

ECONOMY OF EUROLAND – STRUCTURAL CHALLENGES

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Abstract

The economy of Euroland underperformed USA and China in terms of the growth pace in 2023 and 2024, and this situation is going to persist in the future, according to the forecasts of the international financial institutions. This weak growth pace of the GDP in Eurozone has been determined by structural factors, including the deterioration of international competitiveness (exacerbated by the consequences of the geo-political tensions), the lack of the implementation of the Capital Markets Union (with negative impact for the cost of financing and for the access to capital), and the discontinuity of the structural reforms. This paper presents the structural challenges for the economy of Euroland, by employing standard econometric methods and the database of Eurostat (quarterly observations). The results of the econometric estimates point to the deceleration of the annual pace of the potential output in the region in the recent years, given the severe deterioration of the fixed investments. In fact, Euroland continues to be confronted with the same long lasting challenges, competitiveness and convergence. In this context, structural reforms should be accelerated and new measures to improve the economic integration and convergence within Euroland should be implemented, in order to put the region back on track.

Keywords: Euroland economy, potential output, investments.

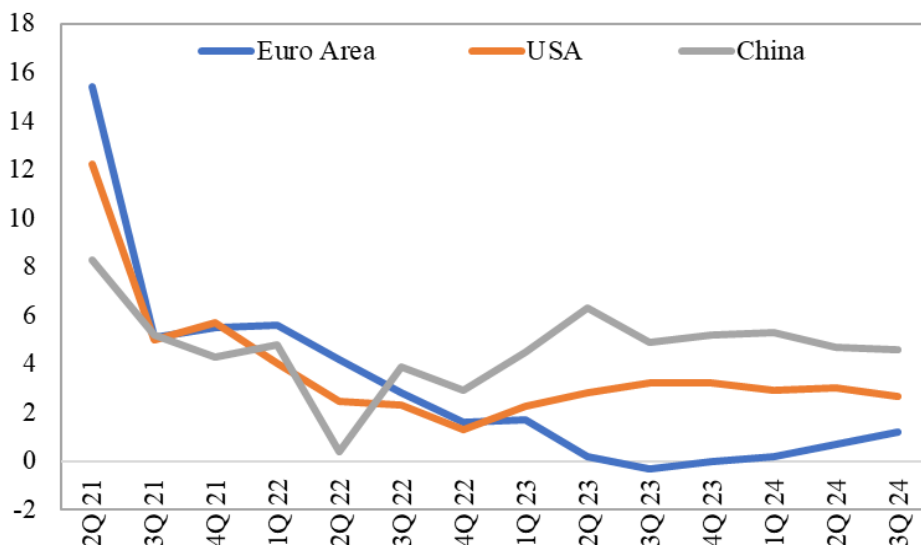
JEL Classification: C22, E22, F10

1. Introduction

Euroland (the core of the European Union, contributing by around 85% to the GDP of the region) underperformed USA and China in terms of the growth pace of economic activity in 2023 and 2024. This evolution was determined by several factors, including the consequences of the geo-political crisis in Ukraine, with negative impact from the perspective of the mid-run challenges – international competitiveness and convergence. For instance, the annual pace of the GDP of Euroland was below 1% for five quarters in a row (2Q 2023 – 2Q 2024), according to the estimates released by Eurostat (2024). In 3Q 2024 the GDP of the region accelerated to 1.2% YoY (the highest since 1Q 2023), but continued to be well below the levels in USA (2.7% YoY), and China (4.6% YoY), taking into account the estimates of Eurostat (2024), US Bureau of Economic Analysis (2024) and the National Institute of Statistics of China (2024), reflected in the following chart.

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Figure 1. The annual pace of GDP (%)



Source: Eurostat, Bureau of Economic Analysis, and National Institute of Statistics of China (2024)

The underperformance of the economy of Euroland compared to USA and China is going to persist in the short-run, according to the recent macroeconomic forecasts of the International Monetary Fund (IMF, 2024, a). The GDP of Eurozone would increase by annual paces of 0.8% in 2024 and 1.2% in 2025, while the US economy may advance by annual paces of 2.8% in 2024, and 2.2% in 2025 in the 2024 autumn macroeconomic scenario of the international financial institution based in Washington. In this scenario, the GDP of China would climb by annual paces of 4.8% in 2024 and 4.5% in 2025.

In a recent report on the competitiveness of Europe, Draghi (2024) underlined the slow dynamics of labour productivity, the weak incorporation of the new technologies, and the demographic changes as main determinants of the underperformance of the EU economy.

Furthermore, the European Central Bank (2024, a) also pointed out recently the widening productivity gap between the Euro Area and the United States, especially after the outbreak of the Great Financial Crisis, due to the low level of the capital deepening. This, in turn, can be explained by the fragmentation of the capital markets, with impact for the level of the financing cost.

On the other hand, the European Central Bank (2024, b) underlined that the weak dynamic of the GDP in Euro Area in the recent years was also determined by the consequences of the exogenous shocks (coronavirus pandemic, and the crisis in Ukraine) and by the decisions of the entity to increase the interest rates to counter the inflationary pressures.

Last, but not least, the International Monetary Fund (2024, b) pointed out the macroeconomic challenges for the Euroland, including the ageing of population, the sluggish productivity growth, the geo-political tensions, the trade disputes, and the distortive industrial policies. In this context, the experts of the international financial institution emphasised the importance of the implementation of stabilization policies and structural reforms at the EU level, including measures to improve the functioning of the Single Market.

In this paper standard econometric tools are implemented and the Eurostat database (quarterly observations) is used in order to estimate the structural components for the annual pace of the GDP, gross fixed capital formation, and exports, and for the short-run real interest rates in Euroland over the past decades.

According to the results of the econometric estimates the annual pace of the potential output in Eurozone has recently presented a downward trend, given the weak dynamic of the investments, in a context dominated by persistence of the uncertainties and the high levels of the financing costs.

The next chapter briefly presents the recent macroeconomic developments in Euroland; the methodology is described in the third chapter; the results are interpreted in the fourth chapter; the conclusions are presented in the last chapter.

2. The Recent Macroeconomic Developments in Euroland

The annual pace of the economic activity has recently improved in Euroland, an evolution determined by the dynamic of the private consumption and of the government spending. According to the estimates of Eurostat (2024), the GDP of the region grew by an annual pace in acceleration to 1.2% in 3Q 2024, the best evolution since 1Q 2023, as can be noticed in the following chart (Figure 2).

There can be noticed the advance of the private consumption (the main component of the GDP from the demand side perspective) for the fourth quarter in a row in 3Q 2024, by an accelerating annual pace to 1.1%, the highest level since 1Q 2023, an evolution supported by the positive climate on the labour market [the unemployment rate declined to a record low level in 2024, according to the database of Trading Economics (2024)].

At the same time, the public consumption increased for the 17th quarter in a row in 3Q 2024, by an annual pace in consolidation to 2.7%, the best evolution since 4Q 2021.

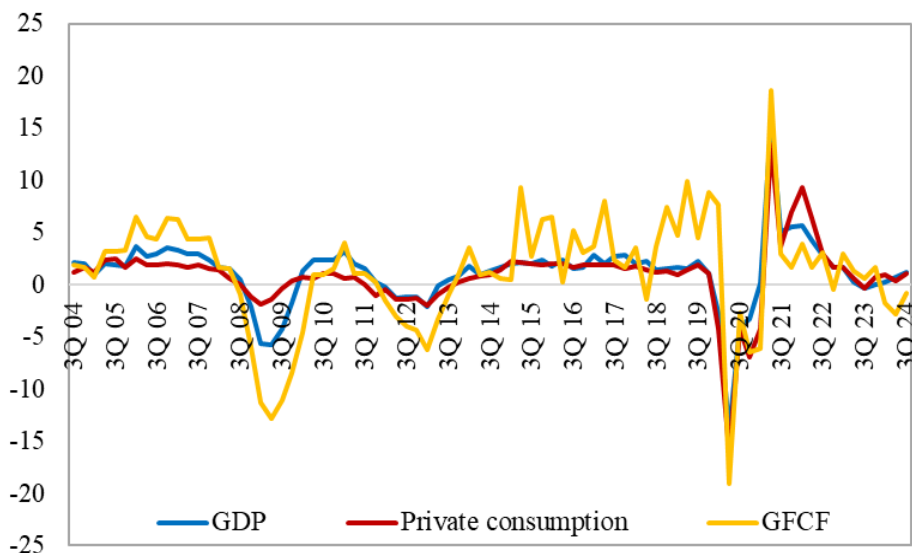
On the other hand, the gross fixed capital formation contracted for the third quarter in a row in 3Q 2024, by an annual pace of 0.8%. This evolution confirms the persistence of a tough investment climate in the region, given the challenges in terms of the international trade, the persistence of the

uncertainties (including the geo-political tensions), and the high level of the real financing costs.

As regards the net foreign demand, the volume of the total exports and the volume of the total imports of Euro Area increased by an annual pace of 2.0% in 3Q 2024.

In other words, the economic activity in the region slightly improved, but the investment climate deteriorated in 2024, as reflected in the following chart.

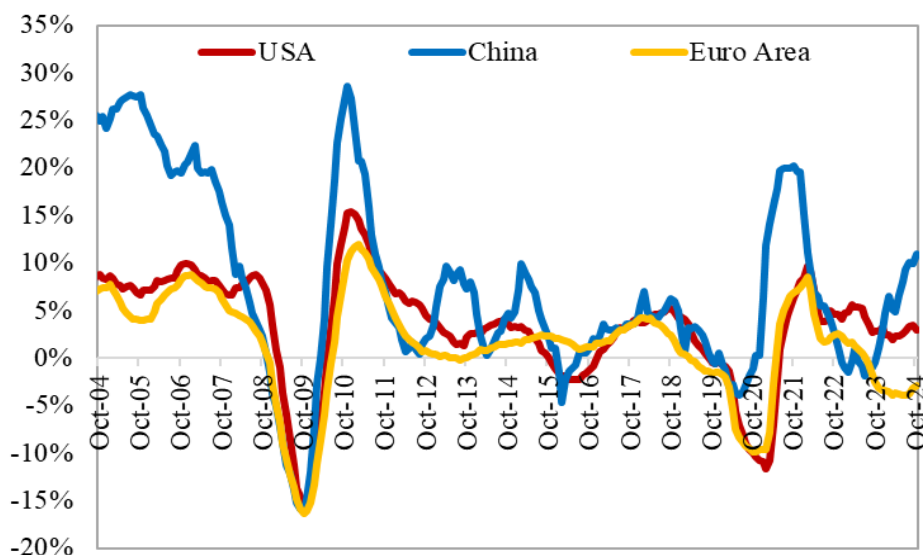
Figure 2. GDP, Private Consumption and Gross Fixed Capital Formation in Euroland (% YoY)



Source: Eurostat (2024)

The tough investment climate in the region is determined by several factors, including the decline of the exports of goods and the upward trend for the real financing costs. For instance, according to the figures of the Netherlands Bureau for Economic Policy Analysis (CPB, 2024) the volume of the exports of goods of Euroland contracted for the 19th month in a row in October 2024, by an intensifying annual pace to 2.5%. Therefore, the volume of the exports of goods in Euro Area declined by an annual pace of 2.5% during January-October 2024, an evolution in divergence compared to the increase of this indicator in USA (by 2.9%), and China (by 10.8%), as can be noticed in the following chart.

Figure 3. The volume of the exports of goods in Euro Area, USA, and China (MA12)

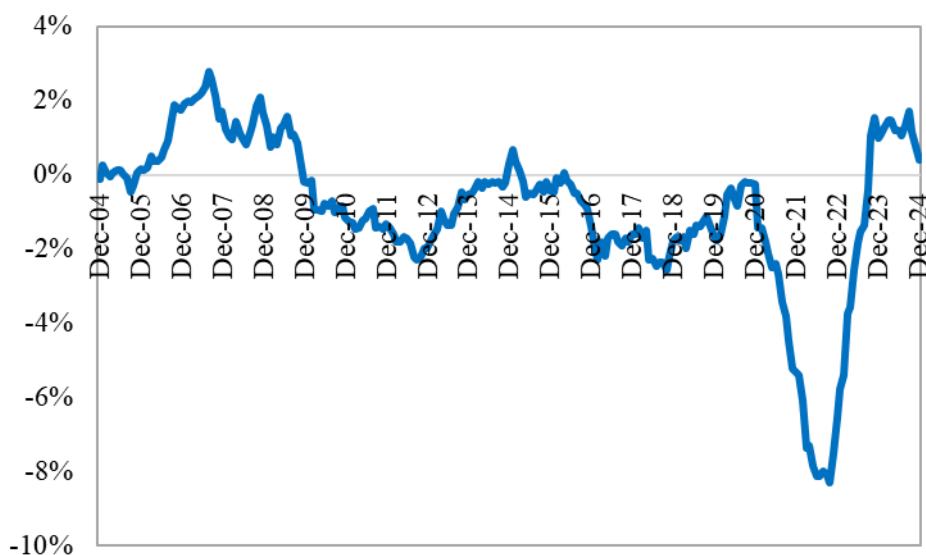


Source: Netherlands Bureau for Economic Policy Analysis (2024)

In this context, the volume of the industrial production in Euroland decreased for the 18th month in a row in October, by an annual pace of 1.5%. During the period January – October 2024 the volume of the industrial production in Euro Zone contracted by an annual pace of 3.1%, a weaker performance compared to the consolidation of the industrial production in USA and the increase of this indicator by an annual pace of 5.6% in China.

Furthermore, the real cost of financing in the short-run presented an upward trend in 2024 (as reflected by the following chart), as the annual pace of the consumer prices in Euroland continued to decelerate towards the lowest level since the pandemic year 2020, while the European Central Bank started to cut the interest rates only in the Summer (month of June). For instance, in September 2024 the EURIBOR for the 3 months maturity adjusted by the annual pace of the consumer prices hit the highest level since the end of 2008, according to our estimates presented in the Figure 4.

Figure 4. EURIBOR 3M adjusted by inflation



Source: estimates using the statistics of Eurostat (2024)

3. Methodology

This paper applied standard econometric tools (the Hodric-Prescott filter) and used the database of Eurostat (quarterly observations) in order to estimate the trend component for the annual pace of GDP, gross fixed capital formation, exports, and for the short-run real interest rates in the Eurozone, during the period 1Q2001 – 3Q 2024.

Furthermore, we assessed the impact of the real interest rates and of the dynamic of the exports on the evolution of the gross fixed capital formation in the region, in terms of the trend components, by applying a standard OLS regression and using the results for the structural components of these variables from the implementation of the Hodrick-Prescott filter.

This filter is widely used in the macroeconomic analysis in order to distinguish between the cyclical and the structural components of the macroeconomic indicators, being expressed as in the following relation:

$$\mathbf{Min} \sum_{t=1}^T (\ln Y_t - \ln Y_t^*)^2 + \lambda \sum_{t=2}^{T-1} ((\ln Y_{t+1}^* - \ln Y_t^*) - (\ln Y_t^* - \ln Y_{t-1}^*))^2 \quad (1)$$

In this relation the Y_t , Y_t^* and λ represent the macroeconomic indicator, its trend (structural component), and the smoothness parameter. We point out that the higher the value of this smoothness parameter, the larger the gap between the macroeconomic variable and its trend (structural) component.

This method has been used over the past decades, being simple and transparent, but we underline the main shortcomings, as mentioned by the literature, as for instance Bouthevillan et al. (2001) – the leakage and the compression effects – these are dependent on the value of the parameter λ .

Given the fact that we worked with quarterly observations in this paper, we used a smoothness parameter of 1 600, as recommended by Hodrick-Prescott (1997).

We applied this filter for the annual pace of the macroeconomic indicators (GDP, gross fixed capital formation, exports, and short-run real interest rates) in Euroland during the period 1Q2001 – 3Q 2024, in order to estimate the trend (structural) component for each of them.

In this paper we worked with Eurostat database (Eurostat, 2024), using the estimates for the annual pace of the volume of GDP, gross fixed capital formation, and exports of Eurozone in the interval 1Q 2001 – 3Q 2024.

As regards the short-run real interest rate in Euroland, we estimated it considering the EURIBOR for the 3M maturity and the annual pace of the consumer prices in the region, monthly observations from Eurostat (2024), for the period January 2001 – September 2024. The results of the monthly estimates for the short-run real interest rate were aggregated into quarterly observations.

Afterwards, the results of the implementation of the Hodrick-Prescott filter were used in order to estimate the following OLS regression:

$$\text{GFCFTR} = C(1) + C(2) * \text{EXPORTSTR} + C(3) * \text{REALINTRATETR} \quad (2)$$

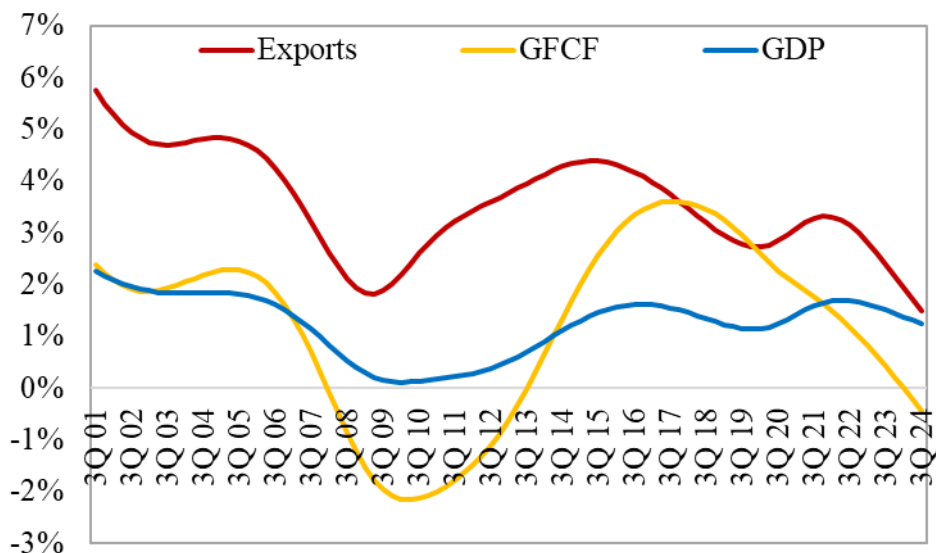
In this relation GFCFTR and EXPORTSTR represent the trend components for the annual pace of the gross fixed capital formation and of the exports, while REALINTRATETR is the structural component for the short-run real interest rate in Euroland.

We worked with the econometric software E-Views.

4. The Interpretation of the Results

The results of this econometric analysis point out the downward trend for the annual potential growth pace of GDP in the Euroland over the past years, to only 1.2% in 3Q 2024. This is the lowest level since the 3Q of the pandemic year 2020, as can be noticed in the following chart.

Figure 5. Annual pace of the trend component for GDP, gross fixed capital formation, and exports in Euroland



Source: econometric using the statistics of Eurostat (2024)

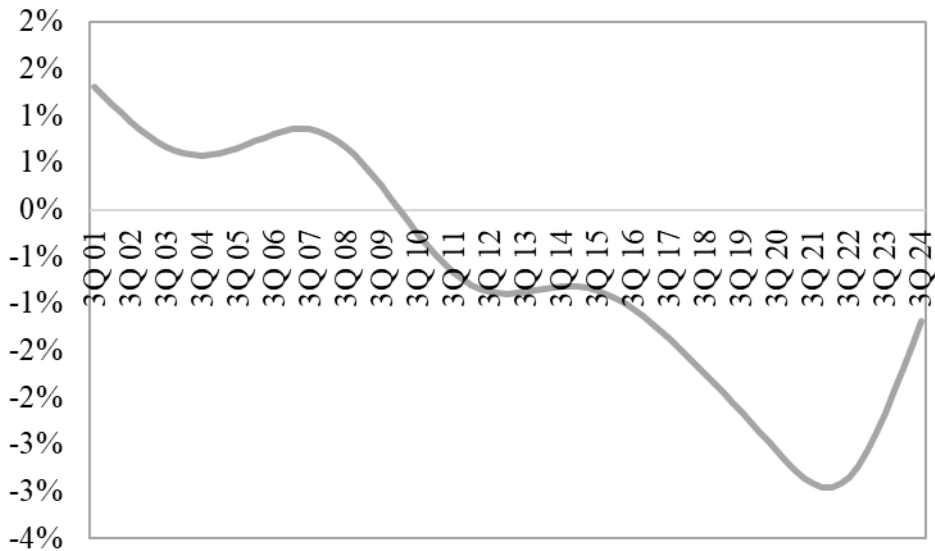
The trend component for the annual pace of the GDP deteriorated from 1.7% in 4Q 2021 (the period before the outbreak of the crisis in Ukraine) to 1.2% in 3Q 2024, an evolution reflecting the severe impact of the geo-political tensions and of their consequences.

We point out the severe deterioration for the trend component of the annual pace of the gross fixed capital formation in Euroland in the recent years (from 1.6% in 4Q 2021 to almost 0% in 3Q 2024, a record low level), as can be noticed in the Figure 5. This evolution was determined by the consequences of the exogenous shocks (coronavirus pandemic, and intensification of the geo-political tensions since the outbreak of the crisis in Ukraine), with negative impact for the international competitiveness of the economy of Euroland and for the short-run real interest rates.

For instance, our econometric estimates express the deceleration of the trend component for the annual pace of the volume of exports in Euroland from 3.3% in 4Q 2021 to 1.5% in 3Q 2024, a record low level, as can be noticed in Figure 5.

On the other hand, the trend component of the short-run real interest rate in Euroland presented an upward trend in the recent quarters, from -3.0% in 4Q 2021 to -1.2% in 3Q 2024, the highest level since 4Q 2016, as reflected in Figure 6.

Figure 6. Trend component for the short-run real interest rate in Euroland



Source: econometric using the statistics of Eurostat (2024)

In fact, the results of our econometric estimates (represented in Tabel 1 below) express the proportional relation between the dynamic of the gross fixed capital formation and the evolution of the exports, in terms of the trend components for the annual pace of their volumes. From the OLS regression resulted a coefficient of 1.288. In other words, an increase of the volume of exports in Euroland by 1% contributed to the advance of the volume of the fixed investments by 1.288% for the period 1Q 2001 – 3Q 2024. Therefore, it can be underlined the strong dependence of the fixed investments in the Euroland on the dynamic of the exports.

On the other hand, there is a negative relation between the evolution of the gross fixed capital formation and the short-run real interest rate in Euroland, the estimated coefficient being -0.683 during the interval 1Q 2021 – 3Q 2024. In other words, the increase of the short-run real interest rate by 1% contributed to the deterioration of the annual pace of the gross fixed capital formation by 0.683% in Euroland during this period.

Table 1. Results of the OLS regression, as expressed
in relation (2), chapter 3

Dependent Variable: GFCFTR

Method: Least Squares

Date: 01/29/25 Time: 10:35

Sample(adjusted): 2001:1 2024:3

Included observations: 95 after adjusting endpoints

GFCFTR = C(1)+C(2)*EXPORTSTR+C(3)*REALINTRATETR

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-3.892205	0.556935	-6.988618	0.0000
C(2)	1.287891	0.139617	9.224430	0.0000
C(3)	-0.683348	0.112216	-6.089601	0.0000
R-squared	0.491930	Mean dependent var		1.198973
Adjusted R-squared	0.480885	S.D. dependent var		1.734923
S.E. of regression	1.250006	Akaike info criterion		3.315243
Sum squared resid	143.7514	Schwarz criterion		3.395892
Log likelihood	-154.4741	Durbin-Watson stat		0.022464

Source: econometric estimates, using Eurostat database (2024)

5. Conclusions

According to the macroeconomic estimates in this paper, the annual pace of the potential growth pace in Euroland has deteriorated significantly since the outbreak of the crisis in Ukraine. This evolution was determined by the consequences of the geo-political tensions for the dynamic of the gross fixed capital formation (fixed investments) in the region.

On the one hand, the intensification of the geo-political tensions, since the beginning of 2022, determined the geo-fragmentation in the world economy, with negative consequences for the evolution of the international trade. Therefore, the exports of the Euroland were severely hit, as the performance of this economy used to be importantly dependent on the foreign demand in the past.

On the other hand, the international sanctions implemented following the outbreak of the crisis in Ukraine, and the dependence of Euroland on the imports of energy from Russia in the past determined the severe increase of the prices of energy in the region, which had spill-over impact for the overall consumer prices. In this context, the European Central Bank had to significantly increase the interest rates in order to counter the inflationary pressures and to contribute to the convergence of the annual pace of the consumer prices towards the inflation target (of 2%). In the past quarters, the inflationary pressures diminished significantly in the region, while the interest rates declined to a lower extent, pushing the real interest rates to positive territory since October 2023.

The main conclusion of this paper is that in order to improve to potential growth pace of the economic activity in Euroland there are needed measures for the sustainable relaunch of the fixed investments.

From the short-run perspective, there can be mentioned the measures in terms of fiscal policy (as the manoeuvre room is gradually increasing in the region, after the recent consolidation process) and monetary policy (the European Central Bank has space to continue the interest rate cut cycle in 2025).

However, the most important, and also the most difficult to implement measures are the structural reforms, which should be accelerated in the region in the coming quarters. In this context, we mention the implementation of the Capital Markets Union (that would contribute to the decline of the cost of the financing in the region), the increase of the flexibility degree on the labour market, and the acceleration of the incorporation of the technological progress (including increasing the allocation for research, development, and innovation).

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