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INFLATION - A MACROECONOMIC CHALLENGE

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Abstract: *Inflationary pressures, but also the uncertainty regarding the duration and severity of the Covid-19 pandemic, have significantly increased in the last year. Moreover, the start of Russia's war against Ukraine on February 24, 2022, further called into question the upward trend in the inflation rate. In this sense, the sudden and continuous increase in energy, fuel, and food prices constitute new challenges for decision-makers. The purpose of this paper is to analyze the evolution of inflation in Romania from the period 1990-2022 because this constitutes a topical macroeconomic challenge. Compared to the way of presenting the information from the bibliography used and found at the end of the paper, in this paper only the essential aspects, the particularities of the chosen research topic, which finally provide an overview, can be found.*

Keywords: *inflation; challenge; Covid-19; uncertainty; volatility;*

JEL Classification: *E31; E58;*

1. Introduction

Inflation is one of the main tools of the functioning mechanism of market economies. This is also a very complex phenomenon because over the years it has revealed different forms and causes, and with its appearance, it also brings quite strong consequences to the entire economic system. This growth is differentiated according to the categories of economic goods in circulation on the market, according to the services of the production factors in various territorial markets. Also, inflation represents the macroeconomic imbalance that can be found at the level of any state, being of a monetary nature and evident by the decrease in purchasing power, but also by a strong increase in prices, thus affecting all people.
Direct inflation targeting is a modern phenomenon, which was discussed at a theoretical level during the 1980s, and New Zealand was the first country to adopt this new strategy in 1989. About 20 countries have adopted this strategy to date, even if there are technical differences from one state to another, each country has different annual inflation rates as follows Great Britain, Canada, Brazil, Finland, and Spain had inflation less than or equal to 5%, while Israel and Chile were experiencing inflation of around 20%, and Poland, the Czech Republic, and Hungary had annual inflation of around 10%. Beginning in the mid-1990s, emerging and developing countries made the transition from exchange rate targeting to monetary aggregate targeting. In August 2005, following the completion of the preparation process, the last stage of which was the testing and

creation of the framework for economic analysis and monetary policy decision, the new strategy based on direct inflation targeting was adopted by Romania, and the steps necessary to implement the new strategies lasted 16 months. The abandonment of the strategy based on the targeting of monetary aggregates was caused by the disintegration of the existing relationship between aggregates and inflation, the accelerated remonetization in conditions of moderate inflation, the privatization of the banking sector, and the liberalization of capital flows. Also, the period of transition to the market economy, after 1990, presents the inflationary phenomenon that had a strong intensity on the economy of the states that were in this situation, creating at the same time a complete economic circuit, in which the period of overheating of the economy can be found from 2007-2008, followed by the recessionary period of 2009.
It should be noted that after the adoption of the new strategy, the high rates of inflation have decreased considerably, which is also the purpose of this new regime. However, the new economic context strongly influenced by the outbreak of the Covid-19 pandemic and the war in Ukraine caused a strong increase in the inflation rate and affected the standard of living of the population, which currently constitutes a macroeconomic challenge.
This paper aims to study and analyze the evolution of inflation and its impact on the economic environment in Romania. The present paper is structured in several distinct parts, as follows: (i) in the first part there is the introduction, (ii) in the second part the specialized literature, (iii) in the third part the research methodology, (iv) in the fourth part is the case study, (v) and the last part contains the conclusions.

2. Specialty literature

The inflationary phenomenon is one that has been considered a controversial subject by many economists, each of them supporting their point of view regarding this process and thus highlighting the effects and ways to reduce it. An eloquent example can be represented by the conception of the authors Richard G. Lipsey and K. Alec Chrystal reproduced in the book entitled "Positive Economy" in which they argue that inflation, unemployment, and growth represent the fundamental problems facing the economy in the current period. Regarding the unemployment rate and the inflation rate, these two are in close correlation with each other, since the decrease in unemployment inevitably leads to an increase in the inflation rate, and regarding the decrease in inflation, this was accompanied in most cases by a level of high unemployment. "Macroeconomic policy can really be like that, like trying to walk on a very narrow bridge where inflation is on one side and unemployment on the other".
Another established author in economics, Paul Samuelson, who received the John Bates Clark Medal in 1947 and the Nobel Prize for Economics in 1970, brings to the fore in his book "Economics-19-e", together with William Nordhaus, their view of inflation. The inflationary phenomenon appears when the economy registers an increase in the general level of prices. Their opinion is based on the idea that "Inflation is as old as market economies", so that over time it has affected each state in different proportions, manifested itself in various forms, and led to the emergence of new changes. Also, the two great economists claim that the impact

of the inflationary phenomenon was very well highlighted through the concept of John Maynard Keynes: "Considering that inflation is a continuous process and that the real value of the currency fluctuates wildly from one month to the next, all the permanent relations between debtors and creditors, which form the final foundation of capitalism, thus become so disordered as to be almost meaningless”. With regard to Keynesian thinking, the inflationary process is viewed through the prism of the evolution of macroeconomic indicators, as well as real macroeconomic flows, and the tendency to increase market prices are associated with the use of labor. A defining idea of this book regarding the rate of inflation is that it has the ability to persist over time for quite a while and at the same rate, especially in modern economies.

Samuelson argues that inflation occurs like a disease for many reasons, with no single source. Part of inflation is due to demand and the other part is due to supply. Since it can be said that this phenomenon is so complex because it is influenced by several factors, it takes place at an internal level, and with its appearance, it also leads to quite high costs. An example he presented in his book with Nordhaus was the analogy between a dog and the inflationary process. Inflation is described in correlation with an old and lazy dog. In the situation where the dog is not "shocked" either by hitting or by means of a cat, it will still remain in its original place. But if it has been disturbed, the dog will drive the cat away and stay in that place until the next shock occurs. Through this idea, the authors want to highlight the fact that inflation occurs most of the time due to an impulse. In this work, Samuelson also presents the concept of hyperinflation, which is encountered at the moment when "the printing presses produce money and prices begin to rise several times every month". Hyperinflation has historically been likened over the years to a revolution or a war.

Can be seen that in the book "Economics" the two authors emphasized the idea that the inflationary phenomenon leads to distortions of interest rates, and tax rates, and last but not least, it also leaves its mark on relative prices. Inflation is not considered a favorable phenomenon either for the population or for the economy, because it affects the redistribution of income and wealth and obviously causes a decrease in the efficiency of the economic activity of a state.

Inflation is a phenomenon that occurs in the economy when there is an increase in the general level of prices. According to the concept of Paul Samuelson and William Nordhaus, stated in the book "Economics-19-e", they claim that "Inflation is as old as market economies" because it appeared over the years and affected the economy of the states considerably.

Inflation has become a complex process because it highlights forms, and causes, and brings with its appearance quite strong consequences on the economic system. Inflation also highlights the fact that there is a money supply in circulation that exceeds the needs of the economy and therefore these consequences are reflected in the price level and the purchasing power of money.

Regarding inflation, the generalized increase in prices is different depending on the categories of economic goods and services of the production factors existing in the economy, such as consumer goods, capital goods, prices of real, monetary, financial assets, etc. Also, in this process not every increase in prices is considered inflation, the increase must be cumulative and permanent.

3. Research Methodology

This part of the presentation of the research methodology aims to facilitate the completion of the next stages of the work by highlighting the methodology and the database used, as well as the sources of information. The present work was carried out through a mixed research methodology, as it is based on qualitative and quantitative data. More precisely, through quantitative data, macroeconomic analysis of the case study was carried out, these data being entered into the Microsoft Excel program to create graphs that allow easier identification of the evolution of macroeconomic indicators. Regarding the qualitative data, they consisted of the descriptive analysis method used for the literature review, and several platforms were used for this stage, including Enformation, which includes a diverse base of platforms such as Scopus, ProQuest, ScienceDirect, and many others. The time period analyzed is between 1990-2022, as the aim was to highlight the maximum levels of inflation recorded.

4. Case Study

4.1. The impact and economic effects of inflation

The economic effects of the inflationary process differ from one economy to another depending on the economic policies adopted, the degree of development of each country, as well as the ability of governments to manage and control inflation as a whole. Regarding the analysis of the consequences of inflation, this is difficult to do, because while some economic agents gain considerably from inflation, the other part stands to lose. Thus, the intensity of the effects is closely related to the intensity of the inflationary phenomenon. It should be noted that in conditions of inflation, prices and wages do not change in the same proportion, as there are changes in the level of relative prices. As a result of this change, two effects of inflation were identified, such as the redistribution of income and wealth of the population between different groups and differentiations occurring at the level of prices and production of various goods and services.
There are many areas that are affected due to inflation. For example, the distribution of income and wealth at the level of a state, as major differences occur between the assets and liabilities they hold. Also, unexpected inflation is the one that benefits debtors, but also creditors, they are not as affected as in the previous period, because there are many types of debt that have interest rates that move up and down with the rates of market interest. An example can be represented by variable rate mortgages. In most cases, windfall inflation helps borrowers and hurts lenders because it redistributes income and wealth from lenders to borrowers. The redistributive impact of inflation is primarily due to its effect on the real value of people's wealth. In the case of unanticipated deflation, the impact is opposite to that encountered in the case of unanticipated inflation, this time those who suffer are the debtors and not the creditors. Inflation affects not only the distribution of income but also the real economy in two important areas, such as economic efficiency and total output, both of which are essential because they lead to the

sustainability of the economic system. Regarding economic efficiency, inflation impacts this area because it changes the price level. Another example can be the situation wherein an economy there is low inflation, if the price of a good on the market increases, both buyers and sellers will notice that there has been a change in the supply/demand conditions for that good in the market and can act accordingly. Otherwise, when there is high inflation in the market it is much more difficult to differentiate the changes that occur at the level of relative and global prices.

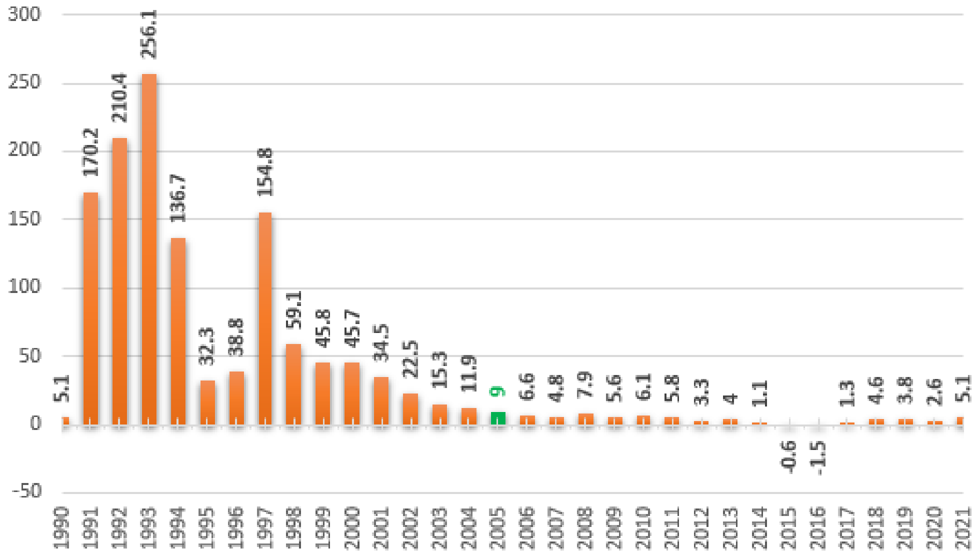

Figure 1: The evolution of the inflation rate in the period 1990-2021 (%)
Source: Author processing based on data provided by INS

As can be seen from the attached graphic representation, the inflation rate fluctuated significantly throughout the analyzed period, registering the level of 5.1% in 1990, and after this year it registered very high values, the memorable year being 1993, at the level whose inflation reached a value of 256.1%. In this sense, due to the high level of inflation, investments were discouraged based on the uncertainty of the economic environment, the exchange rate of the national currency depreciated in relation to the currency, the trade balance became a deficit, and unemployment increased. The pandemic shock, together with the measures implemented by the policymakers, have led to an increase in costs for certain sectors. Because the shock was multidimensional, namely originating from domestic and external sources, and having a negative impact on both demand and supply, the policy response was unprecedented, leading to a considerable increase in inflation. In the second quarter of 2022, the inflation rate reached 6.3%, 5 times higher than the level recorded in the same quarter of the previous year (2021). In this context, the economic environment was strongly affected and the standard of living of the population deteriorated, even more, the majority of the population is strongly affected by the increase in food, energy, and fuel prices.

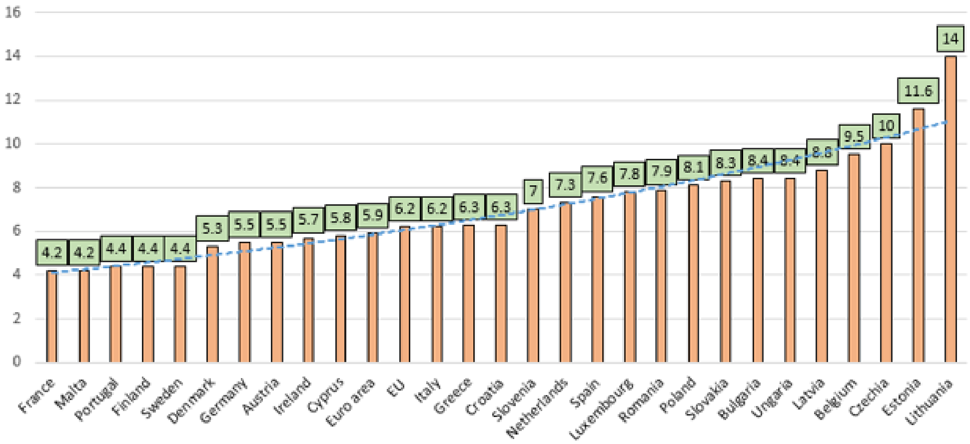

Figure 2: Annual inflation rates (%), in February 2022
Source: Author processing based on data provided by Eurostat

In accordance with the statistical data published by Eurostat, in February 2022, Romania ranked 10th among the member countries of the European Union in terms of inflation. With a value of approximately 7.9%, resulting in accordance with the European methodology for comparability with other countries, Romania was above the European Union average of 6.2% or the Euro Zone average of 5.9%, but favorably compared to eight countries belonging to the former Soviet bloc and Belgium with 9.5%. It should be noted that in 2022 the highest annual rates of price increase were achieved by the Baltic states, Lithuania at 14%, and Estonia at 11.6%, these being the only countries that exceeded the 10% threshold. This limit was reached by the Czech Republic and Lithuania with 8.8%, Bulgaria and Hungary with 8.4%, Slovakia with 8.3%, and Poland with 8.1%, decreasing from the value of 8.7% recorded at the end of the month of January.
In terms of the minimum benchmark, the lowest annual inflation values were recorded by France and Malta at around 4.2%, as well as Portugal, Finland, and Sweden at 4.4%, the only countries that were below the threshold of five percentage points. In light of what was previously discussed, the main commercial partners of Romania can also be mentioned, namely Italy with 6.2% and Germany with 5.5%. At the same time, it is important to mention that Romania, despite the negative effects propagated by the Covid-19 pandemic and the global economic context, managed to mitigate somewhat better, compared to other years, the unfavorable conjuncture for energy worldwide. From the point of view of the transition to the euro, it can be argued that the fixed parity did not help Slovakia, Bulgaria, and the Baltic States at all. Postponing the Czech Republic was not a suitable solution in this context either, given the fact that until the end of 2021, it recorded a historical level of inflation rate, of approximately 4.6% in January 2022, the Maastricht criteria not being the fundamental problem. Moreover, within the competition at the European level, Romania was not in a favorable position from a statistical point of view, given the fact that the weights used on the large groups of services and products are in close correlation with the stage of development of the

economy, respectively the well-being of the population and the incomes obtained at the local level. These are, without a doubt, higher in Romania on the side of food products that are included in the consumption basket, in relation to services, which have reached the lowest price increases and are less than half the level that is taken into account in the Eurozone.
The decrease in the inflation rate in Romania in recent years can represent confusion at the national level. The main point of this confusion concerns the sustainability of aggregate demand. Within developed economies, in recent years, in the absence of an asset price bubble, aggregate demand has been at relatively low levels. However, the Romanian economy does not encounter this problem. The economies of the developed states have promoted unconventional policies in the form of quantitative easing, so as to increase the degree of employment. For this reason, they share the idea that, in the absence of sustainable final demand and, implicitly, a revitalization of economic activity, financial instability may occur. In the case of Romania, the BNR did not have to reduce the interest rate to a minimum level, nor apply unconventional policies. An example is represented by the fact that during the years 2015-2017, the government developed and implemented two important fiscal policy measures, namely the reduction of VAT, thus generating deflation in June 2015-December 2016 and subsequently, the increase of nominal salaries in the public sector. More precisely, from the value of 0.8% in 2015, from the perspective of the ESA definition, the budget deficit increased to approximately 3% during the years 2016-2017, the fiscal impulses in the previously mentioned years being plus 1.9%, respectively 1.1%. The two measures determined the considerable increase in the real wages of consumers and implicitly, the increase in aggregate demand. At the time, economists predicted that when output exceeded its potential level, this demand would cause an upward trend in inflation, which is calculated at constant taxes. However, the inflation rate was still below the lower limit of the band established by the NBR until April 2017. In addition to the restrictive policies applied in order to support a minimum level of the inflation rate, another explanation refers to imports and the prices applied in their framework. In other words, with a relatively stable exchange rate of the leu, and the wages of the population started to rise, many consumers purchased more imported products. For this reason, a considerable part of the additional demand generated by the fiscal stimulus was placed outside Romania, thus avoiding the strain on the domestic production capacity and, of course, the increase in inflation. Therefore, when there are constant taxes, inflation in Romania, in the last ten years, followed the inflation profile of imports of consumer goods, products, and services, but also its decreasing trend. More precisely, the inflation trend was in close correlation with the inflation of consumer goods imported from the Eurozone, taking into account that the member states of the European Union and those belonging to the Euro Zone constitute Romania's main commercial partners. However, many economists invoke the approach of developed states and claim that reducing inflation in the Romanian state implies a much greater reduction in the interest rate. However, the fiscal relaxation focused on the reduction of VAT in the period 2014-2017, as well as the permanent increase in budget allocations focused on current expenses, is viewed by economists as a measure adopted in real-time. This is due to the fact that fiscal relaxation stimulated economic growth, thus supporting the Romanian economy to grow at a higher rate compared to the potential one, thus creating a positive GDP

gap, which will provide Romania with an escape from the deflationary danger that is registered in the states developed.
Returning to the context of 2022, the gross domestic product increase is revised to 3.9%. However, for 2023, a decreasing value of 2.9% is forecast in line with slow growth prospects both globally and in the European Union. Investment and private consumption are seen as the main drivers of growth this year, while net exports are expected to act as a drag on GDP and lead to a gradual widening of the trade deficit. Looking ahead, indicators of economic activity and sentiment point to a less upbeat second quarter. For the rest of the forecast horizon, both positive and negative factors are intertwined. On the one hand, high inflation will affect the purchasing power of households. On the other hand, the optimistic outlook on the labor market and the support measures announced by the government in April, especially for vulnerable households, should keep private consumption growing, albeit more moderately. It is estimated that the dampening effect of high-interest rates and uncertainty on private investment will be more than offset by investment supported by European Union funds. Moreover, the prospects of war and blockades in other states of the world have generated a slowdown, which will therefore affect exports more than imports.
Steep and continued increases in food and energy prices pushed annual HICP inflation to 12.4% in May, lifting 12-month average inflation to 7.1%. Prices will continue to rise over the forecast horizon due to energy, as not all consumers are covered by the capping scheme and as numerous electricity and gas contracts will be renegotiated in the coming months. A price increase for this HICP component is expected in April 2023 as the capping scheme is due to expire. Food prices will also increase given global price trends and war shortages. Average annual HICP inflation is forecast at 11.1% in 2022 before slowing to 7.2% in 2023 as energy prices are set to moderate and core effects play out. Stronger-than-current wage growth represents an upside risk to the inflation forecast.
The National Bank of Romania claims that there will currently be an acceleration of the inflation rate to 9.6 percentage points at the end of the year, from the 8.5% value reached in January, with the potential to increase to a double-digit value. However, the rate is expected to return to the target band by the end of 2023. In 2022, the leu was little changed against the euro, thus remaining the most stable currency in the region since the start of the war in Ukraine. Moreover, it is estimated that the economy of the Romanian state will slow down considerably during this year, taking into account the geopolitical disturbances and the increase in the prices of utility bills that directly affect the citizens of the state and companies, while certain economists support the possibility of the emergence a technical recession in the first part of 2023.

5. Conclusions

The causes of inflation in the post-communist Romanian economy were related to the increase in salary costs that were not consistent with the increase in labor productivity, the depreciation of the national currency, the evolution of taxation, and the evolution of tariffs and prices of public utilities provided under monopoly conditions. In addition to all these things, the higher inflation in the Romanian

economy is due to the delay in the reform of the banking and the real sector, compared to other states in transition.
Also, following the analysis carried out, it can be seen how the inflation rate managed to decrease from the extremely high values, which were close to the hyperinflation threshold due to increases recorded over 50% (for example in the year 1993, the inflation rate was of 256.1%), up to a moderate percentage (inflation rate was 11.9% in 2004), eventually registering a downward trend. It should also be mentioned that the disinflationary process did not have continuity, because there were periods in which inflation increased suddenly (in 1996 it was 38.8%, and in 1997 it was 154.8%), and in the immediately following period it had a much lower level, i.e. in 1998, it recorded the value of 59.8%. However, even if this strategy has led to the creation of a process of disinflation, this result is far inferior to the results obtained by the other states, which have managed to have a single-digit inflation rate. Through the monetary policy in the first years of the transition, restrictive measures were applied, but also to allow the expansion of credit and the supply of currency in the Romanian economy. All these decisions led to increased inflationary pressures, which is why other objectives were pursued. Currently, the level of the inflation rate is high due to the negative effects caused by the outbreak of the Covid-19 pandemic and the uncertainty that arose with the outbreak of the war in Ukraine, which constitutes new macroeconomic challenges.

References

1. Blanchard, O. J., Cerutti, E. & Summers, L. (2015). *Inflation and Activity. Two Explorations and their Monetary Policy Implications*. IMF WorkingPaper, No. 15/230, https://www.imf.org/external/pubs/ft/wp/2015/wp15230.pdf.
2. Budianto, F., Lombardo, G., Mojon, B., Rees, D. (2021). *Global Reflation?*. BIS Bulletin No. 43, https://www.bis.org/publ/bisbull43.htm.
3. European Parliament (2021). *Is high inflation the new challenge for Central Banks?.* https://www.europarl.europa.eu/cmsdata/239446/1e_QA0821266ENN.pdf.
4. National Institute of Statistics. *CPI – annual data series*. https://insse.ro/cms/ro/content/ipc%E2%80%93serie-de-date-anuala.
5. National Institute of Statistics. *CPI – quarterly data series*. https://insse.ro/cms/ro/content/ipc-serie-de-date-trimestriala.
6. Lipsey, R. G. & Chrystal, K. A. (1995). *Positive Economics*. Oxford University Press.
7. Mankiw, N. G. (2009). *Macroeconomics (7th Ed.)*. Worth Publishers, https://jollygreengeneral.typepad.com/files/n.-gregory-mankiw-macroeconomics-7th-edition-2009.pdf.
8. Samuelson, P. A. & Nordhaus, W. D. (2009). *Economics (19th Ed.)*. McGraw-Hill, https://moodle.estgv.ipv.pt/201920/pluginfile.php/59329/mod_resource/content/1/samunord19.pdf.