Council of the European Union

Brussels, 19 December 2024
(OR. en)

17075/24
ADD 1

ECOFIN 1531
UEM 491
SOC 928
EMPL 625
COMPET 1228
ENV 1243
EDUC 458
RECH 549
ENER 613
JAI 1892
GENDER 261
ANTIDISCRIM 177
JEUN 292
SAN 727

COVER NOTE

From:	Secretary-General of the European Commission, signed by Ms Martine DEPREZ, Director
date of receipt:	18 December 2024
To:	Ms Thérèse BLANCHET, Secretary-General of the Council of the European Union
No. Cion doc.:	SWD(2024) 704 final
Subject:	COMMISSION STAFF WORKING DOCUMENT 2025 Report on the euro area Accompanying the document Recommendation for a COUNCIL RECOMMENDATION on the economic policy of the euro area

Delegations will find attached document SWD(2024) 704 final.

Encl.: SWD(2024) 704 final

EUROPEAN
COMMISSION

Strasbourg, 17.12.2024
SWD(2024) 704 final

COMMISSION STAFF WORKING DOCUMENT

2025 Report on the euro area

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

on the economic policy of the euro area

{COM(2024) 704 final}

1. EXECUTIVE SUMMARY

The euro area has displayed remarkable resilience weathering rapid disinflation with minimal impact on employment. Headline inflation is forecast to return to the medium-term target by 2025 and decrease further in 2026, as the energy-induced high inflation proved mostly temporary. The successful disinflation has been accompanied by robust labour markets, which have defied fears of widespread job losses in the face of large macroeconomic shocks. Employment has risen by 3 million in the euro area between the end of 2022 and mid-2024, and real wages have started to grow on the back of the rapid fall in inflation. The recovery in purchasing power is beneficial from an economic and social viewpoint, helping reducing inequality and contributing to aggregate demand. The euro area's ability to absorb shocks and rebound, as seen in its response to the pandemic and the energy shock, has contributed to this outcome. Overall, annual average real GDP growth is expected to be 0.8% in 2024 and to reach 1.3% in 2025 and 1.5% in 2026.

Recent shocks and longer seated issues keep denting the euro area competitiveness. Energy prices for European companies declined in 2023 but remain high. This puts them at a disadvantage vis-à-vis main international peers, particularly for what concerns energy-intensive productions. Addressing high energy prices requires joint focus on competitiveness and decarbonisation transferring (or anticipating) the benefits of decarbonisation, to most vulnerable sectors exposed to international competition. It is therefore key to accelerate decarbonisation, leveraging on all technologies compatible with climate neutrality, particularly renewables, to develop an overall cost-efficient system, including stability of supply and adequate investments in infrastructure. In the short term, policy objectives might still require some well targeted energy support schemes. This case is reinforced when considering that some selected energy-intensive industries carry implications for Europe’s strategic autonomy.

Promoting productivity growth requires coordinated action. Like other developed economies, the euro area has witnessed a deceleration in productivity growth since the early 2000s. Compared to the US, Europe lags in the field of advanced digital technologies and infrastructure, including AI, microelectronics, and biotechnology, though excels in several advanced manufacturing, robotics, and green technology fields. Limited translation of research to marketable innovations and too little private sector investment in R&D and the need for stronger and better coordinated public R&D hinders productivity growth. Moreover, European firms often focus on mid-tech industries, such as automotive and chemicals, rather than the high-tech sectors that now dominate in the US. Europe creates fewer breakthrough innovations and market-leading companies. Structural challenges, including limited and uneven diffusion of digital technologies , skills shortages and demographic pressures have further exacerbated the productivity gap.

Completing and broadening the scope of the Single Market, including in services, is critical for strengthening competitiveness and productivity. Intensifying economic integration within the internal market and reducing excessive business regulation and taxation-related barriers could lead to substantial efficiency and welfare gains and make investments in the EU more attractive. A bigger Single Market makes the capital market union works better. By scaling up, firms can take advantage of greater market opportunities, increase their investment in research and development, and adopt new technologies, ultimately leading to sustained productivity growth.

Investment must be at the core of the euro area’s growth strategy. In recent years, public investment, boosted by the Recovery and Resilience Facility (RRF) and other EU funds, has been robust, but private investments have been less dynamic. Firms in the euro area are more reliant on

bank lending rather than capital markets. Savings in the euro area are abundant, and if channelled into productive investments via capital markets could provide significant financing support for the green and digital transformations. A European Savings and Investments Union, including banking and capital markets, could help leverage private savings to contribute to higher support levels for innovation and the clean and digital transitions. Venture capital, an alternative for banking financing, is still underdeveloped in the euro area compared to global peers. The Capital Market Union (CMU) aims to create a truly single market for capital across the EU to respond to the funding challenges.

The euro area and the Union need targeted industrial policies to secure investments in strategic technologies aimed at safeguarding European competitiveness This can help to ensure that the euro area and the EU develop or preserves a competitive edge in technologies that are crucial for long-term prosperity. However, for this, industrial policies must be aimed at fostering innovation and not sheltering declining industries or national champions. They must be future-oriented, not designed to protect incumbent. Crucially, industrial policies should be coordinated at European level, to avoid fragmenting of the Single Market. The Union has already taken significant steps in this direction, through the important projects of common European interest (IPCEIs), concerning sectors like microelectronics, cloud infrastructure and services, hydrogen, and batteries.

To bridge skills gaps and facilitate a smoother transition for workers, targeted policy measures are needed. Governments and educational institutions, as well as the private sector, must work together to create training programs that address the shortages in digital and green skills. Expanding lifelong learning opportunities, apprenticeships, and vocational education will be crucial to enable workers to reskill and adapt. Experience shows that action in education and skills not only is critical for competitiveness but is indispensable for inclusiveness and social progress. In the end, well-coordinated and timely policy interventions will be key to preparing the workforce to match the future economy's challenges and opportunities.

The euro area needs to balance macroeconomic stability with long-term investment needs. Strengthening public debt sustainability remains a priority for several Member States, amid market scrutiny and heightened expenditure pressures from demographic changes, security and defence, the green and digital transitions, and the need to mitigate and prepare for climate-related events. Fiscal policy should continue working in tandem with monetary policy and focusing on debt sustainability. Policymakers are encouraged to adopt stable, realistic debt reduction paths aligned with the revised economic governance framework, prioritise growth-enhancing reforms and investments, and carefully manage public finances to support long-term economic stability. After four years of strongly expansionary policy, the fiscal stance is expected to turn contractionary in 2024 and 2025: this will help to improve public debt sustainability and support monetary policy.

The progressive easing of monetary policy and the continued roll-out of the RRF will help to compensate for restrictive fiscal policy. The ECB eased monetary policy in June, September and October 2024. This followed a cumulative tightening of 450 basis points between July 2022 and September 2023. The easing of the monetary policy stance and financing conditions, which is expected to continue over the next months can cushion the impact of the fiscal adjustment on growth and provide cheaper funding for new investments, while preserving price stability.

The euro area financial system remains robust and absorbed the shocks of disinflationary policies with remarkable resilience. Non-Performing Loans (NPLs) are around historical lows across the monetary union. Arrears in the commercial real estate (CRE) sector have started to increase, but they are a small part of banks' lending portfolios. Property prices have been falling, especially in the CRE sector, raising concerns about the debt servicing capacity of some firms. Prices for residential real estate (RRE) have also fallen in several Member States but less than for commercials. Nevertheless, concerns for housing affordability remains a key policy issue for many Member States. Weaknesses in the non-bank financial sector (NBFI) call for enhancing resilience and macroprudential policy. Financial risks related to climate change and crypto assets should be

considered in the framework. In this context, the completion of the Banking Union remains a priority.

2. RESILIENCE

The euro area has displayed remarkable resilience weathering rapid disinflation with minimal impact on employment. In the two very large macroeconomic shocks of the last five years, the euro area has taken a hit, but rebounded ([1]). This was the case with the COVID-19 pandemic, and the economic consequences of the ongoing war of aggression of Russia against Ukraine, including the energy crisis, the inflationary pressures it produced and the necessary contractionary monetary stance to contain them.

Crucial to this resilience were timely policy responses. These included robust fiscal and monetary expansions in 2020 and 2021, supported by new European instruments. Additionally, both the EU and Member States implemented various measures, including to support households and firms exposed to surging energy prices, though these measures have not always been targeted and were in some cases rather onerous for public finances (European Commission, 2023a). Furthermore, the structural transformation of economies during the previous decade significantly enhanced their resilience to exogenous shocks. Financial systems demonstrated far greater robustness than during the global financial crisis and, by 2019, the fiscal situation in many Member States had improved considerably, providing them with crucial fiscal space to respond effectively to the shocks. At the same time, over the last five years, imported energy and fossil fuel dependency has decreased ([2]).

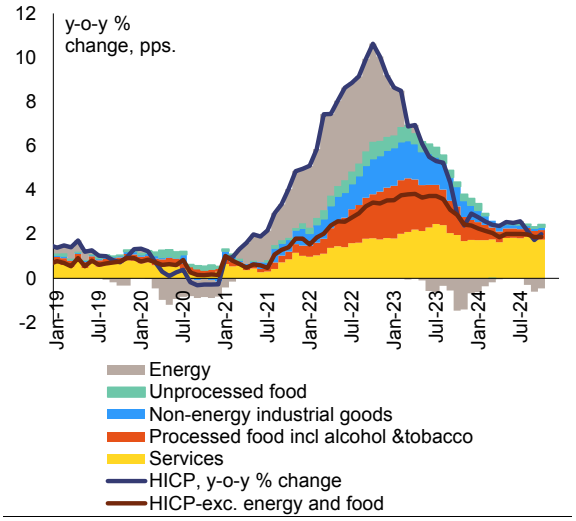
(1) Resilience can be usefully defined as the capacity to withstand a shock (often also described as robustness) and rebound. See Brunnermeier (2021).

(2) EU Member States have been very swift in diversifying away from Russian energy. In September 2021, Russian gas accounted for 41% of EU gas imports. In September 2022, this fell to 9%.

Macroeconomic developments

The euro area's disinflation has been fast. Headline HICP inflation fell from a peak of 10.6% in October 2022, a level which was the highest since the creation of the euro, to 1.7% in September 2024. Overall, annual HICP inflation is expected to decrease from 5.4% in 2023 to 2.4% in 2024, 2.1% in 2025 and 1.9% in 2026. In 2024, five Member States are projected to have inflation below the target.

Graph 2.1: **Inflation breakdown, euro area**

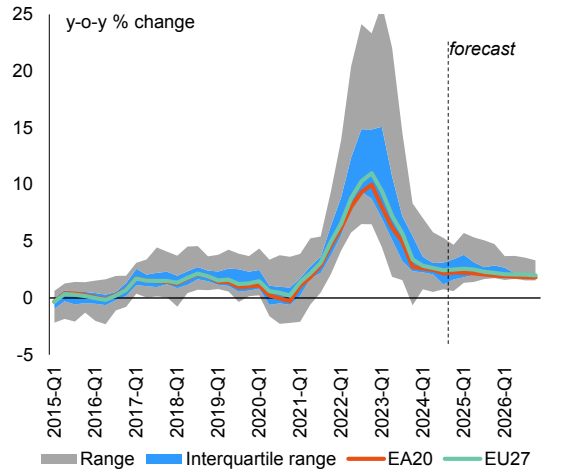


Source: European Commission

Headline inflation decreased fast after the pressure from energy prices had dissipated by November 2023. Food and non-energy industrial goods, due to weaking domestic and global demand, have been major contributors to the fall in inflation throughout 2024 **(Graph 2.1)**. Services inflation has been slower to decline, due to elevated wage pressures along with the price of less frequently adjusted items (e.g. insurance). Although some factors were exogenous, the ECB's monetary tightening since July 2022 has contributed decisively to anchor expectations, to limit the pass-through,

and to the convergence of inflation towards the price stability target (see *Macro-economic and financial stability* section).

Graph 2.2: **Range of annual HICP inflation in euro area Member States**

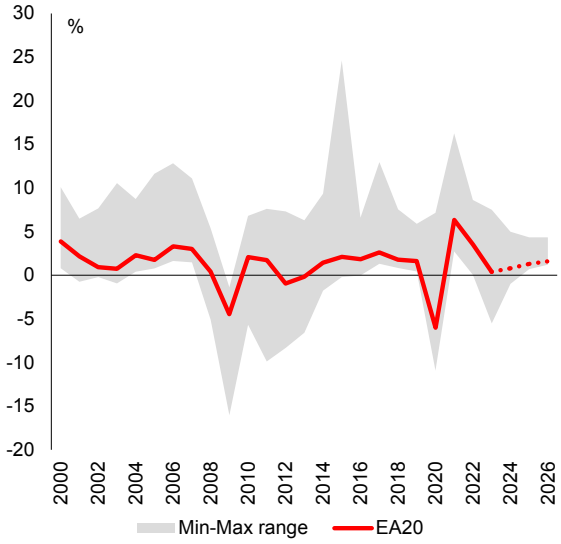


Source: European Commission

Differences in inflation rates among the euro-area Member States have narrowed. The inflation rate differentials that escalated after the outbreak of the energy crisis ([3]) have narrowed further in 2024 **(Graph 2.2)**, and they are now expected to stay close to historical averages by 2025 reflecting country-specific factors. This narrowing was primarily due to the gradual dissipation of energy shock impact and phasing out of associate energy measures. The heterogeneity of the projected core inflation (excluding energy and food) reflects country-specific factors, the structure of consumption, as well as real wage growth and productivity developments. Higher inflation is expected in central and eastern European Member States due to higher unit labour cost pressures (European Commission Autumn, 2024g)

The euro area avoided a recession and set grounds for further rebound. After the contraction in 2020 and subsequent strong rebound, economic growth stagnated between late 2022 and late 2023 as the energy price shock and interest rate increase reverberated through the economy. The forceful tightening of financial conditions contributed to five consecutive quarters of broad stagnation from late 2022 through 2023, but largely achieved its goal of a steady decline in inflation. Remarkably, employment has not only continued to show resilience, but expanded further — a soft landing under challenging circumstances. In 2024, the euro area returned to growth, and it is projected to expand by 0.8% **(Graph 2.3).** At the country level, growth developments and outlook remain diverse. However, dispersion in growth rates has decreased quite considerably since the pandemic shock and is expected to decrease further (see *Box 2.1 on convergence*).

Graph 2.3: **Range of annual GDP growth rates in the euro area**



Source: AMECO

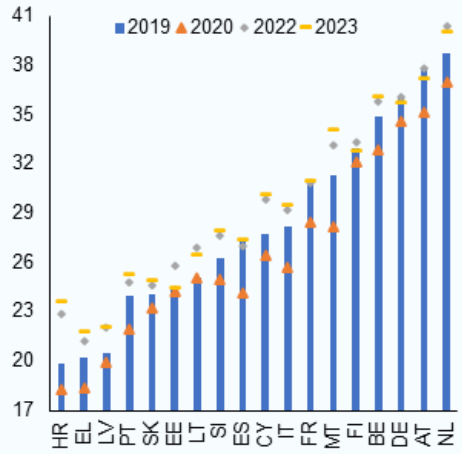
(3) Differences in the energy intensity of the economies explain most of the country-specific impact of the 2022 common energy price shock on inflation. See Coutinho and Licchetta (2023).

Box 2.1: Developments on income convergence

The pandemic and the energy crisis have raised concerns over income divergences in euro area and, more generally, in the EU. These shocks led to disruptions that could threaten to widen the gap between the more advanced, resilient, and diversified economies, and those that are more heavily reliant on specific sectors or external energy supplies.

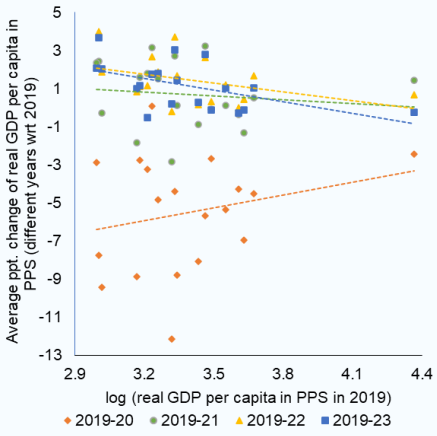
Four years after the onset of the pandemic and two years following the energy shock, convergence in real GDP per capita among euro area Member States does not appear to have been significantly affected. All Member States experienced large losses in income at the start of the pandemic, with losses in real GDP per capita in 2020 ranging from less than 2½% in Latvia, Estonia, and Luxembourg to over 9½% in Greece, Spain, and Malta. However, by the end of 2022, most Member States had recovered their 2019 income levels (**Graph 1**). Absolute beta convergence estimates ([1]), measured against 2019 income levels, confirm temporary disruptions in 2020 (as shown by the upward sloping curve in **Graph 2**) but convergence resumed on the back of the 2021-22 recovery. The ensuing energy shock did not lead to further divergences. Convergence in 2023 was driven by faster growth in the south and in some eastern countries associated with negative growth per capita in Germany, Finland, Austria, and Luxembourg.

Graph 1: GDP per capita (constant prices in PPS, thousands)



Note: IE and LU are not shown in this chart for graphical reasons. For these two Member States the 2023 GDP per capita in constant prices (PPS) are estimated at 73 and 78 thousand euros, respectively.
Source: AMECO

Graph 2 : Absolute beta convergence since 2019



Note: A negative slope of the regression line means convergence.
Source: Calculations based on AMECO

Recent shocks had a more transient impact on convergence compared to the lasting disruptions during the global financial crisis (GFC). The GFC significantly undermined the Member States resilience and economic activity in the euro area as a whole. It took about seven years to return to pre-2008 levels. The temporary nature of the more recent shocks is well evidenced by the dynamics of sigma convergence ([2]) or the coefficient of variation of real GDP per capita **(Graph 3)**. During the GFC, the coefficient saw a large increase between 2008 and 2010 that took around 8 years to unwind. By contrast, during the pandemic in 2020 the increase was relatively small, and it returned to pre-crises levels in 2021, declining further in 2022 and 2023, despite the energy shock ([3]).

The milder impact of recent crises on income convergence in the euro area, compared to previous shocks, was due to the very different nature of the shocks and the different policy responses. The global financial crisis, which emerged in 2008, originated from macro-financial imbalances that had built up for years in several large economies. This led to a prolonged period of adjustment for both the private sector and governments, which was further complicated by weaknesses in the financial systems. By contrast, the COVID-19 and the energy shock were major

([1]) Absolute beta convergence implies that lower-income countries or regions grow faster than richer ones. It is measured by the slope of a regression line between the initial income level and subsequent growth rate. A negative slope indicates convergence, with a steeper slope suggesting a faster convergence rate, as economies with lower initial incomes grow more rapidly than those with higher starting points.

([2]) Sigma convergence refers to a reduction in the dispersion of income levels across regions, countries, or groups over time. When measured as the *coefficient of variation*, sigma convergence indicates a decrease in the relative spread of GDP per capita. In this context, sigma convergence occurs if the coefficient of variation decreases over time, suggesting that the disparities or variations between countries are shrinking, which indicates convergence toward a more homogeneous level.

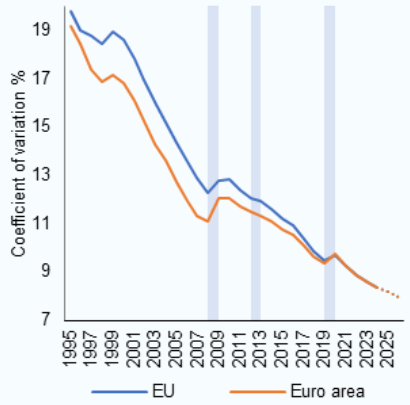
([3]) Beta coefficient estimates (Licchetta & Mattozzi, 2023) based on the 1995-2023 show a relatively mild impact observed after the pandemic and energy shock. This contrasts the steep decline during the three years after the GFC.

(Continued on the next page)

Box (continued)

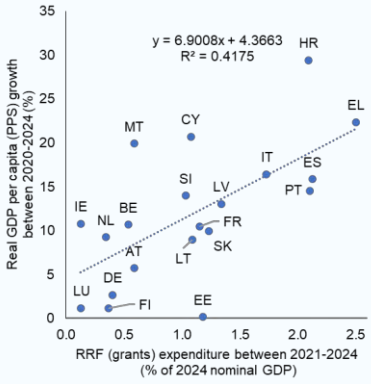
exogenous shocks, mitigated by national and EU policies. Governments responded to the pandemic and the subsequent energy shock with a range of policy measures cushioning the economic blow and facilitating a swift recovery. The fiscal situation at the beginning of 2020 was much stronger in most Member States than it had been in 2008, creating space for effective policy action. Fiscal policies played a crucial role, with high public spending to support businesses, protect jobs, and sustain household incomes. In the Union, Next Generation EU provided significant financial resources for Member States to invest in their economies. The RRF aimed by design at supporting economic convergence; it proved useful and adaptable to the challenges of the subsequent disruption of energy markets **(Graph 4)**. The SURE instrument also supported relevant institutional changes in several Member States in support of short-time work schemes and similar measures, which helped to keep people in jobs, avoiding unemployment, income losses and long-term scaring ([4]). Finally, several monetary policy measures avoided financial fragmentation and quickly adapted to face the new challenges generated by the inflation spike.

Graph 3: Sigma convergence since 1995



Note: Sigma convergence measured as the coefficient of variation (the ratio of the standard deviation to the mean). A reduction indicates an increase in the economies' similarities.
Source: Calculations based on AMECO.

Graph 4: GDP per capita (PPS) growth and RRF (grants) absorption

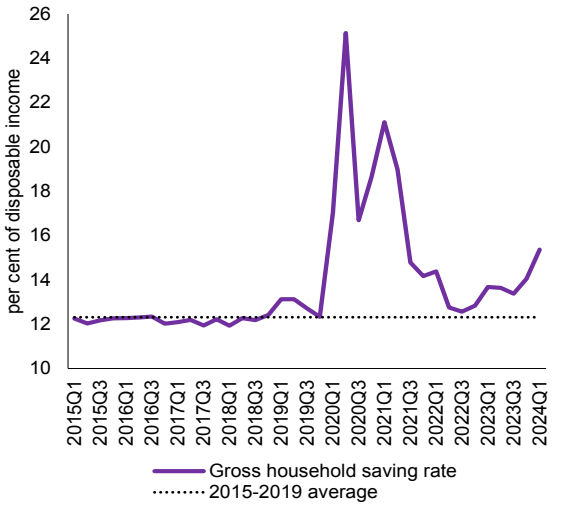


Source: AMECO and European Commission's internal estimates

([4]) The SURE instrument is estimated to have supported 31.5 million people and over 2.5 million firms in 2020. See European Commission (2023c).

Private consumption growth initially contributed to the post-pandemic rebound but it has since lost momentum. Growth in private consumption slowed at the end of 2023 as households put aside a larger share of their disposable incomes than in preceding quarters, and after converging towards its pre-pandemic long-term average, the saving rate **(Graph 2.4)**, edged up again reaching an average of 15.7% of gross disposable income in Q2 2024. Public consumption was supportive of growth throughout the period.

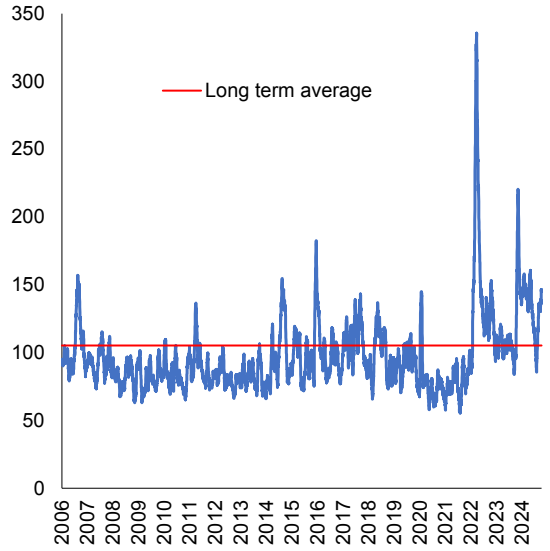
Graph 2.4: **Gross households saving rate in the euro area (% of gross disposable income)**



Source: Eurostat

Uncertainty might be withholding consumption and investment. With the ongoing Russia-Ukraine conflict, escalating tensions in the Middle East **(Graph 2.5)**, and the intensifying adverse impacts of climate change, as well as political uncertainties in some European countries, consumers might be hesitant to spend, opting instead to build up their financial buffers. Several other reasons may have pushed up households' propensity to save, including the erosion of real wealth by rapidly increasing prices and falling real estate value and the need to alleviate or contain their debt repayment burden ([4]).

Graph 2.5: **Geopolitical Risk Index (GPR)**

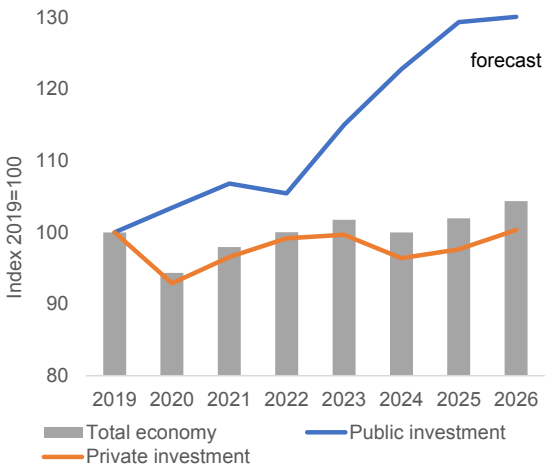


(1) 30-day moving average of daily GPR
Source: Caldara and Iacoviello (2024)

Total investment has been weak. Public investment gained momentum in some countries on the back of the Recovery and Resilience Facility (RRF) and other EU funds **(Graph 2.6)**. Despite support from the RRF, in 2024, private investment has been weak in a context of tightened financial conditions, widespread uncertainty, and long-lasting structural issues (see also competitiveness section).

The contribution of net exports to GDP growth has been slightly positive. Since the end of 2023, net exports have contributed to economic growth, mainly on the back of expanding services exports and weak import growth. Trade in goods weakened across all categories of goods, being likely affected by growing trade fragmentation and expanding trade restrictions amid deteriorating trade policy environment.

Graph 2.6: **Private and public investment**



Source: European Commission

A return to stronger growth is now expected for 2025 and 2026. Overall, annual average real GDP growth is expected to be 0.8% in 2024 and to increase to 1.3% in 2025 and 1.6% in 2026. Robust growth in real disposable income stemming from increased real wages and employment growth is expected to drive the rebound in private consumption – together with a moderate fall in the household saving rate **(Graph 2.7)**.

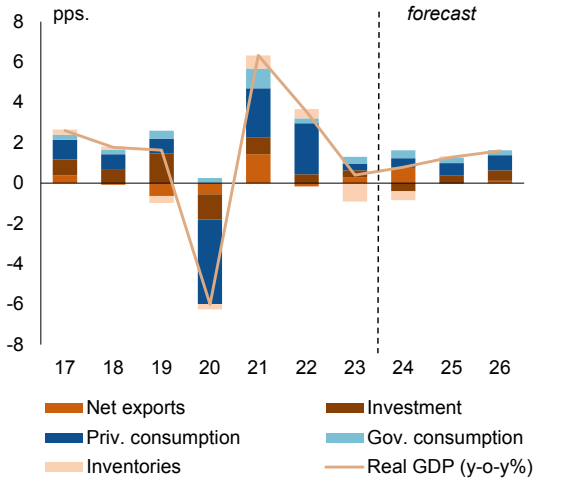
Investment is expected to increase gradually in 2025 and 2026 (Graph 2.7). Private investment is set to recover on the back of the easing of financing conditions. At the same time, investment funded by the RRF and other Union funds, notably cohesion policy funds, is expected to continue to support the economy, and crowding-in private investment further supporting green and digital transitions.

The external balance is expected to be neutral to GDP growth in 2025-26. Exports are projected to expand more briskly from 2025

([4]) See Special Issue on "The cost of uncertainty – New estimates", in European Commission (2024g).

onwards, driven by improved global trade and demand, particularly for investment goods. Despite this, the growth impact of exports is expected to be largely offset by a rebound in imports, driven by strengthening consumer and investment demand at home. Risks of prolonged geopolitical tensions and escalating trade fragmentation might risk damaging the euro area export market share.

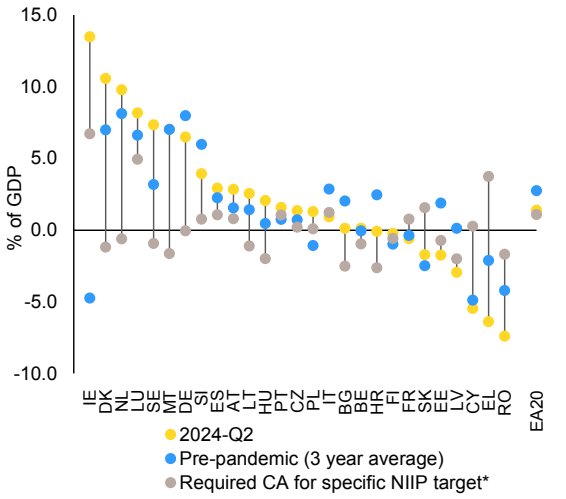
Graph 2.7: **Real GDP growth and contributions**



Source: European Commission, AMECO

Risks of large external imbalances have reemerged, though the outlook points to convergence. The euro area's current account surplus, which had been wiped out by the 2022 energy shock, has reemerged in 2023 as the terms-of-trade shock reversed. The current account is expected to increase from 2.5% of GDP in 2023 to 3.8% of GDP in 2024 and stabilise at 3.6% in 2025 and 2026. While most Member States saw an improvement in their current accounts in 2023, divergences have emerged, with some countries, including Germany and the Netherlands, experiencing notable increases in their surpluses **(Graph 2.8)**, whereas other countries, including Cyprus and Greece, registering significant increases in their deficits. Going forward, dispersion among Member States' current accounts is expected to narrow with improving deficits and norrowing deficits (European Commission, 2024c).

Graph 2.8: **Current account balances in the euro area Member States**



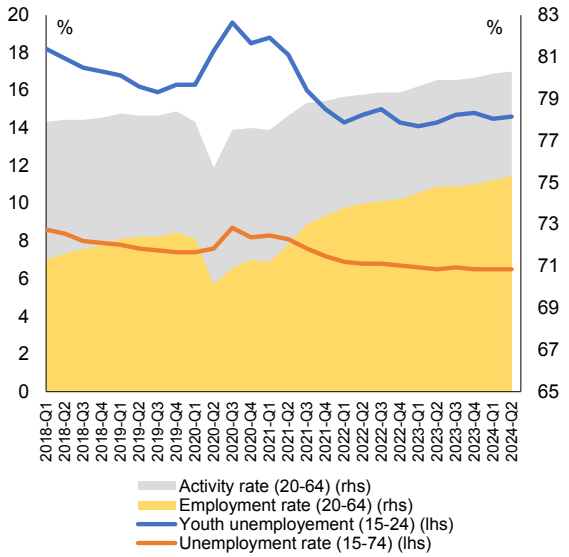
Note: explain CA to specific NIIP target.
Source: European Commission

Labour market developments

The resilience in labour market has been crucial to support the economy. Strong labour markets dynamics supported income and consumption in the post-pandemic recovery. The unemployment rate stabilized at the historically low of 6.3% in October 2024 and employment continued to grow, albeit at a slower pace than during the post-pandemic recovery. Consequently, the employment rate reached a new record high in [Q2 2024], climbing to 75.3%, which is 0.6 ppt. higher than in 2023 **(Graph 2.9)** ([5]). Good labour market performances have been consistent across Member States. This contrasts with previous crises, which were characterised by strong divergences across Member States.

([5]) In parallel, labour productivity growth has been weak and even contracting in 2023. Still, evidence does not suggest a trade-off between productivity and employment growth. See, Special Issue on "Productivity growth in the EU: Is there a trade-offi with employment growth?" in European Commission (2024c).

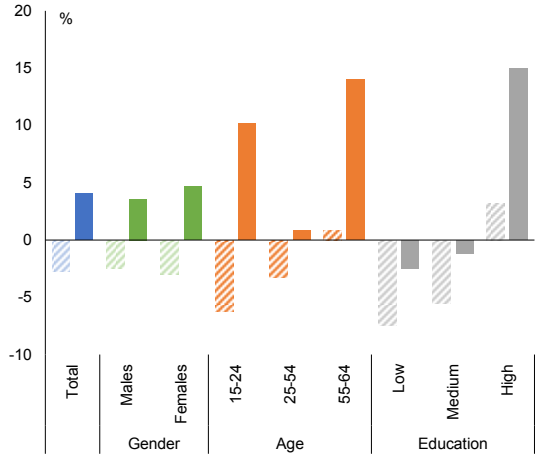
Graph 2.9: **Employment, activity, and unemployment rates in the euro area**



Source: Eurostat

Employment growth has been broad-based across gender, age and education level ([6]). Between Q4 2019 and Q2 2024, total employment (age group 15-64) increased by 4.1%. Employment growth for women (4.7%) was higher than for men (3.6%). Youth employment, which was the hardest hit during the pandemic, has experienced substantial growth (10.1%), while employment among older workers, which was less affected during the pandemic, continued to increase steadily. In terms of educational attainment, employment for highly educated individuals has continued to grow at a robust pace (15%). Employment for those with low to medium education – which amounts to around 60% of total employment - has recovered more slowly and remains below pre-pandemic levels (-2.5% and -1.2% respectively) **(Graph 2.10).**

Graph 2.10: **Change (%) in employment between Q4 2019 and (i) Q1 2021 (light colour); (ii) Q2 2024**



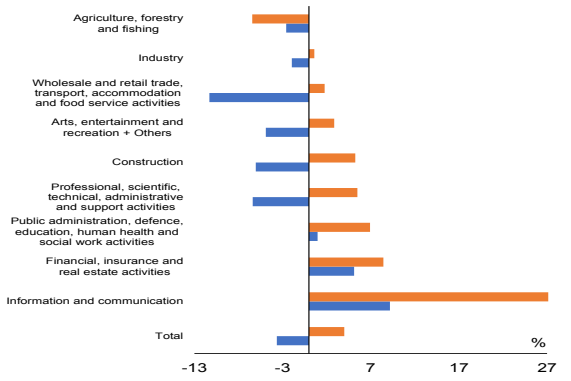
(1) Share of total employment in each category: (i) male (53%) and female (47%); (ii) 15-24 (9%), 25-54 (70%) and 55-64 (21%); low education (18%), medium education (43%), high education (39%).
Source: Eurostat

Employment growth has been positive across essentially all sectors. Except for agriculture, forestry, and fishing, all sectors have recovered their pre-pandemic employment levels or have experienced further increases **(Graph 2.11).** Employment growth was the strongest in the service sector, most notably in information and communication, financial, insurance and real estate and in the public sector. Notably, nearly 44% of the total jobs (around 2.7 million people) created since Q4 2019 (and 20% created since 2021) were within the public sector, underscoring its important role over the pandemic and the recovery ([7]). However, the rapid expansion of public employment could raise concerns about its impact on productivity growth, which has remained subdued, and the increase in public expenditure that is likely to be long-lasting.

([6]) This decomposition does not accout for the worker's country of birth. Active population has been largely driven by foreign-born workers (see Graph 1.14).

([7]) By contrast, the industrial sector has only partially exceeded the pre-pandemic level. Since Q4-2019, employment saw an increase of approximately 154,000 jobs. This includes a decline of 199,000 jobs in manufacturing, which was offset by a gain of 353,000 jobs in sectors such as mining, electricity, and other industrial activities.

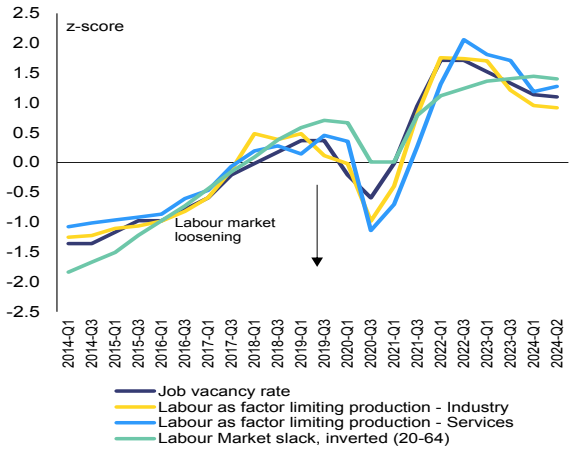
Graph 2.11: **Sectoral change (%) in employment between Q4 2019 and (i) Q1 2021 (blue bars); (ii) Q2 2024 (orange bars)**



Source: Eurostat

The labour market remains tight but is easing. The rapid recovery in 2021-2022 and rotation of demand from industry to services has led to significant labour shortages that have persisted throughout the energy crisis **(Graph 2.12).** Recently, at the aggregate level, there has been a decline in the share of firms that declare labour as a factor limiting their production. The job-vacancy rate has dropped from the historical peak of 3.3% in Q2 2022 to 2.6% in Q2 2024. Yet, it remains above pre-pandemic levels (2.3% in Q4 2019), which were already high by historical standards. Skill shortages also continue to be a pressing issue.

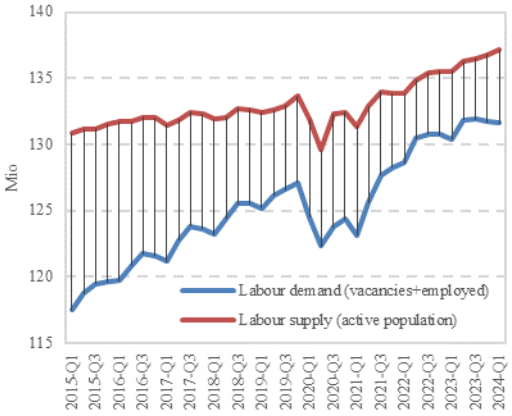
Graph 2.13: **Labour market tightness indicators**



(1) Z-scores are used as measures and computed by subtracting the mean from a data value and then dividing by the standard deviation. A declining (or increasing) value indicates looser (tighter) labour market.
Source: Eurostat and European Commission's Business and Consumers Survey

The labour market tightness reflects labour demand outpacing labour supply. Strong corporate profits and balance sheet dynamics in a context of a temporary fall in real wages have contributed to sustained dynamics in labour demand, which has grown faster than labour supply **(Graph 2.13)**. This is different from the US, where labour shortages have been partly attributed to supply factors such as reduced labour market participation. Going forward the recent decline in the profit share and the recovery of real wages suggest that the impact of this driver on labour shortages will gradually fade.

Graph 2.12: **Labour demand and supply in the euro area**



(1) Labour supply is proxied by active population (20-64), , labour demand by the sum of employed (20-64) and vacancies in industry, construction, and services (Nace B-S).
Source: Own calculations based on Eurostat

Migration inflows contributed to labour supply and, in turn, to employment. Like many other advanced economies, the euro area has benefited from large migration inflows, both from Ukraine ([8]) and other areas. Foreign workers from outside the EU have influenced positively labour force trends since 2021 easing labour market shortages ([9]). Overall, the share

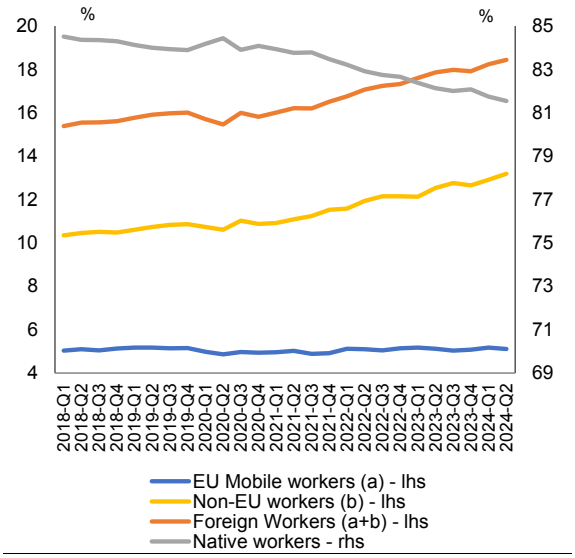
([8]) By July 2024, there were almost 4.1 million people fleeing the war in Ukraine who benefited from temporary protection in EU Member States.

([9]) In the early phase of the pandemic, from Q4 2019 to Q4 2020, the non-EU labour force saw a proportionally larger decline of 2.0% compared to the total labour force's 1.2% decrease. By contrast,

of non-EU workers in the total labour force in the euro area increased from 10.9% to 13.2% between Q1 2021 and Q2 2024 **(Graph 2.14).**

The resilience of the labour market can also be attributed to structural factors. In some cases, employers may be reluctant to fire workers in the expectation of the difficulty of re-hiring once economic conditions improve. Additionally, the ageing workforce might have led to increased hiring to meet skill demands, especially in a context of tight labour market. This trend may have been exacerbated by the decreased cost of posting vacancies, such as through online platforms and virtual interviews.

Graph 2.14: **Composition of the labour force by country of birth**



Source: Eurostat

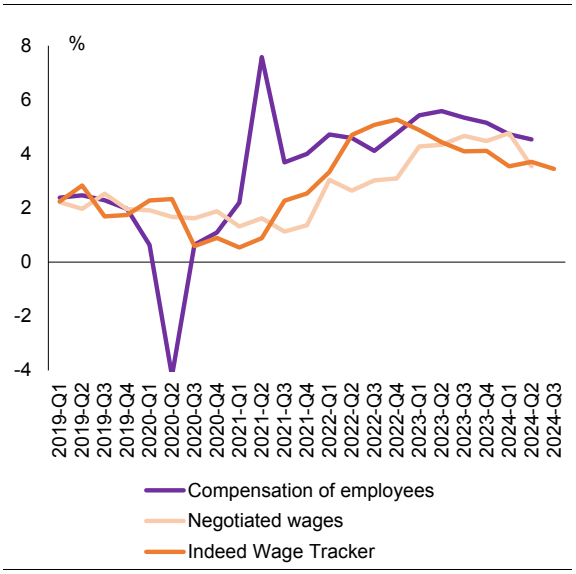
The weakening of economic growth combined with resilient labour market outcomes mechanically implied a further weakening of labour productivity dynamics. In 2023, this resulted in labour productivity declining by 0.9% per person and 0.8% per hour worked. It reinforced the long-term slowdown in labour productivity growth, which is mainly stemming from factors beyond the labour market such as weak capital deepening and a decline in technological innovation and diffusion, including a limited uptake of digital technologies.

between Q1 2021 and Q1 2024, non-EU workers contributed to 41% of the total labour force growth.

Wage developments

Nominal wages growth has been decelerating from a relatively high growth rate. Nominal wages have increased on the back of high inflation and tight labour markets. In Q2 2024, annual growth in nominal compensation per employee was 4.5%, a slightly lower rate than what observed in 2023 **(Graph 2.15).** The Commission's Autumn forecast project that compensation per employee will increase by 3% in 2025 and by 2.6% in 2026.

Graph 2.15: **Nominal wage growth indicators**

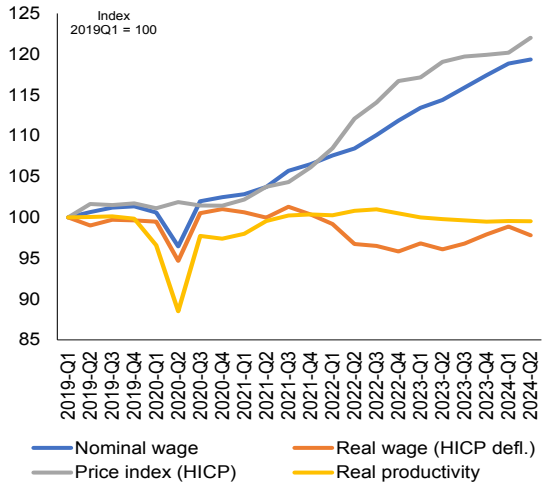


Source: ECB, Indeed.

Dynamic wage increases help the recovery in household's purchasing power. Despite strong nominal wage growth in the past years, real wages declined in 2022, because of the inflationary shock **(Graph 2.16).** Starting from the second half of 2023, growth in real compensation per employee turned positive on a quarter-on-quarter basis, and it has strengthened in the first two quarters of 2024, on the back of rapid disinflation. However, by Q2 2024, cumulative real wage growth since 2019 has remained behind cumulative

productivity growth by about 2 ppt ([10]). Real wage increase is beneficial from a social and macroeconomic viewpoint, helping reducing inequality and contributing to aggregate demand.

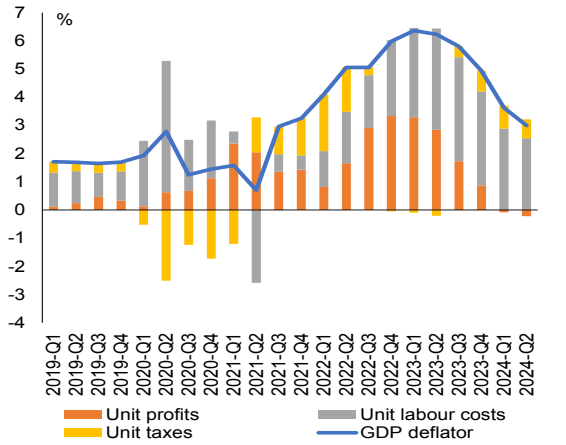
Graph 2.16: **Nominal compensation, real compensation (based on HICP), HICP Index and productivity**



Source: Based on Eurostat

A recovery in real wages is compatible with inflation converging to the policy target. Relatively high nominal wage growth may have some short-term impact on inflation if businesses raise prices to offset recent pay increases. However, recent unit profit declines seem to be acting as a cushion, absorbing wage hikes without pushing up **prices (Graph 2.17)**. Past growth in unit profits suggests that some buffer for further wage increases remains and that firms are absorbing further wage increases by reducing profit margins instead of raising consumer prices. Given the importance of the euro area as a trading partner for each Member States, as well differences in productivity, it might be sensible to consider the euro area inflation rate and target, rather than the national inflation rate, when setting wage bargaining. This approach helps Member States align their wage growth with broader economic conditions, avoid inflation divergences, and maintain competitiveness.

Graph 2.17: **GDP deflator decomposition**



Source: Based on Eurostat

Social implications

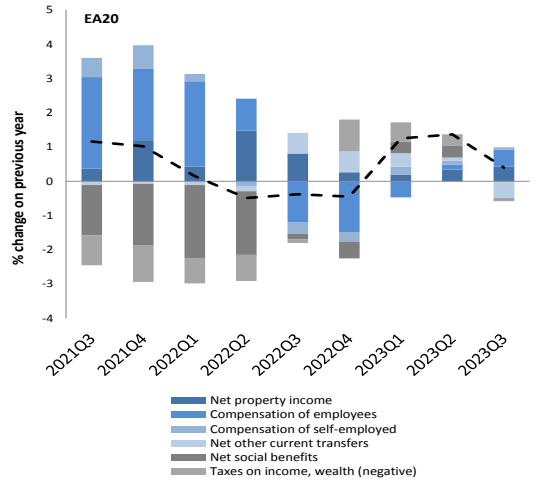
Household incomes increased in 2023 after declining in 2022. Consumption represents around half of euro area GDP, underscoring its critical role in the economy. Household income is a key driver of consumption, and its growth is influenced by wage growth and inflation. Wage growth in 2023 supported an overall increase in households' real disposable income. The impact of high inflation on real wages prompted real gross disposable household income (GDHI) to decline by 0.5% in Q4 2022 compared to the previous year **(Graph 2.18)**. However, as inflationary pressures eased and nominal wage growth gained pace in 2023, real GDHI was 1.8% higher in the Q4 2023 compared to the same quarter of 2022.

The share of people at risk of poverty or social exclusion (AROPE) declined slightly, but social issues persist. Despite the inflation shock and thanks to strong employment growth, the latest data point of 2023 (based on 2022 income) indicates a slightly decreasing percentage of persons at risk of poverty in the euro area, compared to the previous year (from 21.8% to 21.6%). According to Eurostat Flash estimates, the share of people at risk of poverty in the euro area is also expected to

([10]) Following the decline observed in 2023, labour productivity per employed person is set to remain weak this year, at -0.2%, before gaining strength to 1% in 2026, which is above the long-term average.

remain stable in 2024 (based on 2023 incomes). In some countries, a drop in risk of poverty can be partly linked to strong increases in statutory minimum wages (whose updates were broadly in line with inflation) and a mild rebound for higher wages in the second half of 2023 ([11]). However, it remains higher than the low reached in 2019 (20.7%). The share of Roma at risk of poverty remains significantly high (80%) (European Union Agency for Fundamental Rights, 2023).

Graph 2.18: **Real GDHI (% change on previous year), and contribution of GDHI components (pp), 2021-2023**



(1) Nominal GDHI converted into real GDHI by deflating it with the price index of household final consumption expenditure [prc_hicp_aind].
Source: Own calculations based on Eurostat

Financial distress of workers remains high after increasing during the energy crisis, for both the lowest and the lower middle-income households. Against the background of higher price levels and higher financing costs, lowest-income households in the EU report elevated levels of financial distress, corresponding to 27.6% in July 2024, around 10 pps or more above other income groups ([12]). At the country level, the share of lowest income households reporting financial distress ranged from 11.8% in Latvia to 35.6% in France on average in May-July 2024, with a share between 20% and 30% in 11 countries and above 30% in three countries. Compared to the same period in the previous year, this share increased in 10 countries of the euro area. Financial distress remains also high for lower middle-income households, with 17.9% of households in the second income quartile reporting financial distress in July 2024.

([11]) Between January 2022 and January 2024, statutory minimum wages increased by more than 7 % in nominal terms in all Member States where such wages are in place and by more than 20 % in most of these countries. See European Commission (2024i).

([12]) The percentage captures the share of the people in that income group declaring to have experienced financial distress, composed by the two sub-indicators: adults reporting having to draw on savings and/or run into debt.

Box 2.2: **Selected macroeconomic and social aspects of housing affordability**

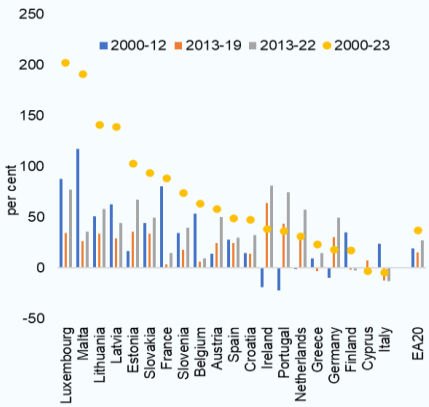
Housing occupies a fundamental position in the modern societies and economies. This is illustrated by the dominating size of housing-related expenses in households' spending, the importance of housing in total assets of an economy, and in social and political relevance of the housing market. For many people, rental costs are the largest item in their monthly spending, and the purchase of a house if very often the largest purchase in their entire life, and therefore house mortgages account for most of household indebtedness.

As housing costs have continued to outpace income growth, concerns about affordability have grown, with implications for economic stability, social cohesion, and the families' well-being. Housing affordability refers to the costs of both buying accommodation or of renting. Many factors have been driving housing market trends. These include demographic developments (including total population, structure of families, and urbanisation), but also monetary policy, national and regional rules governing land use, urban planning and building regulations, public infrastructure, rental regulations including on the legal protection of tenants and landowners, rental subsidies and the availability of social housing. In some countries, higher transaction costs (taxes owed when buying and selling property and notarial fees) may have also contributed to high prices.

Access to safe and affordable housing is a fundamental human need, essential for individual dignity, health, and well-being. It is also critical for social cohesion, enabling people to build communities and participate in society. Unaffordable or unavailable housing can lead to social exclusion, poverty, and aggravates the consequences of income inequality in particular among younger households, undermining the community fabric. House prices and some housing-related regulations, for example on mortgages regulation([1]) may also be a blockage for regional (and even intra EU) mobility with damaging implication for economic dynamism and social progress.([2]) Addressing housing affordability, therefore, requires several policies and tools, and policies with adverse effects need to be avoided.

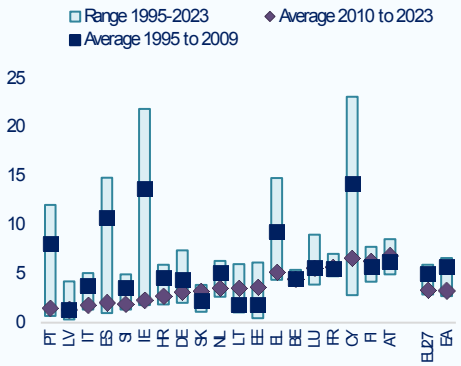
Housing is directly interconnected with the macroeconomy of the euro area, influencing and being influenced by the economic landscape. The residential construction and housing market sectors are pivotal, influencing employment, business cycles, and overall economic activity ([3]). Housing accounts for a sizeable share of output in the euro area. In the first quarter of 2024, housing construction contributed approximately to 6% of GDP, and investment in dwellings accounted for roughly 28% of gross fixed capital formation. Due to this, fluctuations in housing activities, house prices and rentals have substantial effects on the business cycle and GDP, and ultimately on wellbeing. Also, housing market cycles impact fiscal health, influencing tax revenues and social expenditure. In other words, policies that support the stability of the housing market also provide a contribution to economic resilience.

Graph 1: Changes in real house prices (2000-23)



Source: European Commission.

Graph 2: Number of houses completed by thousand persons per year



Source: European Commission.

Monetary policy is in part transmitted through housing-related lending, with policy rates steering mortgage costs and consequently housing demand and supply. The very low interest rates, which were common a few years ago constituted an important driver of the increase in asset prices in general, including of housing. The higher interest rate environment since 2022 is estimated to have contributed to lower demand and more generally led to a healthy

([1]) Borrower-based measures implemented in many countries often have flexibility embedded (e.g. different type for different type of borrowers and or flexibility for banks to lend above the established limits) which are geared towards minimizing their negative impact on housing affordability.
([2]) House owners are usually more mobile than those that level in rented accomodation.
([3]) See also Valderrama L. et Al. (2023) and OECD (2021).

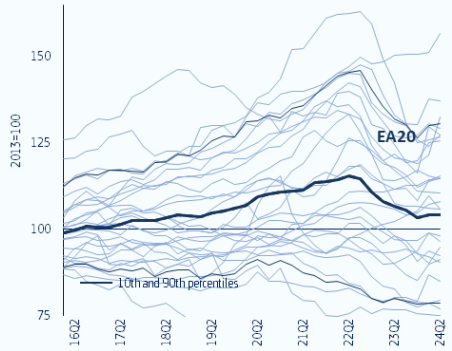
(Continued on the next page)

moderation of asset and house prices between 2022 and 2024. It is, however, still early to pinpoint how the new cycle of interest rates, since mid-2024 will impact the housing market, all the more as many other factors are at play.

Housing affordability in many euro area Member States has deteriorated over the last decade or so, with the situation worsening post-pandemic. House prices were increasing steadily between 2013 and 2022 but with significant differentiation across Member States. At the aggregate level (**Graph 1**), real house price growth (defined as housing prices deflated by consumption expenditure deflator) gradually built up to attain a cumulative increase of some 27% between 2013 and 2022. However, there is a large heterogeneity across Member States with a very large increase in real house prices in Ireland (an increase of 81% between 2013 and 2022), Luxembourg (77%) and Portugal (75%), and more moderate increases in other countries and even some declines in Italy (-13%) and Finland (-3%).

The supply of housing has been insufficient over the past decade in several Member States. Housing availability has had a slow and often inadequate response to demand changes due to the process of planning and building being time-consuming and subject to important regulator barriers and capacity constraints. This stickiness in supply leads to price pressures to accumulate, whenever there are increases in demand as regional economies and populations grow. Moreover, rising construction and refurbishment costs, partly driven by stricter sustainability requirements and by limited supply of building materials and construction have further reduced housing affordability in many Member States. In most Member States, the relatively low returns from renting and regulatory uncertainty have not provided sufficient incentive to invest in build-to-rent projects, exacerbating the supply shortage. As shown in **Graph 2**, the number of houses completed (by thousand persons per year) between 2010 and 2023 in the euro area is at the bottom of the range of the longer 1995-2023 period, and well below the average of the 1995-2010 period. While these results are also an illustration of the boom in construction in the first years of the century, they suggest that the volume of construction in recent years has been insufficient. Given this shortage, many policy interventions may have unintended consequences if the underlying supply issues are left unaddressed. For instance, rental subsidisation, while intended to support low-income households, may add to demand and ultimately increase prices – this transferring resources to the asset owners - if there is not at the same time some policy effort to increase supply. In some countries, rental regulation may have reduced the incentive to build-to-rent and therefore reducing the size of the rental market, further limiting options for those seeking affordable housing.

Graph 3: Price to income ratio



Note: data cover euro area countries

Source: European Commission

In recent years, higher interest rates resulted in lower borrower capacity of households. This may have contributed to raise entry barriers to the housing market, which persist still in mid-2024 despite some stabilisation in house prices. House prices started to moderate in 2022 and 2023, on the back of the tightening of monetary policy. However, price-to-income ratios ([4]) for the euro area as a while (**Graph 3)** in the second quarter of 2024 are still about 5 percentage points. above the level a decade ago (after some decline since 2022), although with very large divergences between Member States, and within these among regions and cities. As a result, for most households the cost of a standard house or apartment far exceeds a decade's worth of the average annual income (Frayne et. Al, 2022). Furthermore, among lower-income, and younger, groups (Kouvavas and Rusinova, 2024), a substantial proportion of households have housing-related costs ([5]) taking up more than 40% of household disposable income. Distortive tax policies – for example favourable tax treatment of mortgage costs -- that support housing demand rather than promoting supply can also be negative for housing affordability.

Housing shortages can also harm longer term growth and competitiveness. Beyond the more immediate social implications, housing availability and affordability issues could discourage labor and residential mobility making it more difficult to overcome interregional inequalities, improve job matching and thereby lift aggregate productivity and social mobility. It also raises the cost of land and labour and hence also the cost of premises and infrastructure for businesses and governments. The consequence is a mismatch in labor allocation and investment opportunities foregone that stymie economic vitality in burgeoning regions, affecting not only national economies but also the euro area and the Union through diminished overall growth and productivity and impaired international competitiveness (IMF, 2024).

Housing market is shaped by national and regional land-use policies and regulations. National governments usually handle social housing strategies, rental regulations, and tax treatment of mortgages, while regional and local authorities control land use, zoning, and building permits and licensing, which impact urban development. The primary responsibility for housing policies, including investing in social housing, ultimately remains with the Member States, which have adopted diverse approaches to meet their specific needs and preferences. However, the EU can offer

([4]) Price to income is the price divided by gross disposable household income.
([5]) Housing-related costs include utilities, home maintenance, and rent or mortgage costs.

(Continued on the next page)

Box (continued)

funding and support EU-derived regulation (and the way it is implemented in Member States) has an indirect impact on how complex, costly or time-consuming it is to deliver housing provision.

Policies supporting both private and social housing supply are needed. Investment in social housing, including new construction maintenance and refurbishment, could be part of the mix. Supply of social housing in particular has been very muted in most Member States in the last decade. Investments in social housing initiatives can alleviate overall supply constraints while enhancing affordability, particularly for low-income and younger families. These programs typically offer rental units at regulated prices or sell properties below market rates under specific conditions. Unlike housing allowances which may promote demand and therefore risk becoming counterproductive and costly for the public purse, construction of social housing expands supply.

Policies aimed at reducing urban congestion can also play a role in alleviating pressure on the housing market. By incentivizing firms to relocate staff or moving services away from congested areas, these policies can redistribute housing demand and alleviate supply constraints, ultimately making it easier for policies supporting housing supply, such as social housing initiatives, to have a more significant impact.

At the European level, a supportive environment can be built via complementary funding mechanisms and strategic initiatives to promote affordable housing. The European Commission, recognizing the importance of affordable housing for social cohesion and economic stability, is introducing a European Affordable Housing Plan, making this a key priority in the next term ([6]). Current efforts, requiring Member States' support, leverage funds (European Commission, 2024n) like the European Regional Development Fund (ERDF), European Social Fund Plus (ESF+), and InvestEU, as well as EUR 15 billion from the Recovery and Resilience Facility (RRF) for affordable housing and social infrastructure.

By promoting deeper financial integration and attracting private investment, the EU enhances financing conditions, including for housing. Private financing will remain dominant in real estate investment, therefore integrated capital markets can help to attract private investment into long-term housing projects, increasing liquidity and diversifying funding, particularly in underserved sectors like social housing ([7]). Banking Union reduces risks across the banking sector and better integrates financial institutions, enabling them to offer new and affordable mortgages. Future Union initiatives on banking and capital markets, under the Savings and Investments Union, will contribute to improving housing finance and boost economic growth, providing a strong foundation for the targeted policies that will be essential in tackling housing affordability.

([6]) Under this plan, Member States will be allowed to double cohesion policy investments in affordable housing as an immediate first step. See political guielines for the next European Commission (Von der Leyen, 2024).

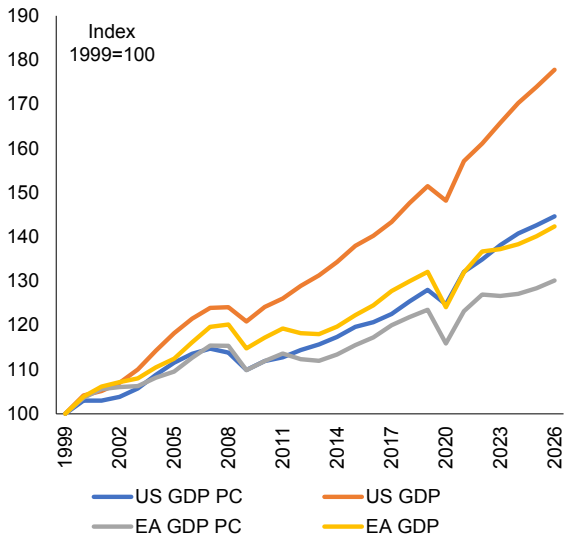
([7]) Fransen et Al. (2018) identified a minimum annual investment gap of EUR 57 billion.

3. COMPETITIVENESS

Competitiveness is about the ability of an economy to grow sustainably without generating external imbalances. There are different notions of competitiveness some of which capture the ability to ensure a prosperous life to citizens over the longer term. The European social economy model has contributed to high and converging level of income (see resilience section). It combines market competition and strong institutions to allocate resources, ensure economic stability and redistribute incomes.

Long-standing structural challenges impact the euro area competitiveness. Economic growth in the euro area has been sluggish since the turn of the century, outpacing only Japan among the G7 economies but lagging significantly behind the US. Based on current trends, by 2025, euro area GDP may have cumulatively grown around 30 percentage points less than the US since 2000. Part of the difference is related to different demographic trends, which therefore need to be filtered out when discussing prosperity. Since 2000, the US population grew by 19 per cent, while the population in the twenty Member States that are now the euro area grew by much less (9 per cent) However, also in per capita terms **(Graph 3.1)**, the euro area has been growing less than the US ([13]). At the same time, some welfare indicators favour the euro area especially in the context of an ageing society ([14]). For example, the euro area's stronger social safety net and higher level of public spending on healthcare and pensions may help to mitigate the negative effects of demographic change, suggesting that a broader perspective on prosperity is needed to fully assess the relative GDP performance of the euro area (Terzi, 2021).

Graph 3.1: **Level of GDP and GDP per capita in the euro area and United States (1999-2025)**



Source: European Commission, AMECO

Productivity

Productivity is the essential determinant of competitiveness. It enables firms to produce efficiently goods and services. By investing in technology, processes, and human capital, firms can boost productivity and thereby competitiveness. Progress and productivity drive economic growth and prosperity through investment, job creation, and expansion. Ultimately, economic prospects depend on productivity trends, driving long-term economic growth and Europe's prosperity.

The green transition supports productivity and competitiveness. In the medium term,

([13]) Furthermore, population growth in the US is stronger than in the EU, where it is expected to turn negative in the decades to come. This contrasts to the projections for the US, where the population is projected to increase further.

([14]) In 2023 the life expectancy for a newborn American was 79, three years shorter than the average in western Europe, according to UN projections. That startling gap was virtually nonexistent in 1980.

because renewable energy sources are widely expected to provide cheaper electricity compared tofossil fuels, they too will boost competitiveness in Europe (Stern and Stiglitz, 2023). As a matter of fact, data from the International Renewable Energy Agency shows that in 2023 solar photovoltaic and onshore wind are already cost-competitive vis-à-vis the cheapest fossil fuel alternative, including for euro area countries such as France, Germany and Italy (IRENA, 2024). Based on current trends, this is likely to become soon the case also for offshore wind. The World Bank estimates that almost all investments in more resilient infrastructure have a benefit-cost ratio higher than one (World Bank, 2019). The economic value provided by a wider set of ecosystem services in the EU28 amounted to EUR 234 billion in 2019 (Eurostat, 2021). Nature-based solutions, such as protecting and restoring wetlands, peatlands and coastal and marine ecosystems, are a cost-effective solution for improving the water cycle, reducing greenhouse gas emission and adapting to climate change. Water is important for Europe's competitiveness, given that a climate-resilient and secure supply of clean water is needed by all economic sectors, notably agriculture, energy and industry. Stricter standards for air, water and soil pollution decrease health costs and reduce damage to crops and buildings (European Commission, 2022). The Commission's analysis supporting a new 2040 climate target (European Commission, 2024q) shows that a more circular economy can reduce investment needs in the energy system by about 7% over the 2031-2050 period, cut spending on transport by some 9% and reduce GHG emissions by around 25%, thus bolstering the Union's strategic independence and economic resilience.

Like other advanced economies, the euro area has experienced a slowdown in productivity since the early 2000s. Looking at total factor productivity (TFP), one metric of productivity that removes the impact of labour and capital on output, the euro area's TFP growth rate was 0.7% annually between 2002 – 2007. But 20 years later (i.e. between 2019 and 2024), it is growing at an annual rate of only around 0.4%. Moreover, the euro area averages hide a substantial heterogeneity across euro area Member States. The Commission services' analysis, as well other international organisations including the IMF and OECD, expect productivity growth to rebound over the next few years on the back of a recovery in output and high level of employment. This assumption is consistent with the view that the post-pandemic weakness in productivity growth might be largely temporary.

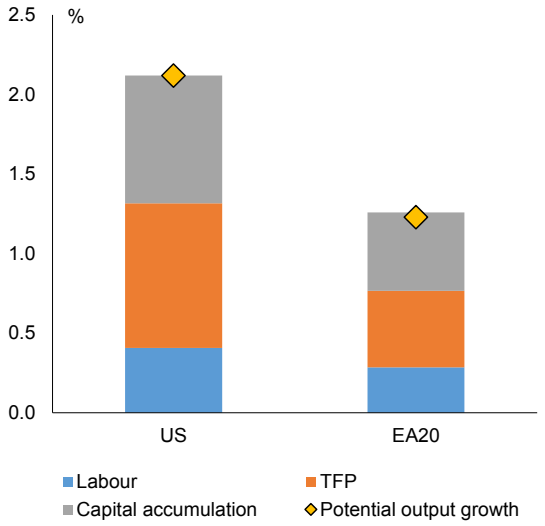
The decline in productivity growth can be attributed to both cyclical and structural factors. Cyclical factors include the post-financial crisis slowdown in global trade and investment and labour-hoarding during economic uncertainty. The COVID-19 pandemic has also disrupted supply chains and reduced investment in productivity-enhancing technologies. On the structural side, rapid ageing is expected to divert public resources away from growth-enhancing investments, reduce the workforce, and hamper innovation, while geopolitical tensions, trade wars, and the loss of competitiveness in manufacturing (e.g. in the automotive industry and energy intensive industries, such as manufacturing of fabricated metals and manufacturing of chemical products) have also reduced investment in productivity-enhancing technologies, further exacerbating the productivity trend (Bergeaut, 2024 and ECB, 2021).

The productivity slowdown has been more pronounced in the euro area than in the US (Graph 3.2). This has resulted in an increasing productivity gap between the two economies. ([15]) The euro area's aggregate TFP growth gap reflects differences in industry composition. The TFP growth advantage of the US is linked to larger shares in value added of sectors generating large productivity gains (e.g. ICT). The innovation landscape further illustrates this divide, with Europe trailing behind in key areas such as AI, big data, and cloud computing, which is also repeated in a

([15]) Moreover, the euro area averages hide a substantial heterogeneity across euro area Member States.

noticeable deficit in high-value startups known as “unicorns”.

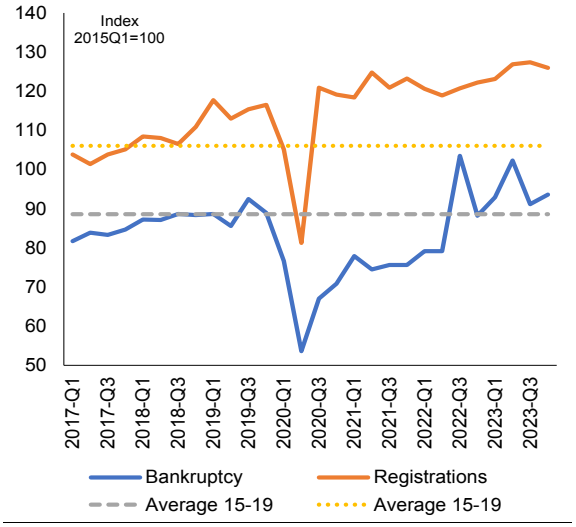
Graph 3.2: **Potential output growth decomposition in the euro area and the United States (2000-2024)**



Source: Eurostat

The decline in productivity growth in the euro area seems largely unrelated to the COVID-19 support measures. While some argue that widespread public support policies in the pandemic times could have led to misallocation of resources by keeping unproductive firms alive (Bundesbank, 2024), evidence suggests that these measures did not disproportionately benefit less productive firms (Lalinsky et al., 2024). In fact, bankruptcies have risen above trend since late 2022, indicating a correction in the economy. Also, new firm entries have remained consistent with pre-pandemic levels **(Graph 3.3)**, suggesting no negative reallocation effect (Lalinsky et al., 2024). However, in contrast to the euro area, the US has experienced a surge in business applications since the pandemic. New business applications dropped initially at the onset of COVID-19, but then surged to all-time highs in the summer of 2020 and have remained elevated ever since, albeit with some cooling in recent months (Decker and Haltiwanger, 2024). This suggests that the US has seen a significant increase in entrepreneurial activity, which could potentially contribute to stronger productivity growth in the future.

Graph 3.3: **Business registrations and bankruptcies in the euro area**

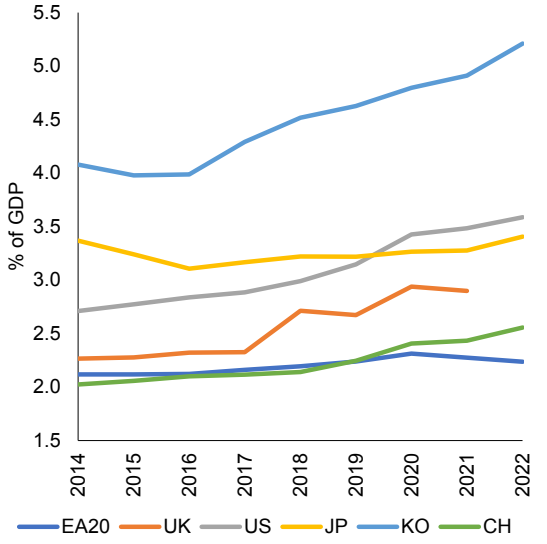


Source: Eurostat

TFP and innovation

For an advanced economy, innovation is essential for growth. This is a feature of Europe and all economies at the technological frontier. Furthermore, TFP growth is the only way of sustainably increasing living standards in the long term - capital accumulation has diminishing returns, making it a limited driver of long-term economic growth and increased living standards. At the same time, working age population is expected to shrink over time. The importance of research and innovation to Europe’s growth model has long been recognised, exemplified by the Lisbon Strategy, which set the objective of reaching 3% of GDP in R&D spending. While spending on R&D has shown a slight upward trend, to this date, the 3% goal has not been achieved in the euro area, hovering at around 2.3% of GDP **(Graph 3.4)**.

Graph 3.4: **R&D expenditure in the euro area, and selected global partners**

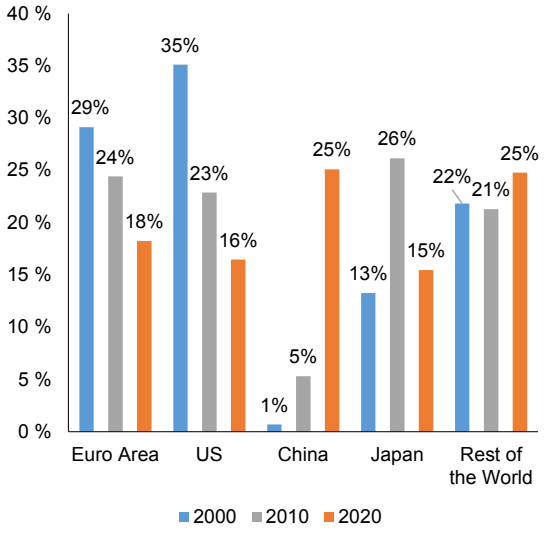


Source: OECD, Eurostat

Productivity heterogeneity has been persistent within the euro area. In 2022, most of the euro area's R&D was performed in Germany (40%), France (19%) and Italy (8%). These three countries are responsible for close to 67% of R&D expenditure in the euro area. Three euro area countries are spending at least 3% of GDP on R&D: Germany, Austria and Belgium. The 2024 European Innovation Scoreboard underscores this heterogeneity between innovation leaders such as Finland and the Netherlands, and less-well performing euro area countries, such as Croatia and Slovakia (European Commission, 2024a).

The euro area's global position in innovation might be at risk. It lags in critical areas (Draghi, 2024). In 2000, the euro area accounted for around 25% of the world's green patent applications, while its share had declined to around 15% in 2021 **(Graph 3.5)**. Meanwhile, China's share has increased significantly to 25%, up from 5% in 2010. Euro area countries retain strength in some of the advanced manufacturing segments and robotics, positioning itself above the US. However, they perform the lowest in micro- and nano-electronics and photonics, as well as AI. At the same time, the euro area keeps leading in global high-value patent filings related to the green transition, notably in renewables and energy efficiency. Its position remains relatively weak in other strategic areas, such as biotechnology, which have a major enabling and transformative nature for agriculture, environment, healthcare, life science, food chains or biomanufacturing (European Commission, 2024m).

Graph 3.5: **World share of green patents by region**



(1) Patent Cooperation Treaty (PCT) patent applications. Fractional counting method, inventor's country of residence and priority date used.
Source: DG Research and Innovation, Common R&I Strategy and Foresight Service, Chief Economist Unit, based on data from the OECD

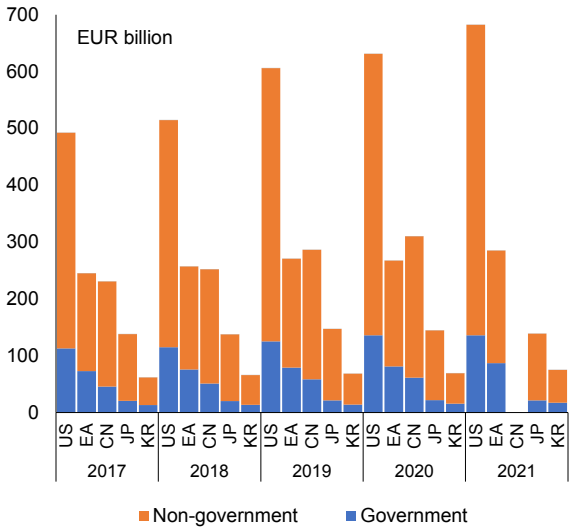
Europe continues to lag behind in applied research and in the translation to marketable products. The EU has a solid research base and is ranked second globally in terms of scientific output. China is the global leader, not only in terms of volume of scientific publications but also in terms of share of the top 10% of most cited publications. Recently, its share of the top 1% of most cited publications overtook that of the US. Europe has comparable levels of public spending on R&D vis-à-vis its competitors**.** In 2022, the R&D intensity of the euro area in the public sector, gathering government and higher education, was higher than that of Japan, the US and China (European Commission, 2024m). However, this investment is largely uncoordinated across Member States ([16])and

([16]) Draghi (2024) highlights that public R&D investment in Europe is coordinated through the Framework Programme represents only about 0.05% of GDP,

seems insufficient to bridge the overall gap in R&D investment in comparison to these countries. Overall spending is lower because private sector R&D in Europe is low, especially in comparison to the US.

The gap with the US in R&D come from private rather than public investment. The euro area spent 0.8% of its GDP in public R&D in 2021, similar to the US, but firms underinvested **(Graph 3.6)**. Business expenditure on R&D in the EU, at 1.2% of GDP in 2021, represents about half that of the US (2.3% of GDP) in the same year.

Graph 3.6: **Gross domestic expenditure on R&D (GERD) - government and non-government**

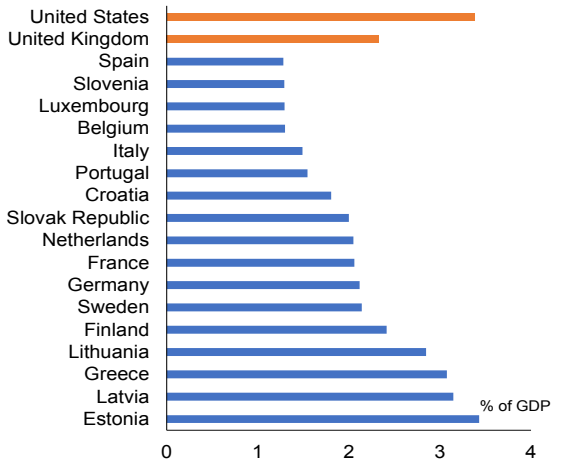


(1) No data for China available for 2021
Source: DG Research and Innovation Chief Economist, R&I Strategy and Foresight Service, Chief Economist Unit, based on Eurostat data (online data code: rd_e_gerdtot)

The EU keeps lagging in terms of unicorn firms ([17]), suggesting R&D spending is failing to fully translate into marketable products. As of May 2024, the number of unicorn companies in the US (741) and China (336) exceeds by far that in the euro area (79) (European Commission, 2024m). All this suggests that fostering innovation will require measures that go beyond a narrow focus on research spending and include policies such as Capital Markets Union to allow start-ups to access the necessary funds.

The limited diffusion of digital innovations helps explaining the productivity slowdown. Several factors specific to digital technologies may limit the diffusion of innovation. First, the adoption of ICT and high-tech in general requires substantial complementary investments and reorganisation to adjust the business model of the firm. Second, it also needs skills that are in high demand but short supply to make appropriate use of complex innovations. Third, data capital – the fuel of the digital economy – is proprietary (hence less easily transmissible than other forms of intangible capital) and often available only to a few big players, which are the ones benefiting from associated dynamic scale economies in 'winner takes all' markets. Moreover, market leaders have an incentive to reduce the adoption capacity of rival firms and exercise this e.g. by strategically acquiring critical patents and promising startups.

Graph 3.7: **Defence expenditure as a share of GDP, 2024 (expected)**



(1) Only euro area NATO member states are featured (in blue). US and UK for comparison (in orange).
Source: NATO

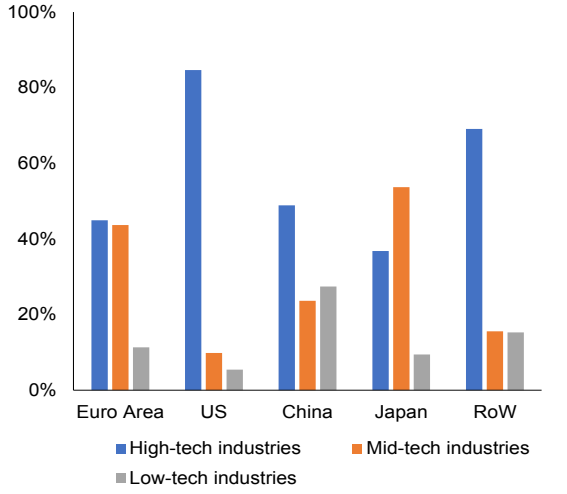
Military investment spending, when adequately underpinned by defence R&D can help advance technologies that drive broader innovation and growth. Investments in defence could have important technological

while in the United States, the Federal Government R&D budget represents 0.65% of GDP.

([17]) A unicorn is a privately held company with a valuation of more than USD 1 billion.

spillovers to various fields (Moretti et. al., 2023). Several technological innovations were initially pioneered for military use and found their way to civil use, including the internet, GPS, voice recognition, or the microwave. In nominal terms, euro area countries combined are the largest spender on defence in the world after the US and China **(Graph 3.7)**. However, defence investments are focused on the acquisition of defence equipment rather than R&D (European Commission, 2024m). The recent European Defence Fund aims to increase the attention on R&D.

Graph 3.8: **Private R&D investment by region and sector type, 2022**



(1) Due to the scope of the scoreboard, the Euro Area data represents 13 Member States. No data was available for Croatia, Cyprus, Estonia, Greece, Latvia, Lithuania and Slovakia.

Source: DG Research and Innovation, Common R&I Strategy and Foresight Service, Chief Economist Unit, based on data from the 2023 EU Industrial R&D Investment Scoreboard. Adaptation of Figure 2.1-0 in SRIP (2024)

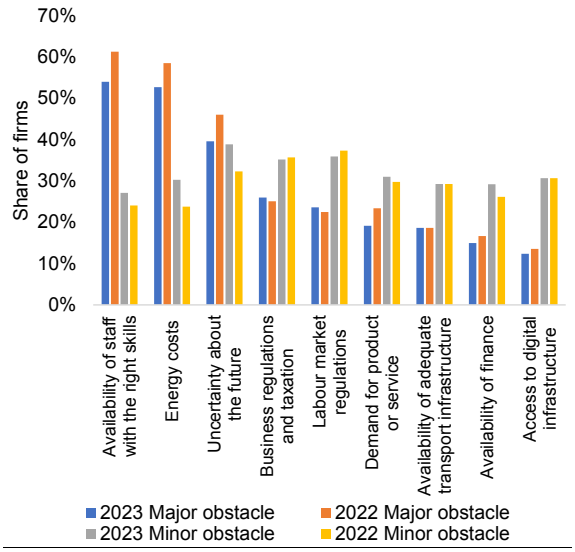
The R&D gap with respect to competitors also originates from structural factors. Using data from Eurostat, Fuest et al. (2024) show that the main difference between the US and Europe is in fact that US private R&D investments are concentrated in sectors that are usually referred to as **"high tech"** such as software, computers and biotechnologies. Most notably, within the US, investment in R&D in high-tech sectors such as health, ICT hardware and ICT services account for approximately 85% of all US private R&D investment (European Commission, 2024m). European firms invest proportionally more in sectors that are defined as **"middle tech"** such as automobile, chemical and transportation **(Graph 3.8)**. The main reason for US private R&D being twice that of Europe is the much higher weight of high-tech industries in the US. Looking at AI, the disparity in private investment is immediately apparent, with the US investing 67 billion dollars, whereas Germany and France each invested less than 2 billion, and Europe as a whole (including the UK) invested 11 billion (Bergeaud, 2024).

Excessive red tape stifles European firms' growth and hinders Single Market potential. Cumbersome administrative procedures, including for public procurement, and taxation issues are among the biggest barriers for businesses **(Graph 3.9)**, alongside shortages of skilled labour (European Investment Bank, 2024). Overregulation and excessive administrative requirements (Draghi, 2024) hinder European firms' competitiveness, particularly for innovative and digital companies, which are limited by often inconsistent, overlapping and restrictive regulations. In the EU context, the phenomenon of "gold plating" is often observed, in which the EU Member States issue additional regulatory requirements on top of the ones envisaged by the EU directives (Letta, 2024). This tendency multiplies administrative burden the companies need to face and often contribute to fragmentation of the Single Market and emergence of uneven playing fields in the EU economies.

Trade fragmentation poses growing challenges to euro area companies. The euro area's openness to trade has driven growth, with net trade contributing 0.2 p.p. to GDP growth over 1999-2023 (relative to an annual GDP growth of 1.3%). However, global trade fragmentation is rising, with a sharp increase in non-tariff trade restrictions since 2020 (see **Box 3.1**) and decoupling between the US and China in key sectors. Trade remedies (antidumping, countervailing duties and safeguards) implemented by the EU against China or tied to China more than doubled between 1995 and 2019 (Bown, 2024), contributing as well to this fragmentation. This is expected to lead to

slower world trade growth ([18]), costing companies and consumers through relocation of activities.

Graph 3.9: **Barriers to investment**



Source: European Investment Bank

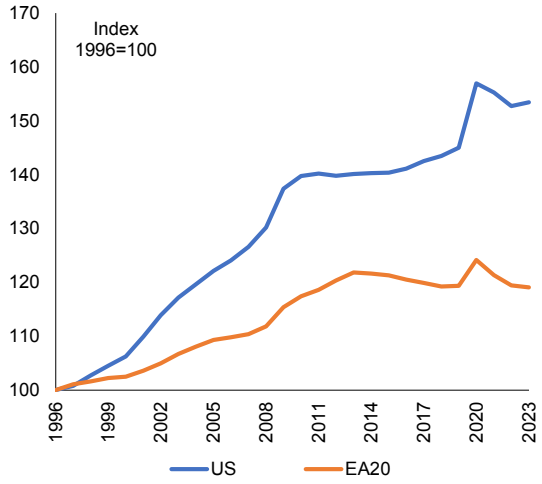
Physical capital

The euro area needs substantially more investment. In terms of capital stock and investment capacity, the euro area is lagging with respect to the US, which has seen a much faster rise in capital intensity per worker over the past 25 years especially since the global financial crisis. **(Graph 3.10)**. Covering this difference requires access to large financing sources (see section on funding).

Investment will be particularly important to support the green and digital transition. Achieving Europe's climate goals, including reaching net zero emissions by 2050, will require significant investments both at public and private level. A failure to boost investment would therefore jeopardise Europe's legislated target to become the first climate-neutral continent, while also reducing the changes of seizing on the growth opportunities associated with being a leader in green technologies. Equally, achieving the Digital Decade targets and objectives will require significant investments on public and private level. Boosting the digital transformation is crucial for Europe's competitiveness and resilience.

Supporting investments must be at the core of the EU's growth strategy, since private investments have been too slow. Private investments rebounded after the COVID-19 pandemic, but they have slowed in 2023 due to tighter financial conditions and increased uncertainty following new geopolitical tensions (see also Graph 1.6 in resilience section). These factors continue to weigh on firms' confidence.

Graph 3.10: **Capital intensity in the euro area and the US**



(1) Net capital stock at 2015 prices per person employed, total economy

Source: European Commission

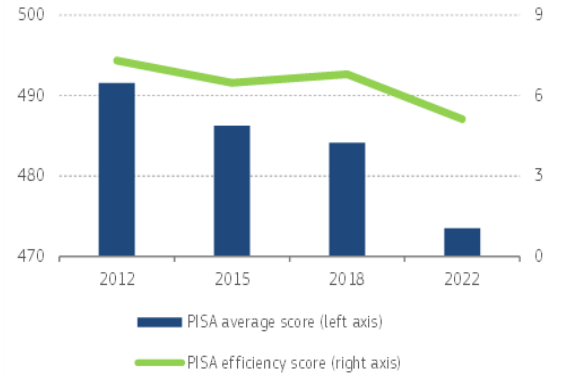
Human capital and skills

Education and skills development are vital for innovation, productivity and competitiveness. As economies are facing pressures of rapid technological change, investing in human capital has become crucial. Educational attainment of young people in the euro area is improving — with 42% of 25- to 34-year-olds holding a tertiary degree in 2022, approaching the 51% seen in the US, but labour market relevance of higher education needs to be

([18]) The IMF projects world trade to grow at 3.2% over the medium term, a pace well below its annual average from 2000-19 of 4.9%.

improved. In particular the number of graduates from STEM fields falls short of demand in many countries. At the same time, performance among younger students is declining. For instance, the average PISA score in reading, mathematics, and science for 15-year-olds fell by 10 points since 2018 and 18 points over the past decade **(Graph 3.11).** Although similar downward trends were observed in other industrialised nations, with a 9-point drop since 2018 and a 19-point decline since 2012 across OECD countries, the euro area lags the US, UK, Canada, and Japan. In 2022, the last year for which data is available, the euro area had the highest proportion of low-achieving students and one of the lowest proportions of top performers, with the COVID-19 pandemic potentially exacerbating this decline.

Graph 3.11: **PISA scores in Europe**

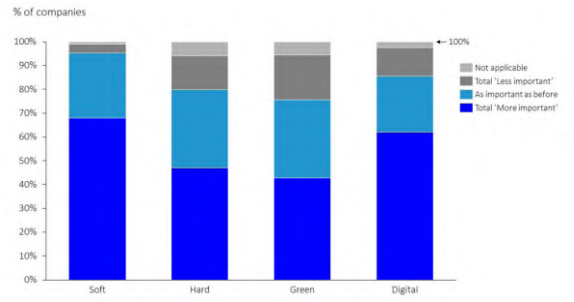


Source: OECD

The dual transition towards digitalisation and greening also requires developing a new set of basic and advanced digital skills. The fast pace of technological innovation demands a swift evolution in the workforce's skill set, with emerging job roles in areas like cloud computing and data analytics. However, this shift poses challenges for groups with limited digital skills that are underrepresented in tech fields. As pointed out in the State of the Digital Decade report 2024 44% of adults in the EU lack of basic digital skills. Moreover, the shortage of people with advanced digital skills and ICT specialists is a significant factor hindering the development and deployment of digital technologies across the economy (European Commission, 2024r).

As industries move toward more sustainable practices, the importance of green skills is also on the rise. Climate change is set to cause substantial changes in job patterns, with positions in carbon-dependent sectors likely to decline and new opportunities in green industries to grow **(Graph 3.12)**. The transition to a low-carbon economy is expected to generate a net increase in employment. For the EU, the impact assessment of the 'Fit for 55' initiative projects an aggregate employment growth of somewhere between -0.3% and 0.5% by 2030, based on simulations with different macro-economic modelling tools. A recent study estimates that 1.2% additional employment growth by 2030 may be associated with the implementation of the European Green Deal (CEDEFOP, 2021). New occupations are likely to arise in green industries and technologies, including energy, agriculture, manufacturing, R&D, and environmental services.

Graph 3.12: **Importance of different skills for SMEs in the EU**



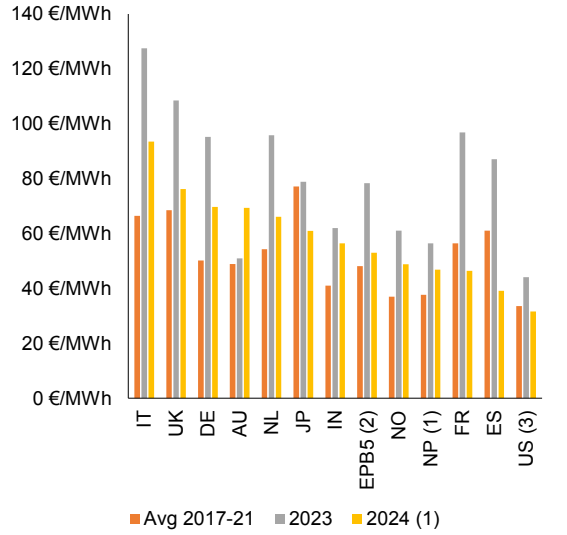
Source: Draghi Report

Energy prices and cost competitiveness

High energy prices in Europe hinder the competitiveness of European firms especially energy-intensive ones. This was already the case before the 2022 energy crisis, suggesting high energy costs have been a long-standing impediment to Europe's competitiveness. The situation was aggravated by the crisis, putting the EU at a greater disadvantage for what concerns price and cost competitiveness, especially for energy-intensive industries. Most

notably the share of firms identifying energy costs as a major or minor obstacle to investment remains high in the EU (while declining in the US in 2023). Energy prices decreased significantly in 2023 and 2024, but they remain high compared to before the energy crisis **(Graph 3.13)** (European Investment Bank, 2024). Moreover, European companies face significantly higher energy prices than international competitors. For instance, European companies face electricity prices that are 2-3 times those in the US. Natural gas prices paid are 4-5 times higher.

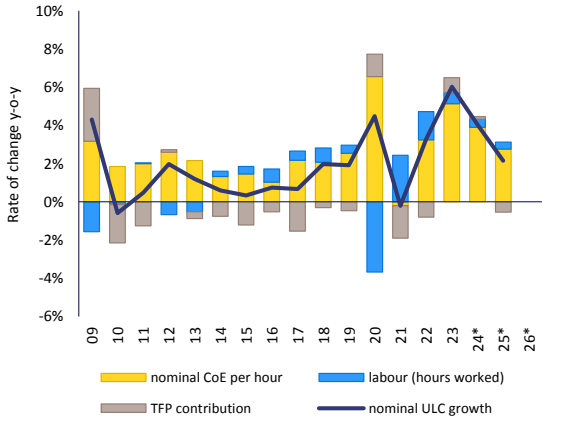
Graph 3.13: **Electricity prices in selected euro area countries and international peers**



(1) NP stands for wholesale electricity prices of the Nord pool market (NO, DK, FI, SE, EE, LT, LV); (2) EPB5 stands for European Power Benchmark. It represents the weighted average of wholesale electricity prices of main EU electricity markets (DE, ES, FR, NL) and Nord pool market (NO, DK, FI, SE, EE, LT, LV); (3) USA is the arithmetic average of the day ahead prices of the following most representative US power Hubs: PJM Western, NYISO Hudson Valley, MISO Indiana, ISONE Internal , ERCOT North , CAISO SP15; (4) Average first half of 2024.
Source: S&P Global Platts, Japan Electric Power Exchange (JEPX), Indian Energy Exchange Limited IEX India

Rising nominal wages in 2023 contributed to a recovery in purchasing power and an increase in unit labour costs. In the face of high inflation, nominal wage increased in some euro area countries. However, strong wage increases, unmatched by an increase in productivity, led to a significant increase in unit labour cost (ULCs) in 2023 **(Graph 3.14**) most notably in the Baltic countries and Slovakia, where the surge was sharp compared to pre-pandemic levels. Recent ULCs increases are mainly a result of wage adjustments aimed at compensating for the loss in purchasing power from the previous two years and are likely to promote the domestic market. Indeed, unit profits started to slow as of early 2024, a sign that wage and cost increases are cushioned by the sizeable accumulated profits from 2022 and 2023 (see section on resilience). In 2025 and 2026, ULCs are overall expected to slow down following wage growth moderation and expected increases in productivity.

Graph 3.14: **Decomposition of the change in unit labour costs (ULC)**



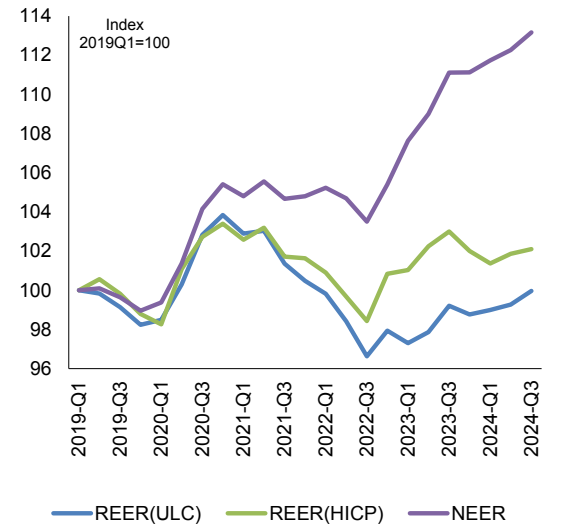
Source: European Commission, AMECO

The euro's real effective exchange rates (REERs) compared to world trading partners appreciated in 2023-24. The 2022 energy crisis induced a large terms of trade shock for a net energy importer like the euro area, which, according to Eurostat, imported 62.5 per cent of its total energy consumption in 2022. As a result of the more pervasive role of the energy price shock for the euro area than for its competitors, as of Q3 2024, the HICP-based REER ([19]) has cumulatively appreciated by more

([19]) The real effective exchange rate (REER) aims at assessing a country (or currency area's) price or cost competitiveness relative to its trading partners. The HICP-based REER is calculated from deflating the nominal effective exchange rate (NEER) by consumer price harmonised index deflator. By an analogy, The ULC-based REER derives from using the unit labour cost deflators. The NEER It is calculated as a weighted geometric average of the bilateral

than 3.6 pps compared to Q3 2022 **(Graph 3.15)**. In turn, the ULC-based REER has appreciated at a slower pace, and it is broadly unchanged compared to Q1 2019, as the temporary real wage compression in the post COVID period mitigated the impact of the energy shock.

Graph 3.15: **Euro area real effective exchange rate (REER), Q1 2019 = 100**



(1) REER refers to the real effective exchange rate of the euro against the currencies of 37 of the euro area's most important trading partners. A positive (negative) change corresponds to an appreciation (depreciation) of the euro.

Source: Eurostat

COMPETITIVENESS AVENUES

Strengthening competitiveness on a sustainable basis requires boosting productivity. This involves the deepening of capital, the effective use of labour, and the acceleration of innovation and its diffusion. Deepening capital can be achieved through investment in infrastructure and cutting-edge digital technologies, fostered by strategic growth funding and agile procurement.. Increasing labour might require a combination of extended career lifespan, targeted managed legal migration, and human capital development. Accelerating innovation and its diffusion can be achieved through a combination of strategies ranging from increasing Research and Development (R&D) spending to improving digital infrastructure.

Competitiveness and productivity can be revived along three major avenues: knowledge, markets, and funding. Each of these elements plays a vital role in driving economic growth, innovation, and overall development. A key factor in enhancing competitiveness and productivity is the generation and dissemination of **knowledge**. Investing in research and development (R&D), education, and training can lead to the development of new technologies, products, and services, as well as improvements in existing ones. Second, competitive **markets** promote efficiency, innovation, and productivity by encouraging businesses to continually improve their offerings to meet evolving consumer demands. Competition also drives firms to adopt best practices and new technologies, leading to increased productivity. Third, access to **funding** is crucial for businesses to invest in R&D, expand their operations, and hire skilled workers.

Knowledge

The green and digital transition hold potential of reviving TFP and potential output growth. Green technologies, such as renewables, hold the potential to lower energy costs for the euro area, boosting overall competitiveness and productivity. Indeed, technologies such as solar photovoltaic and onshore wind are already capable of producing electricity at competitive costs vis-à-vis available fossil fuel alternatives. Digital technologies, including AI and Big Data applications, are widely expected to allow efficiency improvements in production processes once they get fully rolled out (Acemoglu, 2024).

To bridge skills gaps and facilitate a smoother transition for workers, targeted policy measures are needed. Governments and

exchange rates against the currencies of a panel of the most important trading partners of a country (or currency area).

educational institutions, as well as the private sector, must work together to create training programs that address the shortages in both digital and green skills. Expanding lifelong learning opportunities, apprenticeships, and vocational education will be crucial to enabling workers to reskill and adapt. To ensure that these initiatives are inclusive, policies should also aim to lower barriers for disadvantaged groups and promote gender diversity in sectors like ICT. In the end, well-coordinated and timely policy interventions will be key to preparing the workforce to match the future economy's challenges and opportunities.

Aside from the direct impact on productivity, key enabling technologies are crucial to safeguard strategic autonomy. This is due for instance to the potential application of AI in both civil and military technologies, with significant repercussions on strategic autonomy. As acknowledged by the European Defence Agency, many of these cutting-edge technologies, ranging from AI to biotechnology, will define the future of military capabilities in an increasingly tense geopolitical world (European Defence Agency, 2023).

Boosting productivity will require an acceleration in innovation. This will require positioning Europe as a global leader in research and innovation, particularly in groundbreaking technologies such as AI, semiconducors, quantum and biotechnologies, and striving to achieve the goal of dedicating 3% of GDP to R&D by 2030. However, the adoption of new technologies needs to be carefully managed to mitigate its potential downsides, including the exacerbation of inequalities (Bloom et Al., 2019). The rapid pace of innovation, driven in part by the adoption of technologies like AI, could lead to a faster obsolescence of certain professions, causing short-term job displacement. As we consider the implications of this accelerated innovation, it becomes clear that the development and adaptability of human capital will be crucial in ensuring that workers are equipped to thrive in a rapidly changing job market.

Geopolitical fragmentation could negatively affect innovation capacity. A fragmentation of the global economic order could disrupt the free flow of ideas and therefore innovation capacity, with negative growth impact (Aiyar et al., 2023). Policies aimed at alleviating geopolitical concerns should be designed to minimise these detrimental effects, or else risk further slowing productivity in Europe (Terzi, 2024). The recent signing of association agreements between Horizon Europe and third countries such as Canada, the UK, and South Korea is an important step towards safeguarding international research collaborations in a tense geopolitical environment.

Markets

Firms need reliable framework conditions to create jobs, drive growth, and thrive in global markets. These conditions need to be robust enough to facilitate economies of scale, which allow businesses to reduce costs and enhance efficiency as they expand. Simultaneously, the environment must be competitive, encouraging innovation and the development of new technologies and processes.

Industrial policy tools can help drive innovation aimed at promoting European competitiveness This can help to ensure that the euro area develops or preserves a competitive edge in technologies considered crucial for long-term prosperity, to improve the resilience of EU supply chains and to increase defence readiness and capabilities. However, for this, it must be aimed at fostering innovation and providing the necessary conditions so that European firms can scale up and compete on global markets. They must be future-oriented, not designed to protect incumbents (Terzi et al., 2022). Crucially, industrial policies should be coordinated as much as possible at European level, to exploit possible cross-border synergies and avoid a fragmentation of the Single Market. The EU has already taken significant steps in this direction, including by means of the Important Projects of Common European Interest (IPCEI),

concerning sectors like microelectronics, hydrogen, and batteries. Furthermore, there is a need of ensuring resilient and secure digital infrastructures to act against the increasing sophistication and frequency of high-risk internal and external cybersecurity threats. Unified action across national borders, the pooling of resources, the sharing of intelligence and data and the establishment of common mechanisms for incident response are key in this regard.

Completing and broadening the scope of the Single Market is critical to strengthen competition and productivity. More than 30 years after the creation of the Single Market, the EU still needs to take full advantage of its size (440 million consumers, 23 million companies) and its potential to increase private investment and innovation. A more integrated Single Market would make the capital market union works better. By scaling up, firms can take advantage of greater market opportunities making investment more attractive. Intensifying further economic integration (including effective enforcing of existing Single Market rules), improving public procurement practices (in particular opening access to tenders and preventing single bid tenders) and reducing remaining barriers to the 'four freedoms' (in particular to the cross-border provision of services) within the internal market would lead to substantial efficiency and welfare gains (Letta, 2024).

Simplifying reporting requirements could further stimulate a business-friendly environment, reducing burdens on companies, especially SMEs. The Commission has committed to introduce concrete measures, such as reducing reporting requirements by at least 25% by mid-2025 and incorporating red-tape and competitiveness assessments into its proposals.

Strategic projects under the Net-Zero Industry Act and the Critical Raw Materials Act will benefit from accelerated and streamlined permitting procedures while ensuring compliance with the existing environmental, social and governance standards. Predictability and speed are essential to facilitate investments in industrial projects. The Single Market could also benefit from a broader usage of regulatory sandboxes for testing innovative technologies in a controlled environment for a limited amount of time. Special rules on permitting related to geographical areas (such as net-zero Acceleration Valleys in the context of the Net Zero Industry Act) will allow for faster deployment and dissemination of innovation and new technologies. In addition, derogations or a special temporary framework can facilitate simplification of certification and placement of new products in the Market. As risks of geopolitical fragmentation rise, deepening the Single Market would also reinforce resilience. Given the euro area's trade openness and its exposure to external shocks, the size and diversity of the euro area economies provide the scope and scale to build European-based supply chains (Gopinath 2023).

Recent evidence shows a clear link between scaling up and productivity increases. Firms that scale up typically not only become bigger but also more productive, allowing these firms to offer goods and services at lower prices or with higher value. Accounting also for capital inputs confirms that scaling-up firms make more efficient use of their workforce and capital stock as they grow. After scaling up, scalers generate at least 10% higher output than other SMEs using the same amount of labour and physical capita (OECD, 2024).

Sufficient grid interconnections, in particular cross-border, are crucial for connecting energy producers and users across wide geographic areas. An integrated and flexible European electricity market will lead to lower and more stable prices, attract private investment, reduce the need for storage and public subsidies for renewable energy production, and strengthen our energy security. This, in turn, would lower fiscal pressures by reducing the need for energy subsidies and support economic growth by lowering costs for businesses and households.

The euro area's high energy prices are a challenge for competitiveness. Addressing high energy prices requires joint focus on

competitiveness and decarbonisation, transferring (or anticipating where possible) the benefits of decarbonisation, to the sectors exposed to international competition or the sectors more dependent on energy as an input. It is therefore key to accelerate decarbonisation, leveraging on all technologies compatible with climate neutrality, in particular renewables, to develop an overall cost-efficient system, including stability of supply (flexibility and storage) and adequate investments in infrastructure. In the short term, policy efforts might require some well targeted energy subsidisation schemes and other measures to de-risk investment in decarbonisation projects. This case is reinforced when considering that some selected energy-intensive industries might carry implications for Europe's strategic autonomy. Several EU initiatives and long-term policy orientations supports reinforcing the strategic autonomy angle, form energy-oriented projects under the Important Projects of Common European Interest (IPCEIs) to country-specific stipulations of the REPpowerEU chapters of the national RRPs. Broader usage of power purchase agreements (PPAs) could also help mitigate the volatility of energy costs, thus stabilising investors' expectations and reinforcing overall sentiment.

Addressing productivity and competitiveness issues sets an important role for National Productivity Boards (NPBs) (Garcia et al, 2024). NPBs are independent bodies that support Member States in designing and implementing productivity-enhancing reforms. Their effectiveness depends on legal provisions guaranteeing sufficient financial resources and embedding NPBs in domestic policy making. Further progress in establishing the NPB network (i.e., completion of the network, strengthening NPBs' functional autonomy, resources and participation in domestic policy processes) could contribute to enhance European economies' competitiveness. Also, the forthcoming Competitiveness Coordination Tool ([20]) may improve coordination across the EU.

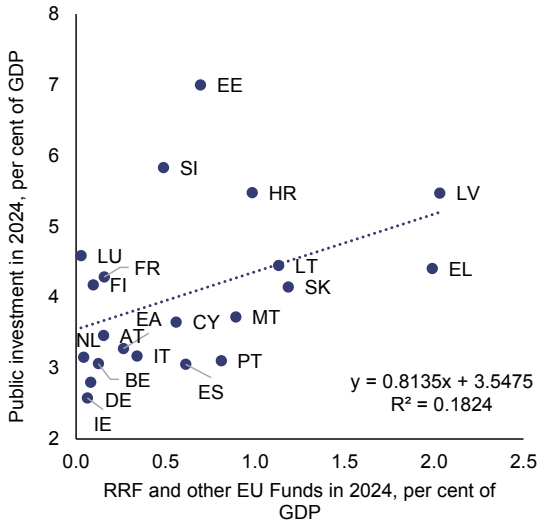
The euro area – and the EU as a whole – faces an urgent need to adapt to the new geoeconomic and geopolitical environment. Economic security considerations are growing in importance, including the necessity to secure access to key raw materials and strenghten strategic value chains. Therefore, the EU will need to carefully navigate its competitiveness, security and sustainability objectives which calls for a coordinated approach and policy complementarity at both the Member State and EU levels (see **Box 3.1**).

Funding

Public investment in the euro area has received a significant boost from the Recovery and Resilience Facility (RRF), REPowerEU, and other Union's funds (Graph 3.16). As of November 2024, around EUR 230 billion (over a total Next Generation EU (NGEU) financing power of EUR 723bn) has been disbursed under the RRF to euro area Member States, supporting the green and digital transitions. The new REPowerEU chapters of the national Recovery and Resilience Plans have also provided additional financial support of EUR 150 billion in grants and EUR 125.5 billion in loans (European Commission, 2024j). aimed at mitigating the energy crisis and promoting the Green Deal objectives. In addition, over EUR 275 billion of cohesion policy funding has been disbursed to Member States since the start of the pandemic in March 2020 to boost investment and growth.

([20]) See, "Mission Letter to Stéphane Séjourn" from Ursula Von Der Leyen, Presdent of the European Commission

Graph 3.16: **RRF and other Funds in 2024 and public investment in 2024**



Source: European Commission

RRF-funded reforms enhance competitiveness and deepen Single Market integration. The time-bound RRF fosters, a more competitive business environment. A significant number of reforms and investments are being deployed in the Member States covering, among others, digitalisation and up- and reskilling of the labour force. The simultaneous roll-out of the national RRPs is estimated to bring a considerable positive spillover via the Single Market, stimulating further growth ([21]). In the political guidelines for the next European Commission of 2024-2029 President Ursula von der Leyen has announced the creation of the new European Competitiveness Fund ([22]).

Firms in the euro area are mostly reliant on bank lending and much less so on capital markets. A large proportion of the European companies (nearly 50% of SMEs) use bank financing as a relevant financing source (European Commission, 2023d). The tightened financing conditions have depressed demand for loans by firms, likely adding to the recent slow-down of corporate investment dynamics. In turn, the high-interest-rate environment is set to weigh on corporate investment, particularly on projects with a long-time horizon such as research and development (European Commission, 2024h).

The euro area large current account surplus (131.6 billion or 3.5% of GDP in the second quarter of 2024) indicates that it has the savings to fund the investment gap. EU households saving rate has been elevated (see also Graph 1.3 in resilience) and households keep around one third of their savings in bank deposits, not investing those in stocks and bond markets. In combination with the Single Market, amore developed Capital Market Union may encourage a better allocation of resources from bank deposits to portfolio or direct investments. To tackle the fragmentation of the European financial market, Letta (2024) proposed a European Savings and Investments Union, including banking and capital markets.

Venture capital can play a much larger role in Europe's financing landscape, particularly compared to the more developed market in the US. Enhancing Europe's competitive and innovative capacities, as well as pushing for further progress in green and digital transformations require more diverse financing. Innovative companies are an important contributor to productivity growth and job creation (IMF, 2024) and require tailored types of financing, matching specific phases of the innovation process. Bank financing, one of the main sources of loans for European companies, is typically risk-averse and home-biased, therefore too expensive or not available for start-ups and fast-growing companies. Private equity and venture capital markets are essential elements for a successful innovative ecosystem (European Investment Bank, 2024). Despite large innovation-oriented investment needs, the venture capital market remains underdeveloped in the EU and is significantly smaller than in the US **(Graph 3.17)**.

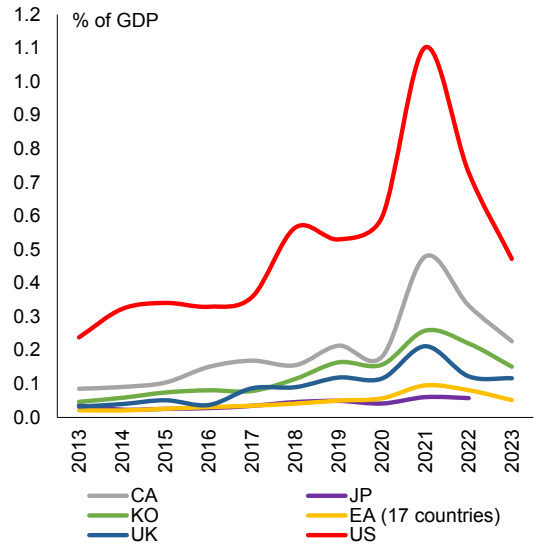
The Capital Market Union can provide better access to financing, enhancing competitiveness. Capital markets in the euro

([21]) Spillovers can increase the impact of the RRF on added value between a quarter and a third (European Commission, 2024o).

([22]) See "Political Guidelines for the next European Commission 2024-2029".

area remain fragmented into national markets with persisting strong home bias from financing seekers and regulatory environment of the national capital markets (European Commission, 2023a). Fragmentation reduces the potential of European capital markets and hide the full benefits from the Single Market. As a result, European companies bear higher cost of financing at the expense of higher potential returns that could be allocated for further productivity enhancement.

Graph 3.17: **Venture capital investments in the euro area and other international peers**



Source: OECD and AMECO

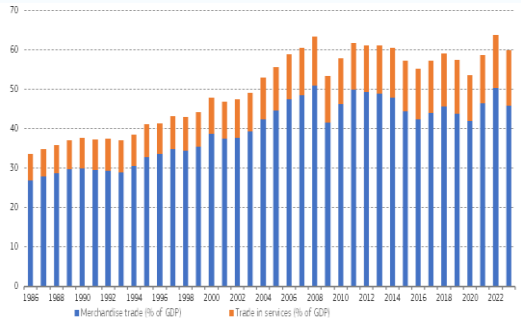
The Capital Market Union agenda aims to respond to the funding challenges inclusing through the creatioon of an integrated capital market. As set out most recently by the European Council in March 2024, the Capital Market Union (CMU) initiative aims to "*create a truly single market for capital across the EU"*. The CMU Action Plan, adopted by the Commission in September 2020, comprises 16 legislative and non-legislative measures, envisaging three main objectives: i) to integrate national capital markets into a genuine single capital market; ii) making the EU a safer place to invest; and iii) support a green, inclusive and resilient economic recovery. Bringing the Capital Market Union to an effective operation should facilitate the access to a well-developed capital market responding to specific financing needs of innovative companies and start-ups and to SMEs more generally – as the backbone of the European economy. The challenge for CMU will therefore be to develop a better and more integrated financial ecosystem and to complete the EU Single Market from services to capital markets.

Box 3.1: Geo-Economic Fragmentation and Multilateral Cooperation

Geoeconomic fragmentation has emerged as a significant economic concern. The once very dynamic cross-border trade and foreign direct investment has decelerated since the Global Financial Crisis **(Graph 1)**. This trend towards what has been dubbed *slowbalisation* has been recently accelerated by geopolitical tensions, increasing protectionism, disruptions caused by the COVID-19 pandemic and Russia's full-scale invasion of Ukraine. Geoeconomic fragmentation signals a potential unravelling of global trade into rival economic blocs, with nations increasingly pursuing trade-inhibiting measures and strategies that foster the *reshoring* or *friend-shoring* of value chains. In this context, the risk of geoeconomic fragmentation is of relevance for the euro area, given strong economic interlinkages – in trade, financial flows and investment - between its Member States. Also, the relatively large degree of euro area's economy openness and its strong integration with the global value chains are likely to imply greater costs from geoeconomic fragmentation (European Commission, 2024f).

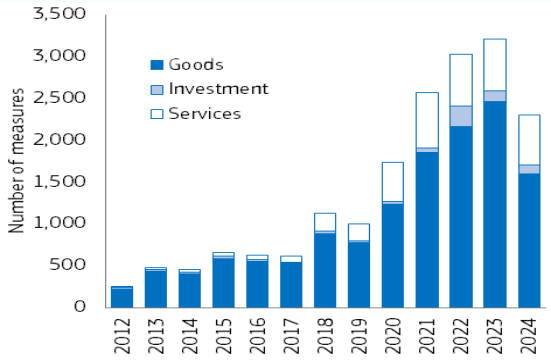
Policy plays a key role in fragmenting the global economy. Recent years registered a sharp rise in measures harmful to trade and foreign investment. Global Trade Alert data show a continuous increase in the number of measures harmful to trade and investment since 2019, with an all-time peak of over 3,000 new measures announced in the course of 2023. By October 2024, the number of new harmful measures during the year reached nearly 2,300 **(Graph 2)**. This policy-driven push back against globalisation has come along with a weakening of key multilateral institutions, notably the World Trade Organisation (WTO) (Dadush, 2022).

Graph 1: Global trade openness (per cent of GDP)



Note: Global trade openness is calculated as the sum of global exports and imports divided by world GDP.
Source: World Development Indicators

Graph 2: Measures harmful to trade and investment (October 2024)



Source: Global Trade Alert.

The rise in harmful policy measures has been concentrated in some of the largest bilateral trade and investment relationships, in particular those of China with the US. Thus, bilateral trade data available confirms that harmful trade measures are triggering a reorientation in trade flows, with Chinese trade partially pivoting away from the US and towards emerging economies. In this process, the EU maintains a relatively stable share in Chinese trade, particularly as an export market ([1]). Amid calls for more economic resilience, the EU's Economic Security Strategy of June 2023 aims to maximise the benefits of trade openness while minimizing risks in the areas raising specific economic security concerns. The EU's economic resilience will be further strengthened by implementing structural reforms and increasing public and private investment.

Strengthening the rules-based multilateral system of cooperation remains a policy priority for the EU. A reformed and strengthened WTO and international coordination remain the best guardrail against global trade fragmentation. The EU also strives to ensure a well-resourced and efficient global financial safety net with the IMF at its centre. Finally, there is a need to maintain an open and frank dialogue with all trade partners and step-up cooperation with both like-minded and less like-minded countries to deliver on global public goods in areas of common interest, such as climate change, global health, global debt vulnerabilities, or peace and security.

([1]) According to Comtrade data, the EU's share in China's export basket increased from 13% to 14.2% in the 2015-22 interval. In the same period, the EU share in Chinese imports decreased from 11.3% to 9.5%.

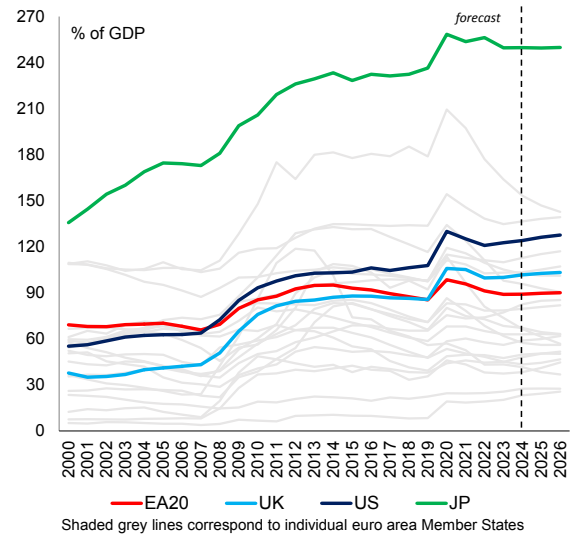
4. MACRO-ECONOMIC AND FINANCIAL STABILITY

The euro area has successfully contained inflation without incurring major economic costs. Recent resilience in the face of major shocks has come at the cost of increasing debt levels and large deficits. Fiscal consolidation is needed to restore long-term sustainability, but it cannot come at the expense of necessary public investments. Policymakers face the complex task of reducing deficits while reshaping expenditure to meet growing demands for key areas, such as security, defence, and the green and digital transitions key areas for safeguarding future competitiveness. Success in this effort will require monetary and fiscal policy to go hand in hand to ensure macroeconomic stability and future-proofing the long-term growth potential of the euro area.

FISCAL POLICY

The high debt levels in many euro area countries call for prudent fiscal policies in the years ahead. Despite recent improvements, the euro area's fiscal position remains markedly deteriorated compared to pre-pandemic levels. The deficit for the euro area as a whole increased from an almost balanced budget in 2019 to a deficit of around 7% of GDP in 2020. The sound deficit position at end-2019 was one of the main reasons why the euro area was more resilient in the last number of years than it had been at the time of the great financial crisis. The support of new EU instruments and the swift activation of the general escape clause of the Stability and Growth Pact were also essential for a strong recovery. The aggregate general government gross debt of the euro area increased from 85.4% of GDP in 2019 to the historically high level of 98.5% of GDP in 2020 altought it remains lower than in other peer countries such as the United States, the United Kingdom and Japan **(Graph 4.1)** ([23]). After peaking in 2020, the debt-to-GDP ratio has been declining, reaching 88.9% in 2023. However, a reduction in the debt ratio is not expected to continue in the coming years unless there is an improvement in the primary balance. Indeed, the debt-to-GDP ratio is projected to increase slightly in 2024-2026, up to 90% in 2026. This is driven by a shrinking interest-growth rate differential, as debt servicing costs are set to rise slightly while nominal GDP growth is expected to slow down due to falling inflation - while primary deficits continue to weigh on debt dynamics.

Graph 4.1: **Developments in government debt in the euro area and outher countries**



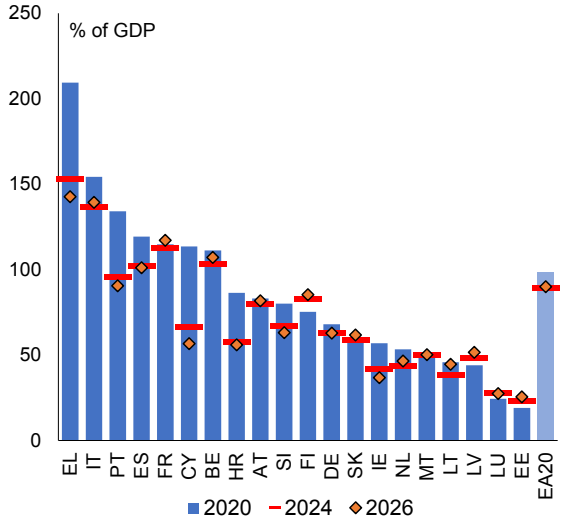
Source: AMECO

Member States with greater fiscal sustainability risk face the challenge to put public debt ratios on a credible declining path. There are stark differences in public debt ratios

([23]) The euro area aggregate data for general government debt are non-consolidated, as they are not adjusted for intergovernmental loans, including those made through the European Financial Stability Facility.

across Member States. By the end of 2026 **(Graph 4.2)**, eleven Member States are set to have debt ratios greater than 60% of GDP, and in five of them (Belgium, Greece, Spain, France and Italy) the debt-to-GDP ratio is expected to remain greater than 100% of GDP. This growing divergence in debt burdens complicates the prospects for fiscal stability, as heavily indebted countries will face stricter constraints on their fiscal policy, limiting their capacity to address future shocks or invest in critical priorities. In addition, the disparity in debt levels risks undermining cohesion within the euro area and could pose a challenge to its long-term stability. At the same time, enhancing sustainable growth by incentivising reforms and investments will also contribute to fiscal sustainability.

Graph 4.2: **Public debt-to-GDP ratio**



Source: AMECO

The revised Economic Governance Framework aims to ensure debt sustainability on a country-specific basis, while supporting investments and reforms. Given the high debt and deficit levels and the expected increase in some categories of public expenditure in the coming years, there is a need to tackle sustainability challenges in several countries. Sustained and gradual fiscal adjustments in line with the recently revised Economic Governance Framework are needed to ensure debt sustainability and to rebuild fiscal buffers in the medium term.

The use of net expenditure as single operational indicator will enhance the role of automatic stabilisers. The indicator of net expenditure is less polluted by the windfall or shortfall than the structural balance and thus more demanding in good times and less in bad time. This stronger countercyclical property will mitigate the impact of fiscal policy on the economic activity in highly indebted euro area Member States for which the discretionary fiscal policy will need to be overall restrictive over the next few years. This would have a stabilising impact for the euro area as a whole.

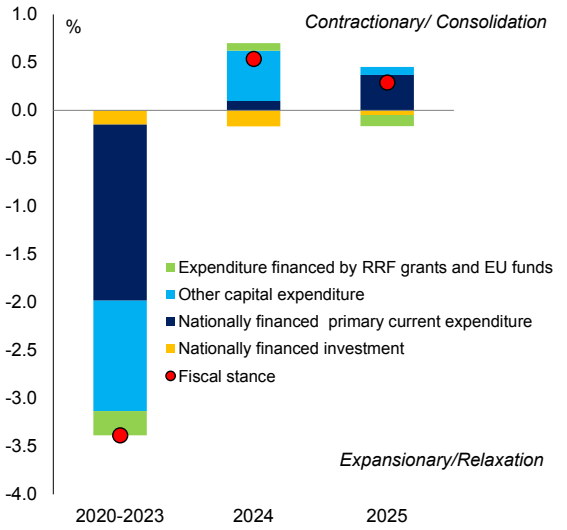
The euro area fiscal stance is expected to turn contractionary in 2024 as monetary policy eases and domestic demand is projected to recover (Graph 4.3). The contraction of ½% of GDP, projected in the Commission's autumn forecast, follows four years of large crisis-related expansion, totalling around 3½% of GDP. In terms of composition, the contraction is driven by the phase-out of large subsidies to support private investment (especially housing renovations in Italy) and somewhat lower expenditure financed by the EU budget (also due to the end of MFF 2014-2020 spending). Net current expenditure has been overall neutral despite the phase-out of measures to mitigate the impact of high energy prices (by 0.8% of GDP). Importantly, public investment financed by national budgets continues to provide an expansionary contribution.

The new EU fiscal rules applied to individual EU Member States are expected to result into a slightly contractionary euro area fiscal stance in 2025. The euro area fiscal stance is projected to be slightly contractionary in 2025 (by just above ¼% of GDP). In terms of composition, net current expenditure is contractionary due to consolidation policies in some Member States (0.4% of GDP), which are largely consistent with the new EU fiscal framework **(Graph 4.3)**. The contraction in net expenditure is for ¾ explained by discretionary revenue measures. Importantly, some further expansion is projected in investment financed by national budgets and (high-quality) expenditure financed by RRF grants and other EU funds (Cepparulo et al. 2024). Moreover, taking a longer perspective, this gradual

contractionary stance in 2024-25 occurs after a large expansion between 2020-23 **(Graph 4.3)**.

The slightly contractionary stance for 2025 can be considered appropriate. Such a stance would be consistent with the need to improve public debt sustainability and reassure market scrutiny. The anchoring of the public finance in sustainable net expenditure path would limit the uncertainty and the risk of future brisk fiscal adjustments in case of erosion of lenders' confidence. Moreover, the support from the RRF will be phased out after 2026, so delaying the adjustment where it is needed does not appear to be desirable. Importantly, the stance will also support monetary policy in the fight against inflation at the time when the output gap is projected to gradually close.

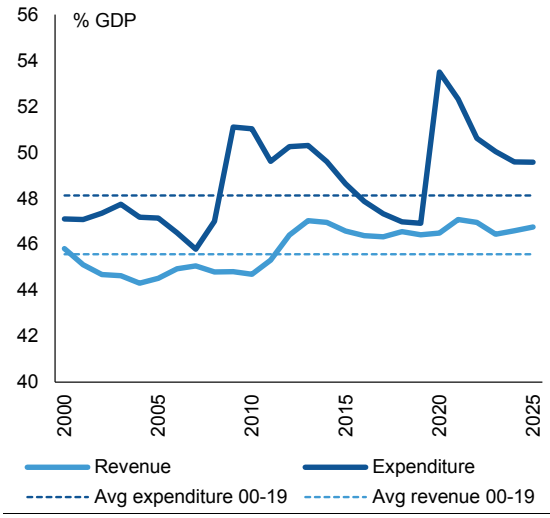
Graph 4.3: **Euro area fiscan stance and components (% of GDP)**



(1) The fiscal stance is measured by Commission services as the net expenditure developments relative to medium-term potential output growth
Source: European Commission

The composition of the public finances is important to minimise the negative impacts of the fiscal adjustment (Box 4.1). Revenue as a share of GDP in the euro area has been relatively stable, while the public expenditure-to-GDP ratio increased during the global financial crisis and the COVID-19 pandemic also due to negative cyclical conditions **(Graph 4.4)**. The revenue-toGDP ratio is projected to increase slightly in 2024, as energy support measures are phased out and tax revenue and social contributions benefited from the strong labour market performance, implying some revenue windfall. In a context in which the sustainability of public finance needs to be improved and investment encouraged, some important trade-offs in tax policy need to be considered given the role of taxation to support a competitive economy. There is a need to properly assess existing tax expenditures to ensure their cost-effectiveness and to potentially make room for any government support to the digital and green transition (European Commission, 2024d). In addition, the tax wedge (i.e. the share of labour costs caused by taxes and social contributions) is relatively high in the euro area compared to the OECD average. Therefore, a shift towards less distortive taxes like environmental and property taxation could be beneficial, especially in the context of labour shortages.

Graph 4.4: **Revenue and expenditure developments in the euro area**

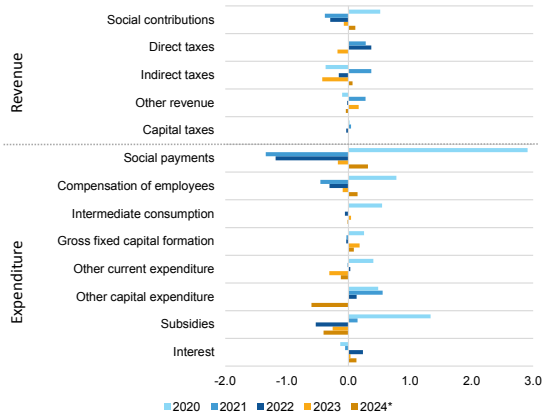


Source: AMECO

Expenditure-to-GDP ratio has declined in the last four years, but it remains well above its long-term average. The complete phase-out of pandemic-related and energy support measures is expected to maintain the expenditure ratio on a downward path until 2024, when it stabilises at 49.5% of GDP, above its long-term average level. According to the Commission 2024 Autumn forecast, in 2024 the projected decrease in subsidies and capital transfers will be partially offset by spending on social payments and compensation of

employees **(Graph 4.5)**. Interest expenditure as a share of GDP is also set to continue increasing despite the recent easing of monetary policy. Contrary to the period after the 2010 sovereign debt crisis, the adjustment has not been driven by cuts in nationally financed public investment, which has been preserved, while the RRF continues to support overall investment and other growth enhancing spending. Looking forward, expenditure pressures are mounting, namely due to ageing, investment needs for the twin transition and competitiveness, as well as defence given the increased geopolitical tensions. Moreover, climate-related events also constitute a risk to public finance through revenue and expenditure channels (European Commission, 2024k).

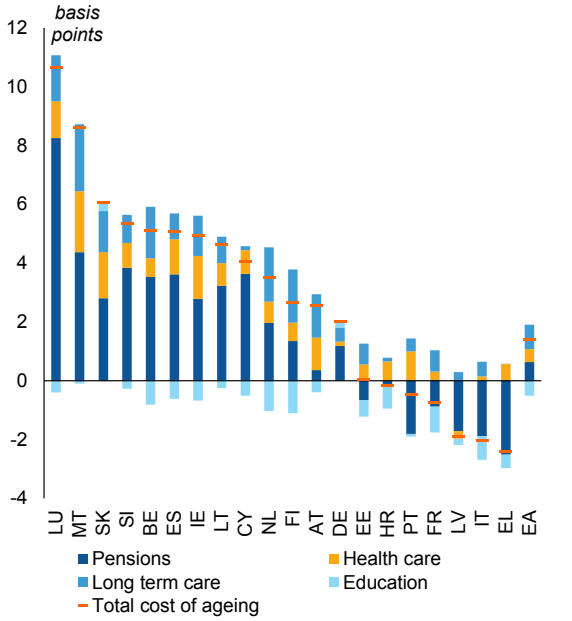
Graph 4.5: **Change in euro area revenue and expenditure components (2020-24)**



Source: AMECO

Ensuring long-term sustainability of the pension, healthcare and long-term care systems is key to strengthening public finances. According to the Commission's 2024 Ageing Report (European Commission, 2024b), the total cost of age-related expenditure, including pensions, education, health care and long-term care is set to increase in the euro area by 1.4 pps. over the projection period (from around 25% of GDP in 2022 to 27% of GDP in 2070). Most of this increase is expected by the mid-point of the projections in 2045, with age--related costs continuing to rise slightly on average in the euro area thereafter. Both the time profile and the projected change in spending vary considerably across Member States. Looking at the different components, spending on health and long-term care rises across the board after COVID-related spending is largely discontinued. However, it is pension expenditure in most countries that drives the overall change in ageing costs by 2070 **(Graph 4.6)**.

Graph 4.6: **Main drivers of the change in cost of ageing in the long run**



(1) Changes in 2022-2070
Source: 2024 Ageing Report

Monetary policy

The ECB tightened its monetary policy in response to a significant and rapid increase in inflation. Like many other central banks in other jurisdictions **(Graph 4.7)**, the ECB began a rapid tightening cycle, raising interest rates between July 2022 and September 2023, with a cumulative increase of 450 basis points. This was done to return inflation to the two per cent medium-term target in a timely manner and keep inflation expectations close to the inflation aim.

Box 4.1: Designing Fiscal Adjustment Strategies

Over the next years, several Member States will have to implement sizable fiscal adjustments. This results from the high government deficits and public debt which followed the successful policies adopted in recent years to support economic activity, jobs and income in response to large macroeconomic shocks. After several years of fiscal expansion, policymakers are called to turn to fiscal consolidation strategies to strengthen fiscal sustainability and rebuild fiscal buffers. The recent reform in economic governance (which applies to all EU Member States) is supportive of medium-term fiscal adjustment strategies that are tailored to the specific needs of each economy. Moreover, it promotes structural reforms and investments which help modernising the economies, increase the resilience and potential growth of the economy, and ensure fiscal sustainability.

Designing effective consolidation strategies is a complex task, requiring careful consideration of a range of factors. This box examines aspects to consider when preparing medium-term fiscal adjustment strategies, drawing on evidence from the economic literature, and focuses on elements for which there is broad consensus. It summarizes the main findings on the dimensions to consider including the socio-economic context, size and pace of the fiscal adjustment, instrument choice, and the complementary role of structural reforms.

The socio-economic context in which a country implements fiscal strategies can have a significant impact on the outcomes. This includes the country's position in the economic cycle (Corsetti et al., 2012 and Batini et. al., 2014), as well as the social and political environment. Fiscal adjustments correlate with higher social instability and can entail electoral costs ([1]). In addition, the existence of well-functioning fiscal institutions increases the likelihood of success of the adjustment, via increased transparency, credibility and accountability (Debrun and Kumar, 2007). Considering the country's specific circumstances when designing consolidation plans can help minimize the detrimental effects on economic growth and equity.

The careful design of the consolidation path, in particular the size and pace of consolidation, is key to minimize the negative impact on the economy. Fiscal adjustments have a lower negative impact on economic growth during normal or good economic times, whereas pursuing consolidation during times of crisis risks exacerbating its impact on economic growth (Auerbach and Gorodnichenko, 2012). The literature suggests that a gradual pace of adjustment may be necessary to avoid significant output and employment losses, particularly in the face of escalating government deficits and debt (Belasundharam et al., 2023). In addition, simultaneous consolidation across countries during the EU sovereign debt crisis has contributed to sharper recession due to negative cross-country spillovers (Terzi, 2020). The new EU macroeconomic governance has duly considered those lessons from the past, notably allowing for a gradual adjustment spanning over four to seven years.

There is evidence that some instruments have a more adverse growth effect than others. The composition of the adjustment is another element to consider when selecting the most appropriate instruments. Studies have identified that successful adjustment strategies focus on reducing current expenditure while preserving investment (Alesina and Ardagna, 2013). If a considerable adjustment is needed, successful strategies rely on a mix of both expenditure and revenue measures (Molnar, 2012).

Spending and tax system reviews underpinned by a medium-term perspective can also mitigate the impact on growth. Carefully designing well-thought fiscal adjustment strategies that give due consideration to policy objectives, choosing the most appropriate instruments and country-specific circumstances, will improve the efficiency and effectiveness of public spending and tax systems. On the expenditure side, spending reviews are in-depth assessments that have proven to be a useful and flexible tool for the identification of saving opportunities (Doherty and Sayegh, 2022). Revenue measures would benefit from being based on a review of the tax system, to avoid inefficiency and undermine distributional objectives. Measures such as strengthening the role of tax authorities and exchanging information across countries contribute to fighting tax evasion and avoidance. In addition, reviewing, for instance, tax exemptions, deductions, credits and other tax benefits, helps to identify redundancies, ineffectiveness, or distortive effects (Turrini et al., 2024).

([1]) Ponticelli and Voth (2020) found a positive correlation between consolidation and instability and Alesina et al. (2021) also shows that the electoral cost of consolidation is higher if introduced in crisis times.

(Continued on the next page)

Box (continued)

The literature suggests that structural reforms play an important role in complementing fiscal policy. They may mitigate the negative effects of consolidation on growth and equity (Cournede et al., 2014). For example, reforms that strengthen the institutional setting, improve tax and social security systems, and support the labour market.

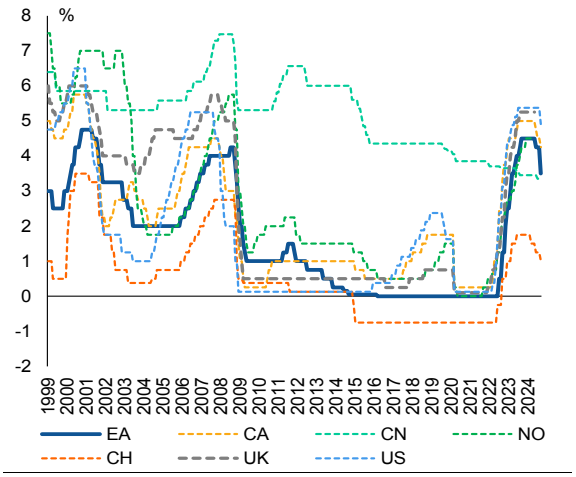
Main findings from the literature

Context	Fiscal multipliers are higher in crises		
	Electoral costs and political feasibility		
	Social instability		
Design	Size and speed of adjustment depend on economic situation and cyclical position: adjust in normal/good times		
	Simultaneous consolidation should be avoided: priority to those with more sustainability challenges		
	Interaction with monetary policy should be considered		
Composition	Large adjustments require a combination of instruments: expenditure and revenue measures, complemented by structural reforms		
	Expenditure	Reduction in current expenditure preferable to capital expenditure	Investment should be preserved
			For instance, reduction of the public wage bill and social transfers seems to be less detrimental than in education and health
		Spending reviews	
	Revenue	Providing the right incentives in line with policy priorities	Twin transition
			Fairness
			Investment, productivity and competitiveness
			Re-evaluate tax expenditure
		Moving towards less distortive taxation	Reduce tax burden on labour
			Use less distortive taxes like the property tax
		Review of tax system	Ensuring principles of simplicity, efficiency, stability and fairness (e.g. fight aggressive tax planning, tax evasion and avoidance)
Structural reforms			

The ECB also continued to unwind the Asset Purchase Programme (APP) and Pandemic Emergency Purchase Programme (PEPP) portfolios, and it further reduced reinvestments of principal payments from maturing securities. In addition, the ECB introduced the Transmission Protection Instrument (TPI) in July 2022 to support the effective transmission of monetary policy in event of unwarranted, disorderly market dynamics and ensure that the monetary policy stance is transmitted smoothly across all euro area countries.

The ECB has recently started to reduce the level of monetary policy restriction. With headline inflation falling to more normal levels in the euro area in recent months, the ECB decided to cut its main policy rate by 25bps in June, September, and October 2024. As a result, the interest rate on the deposit facility decreased from 4.0% in September 2023 to 3.25% in October 2024. Real interest rates remain in the positive territory but, more recently, they have started decreasing towards zero.

Graph 4.7: **Central banks' key policy rates in the euro area and selected countries**

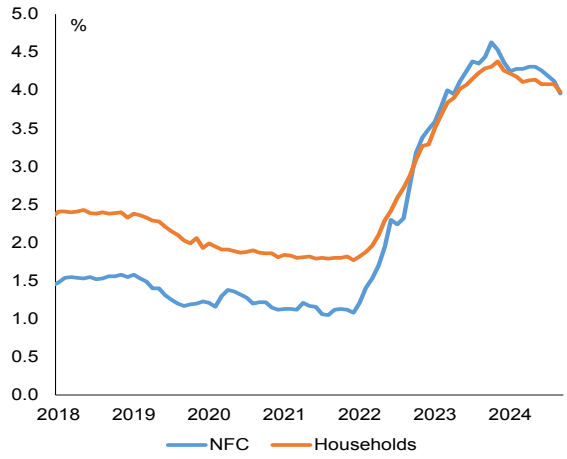


Source: Bank for International Settlements

Financial conditions remain tight but there are signs of easing. Financial conditions previously tightened significantly following the ECB's rate hikes, as reflected in the European Commission's composite financing cost indicators for both non-financial corporations (NFCs) and households, which combine interest rates on all lending to these sectors **(Graph 4.8).** While borrowing costs remained elevated at the end of 2023, some easing has been observed recently. The ECB's decision to cut policy rate suggests that financial conditions

may continue to ease in the months ahead, slightly improving credit access for corporations and households.

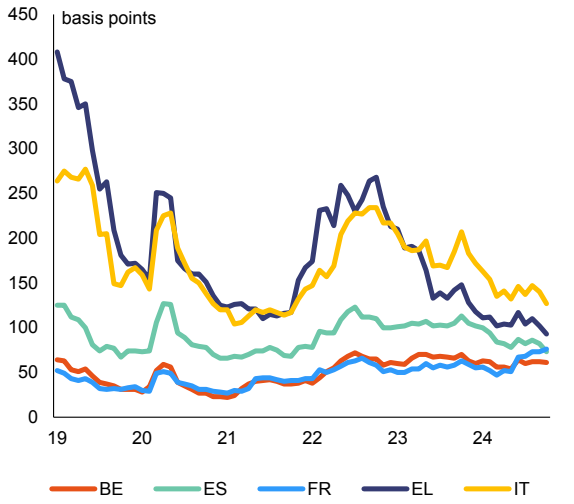
Graph 4.8: **Cost of borrowing indicators**



(1) Cost of borrowing for NFCs and households are measured by the the European Commission's Composit Credit Cost Indicator (CCCI) and Composite Financing Cost Indicator (CFCI) respectively.
Source: European Commission

In the euro area, most sovereign bond spreads remained stable or declined. In euro area countries with public debt above 100% of GDP **(Graph 4.9),** spreads versus German bonds are either relatively stable or decreasing (Greece, Italy, Spain). However, the French sovereign bond spreads widened amid political and fiscal development.

Graph 4.9: **Sovereign bond spreads in selected euro area Member States**



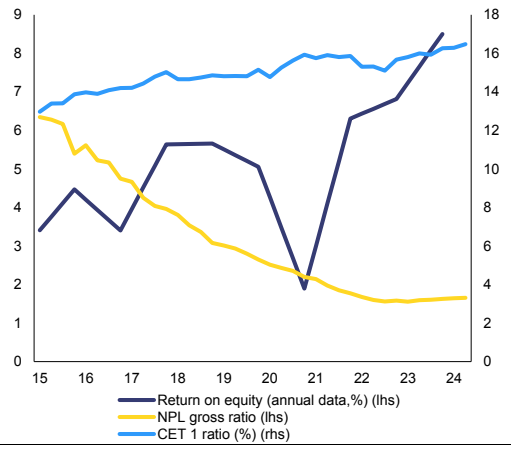
(1) 10 years maturity, spread versus Germany.
Source: ECB

Financial stability

The euro area banking sector has remained strong in recent years, underpinned by strong capital positions. The aggregate Common Equity Tier 1 ratio stood at 15.9% at the end of the year, well above minimum and combined buffer requirements **(Graph 4.10)**. The ratio of non-performing loans (NPLs) remains close to historical lows in aggregate although there are some mild signs of deterioration. Banks' profitability peaked in 2023, with Return on Equity around 10% level over 2023 and remains stable in 2024, higher loan-loss provisions **(Graph 4.10)**.. Loan growth appears subdued due to the high cost of borrowing, weak loan demand, and tight credit standards. (ECB, 2024a).

The EU prudential framework for banks has significantly improved the resilience of the financial system. The 2023 banking turmoil, european banks have been supported by effective supervision and by a comprehensive regulatory framework. This framework will be further enhanced by the implementation of the final elements of the Basel III standards in the EU via the new Banking Package, largely applicable on 1 January 2025.

Graph 4.10: **Euro area bank stability indicators**

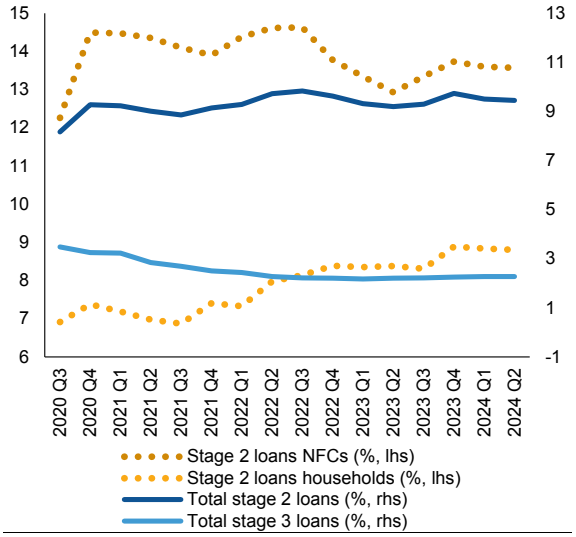


(1) NPL ratio covers gross non-performing debt instruments as a percentage of total gross debt instruments
Source: ECB

The euro area financial system is solid although some vulnerabilities have emerged in some non-financial firms. Strong post pandemic profitability has helped firms' repayment capacity in a context of tighter lending standards. More recently, however, weaker economic growth and higher labour costs have increased vulnerabilities in sectors most exposed to the impact of higher interest rates such as firms in the real estate sector. Default rates on bank loans are slowly increasing even if from low levels. Due to their smaller profit margins and limited liquidity buffers, SMEs are also a vulnerable to a weaker economic environment.

The main risks lie in the commercial real estate (CRE) sector. Most notably, CRE arrears have started to increase – although it remains a small part of most banks' lending portfolios. Further stress in the sector can impair asset valuation and a decline in asset quality may ultimately require additional provisioning, possibly leading to a reduction in CET1 capital.

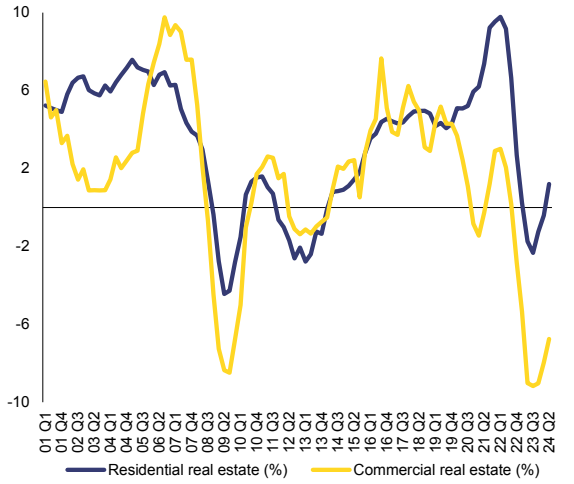
Graph 4.11: **Stage 2 loans by counterpart and stage 3 loans in the euro area**



(1) The International Financial Reporting Standard 9 (IFRS 9) aims to improve the recognition of banks' credit losses, based on a more forward-looking estimation and loan staging approach. Stage 1 consists of performing loans, Stage 2 underperforming loans that have seen a significant increase in credit risk, and Stage 3 credit impaired loans.
Source: ECB

Higher financing costs have impacted real estate markets, with commercial real estate facing additional post-Covid challenges. Property prices have fallen especially in the CRE sector raising concerns about the debt servicing capacity of real estate firms, in a context of deteriorating asset quality. Prices for residential real estate (RRE) fell the most in countries where properties were the most overvalued. Concerns remains about housing affordability (see **Box 2.2**. in the resilience section) (ECB, 2024a).

Graph 4.12: **Residential and commercial real estate prices**



(1) Year-over-year growth of nominal quarterly residential and commercial real estate prices

Source: ECB

The euro area non-bank financial intermediation (NBFI) sector faces diverse risks. NBFIs have grown significantly in recent years and account for around EUR 57 trillion of the European financial sector's assets. NBFIs consist of very diverse sectors which can be subject to important risks. This sector benefited from increased investment income since 2023. However, its resilience is challenged by a decline in the share of liquid assets, more concentrated equity exposures and downside risks to asset valuations, particularly via exposures to real estate and corporates. Investment funds continue to be important investors in euro area issued bonds, however, investments in euro area equities has been comparatively moderate (ECBb, 2024). By contrast, euro area equity funds exposure to US stocks have continued to increase and become more concentrated among a small number of issuers, which exposes the sector to spillover from shocks to individual firms or in global financial markets. While insurance corporations' solvency is solid, there are some profitability challenges, such as an uncertain outlook for underwriting profitability, liquidity risks and potential revaluation losses on real estate investments.

Weaknesses in the NBFI sector call for enhancing sector resilience. Specific vulnerabilities stem from structural liquidity mismatches, build-up of pockets of excessive leverage and interconnectedness with other NBFIs and with banks. In the European context, a lack of consistency and coordination among macroprudential frameworks across the EU is another source of vulnerability. Even though there are EU directives and regulations applicable to certain NBFIs that include some macroprudential tools, there is no overall EU macroprudential framework for them. To address potential gaps, in May 2024 the European Commission put forward a targeted consultation on macroprudential policies for the NBFI sector to collect insights, identify gaps in the framework and other factors that may contribute to the build-up of systemic risks (European Commission, 2024l) ([24]).

The macroprudential framework for banks has also improved the resilience of the system. The banking sector has proved resilient, supported by its multi-layered macroprudential framework, including existing capital buffer requirements, and borrower-based measures ensuring healthy lending standards. Going forward, there is a need to monitor the usability and releasability of capital buffers, to strengthen consistency in the use of macroprudential tools by national authorities, to reduce administrative burdens, including via the use of digital technologies as a facilitator, by simplifying the application of macroprudential measures where possible, as well as, to tackle systemic risks stemming from conventional (i.e. real estate markets) and newer risks (such as digital risks including the increased speed of bank runs in the digital age).

The completion of the Banking Union remains apriority. A key step to further develop the Banking Union is the reform of the crisis management and deposit insurance (CMDI) framework in a way that does not create additional impediments to a swift resolution.

([24]) The Financial Stability Board (FSB) has issued recommendations to promote a level playing field across the NBFI sector, in order to mitigate the risk of cross-border fragmentation, regulatory arbitrage, business reallocation, and risks from global interconnectedness.

Following a proposal by the Commission in April 2023, the Parliament and the Council have agreed on their positions and inter-institutional negotiations are ongoing as of December 2024. The European Deposit Insurance Scheme (EDIS) is another important missing element of the Banking Union. In April 2024 the European Parliament ECON Committee adopted its report on the Commission EDIS proposal of 2015. To go forward, the Commission will continue to promote further development of the Banking Union, including EDIS.

The macroprudential framework could further consider financial risks related to climate change and nature. Since the overarching nature of climate and nature-related risks has the capacity to threaten the stability of the financial system, it is essential to complement the micro prudential measures taken by banking supervisors to tackle climate change and nature degradation with a macroprudential framework. This could help to mitigate the risk build-up and increase resilience against climate and nature risks. In December 2023, the ECB and the European Systemic Risk Board (ESRB) presented policy options for addressing climate risks both in the banking sector and the non-bank financial intermediation sectors though macroprudential frameworks (ECB/ESRB 2023). These include measures for the lenders (such as general or sectoral systemic risk buffers) as well as for the insurance sector (tackling the insurance protection gap) and investment funds sector (primarily related to disclosures). In April 2024, the Basel Committee on Banking Supervision (BCBS) (BIS, 2024) put forward a climate scenario analysis (CSA) to strengthen management and supervision of climate-related financial risks. The European Central Bank (ECB), the European Systemic Risk Board and national central banks now consider the assessment of risks stemming from climate change, nature degradation and biodiversity loss as falling within their mandate (ECB/ESRB Project Team on climate risk, 2023). The Global Risks report included nearly all climate and environment risks such as extreme weather events and critical changes to earth systems in the top 10 global risks ranking for the next decade (World Economic Forum, 2024). According to the ECB, nearly 75% of all bank loans in the euro area are provided to companies that are highly dependent on at least one ecosystem service (Elderson, 2023).

Additional ongoing policy initiatives to support macro-financial stability cover the digital euro. The introduction of a digital euro could spur efficiency and innovation in the european payments markets, unlock benefits for the euro area economy and foster the international role of the euro. The proposal for a regulation on the establishment of the digital euro was tabled in June 2023 and is subject to discussions in the Council and the European Parliament. In parallel, the ECB started in November 2023 its 'preparatory phase' on the digital euro ([25]), which is to last until October 2025. Its main steps include the preparation of a rulebook, selection of service providers, and developing further on technical aspects. The next progress report is expected next autumn. After that, the ECB's Governing Council will decide on the potential development of a digital euro. Any digital euro issuance decision by the ECB is conditional on the Regulation having entered into force.

Crypto assets can also pose a risk to financial stability if current growth and market integration trends persist. Crypto-assets including stablecoins can have financial stability implications through four main transmission channels wealth effects, confidence effects, financial sector exposures and the use of crypto-assets as a form of payment (FSB, 2022). While all these channels are increasing in size and complexity, they lack internal shock absorbers that could provide liquidity at times of stress. For example, the wider involvement of financial institutions or the use of crypto assets as a form of payment would increase the potential for spillover to the wider economy, particularly if leverage

([25]) The ECB provided its Opinion on the digital euro in October 2023 and in June 2024, a year after the proposal by the Commission, the first progress report on digital euro preparation phase was published. See, ECB (2023).

were employed.” Concerning the global regulatory framework for crypto-asset activities, the Financial Stability Board (FSB) is focusing on the implementation of its high-level recommendations for the regulation, supervision and oversight of crypto-asset activities and markets, as well as of global stablecoin arrangements. In the EU, the implementation of the Markets in Crypto-assets (MiCA) Regulation (Regulation (EU) 2023/1114) is progressing. The amended Capital Requirements Regulation already introduced rules on a transitional treatment of banks' exposures to crypto-assets and supervisory powers in relation to crypto-assets based on a simplified Basel approach until the entry into application of a possible future legislative framework that considers the Basel Crypto Standard (SCO60) in a more comprehensive manner.

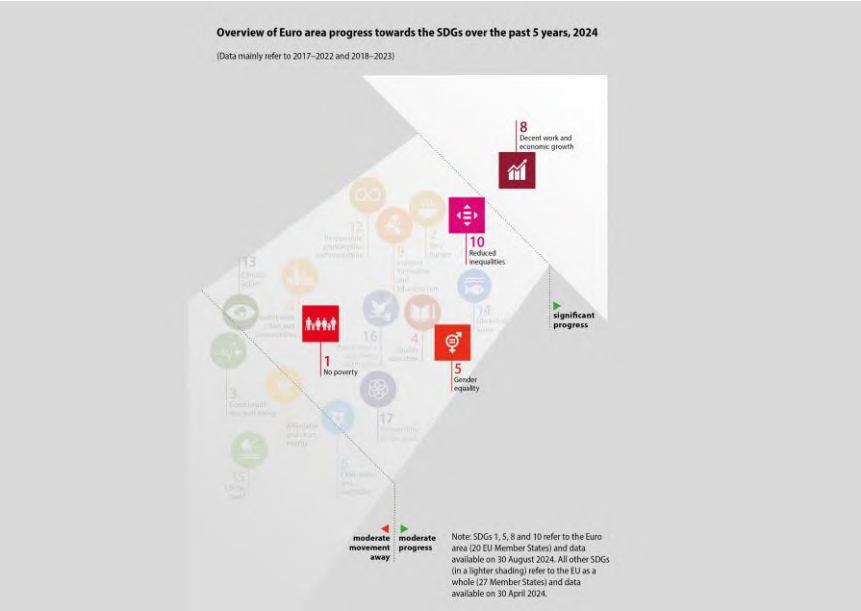
ANNEXES

	Real GDP (y-o-y growth rate %)			Inflation (y-o-y %)			Unemployment rate (%)			Government balance (deficit (-) / surplus (+)) (% of GDP)			Governmnet gross debt (% of GDP)		
	2010	2020	2023	2010	2020	2023	2010	2020	2023	2010	2020	2023	2010	2020	2023
Euro area*	2.1	-6.0	0.4	1.6	0.3	5.4	10.3	8.0	6.6	-6.3	-7.0	-3.6	85.4	98.5	88.9
European Union*	2.1	-5.6	0.4	1.8	0.7	6.4	10.1	7.2	6.1	-6.0	-6.7	-3.5	80.3	91.2	82.1
China	10.6	2.2	5.3	3.3	2.5	0.2	9.6	8.1	3.6	0.1	-8.8	-6.0	33.9	70.2	84.4
United States	2.7	-2.2	2.9	1.6	1.2	4.1	:	5.6	5.2	-9.0	-11.9	-3.6	95.2	131.8	118.7
India	8.5	-5.8	8.2	9.4	6.2	5.4	5.1	2.8	2.6	-4.5	-7.3	-3.0	67.7	88.4	83.0
Japan	4.1	-4.2	1.7	-0.7	0.0	3.3	:	:	:	-8.0	-8.4	-4.1	205.9	258.4	249.7
Russia	4.5	-2.7	3.6	6.8	3.4	5.9	7.9	4.7	4.0	-3.1	-3.7	-2.0	10.1	19.2	19.5
Brazil	7.5	-3.3	2.9	5.0	3.2	4.6	8.0	13.8	8.0	1.6	-7.5	-2.0	62.4	96.0	84.7
Indonesia	6.4	-2.1	5.0	5.1	2.0	3.7	8.1	9.7	5.4	0.0	-4.0	0.5	26.4	39.7	39.6
United Kingdom	2.2	-10.3	0.3	3.3	0.9	7.3	7.4	5.8	3.2	-6.7	-12.0	-3.5	75.9	105.8	100.0
Türkiye	8.4	1.9	5.1	8.6	12.3	53.9	3.7	3.9	2.7	0.4	-2.9	-3.6	39.5	39.4	29.3
Mexico	5.0	-8.4	3.2	4.2	3.4	5.5	5.3	4.4	2.8	-1.2	-0.5	1.5	40.2	58.5	53.1
Korea	7.0	-0.7	1.4	2.9	0.5	3.6	5.2	6.5	3.7	0.9	-2.6	-0.7	28.3	45.9	51.5
Canada	3.1	-5.0	1.2	1.8	0.7	3.9	7.1	7.1	5.3	-3.9	-10.5	-0.2	84.0	118.2	107.5
Saudi Arabia	5.0	-3.6	-0.8	3.7	3.4	2.3	5.5	7.7	3.8	4.7	-12.5	-2.0	8.4	31.0	26.2
Australia	2.4	-2.1	2.0	2.9	0.9	5.6	7.8	11.6	6.1	-4.9	-7.8	0.0	20.3	57.0	49.0
Argentina	10.1	-9.9	-1.6	10.5	42.0	133.5	:	:	:	-0.5	-6.2	-2.8	43.5	103.8	155.4
South Africa	3.0	-6.2	0.7	4.2	3.3	5.9	2.2	3.0	1.9	-2.3	-5.5	-0.9	31.2	68.9	73.4

	Share of World (%) GDP (PPP)			Total investment (% of GDP)			Population (millions)			GDP per capita (PPS)			Current account balance (% of GDP)		
	2010	2020	2023	2010	2020	2023	2010	2020	2023	2010	2020	2023	2010	2020	2023
Euro area	14.9	12.4	11.9	20.7	21.9	21.9	336.7	344.5	347.2	:	:	:	-0.3	1.7	1.6
European Union	18.2	12.2	14.7	20.9	22.1	22.6	438.0	445.4	446.4	46210.7	49456.0	54681.5	0.6	2.5	2.8
China	12.5	18.4	18.7	47.0	42.9	41.6	1340.9	1412.1	1409.7	10214.1	18755.3	22077.7	3.9	1.7	1.4
United States	17.2	15.3	15.0	18.7	21.4	21.5	309.7	331.3	335.1	59720.2	67404.8	74528.5	-2.9	-2.8	-3.3
India	5.4	7.0	7.9	39.8	28.9	33.3	1240.6	1396.4	1428.6	5071.0	7432.5	9220.6	-2.9	0.9	-0.7
Japan	5.0	3.9	3.5	22.6	25.2	26.4	127.6	125.8	124.5	41252.4	43362.9	46311.9	3.8	3.0	3.6
Russia	3.5	3.3	3.5	20.7	23.5	25.7	142.8	147.7	146.3	33418.2	36658.6	40106.5	4.1	2.4	2.5
Brazil	2.9	2.4	2.4	21.8	16.1	16.1	194.7	209.2	211.7	17965.0	17285.8	18968.4	-3.9	-1.7	-1.0
Indonesia	2.0	2.3	2.4	32.9	32.3	30.5	237.6	270.2	278.7	9170.8	12600.0	14014.2	0.7	-0.4	-0.2
United Kingdom	2.7	2.3	2.2	16.1	17.6	17.7	62.8	67.1	68.1	48771.3	48656.4	54724.2	-2.8	-2.9	-2.0
Türkiye	1.5	1.7	1.8	26.8	31.3	30.0	73.7	83.6	85.4	19596.0	28571.0	34591.2	-5.7	-4.3	-4.0
Mexico	2.2	1.8	1.7	23.3	20.2	24.6	114.8	128.2	131.1	20045.1	19692.9	21848.7	-0.3	2.4	-0.3
Korea	1.8	1.8	1.7	32.8	31.5	32.3	49.6	51.8	51.7	39698.1	49528.9	54103.3	2.3	4.4	1.9
Canada	1.6	1.3	1.4	23.5	22.7	24.0	34.0	38.0	40.0	51834.4	53318.1	56103.4	-3.6	-2.0	-0.7
Saudi Arabia	1.2	1.0	1.1	30.9	27.7	29.3	24.0	31.6	32.8	50620.3	51782.6	55802.9	14.1	-3.5	3.2
Australia	1.0	1.0	1.0	26.3	22.3	24.0	22.2	25.6	27.0	53916.7	57598.2	61180.1	-3.7	2.2	0.3
Argentina	1.0	0.7	0.7	17.7	16.6	18.8	40.8	45.4	46.7	28400.3	23779.8	26432.4	-0.4	0.7	-3.2
South Africa	0.7	0.6	0.5	17.6	12.3	15.5	51.4	60.0	62.3	14441.4	13390.5	13897.1	-1.3	2.0	-1.6

Source: IMF World Economic Outlook Database, October 2024, except for Euro area and European Union data in the upper table (marked with *), which are sourced from AMECO, updated on 15 November 2024.

Graph A2.1: **Progress towards the SDGs in the euro area and the EU ([26])**



Source: Eurostat

This annex assesses the pace at which the euro area and the EU have progressed towards each of the 17 sustainable development goals over the last five years. An assessment of progress in the euro area is only available for four SDGs, for which the indicators underpinning the goals have an aggregate for the euro area **(Graph A2.1).**

Overall, over the five-year period the euro area Member States have, as a whole, made significant progress towards ensuring decent work and economic growth (SDG 8). Good progress has also been achieved in relation to the goals on reducing inequalities (SDG 10) and gender equality (SDG 5). Progress has also been made in reducing poverty (SDG 1).

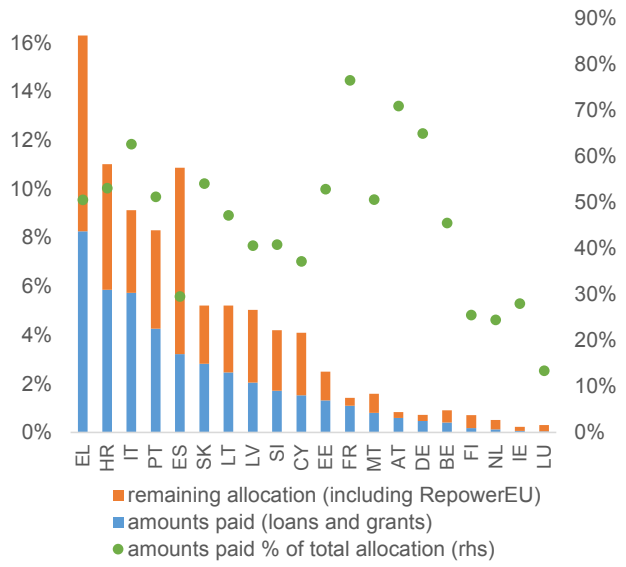
For the other goals (in lighter shading), progress refers to the EU as a whole. Overall, the EU as a whole has shown good progress towards the goals on zero hunger (SDG 2), industry, innovation and infrastructure (SDG 9), responsible consumption and production (SDG 12), life below water (SDG 14), quality education (SDG 4). Progress has also been recorded towards the goals on peace, justice and strong institutions (SDG 16), sustainable cities and communities (SDG 11), partnerships for the goals (SDG 17) and climate action (SDG 13). Progress towards the goal on clean water and sanitation (SDG 6) was limited, with several indicators showing positive developments but others showing no progress or even movement away. For affordable and clean energy (SDG 7), a slight movement away from the goal was observed due to the negative impact on energy affordability of Russia's war of aggression against Ukraine and the consequent energy crisis in the EU. Progress towards the goal on good health and wellbeing (SDG 3) was disrupted by the setbacks of the COVID-19 pandemic that are now fully visible in the available data. The goal on life on land (SDG 15) is characterised by several unsustainable trends in the areas of biodiversity and land degradation, leading to a moderately unfavourable assessment of the EU's progress in this area over the short-term period assessed. The European Commission has proposed important policy initiatives to reverse the degradation of ecosystems as part of the European Green Deal, such as the EU Biodiversity

([26]) SDGs were adopted by the international community in 2015 as part of the UN 2030 Agenda for Sustainable Development through which countries of the world collectively pledged to eradicate poverty, find sustainable and inclusive development solutions, ensure human rights, and make sure that no one is left behind by 2030. In 2019, the European Commission committed to integrate the SDGs into the European Semester. Integrating the objectives of the SDGs into the European Semester provides a unique opportunity to put people, their health and the planet at the centre of economic policy.

Strategy, the EU Forest Strategy, the EU Soil Strategy for 2030 and the Farm to Fork strategy.

The Recovery and Resilience Facility (RRF) is the core component of the NextGenerationEU package, reinforcing public investment and incentivising structural reforms to boost economic growth potential in euro area economies. It has evolved beyond its original design, with over 600 reform measures and 6,000 milestones and targets addressing key structural challenges in Member States. The RRF's total financial allocation for the euro area amounts to around €532 billion, with €295 billion in grants and €237 billion in loans. Notably, RRF allocations reach up to 17.4% of GDP for some euro area Member States, providing crucial financing support for public investments.

Graph A3.1: **The actual payments vs total RRF allocations (grants and loans, as of Q3 2024, % of GDP)**



Source: European Commission

The Recovery and Resilience Facility (RRF) has proven adaptable to emerging challenges. It addresses six policy priorities aligned with the euro area recommendations, focusing on green and digital transitions, labour market participation, social cohesion, and business environment support. In response to the energy crisis and Russia's aggression against Ukraine, the RRF has been updated with RepowerEU chapters, introducing new priorities to reduce the EU's energy dependence.

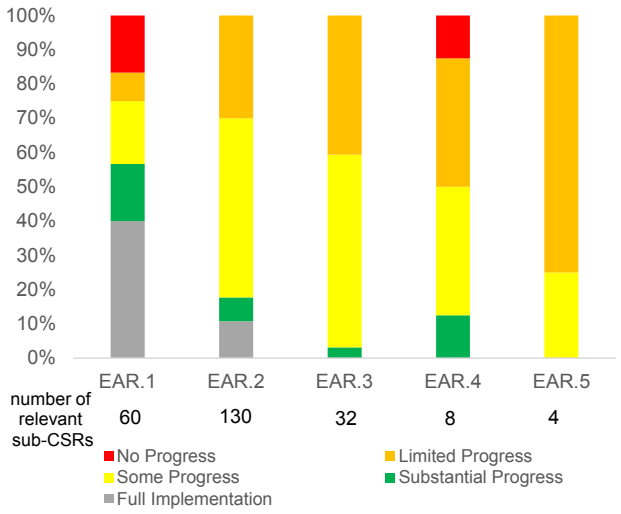
The actual RRF payments have reached over 50% of total allocations in several Member States. The Commission has received 53 payment requests (including partial payments) from the 20 euro area Member States, of which €242.7 billion were disbursed by the end of November 2024, comprising €55.6 billion in pre-financing and €187 billion in grants and loans. This represents nearly 50% of committed RRF funds to the euro area **(Graph A3.1).** The RRF has contributed significantly to public investment in the euro area, supporting GDP growth and sustaining economic momentum. By driving targeted investments and reforms, the RRF continues to counteract economic challenges, positively impacting domestic demand and overall EU growth in 2024, while promoting convergence within the EU.

The implementation of national Recovery and Resilience Plans (RRPs) accelerated in 2024, with most euro area Member States advancing their reform and investment agendas. Despite some delays in 2023, significant progress has been made in achieving investment and reform milestones and targets. Over 1,500 milestones and targets have been positively assessed by the Commission for Euro area Member States while an additional 890 have been reported as completed by Member States, bringing the total amount of fulfilled and reported as completed milestones and targets to 47%. Member States have generally prioritised the implementation of reforms in the first years of their plan, paving the way for a focus on investment in the final two years of the RRF life cycle.

The medium-term impact of the RRF is yet to be seen but is expected to be significant. The estimates based on the European Commission's modelling suggest that the RRF is expected to contribute to an increase of the EU real GDP by up to 1.4% in 2026, compared to a counterfactual no-NGEU scenario. The medium-term impact is estimated to come from higher public investment, with positive spillovers from simultaneous investments across Member States, crowding-in more private investment (Pfeiffer et al., 2023). The other channel is the increase in productivity derived from the RRPs' structural reforms agenda (Bankowski et al., 2022), which may translate to, among others, an increase of real wages in the medium term (European Commission, 2024p). Most recent estimations indicate that the combined fiscal and structural channels of the RRF transmission are expected to contribute to euro area's GDP increase between 0.4% and 0.9% up to 2026 and 0.8%, and 1.2% up to 2031, when compared to a scenario without the NGEU (Bankowski et al., 2024).

The implementation of the euro area recommendations (EARs) can be approximated through the progress on the relevant country-specific recommendations (CSRs). Each year, in the context of the European Semester for economic policy coordination, the Council adopts policy recommendations addressing country-specific mid-term structural challenges. The CSRs implementation progress is continuously monitored by the Commission services with the progress assessment available in the CeSaR database ([27]). The assessment is qualitative based on a progress gradation: from "no progress" to "full implementation". Moreover, for a given annual cycle of policy coordination, the CSRs and their components (sub-CSRs) are tagged with the corresponding EARs if are found relevant for the euro-area dimension, e.g. euro-area relevant 2024 sub-CSRs are tagged with corresponding 2024 EARs in CeSaR database. Therefore, the progress assessment on the implementation of EARs can be seen though the progress of relevant CSRs.

Graph A4.1: **EARs implementation, 2023 cycle**



Source:

The 2024 EAR progress based on the 2024 CSRs progress assessment can be possible only after the cut-off date for this staff working document. However, as the policy areas covered by the Euro Area Recommendations (EARs) have remained largely consistent, using the previous cycle's (2023) euro-relevant CSRs as a proxy for EAR progress can provide a useful approximation.

Overall, the implementation of EAR-relevant CSRs in 2023 cycle shows some progress, but the degree of implementation varies across policy areas (Graph A4.1). Relatively many CSRs are linked to euro area-relevant fiscal policy challenges (as per **2023 EAR 1**). The CSRs related to prudent medium-term positions and to mitigation of pandemic and energy crisis effects, show overall good progress. However, measures linked to long-term public finance sustainability, such as pension reforms, have a lower implementation level. Large number of CSRs are linked to **2023 EAR 2**, which includes recommendations on the **public and private investment** and a variety of **measures responding to the energy crisis**. Most of the relevant sub-CSRs are showing some progress in implementation, mainly thanks to accelerating rollout of investment under the RPPs and measures aimed at increasing the energy efficiency and reduction of energy dependency. There are relatively fewer EAR-relevant CSRs regarding reforms on **labour market,** including **skills shortages, and wages** developments **and social policy (2023 EAR 3)**. In general, these show slightly less positive picture, with an overall some progress achieved and best results in addressing skills shortages and delivery of social services. Much less CSRs respond to **business environment**, **corporate sector solvency** support and **completion of the Capital Markets Union** (CMU) (**2023 EAR 4**), partially because the progress on the CMU requires rather collective action. Nevertheless, generally good implementation record can be observed, mainly in the field of liquidity support for small and medium-sized enterprises, and in improving business environment. Collective action would be also required for the **2023 EAR 5** related to **macro-financial stability**, completion of **Banking Union and introduction of digital euro**, hence only very few CSRs of the 2023 cycle are tied to these challenges. However, the CSRs implementation in these fields was moderate, and this is mainly due to progress in mitigating risks in the financial sector.

([27]) https://ec.europa.eu/economy_finance/country-specific-recommendations-database

Acemoglu D. (2024). *The Simple Macroeconomics of AI*. NBER Working Paper No. w32487 SSRN Electronic Library - PIP Journal Information.

Alesina A., & Ardagna S. (2013). *The design of fiscal adjustments*. Tax policy and the economy, 27(1), 19-68.

Alesina, M. A., Ciminelli, G., Furceri, D., & Saponaro, G. (2021). *Austerity and Elections*. International Monetary Fund.

Aiyar S. et al. (2023). *Geoeconomic Fragmentation and the Future of Multilateralism*. IMF Staff Discussion Note n. 2023/001.

Batini, N., Eyraud, L., & Weber, A. (2014). *A simple method to compute fiscal multipliers.* International Monetary Fund.

Bańkowski K., Benalal N., Bouabdallah O., De Stefani R., Dorrucci E., Huber C., Jacquinot P., Modery W., Nerlich C., Rodríguez-Vives M., Szörfi B., Zorell N. & Zwick C. (2024). Four years into NextGenerationEU: what impact on the euro area economy? ECB Occasional Papers, n. 363.

Balasundharam V., Basdevant O., Benicio D., Ceber A., Kim Y., Mazzone L., Selim H. & Yang, Y. (2023). *Fiscal consolidation: Taking stock of success factors, impact, and design.* International Monetary Fund. https://doi.org/10.2866/3562074

Bergeaud A. (2024). *The Past, Present, and Future of European Productivity.* ECB Forum on Central Banking, July 2024.

BIS. (2024). *The role of climate scenario analysis in strengthening the management and supervision of climate-related financial risks*, Basel Committee on Banking Supervision Discussion Paper.

Bloom N., Van Reenen J. and Williams, H. (2019). *A Toolkit of Policies to Promote Innovation*. Journal of Economic Perspectives (Vol. 33, Issue 3, pp. 163–184). American Economic Association. https://doi.org/10.1257/jep.33.3.163

Bown C. P. (2024). *Modern Industrial Policy and the WTO*. Peterson Institute for International Economics Working Paper n. 23-15: https://doi.org/10.2139/ssrn.4816776.

Brunnermeier, M., Palia, D., Sastry, K. A., & Sims, C. A. (2021). *Feedbacks: Financial Markets and Economic Activity*. American Economic Review (Vol. 111, Issue 6, pp. 1845–1879). https://doi.org/10.1257/aer.20180733

Bundesbank (2024). *Development in euro area business dynamism*. Monthly Report – March 2024

Caldara, D. & Iacoviello M. (2024), *Measuring Geopolitical Risk*. American Economic Review, April, 112(4), pp.1194-1225.

CEDEFOP. (2021). *The green employment and skills transformation: insights from a European Green Deal skills forecast scenario*. https://doi.org/10.2801/112540

Cepparulo, A., McDonnell C. and Reitano V. E. (2024). *An Assessment of the Euro Area Fiscal Stance*. European Economy Economic Brief, n. 080. https://doi.org/10.2765/555052

Corsetti, G., Meier, A., & Müller, G. J. (2012). *What determines government spending multipliers?* Economic Policy, 27(72), 521-565.

Cournède B., Antoine G. & Pina A. (2014). *Reconciling fiscal consolidation with growth and equity*. OECD Journal: Economic Studies, Vol. 2013/1.

Coutinho L. and Licchetta M. (2023). *Inflation differentials in the euro area at the time of high energy prices.* European Economy Discussion Paper Series, n. 197. https://doi.org/10.2765/052803

Dadush, U. (2022). *The future of global value chains and the role of the WTO*. Staff Working Paper ERSD-2022-11.

Debrun X. & Kumar M.S. (2007). *The Discipline-Enhancing Role of Fiscal Institutions: Theory and Empirical Evidence*. IMF Working Papers 2007/171, International Monetary Fund.

Decker R. A. & Haltiwanger J. (2024). *Surging Business Formation in the Pandemic: A Brief Update.* Working Paper, September 2024.

Doherty L. & Sayegh A. (2022). *How to Design and Institutionalize Spending Reviews*," How-To Note No. 2022/004, International Monetary Fund.

Draghi, M. (2024). *The future of European competitiveness*.

ECB/ESRB Project Team on climate risk. (2023). *Towards macroprudential frameworks for managing climate risk*.

Elderson F. (2023). *The economy and banks need nature to survive*. ECB blog, June 2023.

European Union Agency for Fundamental Rights. (2023). *Roma in 10 European countries: main results - Roma survery 2021*. https://doi.org/10.2811/221064

European Central Bank. (2021). *Key factors behind productivity trends in EU countries*. ECB Occasional Paper Series, n. 268 / September 2021.

European Central Bank. (2023). *Opinion of the European Central Bank of 31 October 2023 on the digital euro*. CON/2023/34. Official Journal of the European Union.

European Central Bank. (2024a). *Financial Stability Review*, May 2024.

European Central Bank. (2024b). *Financial Stability Review*, November 2024

European Commission. (2022). *Commission Staff Working Document – Executive summary of the impact assessment report accompanying the document "Proposal for a Directive of the European Parliament and of the Council on ambient air quality and cleaner air for Europe (recast).* SWD(2022) 345 final, October 2022.

European Commission. (2023a). *2024 Euro Area Report*. European Economy Institutional Paper Series, n. 259. https://doi.org/10.2765/049223

European Commission. (2023b). *Recommendation on critical technology areas for the EU's economic security for further risk assessment with Member States*. COM(2023) 6689 final, October 2023.

European Commission. (2023c). *SURE after its sunset: final bi-annual report.* COM(2023) 291 final, June 2023.

European Commission. (2023d). *Survey on the access to finance of Enterprises – Analitycal Report 2023.*

European Commission. (2024a). *European Innovation Scoreboard 2024*. https://doi.org/10.2777/779689

European Commission. (2024b). *Ageing Report 2024. Economic and Budgetary Projections for the EU Member States (2022-2070)*. European Economy Institutional Paper, n. 279.

European Commission. (2024c). *Alert Mechanism Report*. COM(2024) XXX final, Novcbember 2024

European Commission. (2024d). *Annual report on taxation 2024 – Review of taxation policies in the European Union*. https://doi.org/10.2778/10846

European Commission. (2024e). *Employment and social developments in Europe 2023*. https://doi.org/10.2767/089698

European Commission. (2024f*). Euro area competitiveness: Trade performance and risks of trade fragmentation.* Note to the Eurogroup.

European Commission. (2024g). *European economic forecast: Autumn 2024.* European Economy Institutional Paper Series, n. 296.

European Commission. (2024h). *European economic forecast: Spring 2024.* European Economy Institutional Paper Series, n. 286. https://doi.org/10.2765/219276

European Commission. (2024i). *Labour market and wage developments in Europe: Annual Review 2024* (Forthcoming)

European Commission. (2024j). *Report from the Commission to the European Parliament and the Council on the implementation of the Recovery and Resilience Facility.* COM(2024 474 final, October 2024.

European Commission. (2024k). *Report on Public Finances in the EMU, 2023.* European Economy Institutional Paper Series, n 295.

European Commission. (2024l). Report on the macroprudential review for credit institutions, the systemic risks relating to NBFIs and their interconnectedness with credit institutions. COM(2024) 21 final, January 2024.

European Commission. (2024m). *Science, research and innovation performance of the EU: a*

competitive Europe for a sustainable future. https://doi.org/10.2777/965670

European Commission. (2024n). *Social housing and beyond: operational toolkit on the use of EU funds for investments in social housing and associated services*. https://doi.org/10.2767/924036

European Commission. (2024o). *Strengthening the EU through ambitious reforms and investments*. COM(2024) 82 final, February 2024.

European Commission. (2024p). *Mid-term evaluation of the Recovery and Resilience Facility – Staff Working Document*. COM(2024) 70 final, February 2024.

European Commission. (2024q). *Securing our future: Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society.* COM(2024) 63 final, February 2024.

European Commission. (2024r). *2030 digital decade: report on the state of the digital decade 2024.* https://doi.org/10.2759/922

European Defence Agency. (2023). *Enhancing EU military capabilities beyond 2040: main findings from the 2023 long-term assessment of the Capability Development Plan*.

European Investment Bank. (2024). EIB investment survey 2024: European Union overview.

Eurostat. (2021). *Accounting for ecosystems and their services in the European Union (INCA): Final report from phase II of the INCA project aiming to develop a pilot for an integrated system of ecosystem accounts for the EU.* https://doi.org/10.2785/197909

Financial Stability Board. (2022). *Assessment of risks to financial stability from crypto-assets.*

Franse L., Del Bufalo G. & Reviglio E. (2018). *Boosting investment in social infrastructure in Europe: report of the High-Level Task Force on Investing in Social Infrastructure in Europe*. European Economy Discussion Paper Series, n. 74. https://doi.org/10.2765/794497

Frayne, C., Szczypińska A., Vašíček B. & Zeugner S. (2022). *Housing market developments in the euro area: focus on housing affordability*. European Economy Discussion Paper Series, n. 171.. https://doi.org/10.2765/74242

Fuest C., Gros D., Mengel P. L., Presidente G. and Tirole J. (2024). *EU Innovation Policy – How to Escape the Middle Technology Trap?*. European policy Analysis Group, April 2024.

Garcia L., Leodolter A. & Turrini A. (2024). *National Productivity Boards after Seven Years: An Assessment.* European Economy Discussion Paper Series, n. 203.

Gopinath G., Gourinchas P.O., Presbitero A. & Topolova P. (2024). *Changing Global Linkages: a new cold war?* IMF Working Paper, WP/24/76.

IMF. (2024). *Staff Report for the 2024 consultation with the member countries on common euro area policies*.

IRENA. (2024). *Renewable Power Generation Costs in 2023*. International Renewable Energy Agency, Abu Dhabi.

Kouvavas O. & Rusinova D. (2024). *How big is the household housing burden? Evidence from the ECB Consumer Expectations Survey.* ECB Economic Bullettin, Issue 3/2024.

Lalinsky, T, M Anastasatou, S Anyfantaki et al. (2024). *The impact of the COVID-19 pandemic and policy support on productivity: a report by the ESCB expert group on productivity, innovation and technological change*. ECB Occasional Paper Series No 341.

Letta E. (2024). *Much more than a market – Empowering the Single Market to deliver a sustainable future and prosperity for all EU citizens.*

Licchetta, M. & Mattozzi, G. (2023). *Convergence in GDP per Capita in the Euro Area and the EU at the Time of COVID-19*. Intereconomics (Vol. 58, Issue 1, pp. 43–51). https://doi.org/10.2478/ie-2023-0012

Molnár M. (2012). *Fiscal Consolidation: What Factors Determine the Success of Consolidation Efforts?* OECD Journal: Economic Studies, Vol. 2012/1, pp. 123-149.

Moretti E., Steinwender C. & Reenen J. V. (2023). *The Intellectual Spoils of War? Defense R&D, Productivity, and International Spillovers*. Review of Economics and Statistics (pp. 1–46). MIT Press. https://doi.org/10.1162/rest_a_01293

OECD. (2021). *Brick by Brick: Building Better Housing Policies*. OECD Publishing, Paris.

OECD. (2024). *Unleashing SME potential to scale up: draft final synthesis report*. OECD Secretariat and Committee on SMEs and Entrepreneurship (CSMEE).

Ponticelli, J., & Voth, H. J. (2020). *Austerity and anarchy: Budget cuts and social unrest in Europe*. 1919–2008. Journal of Comparative Economics, 48(1), 1-19.

Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937.
http://data.europa.eu/eli/reg/2023/1114/oj

Stern n. & Stiglitz J. (2023). *Climate change and growth*. Industrial and Corporate Change, Vol. 32, Issue 2, pp. 277-303.

Terzi A. (2020). *Macroeconomic adjustment in the euro area.* European Economic Review, Vol. 128.

Terzi A. (2021). *Economic Policy-Making Beyond GDP: An Introduction*. European Economy Discussion Paper Series, n. 142.

Terzi A. (2024). *The green industrial revolution: consequences and policies.* Bennett Institute for Public Policy Working Paper.

Terzi A., Sherwood M. and Singh A. (2022). *Industrial Policy for the 21st century.* European Economy Discussion Paper Series, n. 157.

Turrini A., Guigue J., Kiss Á., Leodolter A., Leventi C., Van Herck K., Neher F., Picos F., Ricci M. (2024). *Tax Expenditures in the EU: Recent Trends and New Policy Challenges*. European Economy Discussion Paper Series, n. 212.

Valderrama L., Gorse P., Marinkov M. & Topalova P. (2023). *European Housing Markets at a Turning Point*, IMF Working Paper n. 2023/076.

Von der Leyen U. (2024). *Europe's Choice – Political Guidance for the next European Commission 2024-2029.* Strasbourg, 18 July 2024.

World Bank. (2019). *Strenghtening new infrastructure assets: a cost-benefit analysis.* Policy research working paper, n. 8899.

World Economic Forum. (2024). *The Global Risks Report 2024: 19th edition.*