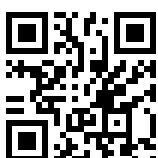


Are inflation dynamics different in the euro area and the United States?



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Abstract

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The euro area and the United States have both experienced an episode of strong inflation post COVID-19 pandemic and after the Russian invasion of Ukraine. We highlight commonalities as well as differences in these episodes, in terms of headline and core inflation, inflation differentials and causes, and monetary policy between the euro area and the United States. We propose different scenarios for inflation and monetary policy.

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This document was requested by the European Parliament's Committee on Economic and Monetary Affairs.

AUTHORS

Christophe BLOT, Sciences Po-OFCE and Université Paris Nanterre
François GEEROLF, Sciences Po-OFCE, Sciences Po and CEPR

ADMINISTRATOR RESPONSIBLE

Giacomo LOI
Drazen RAKIC
Maja SABOL

EDITORIAL ASSISTANT

Adriana HECSER

LINGUISTIC VERSIONS

Original: EN

ABOUT THE EDITOR

The Economic Governance and EMU Scrutiny Unit provides in-house and external expertise to support EP committees and other parliamentary bodies in shaping legislation and exercising democratic scrutiny over EU internal policies.

To contact Economic Governance and EMU Scrutiny Unit or to subscribe to its newsletter please write to:

Economic Governance and EMU Scrutiny Unit
European Parliament
B-1047 Brussels
E-mail: egov@ep.europa.eu

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LIST OF ABBREVIATIONS

BLS	Bureau of Labor Statistics
CPI	Consumer Price Index
ECB	European Central Bank
Fed	(US) Federal Reserve
GSCPI	Global Supply Chain Pressure Index
HICP	Harmonised index of consumer prices
IMF	International Monetary Fund
OOHPI	Owner-occupied housing price index
PCE	Personal Consumption Expenditures
TTF	Title Transfer Facility
US	United States
WTI	West Texas Intermediate

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EXECUTIVE SUMMARY

- **Using a common definition of inflation corresponding to the euro area Harmonised Index of Consumer Prices (HICP), the dynamics of inflation rates in the euro area have lagged those in the United States (US) (by about 4 months),** but so far, the magnitude of the overall increase in the price level has been very similar since the start of the inflationary episode.
- **One significant difference between the euro area and the US is a more substantial role for energy in inflation in the euro area in 2022, as well as a still much stronger increase in food prices, and a much stronger role for rents in the US.** Rents have been much more dynamic in the US than in Europe, so according to a more comprehensive definition of inflation including owner-occupied housing, the cumulated increase in inflation in the US is actually larger than in Europe.
- **The one key factor driving inflation dynamics has been energy, both in the US as well as the euro area.** However, energy inflation is probably overestimated because of methodological difficulties in the measurement of natural gas/electricity prices: in some countries, the flow of new contracts is taken into account rather than the stock (because of a lack of statistical information), so that movements in energy prices are exaggerated and only apply to those who renew their contracts. This implies that headline inflation heterogeneity is also overestimated.
- **Many indicators point towards stronger aggregate demand in the US than in the euro area.** Fiscal policy, GDP growth and consumption growth, as well as the level of unemployment all concur towards thinking that aggregate demand in the US economy is stronger than in the euro area. This may also explain why core inflation in the US is stronger than in the euro area, and in particular rent inflation.
- **Disentangling the role of energy prices and other supply factors from demand matters for the implementation of monetary policy.** Both inflation rates have been showing similar dynamics/path. However, in 2021-2022, the contribution of energy prices to inflation in the euro area was higher whereas, core inflation has played a more important role for the US inflation dynamics.
- **Euro area / US macroeconomic divergence is a potential risk going forward, as it may lead to diverging monetary policy across the Atlantic.** A weakening euro area economy might make it difficult to keep interest rates unchanged in the euro area. At the same time, a much stronger US economy might require keeping policy interest rates higher for longer, and might be more capable of withstanding such higher rates.
- **However, the fact that inflation is so far coming down faster in the US than in the euro area is an encouraging sign.** It may allow the Federal Reserve (Fed) to lower interest rates sooner rather than later and allow the European Central Bank (ECB) to do the same without risking a stronger divergence in the euro/dollar exchange rate, thus exacerbating inflationary pressures in Europe from a weaker euro.

1. INTRODUCTION

Inflation has risen substantially in both the euro area and in the US since the reopening of economies across the world after the COVID-19 pandemic, with a significant acceleration in prices following Russia's invasion of Ukraine. In the US, inflation started to rise about 4 months before Europe, around March 2021. In March 2022, the Federal Reserve started to increase interest rates for the first time; and so, did the ECB in July 2022. For a bit more than a year, both the Fed and the ECB have been increasing interest rates at almost every monetary policy meeting, with one last increase in July 2023 for the Fed and in September 2023 for the ECB. Both central banks have stopped increasing interest rates at their last monetary policy meetings (last two for the Fed), and so the question has become: how much longer both central banks should keep interest rates at these elevated levels? Their further decisions will be surely conditioned on the inflation dynamics but may also depend on the nature of inflation in both currency areas.

At the current juncture, it might be useful to compare inflation dynamics in the euro area and in the US, how comparable they are (were), both at the aggregate and when examining HICP sub-components. It might also be useful to compare which sub-components contributed the most to inflation in both regions. Moreover, it might also be informative to investigate the causes and consequences of inflation differentials, and examine wage, profit, and unit labour cost developments in the euro area and in the US. Finally, we also take a closer look what the likely causes of high inflation might be. As monetary policy is mainly transmitted to prices through its effect on aggregate demand, it may also be relevant to assess whether inflation in the US and in the euro area has been mainly demand- or supply-driven. We end with a discussion on possible scenarios for monetary policy going forward, although much remains uncertain at this stage.

2. INFLATION RATES IN THE EURO AREA AND IN THE US

Aggregate inflation has followed strikingly similar patterns in the euro area and in the US, only with a 4-month lag. However, when one looks a bit more in detail, there are differences between inflation sub-components, and so the source of this aggregate inflation in the two currency areas. In this section, we first describe the data without trying to disentangle causality in any way. The latter more speculative, but also potentially more interesting exercise is undertaken in Section 3.

2.1. Post-COVID-19 inflation: similar patterns with a 4-month lag

The first difficulty is that there are many different possible measures of US inflation (see Box 1). But regardless of these differences, inflation started to rise earlier in the US than in the euro area, going beyond the 2% annual threshold around March 2021, while that level was reached in July 2021 in the euro area 4 months later, as shown on Figure 1. In the US, inflation has peaked at 8.9% annually in June 2022 according to the Consumer Price Index (CPI). In the euro area, inflation has peaked at 10.6% (measured by HICP) in October 2022, again 4 months later.

Such levels of inflation had not been observed since the early 1980s in the US and in European countries.¹ It was a historical record in the euro area since 1999 where the previous highest peak established at 4.1% in July 2008. This high level of inflation was also persistent since it remained above 5% from June 2021 until April 2023 in the US and from December 2021 to September 2023 in the euro area.

One year and a half after the first Fed tightening, the US and the euro area still appear to be moving in tandem. At present, the ECB has announced that interest rates “have reached levels that, maintained for a sufficiently long duration, will make a substantial contribution to the timely return of inflation to the target” and that “ECB interest rates will be set at sufficiently restrictive levels for as long as necessary”. In the meantime, headline inflation appears to be coming down almost as fast as it went up (at about 0.5 percentage points (p.p.)/month, or 6 p.p./year). In October 2023, US annual inflation according to the CPI was at 3.2%, while according to the Eurostat flash estimate it was at 2.9% in the euro area. Markets now anticipate a 0% chance of further Fed tightening at their next meeting on December 13, 2023, although Jerome Powell has said at the last International Monetary Fund (IMF) Research conference (on November 9) that “If it becomes appropriate to tighten policy further, we will not hesitate to do so.”

¹ For example, in the US, inflation exceeded 14% between February and June 1980 according to the CPI calculated by the BLS. It has decreased regularly since then. According to the CPI, the previous peak of inflation above 5% was observed in February 1991.

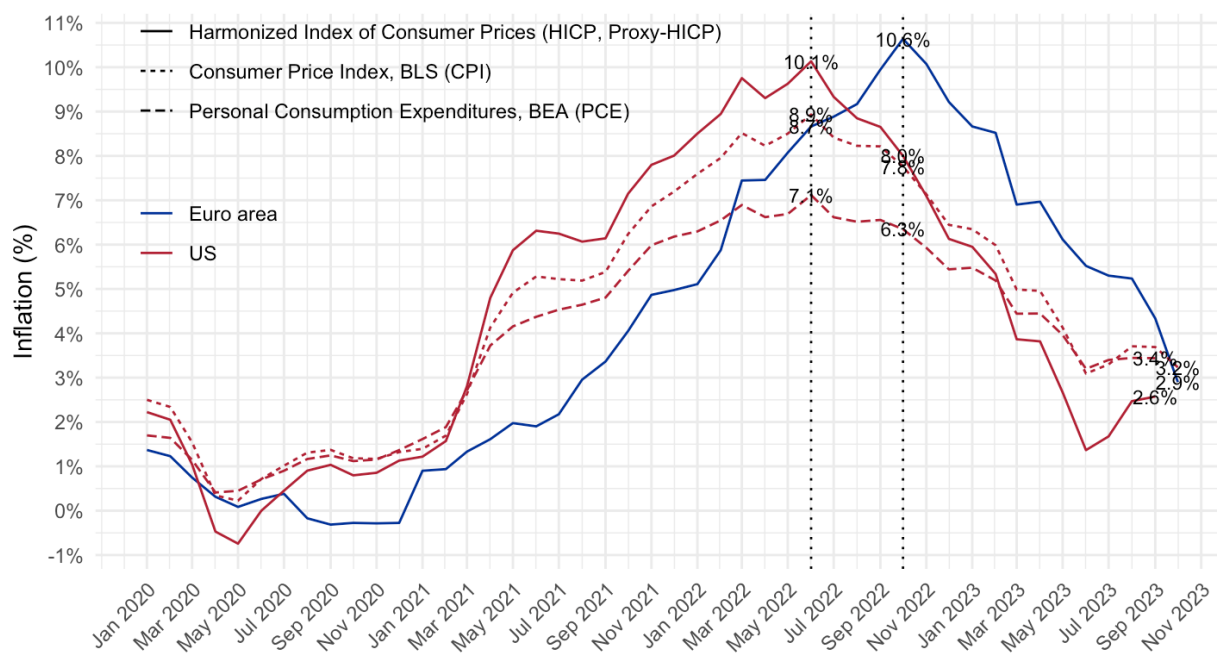
Box 1: Different measures of inflation: CPI, PCE, HICP, proxy-HICP²

Different measures of inflation can be used to measure inflation in the US, all of which are official. The CPI published by the Bureau of Labor Statistics (BLS) is the probably one of the most used measures, for example for indexation purposes, but also cost-of-living adjustments.

The Personal Consumption Expenditure (PCE) measure is computed by the Bureau of Economic Analysis (BEA) and is preferred by the US Federal Reserve to decide on monetary policy matters. There are many differences between the CPI and the PCE (see [here](#) for example), but the CPI is generally greater than the PCE, because it is based on a Laspeyres-type index rather than a Fischer-type index.

Finally, to ease comparison with the euro area, the US also calculates a so-called proxy-Harmonized Index of Consumer Prices (HICP) which is meant to be comparable to Eurostat's HICP. Whenever possible, we therefore make comparisons with the HICP and the proxy-HICP. Unfortunately, the HICP is, however, not perfect either (for example, the exclusion of owner-occupied housing from this index can be a problem). Moreover, the proxy-HICP is only published at the two-digit classification of individual consumption by purpose (COICOP) level.

Figure 1: Inflation rate in the US and the euro area, according to different official measures of inflation

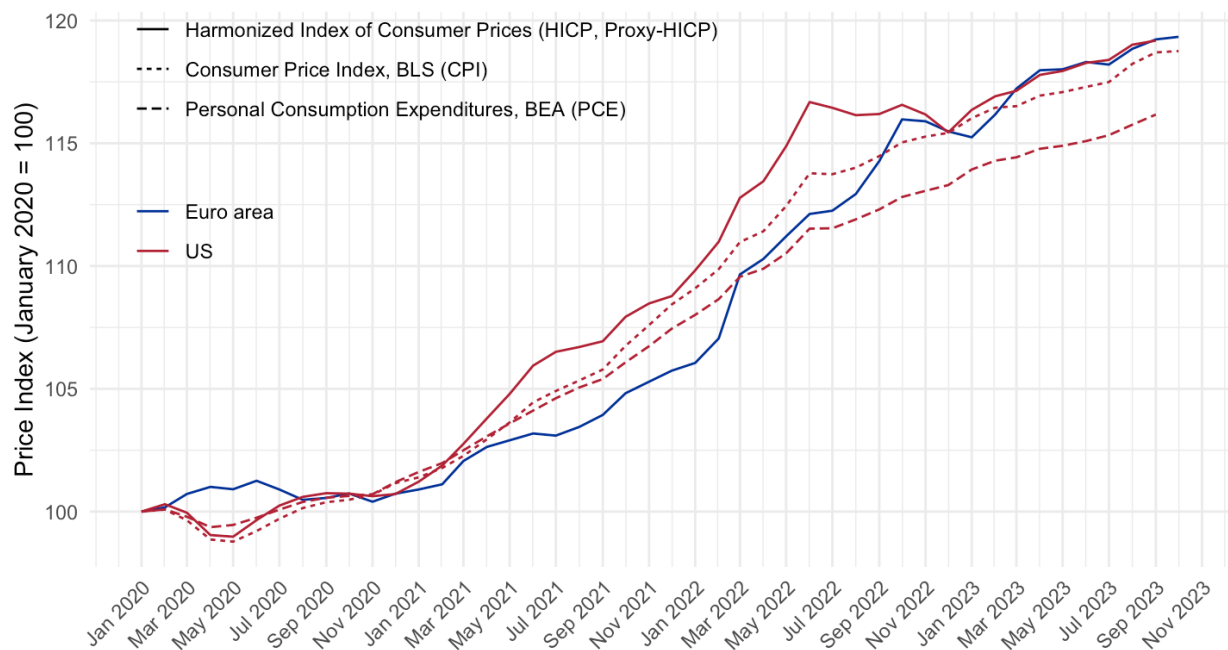


Source: BLS and Eurostat, authors' own elaboration.

Note: Vertical dashed lines represent the peak of inflation in the US (June 2022) and in the euro area (October 2022).

² BLS, BEA, authors' own elaboration.

Figure 2: Cumulative price increases, according to different official measures of aggregate price indices

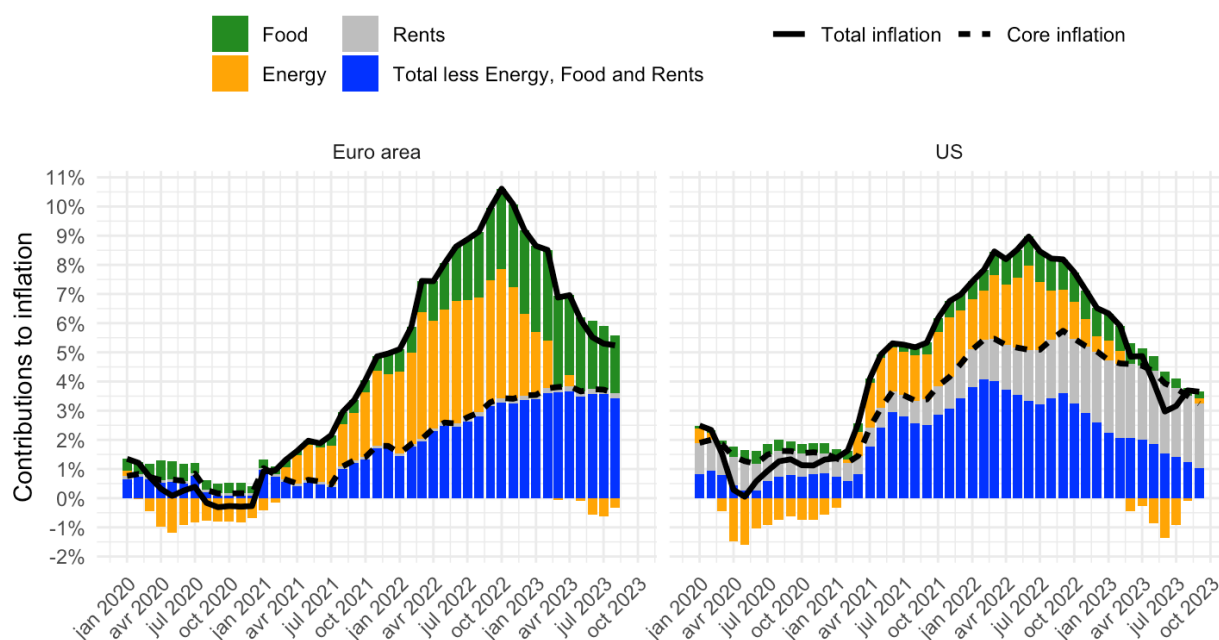


Source: BLS and Eurostat, authors' own elaboration.

Despite these differences in the dynamics of inflation rates, the overall increase is similar when looking at price levels, as shown in Figure 2. Comparing the US equivalent of Eurostat's HICP (so-called proxy HICP), the level of prices was very similar in the euro area and in the US (again, see Box 1).

2.2. Decomposing inflation across sub-components

When one takes a closer look, decomposing the aggregate price level into its subcomponents, one starts to see substantial differences between the euro area and the US, as shown in Figure 3. First, during this inflationary episode starting end 2021, energy has had more impact on inflation in the euro area than the US. The breakdown of this difference in energy inflation can be understood by looking at Figure 4, where it is shown that natural gas and electricity prices seem to have been much more volatile in the euro area. However, one must be careful of substantial measurement issues clouding the measures of energy inflation, as explained in Box 2. At present, the full extent and quantification of this problem remains elusive.

Figure 3: Contributions to inflation

Source: OECD, authors' own elaboration.

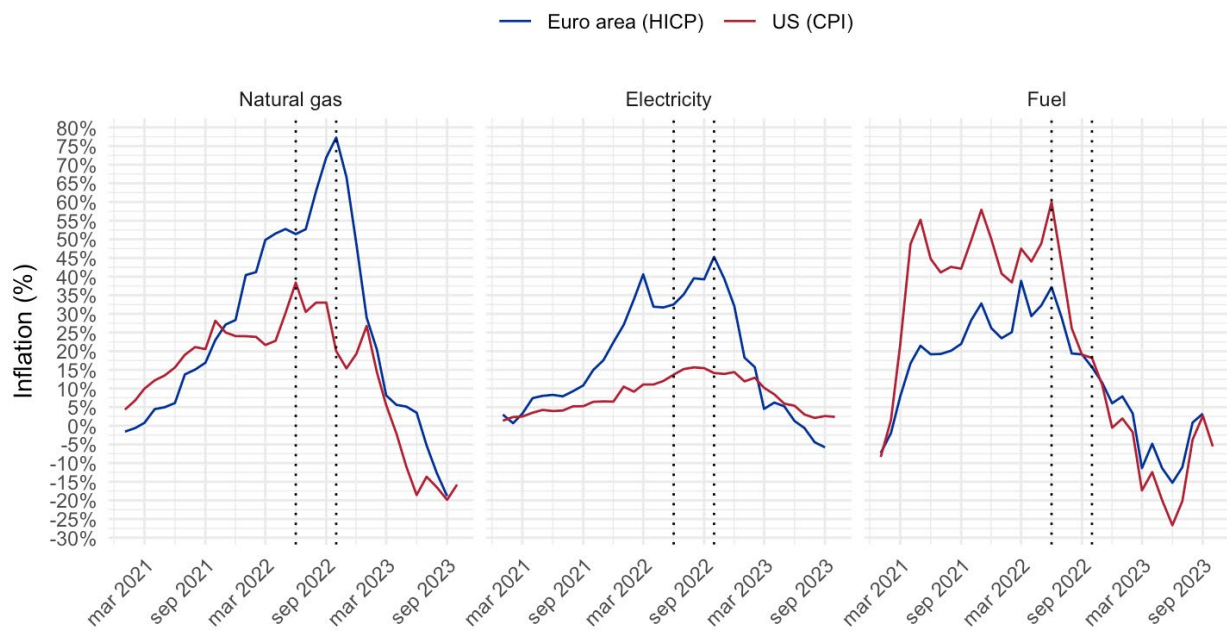
Box 2: Natural gas and electricity prices: measurement issues³

Inflation measurements normally follow international guidelines and procedures ensuring comparability across countries. However, this is not always the case. Recently, Statistics Netherlands (CBS) has recognised an issue concerning the measurement of electricity/natural gas prices: the flow of new contracts, rather than the stock, was taken into account so that measured price rises were exaggerating inflation rates for the average consumer. Statistics Netherlands has very transparently [communicated](#) about this problem, but the full extent of the problem for other European countries remains unknown. This problem implies that inflation might have been overestimated at the peak of the inflationary crisis in Europe, in a different way depending on how statistical institutes deal with this problem, and the share of market-based/renewing contracts in each country.

Note that these measurement issues are not always without consequences: indexations of wages, or goods and services (for example, rents) often occur based on headline inflation (which includes energy). Headline inflation also plays an important role in monetary policy decisions, so further harmonisation efforts should perhaps be undertaken.

However, one should note that on Figure 4 fuel prices follow the opposite pattern in the US, which have overall been more cyclical. This is probably since taxes are a much smaller component of fuel costs in the US than in the euro area.

³ Statistics Netherlands, authors' own elaboration.

Figure 4: Energy inflation

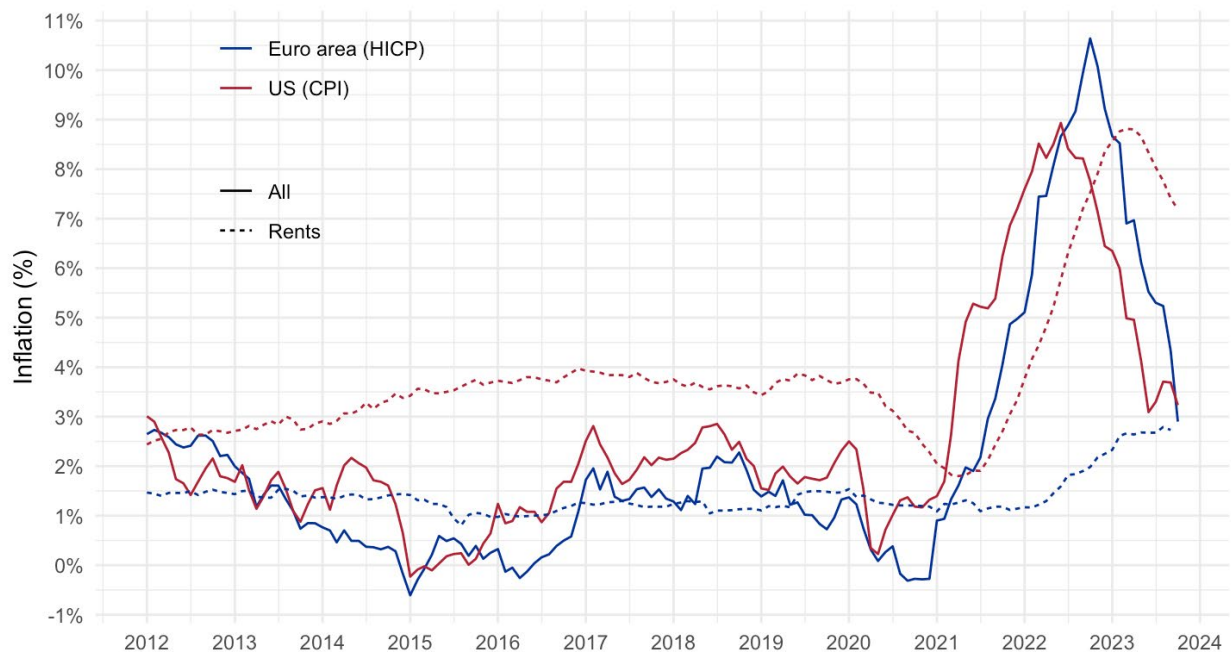
Source: BLS, Eurostat, authors' own elaboration.

Note: Vertical dashed lines represent the peak of inflation in the US (June 2022) and in the euro area (October 2022).

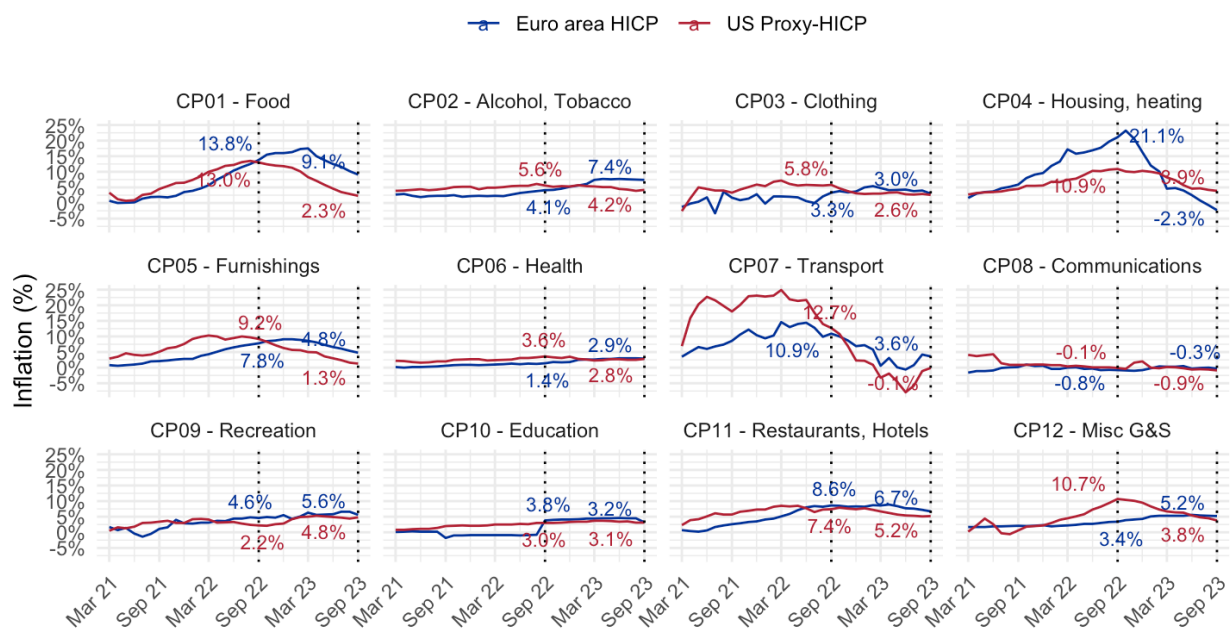
Looking back at Figure 3, one can also note that food inflation has been, and still is, a more significant contributor to inflation in the euro area than in the US which is perhaps less often mentioned than the energy component which is well known.

Finally, it is very important to note the role of rent inflation, which is stronger in the US CPI than in the HICP. There are two reasons for this: one is that the HICP does not include owner-occupied housing costs, so the weight on rent is quite small: in the US, the shelter component accounts for 35% of the CPI, which is about six times the weight of rents in the euro area⁴. Moreover, rent inflation is much higher in the US (see Figure 5), which compounded with a higher weight on rent implies a very high contribution of the shelter sub-component to inflation in the US (Figure 3). It should be noted that inclusion of owner-occupied housing costs to the HICP would not make a big difference for the euro area for the latest inflation numbers: as shown on Figure 5, rent inflation is very close to overall inflation in the euro area. However, this would have led to much lower inflation numbers before: in contrast to the US, rent inflation was a dampening factor on overall inflation, so putting more weight on it would have made inflation lower. It should be noted that the inclusion of an owner-occupied housing price index (OOHPI) into the HICP is envisaged from 2025 onwards (using a different methodology from the BLS), and Eurostat is currently working on it.

⁴ For more information on this important issue, see for example "Rent inflation in the euro area", published as part of the ECB Economic Bulletin, Issue 7/2023. https://www.ecb.europa.eu/pub/economic-bulletin/focus/2023/html/ecb.ebbbox202307_07~d55c0f2d23.en.html

Figure 5: Total and rents inflation, euro area vs. US

Source: BLS, Eurostat, authors' own elaboration.

Figure 6: Inflation by COICOP category, euro area vs. US

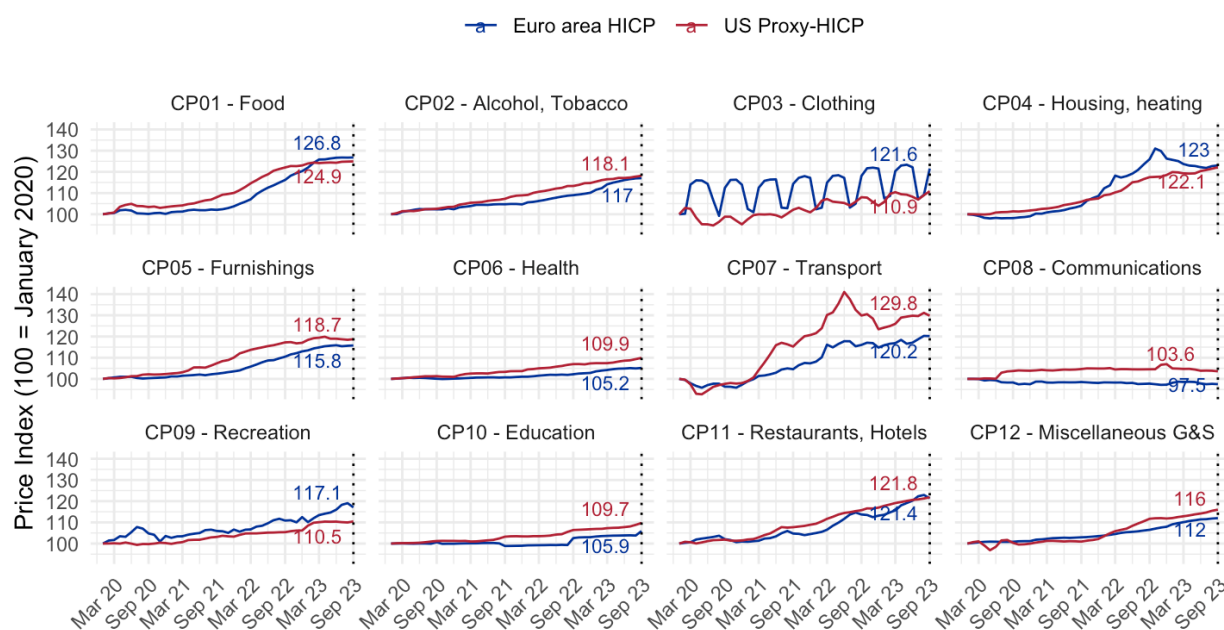
Source: Eurostat, authors' own elaboration.

Note: Vertical dashed lines correspond to September 2022 and September 2023, where percentage values are given.

Finally, one can compare more systematically the sources of divergences between inflation in the US and in the euro area using HICP and proxy-HICP data provided by Eurostat, in Figure 6 (again, see Box 1). For example, in September 2023, year-on-year food inflation was 9.1% in the Euro area, and 2.3% in the US according to the proxy-HICP. Figure 7 gives the cumulative price increase since January 2020 by COICOP category. So far, food inflation has been similar since January 2020 in the euro area and the

US, around 25%, because food inflation started earlier in the US. On the other hand, the cumulative price increase in transportation has been much greater in the US than in the Euro area.

Figure 7: Cumulative price increases by COICOP category, euro area vs. US



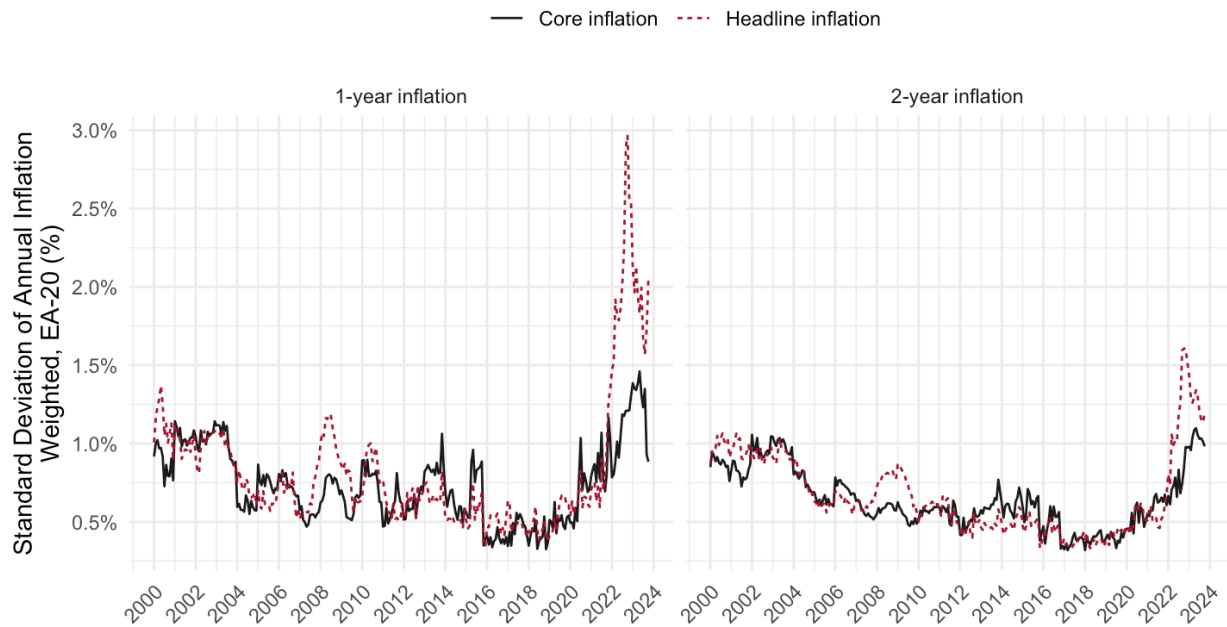
Source: Eurostat, authors' own elaboration.

2.3. Inflation differentials

The euro area is often said to have a one-size-fits-all monetary policy, which cannot address inflation heterogeneity across euro area Member States. Blot et al. (2022) investigated this heterogeneity in some depth, looking at weighted and unweighted measures of heterogeneity, using different statistical measures.

Figure 7 updates these results using the weighted standard deviation. It shows that headline inflation heterogeneity is very high, which again may be explained (at least in part) by methodological difficulties (Box 2). Consistent with this, 2-year headline inflation is much less heterogeneous as shown in the right-hand panel of Figure 7, which suggests some mean reversion, again owing to methodological problems working in the opposite direction when energy prices go down. Core inflation heterogeneity has also risen less according to the 2-year measure, but it's also falling less rapidly, and is almost at a historical high. Services inflation heterogeneity behaves very much like core inflation heterogeneity.

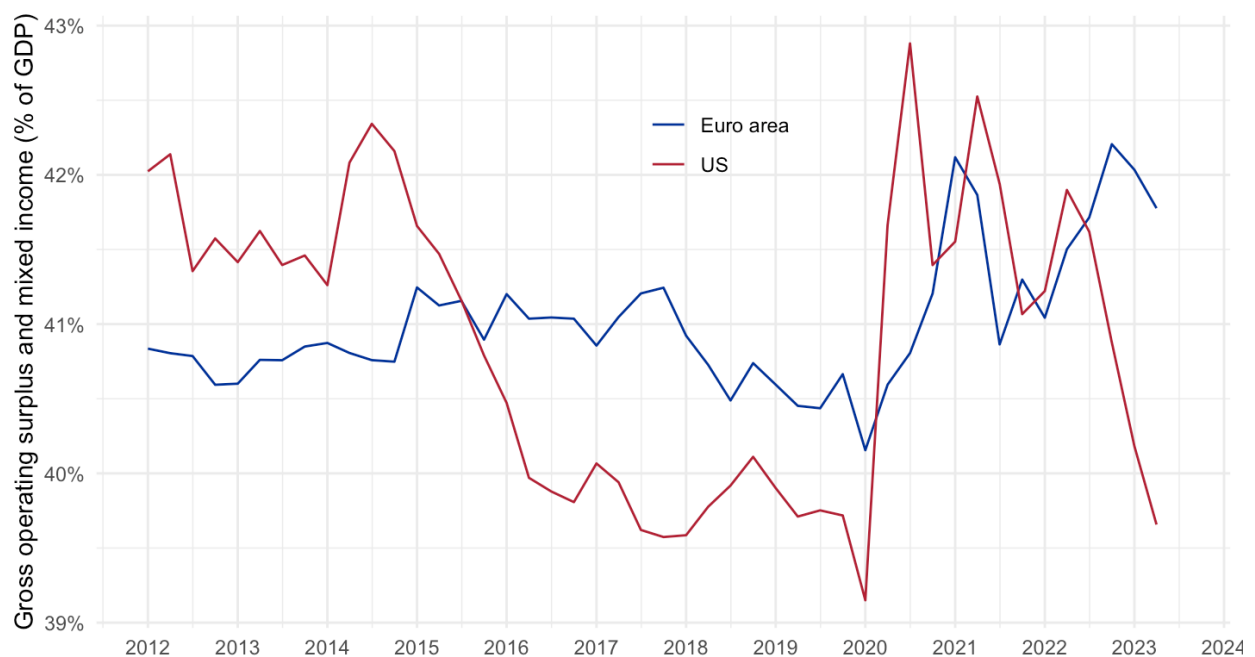
There is unfortunately no official, national accounting data on the state-level inflation for the US coming from the BLS. The BLS does publish inflation rates for different regions, or cities, which are much less heterogeneous, but we have not really found anything worthy of reporting.

Figure 8: Inflation differentials in the euro area

Source: Eurostat, authors' own elaboration.

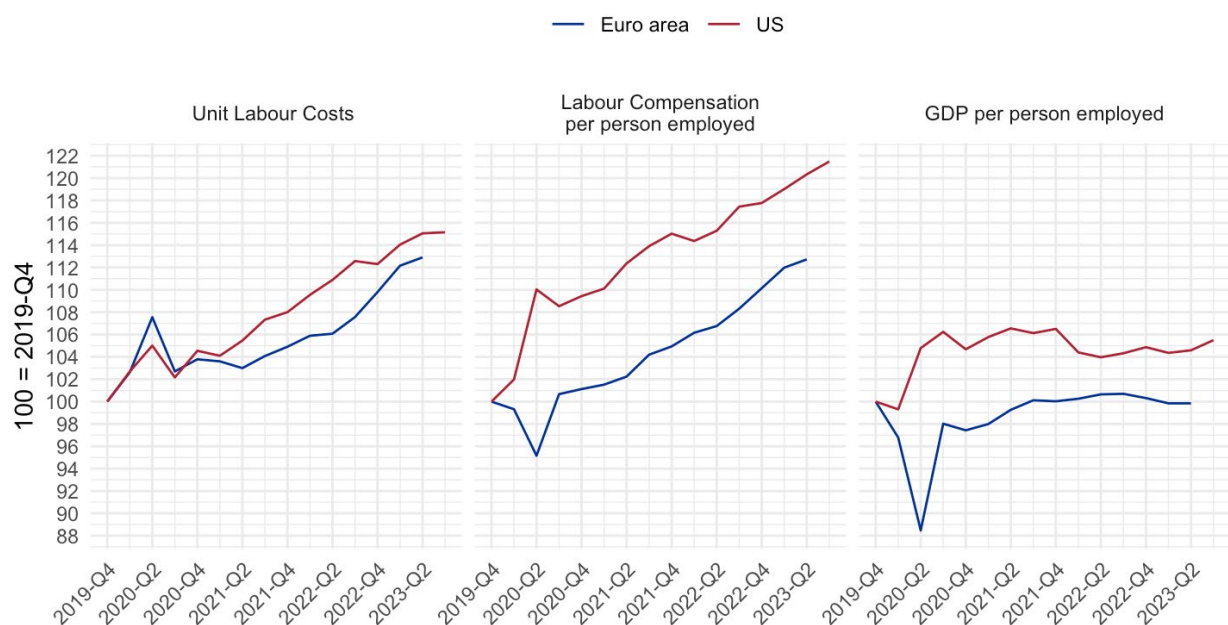
2.4. Wages, profits and productivity

Wages have largely lagged behind inflation so far, in both the euro area and the US, and have not been a significant source of inflation. Of course, wage inflation has increased, but by less than price inflation. So, if anything, falling real wages means that wages have tended to work against inflationary pressures. This is quite different from what happened in the 1970s where wage indexation meant that wages were not contributing to easing inflationary pressures. Consistent with this, there has so far been no deterioration of the profit share: to the contrary, profits have been high after the onset of the Russian invasion of Ukraine, and seem to remain so in Europe, as shown on Figure 8. Given the absence of a wage-price spiral, at least so far, many have started to talk about a profit-price spiral instead, but again Figure 8 seems to point towards a relative stability of the profit share. It remains to be seen whether euro area profits remain at these elevated levels in the coming quarters.

Figure 9: Gross operating surplus (% of GDP), euro area vs. US

Source: OECD, authors' own elaboration.

Finally, as shown in Figure 9, unit labour costs have increased slightly more in the US than in the euro area since before the COVID-19 pandemic (2019-Q4). However, this hides a strong stagnation in labour productivity in the euro area, while measured labour productivity appears much more volatile in the US. This explains in large part why labour compensation per person employed has been so much more volatile since the start of the COVID-19 pandemic.

Figure 10: Decomposition of unit labour costs, euro area vs. US

Source: OECD, authors' own elaboration.

3. SAME INFLATION BUT A DIFFERENT NATURE?

Which factors are behind the recent inflation surge is a crucial issue for policymakers and central banks that oversee price stability. Economists generally like to disentangle demand- and supply-driven inflation. Inflation may indeed either result from an excess of demand – in the good or labour markets – or from a lack of supply. Those factors may also be domestic or global.⁵ As monetary policy is expected to influence domestic demand – through the transmission of a tightening of loosening of financial conditions – central banks may tame inflation by weighing down the domestic demand and increasing the unemployment rate, to the extent that the Phillips curve is not too flat. Consequently, monetary policy would be much less effective in stimulating supply – at least in the short run – or addressing inflation pressures stemming from global factors. Disentangling the role of energy prices and other supply factors from demand matters for the implementation of monetary policy. Interest rate increases are fully relevant if inflation is demand-driven but would not be effective if inflation is due to energy prices or supply shortages.⁶

3.1. A more significant role for energy prices in the euro area

The rise in inflation was concomitant to the surge of energy prices observed in 2021 and amplified after the Russian invasion of Ukraine. Not only is the share of energy goods and services in the consumption basket higher in the euro area, but the nature of the shock was also different.⁷ While the prices of oil are quite similar, there is more heterogeneity in the prices of gas paid in Europe than in the US because of costs of transportation. In the US, the reference price of natural gas – Henry Hub – went from a trough at USD 1.6/megawatt hour (MWh) in June 2020 to a peak at USD 8.8/MWh in August 2022. In the euro area, the Dutch Title Transfer Facility (TTF) price has been multiplied by 48 from May 2020 to August 2022.

The decomposition of inflation between energy prices, food prices and core inflation may provide a first picture of the nature of inflation in the US in the euro area. The contribution of energy prices to the surge of inflation has been more important in the euro area (Figure 3). Even before the invasion of Ukraine, energy prices had significantly increased contributing for 2.4 and 1.9 points, respectively, in inflation in the euro area and in the US in the 2021-Q4. In 2022-Q2, this contribution reached 4.2 points in the euro area, representing more than 50% of the rise in the year-over-year, while it was 30% of inflation in the US for the same period. It may also be noticed that the increase of food prices has had a more pronounced effect in the euro area, contributing still significantly to the euro area inflation in 2023-Q3.

As inflation rates in both areas were close, the higher role of energy prices in the inflation dynamics in the euro area entails a stronger contribution of the core inflation in the US.⁸ It may also be stressed that the contribution to inflation only captures the direct effect of energy prices to headline inflation. There may also be indirect effects if the rise of oil and gas prices increases the price of intermediated goods and the costs of firms which are then passed through by firms to the price of final goods and services. Finally, the recent period has been characterised by a negative contribution of energy prices first in the US and then, again with a few months lag, in the euro area. Thus, conversely to what has been observed in 2021 and until 2023-Q2, core inflation is now higher in the euro area.

⁵ Commodities are much more homogeneous across the world than other goods and services. Their prices are thus generally determined on financial markets by the world demand and global supply. There is for instance marginal differences between the Brent price – crude oil from the North Sea – and the West Texas Intermediate (WTI) extracted from wells in the US.

⁶ During the press conference held on 8 September 2022, Christine Lagarde stated that she could not “reduce the price of energy”.

⁷ The price of energy goods and services represent 7,1% of the CPI in the United States and 10,2% of the HICP in the euro area.

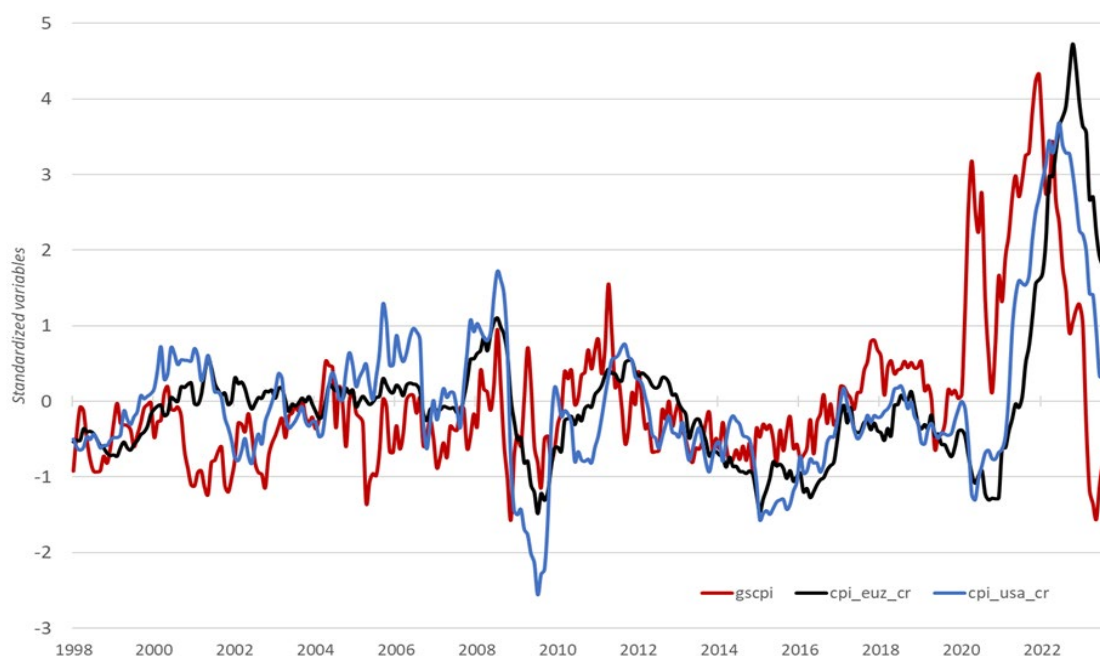
⁸ Core inflation has also been on average higher in the United States since the beginning of 2021.

3.2. The role of supply factors beyond energy prices

Beyond the role of energy prices, the post-COVID-19 inflation has also been fuelled by supply shortages. The lockdown measures taken in 2020, which remained in place in some places (notably in China) up until 2022, entailed labour shortages and supply chain bottlenecks and resulted in order backlogs for many raw and intermediate goods. Delivery times have been extended and shipping costs have soared. These pandemic-related global supply chain disruptions have reached a peak in November 2021 as illustrated by the Global Supply Chain Pressure Index (GSCPI) provided by economists from the New York Federal Reserve.⁹

Liu and Nguyen (2023) have recently proposed to assess the transmission of shocks to the GSCPI on US inflation measured by the PCE. We conduct a similar analysis to compare the impact of those supply shocks on inflation in the euro area and in the US.¹⁰ At first sight, the spike in the GSCPI in December 2021 has led the peak of inflation for a few months (Figure 10). Over the full sample, the correlation is 0.29 between the GSCPI and euro area inflation and 0.45 with the inflation in the US. A simple regression of the inflation rate explained by the GSCPI may fail to account for the relationship between the two variables as their dynamics may result from confounding factors. Impulse response functions are then estimated using local projections where we explain the year-over-year inflation by a GSCPI shocks after controlling for the lag of inflation, the lag of the GSCPI and the current yearly growth rate of the oil price.¹¹ Compared to Liu and Nguyen (2023), the estimation of GSCPI shocks controls for aggregate demand and monetary policy stance in the euro area since we aim to assess the effect of global supply factors on the inflation rate in both areas.¹²

Figure 11: Global supply chain pressure index and inflation



Source: FRB New York, BLS and Eurostat.

⁹ The index is based on several indicators of transportation costs and PMI (Purchasing Managers' Index) surveys. See <https://www.newyorkfed.org/research/policy/gscpi#/overview> and Abbai et al. (2022) for details.

¹⁰ The estimation for the United States is realised for the CPI instead of the PCE.

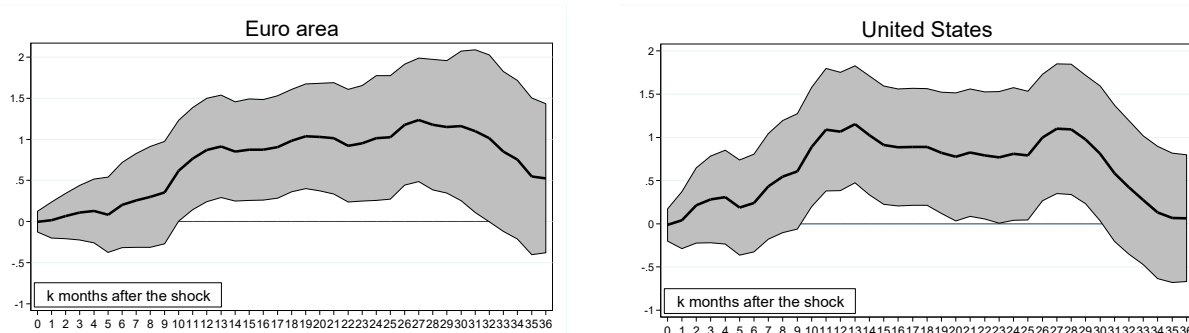
¹¹ The estimated equation is: $\pi_{i,t+k} = \rho \cdot \pi_{i,t-1} + \beta_k \cdot shock_{GSCPI} + \alpha \cdot GSCPI_{t-1} + \theta \cdot goil_{t-1}$, with $\pi_{i,t}$ the inflation rate in the euro area or in the US at time (t). The impulse response function is provided by the estimation of β_k for $k=0, \dots, 36$ months.

¹² The $shock_{GSCPI}$ is estimated by regressing the GSCPI by six-month lags of the unemployment gap and two-year U.S. and euro area Treasury yields.

Notes: To facilitate the comparison with the GSCPI, which is a standardized indicator, the inflation rates are also standardized. To that end, for each month, we compute the difference between the inflation rate and the average inflation over the whole sample divided by the standard-deviation.

Our analysis emphasizes that supply shocks, captured by global supply chain disruptions, have had a significant impact on inflation in the euro area and the US with similar magnitudes in both regions (Figure 11). The peak effect is close to one indicating that a one standard deviation of the GSCPI increases the inflation rate by one percentage point. Considering that the deviation of the GSCPI to its average value has exceeded 4 standard-deviations in December 2021, these results suggest that inflation in the US and in the euro area would increase by 6 percentage points. This effect would be long-lasting as it becomes significant 10 months after the shock and up to 30 months. Therefore, the effect of past global supply chain disruptions would materialise until the beginning of 2024.¹³ While one should be cautious in interpreting the magnitude of these effects, the results suggest that supply factors other than energy have certainly strongly contributed to the inflation in the US in the euro area.

Figure 12: Headline inflation response to GSCPI shock in the euro area and the US



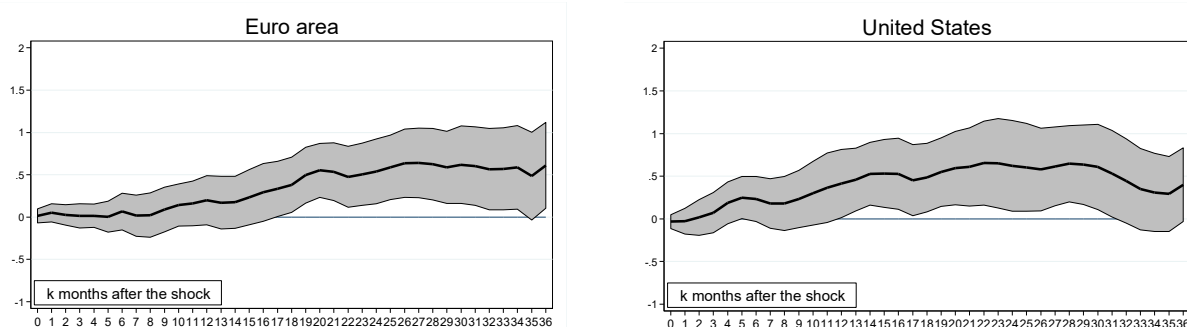
Source: Authors estimations.

Notes: the solid black line represents the response of headline inflation after a shock to GSCPI. The grey shading area shows the 95% confidence band.

Indeed, we cannot exclude that the rise of the GSCPI has been correlated with the energy prices. Beyond extended delays in deliveries, the shipping costs included in the GSCPI may have increased because of higher oil prices. Thus, the impact of shocks measured on headline inflation might reflect an increase of the energy sub-indices. The effect on core inflation may better represent the role of global supply factors in the increase of prices in intermediate goods, which has been then transmitted to consumption goods and services excluding food and energy. The estimations show that it is indeed the case, as the response of core inflation is closer to 0.5 point in both regions (Figure 12). The effects are also transmitted with delays and would then still influence core inflation. The contribution would be close to 2 points, amounting to approximately 50% of core inflation in September 2023.¹⁴ It should be stressed that global supply chain disruptions may have affected goods and services differently playing a more important role for goods. This is confirmed by Abbai et al. (2022) who find that the volatility of CPI Goods' inflation in 2021 was tracked by the GSCPI and the price of energy in the US and in the euro area.

¹³ Note that Liu and Nguyen (2023) focus on the PCE and find smaller and short-lived effects of global supply chain disruptions.

¹⁴ In the United States and in the Euro area, core inflation established at 4.1% and 4.5% respectively in September 2023.

Figure 13: Core inflation response to GSCPI shock in the euro area and in the US

Source: Authors estimations.

Notes: the solid black line represents the response of headline inflation after a shock to GSCPI. The grey shading area shows the 95% confidence band.

3.3. Demand factors and inflation

The previous analyses suggest that energy prices have directly contributed to the inflation surge in the euro area and, to a lesser extent, in the US. The role of this factor has, however, declined as contributions of energy to headline inflation have recently become negative. Beyond energy, our estimates suggest a significant role of supply factors and notably post-COVID-19 disruptions in global supply chains. Is there still some role for demand factors? Economic policies have been expansionary during the COVID-19 crisis aiming to boost demand. Central banks maintained very low interest rates until 2022.

As emphasized by Barnichon et al. (2021), the fiscal stance in the US had not been so expansionary since the New Deal of the 1930s, feeding a vivid debate on the risk of an overheating of the US economy. Fiscal support in the euro area has not been as strong, suggesting that demand factors would play a smaller role. In both regions the unemployment rates have reached low levels in 2022 which might fuel wage inflation according to the Phillips curve analysis. It should, however, be stressed that up to now, wage growth has mainly been lower than price inflation. Real wages remain subdued, notably in the euro area. Additional labour market indicators also suggest tight conditions. Firms report higher recruitment difficulties and the ratio of vacancies on unemployment went to high levels. Thus, it is hard to dismiss a potential role of demand factors but disentangling them from supply factors remains a tricky issue.

Shapiro (2022) proposed an approach to assess the relative contribution demand and supply factors by resorting to a sectoral analysis. The economy is supposed to be hit by sectoral demand and supply shocks. For a given good or service, a positive demand shock is expected to push up the price and the quantity whereas a positive supply shock would increase the quantity but reduce the price. Inflation is demand-driven if there are more sectors characterised by demand shocks. According to a recent update, demand-driven headline inflation has become dominant in the US since August 2023, whereas it was mainly supply-driven in 2022. On average, supply factors contributed to 49% of inflation measured by the PCE against 37% for demand factors in 2022.¹⁵ In September 2023, demand-driven and supply-driven inflation amounted to 1.5% and 1.4%, respectively. Still, demand factors have played a more important role in driving core inflation and became dominant from June 2022 to June 2023 and contribute equally to inflation since then.

¹⁵ The rest is found to be ambiguous. See <https://www.frbsf.org/economic-research/indicators-data/supply-and-demand-driven-pce-inflation/>.

Using Shapiro's (2022) approach, Gonçalves and Koester (2022) report that the contribution of supply and demand factors to core inflation in the euro area has been roughly equivalent. A recent analysis comparing demand-driven and supply driven inflation in advanced economies show that supply factors and supply factors were equivalent for the US but inflation in Europe would be mostly supply-driven.¹⁶

Despite uncertainty on the relative contribution of demand and supply factors, these analyses suggest that both would have contributed to inflation since 2021 and that inflation would be on average more supply-driven in the euro area than in the US from 2021Q2 to 2023-Q3.

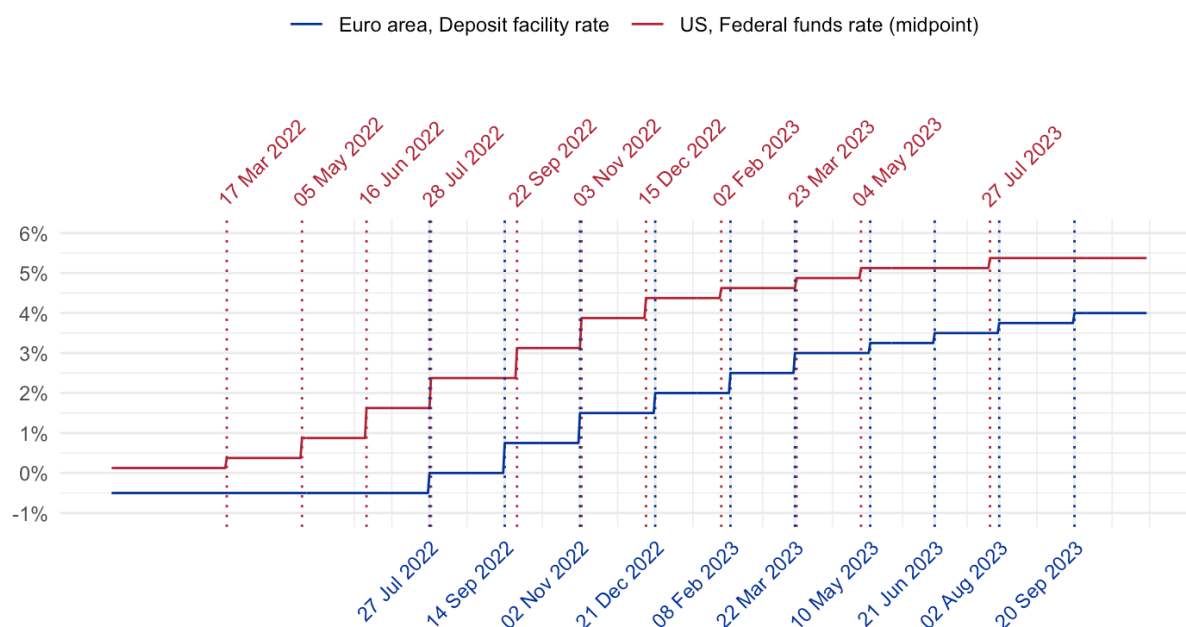
¹⁶ See Fira and Hao (2023).

4. MONETARY POLICY

4.1. Current monetary policy

Regardless of the reason, the Fed and the ECB have taken strong measures to try to soften inflationary pressures that were arising since March 2021 in the US, and July 2021 in the euro area. These measures continue about 12 months after the start of this inflationary episode in both regions, as shown in Figure 13 (it is useful to compare the timing to that of inflation developments in Figure 1).

Figure 14: Monetary policy rates (benchmark), euro area vs. US



Source: BIS, authors' own elaboration.

Given the outcomes of the latest monetary policy meetings by both the Fed and the ECB, it looks like both central banks are willing to pause at least for now. Of course, how long they should pause, whether they should raise some more, or when they should start their descent remain questions open for debate.

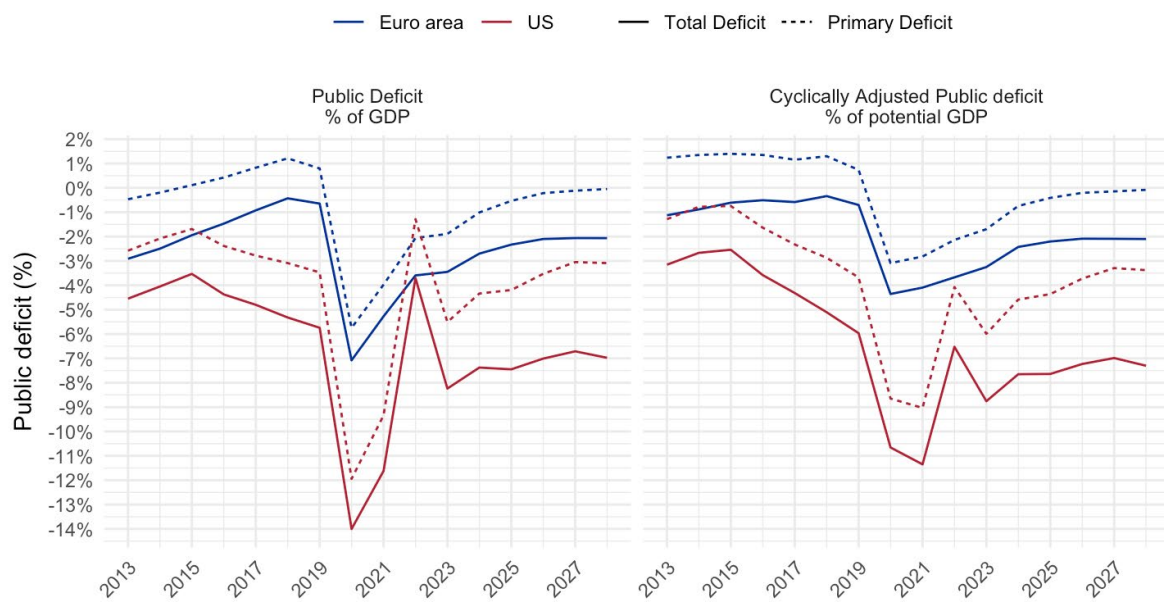
4.2. Possible scenarios

Monetary policy probably works through long and variable lags (see Romer and Romer, 2023 for the most recent evidence). Therefore, it is likely that past tightening is still working its way to aggregate demand. In that regard, the situation appears quite different in the US versus in the euro area: in the US, fiscal policy is currently much more expansionary than in Europe, with public deficits expected to reach around -8% of GDP in the US against -3.5% of GDP in the euro area according to the IMF. It should remain so in the next few years, with US public deficits remaining around -7% of GDP in the US while euro area public deficits are projected at -2% of GDP (see Figure 14). The US economy is also much stronger than the euro area economy with very high consumption, as well as GDP growth (see Figure 15).

Therefore, we view two possible opposite scenarios for the short term. In one scenario, expansionary fiscal policy would lead to continuing inflationary pressures in the US, forcing monetary policy to continue its restrictive stance. Since the euro area economy is slowing down, the question is how long the ECB could continue its restrictive stance in such a context, or rather start decreasing interest rates.

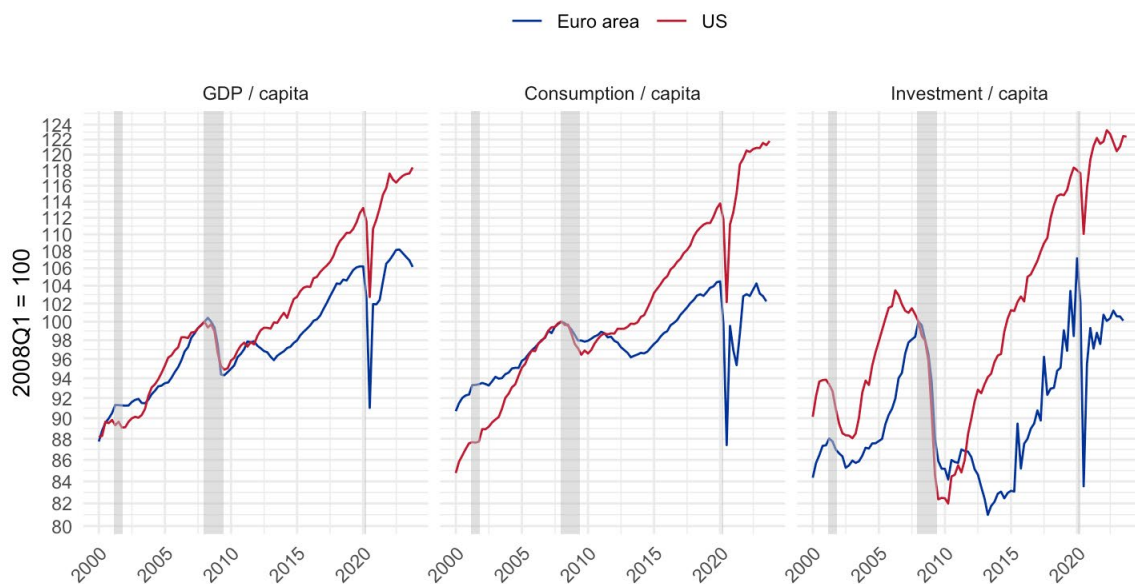
This could have negative consequences on the level of the exchange rate euro/dollar, and have a further effect on strengthening inflationary pressures in Europe. The good news is that this does not appear to be the most likely scenario, as inflationary pressures are easing in the US, without a substantial rise in the unemployment rate or slowing down of the economy (“soft landing”). In such a situation, the Fed could potentially lower interest rates, despite low unemployment and potentially slightly higher than target inflation, which would also give some room to the ECB to cut rates in tandem with the Fed. However, this does not appear to be the most likely scenario at least in the short run, given the statement by ECB president Lagarde from November 10, 2023: “ECB will not start cutting rates in the next couple of quarters”.

Figure 15: Public deficits according to the IMF, euro area vs. US



Source: IMF, Fiscal Monitor.

Figure 16: GDP, consumption, investment in the euro area and in the US



Source: OECD, authors' own elaboration.

5. CONCLUSION

In this paper, we have sought to compare inflation developments in the euro area and the US. Although economic policies are very different across the Atlantic (for example regarding fiscal policy), the inflation dynamics have been remarkably similar, at least at the aggregate level, with a 4-month lag between the two. When one looks underneath the aggregates, however, one finds there are substantial differences: food inflation for example, is much more important in Europe than in the US, while imputed rents are much more important in the case of the US. In fact, if one ignores the shelter component of the CPI, then inflation is already on target in the US.

The notion that inflation was mainly explained by too high aggregate demand in the US becomes perhaps less certain now that inflation is falling without a substantial increase in unemployment or even a slowing down in the US economy, and a still very expansionary fiscal policy. On the contrary, a euro area economy that is slowing down has not meant that inflation has come down much faster.

Given this, we have outlined a few possible scenarios. We should hope for a “soft landing” scenario in both the euro area and the US. For instance, on mid-November Fed Watchers’ expected a 25 bp decrease in the Federal Funds target for the March 2024 meeting with a 30% probability.¹⁷ The most adverse scenario for the euro area would be one where the US still needs to maintain a substantially restrictive monetary policy to ease off inflationary pressures coming from a very resilient economy, while the euro area “breaks” because its economy is weaker, and the ECB faces a difficult choice between stagflation or an even greater recession together with a lower inflation. At this stage, we believe that the optimistic scenario is more likely. But to reduce the likelihood of the pessimistic scenario, euro area and US fiscal policies should perhaps work to be more in sync going forward.

¹⁷ According to the CME FedWatch tool.

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The euro area and the United States have both experienced an episode of strong inflation post COVID-19 pandemic and after the Russian invasion of Ukraine. We highlight commonalities as well as differences in these episodes, in terms of headline and core inflation, inflation differentials and causes, and monetary policy between the euro area and the United States. We propose different scenarios for inflation and monetary policy.

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