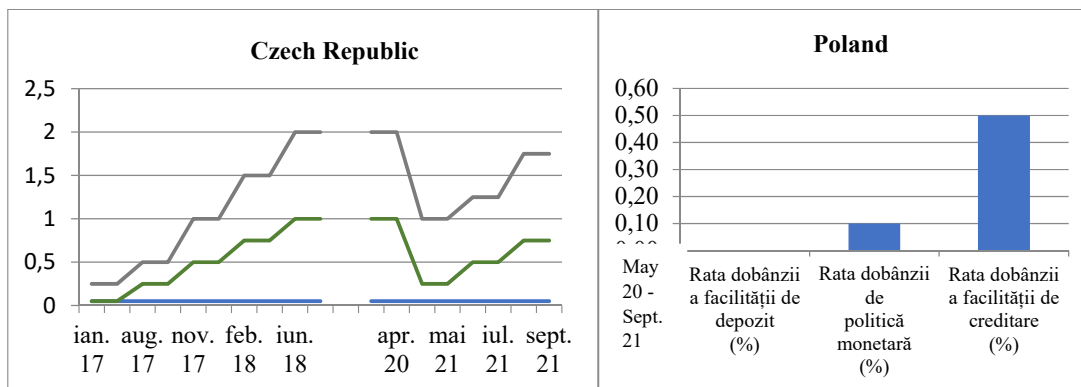
The March 2020 to September 2021 time frame had four different corridor sizes framing the policy rate, three of which were valid for equal two-month time intervals: in the period March 2020 - April 2020 the corridor ranged from -0.95 to +1.00 percentage points; in the period May 2020 - May 2021 it ranged from -0.20 to +0.75 percentage points; in the periods June 2021 - July 2021 and August 2021 - September 2021 the difference between the limits was 0.30 percentage points, with the corridors ranging from -0.45 to +0.75 percentage points and -0.70 to +1.00 p. respectively p.p.

Figure no. 3. Asymmetric corridors around monetary policy interest rates: Euro Area, Croatia and Denmark (2017-2022)



Source: authors' processing of data published on the official websites of the central banks analysed [accessed sept.2022]

Figure no. 4. Asymmetric corridors: Czech Republic, Poland

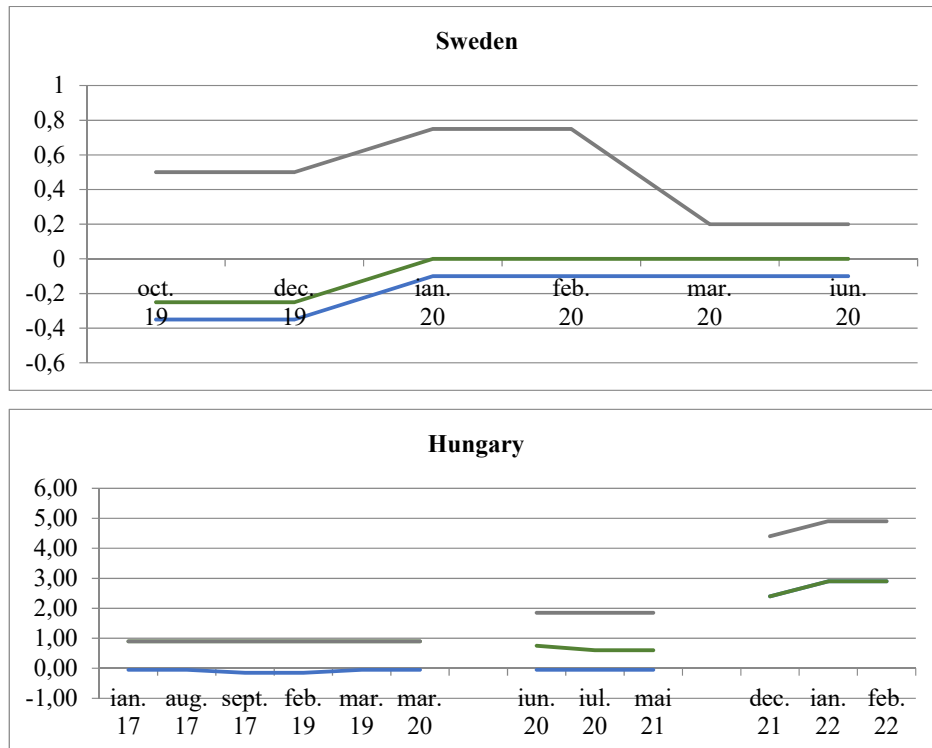


Source: authors' processing of data published on the official websites of the Central Banks analysed

The Bank of Hungary's policy is different over time: the first one from January 2017 to March 2020 had three lanes that margined the base interest rate, of which in the first one (which lasted eight months from January 2017 to August 2017) and the third one (which lasted 13 months from March 2019 to March 2020) the policy rate was equal to the lending facility rate of 0.90% and the deposit facility rate was 0.95 percentage points lower at -0.05%; in the intervening period between September 2017 and February 2019 the monetary policy interest rate and the lending rate remained constant, but the deposit rate was 0.10 percentage points lower at -0.15%.

The second time frame, June 2020 - May 2021, was divided into one-month periods, in which the range of the base interest rate was between -0.80 and +1.10 percentage points, and the second period was 11 months, in which the spread between the policy rate and the facility rates was -0.65 and +1.25 percentage points, respectively. The last period, December 2021 to February 2022, shows, like the second period, two lanes where one was valid for one month. Both lanes are similar in that the monetary policy interest rate is equal to the deposit facility interest rate and the difference between the lending and deposit/base interest rate is two percentage points; in the first lane the interest rates are 2.40% for deposit/money policy and 4.40% for lending, and in the second lane the interest rates are 2.90% for deposit/money policy and 4.90% for lending.

Figure no. 5. Asymmetric corridors: Sweden and Hungary



Source: own processing of data published on the official websites of the Central Banks analysed

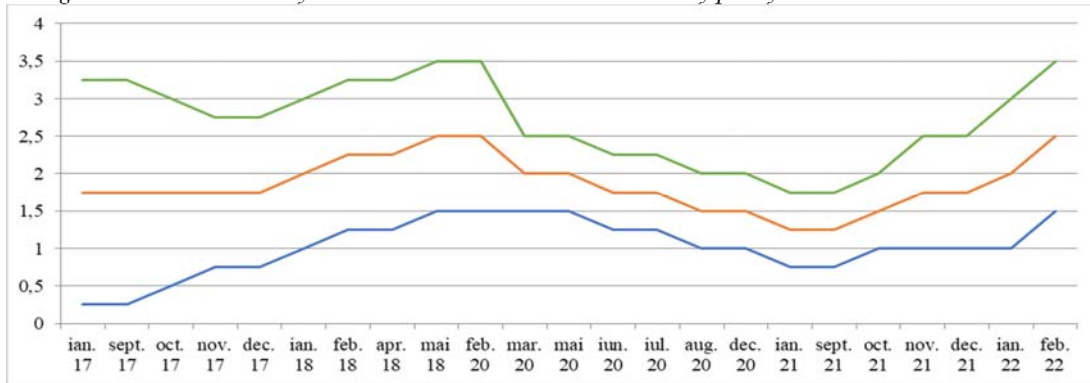
The cases of Poland and Sweden are similar: asymmetric corridor over a time span of 17 months and 9 months respectively in the case of Sweden (Figure no. 5).

In some countries, central banks have chosen a symmetric corridor of lending and deposit facility interest data relative to the base rate. This is the case in Romania. (Figure no.6)

The NBR is one of the central banks that have adopted a symmetric corridor. The period high was ± 1.50 percentage points, after which it moved up 0.25 percentage points to ± 1.25 percentage points in October 2017.

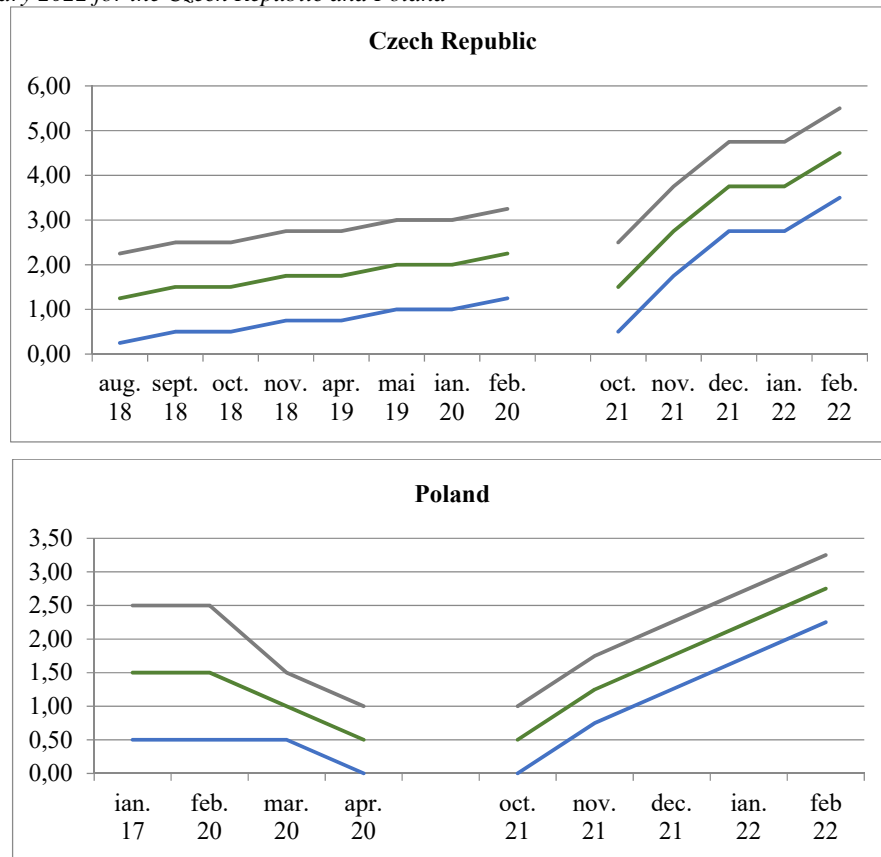
Other countries have had alternative periods. This is the case for the Czech Republic, Poland and Hungary, as well as Sweden. (Figure no.7)

Figure no. 6. Romania - Symmetric corridors around the monetary policy interest



Source: authors' processing of data published by NBR

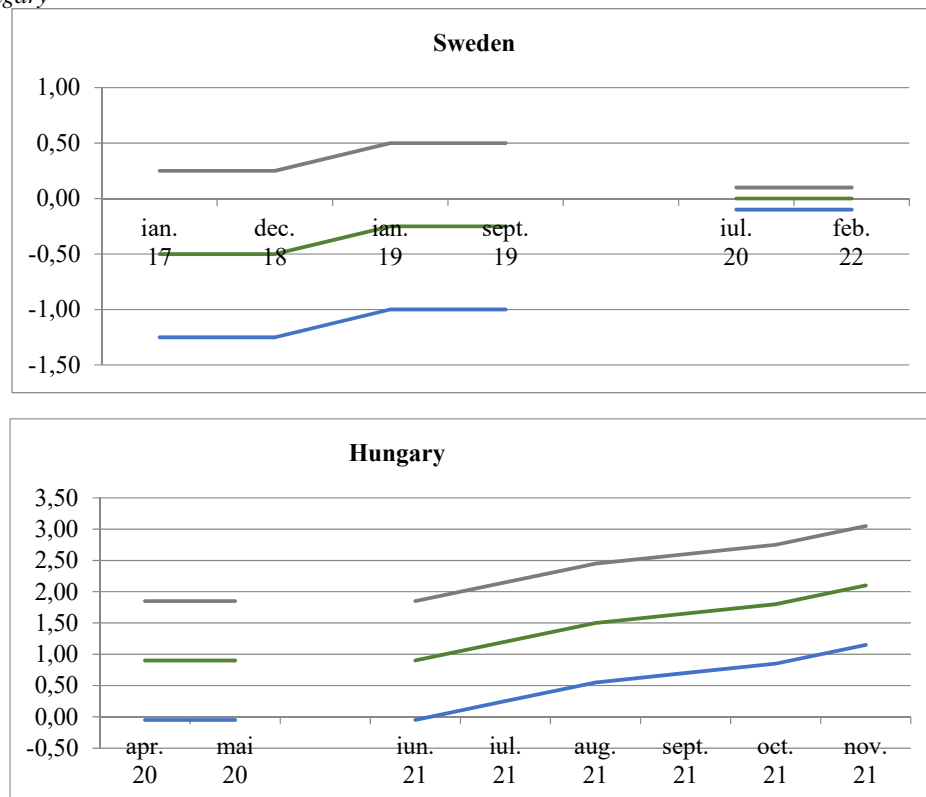
Figure no. 7 Symmetric corridors around monetary policy interest rates in the period January 2017 - February 2022 for the Czech Republic and Poland



Source: own processing of data published on the official websites of the Central Banks analysed

Sweden had a corridor of ± 0.75 percentage points between January 2017 and September 2019, and narrowed by 0.65 percentage points to ± 0.10 percentage points between July 2020 and February 2022. Hungary had in both periods, April 2020 - May 2020 and June 2021 - November 2021 the corridor of ± 0.95 percentage points.

Figure no. 8. Symmetric corridors around monetary policy interest rates (2017 - 2022) Sweden and Hungary



Source: own processing of data published on the official websites of the Central Banks analysed

5. Findings

Monetary policy in EU countries has common elements, but there are also differences. The ECB conducts a single monetary policy for the euro area, but the other countries set their own monetary policy interest rates as well as lending and deposit rates as monetary policy instruments. But the corridor between key rates is country-specific.

The analyses carried out showed that there are two situations: in some cases the interest forms asymmetric colours and in others symmetric colours.

It is noted that out of the total number of EU countries, 25 countries (92.59%) had an asymmetric corridor at some point, consisting of interest rates on standing facilities around the monetary policy rate, while five countries (18.52%) announced a symmetric corridor at some point.

We found that in the Eurozone countries, Croatia and Denmark the interest rate corridor on standing facilities relative to the base rate was asymmetric.

The Czech Republic has recorded an asymmetric corridor for a total duration of 38 months divided equally into two periods, January 2017 - July 2018 and March 2020 - September 2021.

The Central Bank of Hungary has adopted asymmetric intervals for 54 months divided into three time periods: January 2017 - March 2020, June 2020 - May 2021 and December 2021 - February 2022.

Poland and Sweden had the asymmetric corridor for only one time interval, 17 months in the case of Poland (May 2020 - September 2021) where the corridor was between -0.10 and +0.40 percentage points, and 9 months in the case of Sweden (October 2019 - June 2020) where the corridor was between -0.10 and +0.75 percentage points in the period October 2019 - February 2020, and between -0.10 and +0.20 percentage points in the period March 2020 - June 2020.

In the case of Romania, the NBR has always maintained a symmetric corridor, even though the spread between the interest rate on the lending facility and the deposit facility has changed over time. The widest spread was in the period January 2017 - September 2017. In March 2020 - October 2021, the corridor had values at half the previous period, at ± 0.50 percentage points, after which it widened by 0.25 percentage points, reaching ± 0.75 percentage points in the period November 2021 - December 2021.

The Czech Republic, Poland, Sweden and Hungary had symmetric corridors for two time periods. The Czech Republic had in the periods August 2018 - February 2020 and October 2021 - February 2022 the ± 1.00 percentage point corridor. Poland had two lanes in the period January 2017 - April 2020, the first one being ± 1.00 percentage points between January 2017 and February 2020 and the second one ± 0.50 percentage points between March 2020 and April 2020, this lane being maintained also in the period October 2021 - February 2022.

The Czech Republic, Poland, Sweden and Hungary had symmetric colors for two time periods.

6. Conclusions

The study confirmed that there is a link between the change in the policy interest rate and the interest rate corridor for standing facilities.

From the survey, 25 countries had an *asymmetric corridor* of interest rates analysed. Of these 84% had asymmetry between key rates. It should be noted that more than 77% of EU countries experienced this situation over the whole period analysed, and 4 countries (16% of the total) reported asymmetries over a shorter period than the period analysed.

We found that the Czech Republic, Poland, Sweden and Hungary had the asymmetric corridor for shorter periods of time. But it should be noted that there are countries where the corridor has been permanently modified, and in other cases not. For example, in the Czech Republic in the period January 2017 - July 2018 the corridor had 5 different sizes.

Of the five countries that had a symmetric corridor, one (20% of the countries that had symmetry between key rates; 3.70% of the total Union countries) had it for the whole time period analysed, and the remaining four (80% of the countries that had symmetry between key rates; 14.81% of the total Union countries) had symmetry for a shorter time period. Romania belongs to the group of countries that have chosen a symmetric corridor.

The Czech Republic had in the periods August 2018 to February 2020 and October 2021 to February 2022 the ± 1.00 percentage point corridor. Poland had in the period January 2017 - April 2020 two lanes, the first being ± 1.00 percentage points between January 2017 and February 2020 and the second ± 0.50 percentage points between March 2020 and April 2020, this lane being maintained also in the period October 2021 - February 2022.

An important issue to study would be: how has public confidence in central banks and monetary policy evolved? We agree that it is important for financial institutions and the public to trust the central bank. However, it can be seen that confidence in the ECB has changed during the pandemic. (Van der Cruiser and Sammarina, 2022).

In another vein, recent studies have shown that there is a link between ECB decisions and the political orientation of citizens. Brouer & Haan conducted a survey of Dutch households to analyse trust in the ECB. The results confirmed the link between right-wing ideology and public trust in the ECB. We think this is a topic worth studying in the future.

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