

MONETARY POLICY IN THE EUROZONE IN CONDITION OF INFLATION²

Introduction

The outbreak of the COVID-19 pandemic, the war in Ukraine and the global process of turbulent growth of inflation have ushered in “new” realities in the world economy. These processes has led to the simultaneous growth of a number of risks, which began to interact with each other, and in this interaction, they gave rise to a synthesis of adverse health and economic shocks, which crystallized into a “violently” and “dangerously” rising inflation in the Eurozone. The turbulent increase in the rate of change of inflation in the Eurozone is an indicator and a factor of the “new” economic realities in which the Eurozone is positioned.

In her speech on 20 September 2022, European Central Bank (ECB) President Christine Lagarde pointed out that overcoming inflation in the euro area is a question with an unclear answer. She stated that the causes of inflation (which turned out to be much higher and more persistent than the previously forecasted and reached an unprecedented 9.9% for the euro area by September 2022) were a combination of two unprecedented shocks³. The first of these is the COVID-19 pandemic, which is leading to greater demand for goods. Pandemic-related supply bottlenecks and rising prices are reinforcing each other, with business responding to the threat of shortages by ordering more and earlier. This „whiplash effect“ has driven up prices along the value chain, affecting mainly raw material prices, intermediate goods prices and transport prices (Rees, D., Rungcharoenkitkul, P. (2021)). The second shock is related to the war in Ukraine, which resulted in the contraction of fuel supplies and the increase of fuel prices, leading to an increase in inflation. The ECB will counter

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³ <https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220920~c3afc1a441.en.html>

inflation in the Eurozone by suspending net asset purchases and raising interest rates to neutral levels that are neither expansionary nor restrictive⁴.

This article aims to reveal the factors leading to inflation in the Eurozone and to assess the effectiveness of the monetary policy implemented by the ECB using the Least Squares Method and descriptive analysis. The report is structured as follows: the first part provides a literature review of research on the subject, the second part reveals in detail the causes of inflation in the euro area, the third part assesses the effect of the ECB's monetary policy on the inflation process in the euro area, and the last part presents the main findings and conclusions.

1. Literature review

In his speech⁵ of September 29, 2022, the Governor of the Bank of Spain⁶ Pablo Hernández de Cos points out that the prices of oil, gas, raw materials and bottlenecks in supply chains are factors that provoke inflation in the Eurozone. He also claims that the reason for the inflation in the Eurozone is also the economic sanctions imposed against Russia. In addition, Pablo Hernández de Cos states that raising interest rates too sharply in response to increased inflation will cause recession and unemployment. Despite the above considerations, de Cos is convinced that the ECB should undertake an increase in interest rates to prevent secondary inflationary effects. In fact, Hernández de Cos in his arguments launched the thesis that inflation in the Eurozone will be contained in the long term through the recession that the Eurozone will go through to overcome the inflationary gap.

Of interest is the study by Nelimarkka, J., Laine, O.-M. (2021), who found that the ECB's net asset purchases during the COVID-19 pandemic led to only 0.5 percent increase in inflation. They also point out that annual GDP growth of around 2 percentage points in 2020-2021 is a consequence of the asset purchase programs implemented by the ECB during the crisis. Therefore, the authors provide an empirical argument that inflation in the Eurozone is not primarily due to monetary factors such as excessive money supply in the economy. A contrary view is expressed by Conti, A. et al. (2017) who indicated that the main causes of inflation in the Eurozone for the period 2013-2015, apart from oil prices, was the policy implemented by the ECB, which is characterized by a low interest rate and purchases of net assets that increased aggregate demand.

Fisher, I. (1920) has stated that an increase in the amount of money in circulation leads to an increase in inflation. A similar conclusion is drawn by Friedman, M. (1992), who claims that the increase in the money supply leads to an increase in inflation. According to Sargent, T. (1977), the infusion of money supply due to the monetary policy of the central bank leads to the creation of irrational inflationary ex-

⁴ There again.

⁵ <https://www.bis.org/review/r220930d.htm>

⁶ Banco de España.

pectations, which slows down the adjustment of inflationary expectations and creates an increase in the inflation. Cagan, P. (1987) points out that high rates of inflation are directly related to the speed of adjustment of inflationary expectations.

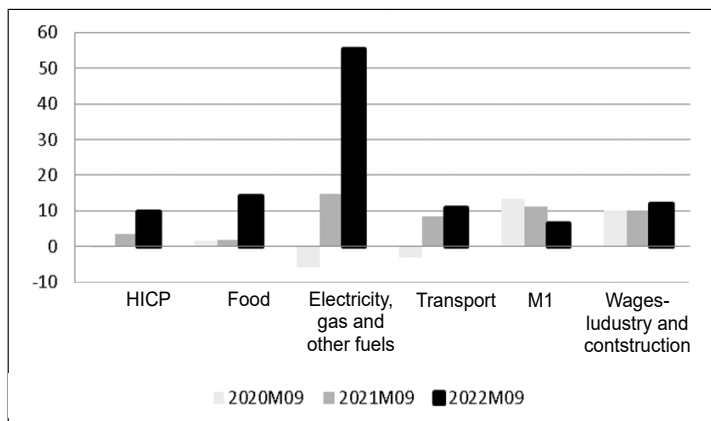
The inflation in the Eurozone is determined by cost-structural factors that increase the expenses of the businesses. The cost-structural cause of the inflation are the costs of the business calculated in the prices of goods (Gordon, R. (1981)). One such factor that provokes inflation in the Eurozone, as shown above, is fuel, gas and electricity prices. The increasing prices of the three resource goods lead to an increase in the prices of goods and respectively create inflation. Another structural-cost factor that leads to the increase in inflation is the wage. In fact, the dynamics of increasing the price of labour leads to an increase in the marginal costs of firms (Keynes, J.M. (2018)).

According to van't Klooster, J. (2022), gas and oil prices are the main drivers of inflation in the Eurozone. The author points out that interest rates are instruments that significantly affect inflationary costs, which are demand factors, and inflation in the Eurozone is largely driven by supply-side inflationary factors. Van't Klooster, J. (2022) goes even further by arguing that interest rate hikes by the ECB will curb inflation and even have a positive impact on economic areas where low interest rates have had an adverse impact. On the other hand, raising interest rates, according to him, will not increase gas supplies and create new energy sources. Van't Klooster, J. (2022) believes that solving the inflation 'conundrum' requires the ECB's monetary policy to consider, in addition to inflationary implications, the implications for the real economy and the restructuring of the energy sector towards green energy production, which would effectively limit the structural factors for inflation in the Eurozone. He also points out that the ECB, in addition to applying all its instruments in a differentiated and very careful manner, must create new monetary instruments that will simultaneously reduce the inflation and stimulate investment in the restructuring of the energy sector of the Eurozone.

2. The causes of inflation in the Eurozone

The inflation in the Eurozone began to increase significantly from the month of October 2021, with the value of the HIPC (Harmonized Index of Consumer Prices) increasing by 4.1%, while in the month of October 2022, the HIPC had a value of 10.7%. A significant increase in the HIPC is due to the large increase in food prices, electricity and fuel prices, and transport service prices. Money in circulation is increasing and wages and salaries are increasing in percentage terms in the Eurozone (see Figure 1). In 2020, the largest growth was recorded in the amount of money in circulation (M1), which in September grew by 13.24% on annual basis. The main reason for this is the ECB's policy of quantitative easing, which is characterized by the purchase of net assets and the granting of loans.

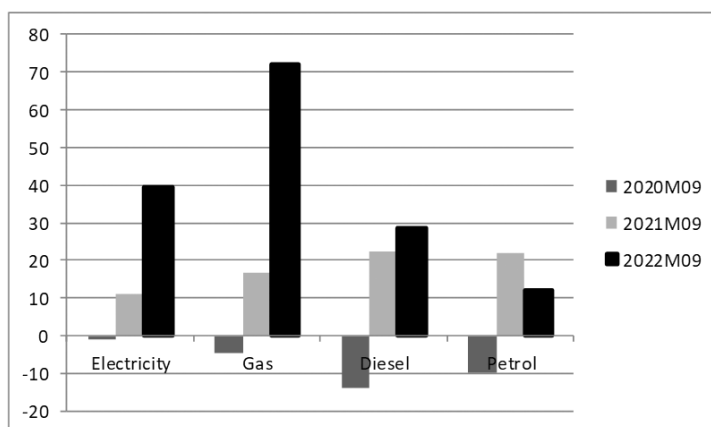
In the context of COVID-19, however, the increase in the money supply does not have a tangible effect on the rise in the inflation. In the next two years, 2021 and 2022, a permanent decrease in the money supply in circulation is reported. Money in circulation is decreasing, but there is an increase in the prices of electricity, fuel, food



Source: ECB, Eurostat, author's calculations;
 *percentage change in rates of change compared to the same month in the previous year on an annual basis

Figure 1. Structure of inflation in the euro area*

and transport. Average daily wages and salaries also increase. The component that is growing at the most significant rates is the energy, which includes electricity, gas and fuels. The components of the energy sector illustrate that the largest increase is recorded in gas, which includes natural gas and gas intended for domestic and industrial use. The next component, the prices of which are also increasing significantly, is electricity followed by diesel and oil (see Figure 2). Therefore, the components that determine to the greatest extent the increase in inflation in the Eurozone are gas, electricity, diesel, and oil.

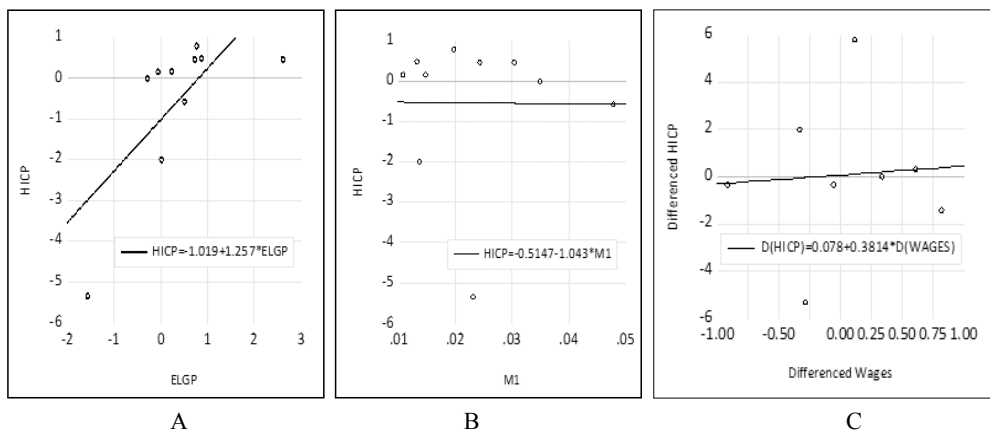


Source: Eurostat, author's calculations;
 *percentage change in rates of change compared to the same month in the previous year on an annual basis

Figure 2. Structure of the energy inflation component*

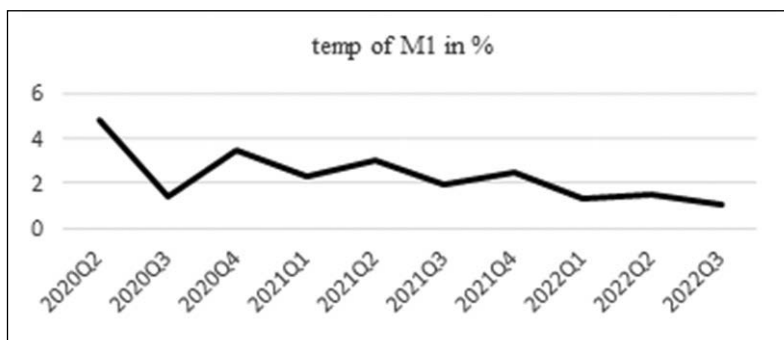
The descriptive approach provides grounds for the thesis that the main factors determining inflation in the Eurozone are fuel prices and the energy structure of the Eurozone, not the money supply and wages.

The main factors that provoke the growth of the inflation in the euro area are the prices of gas, fuel and electricity (see Figure 3A). Gas, fuel and electricity prices drive 51% of the inflation in the Eurozone. The money supply does not have a major impact on the inflation process in the euro area (see Figure 3B). The wage increase in 2022 also has no significant impact on the inflation process in the euro area (see Figure 3C). Therefore, the main reason for the rising inflation in the Eurozone is precisely the price of the energy sources and the fuels. Money in circulation is shrinking its pace of dynamics (see Figure 4), which means that inflation in the Eurozone is not monetary, but expenditure-structural.



Source: BNB, ECB; author’s calculations;
 Legend: HICP – Inflation Index; ELGP – electricity, gas and fuels; M1 – money in circulation; Wages – salaries.

Figure 3. Factors determining inflation in the euro area April 2020 – September 2022

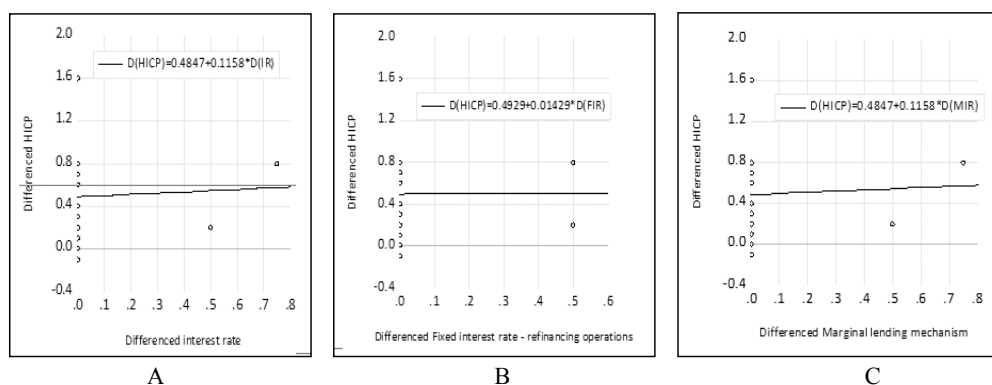


Source: ECB; author’s calculations

Figure 4. Rate of change of money in circulation in the Eurozone

3. The effect of the ECB’s monetary policy on the inflation process in the Eurozone

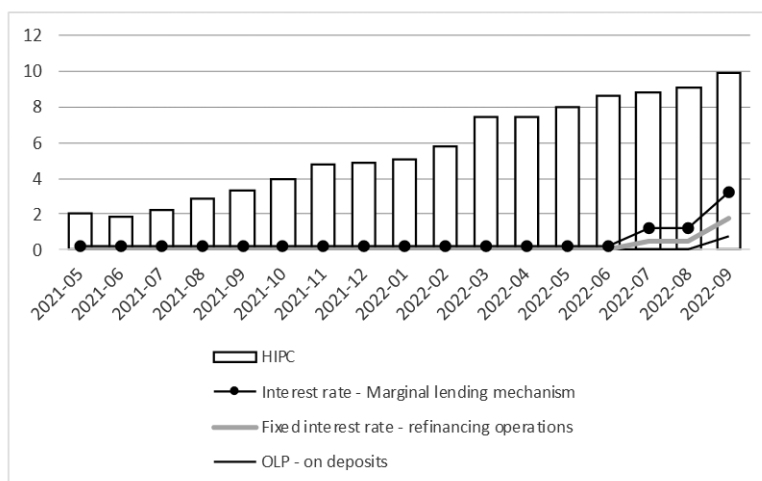
The question arises as to what the impact of the ECB’s monetary policy on the inflation in the Eurozone would be, based on the thesis that the main causes of inflationary turbulence are cost-structural and not monetary. The ECB undertakes an increase in the main interest rate, an increase in the interest rate on refinancing operations and an increase in the interest rate on marginal financing, i.e. the ECB simultaneously tried to shrink all forms of lending and increase the deposits in the eurozone banking system. The desired effect of this policy of simultaneously raising all interest rates is to suppress the inflation. However, the objective thus set by the ECB is not achieved, because the increase in the main interest rate does not lead to a decrease in the inflation as its impact is very weak, even almost neutral (see Figure 4A). The impact of the fixed interest rate, which affects refinancing operations (see Figure 4B), as well as the marginal lending rate (see Figure 4C) is similar. These results clearly show that an increase in the interest rates does not lead to a significant reduction in the inflation.



Source: BNB, ECB; author’s calculations;

Figure 5. The effect of monetary policy of the ECB on the inflation, May 2021 – October 2022

The main reason why the policy of the ECB in the months of September and October 2022 did not lead to the desired effect, namely the reduction of inflation in the Eurozone, is that the ECB was late in raising interest rates. The inflation in the Eurozone starts to rise substantially from March 2022, but that trend is already evident at the end of 2021, and the ECB starts raising the interest rates in July 2022, with the deposit rate in July and August 2022 being 0 p.p.; only in September 2022, the ECB raises it to 0.75 p. p. The increase in the fixed interest rate for refinancing operations in July and August 2022 was 0.5 p.p., and in September 2022, it was increased to 1 p.p. The dynamics of the interest rate for the marginal lending mechanism as in July and August 2022 is 0.75 p. p., and in September, it was increased to 1.5 p.p. (see Figure 5).



Source: ECB, author's calculations

Figure 6. Dynamics of interest rates in the Eurozone

Conclusion

The main task of the ECB's monetary policy is mainly aimed at ensuring price stability and maintaining low, stable and predictable inflation in the medium term in the Eurozone. For this reason, the ECB initiated an increase in interest rates, through which it aims to influence inflationary expectations and, by managing them, to control the inflationary process in the Eurozone. This strategy of the ECB in the fight against the inflationary shock can most likely give positive results in the medium term, but these positive results will not be substantial and tangible. This is because the causes of the inflation in the Eurozone are cost-structural, not monetary. Moreover, the ECB is too likely to fail to overcome the inflationary pressures in the short term because it does not react quickly enough to the inflationary shock. Continuing in the same line of reasoning, adding the political and geopolitical reasons for the cost-structural foundation of the inflation in the Eurozone, the unpleasant conclusion clearly begins to emerge that the monetary policy of the ECB, aiming to influence the inflationary expectations, most likely accepts economic recession as a way to control the inflation in the Eurozone. Therefore, the ECB's policy of raising the interest rates will be synthesized with the impending recession in the Eurozone, and this symbiosis will spontaneously overcome the inflationary shock in the medium to long term.

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