IN-DEPTH ANALYSIS

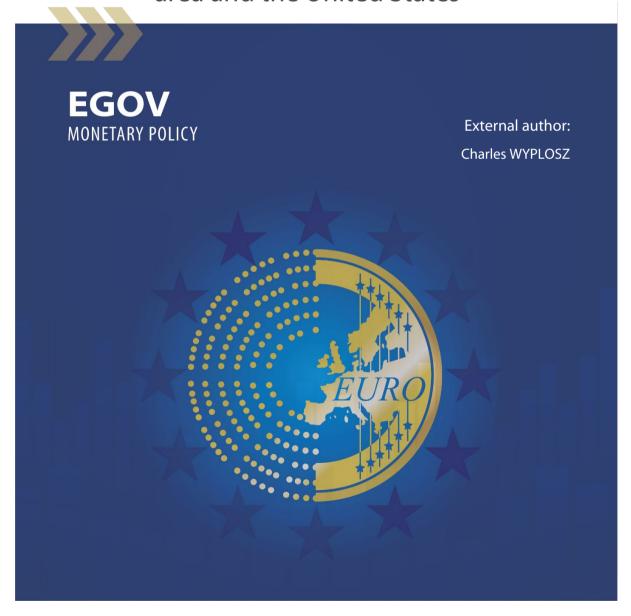
Requested by the ECON committee





The Inflation Episode

Similarities and differences in the euro area and the United States





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Abstract

Inflation has surged and then declined in broadly similar ways in the euro area and the United States, because it has been driven by the impact of the pandemic and its aftermath. Yet, specific differences reflect how monetary and fiscal policies responded as well as the impact of the Russian invasion of Ukraine. The central banks face whole new challenges as they prepare to navigate the next phase now that inflation has rapidly declined, but also further along.

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LIST OF ABBREVIATIONS

CPI Consumer price index

ECB European Central Bank

GDP Gross domestic product

HICP Harmonised index of consumer prices

IMF International Monetary Fund

OECD Organisation for Economic Co-operation and Development

OPEC Organisation of the petroleum exporting countries

QE Quantitative easing

QT Quantitative tightening

US United States

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EXECUTIVE SUMMARY

- The inflation surge and the recent declines have been broadly similar in the euro area and the United States (US). Both have faced the impact of the COVID-19 pandemic and its aftermath and responded with similar monetary and fiscal policies strategies
- **Behind this similarity, important differences have emerged.** Inflation surged earlier in the United States and peaked at a lower rate than in the euro area. While inflation has been very similar across the United States, it has been very different across euro area Member States.
- **Fiscal policy is a key reason for these differences.** In the United States, fiscal policy has been expansionary before the COVID-19 pandemic and massively expansionary in the first year of the pandemic. Most euro area governments reacted later and in a more measured way.
- **Fiscal policies also differed in their scope.** In the United States, the accent has been on cash transfers to households, in an effort to limit the hardships from unemployment. In the euro area, they were often aimed at firms in an effort to limit unemployment and sometimes to contain price increases.
- Another reason is that the impact of the Russian invasion of Ukraine has been negligible in the United States while it has been strong in the euro area. It has also been particularly powerful in the euro area Member States that were more dependent on trade with Russia.
- An important consequence of fiscal transfers has been unusually large savings in both the
 United States and the euro area. Subsequent dissaving has powered the recovery from the
 pandemic and remain a source of growth.
- Due to the timing and effects of fiscal policy as inflation had surged earlier in the US, the Fed has moved faster than the European Central Bank (ECB). In spite of a rapid rollback, the budget deficit remains significantly higher in the United States.
- Labour markets remain very tight, even after both central banks raised their key policy rates. This is a key source of concern since it may imply that the complete return of inflation its target may take more time. This is especially the case in the United States where the labour market remains tighter than before the COVID-19 pandemic but it also seems to be the case in the euro area.
- Both central banks now face delicate decisions regarding the ending and reversal of their efforts to cut inflation. Both the ECB and the Fed consider the end of interest rate hikes but envision to keep them high for some time. This stands in contradiction with the stated end or suspension of forward guidance.
- In the longer run, central banks must deal with the combination of slow growth and durably
 high interest rates when public debts have reached historically high levels. Given the poor
 growth performance of the euro area, the next monetary policy strategy should provide answers.

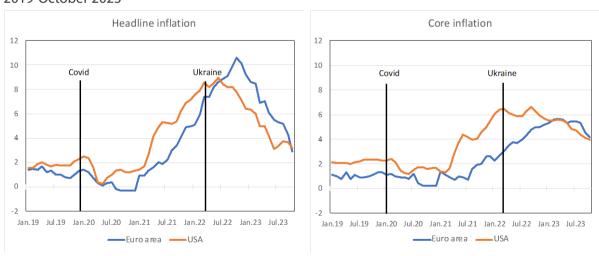
1. INTRODUCTION

Inflation rates in the euro area and in the United States (US) have followed paths both parallel and distinct paths, as can be seen from Figure 1. The left-hand side shows the evolution of both headline inflation, namely Harmonised index of consumer prices (HICP) in the euro area and Consumer price index (CPI) in the US. Inflation rates were almost the same in both countries at the start (January 2019) and at the end (September 2023) of the period under review. Initially, inflation was close to the target of 2%. In September 2023, it stood at about 4%, significantly above target. In-between, the evolution is broadly similar. Inflation declined after the onset of the COVID-19 pandemic and started to rise once the lockdowns were eased and vaccination alleviated fears of contagion during 2021. The inflation surge occurred long before the Russian invasion of Ukraine in late February 2022. Clearly, the causes of the inflation surge and its eventual decline are similar.

Beyond the similarities, however, a few differences stand out:

- Headline inflation started to rise and peaked earlier in the US (May 2020 and June 2022, respectively) than in the euro area (December 2020 and October 2022).
- Core inflation rate, which excludes energy and food prices, on the right-hand side chart in Figure 1, started to rise in the US at about the same time as headline inflation, and stabilized at about the time of the Russian invasion of Ukraine in February 2022. In the euro area, the rise of core inflation lagged headline inflation by several months. Clearly, the pass through of increases in energy and food prices accelerated headline inflation, but the surge was already well under way.
- Core inflation peaked soon after headline inflation in the US but much later in the euro area.
 More generally, the difference between headline and core inflation was larger in the euro area than in the US. This corresponds to the larger increases in energy and food prices in the euro area.

Figure 1: Inflation rates in the euro area and the US (% change over previous year), January 2019-October 2023



Source: ECB and FRED, Federal Reserve Bank of Saint Louis.

Note: Harmonized index of consumer prices (HICP) and Consumer price index for All Urban Consumers (CPI) are shown.

It is also interesting to examine inflation rates at a less aggregated level. Figure 2 displays the headline inflation rates in the euro area Member States and in the eight census regions of the US.¹ For each month, it displays the (unweighted) average inflation rates of countries or regions, along the maximum and minimum observed rates each month, as well as a measure of dispersion, the standard deviation. For proper comparison, the scale of the vertical axis is the same. In the US, regional inflation rates rose and declined in lockstep throughout the whole period from 2019-2023, with no change in dispersion. Within the euro area, the dispersion increased considerably and remained much larger in September 2023 relative to the start of the inflation surge. Indeed, at the peak, headline inflation exceeded 20% in the Baltic States, while it barely reached 7% in France and Spain. Clearly, the shock widely differed across Member States.²

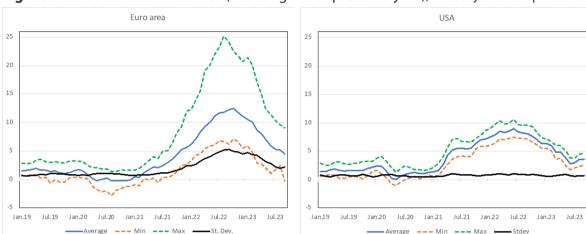


Figure 2: Headline Inflation rates (% change over previous year), January 2019-September 2023

Source: ECB and Bureau of Labour Statistics.

Note: Average, minimum, maximum, and standard deviations of headline inflation rates among the euro area member countries and the eight census regions of the US.

The paper attempts to explain both the similarity and the differences in inflation rates in the euro area and in the US since 2020. The next section examines potential causes other than policies, while Section 3 looks at the role of monetary and fiscal policies. Section 4 briefly characterises the current situation and the policy options. The concluding section widens the scope by asking whether inflation and growth will recover their pre-COVID-19 pandemic levels.

2. NON-POLICY DRIVERS OF INFLATION

The inflation surge has been a global phenomenon driven by global shocks. Yet, while the impact has been qualitatively similar across developed economies, Section 1 makes the point that some significant differences have emerged. One reason is that monetary and fiscal policies have differed, as described in Section 3, but other causes have been at work. They are reviewed in this section.

The COVID-19 pandemic was bound to provoke a deep recession as demand and supply collapsed, as shown in Figure 3. The arrival of vaccines next led to a sharp rebound on both the demand and supply sides. In each phase of this seesaw movement, the relative responses of demand and supply shaped inflation. Briefly stated, inflation declined moderately during the recession phase as demand and

¹ New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, Pacific.

² The divergence of inflation rates across the euro area is described in more details in Wyplosz (2023), which argues that it has deeply disturbed price competitiveness inside the euro area. This issue is likely to emerge as a particularly difficult challenge.

supply declined broadly to the same extent, while demand sharply outpaced supply during the recovery. Figure 3 also shows that the 2020 recession was less deep in the US than in the euro area and that the recovery was stronger in 2021.

8
6
4
2
0
-2
-4
-6
-8
2019 2020 2021 2022 2023
—United States —Euro area

Figure 3: GDP growth (% per year)

Source: Economic Outlook, OECD.

2.1. Post-Covid recovery: the demand side

On the demand side, the recovery was driven by two main factors: the spending of accumulated savings and fiscal policies. These factors are partly related since large fiscal transfers during the 2020-21 have contributed to saving accumulation, as Figure 4 shows (more on fiscal policies below). Stranded and worried households reduced their consumption in 2020 during the acute phase of the pandemic. Once vaccines started to be available in 2021 and the pandemic eased up in 2022, they started to spend their accumulated savings. Household saving is usually quite stable so it is easy to underestimate the importance of the swings visible in left-hand chart of Figure 4. The strength of the recovery is a direct consequence of the swing. Savings rose much more in the US than in the euro area, which partly explains the strength of the recovery.

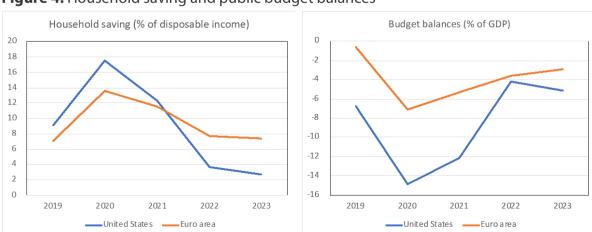


Figure 4: Household saving and public budget balances

Source: Economic Outlook, OECD.

Fiscal policy also contributed to the evolution of economic growth. As the right-hand chart of Figure 4 indicates that fiscal policy was already expansionary in the US in 2019 as the Trump administration had

cut taxes, and turned to extremely expansionary in 2020 with large transfers to households in 2021, with further steps taken later by the Biden administration. Fiscal actions were also strong in the euro area (as a whole, with important differences from country to country) but muted in comparison with the US as explained in Section 3.2.

Comparing Figure 1 and Figure 3, it is clear that the relative strength of the recoveries does not fully explain the subsequent evolution in inflation rates in the euro area and the US. The next two sections present additional explanations that are frequently invoked. They rely on the supply side.

2.1. Supply side

The key characteristic of supply side shocks is that they lead to more inflation, by increasing production shocks, and lower growth, by reducing production.

2.1.1. Supply chain disruptions

Unprecedented supply chain disruptions occurred when the developed countries emerged from the acute phase of the COVID-19 pandemic. In contrast with the saving/dissaving pattern that was – or should have been – widely anticipated, the clogging of transports and the slow restart of production came as a surprise. The difficulties of restarting production after a period of deep reduction were greatly underestimated. Getting people back to work proved to be nontrivial as many people had spent months rethinking their life patterns and their jobs, with some of them concluding that they wanted a change or, at least a break.

According to the Federal Reserve of Ney York's index of global supply chain pressure,³ difficulties appeared at the onset of the COVID-19 pandemic but quickly declined, only to resume at the end of 2020 and to peak in December 2021 (Figure 5). The comparison with the evolution of inflation (Figure 1) suggests that supply chain disruptions contributed to price pressure in several sectors precisely when demand was rising vigorously in the euro area and in the US. Similarly, the easing of these disruptions must have contributed with some lag to the disinflation process.

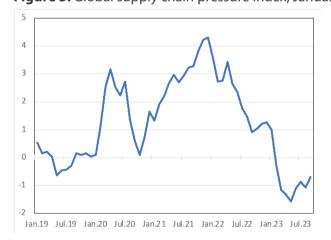


Figure 5: Global supply chain pressure index, January 2019-September 2022

Source: Federal Reserve Bank of New York, Global Supply Chain Pressure Index.

³ This index combines information about transport volumes and prices, and about manufacturing.

2.1.2. The Ukraine shock

As Figure 1 shows, there is no indication that the Russian invasion of Ukraine significantly contributed to inflation in the US where it peaked shortly afterward. In contrast, in the euro area, headline CPI inflation continued to rise vigorously after the invasion and eventually overtook the US rate. This is also when core inflation accelerated in the euro area, an indication that the impact was broader than the substantial rise of energy and food prices. Obviously, the proximity of the euro area to the conflict zone implies that it was much more dependent in trade with Ukraine and Russia. The combination of sanctions and other market disturbances has had a much stronger impact in the euro area, especially on its Eastern members. This is confirmed by Figure 6, which shows that the price of natural gas barely increased in the US but exploded in Europe.⁴

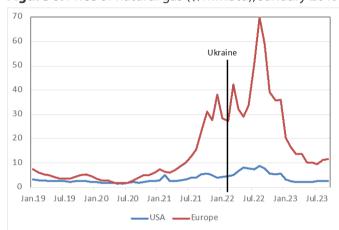


Figure 6: Price of natural gas (\$/mmbtu), January 2019-September 2022

Source: World Bank Commodity Price Dataset. https://www.worldbank.org/en/research/commodity-markets.

Figure 7, which presents the evaluation by the IMF of the main drivers of inflation for regional groups, further confirms this effect. Europe stands out with a sharp acceleration of inflation driven by food and energy prices.

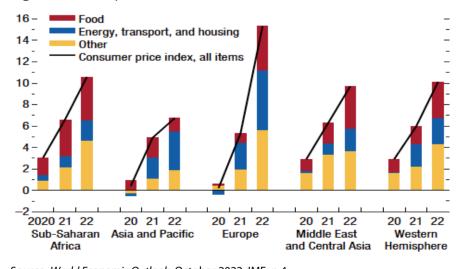


Figure 7: Decomposition of the sources of inflation

Source: World Economic Outlook, October 2022, IMF, p.4.

Note: Western hemisphere includes both North and South America.

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⁴ The European price of gas divorced from the price in the US more than a year before the Russian invasion, apparently before of cold weather and technical supply cuts from Norway and Russia. The increase in Europe occurred even before the inflation surge, to which it has contributed given that the price of electricity is indexed to the price of gas.

As a producer of oil and gas, the US is in a position quite unlike the euro area. Since the gas market tends to be local, as seen from Figure 6 the impact of the Ukraine shock is muted in the US, and it also applies to oil, albeit to a lesser extent. However, higher prices benefit US producers while it hurts European consumers. That means that impact of higher energy prices is much worse in the euro area as they act as a form of tax to be paid to foreign producers.

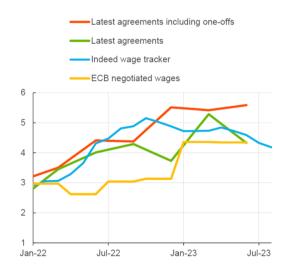
2.2. Wages and productivity

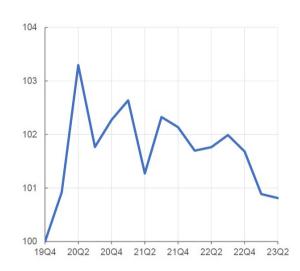
The usual concern about inflation is the wage-price spiral, whereby price increases feed into wage increases, which further leads to price increases. There is no agreement on whether this is a serious threat in the euro area and in the US. So far, wages have lagged behind prices, especially in the euro area (left-hand chart in Figure 8), leading to wider profit margins in firms. There are two paradoxes here. First, wage-earners have suffered a deep reduction in their incomes. Normally, they would want to catch up. Second, they are in a good position to do so since the labour markets are historically tight and yet, real wages remain depressed relative to what they used to be before the COVID-19 pandemic.

One possibility is that wages are lagging and that they will eventually catch up. When they do so, what will happen to profit margins? If firms let their margins decline back to historical levels, the wage-price spiral will stop there. However, labour productivity has declined (right-hand chart in Figure 8), which indicates that the labour costs have risen faster than wages, which eats into profit margins. This raises the probability of a wage-price spiral.

Figure 8: Wages and productivity in the euro area Wage growth (annual percentage change)

Labour productivity per hour (Index: 2019Q4 = 100)



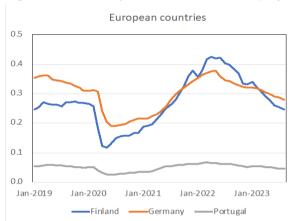


Source: Schnabel (2023b).

Since the aftermath of the COVID-19 pandemic, labour markets have tightened quite significantly. A good measure of tightness is the ratio of the number of job vacancies to the number of unemployed workers, which is presented in Figure 9. Unfortunately, there is no data for the euro area as a whole, only for a few countries, which are reported in the chart. Inasmuch as similar developments are taking place in other euro area countries, there appears to be an important difference between the US and

⁵ This is the view of IMF (2023).

Europe.⁶ While the labour markets have tightened after the COVID-19 pandemic on both sides of the Atlantic, it remains historically tight in the US while, on this measure, it has returned to pre-pandemic levels in Europe. Looking forward, this difference may hint at stronger wage increases in the US than in Europe, raising the probability of a wage-price spiral in the US. On the other side, the power of trade unions is larger in Europe, as is the concern for "social justice".⁷ All in all, it seems too early to rule out the emergence of wage-price spiral in the euro area, which would make the disinflation process protracted and painful.



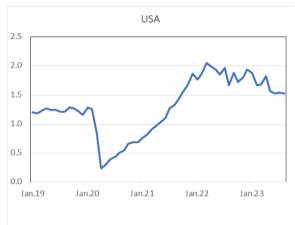


Figure 9: Ratios of job vacancies to unemployed workers

Sources: OECD for Europe, Bureau of Labour Statistics for the US.

⁶ One difference is that the ratio is traditionally much higher in the US. This reflects the larger fluidity of the US labour market where firings are much less regulated than in Europe.

⁷ There is large literature comparing the European and US labour markets, see e.g. Saint-Paul (1996).

3. THE ROLE OF MONETARY AND FISCAL POLICIES

3.1. **Lags**

A key principle of the fight against inflation is to start early, to quickly raise interest rates and to bring them down when the job is done. Both the ECB and the Federal Reserve missed the first step. By the time inflation started to rise, it took the Fed more than two years to start raising its policy rate and one year and a half for the ECB. From start to peak, US inflation rose by 8.7 percentage points while it went up by 10.9 percentage points in the euro area. This indicates that inflation rose faster in the euro area largely, but not only, because of the Ukraine shock, which barely affected the US (Figure 1). But it rose faster during 2021 in the US.

Once they started to raise their policy rates, both the ECB and the Fed proceeded quickly. So far, the Fed raised its rate by 5.25 percentage points since March 2022, somewhat more than the EBC's increase of 4.5 percentage points since July 2022. This is much less than the increases in the inflation rates so that the observed real interest rates – the interest rate less currently observed inflation – are even lower than before the inflation surge, when monetary policies were deemed expansionary. However, monetary policy operates through the real interest rate corrected for expected inflation, not for currently observed inflation which is changing fast, more recently downward.

Like other central banks, the ECB is keen to argue that inflation expectations are "well anchored", meaning that they remain close to the target inflation rate of 2%.8 To buttress its arguments, it refers to the inflation expectations of financial markets as computed by looking at bond prices. These evaluations have repeatedly been disproved by subsequent evolutions of actual inflation. At any rate, what matters are the expectations of economic agents, households, and firms, who borrow and who sets prices. Schnabel (2023a) has recently shown the inflation expectations of Italian firms from surveyed by the Banca d'Italia at different points in time. They are displayed in Figure 10. The Figure shows that these expectations have never been of less 5%, and often exceeded this level by a substantial margin. The implication is that, measured in this way, the current policy rate (4%) implies a negative real interest rate. Of course, households and firms face interest rates above the policy rate so, for them, the real interest rate is now positive. But it is worth noting that, as late as January 2023, the policy rate just stood at 2%, which indicates that monetary policy was not tight while inflation was still high (headline at 5.3%, core at 5.5%).

⁸ See, e.g. Lagarde (2023): "In this setting, it is paramount not only to take decisive action to bring inflation down, but also to communicate effectively to ensure that medium-term inflation expectations remain anchored during the process. More than ever, credibly conveying that inflation will return to our 2% target over the medium term has been vital to help prevent self-fulfilling inflationary dynamics from taking hold".

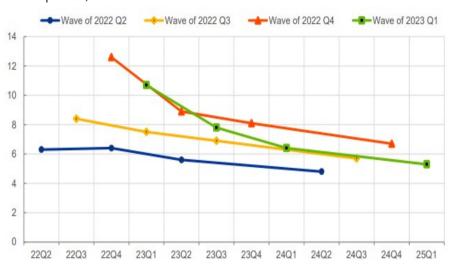


Figure 10: Expectations of consumer price inflation by Italian firms (percentage changes on year-earlier period)

Source: Schnabel (2023a).

Yet, inflation peaked in 2022, in June in the US, when the key policy rate was 1.75%, and in October in the euro area, when the key policy rate (deposit facility rate) was 0.75%. That disinflation started with such low policy interest rates and tight labour markets is surprising. Recent reviews of the history of previous disinflations (Blinder, 2023; Cecchetti et al, 2023) show that disinflations are usually achieved the hard way, with high real interest rates and substantial slack in the labour market. These precedents would suggest that we still are a long way from the end of above-target inflation, both in the euro area and the US. This is far from certain, however. Two interpretations are plausible.

- The rapid increase in interest rates after more than a decade of ultra-low rates took the financial markets by surprise. They had time to develop business models that rested on the presumption that interest rates would be "low for long". Now, with quickly rising interest rates, they had to adapt to a new situation. As a result, lending conditions have been toughened, so that monetary policy turned contractionary even with relatively low interest rates. Bank failures in the US and Switzerland in the first half of 2023 confirm that the adaptation can be challenging, as do increases in corporation bankruptcies.
- The second interpretation is puzzling. Until they changed their minds, the ECB and the Fed argued that the inflation surge would be temporary, because it was the outcome of a unique episode, the supply-side shock of the COVID-19 pandemic. They have changed their minds once inflation reached levels unseen since the 1980s, but that does not mean that inflation would not be temporary once the causes of the burst would disappear. Could it be then that, after all, the central banks were right about the temporary nature of the inflationary episode, simply that they did not realise how strong the surge would be?

Both interpretations imply that inflation would decline even with relatively low real interest rates in both the euro area and the US. An additional interpretation considers the role played by fiscal policies.

3.2. Fiscal policies

In order to examine the role of fiscal policies, Figure 11 displays a standard measure of fiscal policy actions, namely the change of the cyclically adjusted balance. This measure nets out interest service and the effects of the business cycle to reveal discretionary decisions by the authorities. Fiscal policies usually deploy their effects on growth and inflation with a lag, from one to two years. Figure 11 shows that, in the US, fiscal policy turned expansionary in 2018, modestly so in 2019, and very much so in

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2020. In the euro area, it was modestly expansionary in 2019 and more so in 2020 and in 2021, but far less than in the US.

The details of fiscal policies also mattered. In both the euro area and the US, the large expansion of 2020 aimed at protecting households and firms during the acute phase of the pandemic. They relied upon social transfers, much of which went into savings during the acute phase of the pandemic. These accumulated savings were spent over the next couple of years, once fear of COVID-19 receded. In the euro area, quite often, fiscal policies were also used to reduce energy and food price increases through subsidies to producers and/or retailers. This moderated inflation at the time, but contributed to the surge later on when the subsidies were removed (not all of them have been removed everywhere).

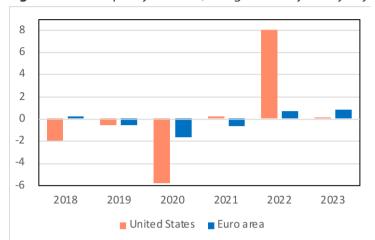


Figure 11: Fiscal policy actions (change in the cyclically adjusted budget balance, % of potential GDP)

Source: OECD.

In both the euro area and the US, the combination of large transfers and diminished consumption during the acute phase of the COVID-19 pandemic has led households to increase their savings. When the pandemic eased up, they have started to spend their accumulated excess savings. The result has been a strong recovery, a delayed effect of expansionary fiscal policies. This process is still under way but could soon reach end. This would slow growth down, accelerate disinflation and weaken the labour markets. It is one additional reason to doubt the "high for long" commitment of central banks.

3.3. QE and QT

A few months after they started to lift their policy interest rates, the ECB and the Fed began to reduce their balance sheets, a process called quantitative tightening (QT). The intention is to keep the power dry in the event of future financial turmoil. In fact, the Fed had to temporarily reverse the process when three medium-sized banks failed in March 2023. Neither quantitative easing (QE) nor QT have much of a macroeconomic effect – they are not substitutes for interest rate policies – but the abundance of liquidity contributes to stabilise the financial markets. QT is proceeding at a measured and predictable pace (in the case of the ECB) as central banks observe how the markets adapt to the new environment of higher interest rates.

Financial market stability is a very important issue when increases in the policy rate deeply affect the business model of all financial institutions. So far, bank profits have risen, in part because bank deposits at their central banks are remunerated, in part because higher rates allow them to raise the interest that they charge to borrowing customers by more than they increased the interest served on deposits, if at all. However, higher interest rates have led to a decline in the value on the bonds that financial institutions hold for regulatory reasons, including those that are deemed safe. These losses affect the

financial balance of financial institutions and can threaten their solvency, which has happened in a few cases.

Beyond the financial stability aspect, the risk from QT is that financial institutions respond by tightening their activities, in particular bank lending to firms and households. In that sense, QT may have a restraining effect on economic activity and on inflation, but this effect is likely to be modest at least relatively to the rise of interest rates. Anyway, both the ECB and Fed are following parallel QT paths, so it does not explain any difference in inflation outcomes.

4. THE NEXT STRATEGY

At the end of October 2023, headline inflation stood at 2.9% in the euro area and at 3.2% in the US. This is not very far from the target of 2%. The Fed and the ECB now face a new set of challenges to which they respond in similar ways for the time being.

4.1. Timing: the turnaround

Inflation has been declining fast since this summer. If confirmed, this would signal the end of the tightening period. Both central banks are committed to durably bring inflation rates to their 2% target. The problem is that monetary policy operates on inflation with long lags, of the order of one to two years. In principle, they should base today's actions on how inflation will evolve over that period. But, having failed to foresee the surge, both central banks have become prudent. They have shifted from forward guidance, announcing their intentions based on previsions, to data dependence: they now claim to rely on what they see, not what they foresee. This all but guarantees that they will stop the tightening cycle too late.

Most central banks seem to follow the same strategy. In order to mitigate the risk of excessive tightening, they officially started to "pause", suspending the tightening cycle but keeping policy interest rates where they currently are, even though inflation is still too high. At the same time, they state that they will keep the policy rate "high for long". Implicitly, they trade a strategy of further tightening soon followed by relaxation against less tightening but a delayed relaxation. This is not just a reminder of the previous forward guidance "low for long", thus mixing up forward guidance and data dependence, it is also risky, for three reasons.

- One lesson, which all central banks profess to have learned from the periods of very low inflation and of surging inflation, is that, no matter as desirable it might be, they should refrain from making commitments. Denying that forward guidance is not a commitment is not credible.
- The rapid fall of inflation is largely due to the decline in energy prices down from previous highs. These prices could rise again in the near future, for many reasons that include new geopolitical turbulence and supply cuts by OPEC.
- Conversely, should inflation soon return to target, monetary policy would be revealed as too tight. The last thing that central banks want is to return to the period of too low inflation. They would therefore promptly start a cycle of interest rate cuts, thus ditching the currently announced interim period of "high for long".

4.2. Next low rates

Once they start lowering their policy rates, central banks will have to determine the point of arrival. Assuming (unrealistically) that there is no further shock, this should be the neutral interest rate. As mentioned in a previous paper (Wyplosz 2021), the level of the neutral rate is highly contentious everywhere. At best, it is estimated with a high degree of imprecision. The debate will go on in parallel in the euro area and in the US. It is likely that the ECB and the Fed will follow similar approaches, testing where the neutral rate is.

4.3. Bank remuneration and size of balance sheets

As a result of QE, bank reserves held at central banks are now vastly excessive. This should drive the interbank market rate to zero. To keep the interbank market rate close to the policy rate, central banks have undertaken to remunerate deposits at the policy rate, which establishes a floor for the interbank

market rate. As they raised the policy rate, the cost of reserve remuneration has grown, sometimes wiping out central bank profits, including in the Eurosystem and at the Fed. Of course, central banks are not-for-profit institutions, so this is not a monetary policy issue. Yet remunerating banks is politically contentious. Eventually central banks will have to face the issue.

One solution would be to return to the previous regime of scarce reserves, which allowed central banks to control the interbank rate by managing the scarcity, without remunerating the bank deposits. Other solutions involve tiering, which means applying different rates of remunerations for parts of the reserves. Since September 2023, the ECB pays no interest on the required reserves. The saving is small but could be raised by increasing the requirement, for example by including the various prudential obligations to hold high quality assets as mandated by the Basel III agreements.

5. CONCLUSION: THE GENIE IS OUT OF BOTTLE

There are important differences in the evolution of inflation in the euro area and the US, and many similarities. The timing is striking. In both, inflation has been very low for more than a decade, despite largely unsuccessful efforts by the ECB and the Fed to bring it up to target, only to rapidly increase in the wake of the pandemic. The quasi simultaneity of these historical events points to similarity in causes and treatments by the central banks, especially as much the same occurred in many other developed countries. The low inflation period reflected the durable effects of the Global Financial Crisis and the ensuing efforts to adopt financial regulations. The 2021 inflation surge was triggered by the rapid recovery of spending on the demand side and, on the supply side, by the disruptions in labour markets and in global supply chains following a period of widespread restrictions of economic activities. The key difference is that the US has been ahead of the euro area in the timing of inflation and of the policy responses. Inflation surged earlier in the US in part due to a pre-COVID-19 pandemic fiscal expansion, in part because, in several euro area Member States, the fiscal reaction to the COVID-19 pandemic has been to use subsidies to limit price and wage subsidies.

Once inflation rose, the genie was out of the bottle. For a while, the ECB and the Fed thought that it would return spontaneously back into the bottle so that inflation would revert to pre-COVID-19 pandemic levels. This could have been the case if the surge was entirely caused by a pure supply shock and with no policy reaction. The central banks did not factor in the expansionary fiscal expansions nor the dissaving by the private sector. Furthermore, they were convinced that keeping inflation expectations anchored would prevent any price-wage spiral, hence their initial choice to not react. Given the extent of losses in the purchasing power of wage-earners, this too was unlikely.

The ECB stuck with this gentle-genie view longer than the Fed, arguing that the euro area was not in the same situation as the US. It is true that the 2020 US fiscal expansion did not have an equivalent in the euro area, but the household dissaving after the pandemic was broadly similar and pressure for wages to catch up on prices would eventually invalidate the argument that Europe is different.

When the Fed finally moved, it reacted more forcefully than the ECB. Along with the fact that the subsequent Ukraine shock hit oil and gas-dependent Europe much more strongly than the oil and gas-producing US, this explains that eventually inflation peaked earlier and lower in the US than in euro area.

Much has been said about whether inflation will get back to target without countries having to undergo a recession – a hard landing. It could, but that is the wrong question. A quarter of two of negative growth is certainly painful, but such a temporary event pales in comparison with the consequences of prolonged weak economic growth. This is where the euro area stands to differ from the USA, as it has done in the past. The left-hand chart in Figure 12 shows the evolution of GDP per capita in the euro area and the US, with a forecast for 2023. The euro area was hit harder during the Global Financial Crisis and the sovereign debt crisis, and it has never recovered. It was again hit harder during the COVID-19 pandemic and its aftermath, further enlarging the gap. This is partly due to demand factors but the right-hand chart show that the euro area's supply side also lags since 2008, and increasingly so. Relative to the US, GDP per capita of the euro area has declined by some 8% and potential GDP by nearly 15%.

GDP per capita Potential GDP 140 115 130 110 120 105 110 100 100 95 90 90 2006 2008 2010 2012 2014 2016 2018 2020 2022 2006 2008 2010 2012 2014 2016 2018 2020 2022 -Euro area ----US Furo area ——US

Figure 12: Real GDP in the euro area and the US (Index: 100 = 2006)

Source: Economic Outlook, OECD.

The relative loss of the euro area is not related to monetary policy but it is complicating the task of the ECB. In the shorter run, it raises the probability of a hard landing. In the longer run, it will make it harder for highly indebted governments to serve their debts. This difficulty will be magnified if interest rates remain high, below their current levels but above those seen before the COVID-19 pandemic. Similar concerns apply to the private sector, including banks, where indebtedness has generally risen markedly, raising fears of financial instability. The ECB released its latest strategy review just before the COVID-19 pandemic. Lower growth and higher rates make this strategy outdated. Hopefully, this will play an important role in the new strategy review expected in 2025.

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Inflation has surged and then declined in broadly similar ways in the euro area and the United States, because it has been driven by the impact of the pandemic and its aftermath. Yet, specific differences reflect how monetary and fiscal policies responded as well as the impact of the Russian invasion of Ukraine. The central banks face whole new challenges as they prepare to navigate the next phase now that inflation has rapidly declined, but also further along.

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