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Inflation – Causes and Measures. Inflation in Romania

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Abstract. *The causes of global inflation developments are the central subject of political debates, after in 2022 it became a global phenomenon, remaining above the average of the pre-pandemic period. According to the World Bank, there is a wide range of shocks to global supply and demand, oil prices and global interest rates that together drive global inflation. According to the International Monetary Fund, the global recovery is becoming increasingly sluggish and with growing regional divergences, with a future downward trend in global growth below the historical average of the period 2000-2019. Moreover, it is estimated that inflation will subside in the next period, but without reaching the estimated target for 2025. However, Romania has the highest inflation rate in the EU, increasing double the average of the EU countries. There are views that monetary policy, more rigor in fiscal consolidation and lower international commodity prices can control inflation and rein in debt growth. But what measures have been adopted in this regard and why does Romania have a different evolutionary trajectory?*

Keywords: external debt, sustainable development, inflation rate

Introduction

If the increase in the inflation rate in recent years was simplistically attributed to the war in Ukraine and the increase in the prices of energy products, being partially justified by most studies undertaken in this regard, it is of interest what happens beyond these shocks and why some countries succeeded in mitigating the inflationary phenomenon and bringing the inflation rate into the control zone, while other countries, including Romania, continue to register increases in the HICP. According to a study undertaken by J.P. Morgan estimates that global core inflation will be around 3% in 2024. According to the study, the decline in commodity prices is expected to moderate, while limiting the decline in the price of services. Currently, the decline in commodity prices can be explained by lower production and lower export prices from China. But increasing transportation costs and delivery times mitigate price declines with an increased risk of "reversal of these price declines" (J.P.Morgan, 2024). In the global services market, a moderate slowdown in inflation is expected.

But the impact of shocks on inflation varies from one region to another, depending on the measures that have been adopted. Thus, in the United States of America, food prices continue to register an insignificant monthly increase with the maintenance of the price of services at a higher level and a slowing of wage inflation. Policymakers' measures are focused on core measures of inflation with a potential impact on energy prices but with any major changes possible as a result of unforeseen geopolitical events. Overall, a decrease in the inflation rate below 2% is more difficult to achieve. According to a recent study (Lansky and Petrosky – Nadeau, 2024) the data

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covering the period May 2023 to February 2024 continues to follow the path of a non-linear Phillips curve showing the relationship between "inflation and some degree of labor market slack, the ratio of the unemployment rate and vacancy rate". In the UK, the monetary policy measures adopted seem to lead to the reduction of general inflation, which continues to remain high (3.1%), its persistence being caused by the price of services which continues to increase from one month to the next. In China, policymakers' measures have seen increased supply leading to lower food prices which, together with lower global commodity prices, have helped to exert deflationary pressure that will remain as long as policies support supply, at the expense of demand, and inflation growth trends are modest, being estimated at 1.2%. According to the results of a study undertaken by Yuzhi Li, China's future inflation rate appears to be "within a controllable range", but the reins seem to remain in the hands of the government to pay attention and take measures to reduce liquidity and reduce pressure on prices to prevent economic turmoil in the post-epidemic era. In emerging countries, deflation was based on collapsing core price inflation, dislocated supply chains and contracting export prices from China. Core and headline inflation are expected to decline. But in certain Latin American and Central European countries (Poland, Hungary, Colombia and Romania) there has been a certain rigidity of core inflation that tends to exceed central bank targets by around 2% as a result of relaxed fiscal policies, markets of narrow labor and inflationary expectations not anchored in reality. Thus, it is possible that "persistent inflation in services will combine with reacceleration in goods prices to keep core inflation above target midpoints." (J.P.Morgan, 2024) In the Eurozone, the rise in inflation was due to energy, food and supply shocks, rising corporate profit margins and rising wages. Expectations for 2024 are for an average of 2.6%, but this can only be achieved in a "sluggish" or slowing economy with moderate growth in corporate wages and prices. We take the conclusions of the previous study as the starting premises of the present paper regarding the existence of several elements specific to each economy that must be taken into account against the simplistic cause-effect relationship explained to citizens between the energy crisis/the war in Ukraine or other singular items and the level of inflation. "An unexpected increase in the level of energy prices, by itself, does not create persistent inflation", (Kilian, L, and X Zhou, in 2022), and this analyzed element can be replaced by any other disruptive element, but if we want to look for the real causes of inflation, they must take into account the entire domestic and international economic context, including geo-political elements.

Premises and findings

For two decades, inflation in the euro area has been relatively constant, with an average level below 2%, with short periods of fluctuations above this level. Since the beginning of 2021, inflation has had a permanent upward trend with a maximum of 10.6% that was reached in October 2022. After this moment, inflation continued to decrease, reaching in January 2024 the level of 2.8% (Figure 1), returning somewhat to the initial trend with a slight increase over the last values recorded before 2021.

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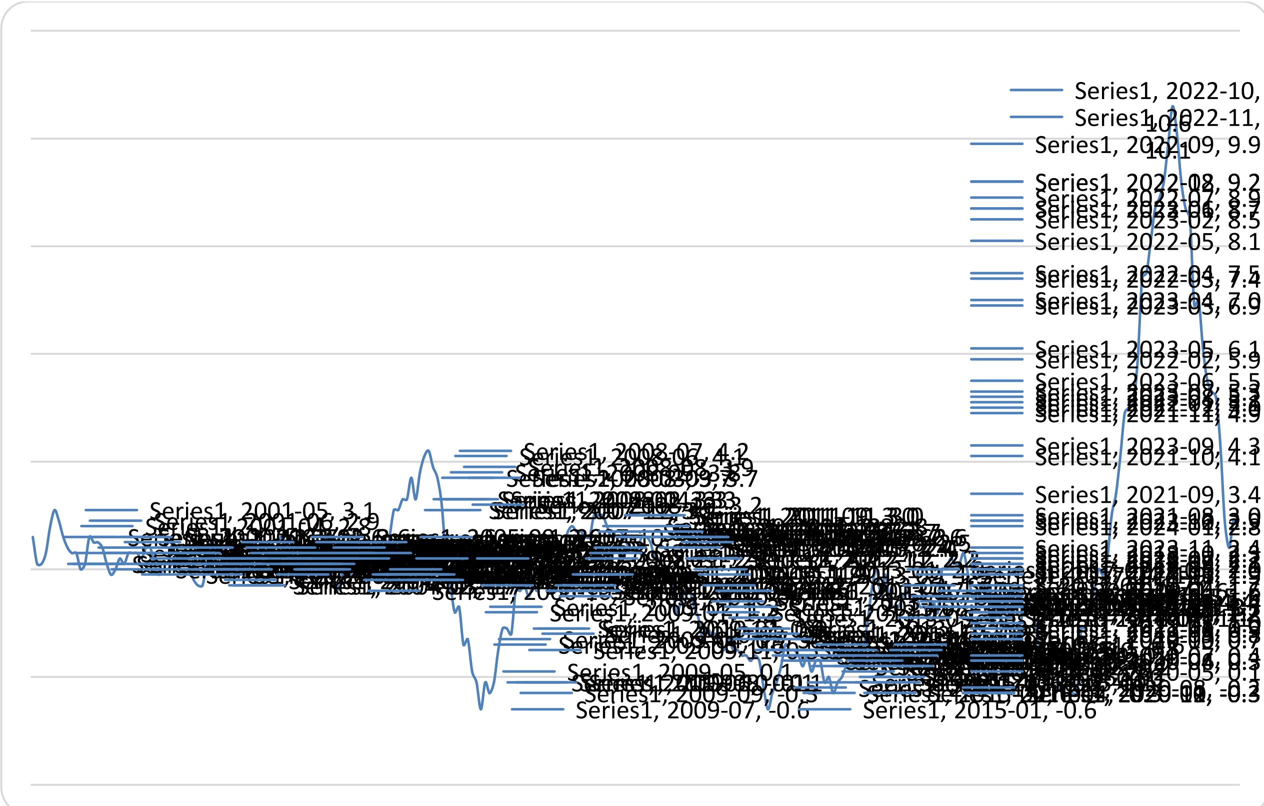

Figure 1. HICP evolution in the euro area, 12.2000-01.2024.

Source: Authors' processing based on Eurostat data (prc_hicp_manr).

In the euro area, more than two-thirds of households' monetary consumption expenditure is occupied by services (about 45%) and non-energy industrial goods (about 25%). The last third involves food, tobacco and alcohol (about 20%) and energy (about 10%). However, the impact of the last third on overall inflation can be significant, given the significant fluctuation in their price (Figure 2).

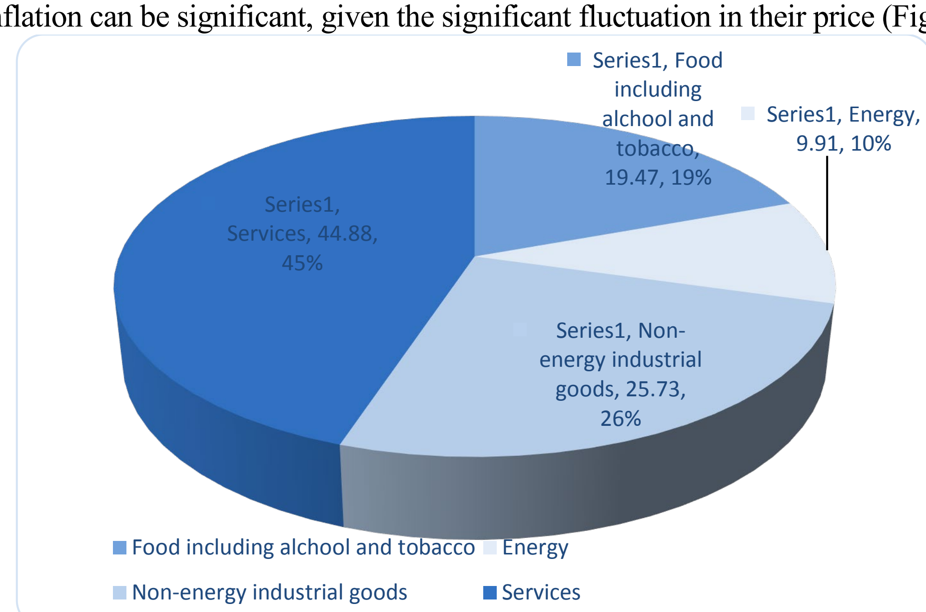

Figure 2. The weights of the HICP components in the euro area, 2024

Source: Authors' processing based on Eurostat data (prc_hicp_inw).

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Compared to the euro zone, although Romania has approximately the same evolutionary trend, it is constantly a few percentage points higher than the euro zone, in January 2024 inflation in Romania being more than double the euro average (Figure 3).

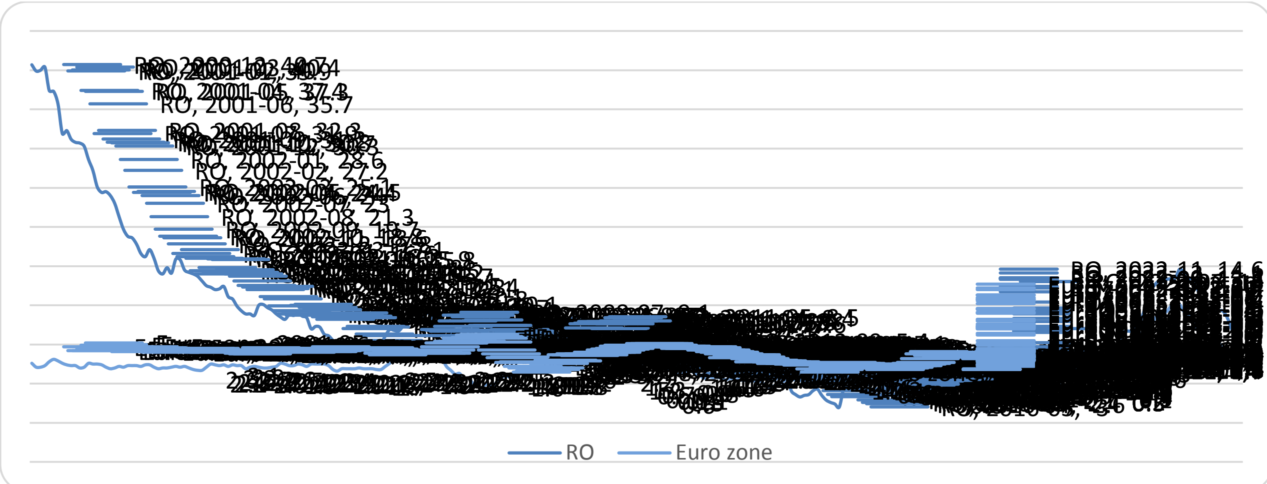

Figure 3. The evolution of the HICP – comparison of the euro area and Romania, 12.2000-01.2024.
Source: Authors' processing based on Eurostat data (prc_hicp_manr).

Compared to the end of 2022, at the beginning of 2024, after only one year, Romania climbed to the top of the EU ranking (Figure 4), occupying the first place. It is important to identify which are the factors that continue to determine the increase in inflation in Romania, given that in the rest of the union the inflationary phenomenon has calmed down.

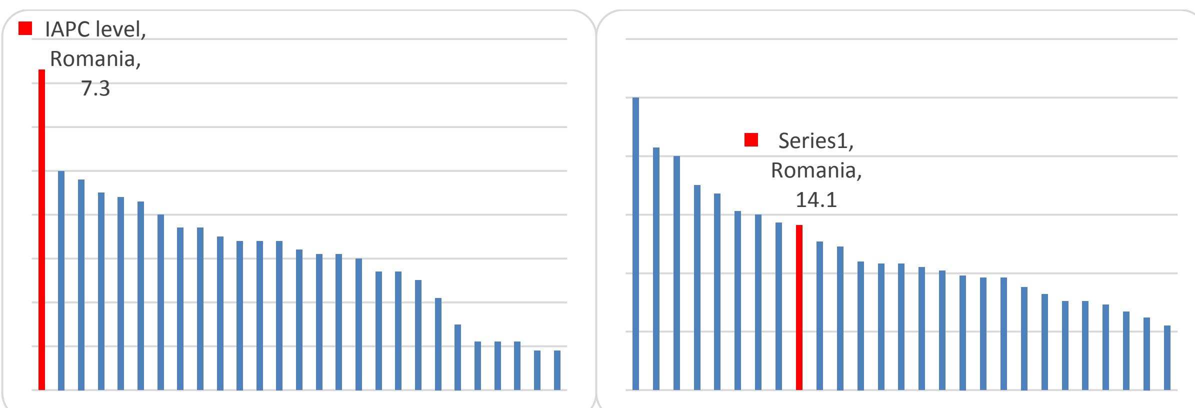

Figure 4. HICP – January 2024 compared to December 2022
Source: Authors' processing based on Eurostat data (prc_hicp_manr)
https://ec.europa.eu/eurostat/databrowser/view/prc_hicp_manr__custom_10217990/default/table?lang=en.

In the most recent minute of the monetary policy meeting of the Board of Directors of the National Bank of Romania, the previous forecasts regarding the very short-term behavior of inflation were reconfirmed, targeting an inflation rate of 4.8 percent in December 2024. The increase from January 2024 was explained by the increase and introduction of some indirect taxes and fees for the purpose of budget consolidation, being to a small extent mitigated the impact generated by the transfer to consumer prices of the increase in the minimum wage level. Expectations for the fall in the inflation rate take into account falling prices of agri-food commodities, crude oil and falling import prices. But there are still uncertainties about the evolution of inflation deriving from the recently implemented fiscal-budgetary measures and the limitation of the commercial addition to food products, a measure that expired at the end of February 2024. In the medium term, there are still a series of uncertainties and risks generated by the war in Ukraine, the conflict in the Middle East, economic developments below expectations in Europe (especially in Germany) against the backdrop of tougher financial conditions. Furthermore, the uncertainties and risks also come from the inefficiency of attracting and using European funds (Next Generation EU) and from the fiscal and revenue policy, to which are added the pressures brought by the new pension law and the dynamics of wages in the public sector. In such a context, in order to achieve the stationary target of inflation at the level of 2.5%, the BNR decided to keep unchanged the monetary policy interest rate at the level of 7%, the interest rate for the credit facility at 8% and the deposit interest at 6%, with permanent monitoring of developments in the domestic and international context to ensure medium-term price stability.

It is noted, however, that the monetary policy adopted by the NBR is still above that adopted at the European level by the Board of Governors of the Central Bank (Figure 5).

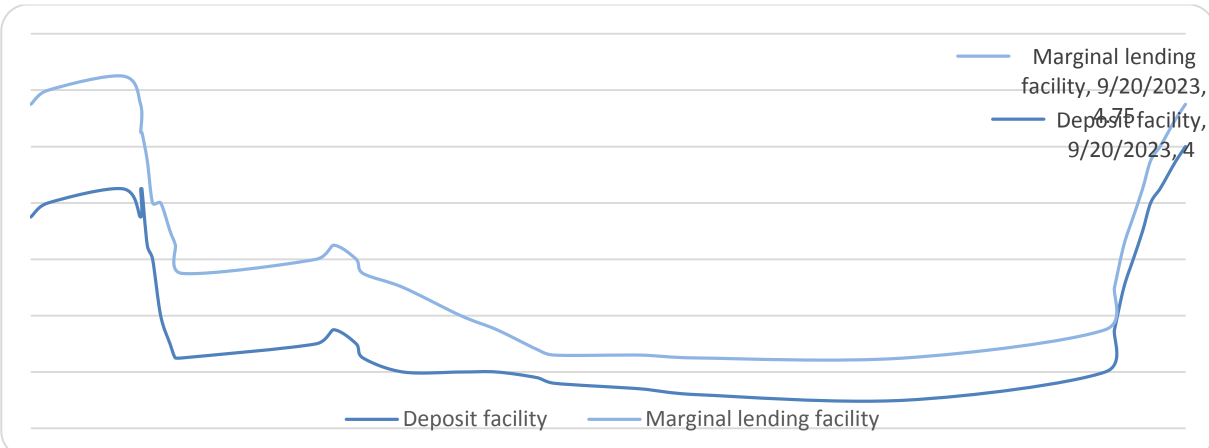

Figure 5. Evolution of key rates at the ECB level – 2007-2023

Source: Own processing based on ECB data.

Although there is an increase in the interest rate at the European level, in September 2023, the marginal lending facility was 4.75% and the deposit facility was 4%, continuing to be below the levels set by the NBR.

In addition to all the elements described above, there are other concerns regarding the persistence of gaps between the demand and supply of labor in certain segments, the halt in the growth of the number of employees in the economy, the slowdown in economic growth, the re-emphasis of the decline in the trade balance deficit compared to the similar period last year and the current account deficit which continued to decrease significantly. Also, the characteristics of the 2023 budget execution and the approved budget plan for 2024 raise concerns. According to the publication of the Ministry of Finance, the execution of the general consolidated budget for 2023 was concluded with a deficit of 89.90 billion lei, compared to the deficit of 80.77 billion lei from 2022. Theoretically, in percentage terms the deficit was 5.68% of GDP, better than the 5.76% of GDP for 2022, but in absolute numbers the deficit was higher compared to the last year. The approved budget plan for 2024 is focused on investments of approximately 7% of GDP. The expected economic growth is 3.4% and the budget deficit is estimated at 5% of GDP.

At the same time, interest rates on term bank deposits of the population decreased, as the stock of deposits increased more than that of loans. In such a context, liquidity is increased and it is natural that banks are no longer interested in the population's deposits (Figure 6).

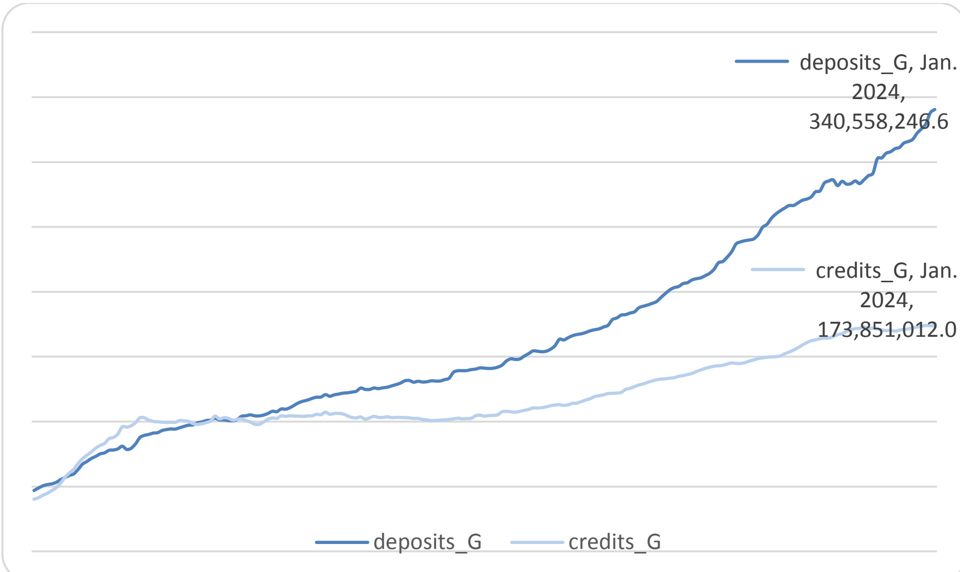

Figure 6. BNR – Structure of deposits attracted / credits granted to households
Source: Authors' processing based on BNR data (https://www.bnr.ro/Raport-statistic-606.aspx).

Romania's external debt continues its upward evolutionary trend, registering a 22% increase in the last year compared to the previous year. To finance its budget deficit, from the beginning of 2024, Romania accessed the international markets for the first time, offering bonds in euros and dollars at an initial price higher than treasury bonds. Their maturity is in 2029 and 2034. This operation follows the trend of other emerging states in the region, such as Poland, Hungary and Slovenia with the aim of covering the budget deficit, similarly to the sums attracted from foreign investors. Equally, the Ministry of Finance wants to launch green bonds and other types of bonds, making Romania one of the countries with the largest loans in the EU.

In Romania, the Government is committed to reducing public expenditures and improving the level of collection, as determining factors of a healthy fiscal policy, but "the insufficient collection of budget revenues and the high share of rigid expenditures in fiscal revenues represent structural vulnerabilities that will complicate the process of fiscal consolidation" (Government of Romania, 2023).

Methodology

Starting from the premises and findings mentioned above, the econometric analysis of correlation and causality was carried out between several series of monthly statistical data exposed above, for the time period between 01.01.2007-31.12.2023.

From the analysis of the monthly series, according to the results in Table 1, the existence of strong direct links can be observed between the evolution of the gross external debt balance, household deposits and household loans. Direct correlations of low intensity are observed between the evolution of the gross external debt balance, household deposits, household loans and the evolution of the inflation rate.

Table 1. Correlations between the balance of the gross external debt, the population's deposits, the population's credits and the inflation rate

Date: 03/06/24 Time: 02:01
Sample: 2007M01 2023M12
Included observations: 204

Correlation t-Statistic Probability	DEPOSITS...	CREDITS_G	IAPC	EXTERNAL...
DEPOSITS_G	1.000000 ----- -----			
CREDITS_G	0.967284 54.18988 0.0000	1.000000 ----- -----		
IAPC	0.272744 4.029180 0.0001	0.323699 4.862413 0.0000	1.000000 ----- -----	
EXTERNAL_DEBT	0.829223 21.08621 0.0000	0.846578 22.60550 0.0000	0.226791 3.309539 0.0011	1.000000 ----- -----

Source: Own processing based on BNR and Eurostat data in Eviews12.

This is also confirmed by the t-statistic and the probability attached to the hypothesis that the correlation coefficient is not significantly different from zero. These results could be skewed by the limited number of records or could even be real. This aspect can be confirmed or denied in time.

Furthermore, the analysis of the causal relationships between the selected indicators was carried out by the Granger causality test. The Granger causality test is a statistical test used to determine whether one time series does not influence another. If the probability value is less than 0.05, then the hypothesis is rejected, that is, the variables have a causal relationship between them.

Table 2. Granger causality test

Pairwise Granger Causality Tests
Date: 03/06/24 Time: 02:34
Sample: 2007M01 2023M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
DEPOSITS_G does not Granger Cause CREDITS_G	202	12.2506...	9.6683...
CREDITS_G does not Granger Cause DEPOSITS_G		1.76633...	0.1736...
EXTERNAL_DEBT does not Granger Cause CREDITS_G	202	5.12266...	0.0067...
CREDITS_G does not Granger Cause EXTERNAL_DEBT		8.79174...	0.0002...
IAPC does not Granger Cause CREDITS_G	202	2.78340...	0.0642...
CREDITS_G does not Granger Cause IAPC		3.21900...	0.0421...
EXTERNAL_DEBT does not Granger Cause DEPOSITS_G	202	4.12720...	0.0175...
DEPOSITS_G does not Granger Cause EXTERNAL_DEBT		6.76559...	0.0014...
IAPC does not Granger Cause DEPOSITS_G	202	0.53111...	0.5887...
DEPOSITS_G does not Granger Cause IAPC		0.52706...	0.5911...
IAPC does not Granger Cause EXTERNAL_DEBT	202	7.84944...	0.0005...
EXTERNAL_DEBT does not Granger Cause IAPC		0.05986...	0.9419...

Source: Own processing based on BNR and Eurostat data in Eviews12.

The results in Table 2 indicate the existence of a bidirectional causality relationship between the change in gross external debt and credit dynamics, at the 0.6% significance level. We could also accept a causal relationship between the dynamics of the inflation rate and the dynamics of household loans, at the significance level of 6% (the causality being bidirectional). Under the same conditions, the existence of a causality between the change in the external debt and the deposits of the population, as well as between the change in the inflation rate and the change in the external debt, is found.

For the other cases, the null hypothesis is not rejected (the Granger test does not identify causal relationships).

Results

The results in Tables 1 and 2 confirm current economic theories according to which the change in the inflation rate is associated with the dynamics of external debt, the increase in external debt with the increase in deposits and loans, and loans with the change in the inflation rate. It can be confirmed that part of the social assistance and personnel expenses covered by external debts are transferred by the population to savings and confirms the evolutionary trend described above. Moreover, household loans could be covered from the same external sources, and their dynamics could be influenced by the dynamics of the inflation rate and the interest charged by banks and influenced by the adopted monetary policy.

It is noted that the expenses that will be allocated to investments in the following years are still below the level of staff and social assistance expenses. In the period 2024 - 2026, it is expected that the European and PNRR funds will advance the national funds that will relieve the budgetary effort, but it would be important that this is not compensated by other external loans to finance other expenses, at the expense of investments, which to contribute to the perpetuation of a high rate of inflation.

Discussions

The fiscal situation in which Romania currently finds itself is particularly difficult, being accentuated by the overlap of crises (sanitary, energy, inflationary, of supply chains), the rather tense international context with the war in Ukraine and other outbreaks that require an increase in defense spending and security. Inflation is high and continuously eroding purchasing power. Equally, the concerns regarding mitigating the impact of climate change and the green transition require strengthening the state's ability to react promptly in extremely complicated moments. The industrial sector is affected by the moderation of the international economic evolution and the slowdown of trade flows, fully feeling the difficulties related to the supply, but also the increase in the prices of energy products. Activity in the industrial sector continued to shrink, in line with the trend recorded at Community level, as a result of reduced demand against the background of much more restrictive financial conditions. Private consumption has been affected by all the uncertainties that define the current socio-economic environment, and the monetary policy echoing the interest rates in the banking system has imprinted the behavioral pattern of consumers.Those categories of people who worked without formal and taxed contracts, family workers and those who organized an economic activity on their own account were acutely affected by the pandemic (Chivu and Georgescu, 2020), and the energy crisis amplified the effects of the previous crisis. Thus, consumption registered a continuous decrease, and the population showed a tendency to increase saving.

In all this extremely confused situation, the budget construction for the year 2024 and for the interval 2025-2026 was based on the measures adopted in three different periods of time: the period preceding the outbreak of the pandemic characterized by fiscal relaxation; the period during Covid-19 that had in mind the elimination of the effects of the health crisis; the austerity period from 2023. Last but not least, legislative instability, without continuity and predictability, "affects the business environment with a major impact on sustainable economic development viewed as a whole, through the three pillars - economic, social and environmental" (Vasile and Zaman, 2005)

With all these unknown and hard-to-forecast elements, Romania is optimistic, still relying on the increase in the degree of absorption of European funds and estimating a decreasing inflation. The forecasts took into account the stabilization of energy prices and other raw materials at the global level, without taking into account the possible return of the upward evolutionary trend and other unforeseen elements that could affect all the forecasts made.

Conclusions

If we look carefully at the expert opinion on inflation control, beyond monetary policy, price dynamics are determined by the rigor of fiscal policy, income policy, international commodity price dynamics, other behaviors and patterns, and other unforeseen events that can induce temporary shocks on the evolution of prices. These elements can curb/accelerate inflation and curb/accentuate debt growth. In narrow terms, the backbone of the fiscal policy adopted at the European level revolves around the discipline of government expenditure and revenue, budget deficits and public debt. Considering only these elements, the results of the analyses, the evolutionary trend recorded and the one predicted by the NBR, starting from the expected increase in the public debt, public sector salary expenses and social expenses determined by the increase in pensions as a result of the application of the new legislative framework and the extremely low level of budget revenue collection (although payroll taxes are among the highest in the EU) it is hard to believe that Romania will succeed in reaching the expected budget deficit and inflation rate target. In addition, if the international prices of goods change their evolutionary trend in an upward direction in conjunction with the removal of the ceiling imposed on food goods, Romania has all the prerequisites to exceed the current level of inflation. We do not take into account other unforeseen elements that may arise from the current international geopolitical context. The skepticism of these conclusions belongs to the authors, as I expressed in the previous article, as there are so many variables with interpenetrating developments, it is difficult to create a logical construction that can be taken up in an econometric model that confers a certain predictability as close as possible to the truth.

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