IN-DEPTH ANALYSIS

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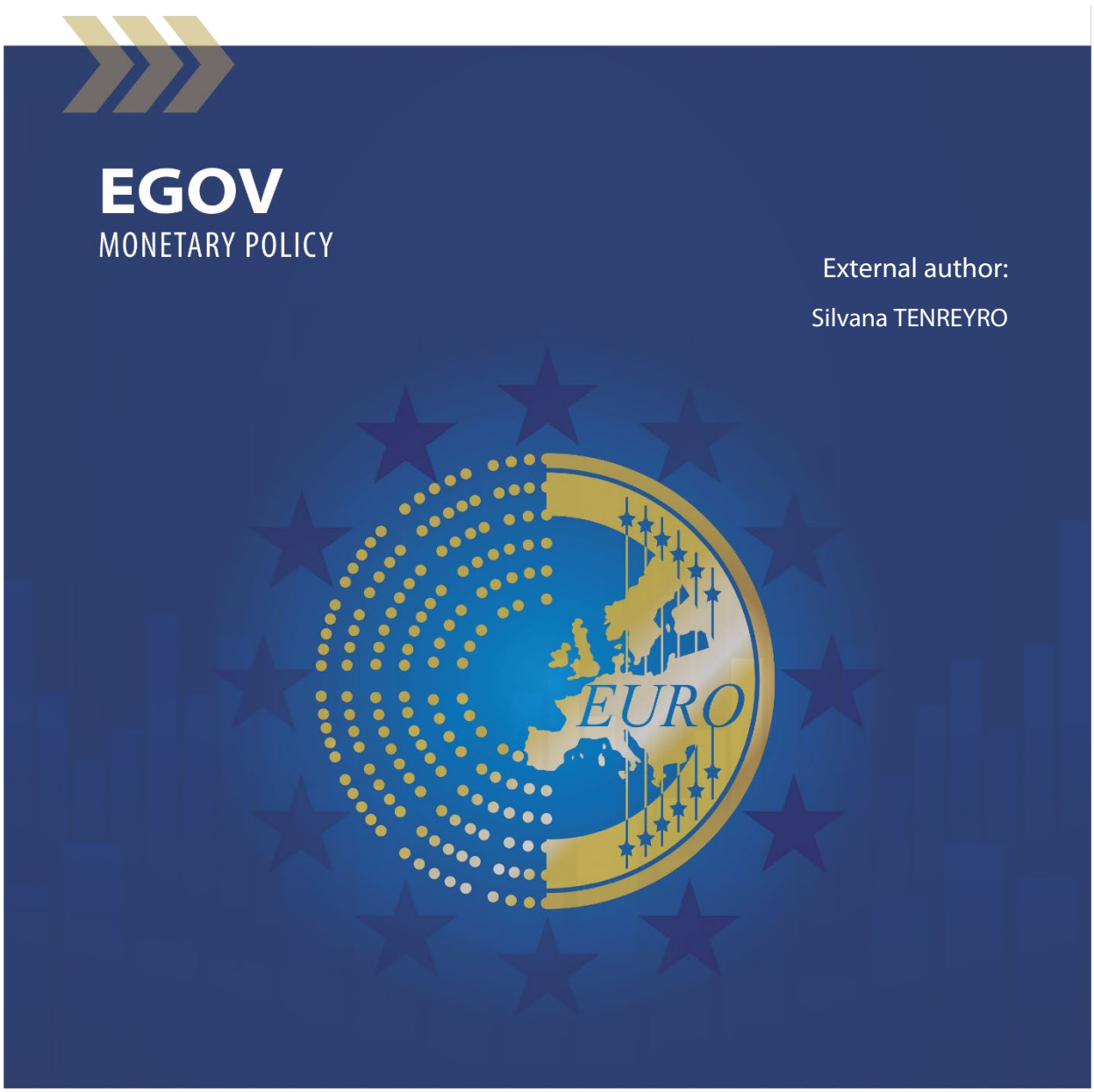
European Parliament

Quarterly assessment of the ECB's monetary policy stance



Economic Governance and EMU Scrutiny Unit (EGOV)
Directorate-General for Internal Policies
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EN

Quarterly assessment of the ECB's monetary policy stance

Abstract

The paper seeks to assess the current monetary policy stance of the European Central Bank (ECB). To do so, it analyses factors driving the inflation dynamics in the euro area (EA) and their potential persistence, drawing comparisons with the inflation drivers and policy response in the United States (US). Given the prominent role played by the energy-price increase in EA inflation and the differential exposure of EA Member States, the paper analyses the country-level inflation dynamics in response to the energy shock. Finally, the paper discusses the ECB's strategy and communication, and the interpretation drawn by financial markets, before taking stock on the stance of monetary policy.

This document was provided by the Economic Governance and EMU Scrutiny Unit at the request of the Committee on Economic and Monetary Affairs (ECON) ahead of the Monetary Dialogue with the ECB President on 4 December 2024.

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

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CONTENTS

LIST OF ABBREVIATIONS

BLS	Bureau of Labor Statistics
COVID	Corona Virus Disease
CPI	Consumer Price Index
DFR	Deposit Facility Rate
EA	Euro Area
ECB	European Central Bank
EIA	Energy Information Administration
ESA	European System of Accounts
EU	European Union
EUR	Euro
GDP	Gross Domestic Product
GSCPI	Global Supply Chain Pressure Index
HICP	Harmonized Index of Consumer Prices
ICE	Intercontinental Exchange, Inc.
MLF	Marginal Lending Facility
MRO	Main Refinancing Operations
NPISH	Non-Profit Institutions Serving Households
OECD	Organisation for Economic Co-operation and Development
PCE	Personal Consumption Expenditure
QE	Quantitative Easing
US	United States
USD	United States Dollar
WTI	West Texas Intermediate

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EXECUTIVE SUMMARY

- **The euro area (EA) has experienced two once-in-a-generation shocks, the COVID-19 pandemic and the Russia's invasion of Ukraine, which caused an extraordinary increase in the prices of energy and other commodities.** These large (mostly supply) shocks led to a contraction in economic activity. Following an initial dip in inflation at the outset of the pandemic, both shocks also caused a material surge in inflation. Fiscal policy provided stimulus to demand, offsetting part of the activity weakness and pushing up on inflation. While monetary policy was supportive in the initial phase of the pandemic, it turned restrictive as inflationary pressures built above target.
- **This monetary policy restrictiveness has weighted down on the pace of economic recovery.** Over time, unwinding of both supply shocks and the restrictiveness of monetary policy have led to a rapid fall in inflation. On the activity front, the positive impact of the supply shock reversal (as COVID-19-related restrictions eased and energy prices normalised) has been counteracted by monetary policy restrictiveness, which has constrained demand. **The result of the tug of war between these two forces has been near stagnation or anaemic growth in the euro area.**
- **Compared with the United States (US), the euro area had a much larger energy-price shock.** Indeed, the US economy is self-sufficient in gas production, and a net exporter of energy and other commodities; hence, the large price adjustments caused by the war represented a positive terms-of-trade shock for the United States and a negative one for the euro area.
- **Moreover, the demand increase induced by the US fiscal stimulus was arguably much larger, given the size of the US fiscal stimulus package relative to that of the euro area.** A stronger demand from the fiscal stimulus and a weaker negative supply shock are both reflected in the US economic performance, with GDP growing above pre-pandemic trends since 2021, in contrast with the trajectory of EA GDP, which fell well below pre-COVID-19 trends and barely stood above pre-COVID-19 levels. Notwithstanding these differences, the extent of monetary tightening in the two jurisdictions was comparable in size.
- **Although qualitatively the inflation experience of various EA Member States was similar, there are some important quantitative differences**. Countries more exposed to the gas price shock and/or with less generous energy-price caps or subsidies have tended to experience higher inflation, both in headline and core measures, as energy prices are a critical input in many core goods and services sectors. Services sectors tend to display less frequent and more staggered price adjustment than goods sectors and this has been reflected in sectoral inflation dynamics, with goods price inflation increasing and decreasing at a faster pace than services price inflation.
- **Today the European Central Bank (ECB)'s monetary policy is restrictive**. Given that risks to inflation have now materially receded and most risks are tilted towards weaker EA activity (which would drag domestic inflation in the future and could present challenges to financial stability), **a steady - and preferably speedy- return to neutral rates seems in line with the ECB mandate**.
- **Communication of the policy strategy is currently limited by a focus on the spot policy rate, with limited guidance on the expected path of rates**. The latter should be more important in determining financial conditions (e.g., pricing of fixed-term mortgages and other loan contracts). With limited guidance, the "path" for rates is determined by markets' expectations of ECB actions, which might not necessarily reflect the ECB reaction function, conditional on the outlook.

1. INTRODUCTION

Over the past few years, the euro area has been subjected to two rare (or low probability) supply shocks, the COVID-19 pandemic and the Russia's invasion of Ukraine, which led to an extraordinary increase in the prices of energy and other commodities. Fiscal policy has responded forcefully to these events, aiming to offset and limit any lasting impact from the contractionary supply shocks. While monetary policy was initially supportive (providing stimulus in the early phase of the pandemic), it turned contractionary as inflation started to increase above target. The contractionary effects of monetary policy, along with the reversal of COVID-19 pandemic related supply restrictions and the fall in energy and other commodity prices have all contributed to the return of inflation to target over a relatively short period of time. EA headline inflation hit 1.7% in September 2024; it increased to the 2% target in October, and is expected to hover above target in subsequent months, before returning sustainably to the 2 %target.

The goal of this paper is to assess the current monetary policy stance of the European Central Bank (ECB).

The report is structured as follows. Section 2 analyses the factors driving the inflation dynamics in the euro area (EA) and their potential persistence. It offers comparisons with the inflation drivers in the United States and discusses the policy responses in the two jurisdictions.

Section 3 examines inflation differentials across Members States, zooming in on the role played by the increase in energy prices caused by the Russia's invasion of Ukraine, as euro area Member States had an uneven exposure to energy price increases and the subsidies put in place to mitigate the impact also differed markedly across countries.

Section 4 discusses the ECB's communication of its policy strategy and its interpretation by financial markets, before taking stock on the stance of monetary policy. The focus is on the interest-rate path, which is the ECB's active instrument of monetary policy. For the euro area as a whole, passive balance-sheet movements on the background are reflected in market's expectations of interest rates.

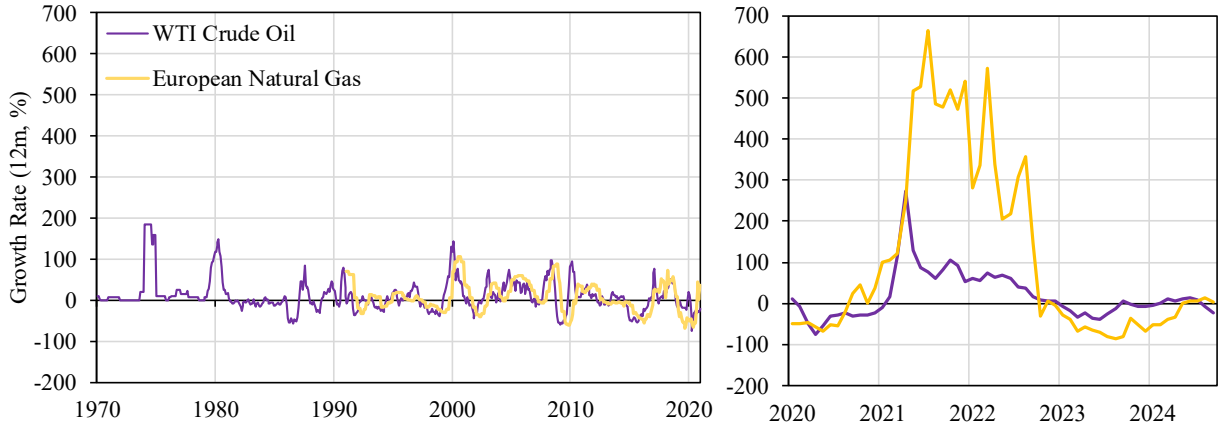
2. DRIVERS OF EURO AREA INFLATION DYNAMICS

2.1. The shocks hitting the euro area

To set the stage for the analysis of inflation and the policy response, it is important to contextualise it: as emphasised in the Geneva Report 2023, the EA economy has been subjected to two once-in-a-generation shocks, the COVID-19 pandemic and the Russia's invasion of Ukraine, which caused an increase in the prices of energy and other commodities.[1] All of this happened in a space of less than three years, a most remarkable concentration of "tail" or rare events.

The magnitudes of these two supply shocks were extraordinary: for some countries, the energy shock *alone* was comparable or larger than what they experienced in the 1970s, as illustrated in Figure 1. In particular, the increase in wholesale gas prices in Europe was remarkably larger than the global increase in wholesale oil prices in the 1970s.

Figure 1: WTI Crude Oil and EU Natural Gas Price (1970-Present)



Source: Federal Reserve Bank of St. Louis.

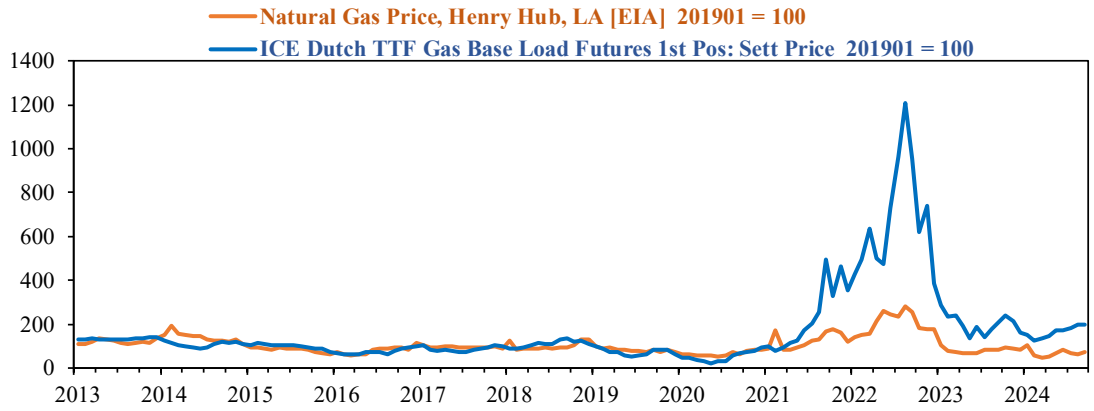
Notes: The vertical axis shows the 12 months percentage change in Spot Crude oil price, West Texas Intermediate (WTI) (USD) and the global price of Natural Gas, EU (USD); the former is published by FRED, Federal Reserve Bank of St. Louis [WTISPLC series]; https://fred.stlouisfed.org/series/WTISPLC and the latter is published by the International Monetary Fund [PNGASEUUSDM series], and retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PNGASEUUSDM.

Moreover, the European economy was significantly more exposed than the US economy, which is self-sufficient in gas supply and indeed a net exporter of liquefied natural gas and other commodities, whereas the euro area as a whole is a net importer of gas.[2] This is reflected in Figure 2, which shows that gas prices in the euro area increased multiple times more than in the United States.

[1] This report draws on the analytical framework of the Geneva Report 2023 (Guerrieri, Reichlin, Markussen and Tenreyro, 2023) and on Tenreyro (2023), offering an up-to-date analysis that serves as the basis for the ex-post policy assessment.

[2] The report explores differences in exposure across different EA members in Section 3.

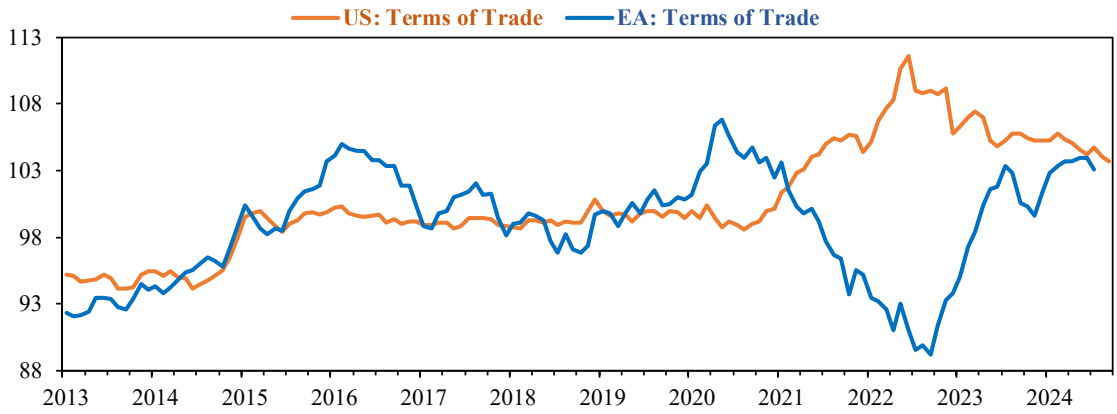
Figure 2: Gas Prices: US vs EA



Source: EIA, ICE.
Note: The vertical axis shows the Henry Hub Natural Gas spot price (USD), Not Seasonally Adjusted – published by U.S. Energy Information Administration [DHHNGSP series], and retrieved from FRED, Federal Reserve Bank of St. Louis: https://fred.stlouisfed.org/series/DHHNGSP, 2019 M1 normalized to 100; and ICE Dutch TTF Natural Gas Futures (EUR) – published by Intercontinental Exchange, [ICE Dutch TTF Natural Gas Futures Historical Data], retrieved from Investing.com: https://uk.investing.com/commodities/ice-dutch-ttf-gas-c1-futures-historical-data, 2019 M1 normalized to 100.

This large shift in the prices of energy and other commodities represented a negative terms-of-trade shock for European countries, which sharply contrasts with the positive terms-of-trade shock experienced by the United States, as illustrated in Figure 3. In other words, the increase in commodity prices was a net negative hit for the euro area, increasing costs and prices, while for the United States, it was in part a positive driver of export demand.

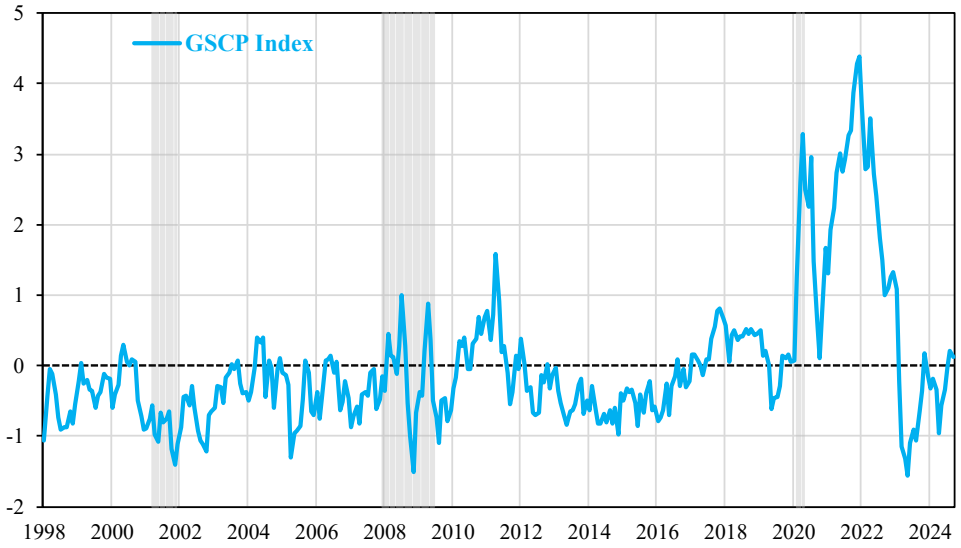
Figure 3: Terms of Trade: US vs EA



Source: LSEG Workspace.
Notes: The vertical axis shows US Terms of Trade – published by LSEG Datastream, retrieved from LSEG Workspace [United States TERMS OF TRADE REBASED TO 1975=100, Not SA, Index,1975=100]; 2019 M1 normalized to 100; and Euro Area Terms of Trade – published by Eurostat, retrieved from LSEG Workspace [Euro Zone Terms of Trade, Unit Value Index, Total, Index, 2010=100], 2019 M1 normalized to 100.

The energy price increase happened while the economy was still suffering the COVID-19 pandemic effects and aftereffects. The pandemic led to restrictions and delays in global supply chains, as many countries introduced lockdowns and limited activity in certain sectors. This supply contraction was aggravated by a marked global rotation in demand away from services and toward goods, which led to bottlenecks in orders and compounded the capacity constraints in global good production. Figure 4 shows the evolution of an index of supply constraint, reflecting the disruption caused by COVID-19. While the index hovered around its average over the preceding twenty years, including around the financial crisis, it dramatically spiked with the various pandemic waves and was later also affected by the war in Ukraine. As shown in the figure, supply constraints have now normalised and the latest readings are back to historical averages.

Figure 4: Global Supply Chain Pressure Index



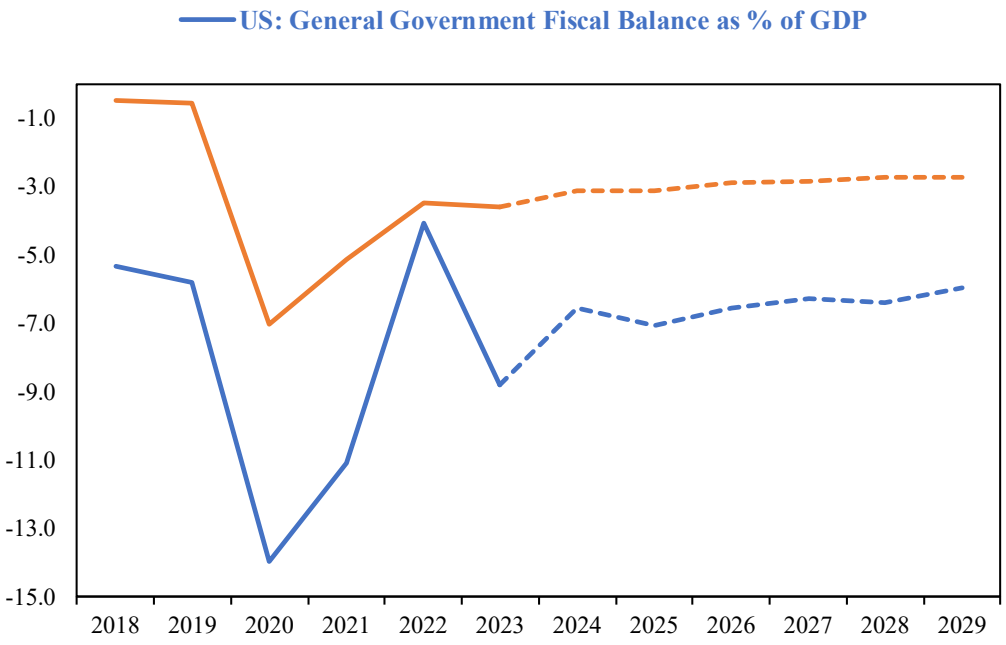
Source: Federal Reserve Bank of New York.

Notes: The Global Supply Chain Pressure Index integrates transportation cost data and manufacturing indicators to provide a gauge of global supply chain conditions. Transportation costs are measured from the Baltic Dry Index and the Harpex index, airfreight cost indices from the U.S. Bureau of Labor Statistics. The Index also uses several supply chain-related components from Purchasing Managers' Index surveys, focusing on manufacturing firms across seven interconnected economies: China, the euro area, Japan, South Korea, Taiwan, the United Kingdom, and the United States. Published by Federal Reserve Bank of New York;https://www.newyorkfed.org/research/policy/gscpi#/interactive. The shaded areas indicate US recessions.

2.2. The fiscal stimulus

In response to the various waves of the COVID-19 pandemic, most governments put in place demand stimulus packages. The rationale was to prevent the pandemic – what should in principle be a temporary shock – from having lasting effects on the economy, including high unemployment. While central banks had limited policy space, as they were close to their effective lower bounds, they ensured there was liquidity in the system to prevent a financial crisis. Overall, the lion's share of most stimulus packages was provided by fiscal policy. But within that, there were marked quantitative differences across jurisdictions. The US fiscal policy, which was already more expansionary than the euro area's responded very strongly. The war also prompted fiscal support in Europe given its negative impact on activity. Even though the increase in commodity prices, as said, was a positive terms-of-trade shock for the US economy, US fiscal policy remained more expansionary than in the euro area, sustaining the fiscal gap between the two jurisdictions. This is illustrated in Figure 5, which shows the general government fiscal balance as a share of GDP in both regions.

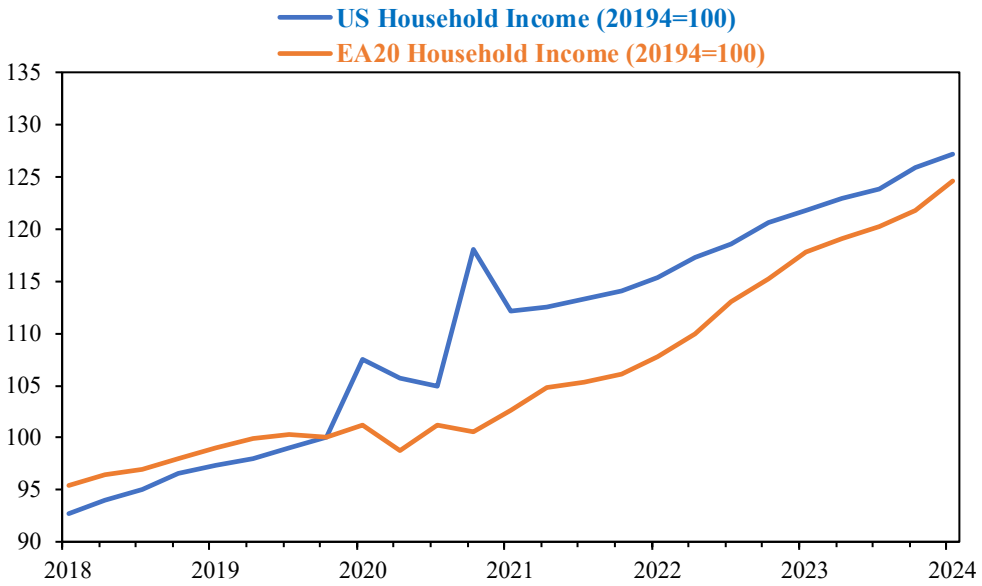
Figure 5: Fiscal response, government fiscal balance as % of GDP: EA vs US



Source: International Monetary Fund/ LSEG Workspace.
Notes: The vertical axis shows the government fiscal balance as a % of GDP. Bold lines are actual, dashed lines are forecast. Euro Area – published by International Monetary Fund - World Economic Outlook, retrieved from LSEG Workspace [Euro Zone General government balance, % GDP]; US - published by International Monetary Fund - World Economic Outlook, retrieved from LSEG Workspace [United States General government balance, % GDP]

The combination of strong fiscal stimulus, along with positive external demand and terms of trade in the United States can explain why the US economy has been running above its pre-COVID-19 trend since 2021. Most remarkably, US real household income, helped by US stimulus checks and other fiscal measures, have grown strongly since 2020, show. This has opened a gap with EA household incomes, as illustrated in Figure 6.

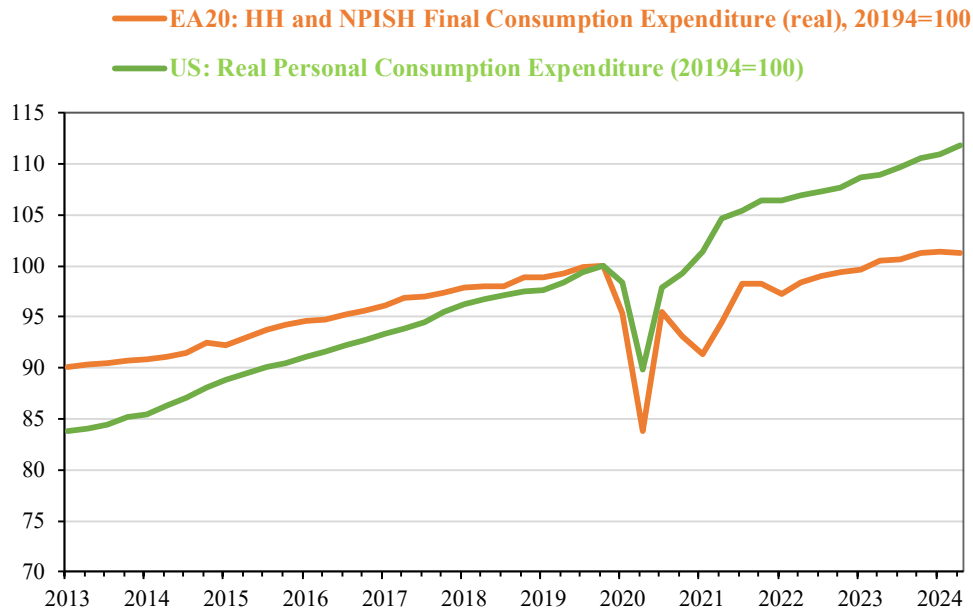
Figure 6: Fiscal response, household income: EA vs US



Source: Federal Reserve Bank of St. Louis, ECB.
Notes: The vertical axis shows the following quantities: EA - Gross Disposable Income of Households, Seasonally Adjusted, published by European Central Bank [series key: QSA.Q.Y.I9.W0.S1M.S1._Z.B.B6G._Z._Z._Z.XDC._T.S.V.N._T]; https://data.ecb.europa.eu/data/datasets/QSA/QSA.Q.Y.I9.W0.S1M.S1._Z.B.B6G._Z._Z._Z.XDC._T.S.V.N._T ,2019 Q4 normalized to 100; US - Personal Income, Billions of Dollars, Quarterly, Seasonally Adjusted Annual Rate [PINCOME series], published by the Bureau of Economic Analysis, retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PINCOME, Q4 normalized to 100.

The strength in US household income and demand stemming from fiscal policy and favourable terms of trade and its contrast with the euro area is clearly reflected in the evolution of real consumption expenditures in the two jurisdictions. While US consumption has grown strongly and above pre-pandemic trends after its initial dip during the pandemic, EA consumption recovered very slowly, barely returning to its pre-pandemic level, and thus falling materially behind its pre-pandemic trend. This is illustrated in Figure 7, which shows the evolution of real consumption in the two regions.

Figure 7: Household consumption expenditure, EA vs US

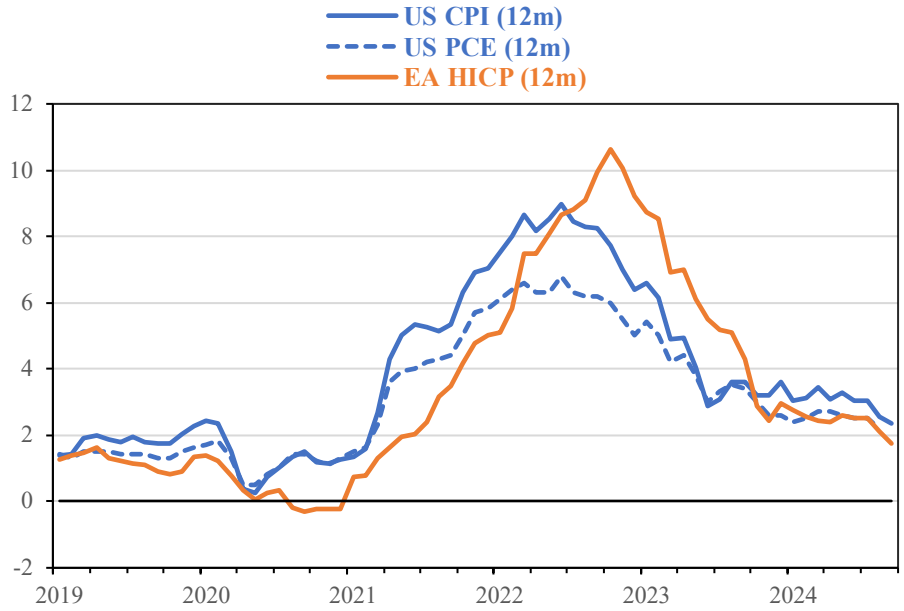


Source: Eurostat/LSEG Workspace, BEA/LSEG Workspace.
Notes: The vertical axis shows the following quantities: EA - Euro Zone Expenditure Approach, Final Consumption Expenditure, Households and NPISH, Total (EA20), ESA 2010, Current Prices, Calendar Adjusted, Seasonally Adjusted, EUR, published by Eurostat, retrieved from LSEG Workspace; converted to constant prices values with Euro Area Harmonized Index of Consumer Prices (HICP) (seasonally adjusted), published by the European Central Bank [HICP-Overall index, Euro area (changing composition), Monthly(Online data code: ICP.M.U2.Y.000000.3.IN], 2019 Q4 normalized to 100;
US – United States Personal Outlays, Personal Consumption Expenditure, Overall, Total, Constant Prices, Seasonally Adjusted, USD, 2017 chained prices, published by Bureau of Economic Analysis, retrieved from LSEG Workspace, 2019 Q4 normalized to 100.

2.3. The dynamics of aggregate and sectoral inflation

The dynamics of EA HICP inflation, as gauged by the harmonised index of consumer prices (HICP), reflects the impact of the large supply shocks, as displayed in Figure 8. Initially, EA inflation fell by more than US inflation (whether the latter is gauged by CPI, the consumer price index, or PCE, the personal consumption expenditure index used by the Federal Reserve to gauge its target), suggesting lower demand pressures in the initial phase of the pandemic along with the fall in global commodity prices. The delayed take-off of EA inflation relative to US inflation reflects both the stronger US fiscal stimulus and overall demand, and, as argued by Guerrieri et al. (2023), a higher degree of stickiness in EA pricing. The higher peak subsequently reached by EA inflation in turn mimics the higher increase in gas prices in Europe relative to the United States and the higher degree of exposure of EA Member States. The precipitous increase in EA inflation is symmetrically matched by a precipitous fall from its 2023 peak.

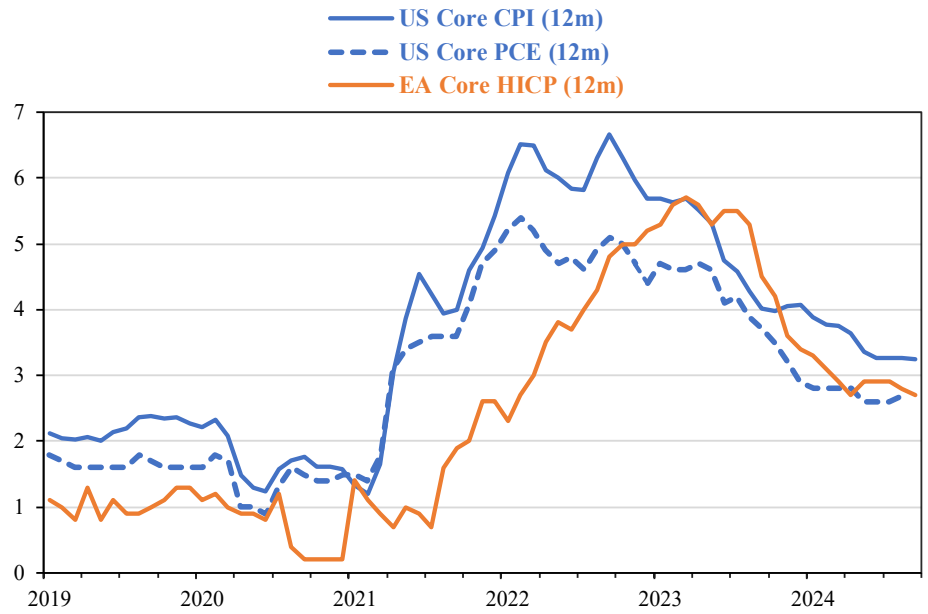
Figure 8: Headline Inflation: US CPI, US PCE and EA HICP 12-month % change



Source: BLS/LSEG Workspace, BEA/LSEG Workspace, Eurostat/ECB.
Notes: The vertical axis shows 12-month % change in United States Consumer Price Index (CPI) (seasonally adjusted), published by Bureau of Labor Statistics, retrieved from LSEG Workspace [US CPI Index SA]; 12-month % change in United States Personal Consumption Expenditure Price Index (PCE) (seasonally adjusted), published by Bureau of Economic Analysis, retrieved from LSEG Workspace [US PCE Price Index YY]; 12-month % change in Euro Area Harmonized Index of Consumer Prices (HICP) (seasonally adjusted), published by the European Central Bank [HICP-Overall index, Euro area (changing composition), Monthly(Online data code: ICP.M.U2.Y.000000.3.IN].

The behaviour of core inflation and the contrast between EA and the US trajectories are illustrated in Figure 9. In sync with the bigger role played by energy and other commodities in driving headline inflation, and in line with higher price stickiness in core components, EA core inflation started to pick up at a much slower pace in the second half of 2021. The relatively smaller EA fiscal stimulus and overall demand pressures also meant that core EA inflation reached a lower peak and started its reversal more quickly than US CPI.

Figure 9: Core Inflation: US CPI, US PCE and EA HICP 12-month % change



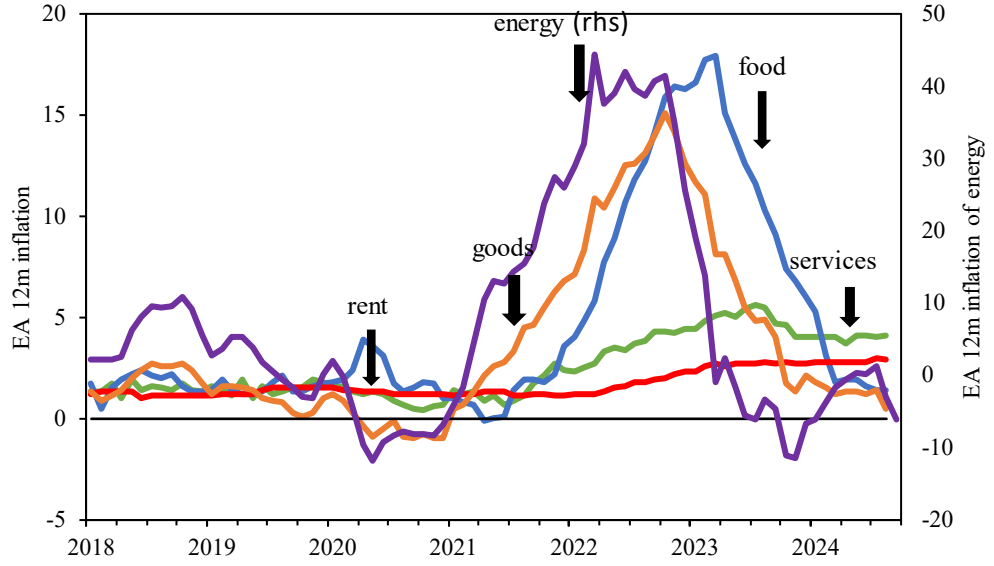
Source: BEA/LSEG Workspace, Eurostat.
Notes: The vertical axis shows 12-month % change in United States Core Consumer Price Index (CPI) (seasonally adjusted), published by the Bureau of Labor Statistics, retrieved from LSEG Workspace [US Core CPI Index, SA]; 12-month % change in United States Core Personal Consumption Expenditure Price Index (PCE) (seasonally adjusted), published by Bureau of Economic Analysis, retrieved from LSEG Workspace [United States Core PCE Price Index-Actual, Chg Y/Y]; 12-month % change in Euro Area Harmonized Index of Consumer Prices (HICP) (not seasonally adjusted), Overall index excluding energy, food, alcohol and tobacco, published by the Eurostat [HICP–monthly data (annual rate of change) (Online data code: prc_hicp_manr].

The overall persistence of both headline and core measures of inflation across countries masks fast adjustments of inflation at the disaggregated sectoral level. Figures 10 and 11, for the EA and US, respectively, show that following an initial dip, energy price inflation increased precipitously and subsequently fell equally fast. Energy price increases was an important driver of inflation. This is a component known for high price flexibility and fast pass-through into costs. The next component to adjust was goods inflation, and in particular food inflation, which increased and decreased at fast speed. Services price inflation instead adjusted more slowly, consistent with higher nominal rigidity in services components.

The weighted sum of all these components with different timings of adjustments leads to overall inflation indices that appear persistent in aggregate, while in truth masking a much faster dynamics at the sectoral level.[3] The observation that the components of the baskets with earlier and fastest inflation increases are unwinding should give confidence to policy makers that the remaining components whose adjustments started later and are still in process should be on track for unwinding.

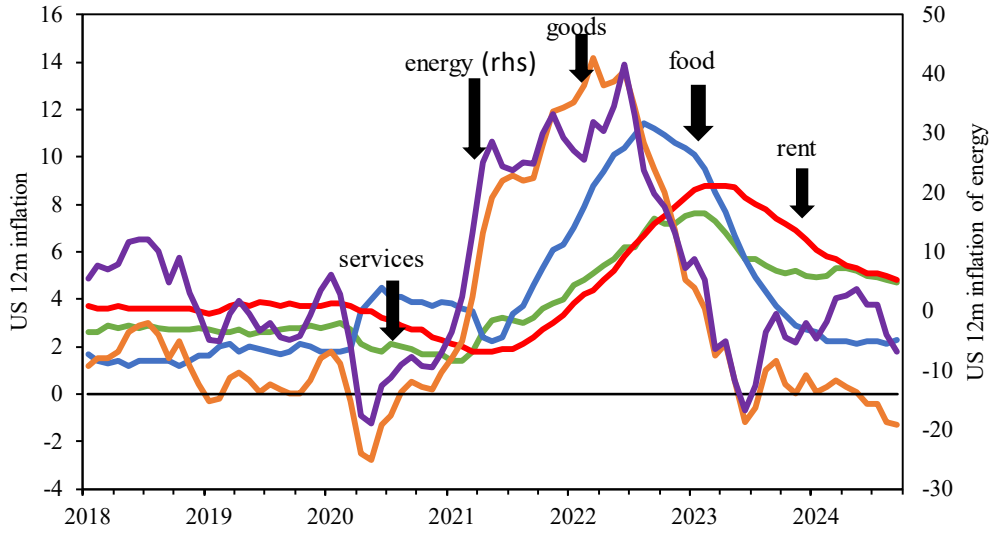
[3] The Geneva Report 2023 formalises this point using a stylised two-sector model and provides additional empirical evidence on the differential pace of adjustments across sectors in response to demand and supply shocks.

Figure 10: HICP Inflation by sector, 12-month %change: EA



Source: Eurostat/ECB.
Notes: The vertical axis represents 12-month % change in Euro Area Harmonized Index of Consumer Prices (HICP) (not seasonally adjusted) for each sector, with expenditure measures selected as Services, Food, Energy (on right-hand side axis), Actual Rentals for Housing and Goods [HICP–monthly data (annual rate of change), published by Eurostat (Online data code: prc_hicp_manr].

Figure 11: CPI Inflation by sector, 12-month %change: US



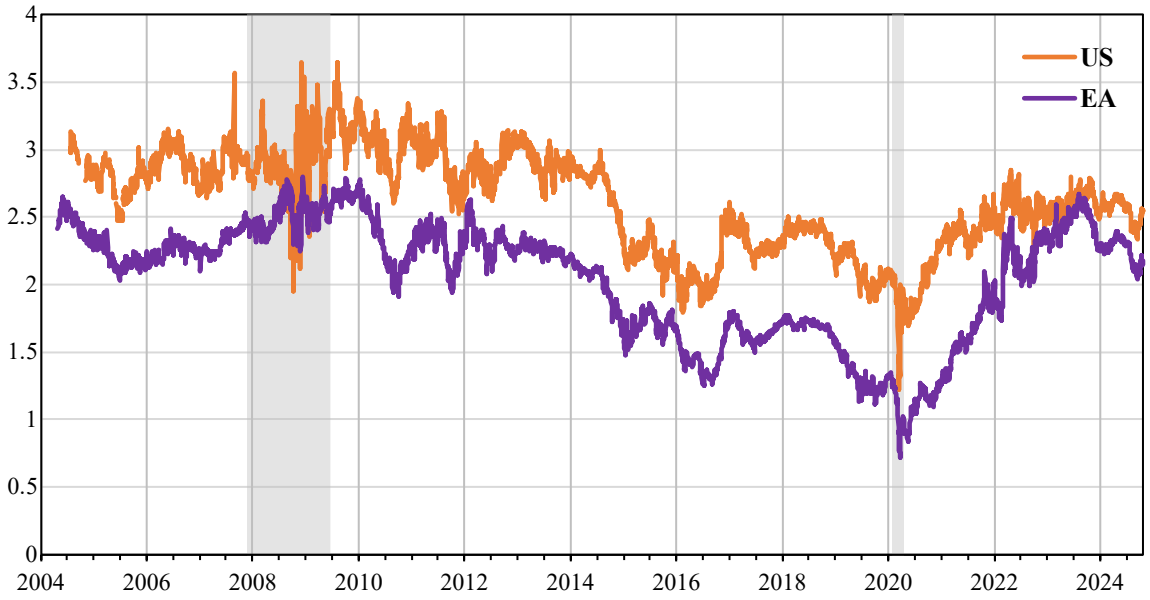
Source: BLS.
Notes: The vertical axis represents 12-month % change in United States Consumer Price Index for All Urban Consumers (CPI-U) (not seasonally adjusted), with expenditure-specific series being Services [online data code: CUUR0000SAS], Energy (right-hand side) [online data code: CUUR0000SA0E], Food [online data code: CUUR0000SAF1], Rent of Primary Residence [online data code: CUUR0000SEHA] and Commodities [online data code: CUUR0000SA0C], published by the Bureau of Labor Statistics.

A big preoccupation for policymakers when facing both the pandemic and the increase in energy price was the risk of a repeat of the 1970s, when inflation expectations appeared to de-anchor and unhinge from the logical connection to future demand-supply imbalances portrayed in many macroeconomic models. There were of course many differences from the 1970s, to start with, including the absence of a clear policy framework with quantitative inflation targets and central bank independence to achieve them. Perhaps because of that, long-term inflation expectations both in the EA and the US did not de-anchor. If anything, they re-anchored, having been materially below target for many years, as shown in Figure 12. The figure displays market based five-year on five-year (5y5y) inflation expectations based on inflation-linked swaps for both the US and the EA. In accounting for this renormalisation of

expectations (which returned to target in this period), Guerrieri et al. (2023) argued that the credibility that central banks had accumulated over the decades paid its returns during these concomitant crises. Credibility meant central banks could raise interest rates well below what historical "Taylor-type rules" would have suggested and that the rate increases were more than sufficient to return inflation back to target over a reasonable period of time.[4,5]

An alternative or rather complementary interpretation, of course, is that long-term inflation expectations did not move above target-consistent levels simply because markets did not expect future demand-supply imbalances to persist for long in the future. (Since future demand-supply imbalances would typically react to interest rates, these are complementary explanations.) At any rate, it is clear that there was no unhinging of long-term expectations during this episode. If anything, inflation expectations re-anchored to target-consistent levels.

Figure 12: Inflation expectations, inflation linked swap 5Y5Y (%): EA vs US



Source: Bloomberg.
Notes: The vertical axis represents USD Inflation Swap Forward 5Y5Y (FIGI: BBG007B66TK6) and EUR Inflation Swap Forward 5Y5Y (FIGI: BBG007B66TH0), Retrieved from Bloomberg.The shaded areas indicate US recessions.

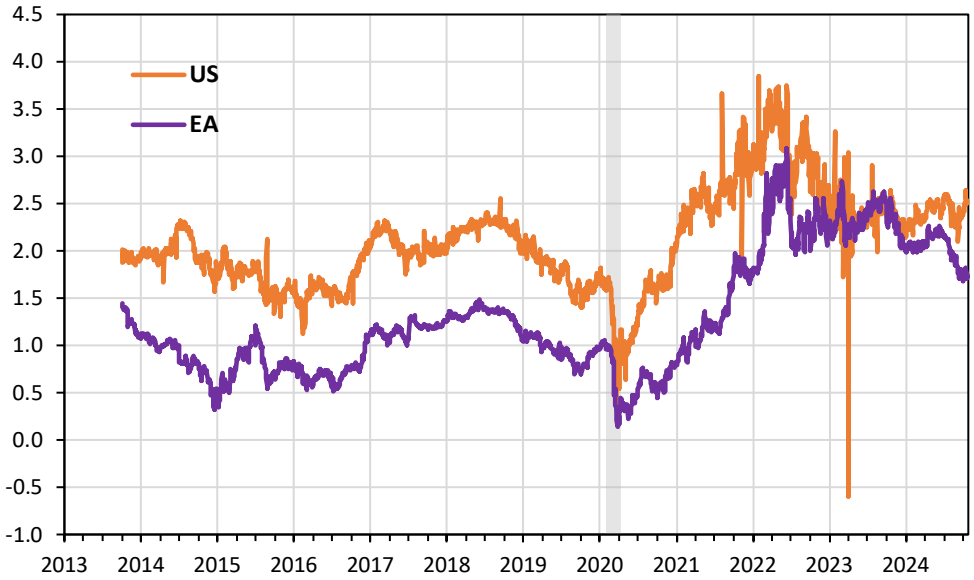
The focus on long-term expectations is crucial when thinking about de-anchoring of expectations or unhinging of expectations from future excess demand, and when trying to assess credibility. Short-term inflation expectations should naturally adjust more quickly especially in response to large increases in the prices of energy and other commodities. The adjustment in short-term expectations reflects the fact that prices are changing and need to change in response to uneven shocks of this nature. This short-term adjustment happens almost independently of central banks' actions (especially barring extreme ones) given that interest-rate increases are typically passed through more slowly to the real economy.

Figure 13 displays market-based one-year on one-year inflation expectations based on inflation linked swaps for both the EA and the US economies. As the Figure shows, markets' short- term inflation expectations in both jurisdictions quickly picked up in early 2020, starting from below target levels. They were back to target-consistent levels in the euro area within three years and have now fallen

[4] Taylor rules are empirically estimated relations between the policy rate and the level of inflation and the output gap (or other measures of slack). The first to estimate them was John Taylor, see Taylor (1993). During the recent surge in inflation, some analysts were arguing that interest rates should increase more than one-for-one with the level of inflation, based on past estimates of the Taylor rule.
[5] When considering what a reasonable period of time is, a policy maker may want to take into account both the lags in the transmission of monetary policy and the size of the shocks hitting the economy. For small shocks, a typical policy horizon to return inflation to target, given lags, would be around 2-to-3 years. With extraordinary shocks, a policy maker might consider a somewhat longer horizon.

below target. Inflation expectations in the United States have been more volatile throughout the period (with one abnormality in 2023), but appear to be back at historical levels now.

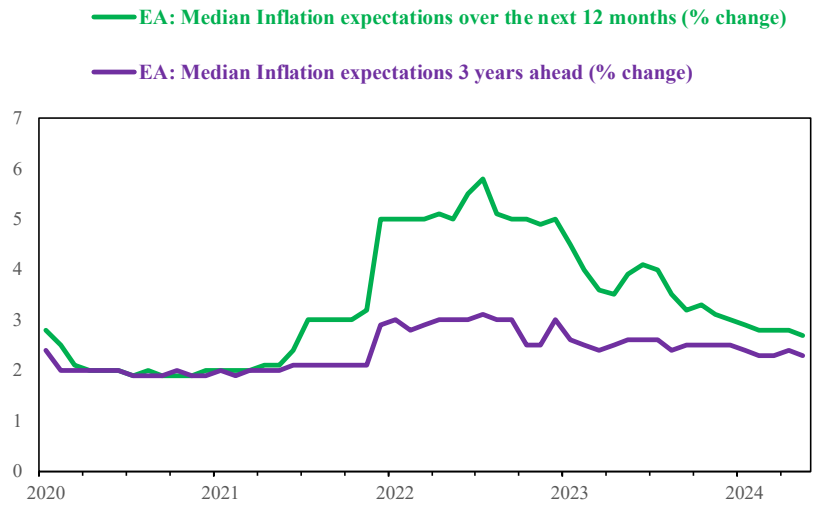
Figure 13: Inflation expectations, inflation linked swap 1Y1Y (%): EA vs US



Source: LSEG Workspace.
Notes: The vertical axis represents US Dollar 1 Year By 1 Year Forward Inflation Linked Swap [USIL1YF1Y=R] and Euro 1 Year By 1 Year Forward Inflation Linked Swap [EUIL1YF1Y=R], Retrieved from LSEG Workspace. The shaded areas indicate US recessions.

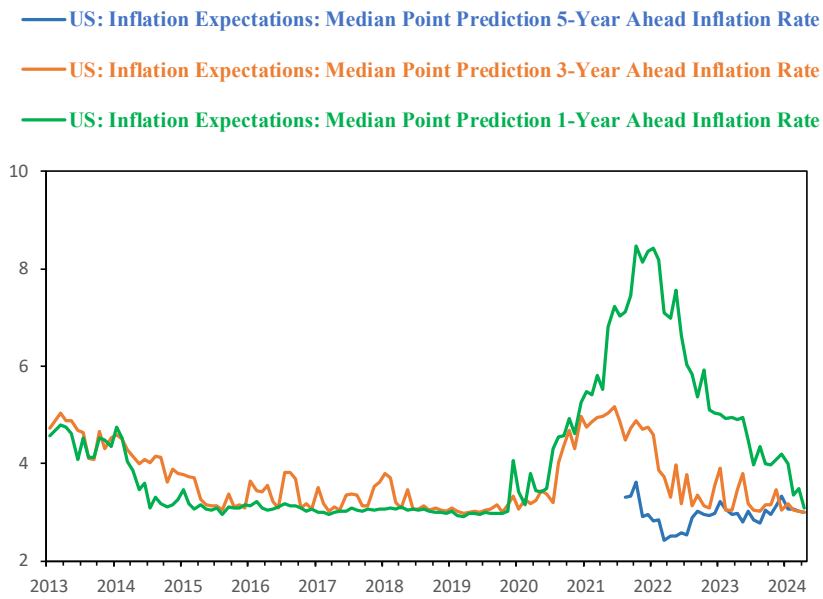
Household measures of inflation expectations appear to be more sensitive to changes in actual or past inflation, as illustrated in Figures 14 for the EA and 15 for the US economy. In both jurisdictions, 12-month ahead inflation expectations moved more quickly and increased by more than 3-year ahead expectations. Household measures of inflation expectations also tend to be more sensitive to some components of the basket, such as food and energy. Reassuringly, virtually all measures have now returned to their pre-pandemic averages. This can be seen clearly in Figure 15, which shows all measures converging back to the average levels before the pandemic.

Figure 14: Inflation expectations for different horizons, median point prediction: EA



Source: ECB Consumer Expectations Survey.
Note: The vertical axis shows, for the Euro Area, % change in median inflation expectations over the next 12 months and % change in median inflation expectations, 3 years ahead, published by the European Central Bank in the Consumer Expectations Survey (CES) : https://www.ecb.europa.eu/stats/ecb_surveys/consumer_exp_survey/results/html/inflation_results.en.html

Figure 15: Inflation expectations for different horizons, median point prediction (%): US



Source: US Survey of Consumer Inflation Expectations, Federal Reserve Bank of New York.
Note: The vertical axis represents the median point predictions of inflation rates 1, 3 & 5 years ahead. The point prediction is obtained by asking what the respondent thinks the inflation rate will be over a specified period. Survey of Consumer Expectations published by Federal Reserve Bank of New York, Center for Microeconomic Data; https://www.newyorkfed.org/microeconomics/sce#/

Note that in the euro area and to a lesser extent in the United States, measures of inflation expectations also tend to be biased upwards, relative to ex post realisations of inflation; in other words, on average, realised inflation tends to be below what households had expected.[6] In any case, a prompt return of short-term inflation expectations to pre-pandemic averages indicates that households correctly anticipated price increases, but the overshoot in inflation did not cause a de-anchoring of expectations or a loss in credibility. It is important to also note that typically households have very little – if any – market power in wage or price setting decisions. Hence, undue weight on these measures, given their upward bias and the high sensitivity to a few components of the basket (fuel or food), might lead to monetary policy stances that are more restrictive than the remit would call for.

2.4. The monetary policy response

At the onset of the COVID-19 pandemic, most central banks loosened financial conditions through a combination of rate cuts and programmes of quantitative easing. The goal was partly to avert a financial crisis at a time of high uncertainty and flight to safety, and partly to ensure inflation stayed at target, as initially private demand weakened, and global commodity prices fell. By reducing the cost of borrowing to companies and households, monetary policy could help bridging the economy to a time when vaccination was available, thus ensuring that what should be a temporary shock did not have long-lasting consequences. While fiscal support eventually provided the biggest offset to the weakness in activity, monetary policy played a more marginal, but necessary role.

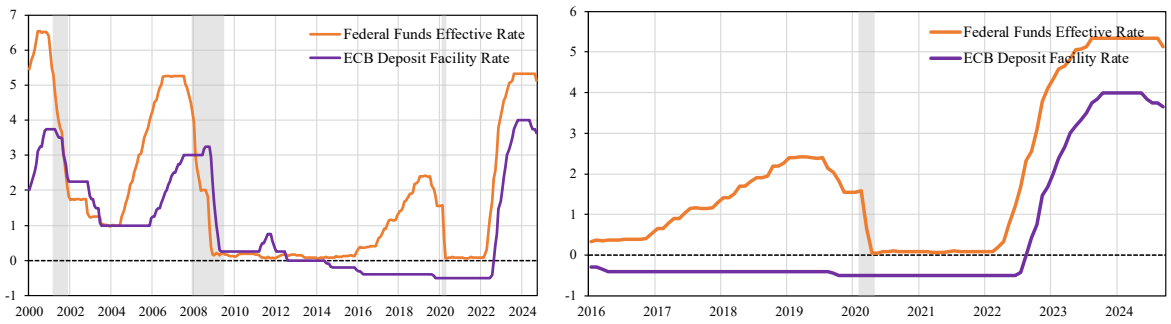
Two years after the beginning of the pandemic and with vaccination programmes in place across advanced and most emerging economies, central banks started tightening financial conditions very quickly. Inflation was increasing for two main reasons. First, the COVID-induced rotation in global demand from services to goods sectors, along with supply constraints, generated inflationary pressures that were not fading fast enough. Aggravating the picture, the Russian invasion of Ukraine had triggered a meteoric increase in commodity prices, which would feed through other components of

[6] As an example of this upward bias, households would keep responding they expect inflation to be 3% even though, for a long period, realised inflation is 2%.

headline and core inflation. Central banks reacted by raising interest rates with the goal of restricting demand and lowering price pressures.

Figure 16 displays the policy response of the ECB and the Federal Reserve Bank, which consisted of fast increases in their corresponding policy rates (correspondingly, the ECB deposit facility rate and the Federal Funds rate). The amount of tightening in the two economies was fairly similar, despite the fact that the two jurisdictions were differentially affected by the increase in gas prices and that the US fiscal stimulus was larger.

Figure 16: Monetary policy response, policy rates (%): EA vs US



Source: Federal Reserve Bank of St. Louis.

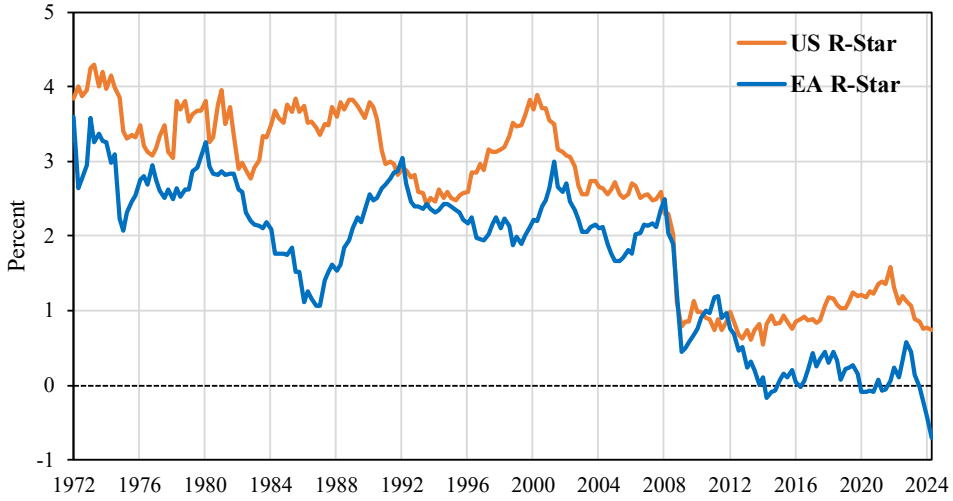
Notes: The vertical axis represents federal funds effective rate (%), not seasonally adjusted, & ECB deposit facility rate (%), not seasonally adjusted. Federal Funds effective rate (average of daily figures), is determined by the market, but influenced by the Federal Reserve through open market operations to reach the federal funds rate target; the former is published by the Board of Governors of the Federal Reserve System (US) [FEDFUNDS], while the latter by ECB [ECBDFR] and both retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/graph/?g=1tQn5; https://fred.stlouisfed.org/series/ECBDFR#0 The shaded areas indicate US recessions.

These actions took the policy stance to restrictive territory, slowing down activity in order to counteract the increases in prices caused by the large supply shocks. Policy rates were driven quickly above their neutral levels.

There is a live debate on the exact level of the neutral rate of interest, that is, the level at which policy is neither inflationary nor disinflationary. A commonly used benchmark is based on the method proposed by Holston, Laubach and Williams (2023) and updated regularly by the Federal Reserve Bank of New York. Figure 17 displays estimates of real neutral rates or R* for both the EA and US economies using the Holston et al. (2023) method. For the United States, the neutral real rate is estimated to be just below 1%, whereas for the euro area it is now in negative territory, just above –1%. There is uncertainty in the estimation, of course, and the figures need to be read with caution. As the plot shows, according to this measure, neutral rates had been falling before the pandemic, with a sharp drop during the financial crisis. Following a temporary increase during the pandemic, however, the rates have now fallen back in both jurisdictions. The numbers in Figure 17 need to be contrasted with the corresponding policy rates, after subtracting for measures of inflation expectations.

While, as seen before, short-run inflation expectations initially picked up, they are now roughly consistent with inflation at the 2% target, pointing to neutral nominal rates in the order of 3% and 1.5% for the United Sates and the euro area, respectively, according to Holston et al. (2023)'s measures.

Figure 17: Updated estimates of long-term R* (Holston-Laubach-Williams (2023) model) (%): EA vs US

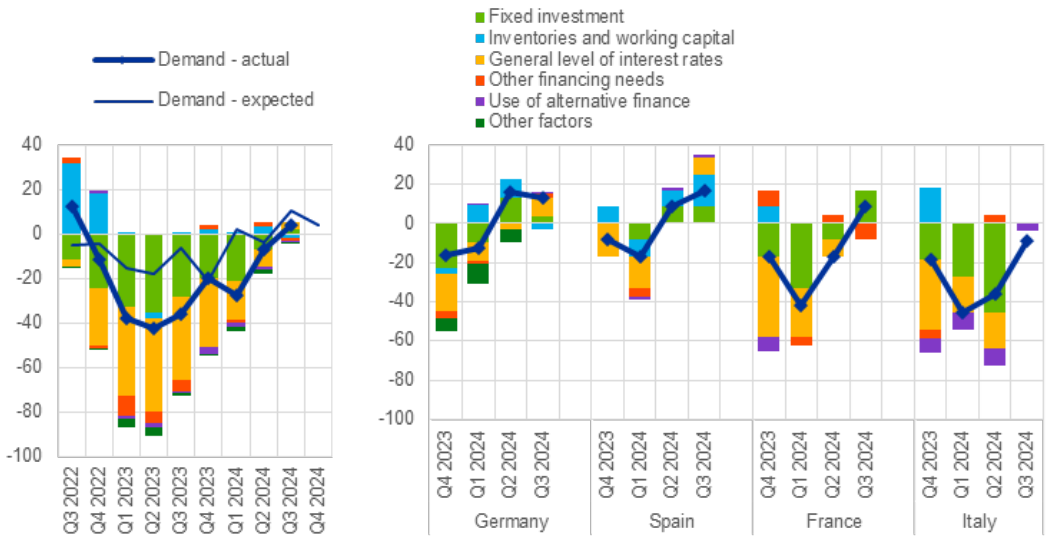


Source: Federal Reserve Bank of New York.
Notes: The vertical axis represents the R* estimates (%) by Holston, K., Laubach, T., and Williams J (2023); retrieved from Federal Reserve Bank of New York; https://www.newyorkfed.org/research/policy/rstar

As shall be explained in Section 4, the spot rate cannot in itself fully inform about the degree of restrictiveness of the monetary policy stance, as the whole expected path for rates is important.

A proxy indicator of restrictiveness in financial conditions is given by indices of credit demand. Figure 18 shows that demand for loans or credit lines to enterprises has fallen throughout 2023 and 2024 for the euro area as a whole, with the cumulative of changes adding to a material fall. Amongst the factors causing the fall in demand, the level of interest rate has played a large quantitative role.

Figure 18: Changes in demand for loans or credit lines to enterprises, and contributing factors: EA



Source: ECB, Euro Area Bank Lending Survey (BLS) – The data correspond to the third quarter of 2024, published 15/10/2024; https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/ecb.blssurvey2024q3~f30e9a3fd6.en.html

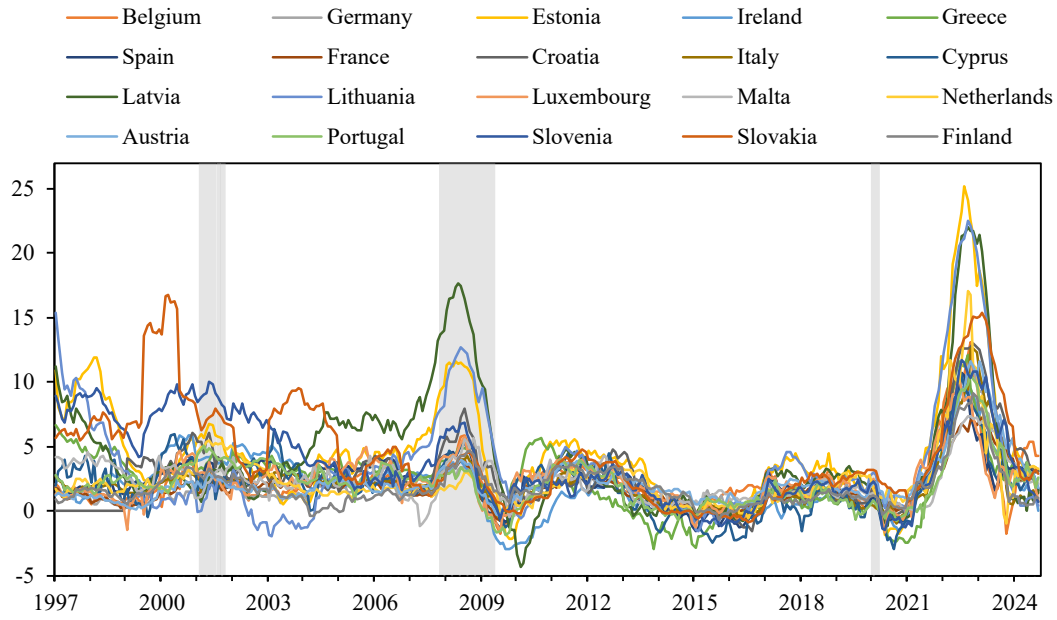
3. INFLATION DIFFERENCES ACROSS MEMBER COUNTRIES

3.1. The dynamics of inflation in different euro area countries

While all countries in the euro area have gone through similar phases of increasing and decreasing inflation through the pandemic and the energy crisis, there are important quantitative differences across EA member countries, as illustrated in Figures 19 and 20, which show, respectively, the evolution of headline and core inflation in EA countries.

The cumulative increases in energy prices since 2019 and up until May 2023 (roughly around peak) for EA member countries are displayed in Figure 21. The figure, reproduced from Vlieghe (2024) for EA Member States, highlights the enormous heterogeneity in energy price increases across EA countries. A number of factors can help explain this large variation. First, different countries put in place energy price caps or energy price subsidies of various magnitudes that cushioned the effect to different degrees. Second, some countries were quicker to resort to other international trading partners able to supply cheaper energy. Third, in some cases countries were able to diversify to other sources of energy (hydropower, solar, wind), again, reducing the exposure to the shock.

Figure 19: Headline inflation in Euro Area Member States, in %

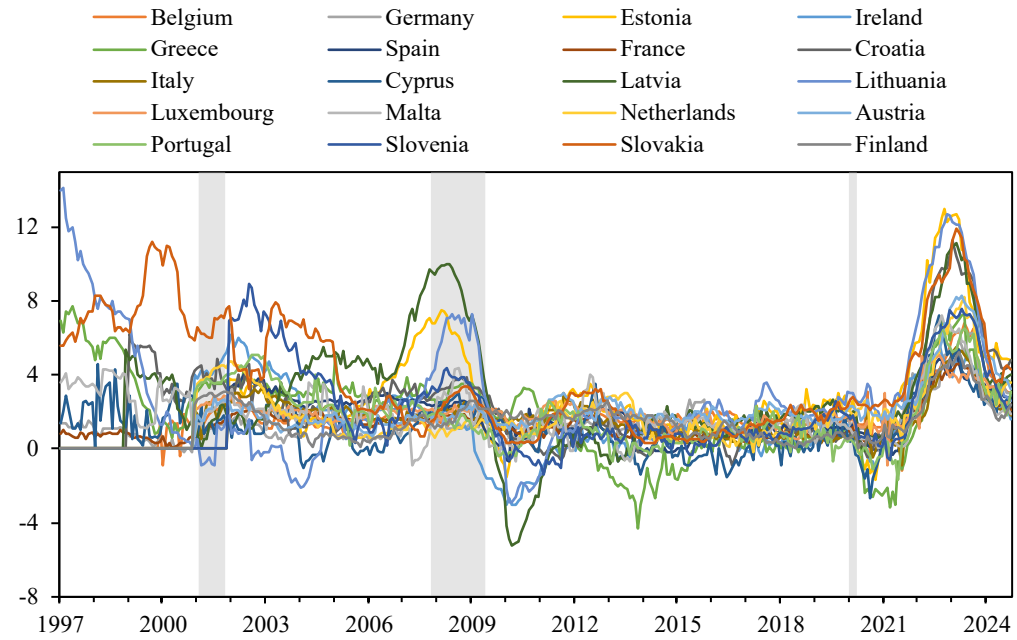


Source: Eurostat.

Notes: The vertical axis shows the Harmonized Index of Consumer Prices (HICP) (not seasonally adjusted) for countries in the Euro Area, Overall index, published by Eurostat [HICP – monthly data (index), Online data code: prc_hicp_midx]. The shaded areas indicate US recessions.

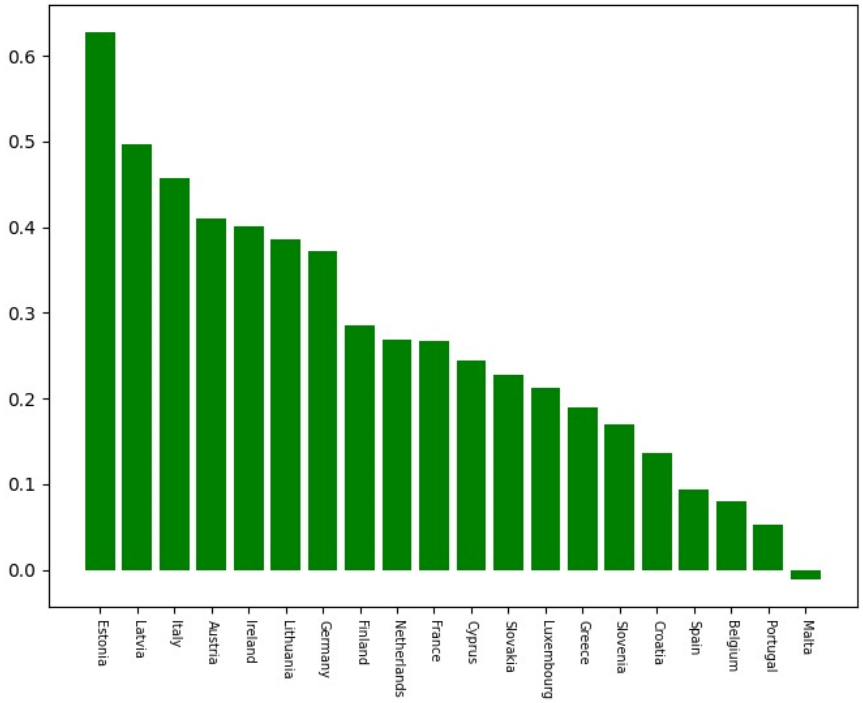
In other words, the response of inflation reflects the exposure to gas prices of different countries and the actions governments as well as the private sector took to mitigate the impact of price increases, in the form of subsidies or trade and technological diversification.

Figure 20: Core inflation in Euro Area Member States, in %



Source: Eurostat.
Note: The vertical axis shows the Harmonized Index of Consumer Prices (HICP) (not seasonally adjusted) for countries in the Euro Area, Overall index excluding energy, food, alcohol and tobacco, published by Eurostat [HICP – monthly data (index), Online data code: prc_hicp_midx]. The shaded areas indicate US recessions.

Figure 21: Cumulative CPI energy inflation, May 2019 to May 2023, in euro area Member States



Source: Vlieghe (2024), OECD, Eurostat. Notes: Panel data for EA countries, from May 2019 to May 2023. The vertical axis shows differences in the log of energy price level between May 2019 and May 2023 for each member country in the Euro Area. Data from Vlieghe (2024) replication package.

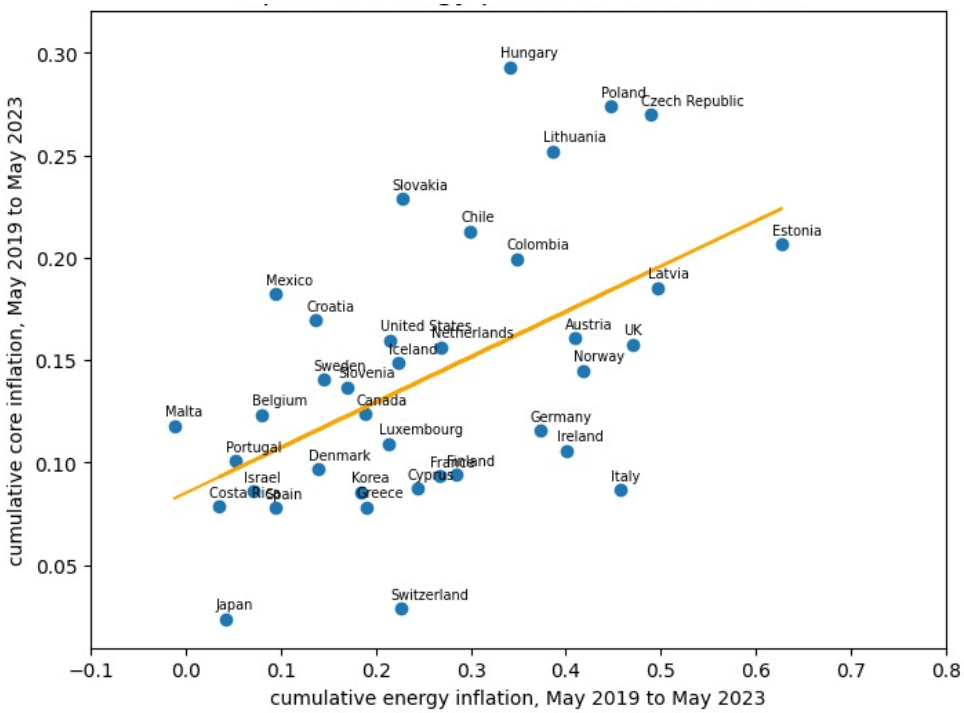
3.2. The differential impact of the energy shock

As discussed by Guerrieri et al. (2023) and Vlieghe (2024), energy price increases not only affected headline inflation but also core and services inflation. This is because most sectors (including services and other core goods components) use energy as an input into production. Policymakers and analysts

often tend to think of core inflation as completely separable from energy (the inclusion of energy is one of the key distinctions between headline and core measures of inflation). However, in practice, energy prices are passed through to core prices and influence core measures of inflation indirectly.

Figure 22 shows there was a strong positive correlation between cumulative energy price increases (computed from December 2019 to May 2023) and cumulative core price increases (for the same period) in a broad cross section of countries that includes EA Member States.

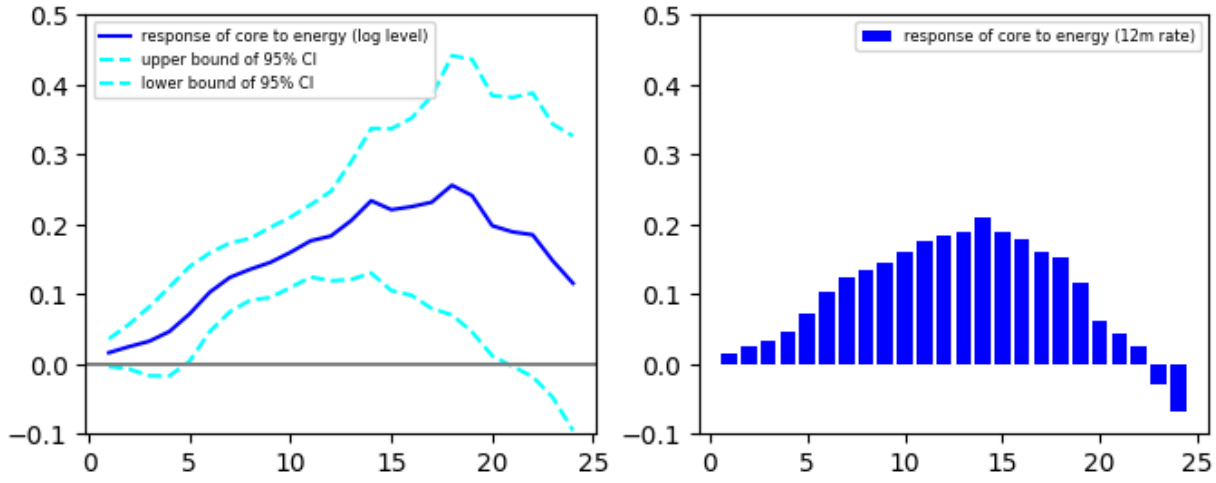
Figure 22: Cross-country variation in energy-price and core inflation



Source: Vlieghe (2024), OECD, Eurostat.
Notes: Panel data for OECD countries (except Australia, New Zealand and Turkey) with Croatia, Cyprus and Malta, from May 2019 to May 2023. The horizontal axis shows the differences in log of energy price level between May 2019 and May 2023, and the vertical axis shows the differences in log of core price level between May 2019 and May 2023 for countries in the panel. Data from Vlieghe (2024) replication package.

It is possible to assess more directly the impact of energy prices on core inflation in the recent period following the approach in Vlieghe (2024). Using a local-projection method for a sample of OECD countries covering the period January 2015 to May 2023, the estimated energy price impact is displayed in Figure 23. The plot on the left-hand side shows the effect of an energy price increase (in logarithms) on the core price level (also in logarithms) at different time horizons (measured in months). The plot on the right-hand side shows the implied 12-month core inflation rate in response to an energy price increase. Thus, the left plot of indicates that increases in energy prices have a significant impact on the level of core inflation, reaching peak impact around eighteen months following the shock. The evolution of 12-month core inflation (that is in growth rates rather than levels), displayed in the right-hand side plot, indicates that the core inflation rate peaks about fourteen months following the energy price increase.

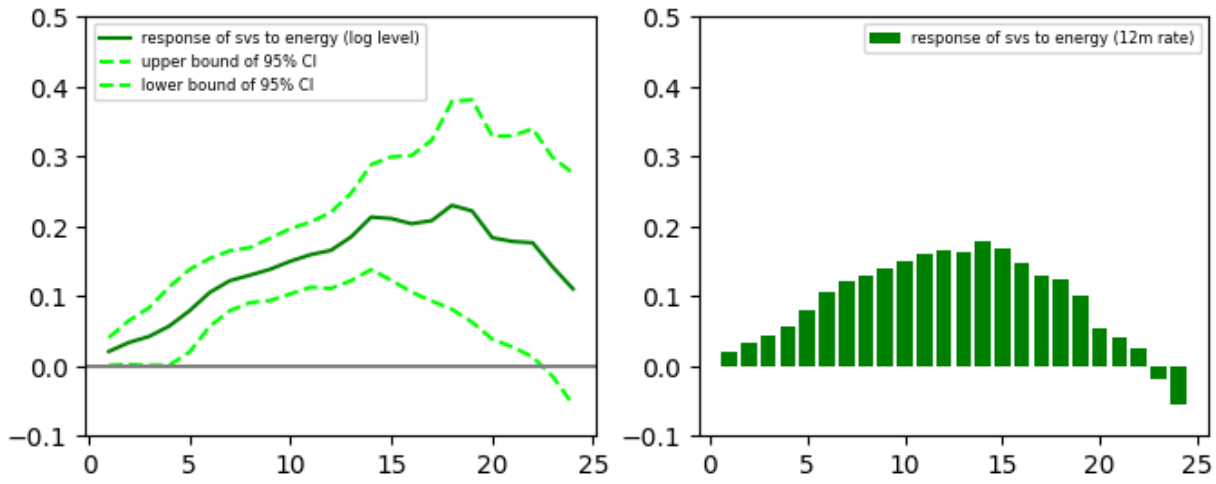
Figure 23: Impact of energy price shock on core prices



Source: Vlieghe (2024), OECD, Eurostat, Malta National Statistics Office, CROSTAT – Central Bureau of Statistics, Republic of Croatia, Statistical Service of the Republic of Cyprus.
Notes: Panel data for OECD countries (except Australia, New Zealand and Turkey) with Croatia, Cyprus and Malta, from January 2015 to May 2023. The left-hand side graph shows impulse response of core price level (in log levels) to energy prices increases (in log), and the right-hand side graph shows impulse response of 12-month core inflation rate to energy prices increases. Data from Vlieghe (2024) replication package.

It is interesting to also look at the effect on services, typically (and perhaps wrongly) considered less affected by energy. Figure 24 carries out the same exercise for services inflation instead of core inflation and finds a generally similar pattern, consistent with the results in Vlieghe (2024) and Guerrieri et al (2023). Services components of inflation are highly sensitive to the cost of energy. Reassuringly, these effects reverse relatively fast with the unwind of the shock. As emphasised by Vlieghe (2024), the temporary impact of energy price increases in both core and services inflation calls for caution in using measures of core or services inflation as indicators of inflation persistence, given that energy shocks appear to have a non-lasting impact on these inflation components; in other words, any enduring effect from energy prices is on core price levels, but not on inflation rates.

Figure 24: Impact of energy price shock on services prices



Source: Vlieghe (2024), OECD, Eurostat, Malta National Statistics Office, CROSTAT – Central Bureau of Statistics, Republic of Croatia, Statistical Service of the Republic of Cyprus.
Notes: Panel data for OECD countries (except Australia, New Zealand and Turkey) with Croatia, Cyprus and Malta, from January 2015 to May 2023. The left-hand side graph shows impulse response of services price level (in log levels) to energy prices increases (in logs), and the right-hand side graph shows impulse response of 12-month services inflation rate to energy prices increases. Data from Vlieghe (2024) replication package.

4. THE ECB'S MONETARY POLICY STANCE AND COMMUNICATION STRATEGY

The ECB Governing Council uses the deposit facility rate (DFR), considered as "the rate through which the Council steers the monetary policy stance," as the main instrument conducting monetary policy. The DFR tends to move in tandem with the interest rates on the main refinancing operations (MRO) and the marginal lending facility (MLF). At its latest meeting in October 2024, the Governing Council decided to lower the DFR to 3.25%, the MRO rate to 3.40%, and the MLF rate to 3.65%, with effect on 23 October 2024.[7]

A parenthetical explanation of the meaning of the *policy stance* is in order. The effective monetary policy stance of a central bank is defined not just by the current level of the policy rate (in this case the ECB deposit facility rate), but by the future expected path of policy rates. The whole path of interest rates matters because financial contract prices (for example, mortgage rates, particularly those that are fixed for a number of years) are based on what commercial banks or other financial institutions expect the policy rate to be over the relevant horizon of the contract or loan. Some central banks (including the US Federal Reserve or Sweden's Riksbank) are very explicit about the future policy rate path: conditional on the current forecast, those central banks provide estimates of the future interest rate path (a common path in the case of the Riksbank, and separate projections by different voting members in the case of the Federal Reserve, known as dot plots). To be clear, forecast dot plots or paths for interest rates should not be interpreted as commitments by central banks. They are conditioned on the outlook for the economy at the time of the forecast (i.e., conditioned on the projections for inflation, GDP, etc.) In both Sweden and the United States, it is well understood that when the forecast for the economy changes, so will estimates of the policy rate path or the dot plots.[8]

Unlike the Fed or the Riksbank, the ECB emphasises in its communications that it takes its decisions following a "meeting-by-meeting" approach.[9] Clearly, any decision on rates (or paths) needs to be taken and communicated "meeting-by-meeting". However, this is not a reason why a central bank could not or should not give more (conditional) guidance or communicate about the expected path of interest rates at the time of the meeting, conditional on the current outlook. There is no contradiction in making decisions meeting-by-meeting while still communicating its conditional estimates of the path of intended rates further into the future.

As it stands, the current approach by the ECB offers limited guidance on the future expected path of interest rates. In the absence of conditional forward guidance in the form of an explicit path communicated by the central bank, the only way to gauge the effective policy stance is by looking at market expectations of the future rate path. This path, however, may not reflect the true reaction function of the Governing Council, and, as such, it may at times introduce unnecessary noise in market pricing. It may also be based on different forecasts than the one used by the ECB, if market participants have a different assessment of probabilities and risks. Hence, these two different elements - ECB

[7] While various forms of quantitative easing (QE) have been actively used during the recent period, this is not the active instrument at the moment. A discussion of QE merits a separate report. Central banks, including the ECB are moving to clear separation between monetary policy and financial stability functions. In that transition, having a strong liquidity provision facility that does not require QE is gaining traction.

[8] There are many advantages to having an explicit interest rate path. First, it clearly communicates the reaction function of the monetary policy authority: it informs markets, firms and the public about the forecast path of interest rates, *conditional on the current forecast* for inflation, activity, etc. The key to stress is that the projection of the interest rate path is indeed a forecast, just as the projections for the other economic variables forecast by the central bank. Importantly, once the forecast for the economy changes, the expected path for interest rates would change too. A second advantage communicating the intended path for rates is that it can better elucidate the monetary policy strategy and improve both the internal and external communication, as well as the quality and discipline of the debate. By discussing the whole path (in the same way as Council members discuss the forecast for other variables), members are compelled to think beyond the immediate vote. On the other side of the argument, it is often contended that a disadvantage of communicating an intended path for rates is that the public might interpret it as a commitment from the central bank. However, this objection has a solution: it is a matter that requires explaining the meaning of the forecast path of interest rates to the public (and the media). As a matter of fact, the dot plots or the path projections are not interpreted as commitments in the case of the Federal Reserve Bank or the Riksbank. They are interpreted as forecasts at the time of publishing.

[9] See various rounds of communications in https://www.ecb.europa.eu/press/accounts/html/index.en.html

reaction function and actual forecast- get confounded in the market expected path for interest rates, which, ultimately ends up being the key influence on the pricing of various loan contracts in financial markets.

Could the ECB improve on the current approach to communication? Possibly. The ECB could clarify the policy stance by communicating its strategy and reaction function more explicitly, for example, by giving *quantitative* guidance on where interest rates are heading in the near and medium term, *conditional* on the current forecast. There are different ways to do this. For example, one possibility would be to emulate the Federal Reserve or the Riksbank and provide a forecast path for interest rates, being duly clear, as those central banks are, that the path is *not* a commitment: it is conditional on the current outlook. Another possibility would consist of giving updates on where the Governing Council judges the neutral rate to be (or a range for it), without necessarily publishing an explicit path. In these two cases, using the jargon of the ECB, the rate path itself becomes "data dependent": as the data change in a way that affects the forecast, so should the path for interest rates. Yet another possibility would be to give some indication of how, conditional on the forecast, the ideal policy path compares with current market pricing.[10]

Returning from the figurative parentheses, the monetary policy stance taken by the ECB in response to the inflation overshoot has been highly restrictive by design, and it remains restrictive at present. The unwind of the two large negative supply shocks (as energy price increases reversed and COVID-related restrictions eased) has both contributed to lower inflation and pushed up on economic activity. Monetary policy restrictiveness, in turn, has also contributed to the fall in inflation, but has done so by restricting demand and hence offsetting the positive activity impact from the unwind of the supply shocks. Effectively, this tug of war between positive supply forces and restrictive monetary policy has resulted in weak growth, if not stagnation, in the euro area, particularly in private-sector domestic activity, as judged by the Centre for Policy and Economic Research' Euro Area Business Cycle Dating Committee.[11] As inflationary pressures continue to ease, it seems appropriate for the ECB to return to a more neutral policy stance, preventing an unnecessary undershoot in inflation and further costly activity weakness. The Governing Council's latest decisions seem in line with such a plan. However, more guidance on the future would be of help for financial market participants, companies and households, and would allow market pricing to better reflect the optimal path envisioned by the Governing Council. In assessing the speed with which to proceed in returning inflation sustainably to its target, avoiding inflation undershoots relative to target (which cause unnecessary economic activity weakness) should be a reasonable first criterion: returning to target from above seems a prudent and less costly way to comply with the remit. Looking through bumps generated by base effects should be a second reasonable criterion to achieve the target in the medium term.

[10] Schnabel (2024) discussed the wisdom of a path in a speech that echoes the points in Tenreyro (2023).
[11] See https://cepr.org/about/people/cepr-cepr-business-cycle-dating-committee

5. CONCLUDING REMARKS

The ECB has maintained a restrictive policy stance that has constrained aggregate demand in order to ensure that inflation returns to the target. At the same time, the reversal of negative supply shocks (easing of COVID-19 restrictions and energy price falls) has been pushing down on inflationary pressures while pushing up on economic activity. The impact of this effectively positive supply force and the negative demand effect from restrictive monetary policy stance have jointly led to a rapid fall in inflation towards target. On the economic activity front, however, the two forces have been acting against each other, with monetary policy restricting economic activity and positive supply forces strengthening it. The result of this tug of war between demand and supply has been anaemic growth for the euro area.

Inflationary pressures in the euro area have now materially receded, inflation is at target and expected to hover around its target in the policy-relevant horizon of two-to-three years, while economic growth remains weak. Sustained demand weakness in the euro area will continue to bear down on domestic inflation, risking a fall below target in the future and potentially presenting challenges to financial stability. In light of the fast progress with inflation, the change in the balance of risks, and the lags in the transmission of monetary policy, a steady and preferably speedy return to a neutral policy stance (that neither restricts nor stimulates demand) seems in line with the ECB remit.

The Governing Council has started to take steps in that direction. More guidance on the next steps (and on how they might be different from current pricing in financial markets) should facilitate the transmission of the ECB's intended monetary policy loosening to the real economy.

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The paper seeks to assess the current monetary policy stance of the European Central Bank (ECB). To do so, it analyses factors driving the inflation dynamics in the euro area (EA) and their potential persistence, drawing comparisons with the inflation drivers and policy response in the United States (US). Given the prominent role played by the energy-price increase in EA inflation and the differential exposure of EA Member States, the paper analyses the country-level inflation dynamics in response to the energy shock. Finally, the paper discusses the ECB's strategy and communication, and the interpretation drawn by financial markets, before taking stock on the stance of monetary policy.

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