Finance, Accounting and Business Analysis
Volume 4 Issue 2, 2022
http://faba.bg

The End of the Negative Interest Rates

Elena Ralinska

Department of Finance, University of National and World Economy, Sofia, Bulgaria

Info Articles

Keywords:
Negative interest rates, inflation, European Central Bank, Government securities

Abstract

Following the COVID-19 pandemic the world faced another crisis – the rapid increase in the inflation rate. In some countries, including in Bulgaria, the inflation rate reached two-digit values. Disrupted supply chains as a result of the war in Ukraine caused shortages of goods and increased prices of basic raw materials, particularly energy sources. The loose monetary policy conducted by the central banks, especially during the past few years also contributed for the inflation rate to increase rapidly. In response the European Central Bank in July 2022 for first time in 7-8 years increased its key interest rates. The main goal of this policy is to fight inflation and achieve the target level of inflation by decreasing credit activity. Through the transmission mechanism of monetary policy, the increase in key ECB interest rates caused an increase in market interest rates. The negative interest rates are in the past and it is about to be seen whether the performed monetary policy will be effective.

Objective: This paper examines the effect of increased interest rates on government securities yield, public finance and financial results of ECB and commercial banks.

Methodology: The study presents the dynamics in government securities yield of Germany, Spain and Italy by examining Bloomberg data for the period January – September 2022. Also, in the paper is presented the dynamics of DAX and Euro Stoxx 50 indices for the above mentioned period. For illustration of results are used graphs based on observations, comparative analysis and systematization. Through the methods of analysis and synthesis the risks of the increased key interest rates of ECB on public finance and financial results of ECB and commercial banks, are investigated.

Results: The analysis indicates that the adjustment of the interest rates on government securities to changes in key interest rates of ECB is immediate, and sometimes with some haste. The increase in the key interest rates of ECB caused an increase in government securities yield which will make it harder for the most indebted countries to service their government debt because it will raise their financial costs.

*Address Correspondence:
E-mail: e.ralinska@yahoo.com

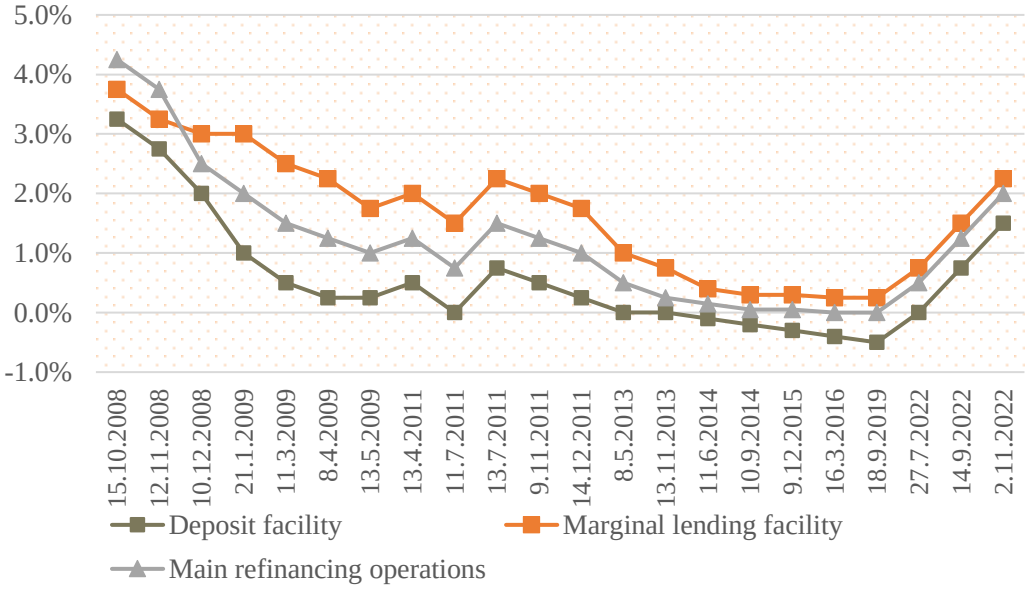
INTRODUCTION

In the last few years, economies around the world, and in particular in the EU, have been operating in an environment of unprecedentedly low and even negative interest rates. This trend is a result of the expansionary monetary policy of central banks that began in response to the Global Financial Crisis. Despite expectations that this loose monetary policy by all central banks, and the ECB in particular, would be shorter-term, it lasted more than 10 years. During this period, the ECB poured large amounts of liquidity into the banking system through measures called quantitative easing, as well as in the form of special instruments for rescuing financial institutions in a difficult financial situation. Quantitative easing are large-scale purchases of assets by central banks, and especially of government securities, which inflates their balance sheets and increases liabilities in relation to the monetary base (Mihailova, G.). The ECB buys not only government securities, but also other securities, influencing their yield downwards. It also restructured the maturity of its purchases—selecting longer-term instruments to influence long-term interest rates.

This, in turn, leads to an increase in the prices of the securities acquired by the ECB and to a decrease in their yield. Interest rates on other assets are also beginning to fall due to rebalancing of portfolios of assets and securities ((Reza, Santor, Suchanek (2015).

Along with the quantitative easing and the tools for injecting liquidity support to commercial banks under favorable conditions, after the outbreak of the crisis, ECB undertook a policy of lowering its main interest rates, which are three – deposit facility rate, lending facility rate and interest rate on main refinancing operations. For the period from 2008 to 2019, the ECB repeatedly lowered its key interest rates (see Figure 1), with the interest rate on the deposit facility even moving into negative territory. The European Central Bank, for the first time in history, resorted to reducing the main interest rate on deposits (deposit facility) to a negative value in mid-2014. From July 2012 to the beginning of June 2014, this interest rate was fixed at 0% by the Management Board of the ECB. From June 11, 2014, the negative value of "-0.1%" on deposit facility came into force, with the lowest value it reached being -0.50% after the ECB's decision of September 18, 2018. The ECB has adopted a policy of low and negative interest rates in order to stimulate lending and reduce interest rates in conditions of prolonged low inflation (Kamelarov, 2018).

The other two key interest rates of the ECB do not go into negative territory, but they are also reduced significantly, with their lowest values being recorded in 2016 – 0.0% for the main refinancing operations and 0.25% for the marginal lending facility.



Source: European Central Bank

Figure 1 European Central Bank key interest rates

From mid-2022, a market correction began in the opposite direction, with negative ECB interest rates becoming a thing of the past, which began to affect market interest rates as well. Within a few months from July 2022, the ECB increased its key interest rates three times, which from the beginning of November reached respectively 1.5% on the deposit facility, 2.25% on the marginal lending facility and 2% on the main refinancing operations (European Central Bank).

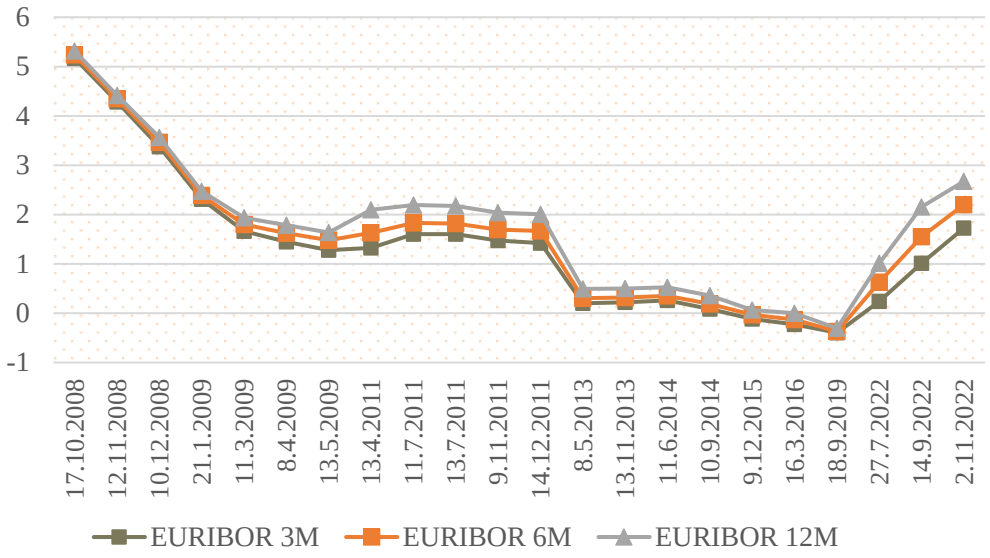
By using a variety of instruments to conduct its monetary policy, the ECB regulates liquidity and

short-term interest rates, thereby influencing both the money market and various economic indicators. The relationship between the money market and monetary policy is two-way. On the one hand, the money market (and the financial market in general) plays an important role in the implementation of monetary policy, and on the other hand, changes in monetary policy directly affect the money market.

The way in which the monetary policy conducted by the ECB can influence the price level and, respectively, the entire economy is called a transmission mechanism. The transmission mechanism of the ECB's monetary policy is a complex process in its nature, which can be different in different member countries and change over time and take place through different channels. At the heart of this transmission mechanism is the money market, which is directly influenced by monetary policy decisions and through which impulses are transmitted to the real sector and to the financial market as a whole.

The change in the official interest rates is transmitted to the economy through 4 different but interrelated channels – market interest rates, expectations, asset prices and the exchange rate.

The change in the official interest rates has a direct impact on money market interest rates, as it is evident by the dynamics of the EURIBOR index presented in the following figure. The dates shown in the figure correspond to the dates on which the ECB changed its key interest rates. For the period under review, the index for all three maturities follows the dynamics of the key interest rates of the ECB, and since the end of 2015, the index has registered negative values. This trend of negative index values continues until 2022, and from July 2022, EURIBOR for all three presented maturities registered positive values. EURIBOR with maturity 12m already in April started to register positive values, which reflected the expectations of economic agents that the ECB will very soon take a step to raise interest rates.



Source: www.euribor-rates.eu

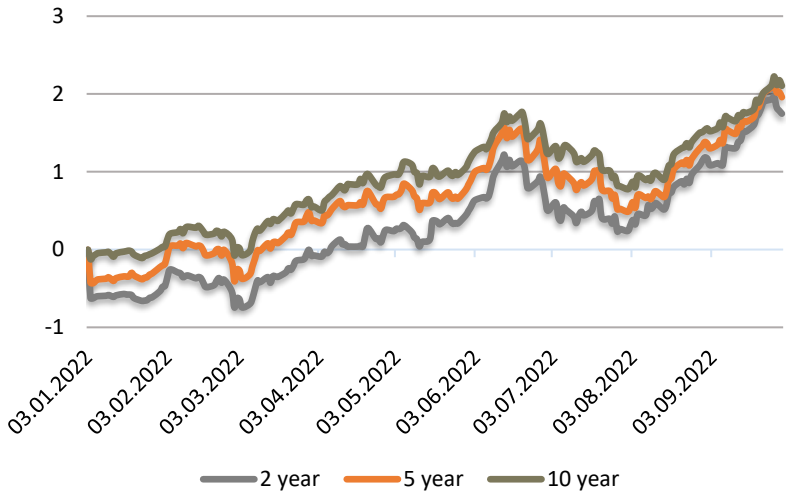
Figure 2 Dynamics of the EURIBOR index with maturities of 3m, 6m and 12m (%)

The Euribor affects the interest rates, applied by the banks, as it is used as a benchmark for calculating interest rates on bank loans. The effects of the transmission mechanism spill over into the real sector as the rise or fall of interest rates in the banking market affects companies' decisions to invest and households' decisions to borrow or save. Bank loans and deposits represent the largest fraction of the total financial assets and liabilities of the Eurozone, therefore they also have a key role in the interest rates channel. According to empirical data for the Eurozone, published by the ECB, the transmission mechanism of monetary policy operates similarly in all participating countries.

In a number of studies devoted to the impact of the monetary policy of the ECB on the financial market, it is established that among financial assets the effect of the monetary policy and, in particular, of the change in the main interest rates, is stronger for government bonds (Kolev, S., 2018, Andrade et al., 2016). This is also confirmed by the following three figures, which show the yield on German, Italian and Spanish government securities with terms of 2 year, 5 year and 10 year, for the period January - October 2022. The figures show that the dynamics of the yield of bonds of the three represented countries is identical and corresponds to changes in ECB interest rates and reflects the expectations of economic agents. In the case of German government securities in January, the yield for all three maturities was in negative territory, gradually moving into positive territory. Thus, from April 2022, the yield on all maturities of German government securities is positive and, with certain exceptions, shows a constant

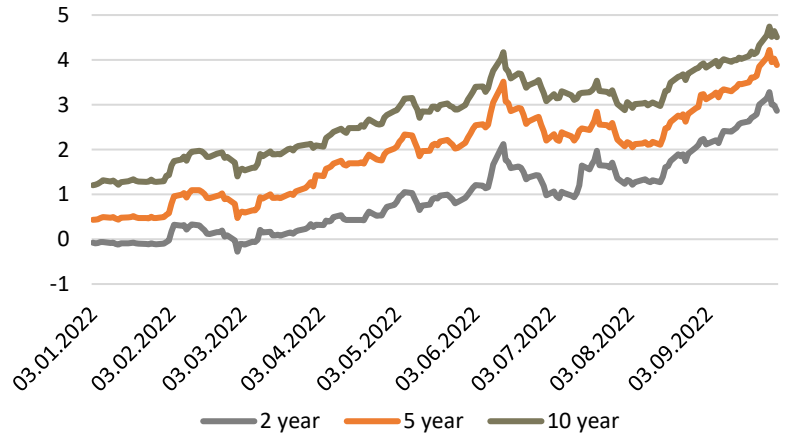
increase. In the case of Spanish government securities, at the beginning of the considered period, the yield was negative for the 2-year and 5-year bonds, and similarly to the German government securities, they gradually moved into positive territory, but at a slightly faster pace. Among the Italian government securities, only the bonds with maturity of 2 year registered negative values, and already at the end of January they recorded positive values.

It can be seen that the increase in the yield on government securities of all three countries began to be observed even before the ECB increased its interest rates, which is in response to investors' expectations that this will happen as soon as possible. Investors' expectations were dictated by the strong acceleration of the rate of inflation in Europe and by the increase by the Fed of the main interest rate. This is also the reason that already in March the yields on government securities of the three represented countries entered positive territory. Overall, the Fed raised its key interest rate much earlier and more aggressively.



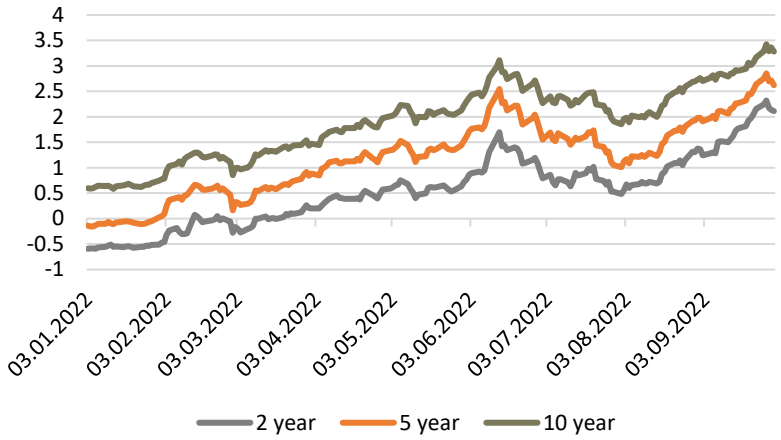
Source: Bloomberg

Figure 3 Yield on German government securities (in %)



Source: Bloomberg

Figure 4 Yield on Italian government securities (in %)



Source: Bloomberg

Figure 5 Yield on Spanish government securities (in %)

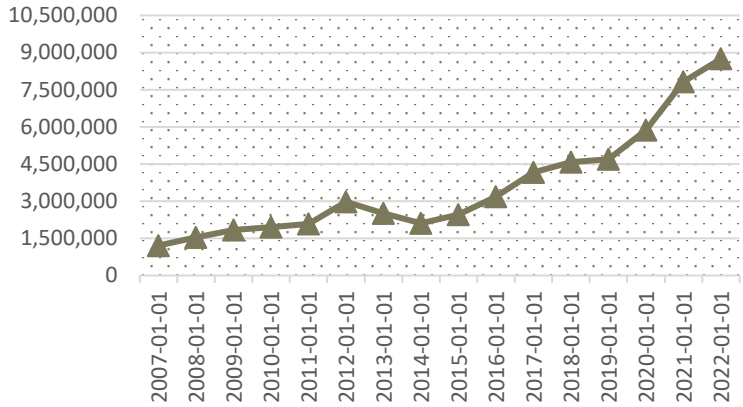
In every economy there are many interest rates - on deposits, on loans, government securities, interest rates of the central bank, etc. At the same time, the yield on government securities is considered the so-called risk-free interest rate, because theoretically it is considered that these securities do not carry the risk of default. All other bonds carry the risk of default, so their yield includes two components - the risk-free interest rate and the default risk premium. That is, the risk-free interest rate enters as an ingredient in all other interest rates, which are theoretically always higher than the risk-free interest rate. This means that when interest rates on government securities rise, an increase in interest rates on other financial instruments is also observed. Or it is empirically found that different interest rates tend to move in parallel.

In practice, there are differences in the extent and speed with which different interest rates adjust to changes in the ECB's key interest rates and in government securities, i.e. these adjustments are not always immediate. On the other hand, as can be seen from the presented dynamics of interest rates on government securities of the examined countries, the adjustment to changes in key interest rates is immediate, and sometimes with some haste.

One of the main concerns from the increase in the key interest rates by the ECB is the high indebtedness of some of the countries in the Eurozone. The public debt of the Eurozone countries at the end of the first quarter of 2022 is 96% of GDP, and of the EU countries it is slightly smaller - 88%. Looking at individual countries, the share of government debt in GDP is highest in Greece (189%), Italy (153%), Portugal (127%) and Spain (118%). An increase in interest rates will make it harder for the most indebted countries to service their government debt because it will raise their financial costs. For the most indebted countries, this means an increase in the cost of servicing their public debt by tens of billions of euros per year.

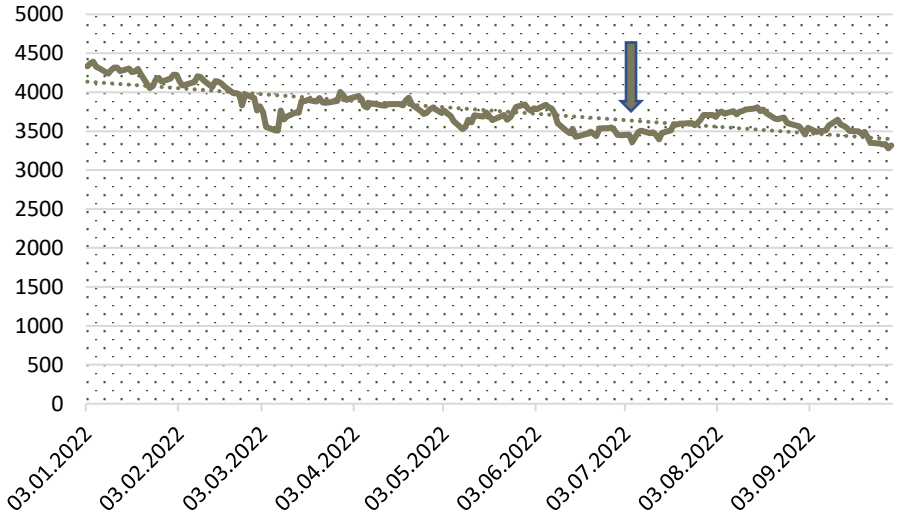
Changes in interest rates also affect the balance sheet value of government securities held by the ECB and commercial banks. When interest rates rise, the value of government securities falls, which leads to their depreciation. Thus, the value of the assets falls and, at the same time, the financial costs rise. If the interest rate increase is very sharp, the devaluations will be significant, which could lead to large losses for both the ECB and the commercial banks, thus undermining the stability of the banking system.

A major part of the ECB's assets are government bonds, and in recent years the ECB's balance sheet has been greatly increased (see Figure 6). This increase of the balance sheet poses a risk of serious losses for the ECB in the event of a sharp devaluation of assets and in particular of government securities.

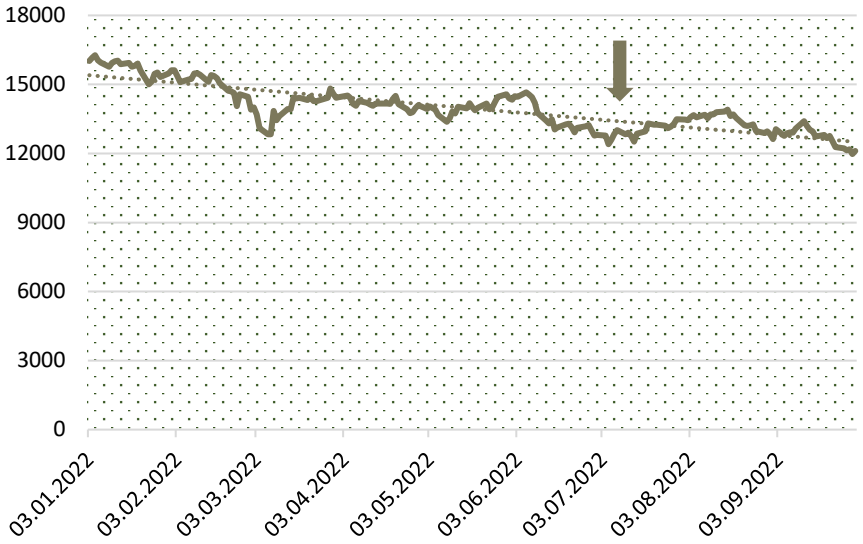


Source: Federal Reserve Economic Data (https://fredhelp.stlouisfed.org/)
Figure 6 Assets of ECB (in mln. euro)

Changes in the main interest rates of the ECB also have an impact on the stock markets, but this impact is not as pronounced as in the case of market interest rates and yields on government securities. Figure 7 and Figure 8 shows the dynamics of the Euro Stoxx 50 and DAX indices for the period January - September 2022. Both indices recorded a decrease in March, which reflects the concerns of investors as a result of the war in Ukraine and the acceleration of the rate of inflation in the countries from the EU. Following the increase in the interest rates by the ECB in July, both indices saw an increase. Although with this action the ECB started to tighten the monetary policy, the stock indices did not lose their value, on the contrary. This market reaction shows that investors perceive this action by the ECB as safe and prudent and as a signal of the central bank's intention to fight inflation. That is, regardless of whether monetary policy is loose or tight, as long as it relevant to economic conditions, it will be well accepted by the market.



Source: Bloomberg
Figure 7 Dynamics of the main European index Euro Stoxx 50



Source: Bloomberg

Figure 8 Dynamics of the main German index DAX

And while raising interest rates poses a risk to the solvency of indebted countries, this move currently is in sync with price stability, i.e. it is one of the tools to fight inflation.

Maintaining inflation within certain limits is the main objective of the monetary policy of almost all central banks and indicates the effectiveness of economic policy, including monetary policy, the stability and dynamics of the entire economic system. Central banks and countries around the world have taken various steps to fight inflation, a problem further complicated by the war in Ukraine and disrupted supply chains.

Unlike the ECB, the Federal Reserve took steps to fight inflation much earlier, raising interest rates as early as March 2022, followed by several larger increases. The ECB's response to inflation was rather slow and timid.

Inflation is one of the main macroeconomic indicators that has an adverse effect on the entire economy and leads to a decrease in the real income of the population, devaluation of the population's savings, disruption of the production process, etc. Inflation also has a negative impact on all units of the financial system, exacerbates the crisis of public finances, and stimulates the increase of the budget and government spending. Uncontrolled inflation can destroy entire social systems, and that why price stability is a major goal of central banks around the world.

Economists agree that inflation is a monetary phenomenon, which is confirmed by empirical data showing a strong correlation between money supply and inflation. Historically, countries that have experienced high and prolonged inflation have also had excessive growth in the money supply. Milton Friedman also came to this conclusion, who in the book "Monetary History of the United States: 1867-1960" together with Anna Schwartz claimed that "inflation is always and everywhere a monetary phenomenon." However, this does not mean that the increase in the money supply is the sole and immediate cause of inflation (Mladenov, M., 2009) .

At the EU level, in the period after the global financial crisis, there were no significant changes in the rate of inflation, and its values were below the target set by the ECB. There were even periods of deflation. The situation began to change from the beginning of 2021, initially with a gradual increase in the price level, with the pace accelerating at the end of the year and in the period after the start of the military conflict in Ukraine. Disrupted supply chains as a result of the war caused shortages of goods and increased prices of basic raw materials, particularly energy sources. This in turn provokes an inflationary spiral, raising the prices of all other goods and services, since energy and fuels are a major component of costs in any production. In some countries, including Bulgaria, inflation reached double-digit values for several months.

At first, there was no consensus among economists as to whether inflation was a transitory effect or would continue for a longer period. Almost a year after the beginning of the inflationary processes, it is clear that it is not a transitory effect and will have a long-term effect.

The specific methods for controlling of inflation depend on clarifying the nature of inflation, identifying the main and related factors that cause inflationary processes. Based on this, two directions of anti-inflationary policy were formed: Keynesian and monetarist.

According to the Keynesian trend, the main cause of inflation is the increase in aggregate demand, therefore any policy that is aimed at reducing the components of aggregate demand will be effective in fighting inflation. Aggregate demand can be limited in several ways - reducing consumption by increasing taxes, reducing public spending, increasing interest rates, which will make debt and investment more expensive (Totonchi, J., 2011).

According to monetarists led by M. Friedman, inflation occurs when the growth rate of money supply exceeds the growth rate of the economy. According to them, the causes of inflation, which is generated by improper intervention in the economy, must be completely eliminated, and since it is a purely monetary phenomenon, it can be controlled by controlling the money supply (Hetzel, R., 2013). They based their concept on the quantity theory of money, viewing money as the basic element of a market economy.

Limiting inflation is a serious challenge for economies today and requires targeted actions from both the central bank and fiscal policy. External factors must also be considered. The central banks have already taken the first steps towards limiting inflation, but this will certainly be a long-term process, which will largely depend on the development of the military conflict in Ukraine. Confidence in central banks is critical to controlling long-term inflation. This includes managing long-term inflation expectations and avoiding situations where fiscal policy is out of sync with anti-inflationary monetary policy.

CONCLUSION

The COVID-19 pandemic and the outbreak of the war in Ukraine have put EU economies under serious challenges, the biggest of which is high inflation. While for a long time inflation in the Eurozone was below the target and the ECB was trying to raise it, in 2022 the situation changed radically, as we witnessed rapidly rising prices and high inflation rates that have continued to date. The ECB took steps to fight inflation by raising its key interest rates several times and starting to taper asset purchases.

Money market interest rates reacted immediately and rose. Treasury yields also responded immediately, with Treasury yields moving into positive territory after a long period of negative interest rates. Other interest rates have also started to react, with the degree of adjustment varying across instruments.

The ECB is seen to be more cautiously than the Federal Reserve on the increase of interest rates. The main reason for that is the fact that some countries in European Union are highly indebted and the increase in interest rates will make it harder for them to service their government debt because it will raise their financial costs. The negative effect on the book value of the government securities held by ECB and commercial bank should also be taken into consideration.

Given the fact that central bank actions operate with lags, i.e. they require time to affect the real economy, it is still too early to analyze the effects of an increase in key interest rates on inflation.

REFERENCES

Andrade, P., et al., The ECB's asset purchase programme: an early assessment, ECB Working Paper No. 195, 2016
https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1956.en.pdf

Bloomberg (https://www.bloomberg.com/europe)

European Central Bank, The monetary policy of ECB, 2011, European Central Bank, 2011, https://www.ecb.europa.eu/pub/pdf/other/monetarypolicy2011en.pdf

European Central Bank (https://www.ecb.europa.eu/home/html/index.en.html)

Finance Research IPEDR vol.4 (2011) © (2011) IACSIT Press, Singapore
http://www.ipedr.com/vol4/91-F10116.pdf

Hartmann, P., Smets, F., The first twenty years of the European Central Bank: monetary policy, European Central Bank, 2018
https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2219.en.pdf

Hetzel, R., The Monetarist-Keynesian Debate and the Phillips Curve: Lessons from the Great Inflation, Economic Quarterly - Volume 99, Number 2 - Second Quarter 2013

Kamelarov, A., Does the monetary policy in the euroarea change the focus?, EU – The altered center and the new periphery, Sofia, 2018

Kolev, S., Analyzing the impact of unconventional monetary policy measures taken by the world's leading central banks on the government securities yield through the interest rate channel, Institute for Economic Policy Sixth Academic Competition "Dr. Ivanka Petkova", 2018
https://www.epi-bg.org/images/Award_IP/Svilen_Kolev_Paper_BG.pdf

Mladenov, M., Money, banks, credit, publishing house Trakia-M, 2009

Mihailova-Borisova, G., Effectiveness of the ECB's quantitative easing

Totonchi, J., Macroeconomic Theories of Inflation, 2011 International Conference on Economics and